Fertilizer Recommendations by Crops, Categorized

(Crop codes in parentheses)

I Field Crops

1. (**701**) Canola Spring Type
2. (**702**) Canola Winter Type
3. (**001**) Corn (for Grain) Dryland
4. (**002**) Corn (for Grain) Irrigated 150 bu/a
29. (**C01**) Corn (for Grain) Irrigated 200 bu/a
30. (**C02**) Corn (for Grain) Irrigated 250 bu/a
31. (**C03**) Corn (for Grain) Irrigated 300 bu/a
6. (**500**) Cotton - 750 lbs yield goal
7. (**501**) Cotton - 1000 lbs yield goal
8. (**502**) Cotton - 1250 lbs yield goal
9. (**503**) Cotton - 1500 lbs yield goal
10. (**006**) Grain Sorghum
5. (**003**) Irrigated Corn Silage
27. (**KEN**) Kenaf
11. (**010**) Peanuts
12. (**013**) Small Grain - Barley
13. (**012**) Small Grain - Oats
14. (**014**) Small Grain - Rye for Seed Production or Cover Crop
15. (**011**) Small Grain - Wheat
16. (**711**) Small Grain Silage
17. (**004**) Sorghum Silage
18. (**017**) Soybeans
19. (**008**) Sugar Cane
20. (**009**) Sunflower
21. (**007**) Sweet Sorghum
22. (**019**) Tobacco (Average Pebble Soil)
23. (**018**) Tobacco (Low Moisture and Sandy Soils)
24. (**020**) Tobacco Plant Bed
28. (**TRU**) Truffles
25. (**015**) Wheat - Grain Sorghum Rotation
26. (**016**) Wheat - Soybean Rotation

II Pastures, Hay Crops

1. (**025**) Alfalfa-Establishment
2. (**026**) Alfalfa-Maintenance
4. (**032**) Annual Lespedeza
30. (**027**) Arrowleaf Clover (Apache, Yuchi, Amclo, Mechee)
5. (**046**) Bahia Grass Pasture
6. (**042**) Brown Top Millet
7. (**035**) Coastal Bermuda Pasture
8. (**037**) Coastal Bermuda-Hay
9. (**045**) Common Bermuda Pasture
10. (**030**) Crimson Clover
11. (**047**) Dallis Grass Pasture
12. (**740**) Fescue Hay
13. (**040**) Fescue Pasture

II Pastures, Hay Crops *(cont.)*

14. (**039**) Fescue-Clover Associations
15. (**742**) Forage Chicory
16. (**036**) Hybrid Bermudas - Pasture
17. (**038**) Hybrid Bermudas-Hay
18. (**043**) Hybrid Millets
19. (**033**) Lupine
21. (**041**) Orchard Grass Pasture
22. (**051**) Perennial Peanuts
23. (**048**) Sericea
24. (**044**) Sorghum Sudan Hybrids
25. (**031**) Subterranean Clover
26. (**049**) Summer Perennials Overseeded in Fall
31. (**SGB**) Switchgrass and other native grasses-Biomass and forage
32. (**SGW**) Switchgrass and other native grasses-Wildlife
27. (**050**) Temporary Winter Grazing
28. (**034**) Vetch
29. (**741**) White Clover

III Pine Trees, Field Nursery Stock, and Christmas Trees

1. (**078**) Christmas Trees - Cedar
2. (**077**) Christmas Trees - Pine and Leyland Cypress
3. (**075**) Field Nursery - Broadleaf Evergreen (production)
4. (**074**) Field Nursery - Deciduous Trees & Shrubs (production)
5. (**071**) Field Nursery - Deciduous Trees (pre-plant)
6. (**073**) Field Nursery - Evergreens (pre-plant)
7. (**076**) Field Nursery - Narrow Leaf Evergreen (production)
8. (**072**) Field Nursery - Shrubs (pre-plant)
9. (**069**) Pine Plantation - Establishment
10. (**070**) Pine Plantation - Maintenance
11. (**068**) Pine Seedling Nursery

IV Fruits and Pecans

1. (**115**) Apples (bearing)
2. (**117**) Apples (non-bearing)
3. (**131**) Blackberries (commercial)
4. (**126**) Blueberries-Rabbiteye (commercial)
5. (**134**) Blueberries-Southern Highbush in Pinebark Beds
6. (**133**) Blueberries-Southern Highbush in Soil or Amended Soil

IV Fruits and Pecans *(cont.)*

7. (**129**) Figs (commercial)
8. (**127**) Grapes (bunch, hybrid)
9. (**128**) Grapes (muscadine)
10. (**119**) Nectarines (bearing)
11. (**122**) Nectarines (non-bearing)
21. (**OLV**) Olives
12. (**120**) Peaches (bearing)
13. (**123**) Peaches (non-bearing)
14. (**116**) Pears (bearing)
15. (**118**) Pears (non-bearing)
16. (**125**) Pecans
17. (**121**) Plums (bearing)
18. (**124**) Plums (non-bearing)
19. (**132**) Raspberries (commercial)
20. (**130**) Strawberries-Plasticulture
22. (**WGP**) Wine Grapes

V Vegetables

1. (**140**) Asparagus
2. (**165**) Basil (and other herbs not listed)
3. (**144**) Beets
4. (**146**) Broccoli, fresh market
5. (**147**) Cabbage, fresh market
6. (**160**) Cantaloupes
7. (**145**) Carrots
8. (**148**) Cauliflower, fresh market
9. (**185**) Chives
10. (**184**) Cilantro
11. (**149**) Collards, fresh market
12. (**159**) Cucumbers
13. (**164**) Eggplant
14. (**183**) Endive
15. (**173**) English Peas
16. (**180**) Greenhouse Tomatoes
17. (**177**) Irish Potatoes
18. (**150**) Kale, fresh market
19. (**154**) Lettuce, fresh market
20. (**142**) Lima Beans
21. (**151**) Mustard, fresh market
22. (**170**) Okra
23. (**171**) Onions (green bunching)
24. (**172**) Onions (mature and dry)
25. (**169**) Onions (plantbed)
26. (**166**) Parsley
27. (**175**) Pepper (Bell and Pimento)
28. (**176**) Pepper Transplants
29. (**143**) Pole Beans
30. (**162**) Pumpkin
31. (**167**) Radishes

V Vegetables *(cont.)*

32. (**168**) Rhubarb
33. (**141**) Snap Beans
34. (**174**) Southern Peas
35. (**152**) Spinach, fresh market
36. (**161**) Squash
37. (**181**) Staked Tomatoes
38. (**158**) Sweet Corn
39. (**178**) Sweet Potatoes
40. (**182**) Tomato Transplants
41. (**153**) Turnips, fresh market
42. (**163**) Watermelon

VI Sod Production

1. (**769**) Sod Production Centipede
2. (**768**) Sod Production Hybrid Bermudas
3. (**771**) Sod Production St. Augustine
4. (**772**) Sod Production Tall Fescue
5. (**770**) Sod Production Zoysia

VII Ornamentals and Flowers (nursery field production)

1. (**887**) Annual Flowers (commercial)
2. (**880**) Azaleas (commercial)
3. (**882**) Camellias (commercial)
4. (**883**) General Ornamental Shrubs (commercial)
5. (**884**) Ground Cover (commercial)
6. (**885**) Ornamental Trees (commercial)
7. (**888**) Perennial Flowers (commercial)
8. (**881**) Rhododendrons (commercial)
9. (**890**) Roses (commercial)
10. (**886**) Shade Trees (commercial)
11. (**891**) Spring Flowering Bulbs (commercial)
12. (**889**) Summer Bulbs (commercial)

VIII Home Lawns

1. (**CLE**) Centipede Lawn - Establishment
2. (**CLM**) Centipede Lawn - Maintenance
3. (**052**) Common Bermuda Lawn
4. (**059**) Cool Season Grass Mixtures
5. (**053**) Hybrid Bermuda Lawn
6. (**057**) Kentucky Bluegrass
7. (**060**) Ryegrass for Overseeding Lawns
8. (**SSP**) Seashore Paspalum
9. (**055**) St. Augustine Lawn
10. (**058**) Tall Fescue Lawn
11. (**056**) Zoysia Lawn

IX Golf Courses

1. (**061**) Bentgrass Golf Greens

IX Golf Courses *(cont.)*

2. (**062**) Bermuda Golf Greens (Overseeded)
3. (**063**) Golf Fairways
4. (**064**) Golf Tees

X Industrial/Business Lawns

1. (**790**) Industrial/Business Lawns - Bermuda
2. (**BCE**) Industrial/Business Lawns - Centipede Establishment
3. (**BCM**) Industrial/Business Lawns - Centipede Maintenance
4. (**792**) Industrial/Business Lawns - St. Augustine
5. (**794**) Industrial/Business Lawns - Tall Fescue
6. (**793**) Industrial/Business Lawns - Zoysia

XI Other Turf

1. (**065**) Athletic Field
2. (**066**) Roadside Turf - Establishment
3. (**067**) Roadside Turf - Maintenance

XII Home Landscape Plants

1. (**087**) Annual Flowers
2. (**080**) Azaleas
3. (**082**) Camellias
4. (**083**) General Ornamental Shrubs
5. (**092**) Goldenseal
6. (**084**) Ground Cover
7. (**085**) Ornamental Trees
8. (**088**) Perennial Flowers
9. (**081**) Rhododendrons
10. (**090**) Roses
11. (**086**) Shade Trees
12. (**091**) Spring Flowering Bulbs
13. (**089**) Summer Bulbs

XIII Home Garden

1. (**095**) Apples - Home Garden
2. (**096**) Blackberries - Home Garden
3. (**098**) Blueberries-Home Garden
4. (**099**) Bunch Grapes - Home Garden
5. (**100**) Citrus - Home Garden
6. (**101**) Figs - Home Garden
7. (**114**) Herbs (homeowner)
8. (**112**) Home Vegetable Garden
9. (**102**) Kiwifruit - Home Garden
10. (**103**) Muscadine - Home Garden
11. (**104**) Nectarines - Home Garden
12. (**105**) Peaches - Home Garden
13. (**107**) Pears - Home Garden
14. (**109**) Pecans (bearing) - Home Garden

XIII Home Garden *(cont.)*

15. (**108**) Pecans (young trees) - Home Garden
16. (**106**) Plums - Home Garden
17. (**097**) Raspberries - Home Garden
18. (**110**) Strawberries - Home Garden

XIV Wildlife Plots

1. (**W10**) Dove Fields - Brown Top Millet, Proso, Sesame, and Buckwheat
2. (**W12**) Dove Fields - Corn or Grain Sorghum
3. (**W11**) Dove Fields - Peredovic Sunflower
4. (**W09**) Fall Deer - Alfalfa
5. (**W08**) Fall Deer - Forage Chicory
6. (**W05**) Fall Deer Mix - Brassicas
7. (**W04**) Fall Deer Mix - Cool season annual grasses
8. (**W06**) Fall Deer Mix - Cool Season Grasses with Clover
9. (**W07**) Fall Deer Mix - Legumes
10. (**W02**) Summer Deer Mix (Grass only)
11. (**W01**) Summer Deer Mix (Legume only)
12. (**W03**) Summer Deer Mix (Legumes and Grass)
13. (**191**) Wildlife Plots - Chufa
14. (**190**) Wildlife Plots - Temporary Winter Grazing

Fertilizer Recommendations by Crops, Alphabetized

(Crop codes in parentheses)

II-1. (**025**) Alfalfa-Establishment
II-2. (**026**) Alfalfa-Maintenance
XII-1. (**087**) Annual Flowers
VII-1. (**887**) Annual Flowers (commercial)
II-4. (**032**) Annual Lespedeza
XIII-1. (**095**) Apples - Home Garden
IV-1. (**115**) Apples (bearing)
IV-2. (**117**) Apples (non-bearing)
II-30. (**027**) Arrowleaf Clover (Apache, Yuchi, Amclo, Mechee)
V-1. (**140**) Asparagus
XI-1. (**065**) Athletic Field
XII-2. (**080**) Azaleas
VII-2. (**880**) Azaleas (commercial)
II-5. (**046**) Bahia Grass Pasture
V-2. (**165**) Basil (and other herbs not listed)
V-3. (**144**) Beets
IX-1. (**061**) Bentgrass Golf Greens
IX-2. (**062**) Bermuda Golf Greens (Overseeded)
XIII-2. (**096**) Blackberries - Home Garden
IV-3. (**131**) Blackberries (commercial)
XIII-3. (**098**) Blueberries-Home Garden
IV-4. (**126**) Blueberries-Rabbiteye (commercial)
IV-5. (**134**) Blueberries-Southern Highbush in Pinebark Beds
IV-6. (**133**) Blueberries-Southern Highbush in Soil or Amended Soil
V-4. (**146**) Broccoli, fresh market
II-6. (**042**) Brown Top Millet
XIII-4. (**099**) Bunch Grapes - Home Garden
V-5. (**147**) Cabbage, fresh market
XII-3. (**082**) Camellias
VII-3. (**882**) Camellias (commercial)
I-1. (**701**) Canola Spring Type
I-2. (**702**) Canola Winter Type
V-6. (**160**) Cantaloupes
V-7. (**145**) Carrots
V-8. (**148**) Cauliflower, fresh market
VIII-1. (**CLE**) Centipede Lawn - Establishment
VIII-2. (**CLM**) Centipede Lawn - Maintenance
V-9. (**185**) Chives
III-1. (**078**) Christmas Trees - Cedar
III-2. (**077**) Christmas Trees - Pine and Leyland Cypress
V-10. (**184**) Cilantro
XIII-5. (**100**) Citrus - Home Garden
II-7. (**035**) Coastal Bermuda Pasture
II-8. (**037**) Coastal Bermuda-Hay
V-11. (**149**) Collards, fresh market
VIII-3. (**052**) Common Bermuda Lawn
II-9. (**045**) Common Bermuda Pasture
VIII-4. (**059**) Cool Season Grass Mixtures
I-3. (**001**) Corn (for Grain) Dryland
I-4. (**002**) Corn (for Grain) Irrigated 150 bu/a
I-29. (**C01**) Corn (for Grain) Irrigated 200 bu/a
I-30. (**C02**) Corn (for Grain) Irrigated 250 bu/a
I-31. (**C03**) Corn (for Grain) Irrigated 300 bu/a
I-6. (**500**) Cotton - 750 lbs yield goal
I-7. (**501**) Cotton - 1000 lbs yield goal
I-8. (**502**) Cotton - 1250 lbs yield goal
I-9. (**503**) Cotton - 1500 lbs yield goal
II-10. (**030**) Crimson Clover
V-12. (**159**) Cucumbers
II-11. (**047**) Dallis Grass Pasture
XIV-1. (**W10**) Dove Fields - Brown Top Millet, Proso, Sesame, and Buckwheat
XIV-2. (**W12**) Dove Fields - Corn or Grain Sorghum
XIV-3. (**W11**) Dove Fields - Peredovic Sunflower
V-13. (**164**) Eggplant
V-14. (**183**) Endive
V-15. (**173**) English Peas
XIV-4. (**W09**) Fall Deer - Alfalfa
XIV-5. (**W08**) Fall Deer - Forage Chicory
XIV-6. (**W05**) Fall Deer Mix - Brassicas
XIV-7. (**W04**) Fall Deer Mix - Cool season annual grasses
XIV-8. (**W06**) Fall Deer Mix - Cool Season Grasses with Clover
XIV-9. (**W07**) Fall Deer Mix - Legumes
II-12. (**740**) Fescue Hay
II-13. (**040**) Fescue Pasture
II-14. (**039**) Fescue-Clover Associations
III-3. (**075**) Field Nursery - Broadleaf Evergreen (production)
III-4. (**074**) Field Nursery - Deciduous Trees & Shrubs (production)
III-5. (**071**) Field Nursery - Deciduous Trees (pre-plant)
III-6. (**073**) Field Nursery - Evergreens (pre-plant)
III-7. (**076**) Field Nursery - Narrow Leaf Evergreen (production)
III-8. (**072**) Field Nursery - Shrubs (pre-plant)
XIII-6. (**101**) Figs - Home Garden
IV-7. (**129**) Figs (commercial)
II-15. (**742**) Forage Chicory
XII-4. (**083**) General Ornamental Shrubs
VII-4. (**883**) General Ornamental Shrubs (commercial)
XII-5. (**092**) Goldenseal
IX-3. (**063**) Golf Fairways
IX-4. (**064**) Golf Tees

I-10. (**006**) Grain Sorghum
IV-8. (**127**) Grapes (bunch, hybrid)
IV-9. (**128**) Grapes (muscadine)
V-16. (**180**) Greenhouse Tomatoes
XII-6. (**084**) Ground Cover
VII-5. (**884**) Ground Cover (commercial)
XIII-7. (**114**) Herbs (homeowner)
XIII-8. (**112**) Home Vegetable Garden
VIII-5. (**053**) Hybrid Bermuda Lawn
II-16. (**036**) Hybrid Bermudas - Pasture
II-17. (**038**) Hybrid Bermudas-Hay
II-18. (**043**) Hybrid Millets
X-1. (**790**) Industrial/Business Lawns - Bermuda
X-2. (**BCE**) Industrial/Business Lawns - Centipede Establishment
X-3. (**BCM**) Industrial/Business Lawns - Centipede Maintenance
X-4. (**792**) Industrial/Business Lawns - St. Augustine
X-5. (**794**) Industrial/Business Lawns - Tall Fescue
X-6. (**793**) Industrial/Business Lawns - Zoysia
V-17. (**177**) Irish Potatoes
I-5. (**003**) Irrigated Corn Silage
V-18. (**150**) Kale, fresh market
I-27. (**KEN**) Kenaf
VIII-6. (**057**) Kentucky Bluegrass
XIII-9. (**102**) Kiwifruit - Home Garden
V-19. (**154**) Lettuce, fresh market
V-20. (**142**) Lima Beans
II-19. (**033**) Lupine
XIII-10. (**103**) Muscadine - Home Garden
V-21. (**151**) Mustard, fresh market
XIII-11. (**104**) Nectarines - Home Garden
IV-10. (**119**) Nectarines (bearing)
IV-11. (**122**) Nectarines (non-bearing)
V-22. (**170**) Okra
IV-21. (**OLV**) Olives
V-23. (**171**) Onions (green bunching)
V-24. (**172**) Onions (mature and dry)
V-25. (**169**) Onions (plantbed)
II-21. (**041**) Orchard Grass Pasture
XII-7. (**085**) Ornamental Trees
VII-6. (**885**) Ornamental Trees (commercial)
V-26. (**166**) Parsley
XIII-12. (**105**) Peaches - Home Garden
IV-12. (**120**) Peaches (bearing)
IV-13. (**123**) Peaches (non-bearing)
I-11. (**010**) Peanuts
XIII-13. (**107**) Pears - Home Garden
IV-14. (**116**) Pears (bearing)
IV-15. (**118**) Pears (non-bearing)
IV-16. (**125**) Pecans
XIII-14. (**109**) Pecans (bearing) - Home Garden
XIII-15. (**108**) Pecans (young trees) - Home Garden
V-27. (**175**) Pepper (Bell and Pimento)
V-28. (**176**) Pepper Transplants
XII-8. (**088**) Perennial Flowers
VII-7. (**888**) Perennial Flowers (commercial)
II-22. (**051**) Perennial Peanuts
III-9. (**069**) Pine Plantation - Establishment
III-10. (**070**) Pine Plantation - Maintenance
III-11. (**068**) Pine Seedling Nursery
XIII-16. (**106**) Plums - Home Garden
IV-17. (**121**) Plums (bearing)
IV-18. (**124**) Plums (non-bearing)
V-29. (**143**) Pole Beans
V-30. (**162**) Pumpkin
V-31. (**167**) Radishes
XIII-17. (**097**) Raspberries - Home Garden
IV-19. (**132**) Raspberries (commercial)
XII-9. (**081**) Rhododendrons
VII-8. (**881**) Rhododendrons (commercial)
V-32. (**168**) Rhubarb
XI-2. (**066**) Roadside Turf - Establishment
XI-3. (**067**) Roadside Turf - Maintenance
XII-10. (**090**) Roses
VII-9. (**890**) Roses (commercial)
VIII-7. (**060**) Ryegrass for Overseeding Lawns
VIII-8. (**SSP**) Seashore Paspalum
II-23. (**048**) Sericea
XII-11. (**086**) Shade Trees
VII-10. (**886**) Shade Trees (commercial)
I-12. (**013**) Small Grain - Barley
I-13. (**012**) Small Grain - Oats
I-14. (**014**) Small Grain - Rye for Seed Production or Cover Crop
I-15. (**011**) Small Grain - Wheat
I-16. (**711**) Small Grain Silage
V-33. (**141**) Snap Beans
VI-1. (**769**) Sod Production Centipede
VI-2. (**768**) Sod Production Hybrid Bermudas
VI-3. (**771**) Sod Production St. Augustine
VI-4. (**772**) Sod Production Tall Fescue
VI-5. (**770**) Sod Production Zoysia
I-17. (**004**) Sorghum Silage
II-24. (**044**) Sorghum Sudan Hybrids
V-34. (**174**) Southern Peas
I-18. (**017**) Soybeans
V-35. (**152**) Spinach, fresh market
XII-12. (**091**) Spring Flowering Bulbs
VII-11. (**891**) Spring Flowering Bulbs (commercial)
V-36. (**161**) Squash
VIII-9. (**055**) St. Augustine Lawn

V-37. (**181**) Staked Tomatoes
XIII-18. (**110**) Strawberries - Home Garden
IV-20. (**130**) Strawberries-Plasticulture
II-25. (**031**) Subterranean Clover
I-19. (**008**) Sugar Cane
XII-13. (**089**) Summer Bulbs
VII-12. (**889**) Summer Bulbs (commercial)
XIV-10. (**W02**) Summer Deer Mix (Grass only)
XIV-11. (**W01**) Summer Deer Mix (Legume only)
XIV-12. (**W03**) Summer Deer Mix (Legumes and Grass)
II-26. (**049**) Summer Perennials Overseeded in Fall
I-20. (**009**) Sunflower
V-38. (**158**) Sweet Corn
V-39. (**178**) Sweet Potatoes
I-21. (**007**) Sweet Sorghum
II-31. (**SGB**) Switchgrass and other native grasses-Biomass and forage
II-32. (**SGW**) Switchgrass and other native grasses-Wildlife
VIII-10. (**058**) Tall Fescue Lawn
II-27. (**050**) Temporary Winter Grazing
I-22. (**019**) Tobacco (Average Pebble Soil)
I-23. (**018**) Tobacco (Low Moisture and Sandy Soils)
I-24. (**020**) Tobacco Plant Bed
V-40. (**182**) Tomato Transplants
I-28. (**TRU**) Truffles
V-41. (**153**) Turnips, fresh market
II-28. (**034**) Vetch
V-42. (**163**) Watermelon
I-25. (**015**) Wheat - Grain Sorghum Rotation
I-26. (**016**) Wheat - Soybean Rotation
II-29. (**741**) White Clover
XIV-13. (**191**) Wildlife Plots - Chufa
XIV-14. (**190**) Wildlife Plots - Temporary Winter Grazing
IV-22. (**WGP**) Wine Grapes
VIII-11. (**056**) Zoysia Lawn

FIELD CROPS

David E. Kissel, Director – Agricultural & Environmental Services Laboratories
Glendon Harris, Extension Agronomist – Soils & Fertilizer

Canola Spring Type (*Code* #701)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-100	*-80-60	*-80-40	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-100	*-60-60	*-60-40	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-100	*-30-60	*-30-40	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-60	*-0-40	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	160 pounds nitrogen (N) per acre. Rate will depend upon cropping system.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) and boron (B) recommendations below.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

*For canola grown on sandy soils and following a non-legume crop, apply 160 pounds nitrogen (N) per acre. To improve nitrogen efficiency on these soils, apply nitrogen as follows: 40 pounds nitrogen per acre at planting, 40 pounds nitrogen per acre 45 days after planting, and 80 pounds nitrogen per acre just prior to crop bolt (rapid stem elongation).

For canola following a legume, such as peanuts or soybeans, reduce the amount of nitrogen applied at planting to 20 pounds nitrogen per acre.

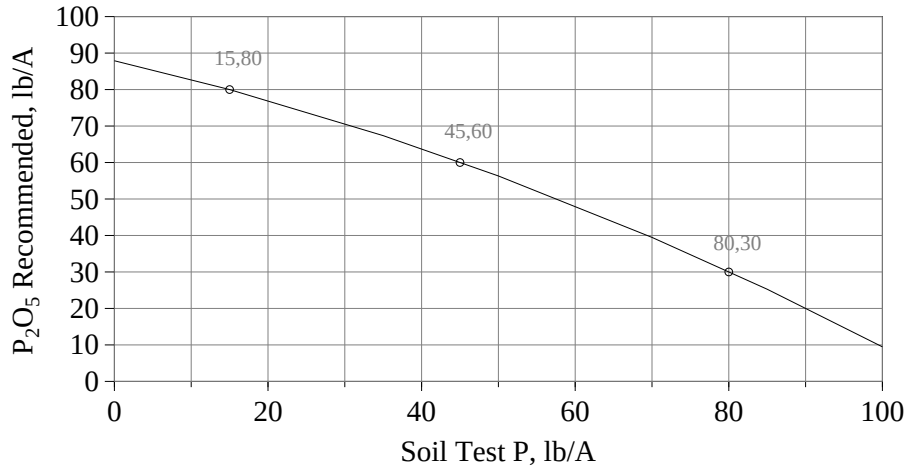
On deep sandy soils or where sulfur (S) deficiency is likely, apply 10 pounds of sulfur (S) per acre with the spring nitrogen application.

On soils testing low in boron (B) or on deep sandy soils where boron deficiency is likely, apply 1 pound of boron (B) per acre with the preplant fertilizer.

Canola Spring Type (*Code 701*)

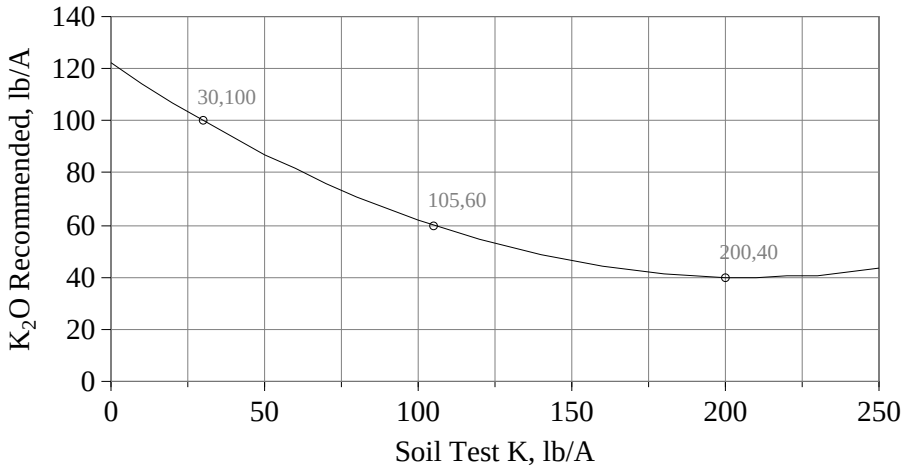
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



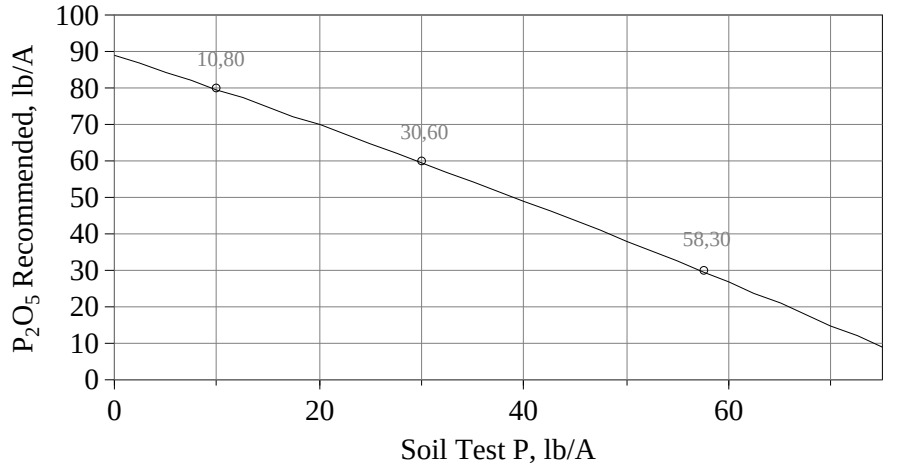
K Recommendations, Coastal Plain

$K_2O = 122 - 0.790K + 0.00190K^2$



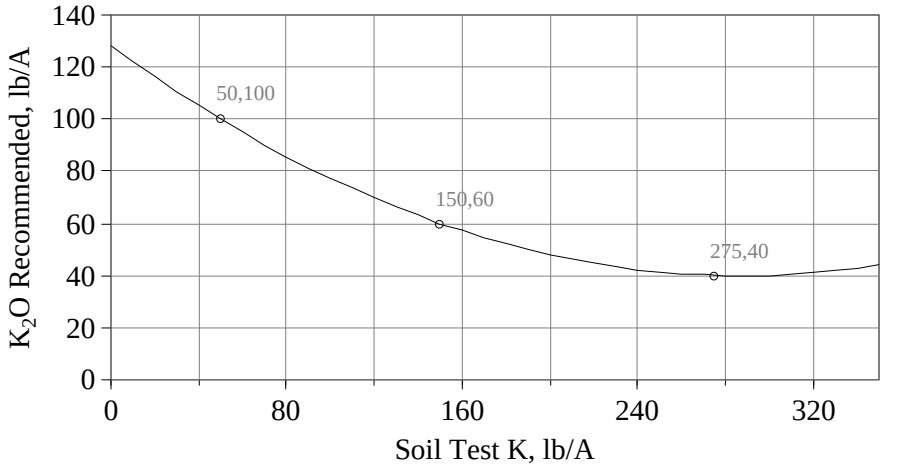
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.614K + 0.00107K^2$



Canola Winter Type (*Code* #702)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-100	*-80-60	*-80-40	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-100	*-60-60	*-60-40	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-100	*-30-60	*-30-40	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-60	*-0-40	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	135-175 pounds nitrogen (N) per acre. Rate will depend upon cropping system.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) and boron (B) recommendations below.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

*For canola following a non-legume crop, apply 160 to 175 pounds nitrogen (N) per acre. Following a legume crop, apply 135 to 150 pounds nitrogen per acre. Apply 40 to 50 pounds of the recommended nitrogen per acre in the fall and the remainder in early February prior to crop bolt (rapid stem elongation).

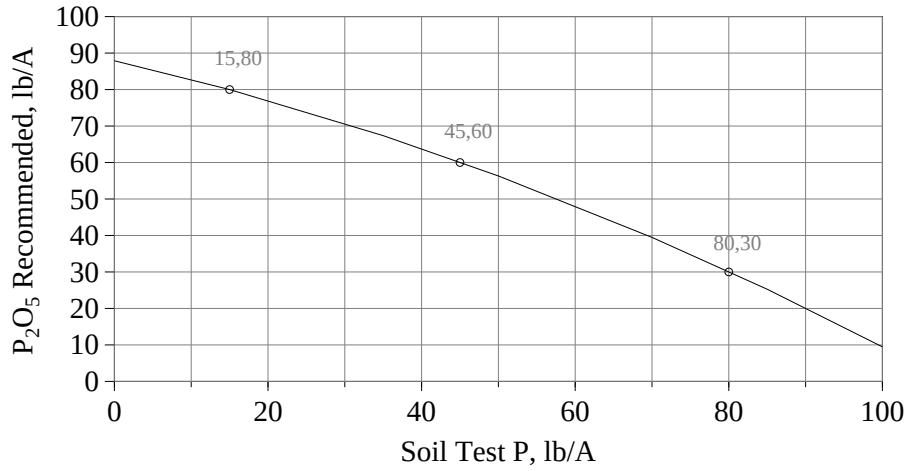
On soils where sulfur deficiency is likely, apply 10 pounds of sulfur (S) per acre with the sidedress nitrogen.

On soils testing low in boron (B), apply 1 pound of boron (B) per acre with the preplant fertilizer.

Canola Winter Type (*Code 702*)

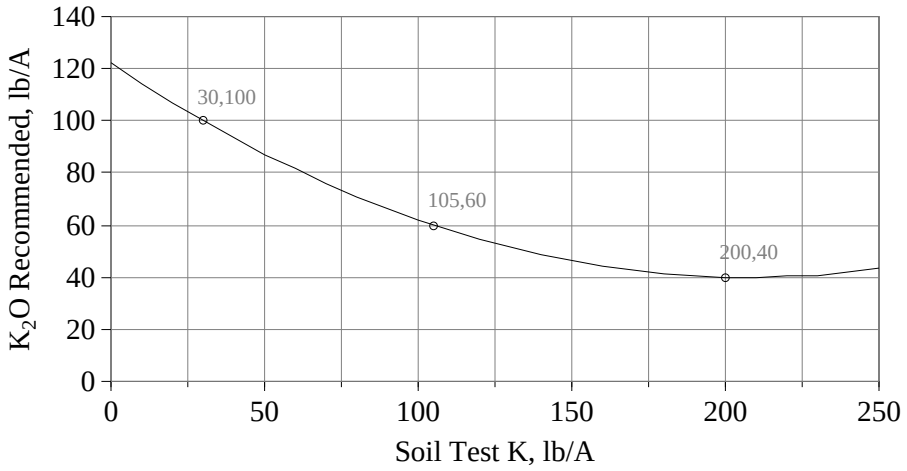
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



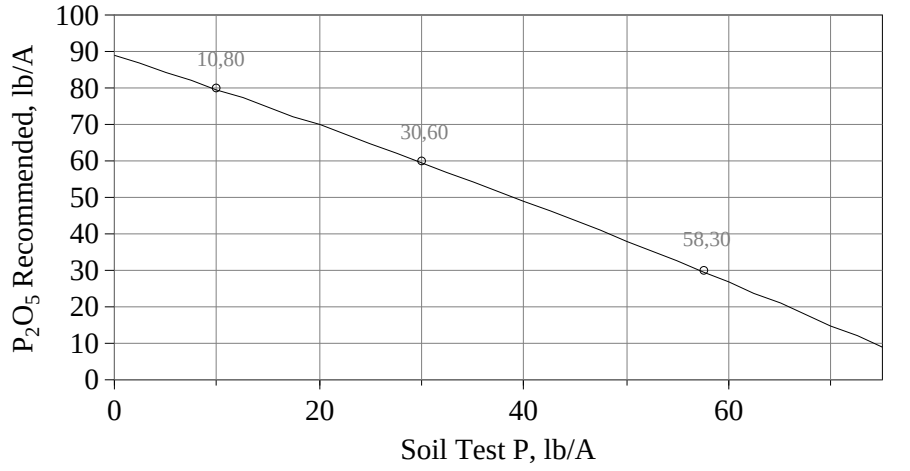
K Recommendations, Coastal Plain

$K_2O = 122 - 0.790K + 0.00190K^2$



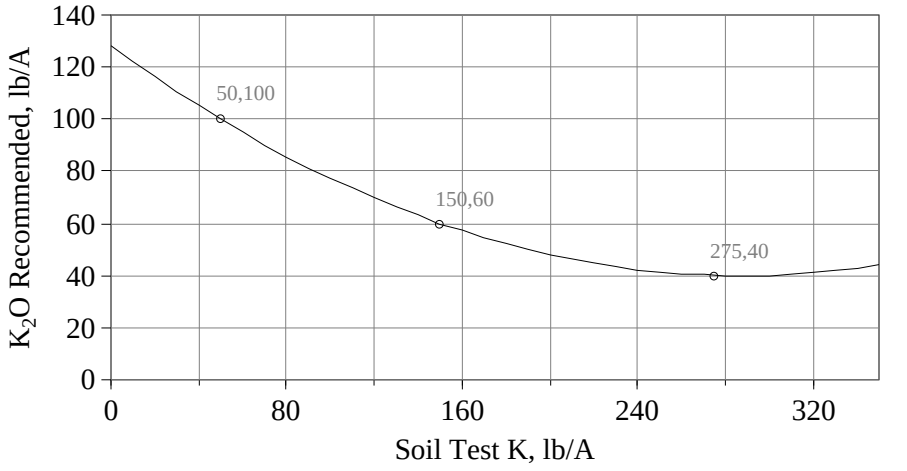
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.614K + 0.00107K^2$



Corn (for Grain) Dryland (*Code* #001)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	120-80-80	120-80-40	120-80-20	120-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	120-45-80	120-45-40	120-45-20	120-45-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	120-20-80	120-20-40	120-20-20	120-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	120-0-80	120-0-40	120-0-20	120-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	120 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

The recommendations given are for an expected corn grain yield of 100 bushels per acre. For expected yields in excess of 100 bushels per acre, increase the nitrogen (N) rate 12 pounds per acre, the phosphate (P_2O_5) rate 4 pounds per acre, and the potash (K_2O) rate 8 pounds per acre for every 10-bushel increment over 100 bushels per acre.

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Split the nitrogen applications, applying one-fourth to one-third of the nitrogen prior to or at planting and the remainder as a sidedress application when the corn is 18 to 24 inches high.

For new ground soils testing low in phosphorus (P), double the recommended rate of phosphate.

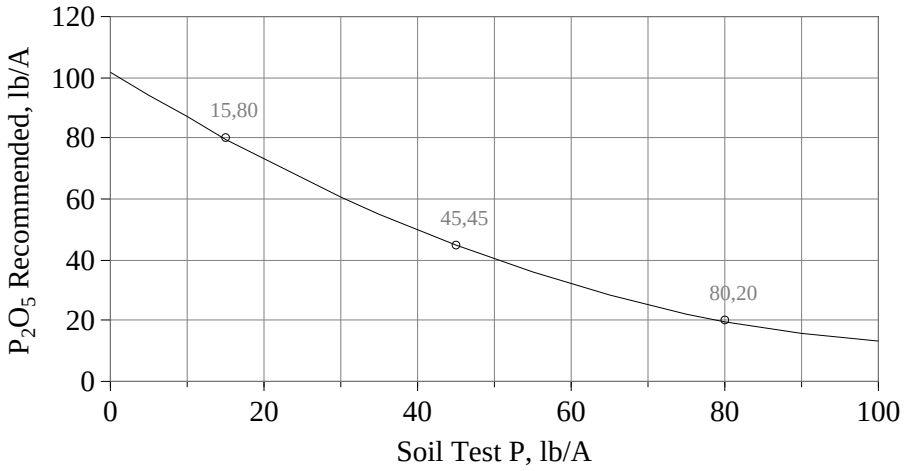
For early planted corn, apply a starter fertilizer at a rate to supply 10 to 20 pounds nitrogen per acre and 30 to 60 pounds phosphate per acre.

The applied fertilizer should contain sufficient sulfur (S) to supply 10 pounds sulfur per acre.

Corn (for Grain) Dryland (*Code 001*)

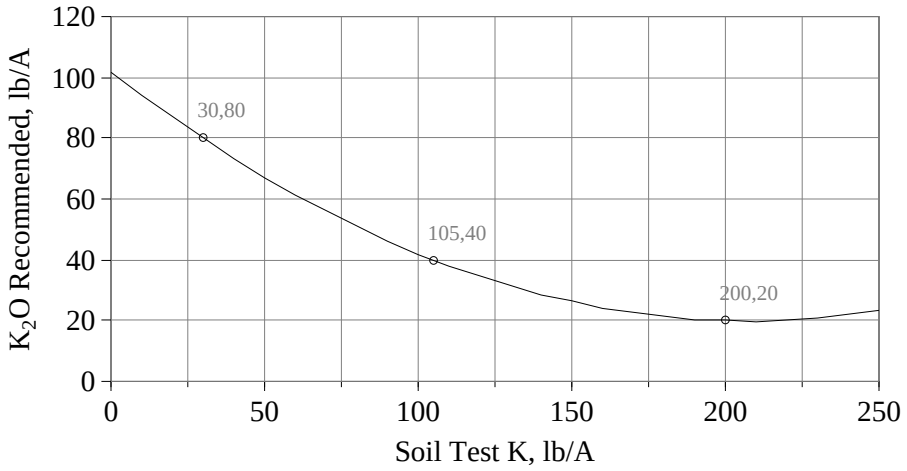
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.584P + 0.00696P^2$



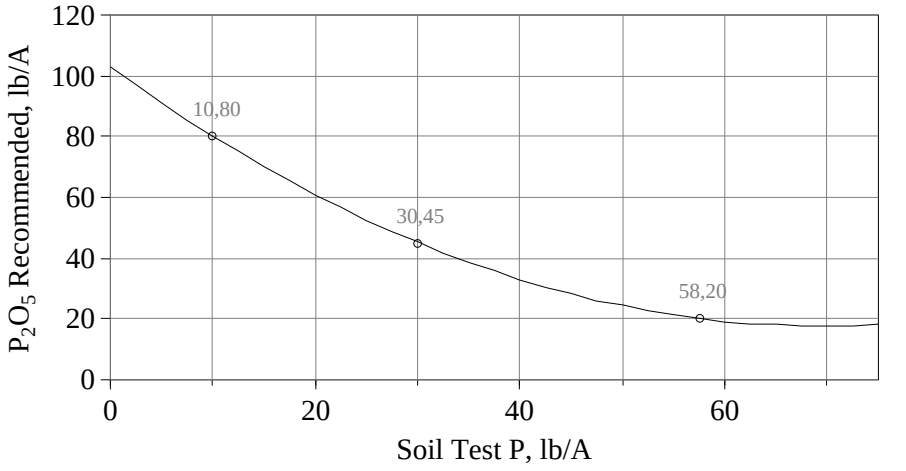
K Recommendations, Coastal Plain

$K_2O = 102 - 0.790K + 0.00190K^2$



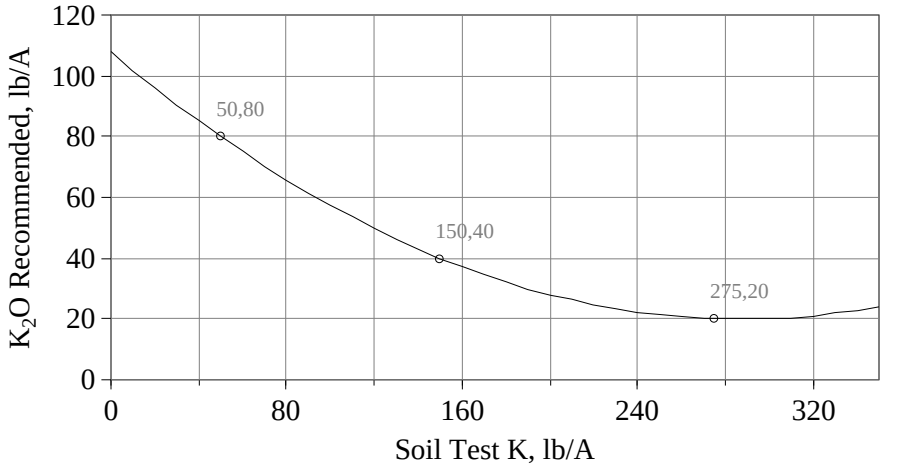
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.458P + 0.01770P^2$



K Recommendations, Piedmont

$K_2O = 108 - 0.614K + 0.00107K^2$



Corn (for Grain) Irrigated 150 bu/a (*Code* #002)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	180-110-130	180-110-90	180-110-70	180-110-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	180-90-130	180-90-90	180-90-70	180-90-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	180-70-130	180-70-90	180-70-70	180-70-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	180-0-130	180-0-90	180-0-70	180-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	180 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Split the nitrogen applications, applying one-fourth to one-third of the nitrogen prior to or at planting and the remainder as a sidedress application when the corn is 18 to 24 inches high; or apply the remainder of the nitrogen through the irrigation system in 3 to 4 equal applications at 7 to 10 day intervals, beginning at the 6 leaf stage.

For new ground testing low in phosphorus (P), double the recommended rate of phosphate.

For early planted corn, apply a starter fertilizer at a rate to supply 10 to 20 pounds nitrogen per acre and 30 to 60 pounds phosphate per acre.

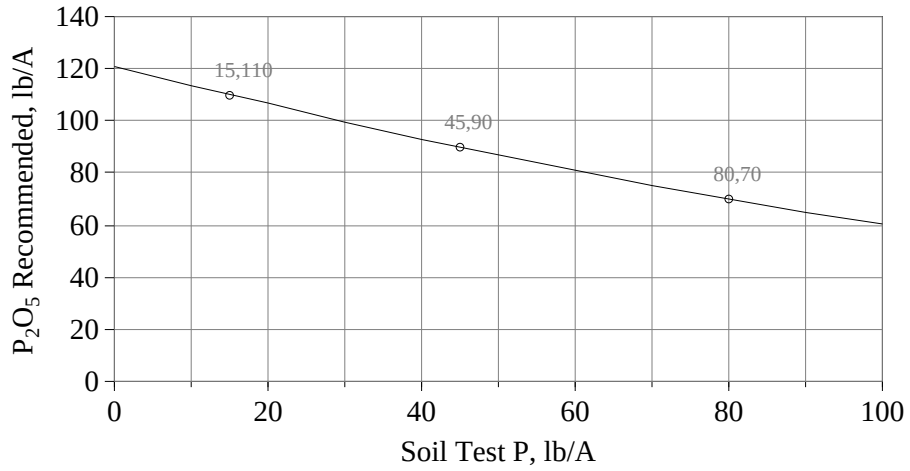
The applied fertilizer should contain sufficient sulfur (S) to supply 15 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Use plant analysis to monitor the nutrient status of the plants. If any are found to be low they can be applied to the crop as a sidedress, foliar application or through the irrigation system. Contact your local county agent for additional information.

Corn (for Grain) Irrigated 150 bu/a (*Code 002*)

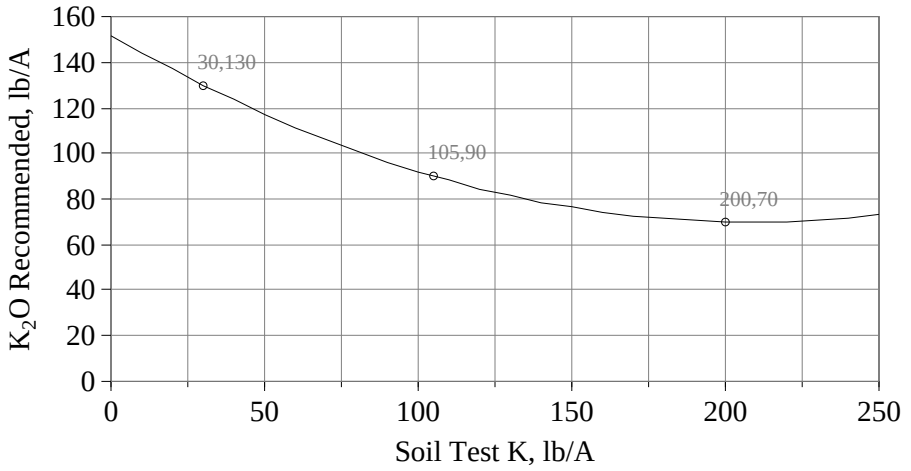
P Recommendations, Coastal Plain

$P_2O_5 = 121 - 0.755P + 0.00147P^2$



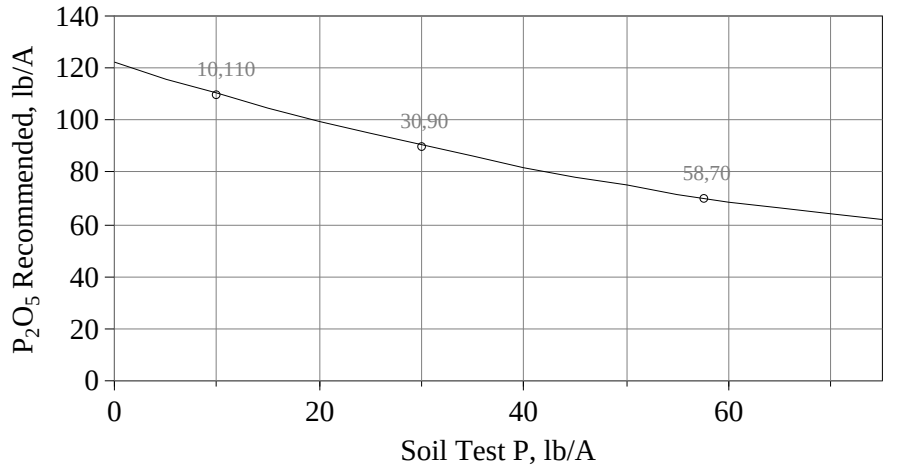
K Recommendations, Coastal Plain

$K_2O = 152 - 0.790K + 0.00190K^2$



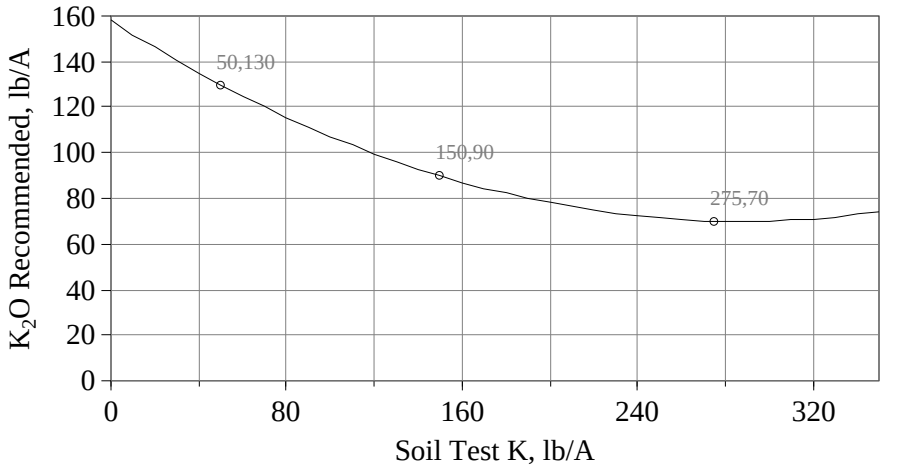
P Recommendations, Piedmont

$P_2O_5 = 122 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 158 - 0.614K + 0.00107K^2$



Irrigated Corn Silage (*Code* #003)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-140-240	*-140-190	*-140-130	*-140-100
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-105-240	*-105-190	*-105-130	*-105-100
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-75-240	*-75-190	*-75-130	*-75-100
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-240	*-0-190	*-0-130	*-0-100

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Fact Sheet:

Nitrogen can be applied from 180 to 260 pounds N per acre for expected yields of 20 to 30 tons silage yield per acre. Split the nitrogen (N) applications, applying one-fourth to one-third prior to or at planting and the remainder when the crop is 18 to 24 inches high.

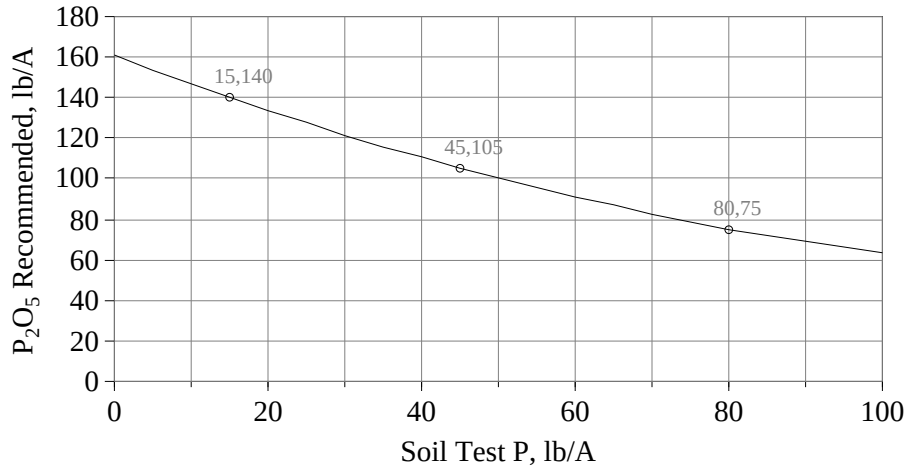
Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

The applied fertilizer should contain sufficient sulfur (S) to supply 20 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Irrigated Corn Silage (*Code 003*)

P Recommendations, Coastal Plain

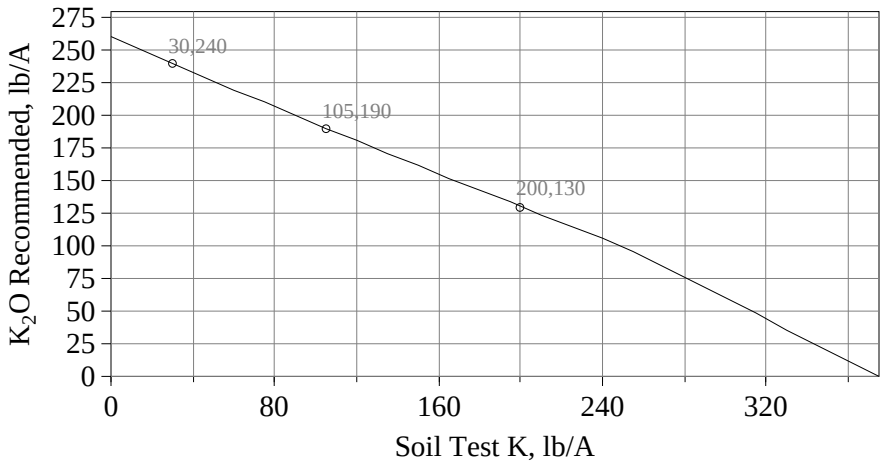
$P_2O_5 = 161 - 1.452P + 0.00476P^2$



K Recommendations, Coastal Plain

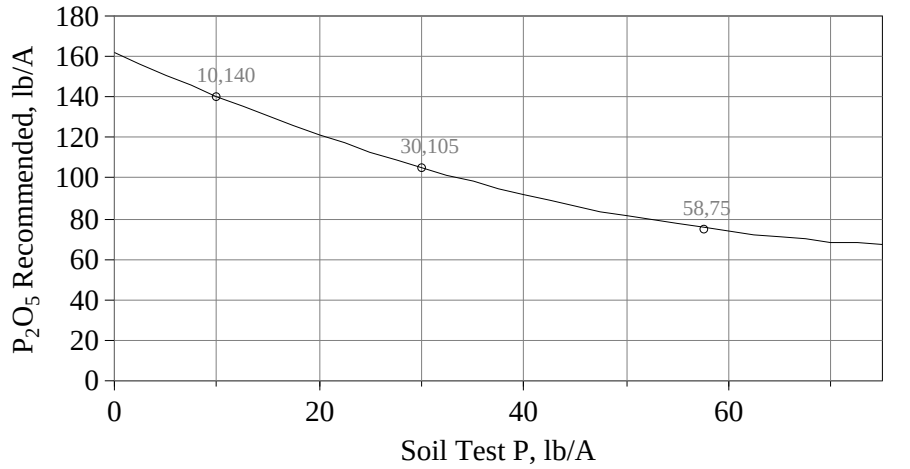
if ($K < 250$) $K_2O = 261 - 0.695K + 0.00021K^2$

if ($K \geq 250$) $K_2O = 300 - 0.80K$



P Recommendations, Piedmont

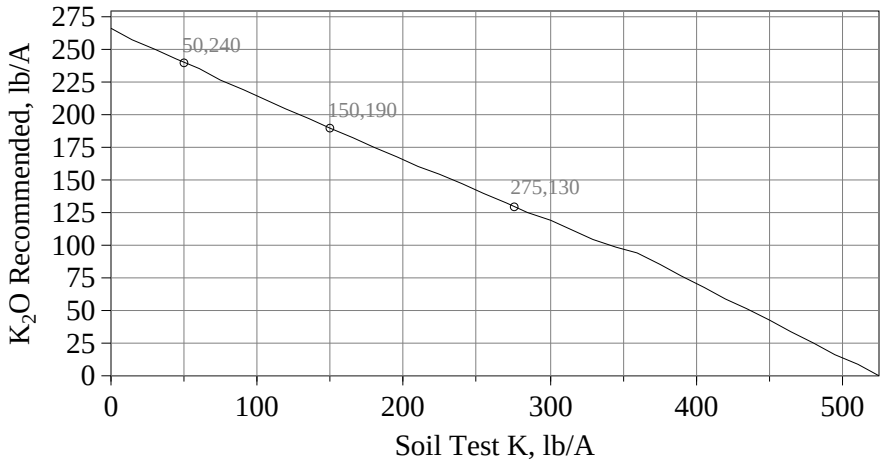
$P_2O_5 = 162 - 2.305P + 0.01388P^2$



K Recommendations, Piedmont

if ($K < 350$) $K_2O = 266 - 0.518K + 0.00009K^2$

if ($K \geq 350$) $K_2O = 299 - 0.57K$



Cotton - 750 lbs yield goal (*Code* #500)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-100-100	60-100-50	60-100-0	60-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-50-100	60-50-50	60-50-0	60-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-0-100	60-0-50	60-0-0	60-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-0-100	60-0-50	60-0-0	60-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	See boron (B) recommendations on Fact Sheet.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Yield Goals: Yield goals should be realistic and based on history of production. The 1250 and 1500 pound lint yield goals assume irrigation.

Lime: Liming to the target soil pH of 6.0 is critical for proper uptake and utilization of essential nutrients and reducing toxic elements such as aluminum.

Nitrogen: Peak demand for nitrogen (N) occurs around the fourth week of bloom; therefore, split the recommended rate with one-fourth to one-third at planting and the remainder as a sidedress between first square and first bloom. On deep sands (more than 18 inches to clay) increase the total to 120 pounds nitrogen with one-third at planting, one-third at first square, and one-third at first bloom. For other soils, with a history of inadequate stalk size or when following a cotton crop increase the recommended rate by 25% not to exceed 120 pound nitrogen. For rates above 100 pounds nitrogen cotton should be highly managed in terms of insect control, growth regulation, and boron applications. Reduce the nitrogen rate by 20 to 30 pound when following soybeans, peanuts, or a good stand of legume cover crops like clover or vetch. If there is a history of excessive cotton stalk size reduce the nitrogen rate by 25%.

Phosphorus: The entire phosphorus (P) recommendation should be applied at or before planting because this element is both immobile in soil and important to seedling root growth. Depending on soil test level, all or part of the phosphorus requirement can be applied with granular or liquid starter fertilizer on a 2 inch to the side and 2 inch deep placement. On new ground low in phosphorus, double the phosphate recommendation.

Potassium: Peak demand for potassium (K) occurs around the fourth week of bloom. Potassium is relatively mobile in soil, especially sandy soils; therefore, split applications (half at planting and half with nitrogen sidedressing) should be considered where convenient and economical. Foliar potassium sprays may also be considered on deep sands, where potassium deficiency has occurred previously or under high-yield conditions. For cotton following hay, pasture or soybeans, increase the recommendation by 40 to 50 pound potash on low or medium testing soils.

Secondary Nutrients: Adequate amounts of calcium and magnesium can be supplied with a good liming program that includes dolomitic lime. If needed, additional calcium can be supplied with gypsum and additional magnesium with magnesium sulfate, potassium-magnesium-sulfate or similar materials. Sulfur (S) fertilization is most critical on sandy soils.

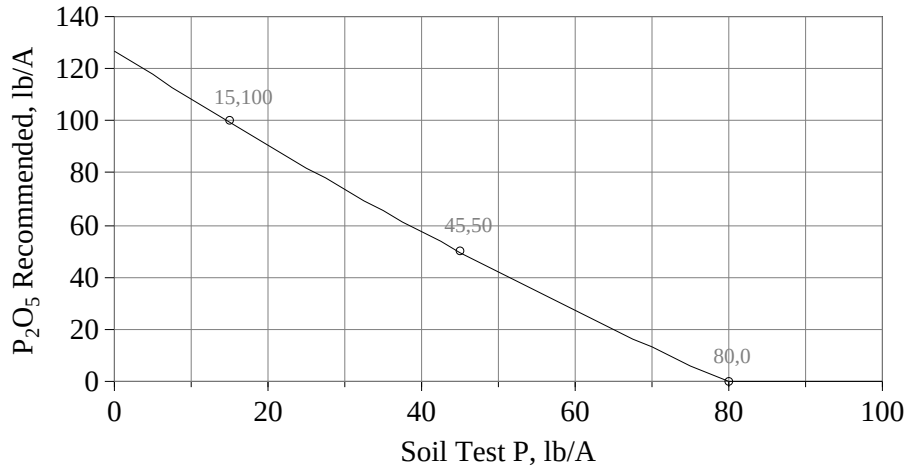
Micronutrients: Boron (B) can be efficiently applied in two applications of 0.25 pound boron tank-mixed with insecticide or growth regulator sprays. Foliar applications of more than 0.5 pound boron in a single application may cause burn. Cumulative applications exceeding 2.0 pound boron may reduce yield. Leaf blade analysis should be used to confirm any other suspected micronutrient deficiency before making a corrective treatment.

Petiole and Leaf Blade Analysis: Petiole analysis can be used to monitor nitrogen, phosphorus and potassium during the season for making in-season adjustments of these elements. Leaf blade analysis can also be used to determine the nutrient status of cotton prior to bloom or for troubleshooting anytime during the season.

Cotton - 750 lbs yield goal (*Code 500*)

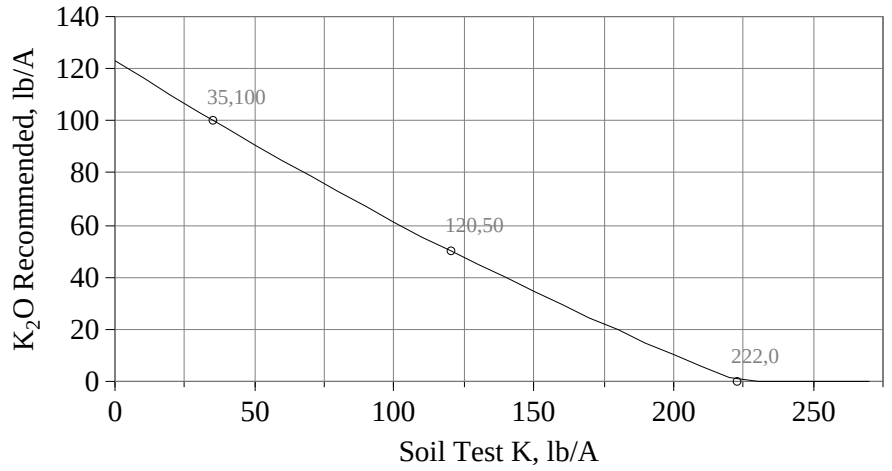
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



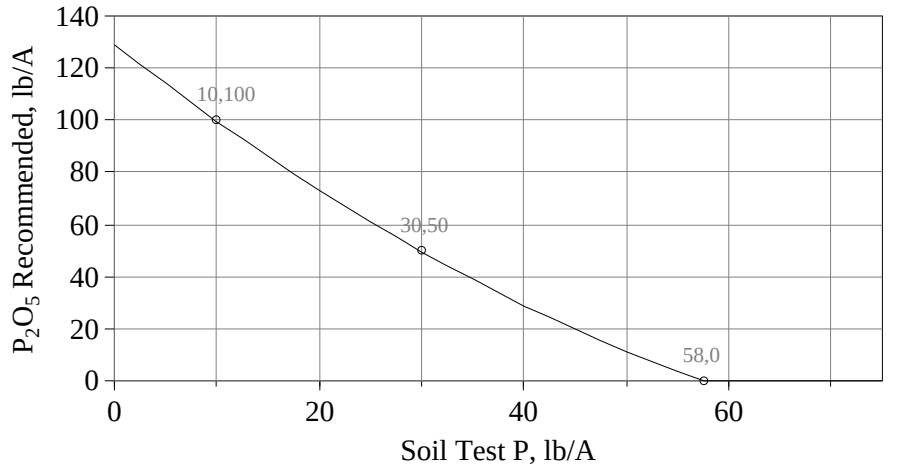
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



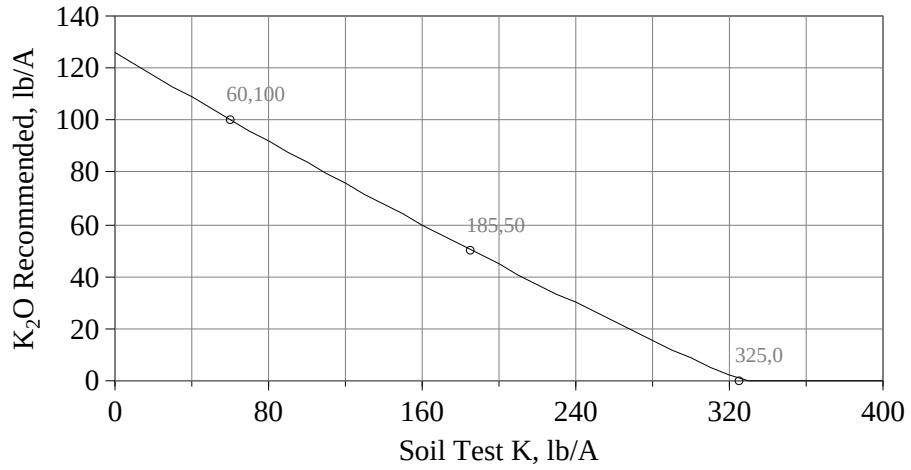
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Cotton - 1000 lbs yield goal (*Code* #501)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	75-115-110	75-115-60	75-115-0	75-115-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	75-60-110	75-60-60	75-60-0	75-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	75-0-110	75-0-60	75-0-0	75-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	75-0-110	75-0-60	75-0-0	75-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	75 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	See boron (B) recommendations on Fact Sheet.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Yield Goals: Yield goals should be realistic and based on history of production. The 1250 and 1500 pound lint yield goals assume irrigation.

Lime: Liming to the target soil pH of 6.0 is critical for proper uptake and utilization of essential nutrients and reducing toxic elements such as aluminum.

Nitrogen: Peak demand for nitrogen (N) occurs around the fourth week of bloom; therefore, split the recommended rate with one-fourth to one-third at planting and the remainder as a sidedress between first square and first bloom. On deep sands (more than 18 inches to clay) increase the total to 120 pounds nitrogen with one-third at planting, one-third at first square, and one-third at first bloom. For other soils, with a history of inadequate stalk size or when following a cotton crop increase the recommended rate by 25% not to exceed 120 pound nitrogen. For rates above 100 pounds nitrogen cotton should be highly managed in terms of insect control, growth regulation, and boron applications. Reduce the nitrogen rate by 20 to 30 pound when following soybeans, peanuts, or a good stand of legume cover crops like clover or vetch. If there is a history of excessive cotton stalk size reduce the nitrogen rate by 25%.

Phosphorus: The entire phosphorus (P) recommendation should be applied at or before planting because this element is both immobile in soil and important to seedling root growth. Depending on soil test level, all or part of the phosphorus requirement can be applied with granular or liquid starter fertilizer on a 2 inch to the side and 2 inch deep placement. On new ground low in phosphorus, double the phosphate recommendation.

Potassium: Peak demand for potassium (K) occurs around the fourth week of bloom. Potassium is relatively mobile in soil, especially sandy soils; therefore, split applications (half at planting and half with nitrogen sidedressing) should be considered where convenient and economical. Foliar potassium sprays may also be considered on deep sands, where potassium deficiency has occurred previously or under high-yield conditions. For cotton following hay, pasture or soybeans, increase the recommendation by 40 to 50 pound potash on low or medium testing soils.

Secondary Nutrients: Adequate amounts of calcium and magnesium can be supplied with a good liming program that includes dolomitic lime. If needed, additional calcium can be supplied with gypsum and additional magnesium with magnesium sulfate, potassium-magnesium-sulfate or similar materials. Sulfur (S) fertilization is most critical on sandy soils.

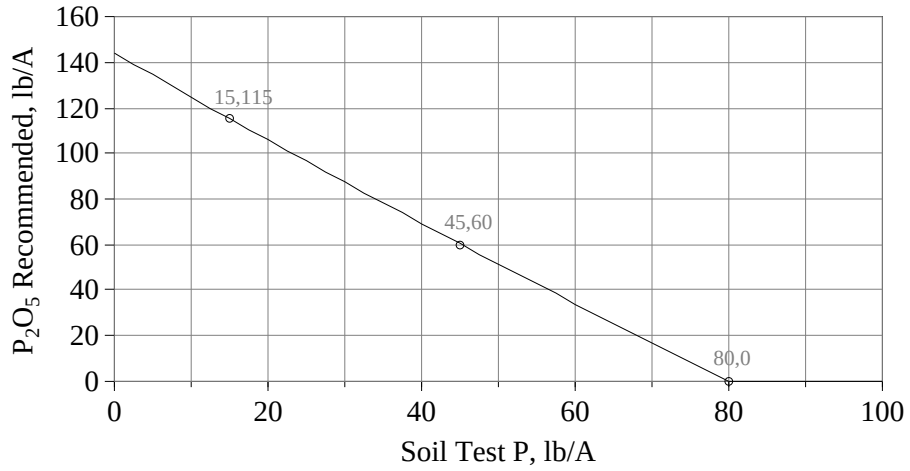
Micronutrients: Boron (B) can be efficiently applied in two applications of 0.25 pound boron tank-mixed with insecticide or growth regulator sprays. Foliar applications of more than 0.5 pound boron in a single application may cause burn. Cumulative applications exceeding 2.0 pound boron may reduce yield. Leaf blade analysis should be used to confirm any other suspected micronutrient deficiency before making a corrective treatment.

Petiole and Leaf Blade Analysis: Petiole analysis can be used to monitor nitrogen, phosphorus and potassium during the season for making in-season adjustments of these elements. Leaf blade analysis can also be used to determine the nutrient status of cotton prior to bloom or for troubleshooting anytime during the season.

Cotton - 1000 lbs yield goal (*Code 501*)

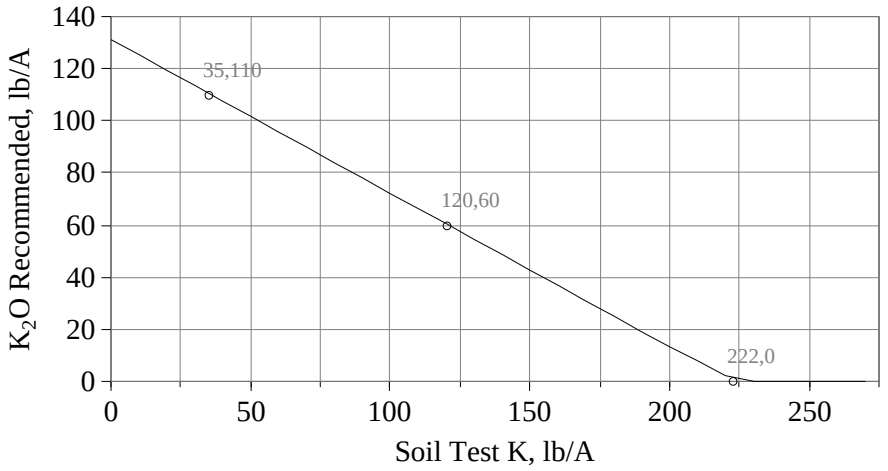
P Recommendations, Coastal Plain

$P_2O_5 = 144 - 1.943P + 0.00183P^2$



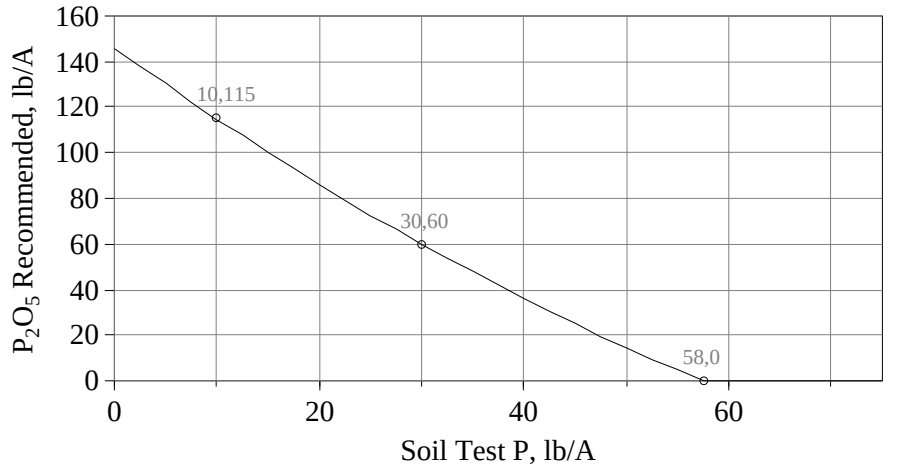
K Recommendations, Coastal Plain

$K_2O = 131 - 0.591K + 0.00002K^2$



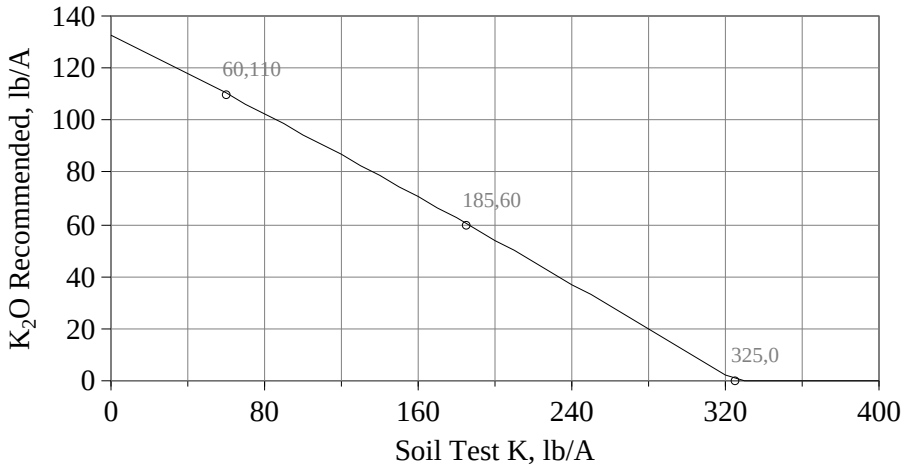
P Recommendations, Piedmont

$P_2O_5 = 146 - 3.228P + 0.01196P^2$



K Recommendations, Piedmont

$K_2O = 133 - 0.373K - 0.00011K^2$



Cotton - 1250 lbs yield goal (*Code* #502)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	90-130-130	90-130-70	90-130-0	90-130-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	90-70-130	90-70-70	90-70-0	90-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	90-0-130	90-0-70	90-0-0	90-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	90-0-130	90-0-70	90-0-0	90-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	90 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	See boron (B) recommendations on Fact Sheet.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Yield Goals: Yield goals should be realistic and based on history of production. The 1250 and 1500 pound lint yield goals assume irrigation.

Lime: Liming to the target soil pH of 6.0 is critical for proper uptake and utilization of essential nutrients and reducing toxic elements such as aluminum.

Nitrogen: Peak demand for nitrogen (N) occurs around the fourth week of bloom; therefore, split the recommended rate with one-fourth to one-third at planting and the remainder as a sidedress between first square and first bloom. On deep sands (more than 18 inches to clay) increase the total to 120 pounds nitrogen with one-third at planting, one-third at first square, and one-third at first bloom. For other soils, with a history of inadequate stalk size or when following a cotton crop increase the recommended rate by 25% not to exceed 120 pound nitrogen. For rates above 100 pounds nitrogen cotton should be highly managed in terms of insect control, growth regulation, and boron applications. Reduce the nitrogen rate by 20 to 30 pound when following soybeans, peanuts, or a good stand of legume cover crops like clover or vetch. If there is a history of excessive cotton stalk size reduce the nitrogen rate by 25%.

Phosphorus: The entire phosphorus (P) recommendation should be applied at or before planting because this element is both immobile in soil and important to seedling root growth. Depending on soil test level, all or part of the phosphorus requirement can be applied with granular or liquid starter fertilizer on a 2 inch to the side and 2 inch deep placement. On new ground low in phosphorus, double the phosphate recommendation.

Potassium: Peak demand for potassium (K) occurs around the fourth week of bloom. Potassium is relatively mobile in soil, especially sandy soils; therefore, split applications (half at planting and half with nitrogen sidedressing) should be considered where convenient and economical. Foliar potassium sprays may also be considered on deep sands, where potassium deficiency has occurred previously or under high-yield conditions. For cotton following hay, pasture or soybeans, increase the recommendation by 40 to 50 pound potash on low or medium testing soils.

Secondary Nutrients: Adequate amounts of calcium and magnesium can be supplied with a good liming program that includes dolomitic lime. If needed, additional calcium can be supplied with gypsum and additional magnesium with magnesium sulfate, potassium-magnesium-sulfate or similar materials. Sulfur (S) fertilization is most critical on sandy soils.

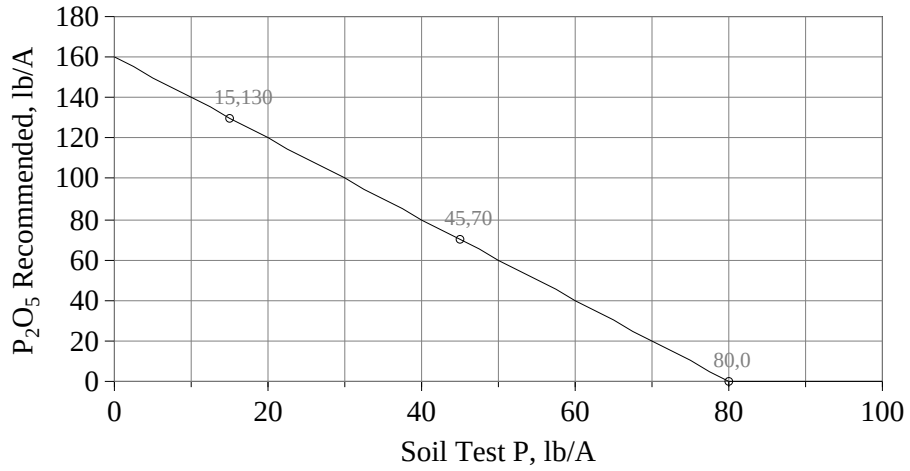
Micronutrients: Boron (B) can be efficiently applied in two applications of 0.25 pound boron tank-mixed with insecticide or growth regulator sprays. Foliar applications of more than 0.5 pound boron in a single application may cause burn. Cumulative applications exceeding 2.0 pound boron may reduce yield. Leaf blade analysis should be used to confirm any other suspected micronutrient deficiency before making a corrective treatment.

Petiole and Leaf Blade Analysis: Petiole analysis can be used to monitor nitrogen, phosphorus and potassium during the season for making in-season adjustments of these elements. Leaf blade analysis can also be used to determine the nutrient status of cotton prior to bloom or for troubleshooting anytime during the season.

Cotton - 1250 lbs yield goal (*Code 502*)

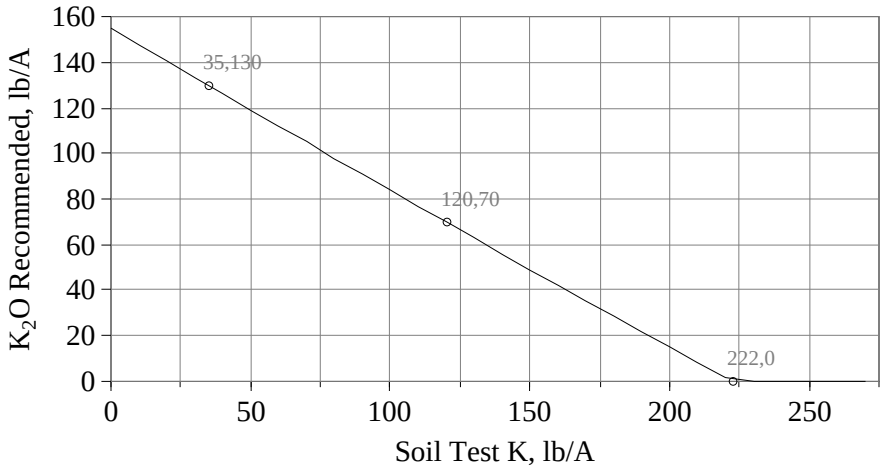
P Recommendations, Coastal Plain

$P_2O_5 = 160 - 2.000P$



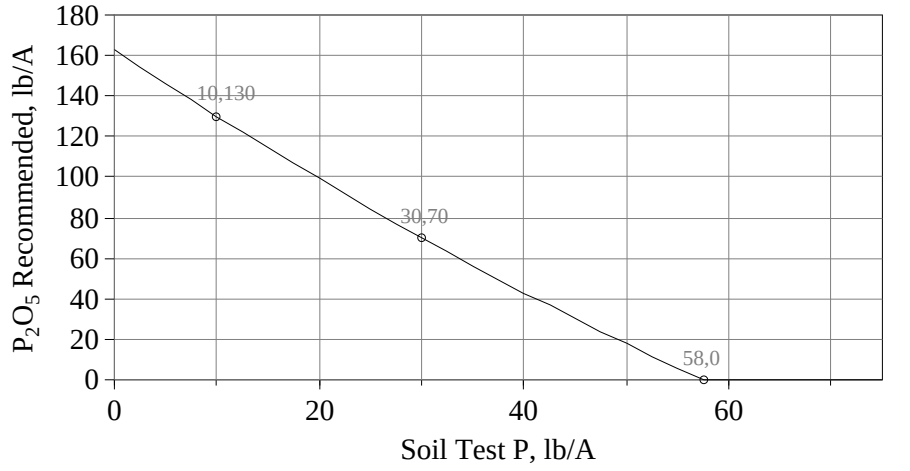
K Recommendations, Coastal Plain

$K_2O = 155 - 0.724K + 0.00012K^2$



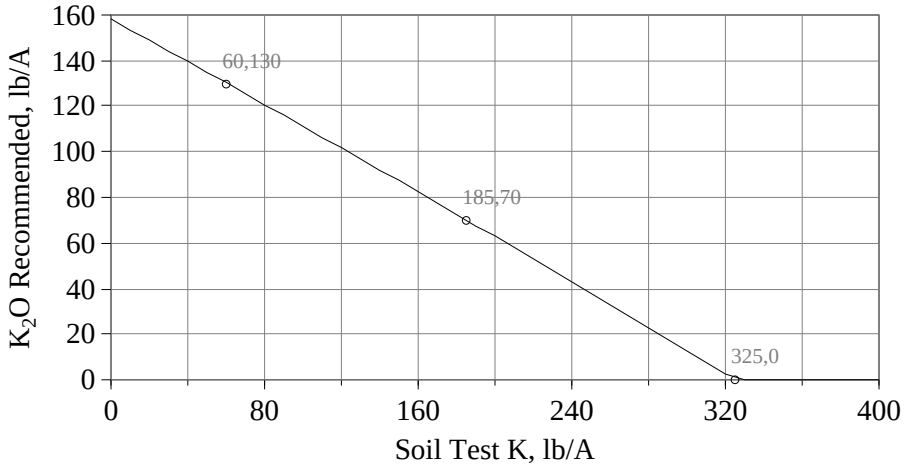
P Recommendations, Piedmont

$P_2O_5 = 163 - 3.383P + 0.00957P^2$



K Recommendations, Piedmont

$K_2O = 158 - 0.460K - 0.00008K^2$



Cotton - 1500 lbs yield goal (*Code* #503)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	105-140-140	105-140-80	105-140-0	105-140-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	105-80-140	105-80-80	105-80-0	105-80-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	105-10-140	105-10-80	105-10-0	105-10-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	105-0-140	105-0-80	105-0-0	105-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	105 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	See boron (B) recommendations on Fact Sheet.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Yield Goals: Yield goals should be realistic and based on history of production. The 1250 and 1500 pound lint yield goals assume irrigation.

Lime: Liming to the target soil pH of 6.0 is critical for proper uptake and utilization of essential nutrients and reducing toxic elements such as aluminum.

Nitrogen: Peak demand for nitrogen (N) occurs around the fourth week of bloom; therefore, split the recommended rate with one-fourth to one-third at planting and the remainder as a sidedress between first square and first bloom. On deep sands (more than 18 inches to clay) increase the total to 120 pounds nitrogen with one-third at planting, one-third at first square, and one-third at first bloom. For other soils, with a history of inadequate stalk size or when following a cotton crop increase the recommended rate by 25% not to exceed 120 pound nitrogen. For rates above 100 pounds nitrogen cotton should be highly managed in terms of insect control, growth regulation, and boron applications. Reduce the nitrogen rate by 20 to 30 pound when following soybeans, peanuts, or a good stand of legume cover crops like clover or vetch. If there is a history of excessive cotton stalk size reduce the nitrogen rate by 25%.

Phosphorus: The entire phosphorus (P) recommendation should be applied at or before planting because this element is both immobile in soil and important to seedling root growth. Depending on soil test level, all or part of the phosphorus requirement can be applied with granular or liquid starter fertilizer on a 2 inch to the side and 2 inch deep placement. On new ground low in phosphorus, double the phosphate recommendation.

Potassium: Peak demand for potassium (K) occurs around the fourth week of bloom. Potassium is relatively mobile in soil, especially sandy soils; therefore, split applications (half at planting and half with nitrogen sidedressing) should be considered where convenient and economical. Foliar potassium sprays may also be considered on deep sands, where potassium deficiency has occurred previously or under high-yield conditions. For cotton following hay, pasture or soybeans, increase the recommendation by 40 to 50 pound potash on low or medium testing soils.

Secondary Nutrients: Adequate amounts of calcium and magnesium can be supplied with a good liming program that includes dolomitic lime. If needed, additional calcium can be supplied with gypsum and additional magnesium with magnesium sulfate, potassium-magnesium-sulfate or similar materials. Sulfur (S) fertilization is most critical on sandy soils.

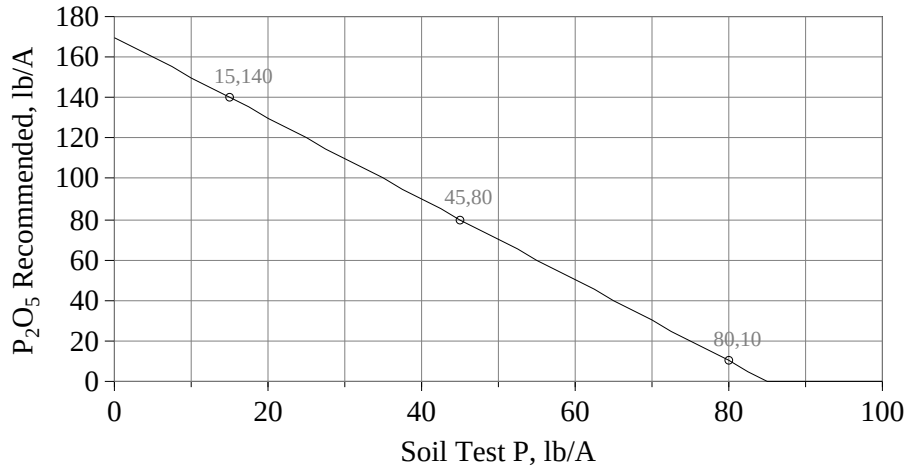
Micronutrients: Boron (B) can be efficiently applied in two applications of 0.25 pound boron tank-mixed with insecticide or growth regulator sprays. Foliar applications of more than 0.5 pound boron in a single application may cause burn. Cumulative applications exceeding 2.0 pound boron may reduce yield. Leaf blade analysis should be used to confirm any other suspected micronutrient deficiency before making a corrective treatment.

Petiole and Leaf Blade Analysis: Petiole analysis can be used to monitor nitrogen, phosphorus and potassium during the season for making in-season adjustments of these elements. Leaf blade analysis can also be used to determine the nutrient status of cotton prior to bloom or for troubleshooting anytime during the season.

Cotton - 1500 lbs yield goal (*Code 503*)

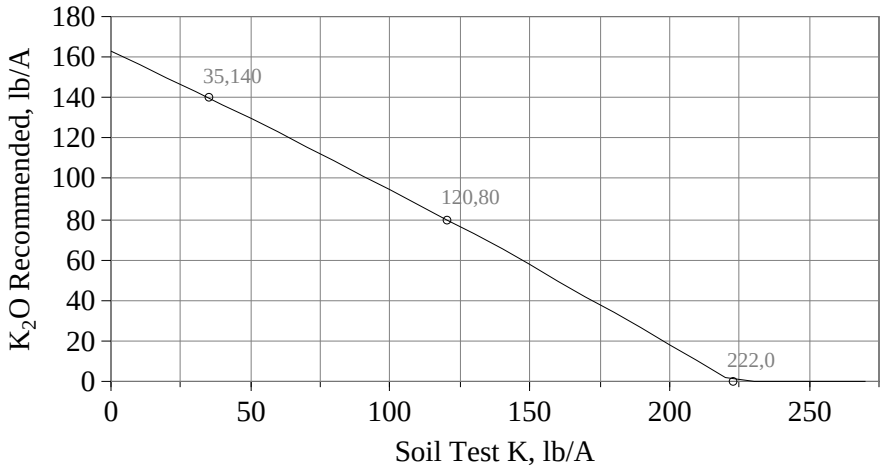
P Recommendations, Coastal Plain

$P_2O_5 = 170 - 2.000P$



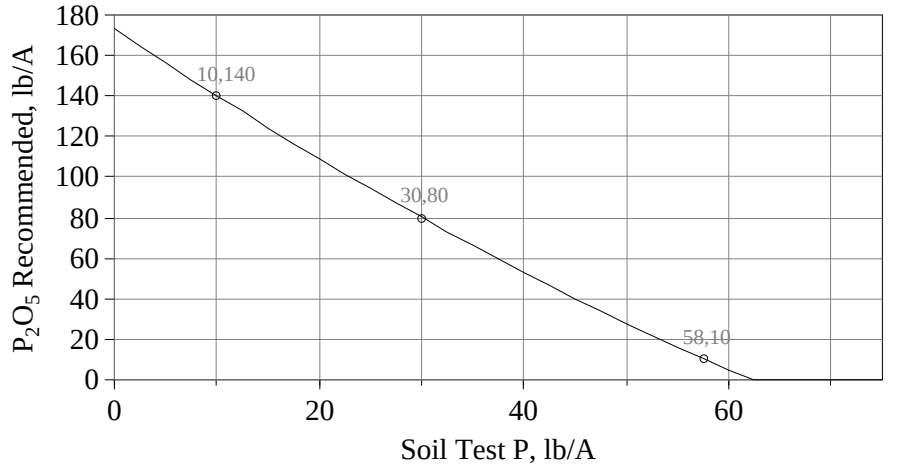
K Recommendations, Coastal Plain

$K_2O = 163 - 0.644K - 0.00040K^2$



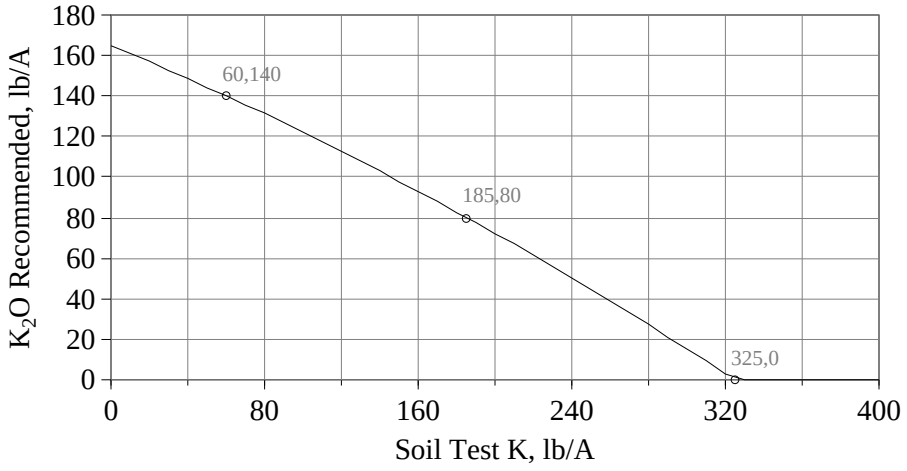
P Recommendations, Piedmont

$P_2O_5 = 173 - 3.383P + 0.00957P^2$



K Recommendations, Piedmont

$K_2O = 165 - 0.394K - 0.00035K^2$



Grain Sorghum (*Code* #006)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-80	80-80-60	80-80-30	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-80	80-60-60	80-60-30	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-80	80-30-60	80-30-30	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-80	80-0-60	80-0-30	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Split the nitrogen (N) application, applying half prior to or at planting and the remainder before the 6th leaf stage.

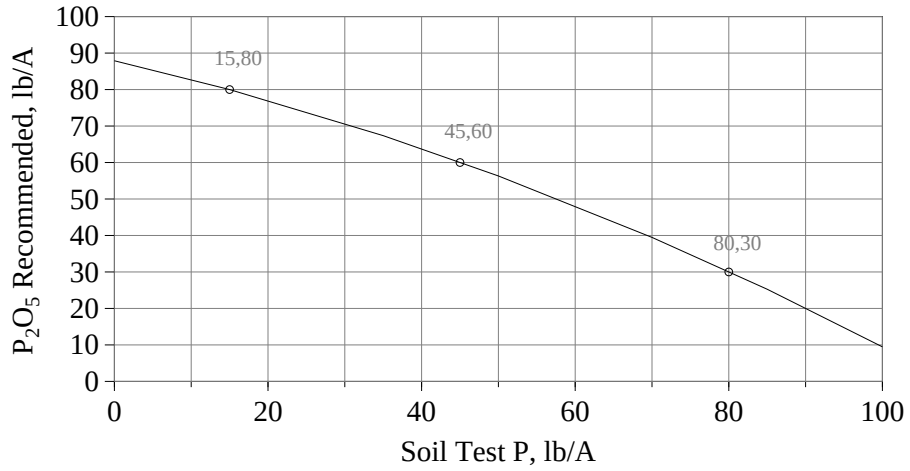
For projected grain sorghum yields of 100 bushels per acre or higher increase the nitrogen (N) fertilizer rate to 125 pounds nitrogen per acre.

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Grain Sorghum (*Code 006*)

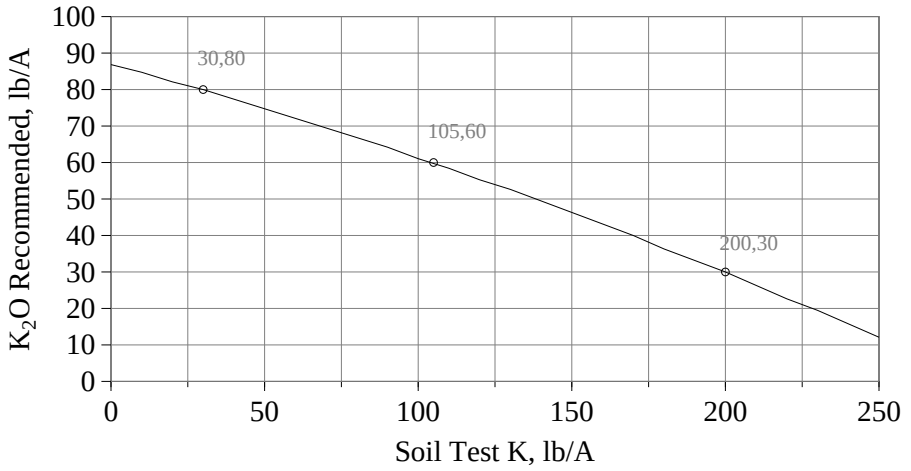
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



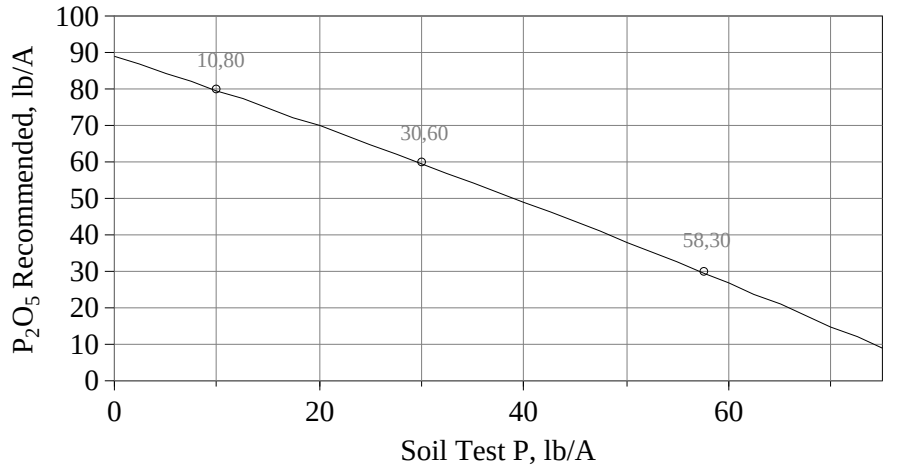
K Recommendations, Coastal Plain

$K_2O = 87 - 0.228K - 0.00029K^2$



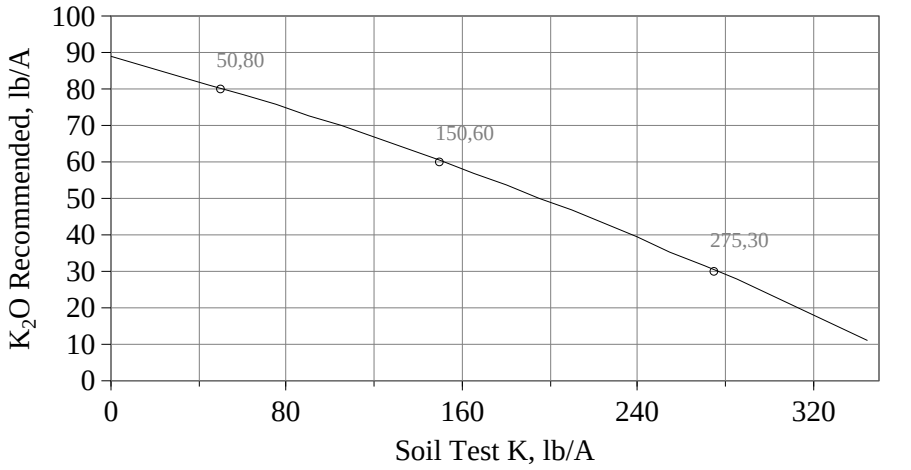
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 89 - 0.164K - 0.00018K^2$



Peanuts (*Code* #010)

Soil Test Rating	Potassium			
	Low K Coast: 0-30 lbs/A Pied: 0-50 lbs/A	**Medium K** Coast: 31-60 lbs/A Pied: 51-100 lbs/A	**High K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**Very High K** Coast: 150+ lbs/A Pied: 200+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-15 lbs/A Pied: 0-10 lbs/A	0-80-80	0-80-50	0-80-0	0-80-0
Medium P Coast: 16-30 lbs/A Pied: 11-20 lbs/A	0-50-80	0-50-50	0-50-0	0-50-0
High P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-0-80	0-0-50	0-0-0	0-0-0
Very High P Coast: 60+ lbs/A Pied: 40+ lbs/A	0-0-80	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) and calcium (Ca) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Apply inoculum when field has not been planted in peanuts for more than 5 years.

Calcium should be applied to all peanuts saved for seed purposes and to all large-seeded Virginia type varieties regardless of soil test levels. The broadcast rates for Runner or Spanish type saved for seed are 160 to 200 pounds calcium per acre as gypsum and for large-seeded Virginia type 320 to 400 pounds calcium per acre as gypsum. When banding over the row reduce the broadcast rates proportionately.

For Runner and Spanish types for market production, lime that is recommended and applied after deep turning and incorporated no more than 3-inches prior to planting should supply adequate calcium. When lime is not applied or when large amounts of rainfall occur between application of lime and planting, a soil sample should be taken 10 - 14 days after planting to determine calcium level in the pegging zone. Take pegging zone samples 3-inches deep and request the special calcium test to determine if gypsum should be applied.

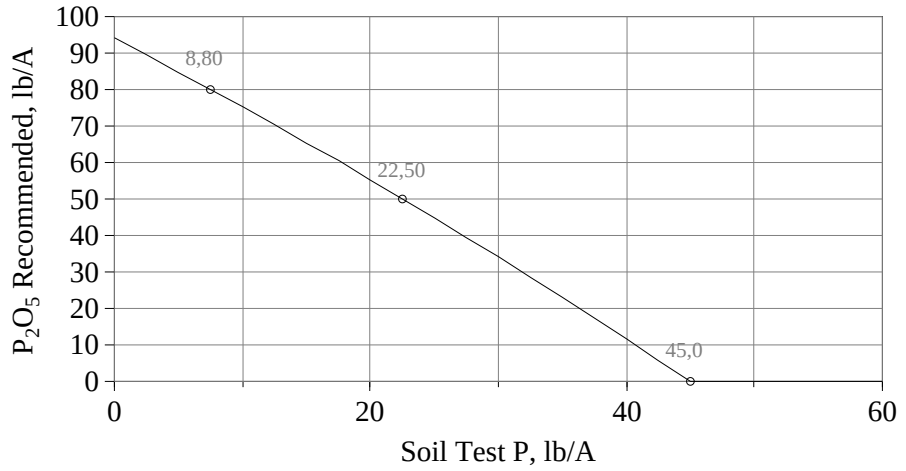
When applying boron it may be applied with the fertilizer, preplant incorporated herbicides, or split in two early fungicide applications (prior to early bloom).

If plant residues are removed from the field, soil test prior to planting the next crop.

Peanuts (*Code 010*)

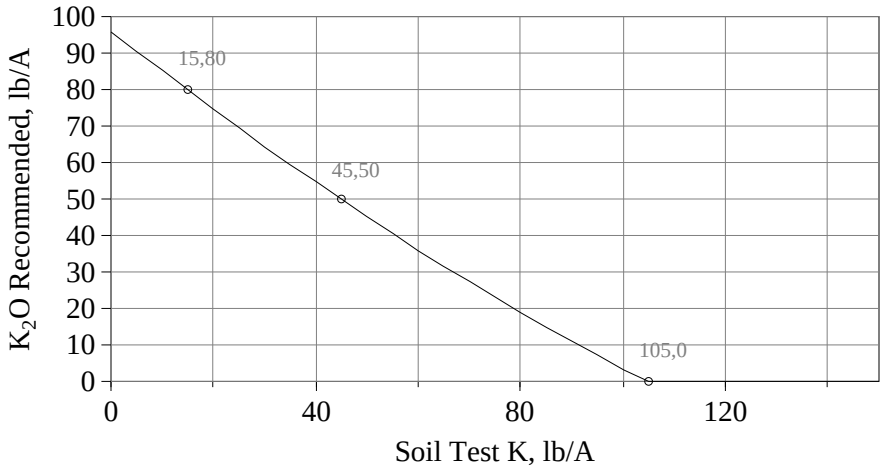
P Recommendations, Coastal Plain

$P_2O_5 = 94 - 1.822P - 0.00593P^2$



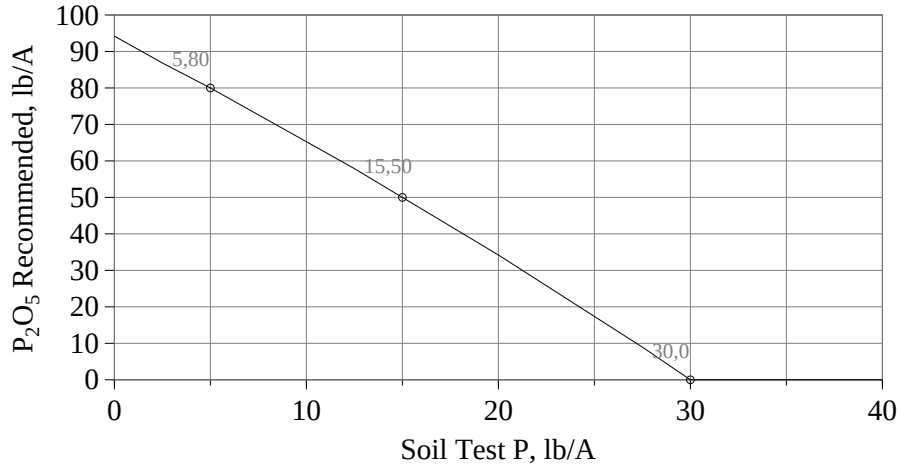
K Recommendations, Coastal Plain

$K_2O = 96 - 1.111K + 0.00185K^2$



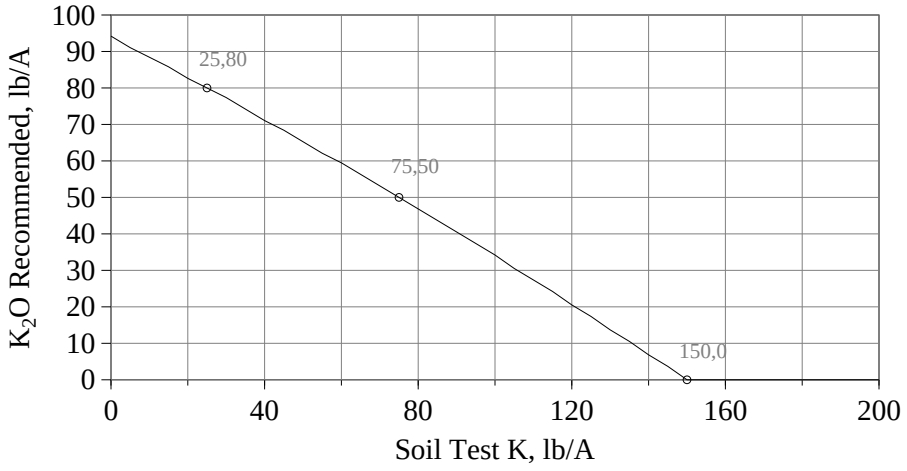
P Recommendations, Piedmont

$P_2O_5 = 94 - 2.733P - 0.01333P^2$



K Recommendations, Piedmont

$K_2O = 94 - 0.547K - 0.00053K^2$



Small Grain - Barley (*Code* #013)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60-100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

For barley following a legume apply 60 pounds nitrogen per acre; for barley following cotton, corn, etc. apply 80 pounds nitrogen per acre; for barley following grain sorghum apply 100 pounds nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder in February.

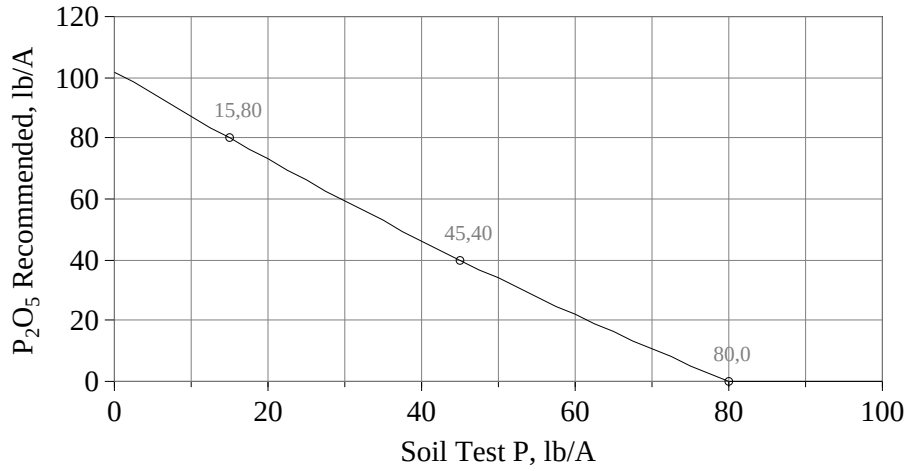
Coastal Plain only:

On deep sandy soils, apply 10 pounds of sulfur (S) per acre. The sulfur should be applied when the topdress nitrogen application is made.

Small Grain - Barley (*Code 013*)

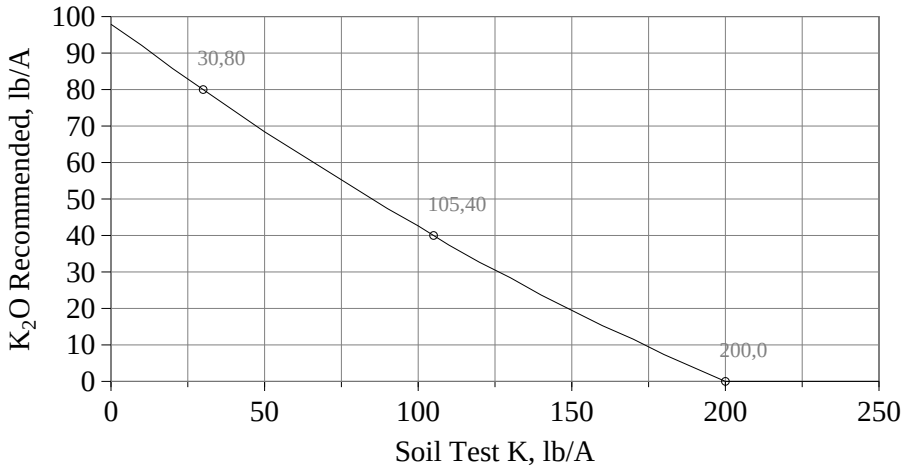
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



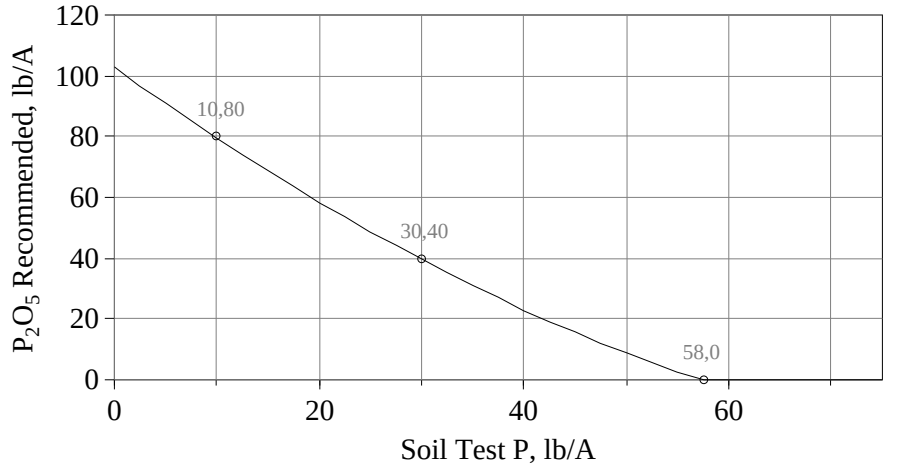
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



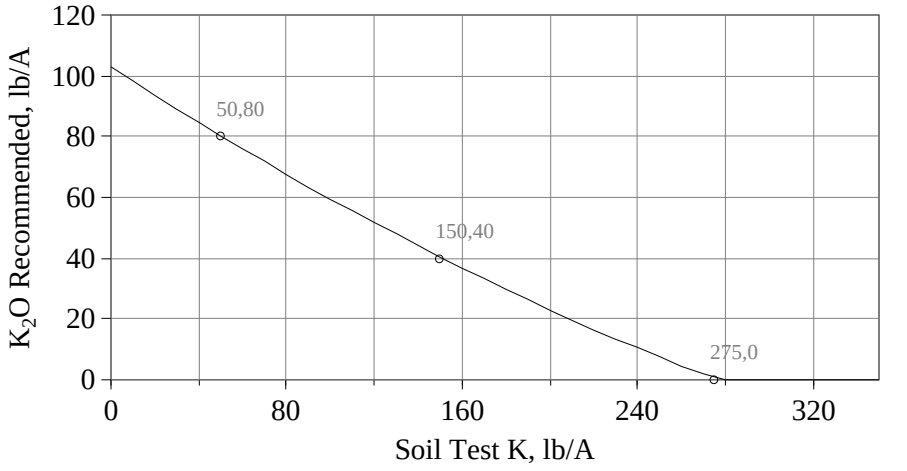
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Small Grain - Oats (*Code* #012)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60-100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

For oats following a legume apply 60 pounds nitrogen per acre; for oats following cotton, corn, etc. apply 80 pounds nitrogen per acre; for oats following grain sorghum apply 100 pounds nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder in February.

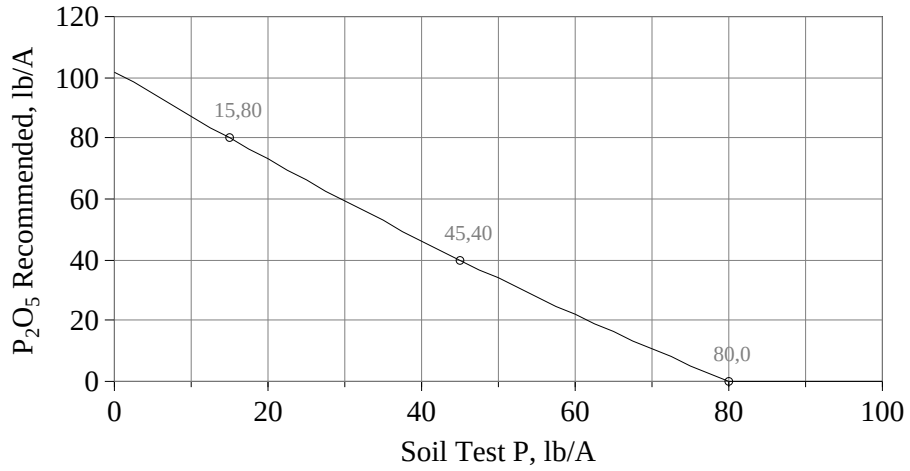
Coastal Plain only:

On deep sandy soils, apply 10 pounds of sulfur (S) per acre. The sulfur should be applied when the topdress nitrogen application is made.

Small Grain - Oats (*Code 012*)

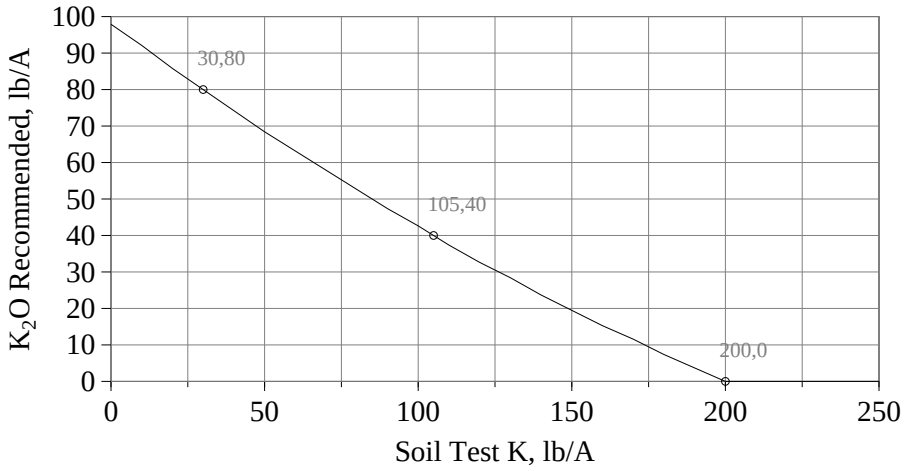
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



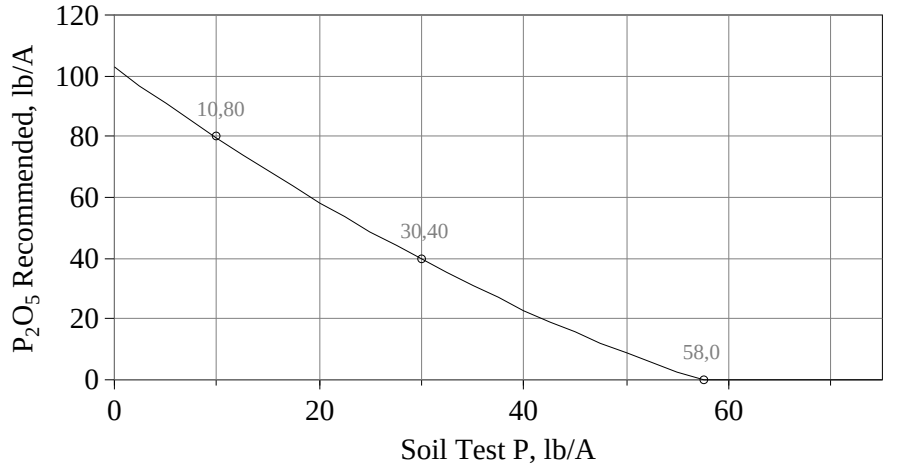
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



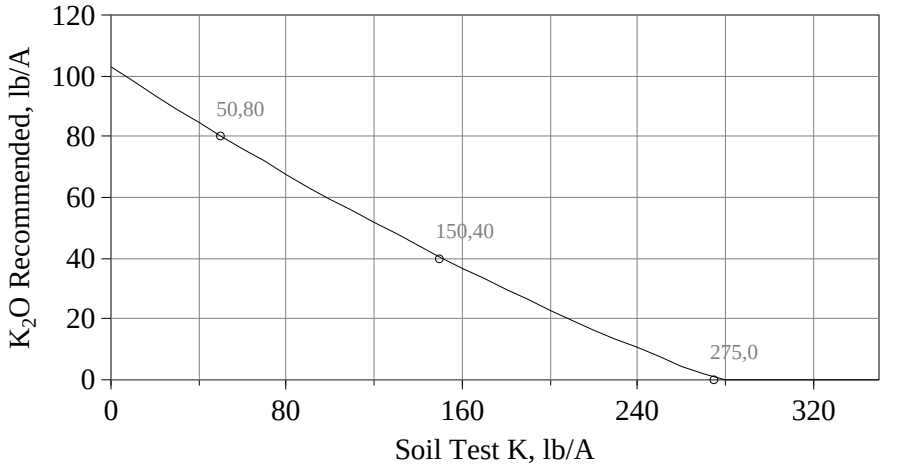
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Small Grain - Rye for Seed Production or Cover Crop (*Code* #014)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	40-60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

For rye for seed following a legume, apply 40 pounds nitrogen per acre; for rye for seed following cotton, corn, etc., apply 60 pounds nitrogen per acre. If following a legume, no nitrogen need be applied in the Fall. If following a non-legume, apply 20 pounds of the recommended nitrogen per acre in the fall and the remainder in February.

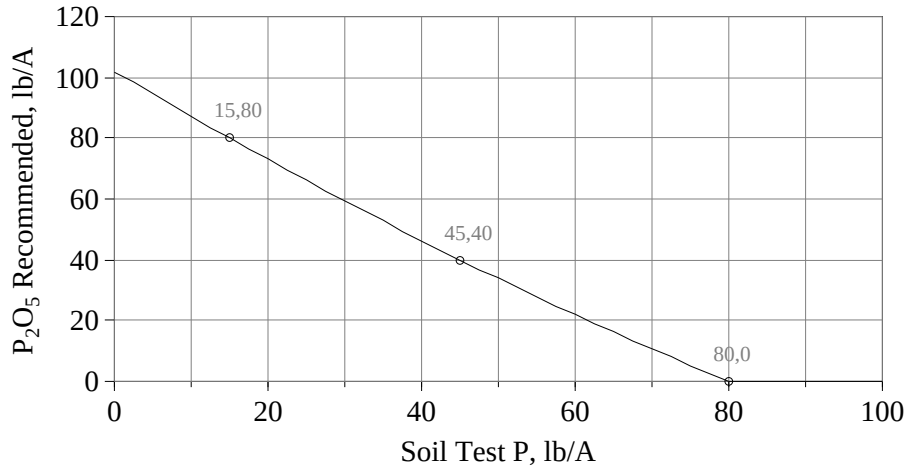
Coastal Plain only:

On deep sandy soils, apply 10 pounds of sulfur (S) per acre. The sulfur should be applied when the topdress nitrogen application is made.

Small Grain - Rye for Seed Production or Cover Crop (*Code 014*)

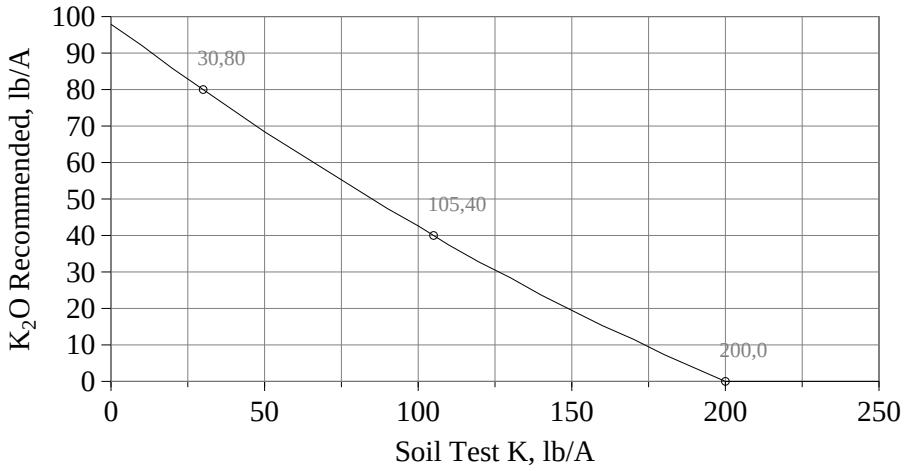
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



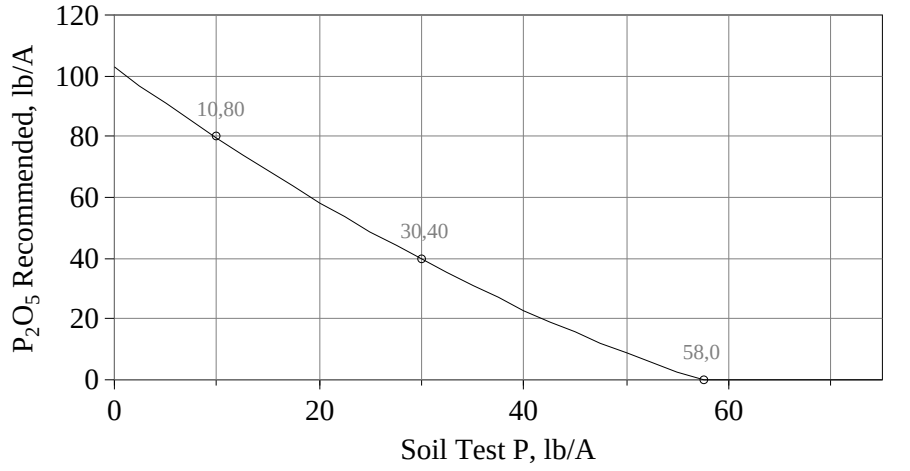
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



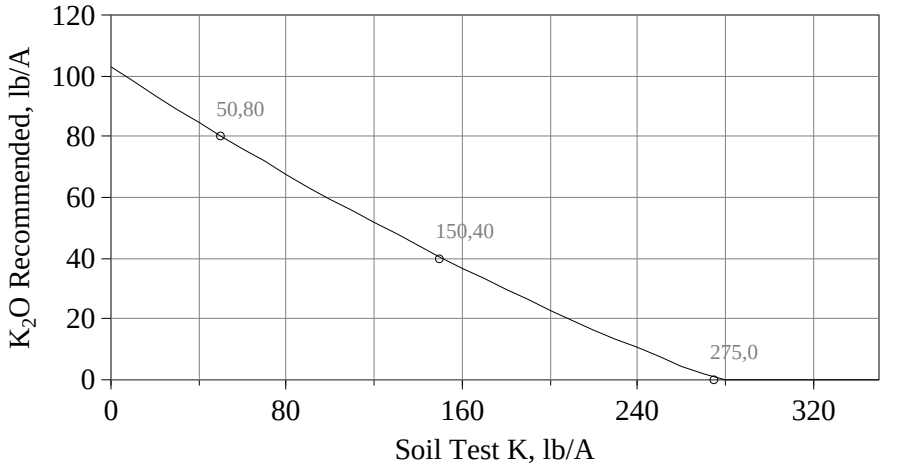
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Small Grain - Wheat (*Code* #011)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60-120 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

For wheat following a legume apply 60 to 80 pounds nitrogen per acre; for wheat following cotton, corn, etc. apply 80 to 100 pounds nitrogen per acre; for wheat following grain sorghum apply 100 to 120 pounds nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder in February.

When grazed, increase the nitrogen (N) fertilizer rate by 60 pounds nitrogen per acre. Split the nitrogen applications, applying half in the fall and the remainder in mid-winter.

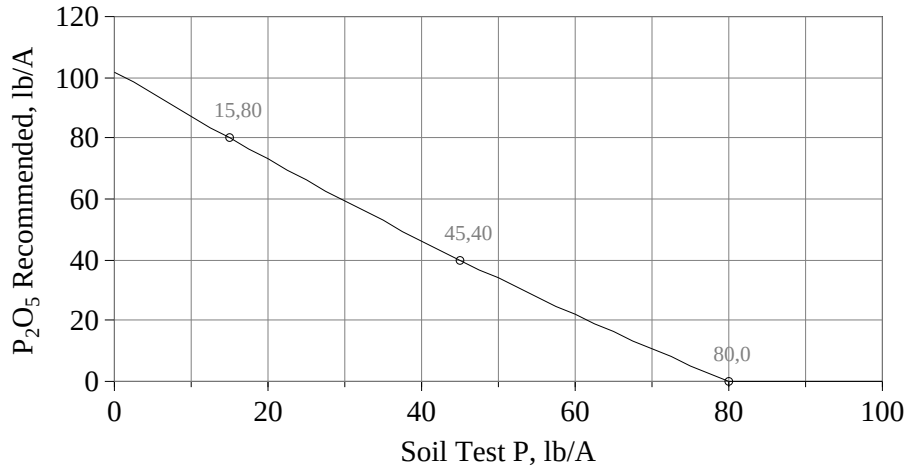
Coastal Plain only:

On deep sandy soils, apply 10 pounds of sulfur (S) per acre. The sulfur should be applied when the topdress nitrogen application is made.

Small Grain - Wheat (*Code 011*)

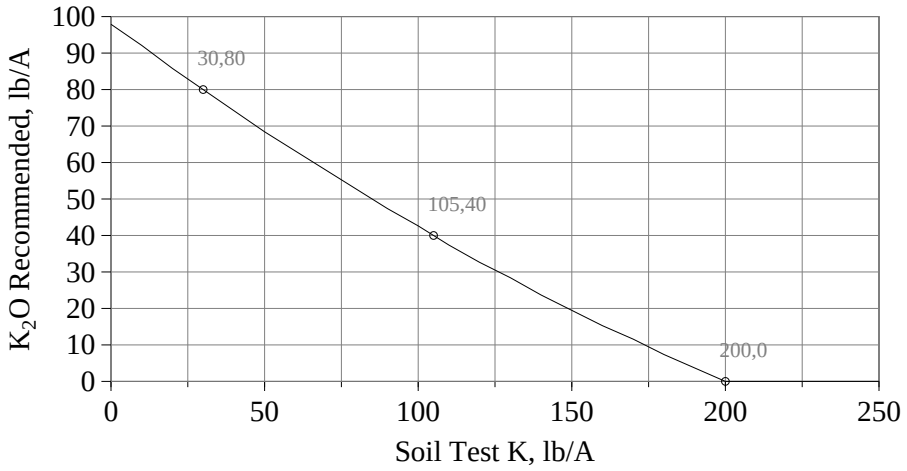
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



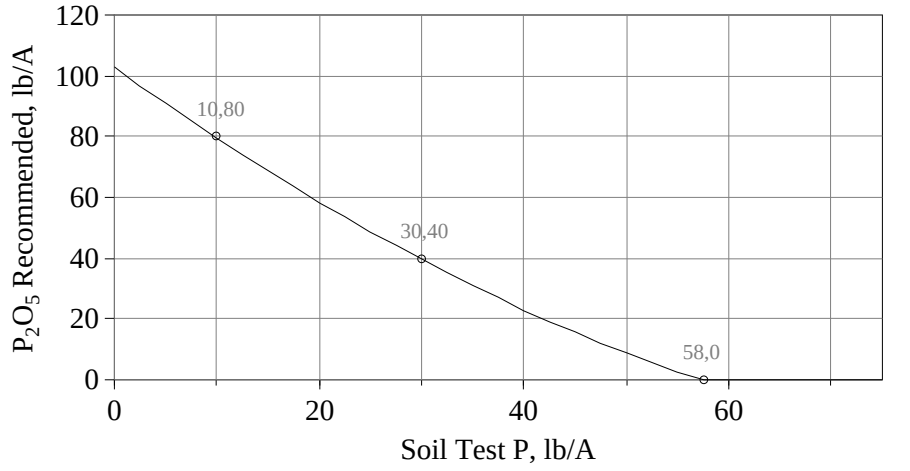
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



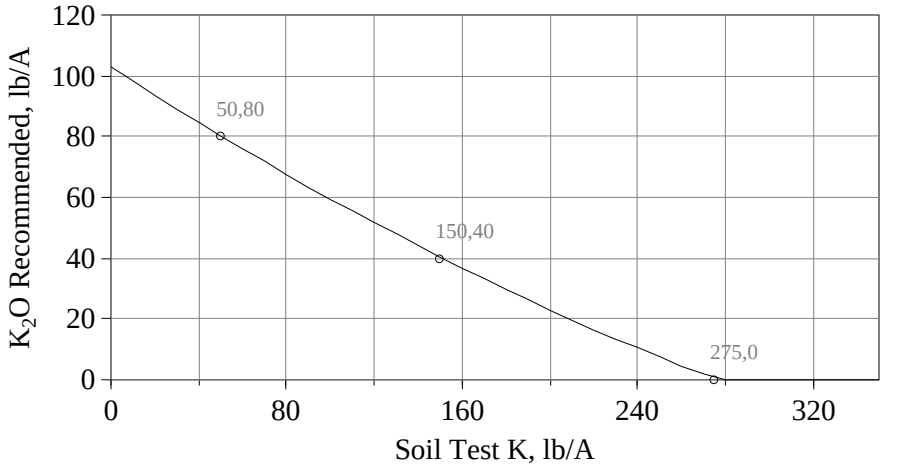
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Small Grain Silage (*Code* #711)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-160	*-100-120	*-100-80	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-65-160	*-65-120	*-65-80	*-65-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-160	*-40-120	*-40-80	*-40-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-160	*-0-120	*-0-80	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	120-160 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

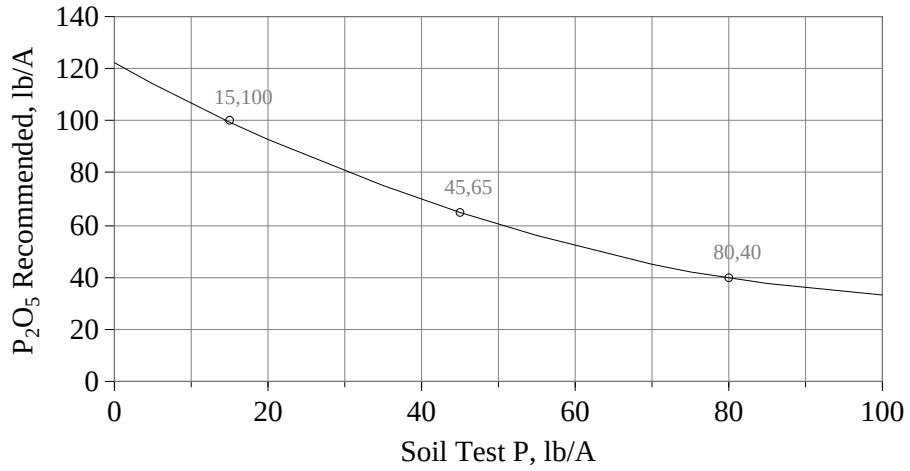
*For small grain following a legume apply 120 pounds nitrogen (N) per acre; for small grain following cotton, corn, etc. apply 140 pounds nitrogen per acre; for small grain following grain sorghum apply 160 pounds nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder in February.

On deep sandy soils, apply 10 pounds of sulfur (S) per acre. The sulfur should be applied when the topdress nitrogen application is made.

Small Grain Silage (*Code 711*)

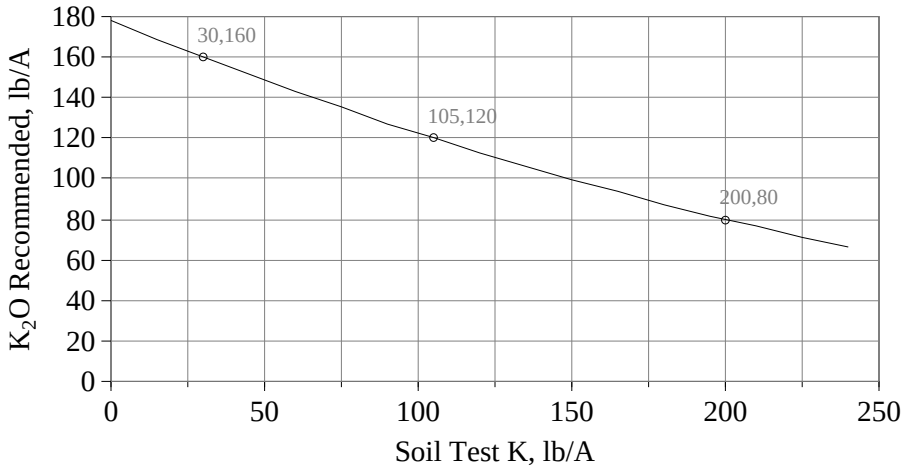
P Recommendations, Coastal Plain

$P_2O_5 = 122 - 1.584P + 0.00696P^2$



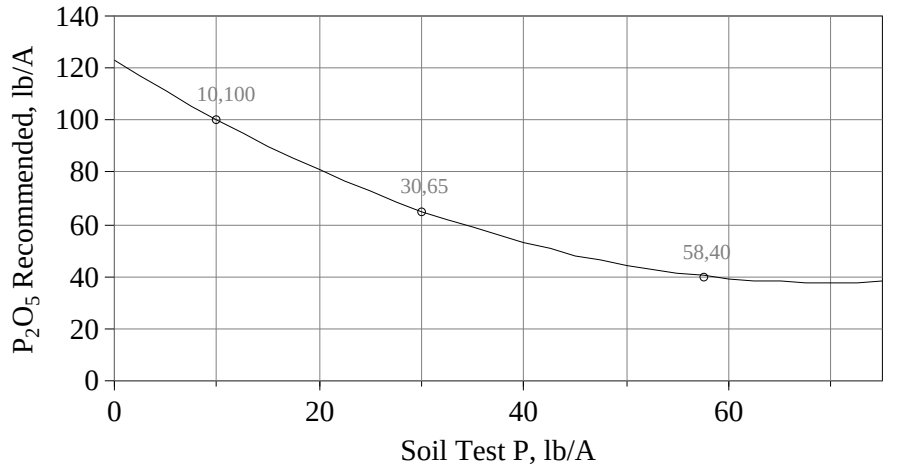
K Recommendations, Coastal Plain

$K_2O = 178 - 0.622K + 0.00066K^2$



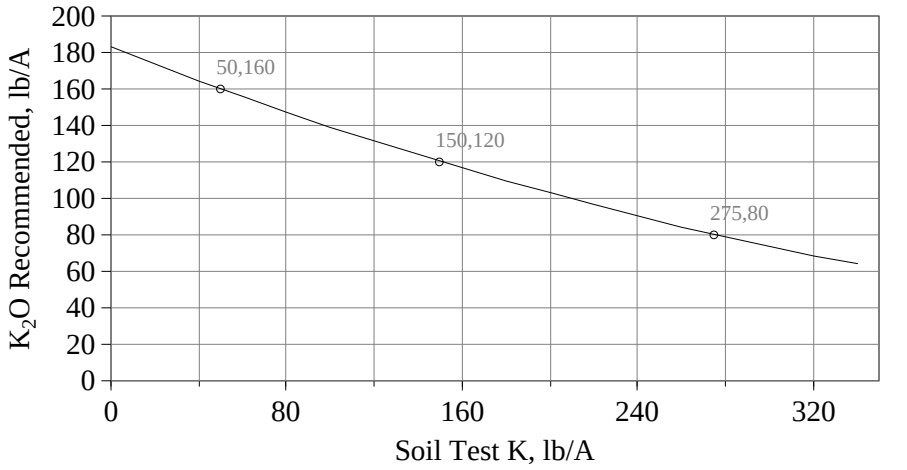
P Recommendations, Piedmont

$P_2O_5 = 123 - 2.458P + 0.01770P^2$



K Recommendations, Piedmont

$K_2O = 183 - 0.472K + 0.00036K^2$



Sorghum Silage (*Code* #004)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	150-80-160	150-80-120	150-80-90	150-80-80
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	150-60-160	150-60-120	150-60-90	150-60-80
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	150-40-160	150-40-120	150-40-90	150-40-80
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	150-0-160	150-0-120	150-0-90	150-0-80

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	150 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Nitrogen can be applied from 180 to 260 pounds N per acre for expected yields of 20 to 30 tons silage yield per acre. Split the nitrogen (N) applications, applying one-fourth to one-third prior to or at planting and the remainder when the crop is 18 to 24 inches high.

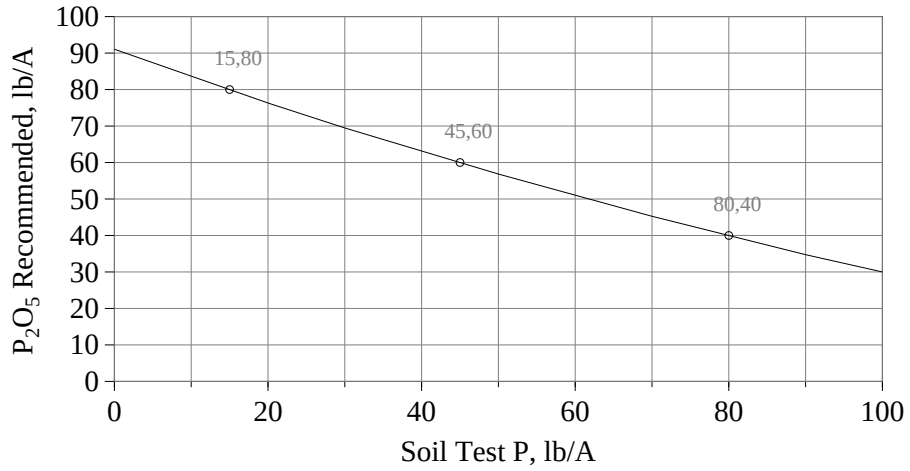
Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

The applied fertilizer should contain sufficient sulfur (S) to supply 20 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Sorghum Silage (*Code 004*)

P Recommendations, Coastal Plain

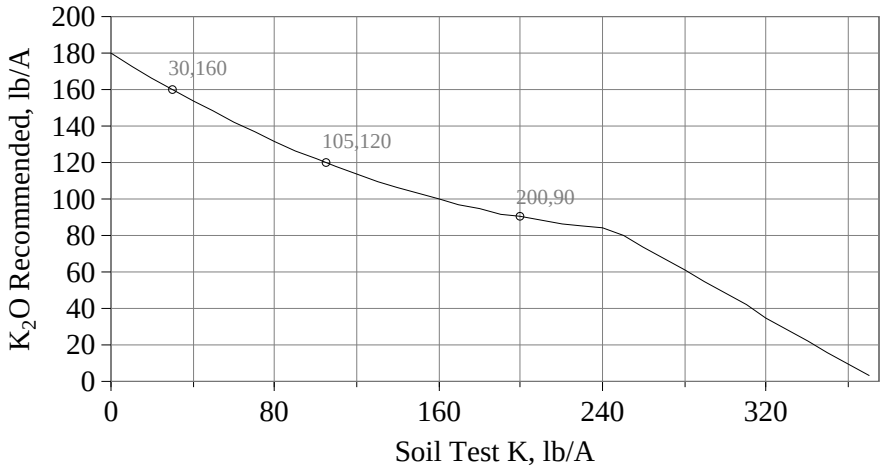
$P_2O_5 = 91 - 0.755P + 0.00147P^2$



K Recommendations, Coastal Plain

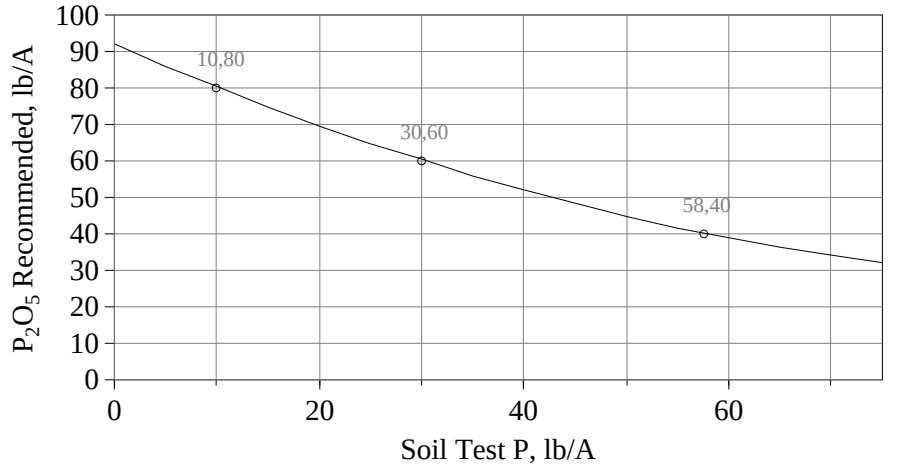
if ($K < 250$) $K_2O = 180 - 0.706K + 0.00128K^2$

if ($K \geq 250$) $K_2O = 240 - 0.64K$



P Recommendations, Piedmont

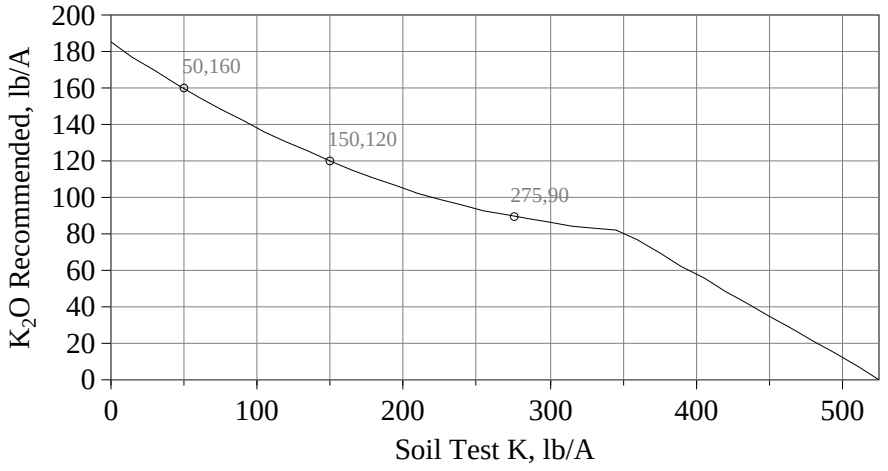
$P_2O_5 = 92 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

if ($K < 350$) $K_2O = 185 - 0.542K + 0.00071K^2$

if ($K \geq 350$) $K_2O = 242 - 0.46K$



Soybeans (*Code* #017)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-70-100	0-70-80	0-70-60	0-70-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-40-100	0-40-80	0-40-60	0-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-80	0-0-60	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-80	0-0-60	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

For Coastal Plain Soils Only: If the soil test manganese (Mn) level is low, apply 10 pounds of manganese per acre either as manganese sulfate or manganese oxide as a broadcast application.

CAUTION: If the soil pH is 6.0 or less, do not apply manganese, irrespective of the soil manganese level.

Fact Sheet:

Inoculate seed at planting. Apply 1 ounce of molybdenum salt per bushel of seed as a seed treatment.

continued -»

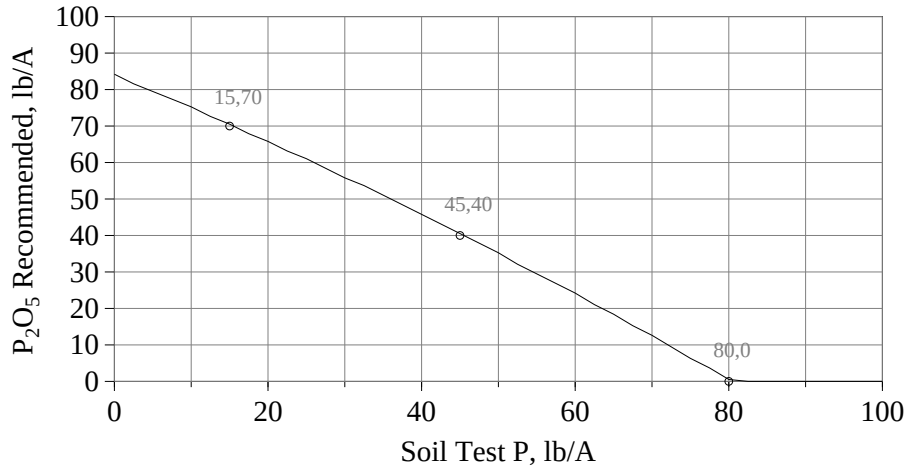
Coastal Plain only:

Apply a soluble source of boron (B) at 1/4 pound boron per acre as a foliar spray at the R2 (full bloom) to R3 (early podding) stage. The boron material may be mixed with a compatible pesticide. Your County Extension Agent can provide additional information about boron and pesticide combinations.

Soybeans (*Code 017*)

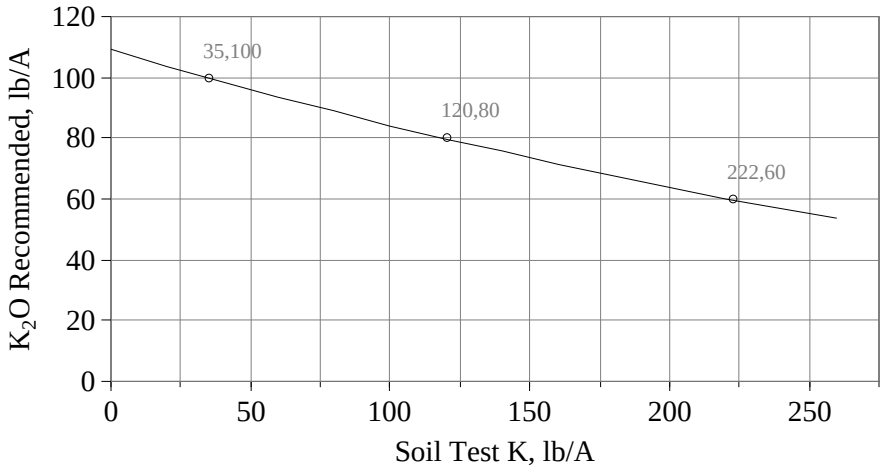
P Recommendations, Coastal Plain

$P_2O_5 = 84 - 0.868P - 0.00220P^2$



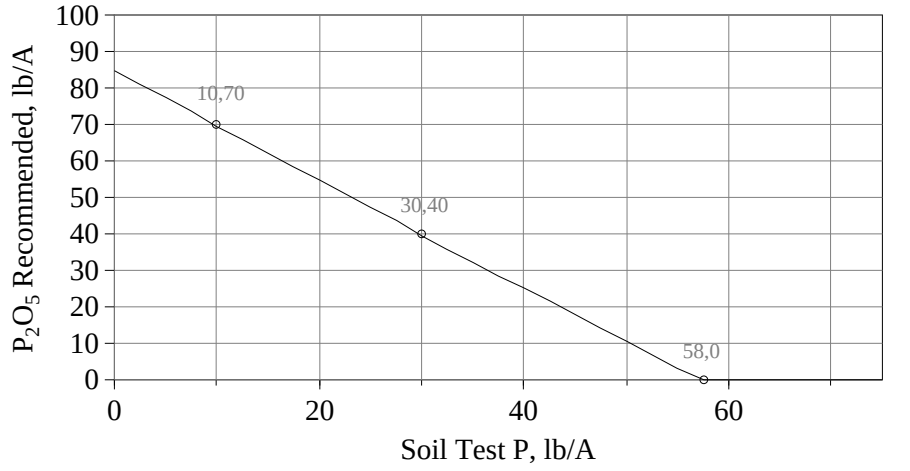
K Recommendations, Coastal Plain

$K_2O = 109 - 0.268K + 0.00021K^2$



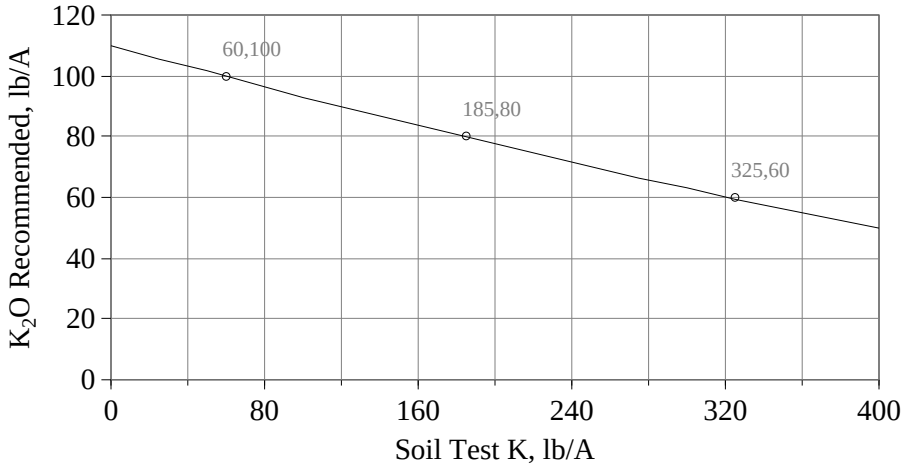
P Recommendations, Piedmont

$P_2O_5 = 85 - 1.538P + 0.00096P^2$



K Recommendations, Piedmont

$K_2O = 110 - 0.175K + 0.00006K^2$



Sugar Cane (*Code* #008)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-80	80-80-60	80-80-30	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-80	80-60-60	80-60-30	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-80	80-30-60	80-30-30	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-80	80-0-60	80-0-30	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

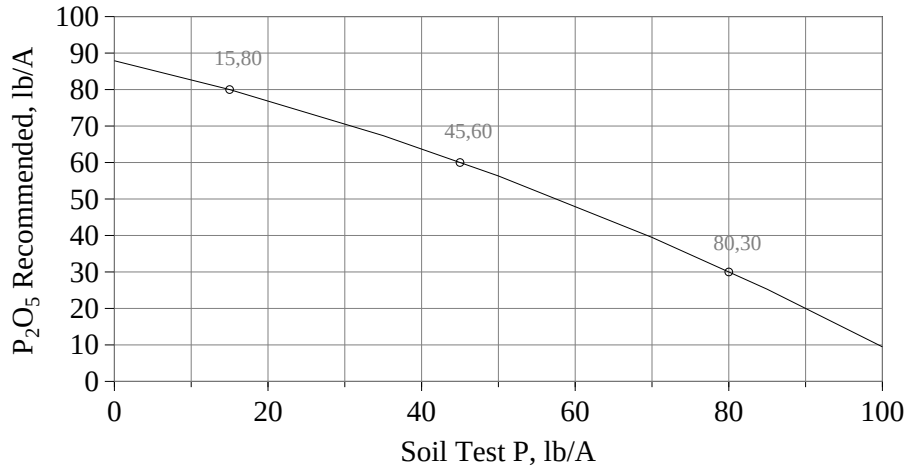
Fact Sheet:

Split the nitrogen (N) application, applying half prior to or at planting and the remainder before the 6th leaf stage.

Sugar Cane (*Code 008*)

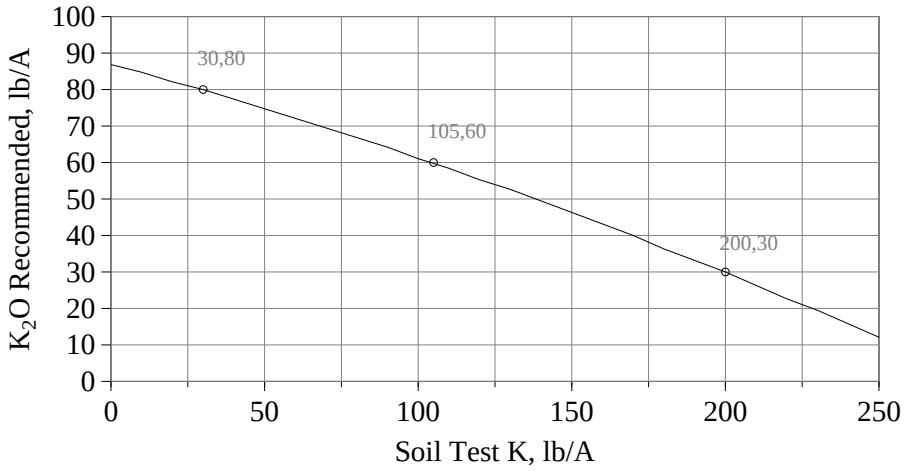
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



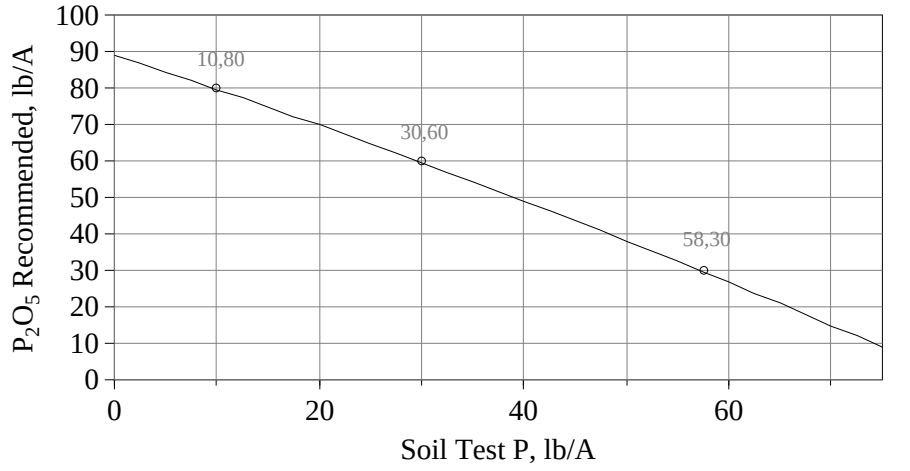
K Recommendations, Coastal Plain

$K_2O = 87 - 0.228K - 0.00029K^2$



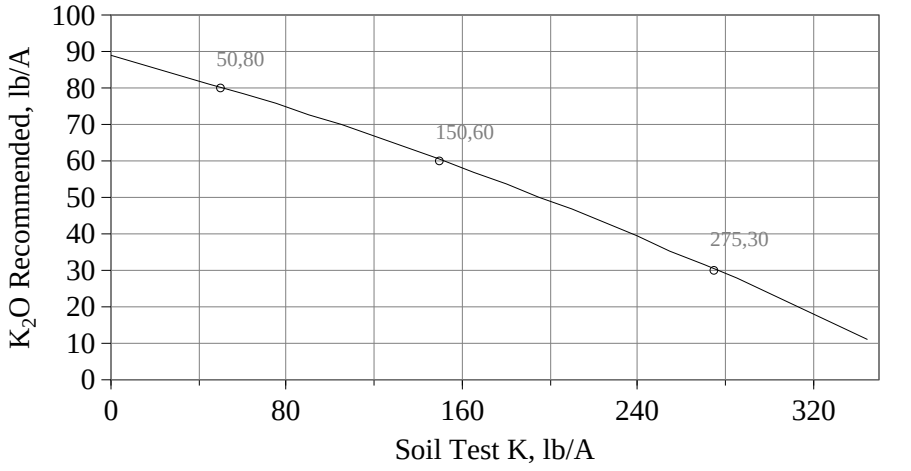
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 89 - 0.164K - 0.00018K^2$



Sunflower (*Code* #009)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-80	80-80-60	80-80-30	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-80	80-60-60	80-60-30	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-80	80-30-60	80-30-30	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-80	80-0-60	80-0-30	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

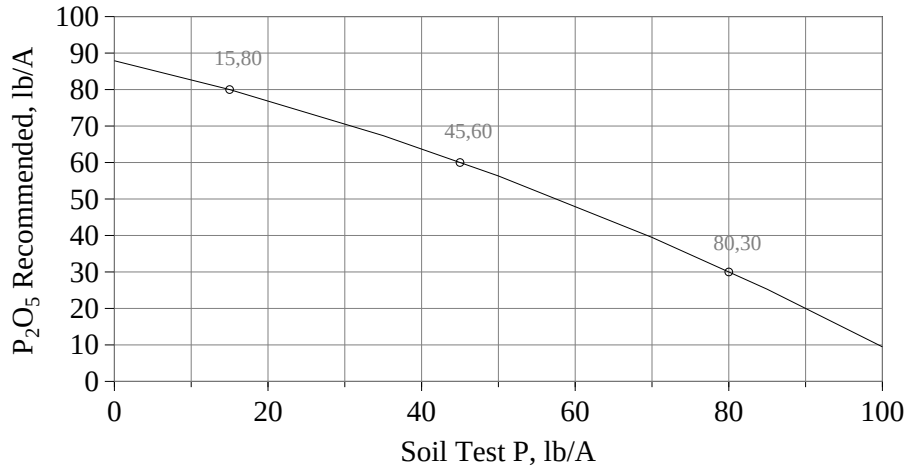
Fact Sheet:

Split the nitrogen (N) application, applying half prior to or at planting and the remainder before the 6th leaf stage.

Sunflower (*Code 009*)

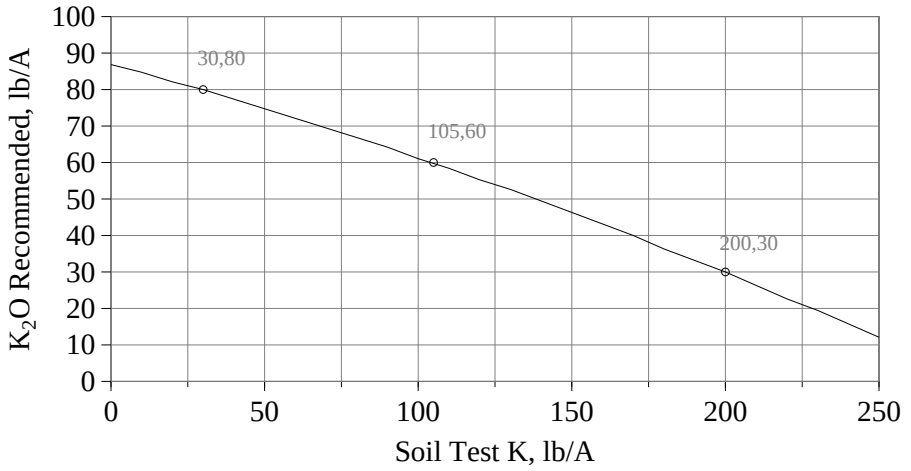
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



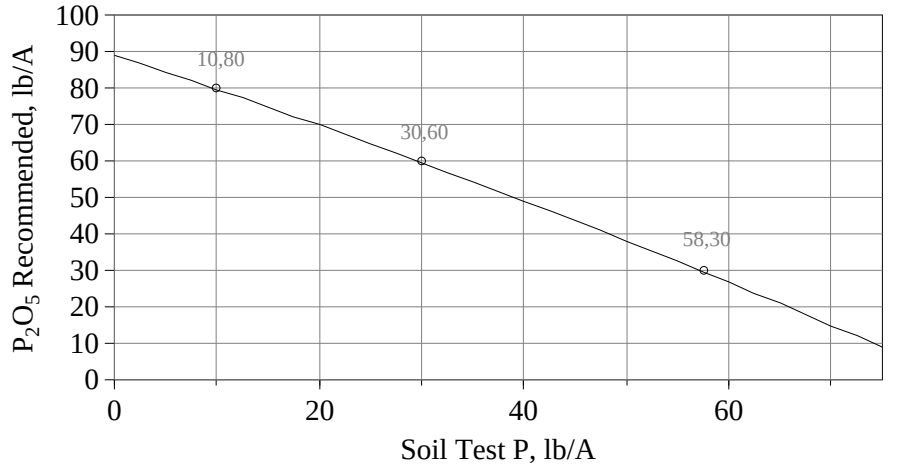
K Recommendations, Coastal Plain

$K_2O = 87 - 0.228K - 0.00029K^2$



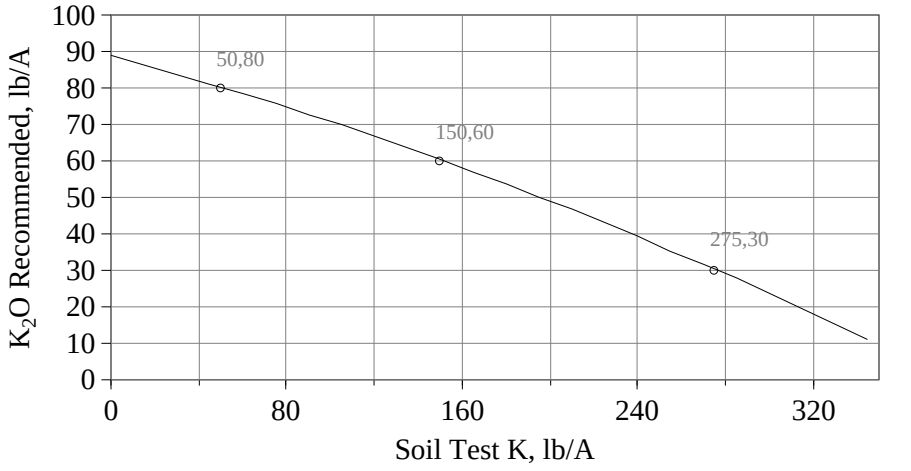
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 89 - 0.164K - 0.00018K^2$



Sweet Sorghum (*Code* #007)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-80	80-80-60	80-80-30	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-80	80-60-60	80-60-30	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-80	80-30-60	80-30-30	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-80	80-0-60	80-0-30	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

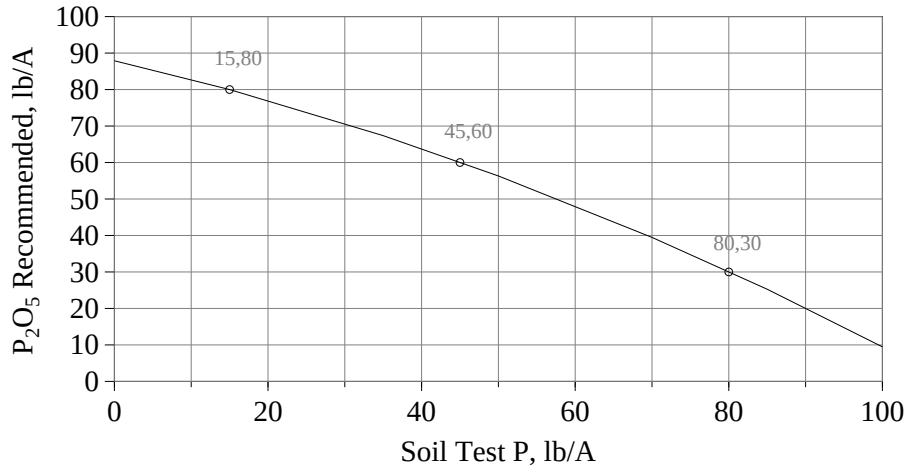
Fact Sheet:

Split the nitrogen (N) application, applying half prior to or at planting and the remainder before the 6th leaf stage.

Sweet Sorghum (*Code 007*)

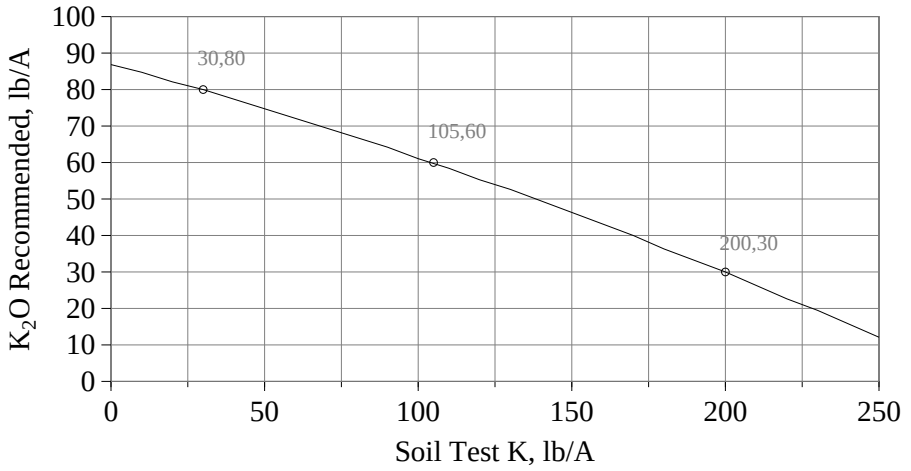
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



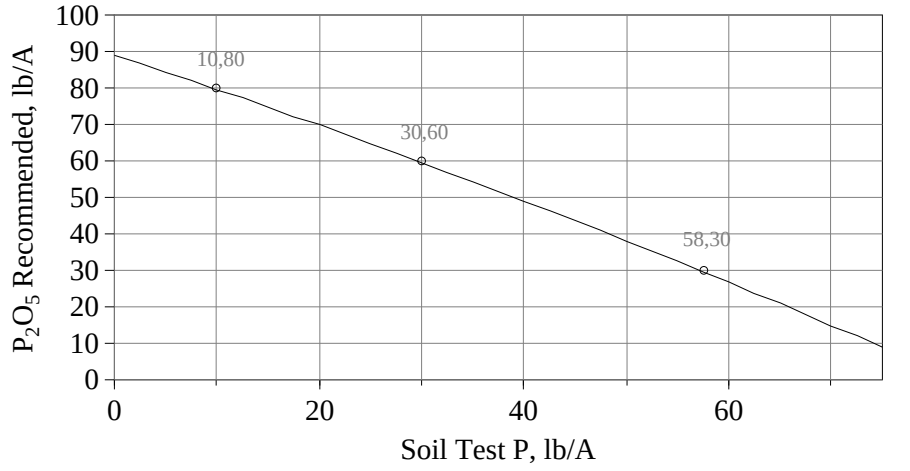
K Recommendations, Coastal Plain

$K_2O = 87 - 0.228K - 0.00029K^2$



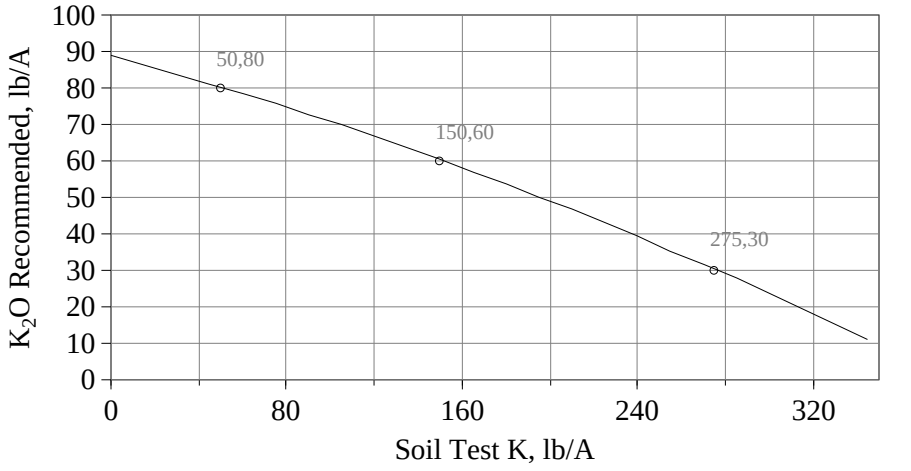
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 89 - 0.164K - 0.00018K^2$



Tobacco (Average Pebble Soil) (*Code* #019)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	50-100-180	50-100-150	50-100-130	50-100-125
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	50-80-180	50-80-150	50-80-130	50-80-125
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	50-45-180	50-45-150	50-45-130	50-45-125
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	50-20-180	50-20-150	50-20-130	50-20-125

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Apply one-third to one-half of the fertilizer at or immediately after transplanting, and the remainder in one or two applications. The final application should be applied within two or three weeks after transplanting and should be placed no more than 6 inches from the row. The fertilizer rates suggested are for normal rainfall conditions. When heavy leaching rains occur, nutrients lost by leaching should be replaced. (Consult your local County Extension Agent for replacement values.)

At least 50% of the fertilizer nitrogen (N) should be in the nitrate form. All fertilizers for flue-cured tobacco should contain at least 1.2% magnesium, at least 50% being water soluble.

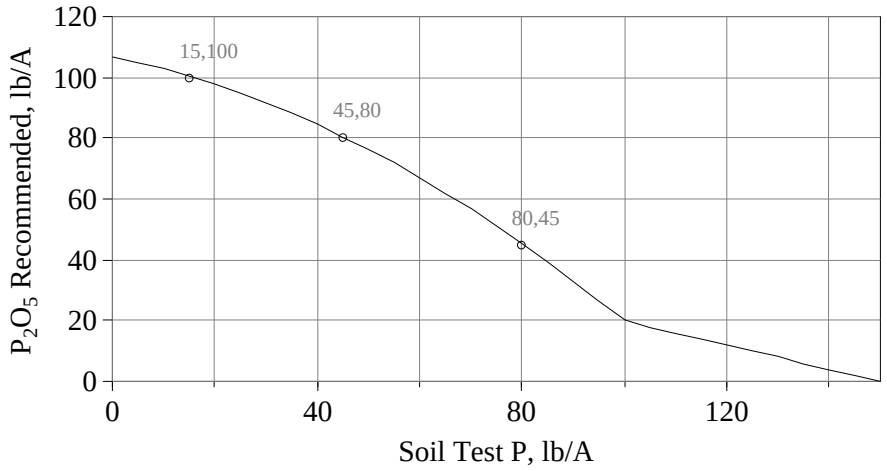
Tobacco top dresser fertilizers should not contain more than 2% chlorine.

Tobacco (Average Pebble Soil) (*Code 019*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 107 - 0.359P - 0.00513P^2$

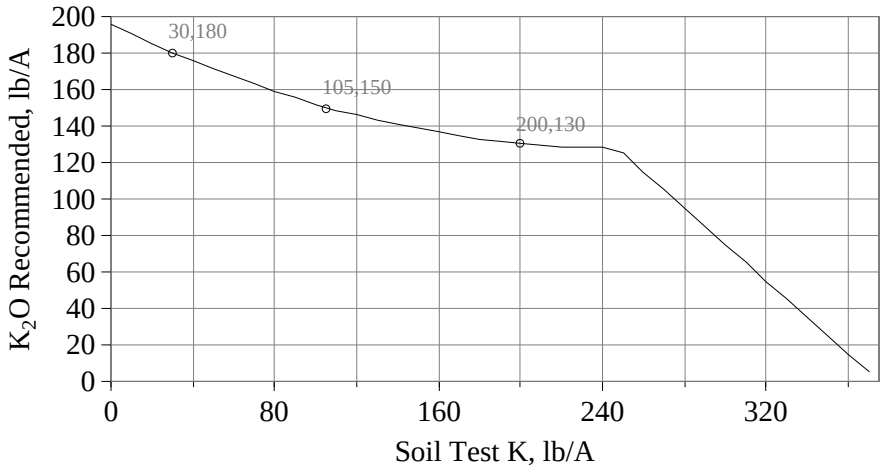
if (P ≥ 100) $P_2O_5 = 60 - 0.40P$



K Recommendations, Coastal Plain

if (K < 250) $K_2O = 196 - 0.550K + 0.00111K^2$

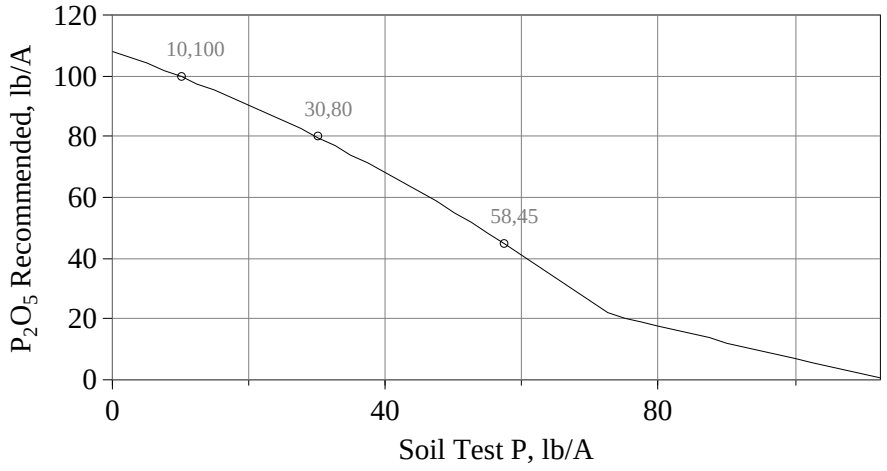
if (K ≥ 250) $K_2O = 375 - 1.00K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 108 - 0.770P - 0.00574P^2$

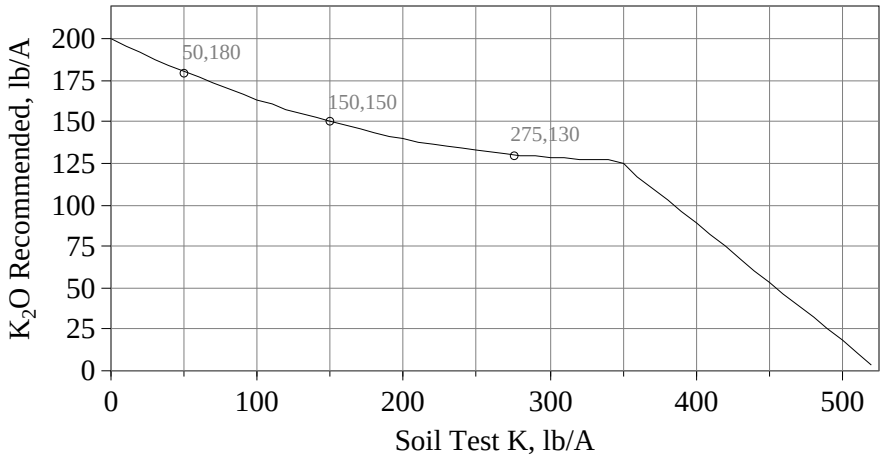
if (P ≥ 75) $P_2O_5 = 60 - 0.53P$



K Recommendations, Piedmont

if (K < 350) $K_2O = 200 - 0.424K + 0.00062K^2$

if (K ≥ 350) $K_2O = 373 - 0.71K$



Tobacco (Low Moisture and Sandy Soils) (*Code* #018)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-100-180	60-100-160	60-100-140	60-100-130
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-80-180	60-80-160	60-80-140	60-80-130
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-45-180	60-45-160	60-45-140	60-45-130
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-20-180	60-20-160	60-20-140	60-20-130

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Apply one-third to one-half of the fertilizer at or immediately after transplanting, and the remainder in one or two applications. The final application should be applied within two or three weeks after transplanting and should be placed no more than 6 inches from the row. The fertilizer rates suggested are for normal rainfall conditions. When heavy leaching rains occur, nutrients lost by leaching should be replaced. (Consult your local County Extension Agent for replacement values.)

At least 50% of the fertilizer nitrogen (N) should be in the nitrate form. All fertilizers for flue-cured tobacco should contain at least 1.2% magnesium, at least 50% being water soluble.

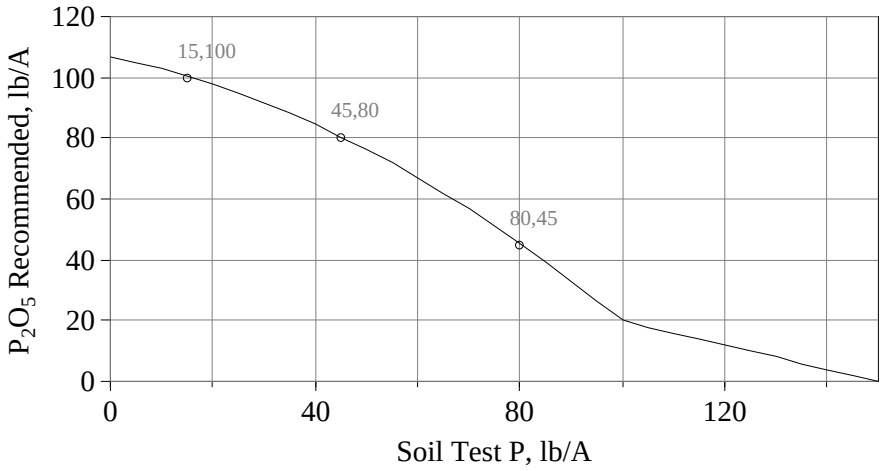
Tobacco top dresser fertilizers should not contain more than 2% chlorine.

Tobacco (Low Moisture and Sandy Soils) (*Code 018*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 107 - 0.359P - 0.00513P^2$

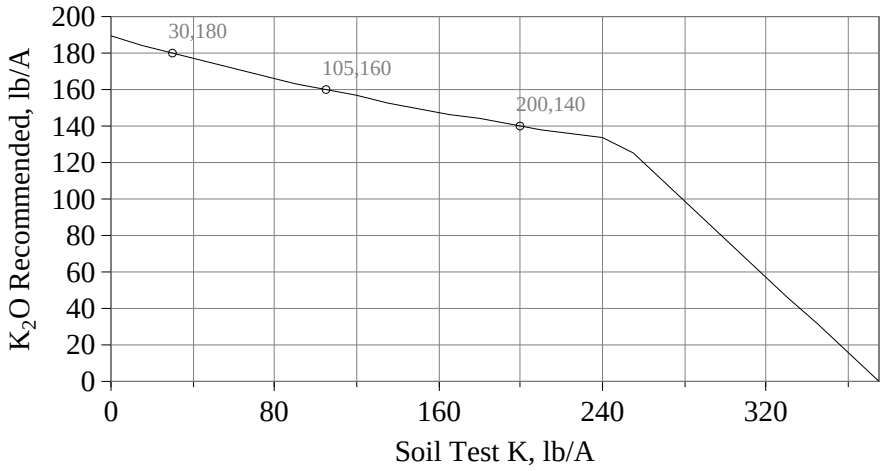
if (P ≥ 100) $P_2O_5 = 60 - 0.40P$



K Recommendations, Coastal Plain

if (K < 250) $K_2O = 189 - 0.311K + 0.00033K^2$

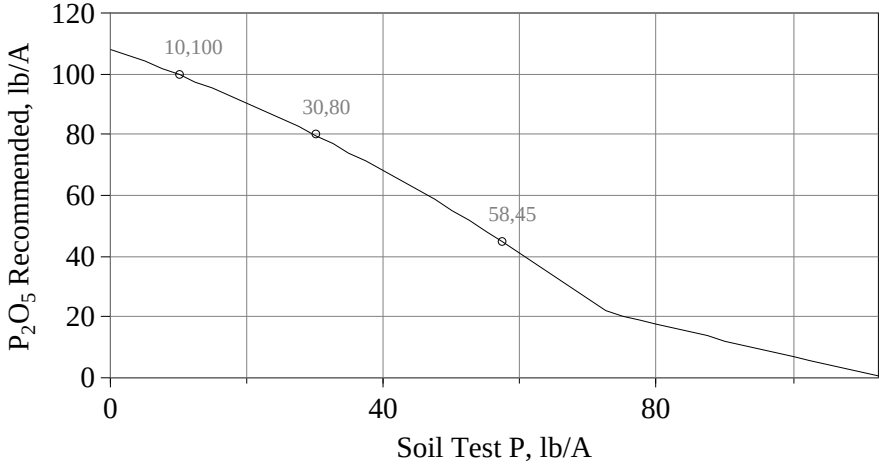
if (K ≥ 250) $K_2O = 390 - 1.04K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 108 - 0.770P - 0.00574P^2$

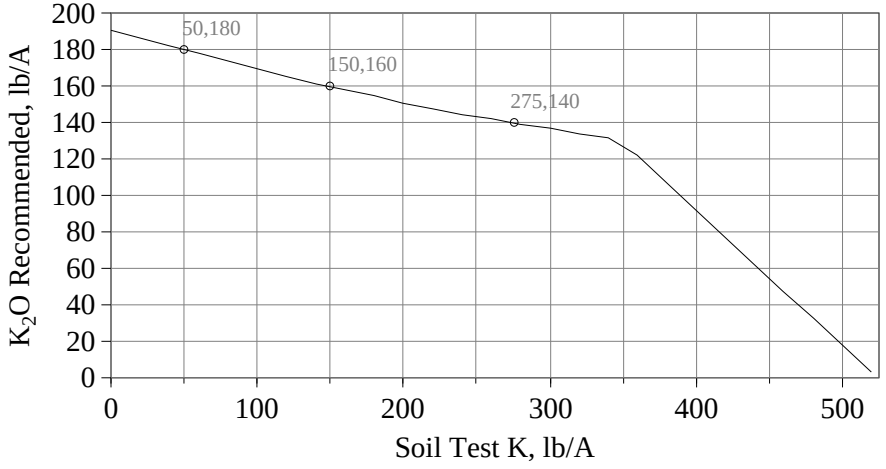
if (P ≥ 75) $P_2O_5 = 60 - 0.53P$



K Recommendations, Piedmont

if (K < 350) $K_2O = 191 - 0.236K + 0.00018K^2$

if (K ≥ 350) $K_2O = 388 - 0.74K$



Tobacco Plant Bed (*Code* #020)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	014	014	014	014
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	014	014	014	014
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	014	014	014	014
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	014	014	014	014

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	3-6 pounds nitrogen (N) per 100 square yards
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 0.3 pounds Mg/100 square yards.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

014. Apply a complete tobacco plant bed fertilizer that will supply at least 3 and no more than 6 pounds of nitrogen (N) per 100 square yards. This may be obtained with 50 to 100 pounds of 6-12-6 per 100 square yards (2400 to 4800 pounds of fertilizer per acre). Mix into the upper 2 to 4 inches of soil prior to seeding. Irrigate to wet soil to a depth of 6 to 8 inches (1/2 inch of irrigation) after seeding but before covering to prevent fertilizer salt injury and promote uniform germination.

Additional nitrate nitrogen may be applied once plants are dime-sized to maintain desired color and promote rapid growth. Limit application to 0.5 to 1 pound of nitrate nitrogen (3 to 6 pounds of nitrate of soda or calcium nitrate) per 100 square yards which is equivalent to 25 to 50 pounds nitrogen (150 to 300 pounds nitrate of soda or calcium nitrate) per acre.

Yellowing of plants may also result from magnesium or sulfur deficiency. Correct diagnosis of the problem requires the use of plant analysis. Magnesium and sulfur deficiencies may be corrected by applying 3 pounds of potassium-magnesium-sulfate or equivalent from other sources per 100 square yards (145 pounds per acre).

Do not apply fertilizers to wet foliage. Irrigate after application to wash fertilizer material off the plant.

Organic forms of nitrogen are not suggested for use in tobacco plant beds.

Wheat - Grain Sorghum Rotation (*Code* #015)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-160-160	*-160-100	*-160-40	*-160-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-100-160	*-100-100	*-100-40	*-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-160	*-40-100	*-40-40	*-40-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-160	*-0-100	*-0-40	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Coastal Plain only:

***Nitrogen recommendation:**

For wheat following a legume apply 60 to 80 pounds of nitrogen per acre; for wheat following corn, cotton, etc., apply 80 to 100 pounds of nitrogen per acre; for wheat following grain sorghum apply 100 to 120 pounds of nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder as a topdressing in February.

When the wheat is grazed, increase the nitrogen rate by 60 pounds of nitrogen per acre. Apply in 2 applications; half in the fall and the remainder in February.

For grain sorghum apply 100 to 125 pounds of nitrogen per acre. Apply half of the nitrogen prior to or at planting and the remainder before the 6^{th} leaf stage.

On deep sandy soils, 10 pounds of sulfur (S) per acre should be applied to the wheat. The sulfur should be applied along with the topdress nitrogen.

The recommended amounts of phosphate (P_2O_5) and potash (K_2O) should be applied prior to seeding the wheat except on soils in which the subsoil is greater than 16 inches below the surface. On these soils apply part of the potassium to the wheat at planting and the remainder prior to seeding the grain sorghum. For other soils no additional phosphate or potash should be needed for the grain sorghum.

Piedmont only:

***Nitrogen recommendation:**

For wheat following a legume apply 60 to 80 pounds of nitrogen per acre; for wheat following corn, cotton, etc., apply 80 to 100 pounds of nitrogen per acre; for wheat following grain sorghum apply 100 to 120 pounds of nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder as a topdressing in February.

When the wheat is grazed, increase the nitrogen rate by 60 pounds of nitrogen per acre. Apply in 2 applications; half in the fall and the remainder in February.

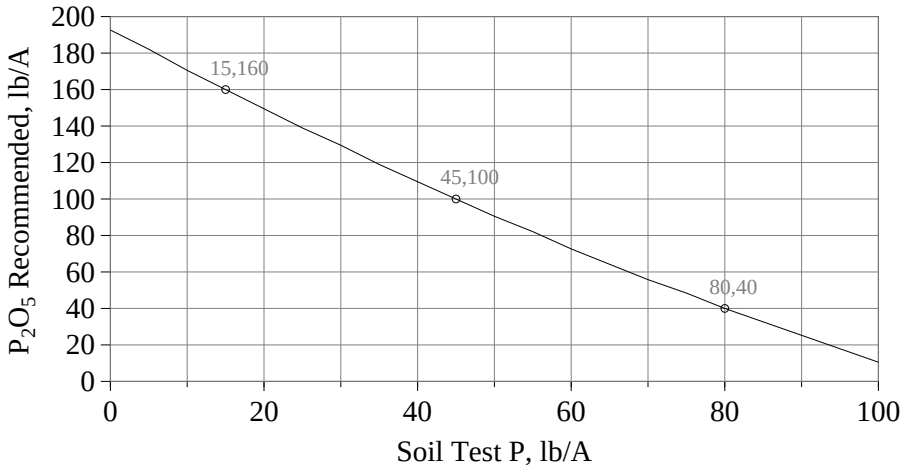
For grain sorghum apply 100 to 125 pounds of nitrogen per acre. Apply half of the nitrogen prior to or at planting and the remainder before the 6^{th} leaf stage.

The recommended amounts of phosphate (P_2O_5) and potash (K_2O) should be applied prior to seeding the wheat except on soils in which the subsoil is greater than 16 inches below the surface. On these soils apply part of the potassium to the wheat at planting and the remainder prior to seeding the grain sorghum. For other soils no additional phosphate or potash should be needed for the grain sorghum.

Wheat - Grain Sorghum Rotation (*Code 015*)

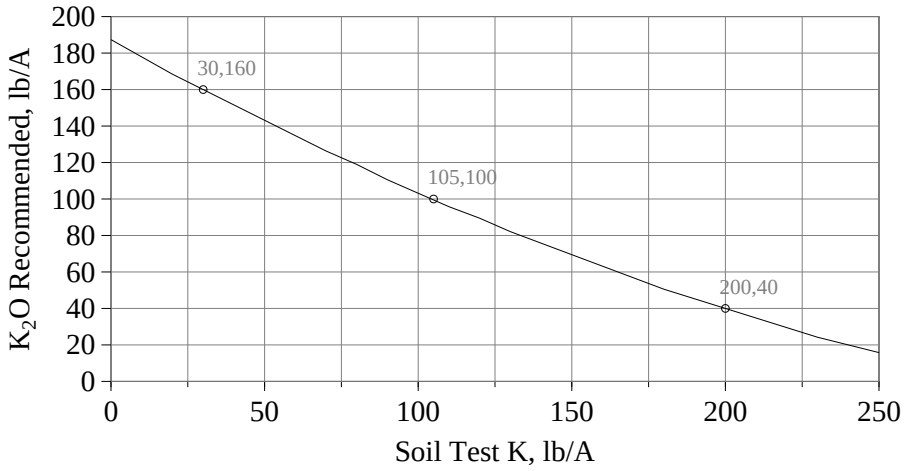
P Recommendations, Coastal Plain

$P_2O_5 = 193 - 2.264P + 0.00440P^2$



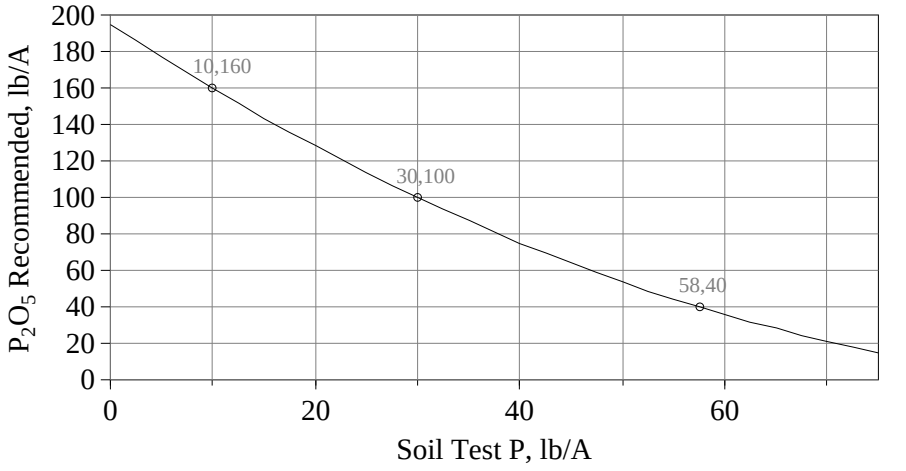
K Recommendations, Coastal Plain

$K_2O = 187 - 0.934K + 0.00099K^2$



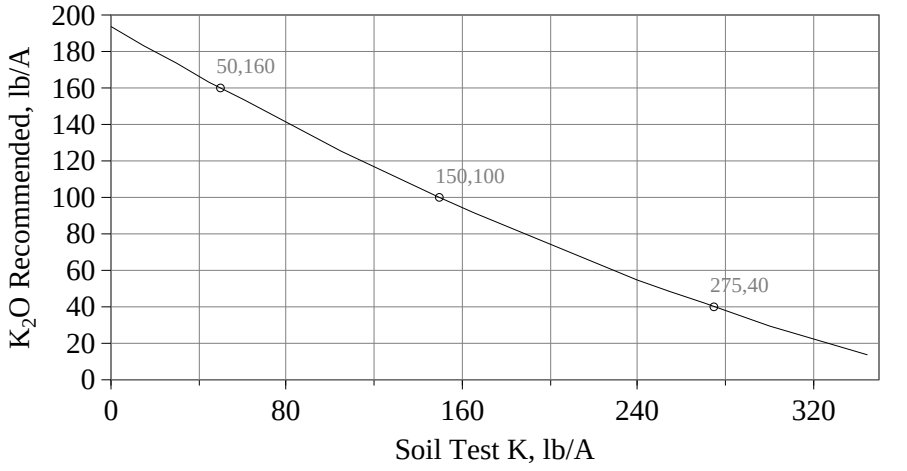
P Recommendations, Piedmont

$P_2O_5 = 195 - 3.689P + 0.01722P^2$



K Recommendations, Piedmont

$K_2O = 194 - 0.706K + 0.00053K^2$



Wheat - Soybean Rotation (*Code* #016)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-150-180	*-150-120	*-150-60	*-150-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-85-180	*-85-120	*-85-60	*-85-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-35-180	*-35-120	*-35-60	*-35-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-180	*-0-120	*-0-60	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60-120 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See sulfur (S) and manganese (Mn) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

***Nitrogen recommendation:**

For wheat following a legume apply 60 to 80 pounds nitrogen per acre; for wheat following corn, cotton, etc. apply 80 to 100 pounds nitrogen per acre; for wheat following grain sorghum apply 100 to 120 pounds nitrogen per acre. Apply 20 to 40 pounds of the recommended nitrogen per acre in the fall and the remainder as a topdressing in February.

When grazed, increase the nitrogen rate by 60 pounds of nitrogen per acre. Apply in 2 applications, half in the fall and the remainder in February.

On deep sandy soils, 10 pounds of sulfur (S) per acre should be applied to the wheat. The sulfur should be applied along with the topdress nitrogen.

The recommended amounts of phosphate (P_2O_5) and potash (K_2O) should be applied prior to seeding the wheat except on low potassium testing sandy soils in which the subsoil is greater than 16 inches below the surface. On these soils, apply part of the potassium to the wheat at planting and the remainder prior to planting the soybeans. For other soils, no additional phosphate or potash should be needed for the soybeans.

Additional recommendations - Soybeans:

Inoculate the soybean seed at planting. Apply one ounce of molybdenum salt per bushel of seed as a seed treatment.

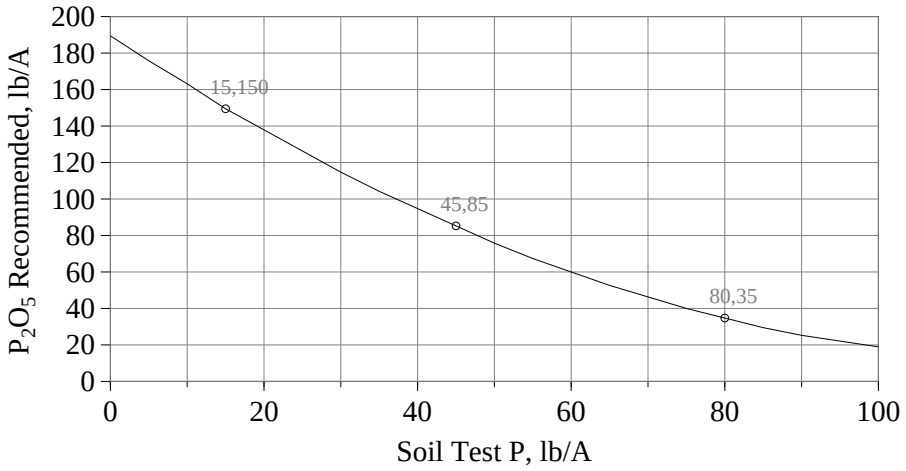
Coastal Plain only:

If the soil test manganese (Mn) level is low, apply 10 pounds of manganese per acre either as manganese sulfate or manganese oxide as a broadcast application. If the soil pH is 6.0 or less, do not apply manganese, irrespective of the soil manganese level.

Wheat - Soybean Rotation (*Code 016*)

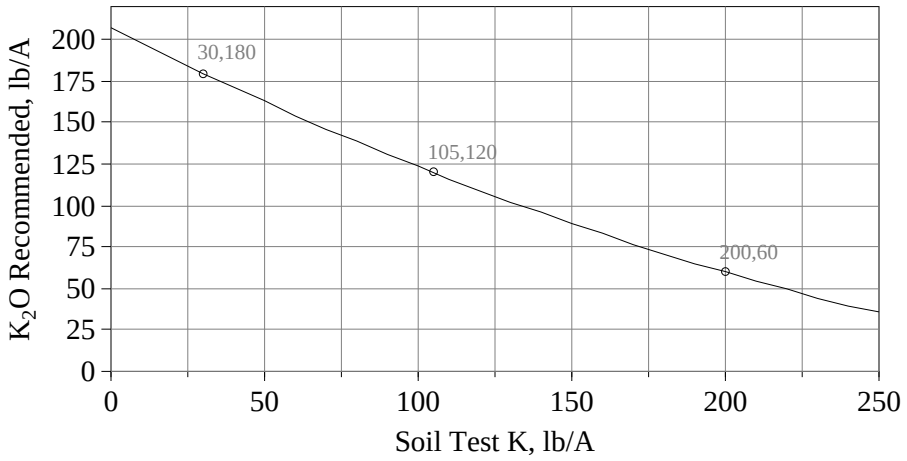
P Recommendations, Coastal Plain

$P_2O_5 = 190 - 2.848P + 0.01136P^2$



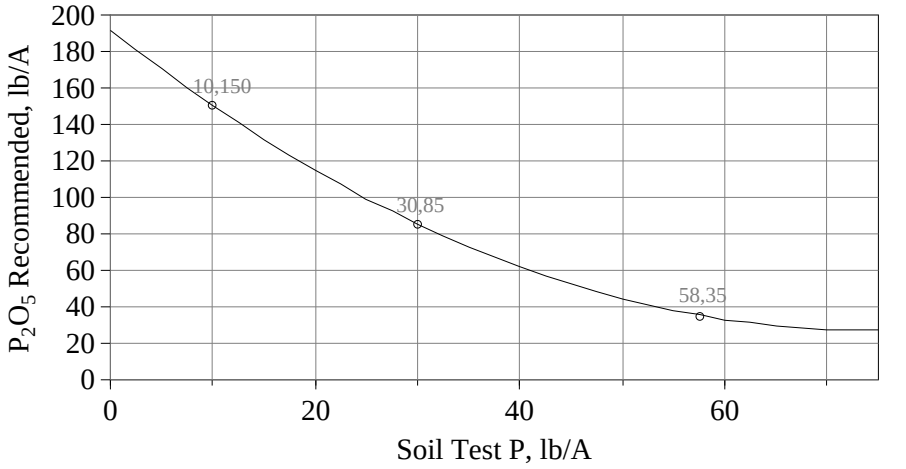
K Recommendations, Coastal Plain

$K_2O = 207 - 0.934K + 0.00099K^2$



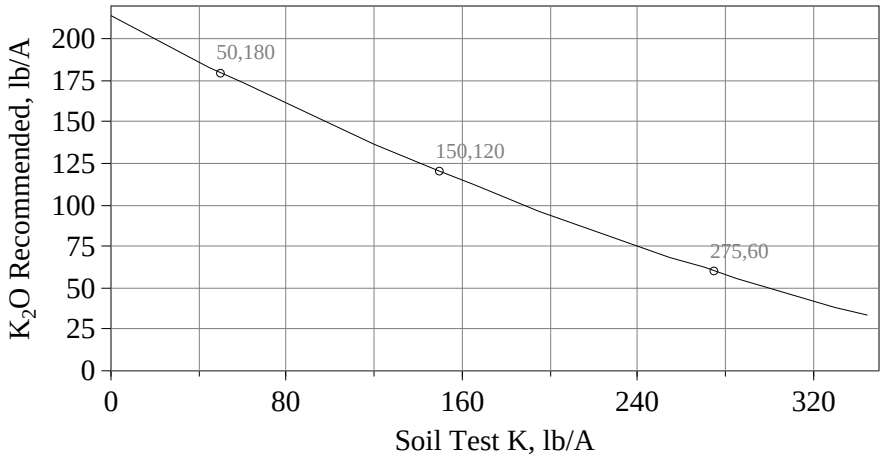
P Recommendations, Piedmont

$P_2O_5 = 192 - 4.456P + 0.03014P^2$



K Recommendations, Piedmont

$K_2O = 214 - 0.706K + 0.00053K^2$



Kenaf (*Code* #KEN)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	175-100-100	175-100-50	175-100-0	175-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	175-50-100	175-50-50	175-50-0	175-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	175-0-100	175-0-50	175-0-0	175-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	175-0-100	175-0-50	175-0-0	175-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	175 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

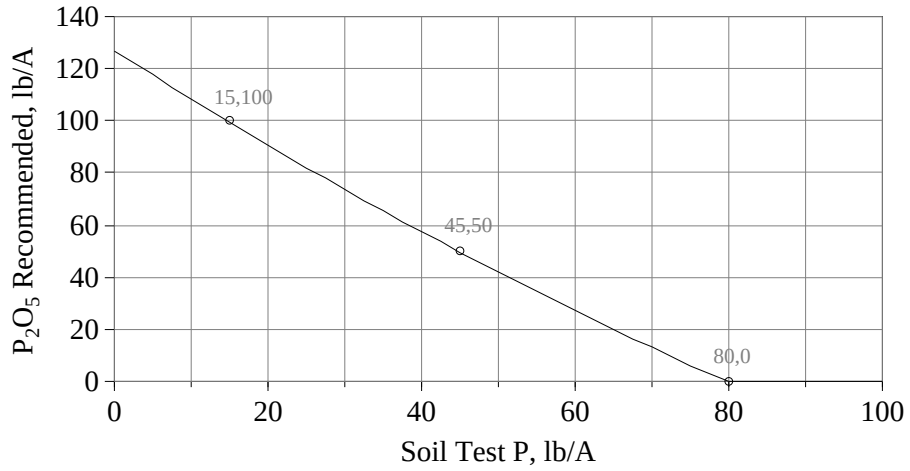
Fact Sheet:

Apply 30 pounds of nitrogen (N) at planting and the balance 30 to 40 days after planting.

Kenaf (*Code KEN*)

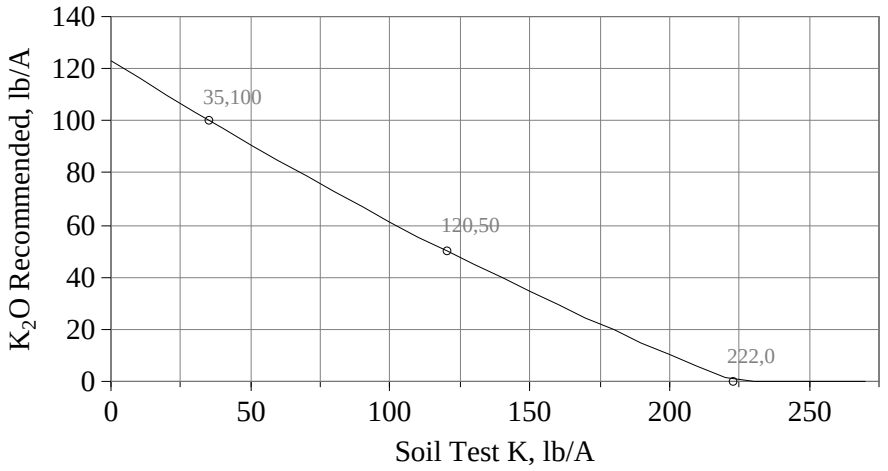
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



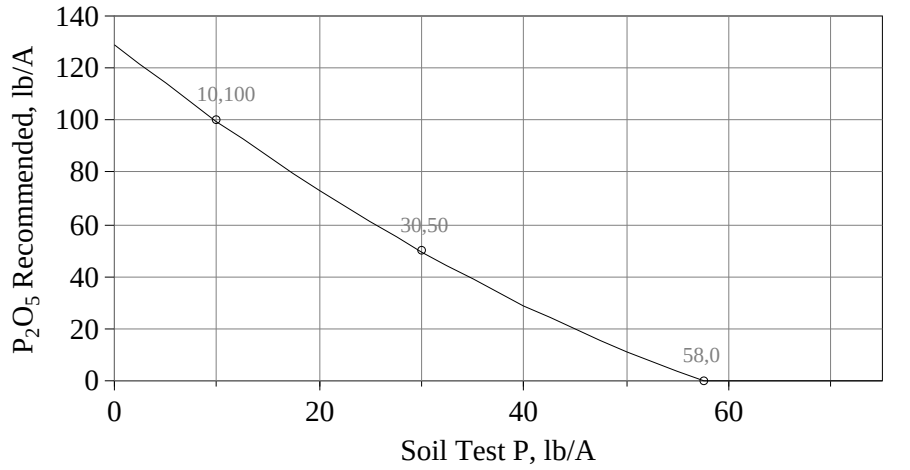
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



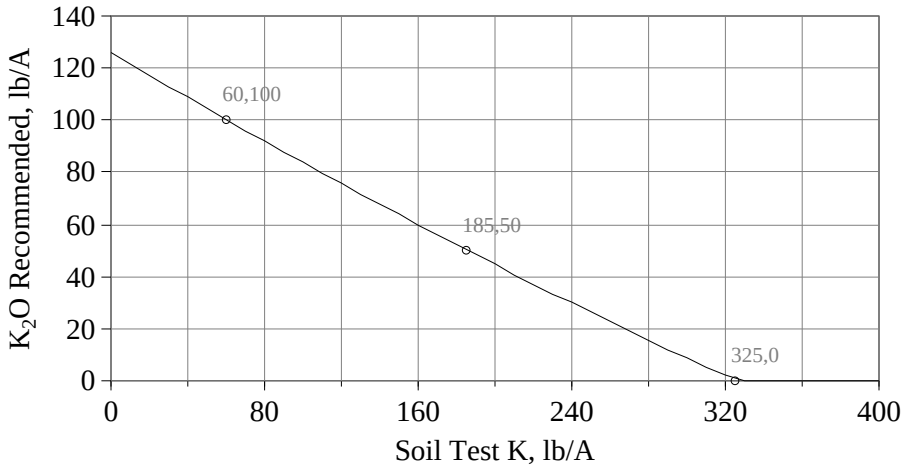
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Truffles (*Code* #TRU)

Soil Test Rating	Potassium			
	Low K Coast: 0-30 lbs/A Pied: 0-50 lbs/A	**Medium K** Coast: 31-60 lbs/A Pied: 51-100 lbs/A	**High K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**Very High K** Coast: 150+ lbs/A Pied: 200+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-10 lbs/A Pied: 0-10 lbs/A	*-80-80	*-80-50	*-80-0	*-80-0
Medium, High, Very High P >10 lbs/A	*-0-80	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	7.5 to 8.0
Nitrogen:	30-50 pounds nitrogen (N) per acre to the host tree
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

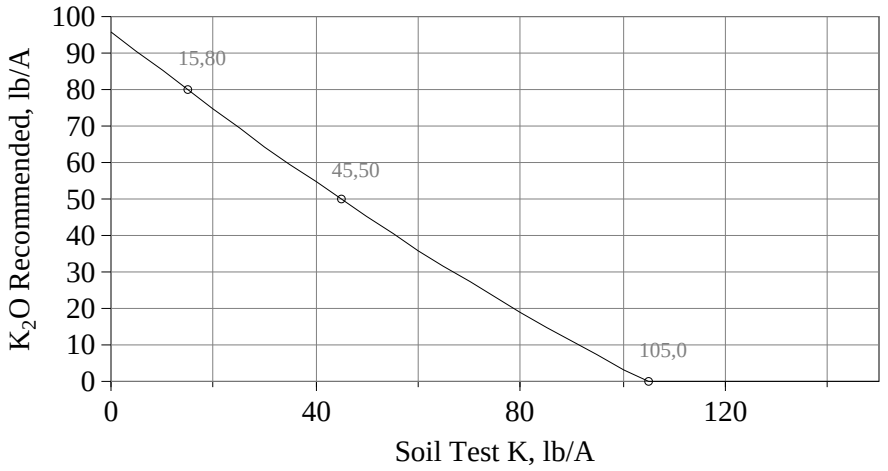
The recommended pH for truffles is 7.5 to 8.0. The soil should contain an excess of lime to maintain this pH level. Dolomitic lime is recommended to maintain an adequate magnesium level in the soil. Soil test phosphorus should be less than 10 pounds available P per acre for truffle production. Truffle production is a symbiant relationship between the fungus and the tree. The more that soil test P exceeds 10 pounds per acre, the less chance there is for success in truffle production. Potassium fertilizer applications should be those needed by the host trees. Apply 30 to 50 pounds N per acre to the host tree after new leaves appear in the spring.

Truffles (*Code TRU*)

At phosphorus soil test values in the traditional medium, high, and very high ranges, production of truffles may not be successful.

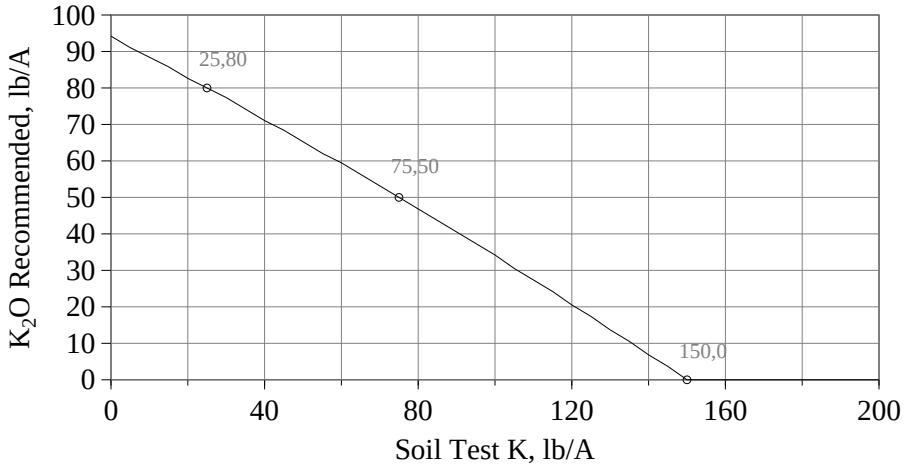
K Recommendations, Coastal Plain

$K_2O = 96 - 1.111K + 0.00185K^2$



K Recommendations, Piedmont

$K_2O = 94 - 0.547K - 0.00053K^2$



Corn (for Grain) Irrigated 200 bu/a (*Code* #C01)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	240-140-180	240-140-140	240-140-120	240-140-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	240-105-180	240-105-140	240-105-120	240-105-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	240-75-180	240-75-140	240-75-120	240-75-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	240-0-180	240-0-140	240-0-120	240-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	240 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Split the nitrogen applications, applying one-fourth to one-third of the nitrogen prior to or at planting and the remainder as a sidedress application when the corn is 18 to 24 inches high; or apply the remainder of the nitrogen through the irrigation system in 3 to 4 equal applications at 7 to 10 day intervals, beginning at the 6 leaf stage.

For new ground testing low in phosphorus (P), increase the phosphate rate by 50%.

For early planted corn, apply a starter fertilizer at a rate to supply 10 to 20 pounds nitrogen per acre and 30 to 60 pounds phosphate per acre.

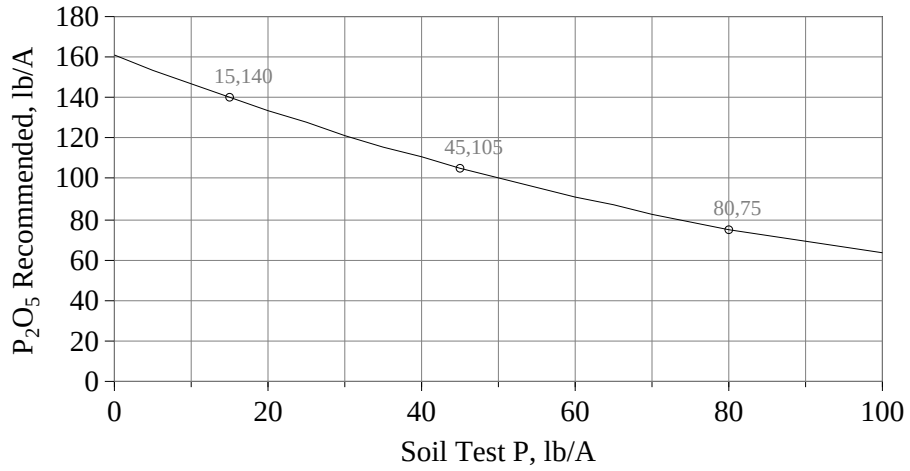
The applied fertilizer should contain sufficient sulfur (S) to supply 20 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Use plant analysis to monitor the nutrient status of the plants. If any are found to be low they can be applied to the crop as a sidedress, foliar application or through the irrigation system. Contact your local county agent for additional information.

Corn (for Grain) Irrigated 200 bu/a (*Code C01*)

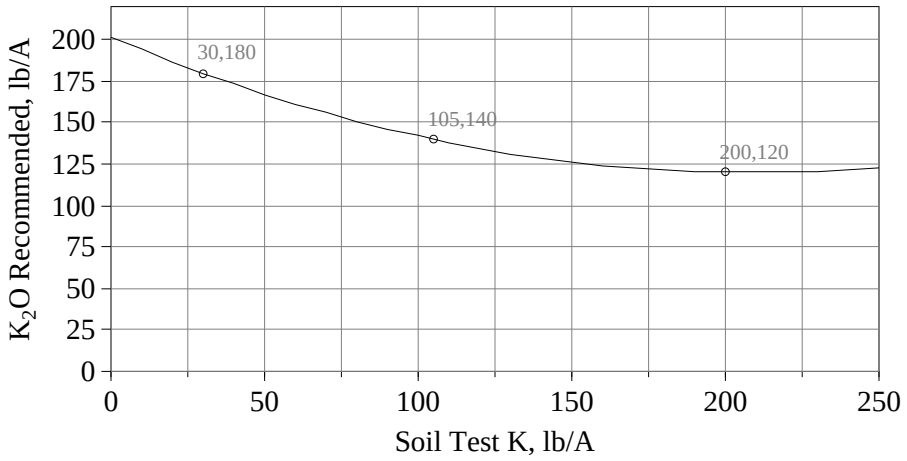
P Recommendations, Coastal Plain

$P_2O_5 = 161 - 1.452P + 0.00476P^2$



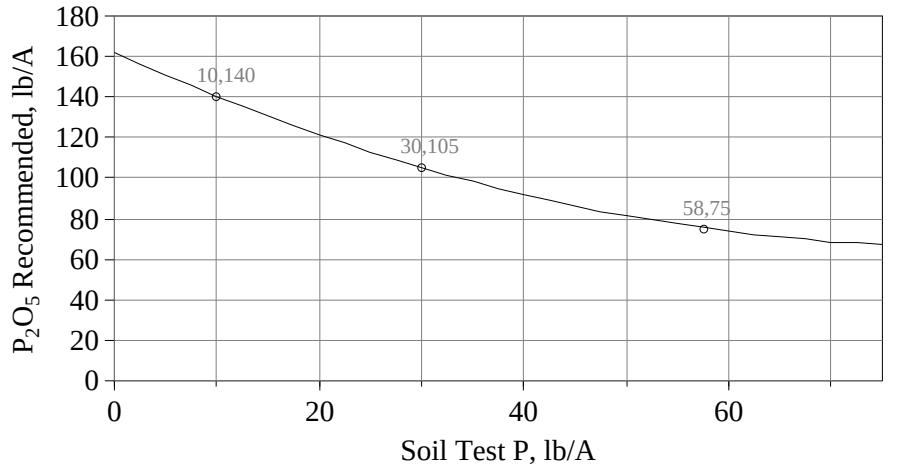
K Recommendations, Coastal Plain

$K_2O = 202 - 0.790K + 0.00190K^2$



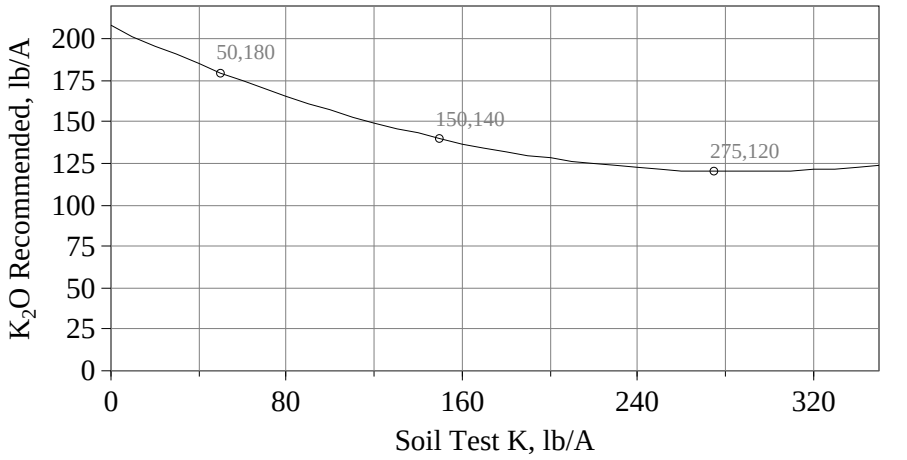
P Recommendations, Piedmont

$P_2O_5 = 162 - 2.305P + 0.01388P^2$



K Recommendations, Piedmont

$K_2O = 208 - 0.614K + 0.00107K^2$



Corn (for Grain) Irrigated 250 bu/a (*Code* #C02)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	300-170-230	300-170-190	300-170-170	300-170-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	300-120-230	300-120-190	300-120-170	300-120-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	300-75-230	300-75-190	300-75-170	300-75-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	300-0-230	300-0-190	300-0-170	300-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	300 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Split the nitrogen applications, applying one-fourth to one-third of the nitrogen prior to or at planting and the remainder as a sidedress application when the corn is 18 to 24 inches high; or apply the remainder of the nitrogen through the irrigation system in 3 to 4 equal applications at 7 to 10 day intervals, beginning at the 6 leaf stage.

For new ground testing low in phosphorus (P), increase the phosphate rate by 25%.

For early planted corn, apply a starter fertilizer at a rate to supply 10 to 20 pounds nitrogen per acre and 30 to 60 pounds phosphate per acre.

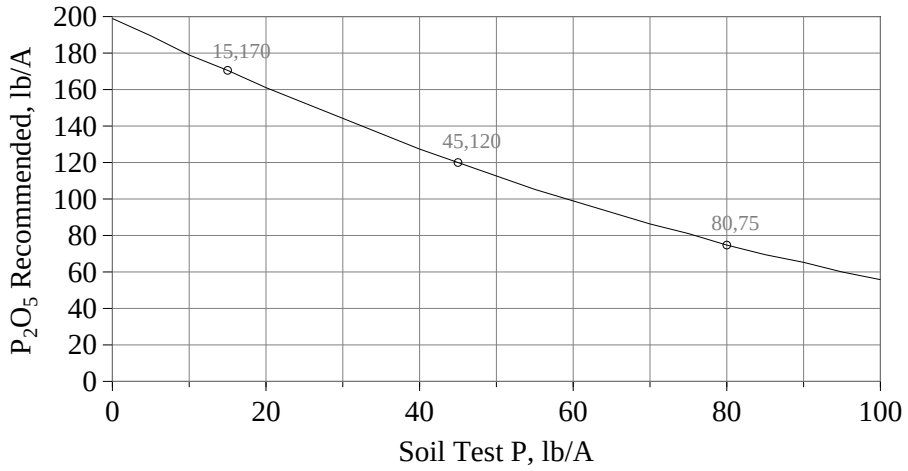
The applied fertilizer should contain sufficient sulfur (S) to supply 25 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Use plant analysis to monitor the nutrient status of the plants. If any are found to be low they can be applied to the crop as a sidedress, foliar application or through the irrigation system. Contact your local county agent for additional information.

Corn (for Grain) Irrigated 250 bu/a (*Code C02*)

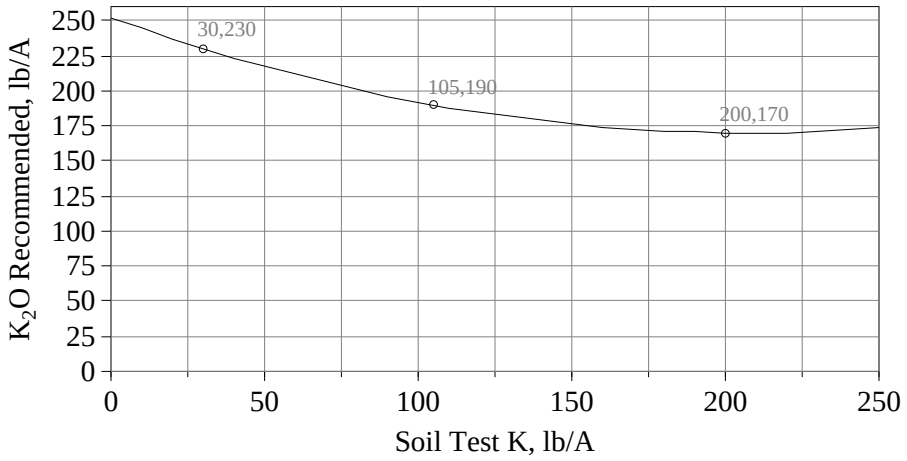
P Recommendations, Coastal Plain

$P_2O_5 = 199 - 2.018P + 0.00586P^2$



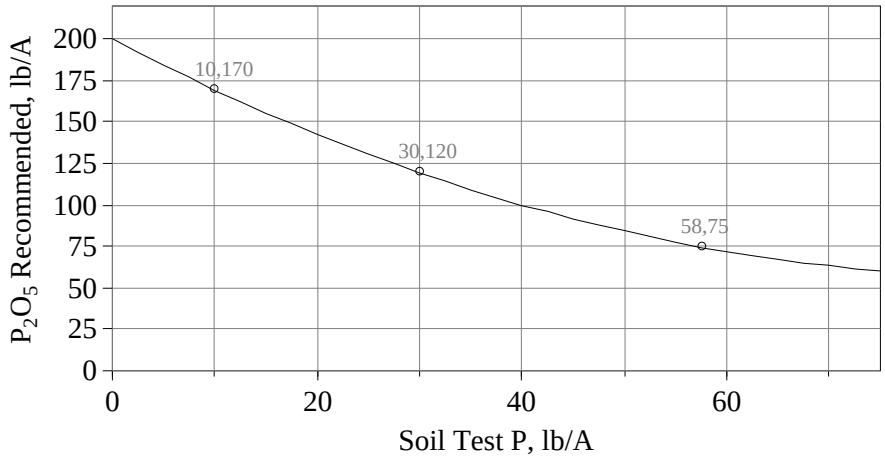
K Recommendations, Coastal Plain

$K_2O = 252 - 0.790K + 0.00190K^2$



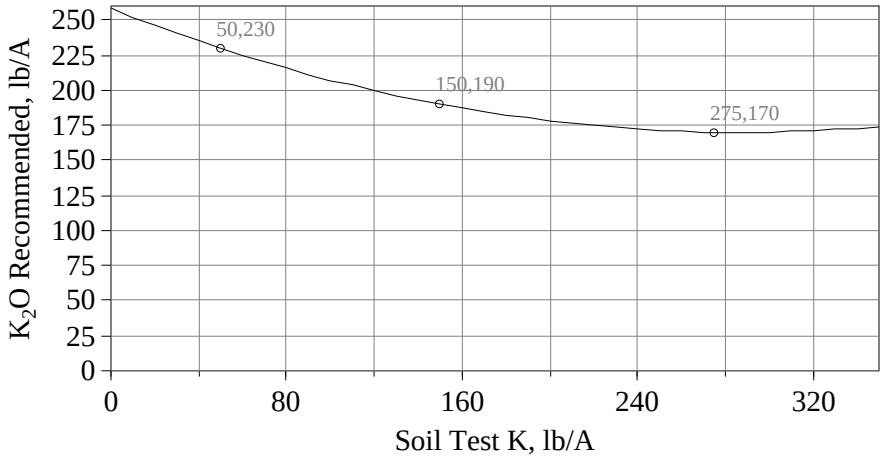
P Recommendations, Piedmont

$P_2O_5 = 200 - 3.227P + 0.01818P^2$



K Recommendations, Piedmont

$K_2O = 258 - 0.614K + 0.00107K^2$



Corn (for Grain) Irrigated 300 bu/a (*Code* #C03)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	360-200-280	360-200-240	360-200-220	360-200-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	360-130-280	360-130-240	360-130-220	360-130-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	360-75-280	360-75-240	360-75-220	360-75-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	360-0-280	360-0-240	360-0-220	360-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	360 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 3 pounds of zinc per acre.
Other:	See sulfur (S) recommendations below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Reduce the nitrogen rate by 20 to 40 pounds per acre following peanuts and soybeans, and by 80 to 100 pounds per acre following alfalfa or a legume winter cover crop that is allowed to bloom.

Split the nitrogen applications, applying one-fourth to one-third of the nitrogen prior to or at planting and the remainder as a sidedress application when the corn is 18 to 24 inches high; or apply the remainder of the nitrogen through the irrigation system in 3 to 4 equal applications at 7 to 10 day intervals, beginning at the 6 leaf stage.

For early planted corn, apply a starter fertilizer at a rate to supply 10 to 20 pounds nitrogen per acre and 30 to 60 pounds phosphate per acre.

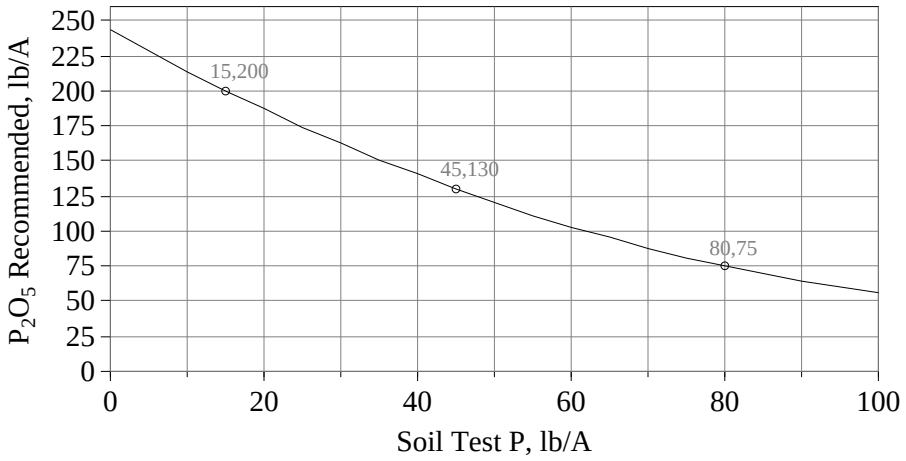
The applied fertilizer should contain sufficient sulfur (S) to supply 30 pounds sulfur per acre. Since sulfur is highly leachable, especially on deep sands, application of sulfur with post plant nitrogen applications may improve efficiency.

Use plant analysis to monitor the nutrient status of the plants. If any are found to be low they can be applied to the crop as a sidedress, foliar application or through the irrigation system. Contact your local county agent for additional information.

Corn (for Grain) Irrigated 300 bu/a (*Code C03*)

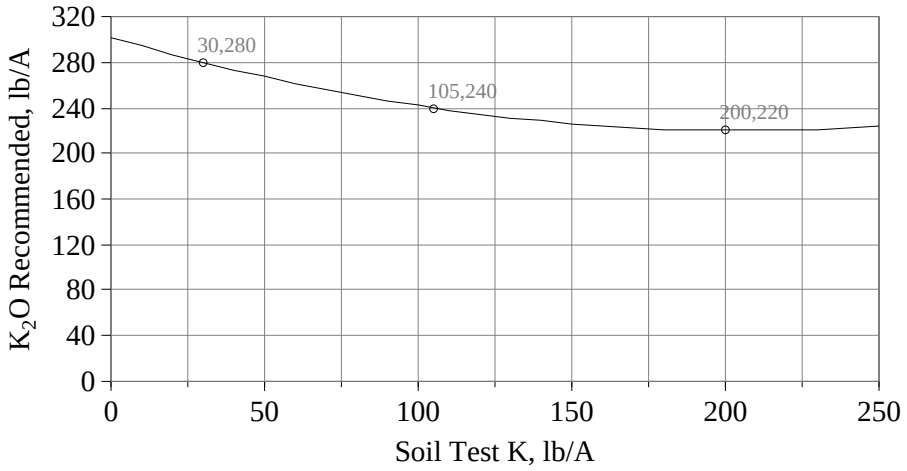
P Recommendations, Coastal Plain

$P_2O_5 = 243 - 3.037P + 0.01172P^2$



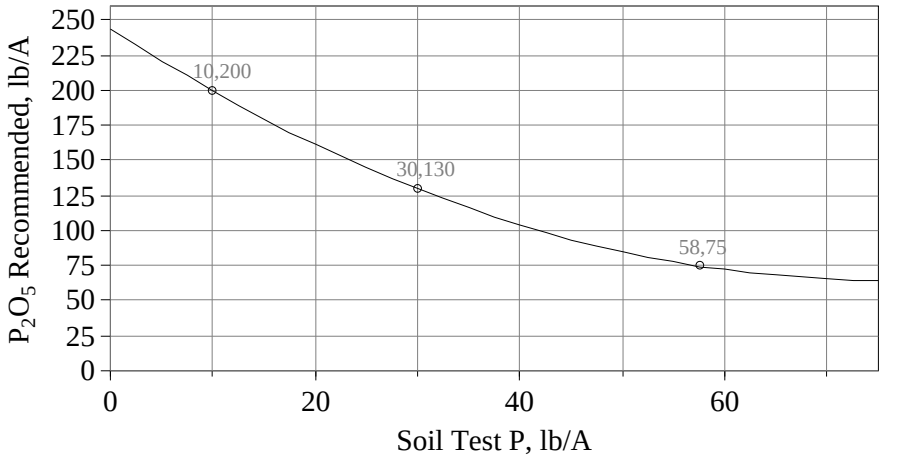
K Recommendations, Coastal Plain

$K_2O = 302 - 0.790K + 0.00190K^2$



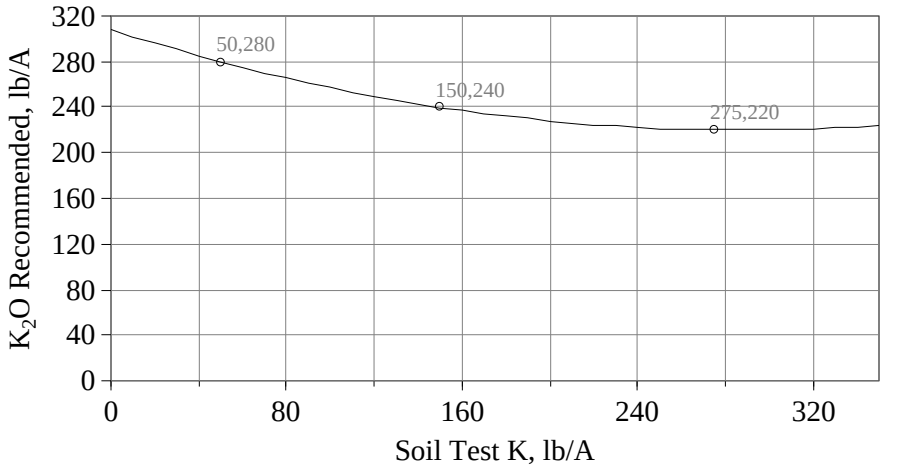
P Recommendations, Piedmont

$P_2O_5 = 244 - 4.763P + 0.03158P^2$



K Recommendations, Piedmont

$K_2O = 308 - 0.614K + 0.00107K^2$



PASTURES, HAY CROPS

David E. Kissel, Director – Agricultural & Environmental Services Laboratories
Dennis Hancock, Extension Agronomist – Forages
Glendon Harris, Extension Agronomist – Soils & Fertilizer

Alfalfa-Establishment (*Code* #025)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-160-250	0-160-200	0-160-150	0-160-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-130-250	0-130-200	0-130-150	0-130-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-100-250	0-100-200	0-100-150	0-100-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-250	0-0-200	0-0-150	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.5 to 7.0. If the pH is less than 6.5, see Lime Table A.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) and molybdenum (Mo) recommendations below.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

Per 60 pounds of seed, apply 1/4 ounce of molybdenum (2/3 ounce of sodium molybdate) in just enough water to slightly moisten the seed. (CAUTION: DO NOT EXCEED THE RECOMMENDED AMOUNT OF MOLYBDENUM.)

Apply 3 pounds of boron (B) per acre.

continued -»

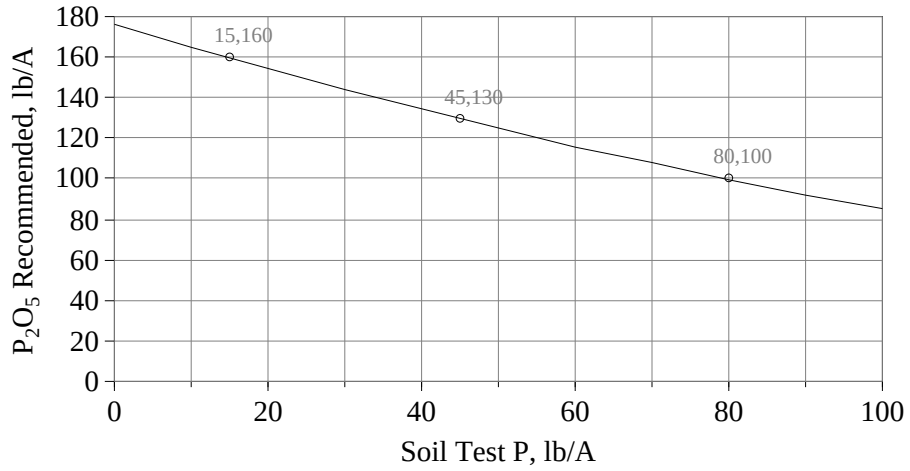
Piedmont only:

Gypsum subsoil test: Research has shown significant yield increases to gypsum application on some piedmont and mountain soils with red, acidic subsoils. A subsoil sample must be tested to determine if gypsum is needed. Take samples by removing and discarding the topsoil down to a depth of 15 inches. Collect a subsoil sample from the 15-inch depth from several locations, mix and place in a soil test bag. There is a fee for this special test.

Alfalfa-Establishment (*Code 025*)

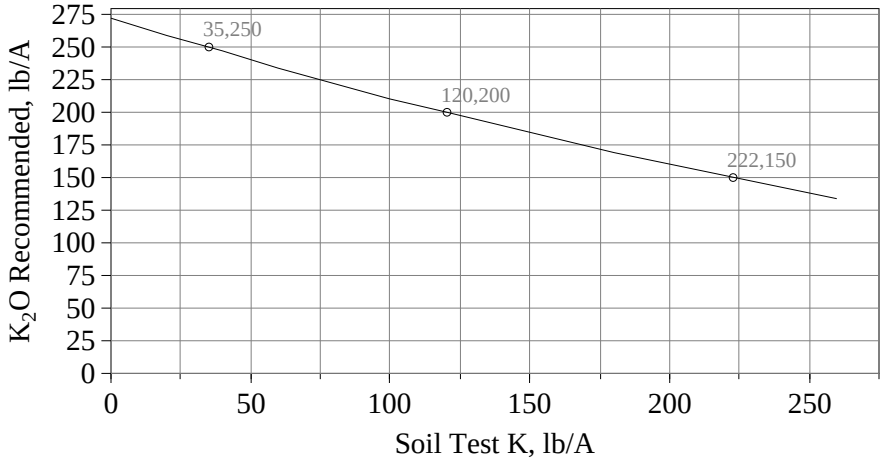
P Recommendations, Coastal Plain

$P_2O_5 = 176 - 1.132P + 0.00220P^2$



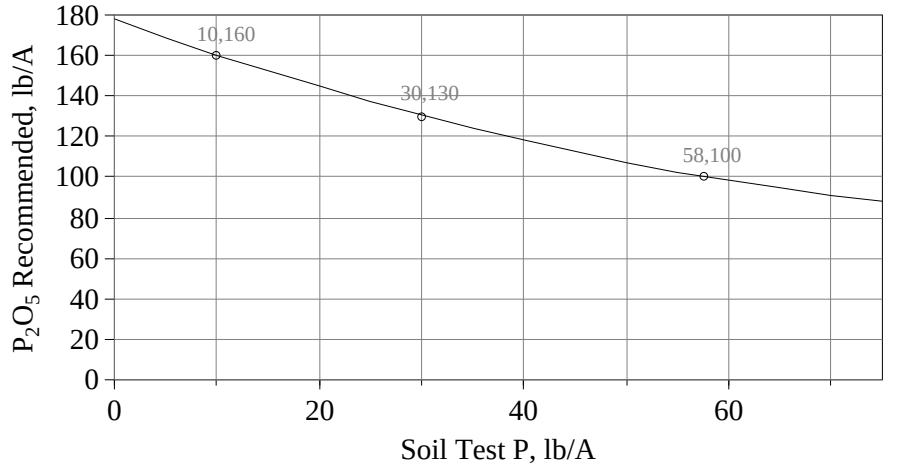
K Recommendations, Coastal Plain

$K_2O = 273 - 0.672K + 0.00054K^2$



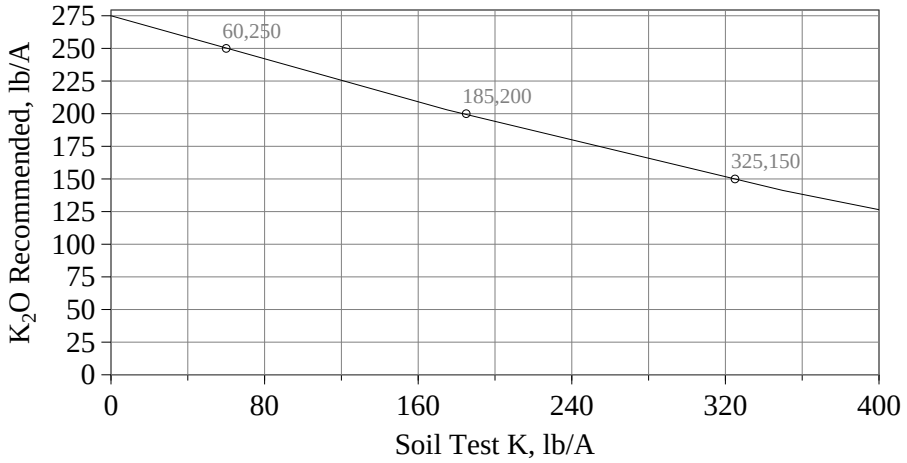
P Recommendations, Piedmont

$P_2O_5 = 178 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 276 - 0.439K + 0.00016K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-250	0-100-200	0-100-150	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-70-250	0-70-200	0-70-150	0-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-50-250	0-50-200	0-50-150	0-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-250	0-0-200	0-0-150	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.5 to 7.0. If the pH is less than 6.5, see Lime Table A.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) and molybdenum (Mo) recommendations below.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

For maintenance, apply 3 pounds of boron (B) per acre annually. Apply 3 ounces of molybdenum (Mo) (8 ounces of sodium molybdate) in 25 gallons of water per acre every two years. Apply the foliar application of molybdenum in late winter or in the spring before new shoots reach 2 to 3 inches in height.

It may be possible to extend the life of alfalfa stands and improve yields by splitting the potash (K_2O). In the Piedmont apply one-half of the recommended amount in the spring and the remainder after the third harvest. On sandy Coastal Plain Soils three applications are preferred - spring, summer and fall.

continued -»

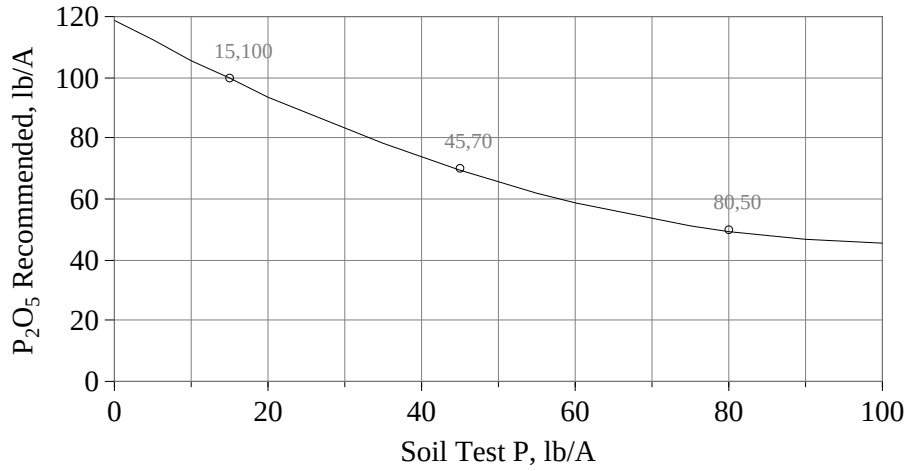
Piedmont only:

Gypsum subsoil test: Research has shown significant yield increases to gypsum application on some piedmont and mountain soils with red, acidic subsoils. A subsoil sample must be tested to determine if gypsum is needed. Take samples by removing and discarding the topsoil down to a depth of 15 inches. Collect a subsoil sample from the 15-inch depth from several locations, mix and place in a soil test bag. There is a fee for this special test.

Alfalfa-Maintenance (*Code 026*)

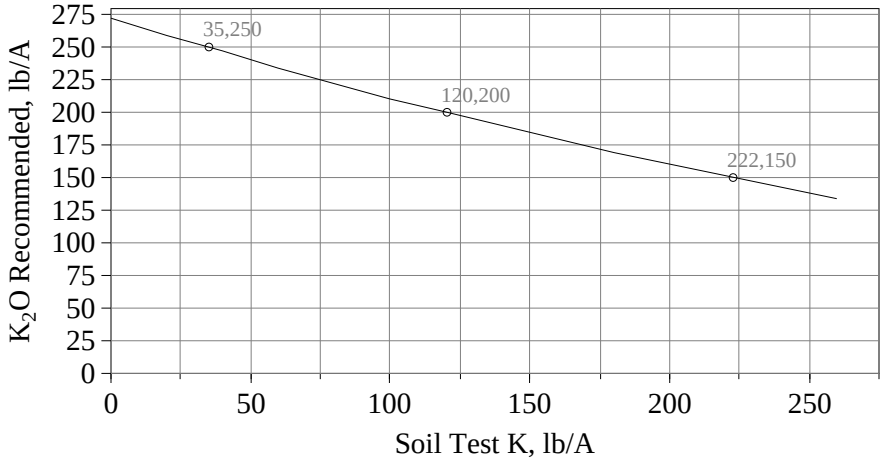
P Recommendations, Coastal Plain

$P_2O_5 = 119 - 1.395P + 0.00659P^2$



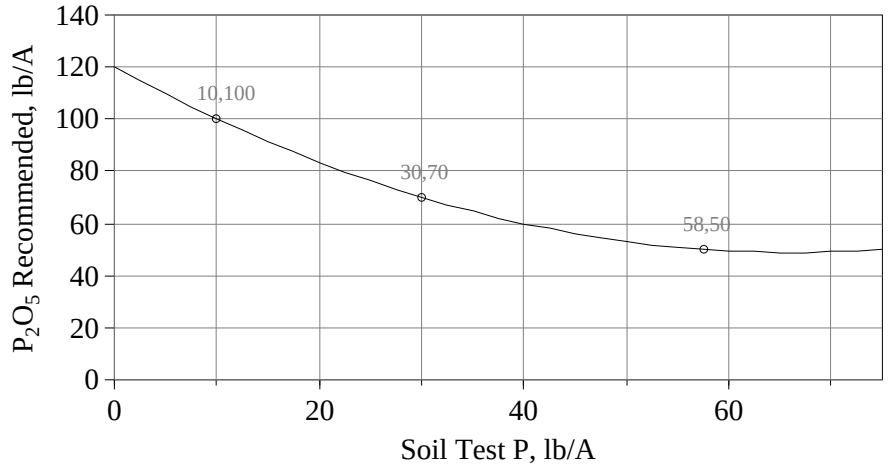
K Recommendations, Coastal Plain

$K_2O = 273 - 0.672K + 0.00054K^2$



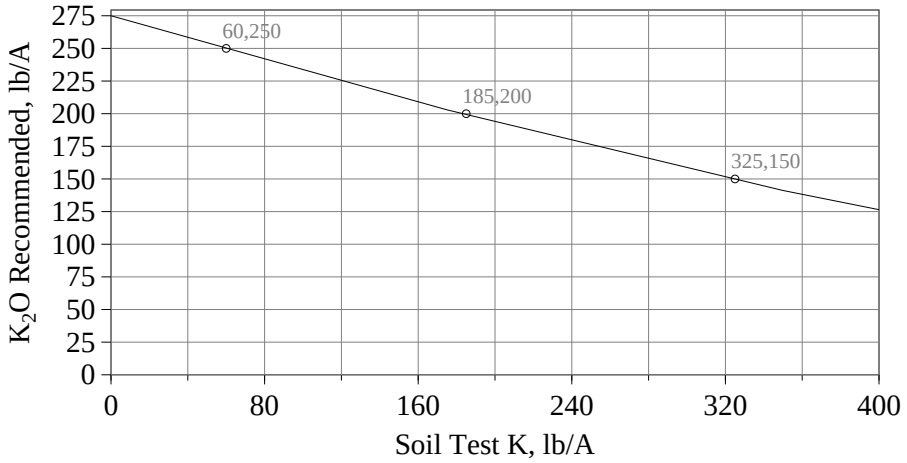
P Recommendations, Piedmont

$P_2O_5 = 120 - 2.151P + 0.01627P^2$



K Recommendations, Piedmont

$K_2O = 276 - 0.439K + 0.00016K^2$



Annual Lespedeza (*Code* #032)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

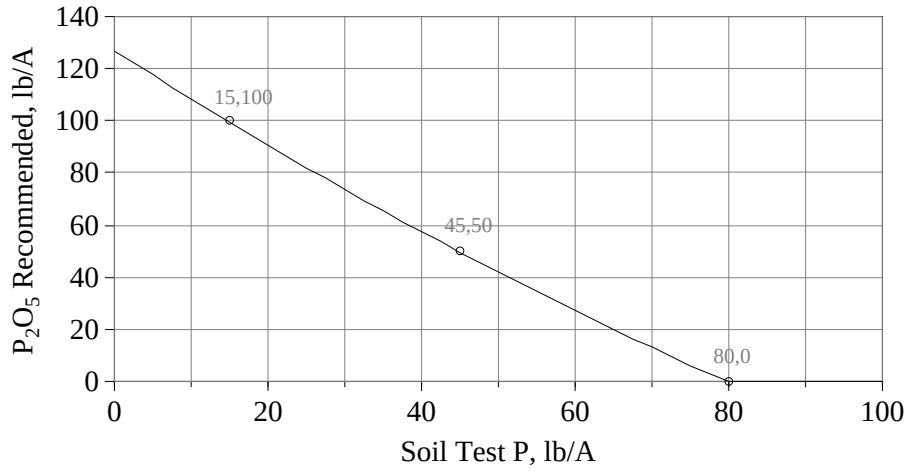
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Annual Lespedeza (*Code 032*)

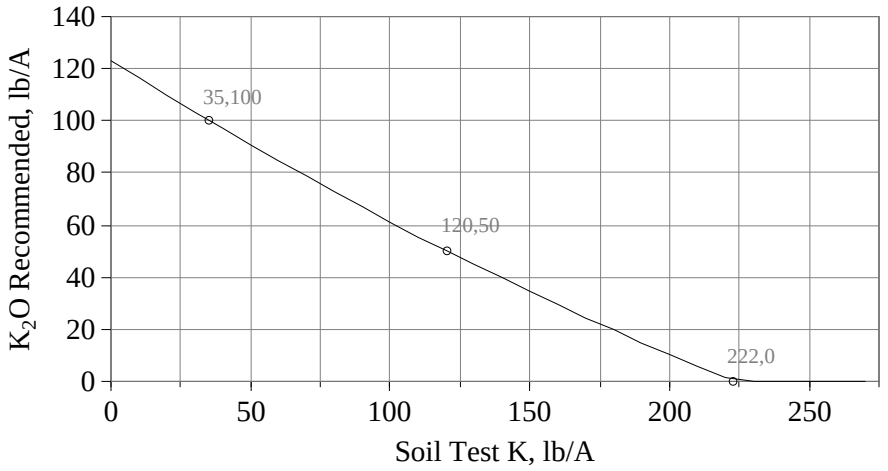
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



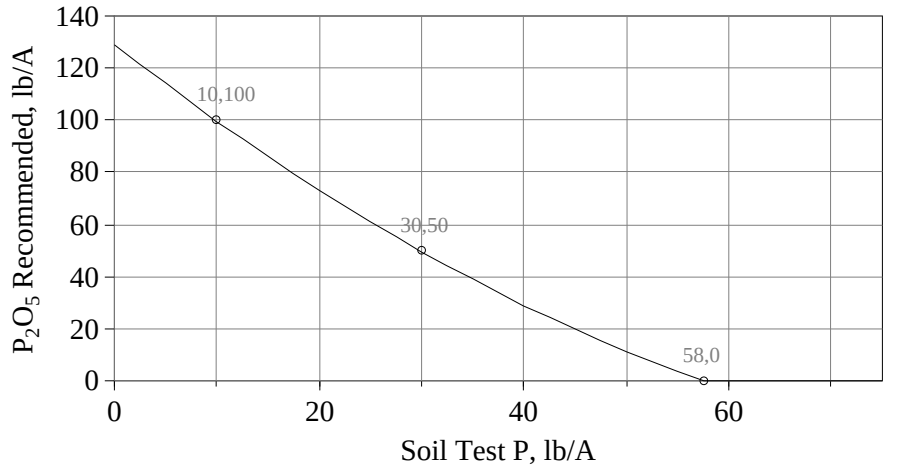
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



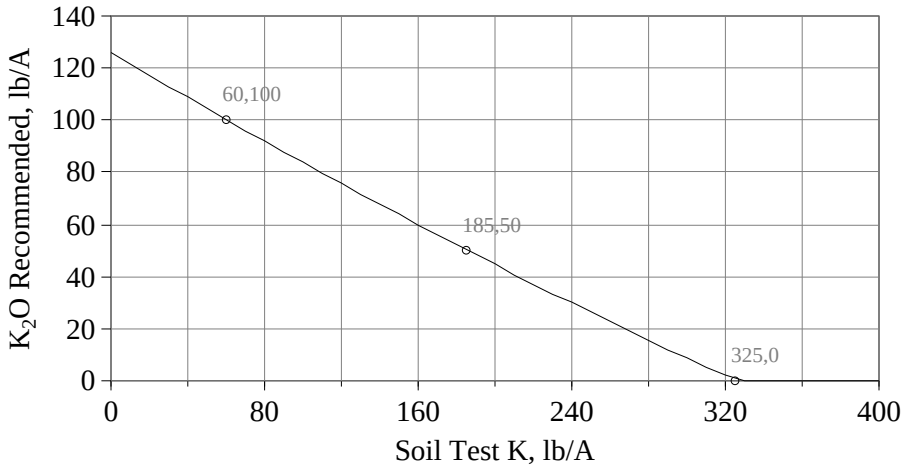
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Bahia Grass Pasture (*Code* #046)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	75-175 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

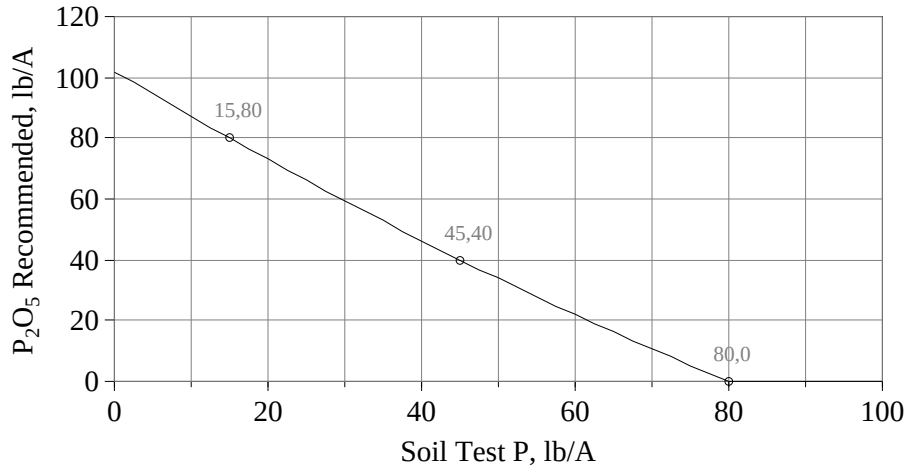
*For pastures not intensively grazed apply 75 to 125 pounds nitrogen per acre. For intensively grazed pastures apply 125 to 175 pounds nitrogen per acre.

If excess forage is common under grazing conditions, split the pasture in half and apply nitrogen to only one section in early April, and to the remaining apply nitrogen in July or August, dependent upon the amount of forage that will be utilized.

Bahia Grass Pasture (*Code 046*)

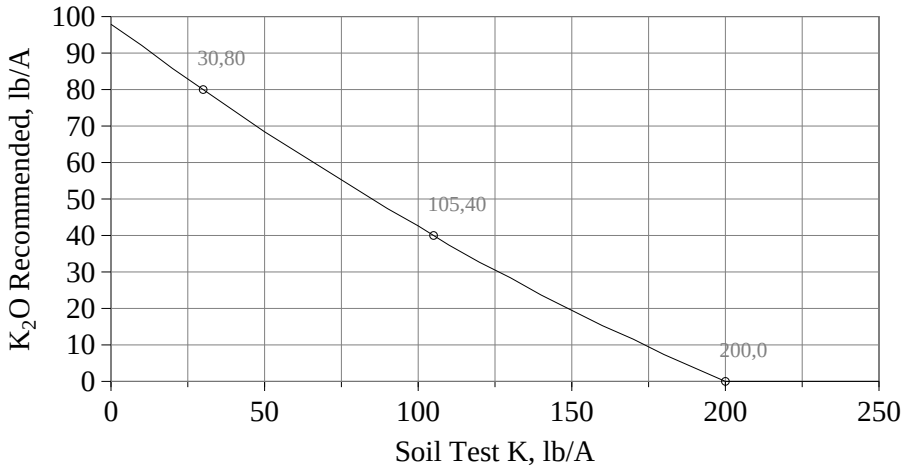
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



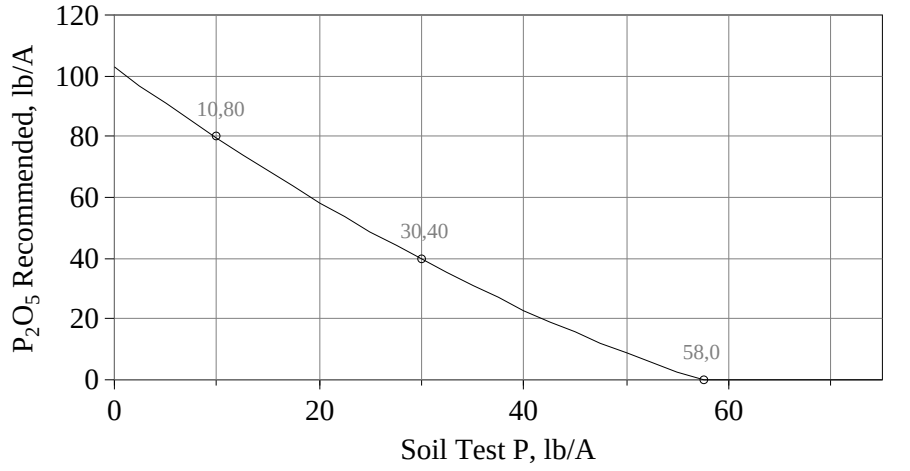
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



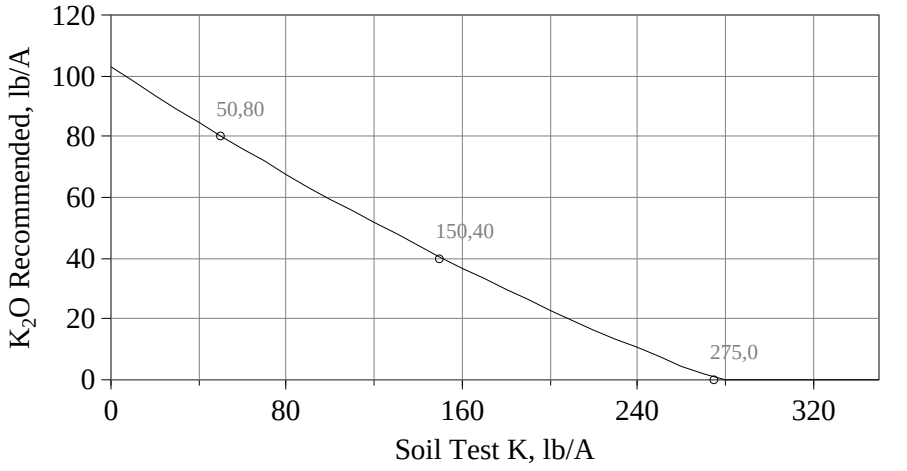
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Brown Top Millet (*Code* #042)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-60-100	60-60-80	60-60-60	60-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-40-100	60-40-80	60-40-60	60-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-20-100	60-20-80	60-20-60	60-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-0-100	60-0-80	60-0-60	60-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

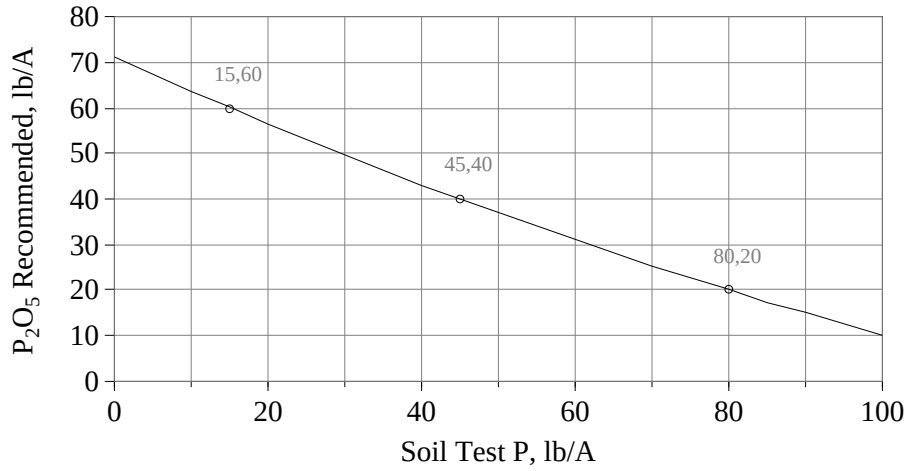
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Brown Top Millet (*Code 042*)

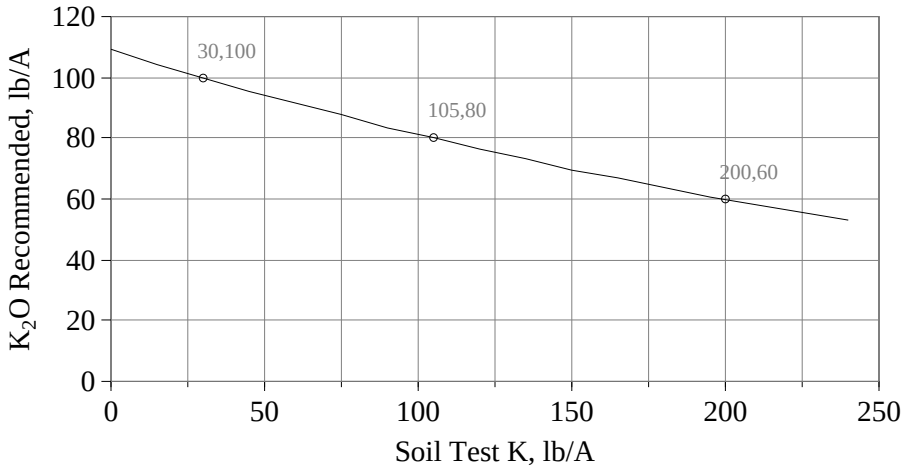
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



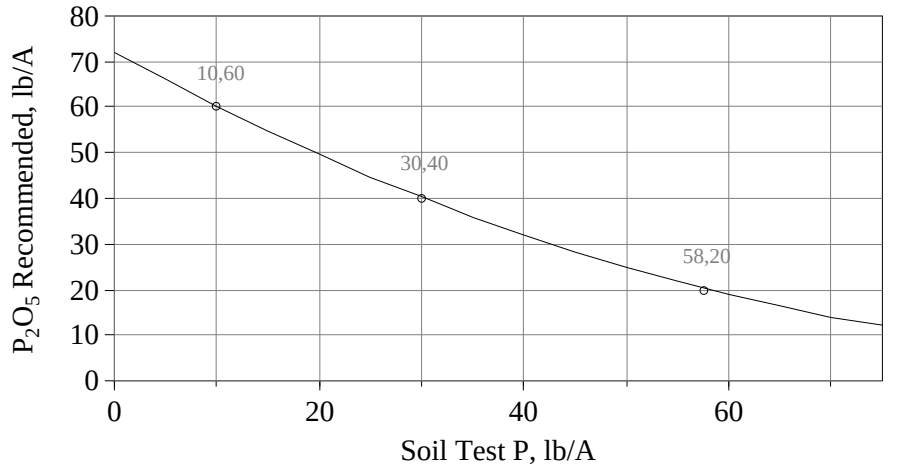
K Recommendations, Coastal Plain

$K_2O = 109 - 0.311K + 0.00033K^2$



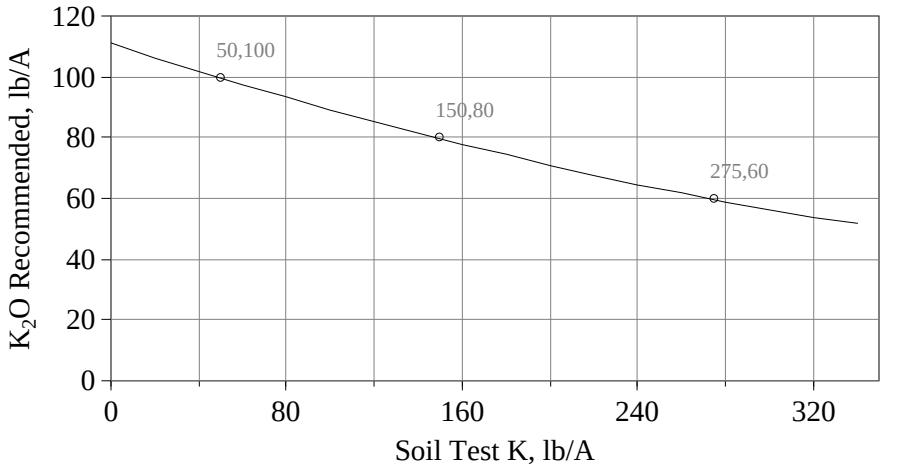
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 111 - 0.236K + 0.00018K^2$



Coastal Bermuda Pasture (*Code* #035)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-120	*-60-65	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-120	*-30-65	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-120	*-0-65	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-65	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	150-250 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

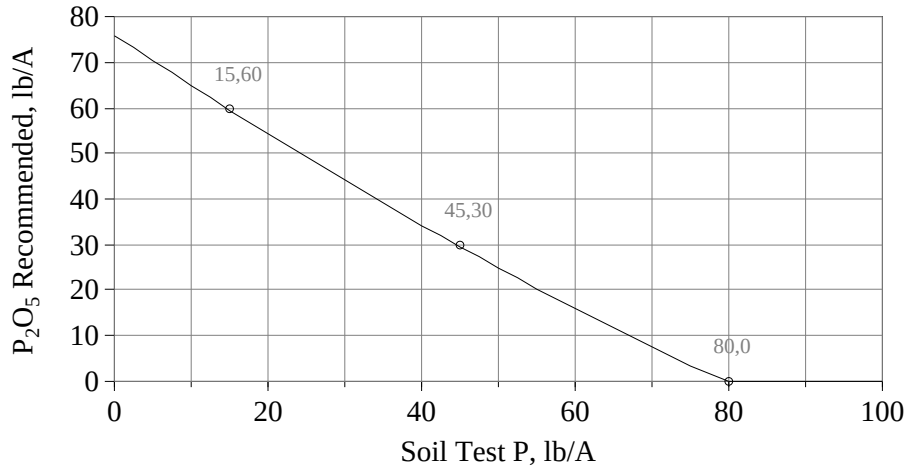
Fact Sheet:

For pastures not intensively grazed, apply 150 to 200 pounds nitrogen per acre. For intensively grazed pastures apply 200 to 250 pounds nitrogen per acre. Apply phosphate (P_2O_5) and potash (K_2O) as recommended above. Split the fertilizer application applying half in early spring and the remainder in mid-summer. NOTE: Under intensive management conditions 3 equal applications of fertilizer applied at 6-week intervals may prove to be more effective.

Coastal Bermuda Pasture (*Code 035*)

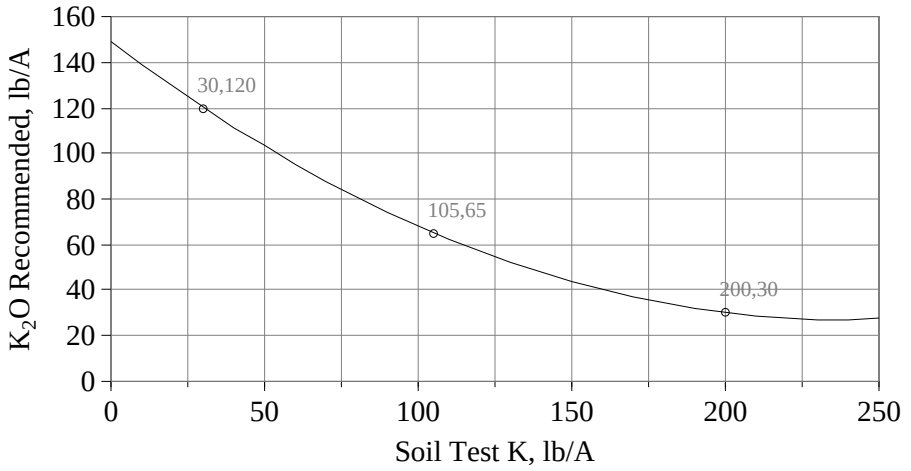
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



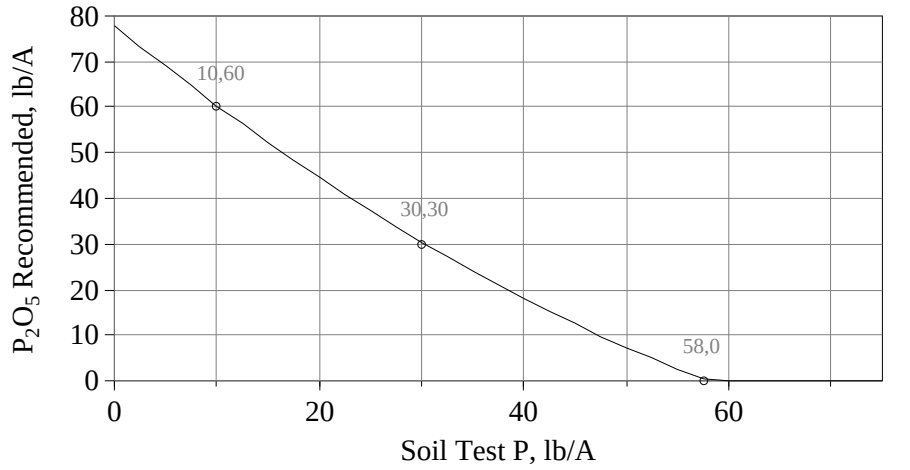
K Recommendations, Coastal Plain

$K_2O = 149 - 1.024K + 0.00215K^2$



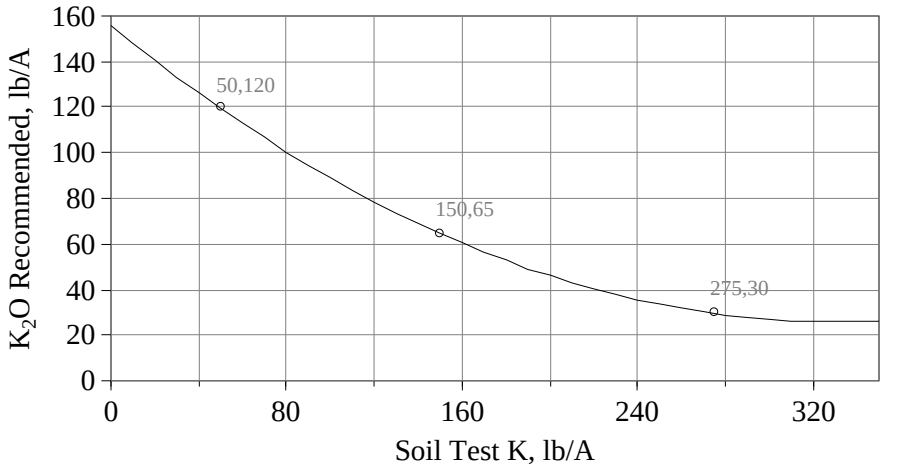
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 156 - 0.790K + 0.00120K^2$



Coastal Bermuda-Hay (*Code* #037)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-250	*-80-200	*-80-150	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-250	*-60-200	*-60-150	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-250	*-30-200	*-30-150	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-250	*-0-200	*-0-150	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	200-400 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

*Apply nitrogen (N) at the rate of 200 to 400 pounds per acre. Apply 75 to 100 pounds of nitrogen per acre when spring growth begins and 75 to 100 pounds of nitrogen per acre after each harvest. With four harvests, 200 pounds of nitrogen per acre should produce 4 to 5 tons of hay per acre and 400 pounds of nitrogen per acre should produce 7 to 8 tons per acre on fields with good grass stands and in years with normal rainfall.

The phosphate (P_2O_5) and potash (K_2O) recommendations are based on a nitrogen application rate of 200 pounds of nitrogen per acre. If higher nitrogen rates are used increase the rates of phosphate by 10 pounds per acre and potash by 50 pounds per acre for each additional 100 pounds of nitrogen applied.

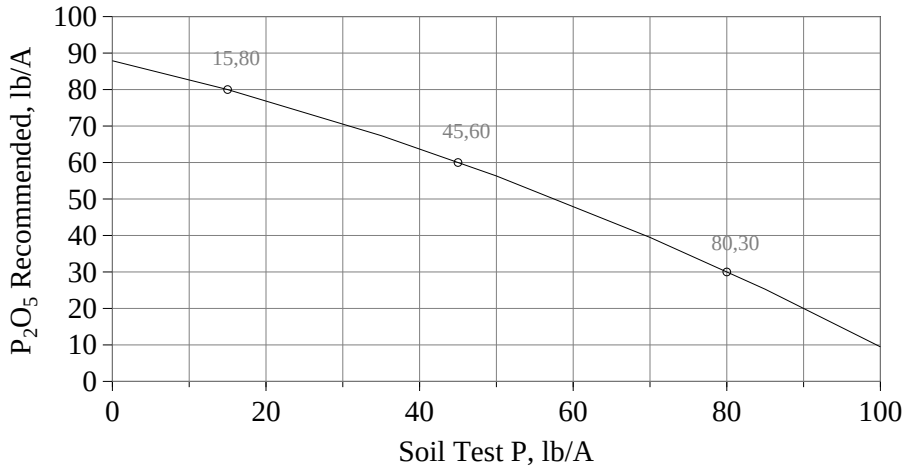
To reduce the chance of winter injury, split the potash (K_2O) application, applying half in the spring and half after the second or third clipping. All of the phosphate may be applied in the spring or at the time the potash is applied.

When high amounts of forage are removed, soil test annually to determine the lime and fertilizer requirements. High application rates of nitrogen fertilizer and high nutrient removal will lower the soil pH. Liming may be necessary annually to maintain the proper pH and adequate levels of calcium (Ca) and magnesium (Mg).

Coastal Bermuda-Hay (*Code 037*)

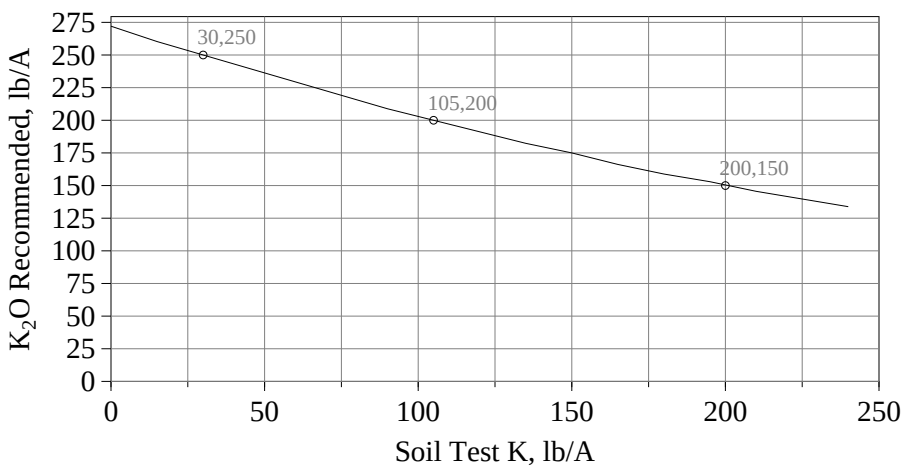
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



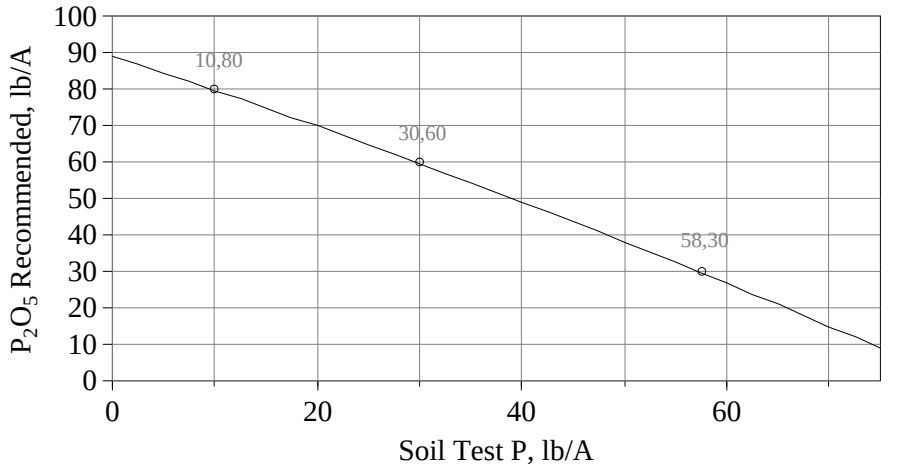
K Recommendations, Coastal Plain

$K_2O = 273 - 0.779K + 0.00083K^2$



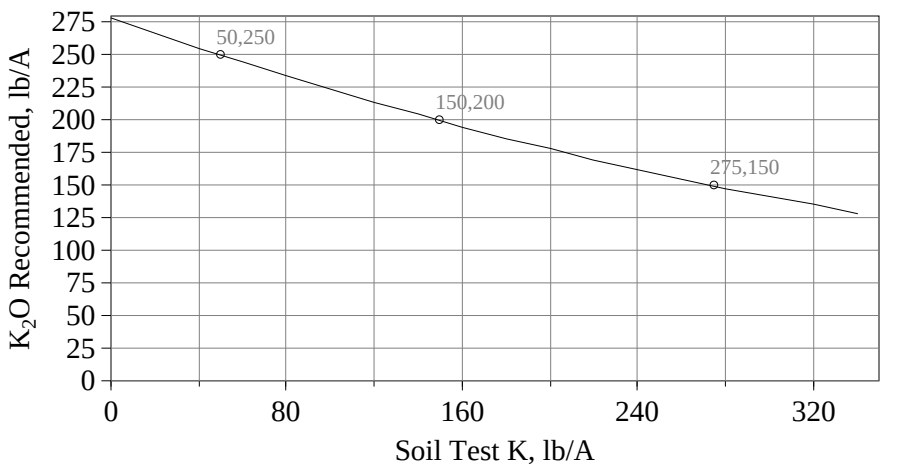
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 278 - 0.588K + 0.00044K^2$



Common Bermuda Pasture (*Code* #045)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	75-175 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

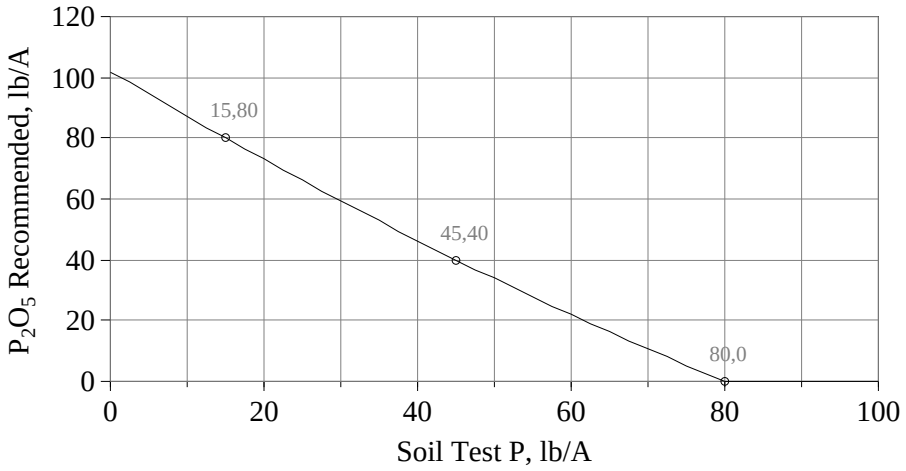
*For pastures not intensively grazed apply 75 to 125 pounds nitrogen per acre. For intensively grazed pastures apply 125 to 175 pounds nitrogen per acre.

If excess forage is common under grazing conditions, split the pasture in half and apply nitrogen to only one section in early April, and to the remaining apply nitrogen in July or August, dependent upon the amount of forage that will be utilized.

Common Bermuda Pasture (*Code 045*)

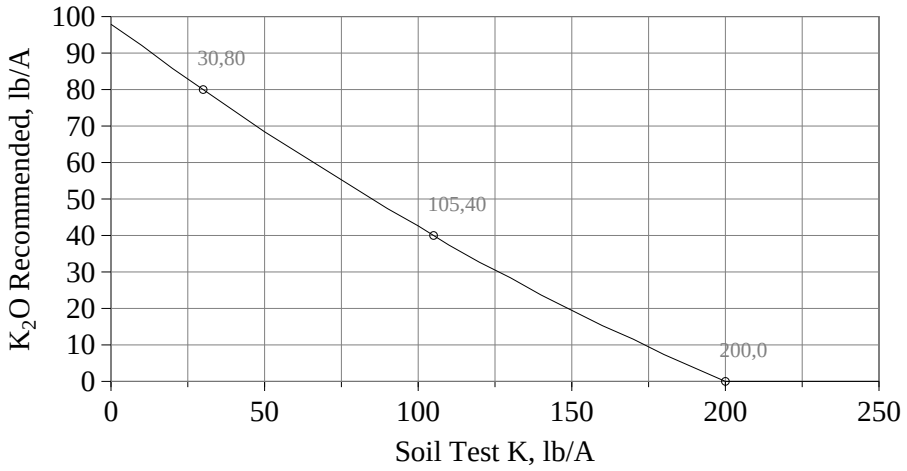
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



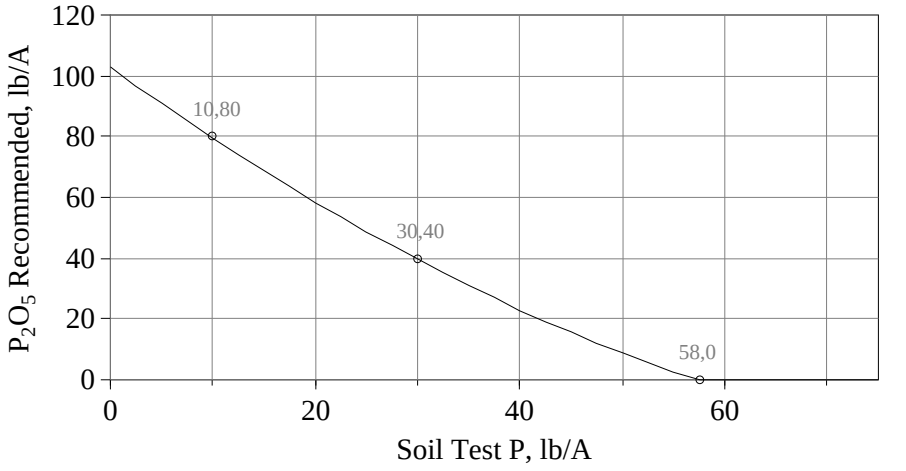
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



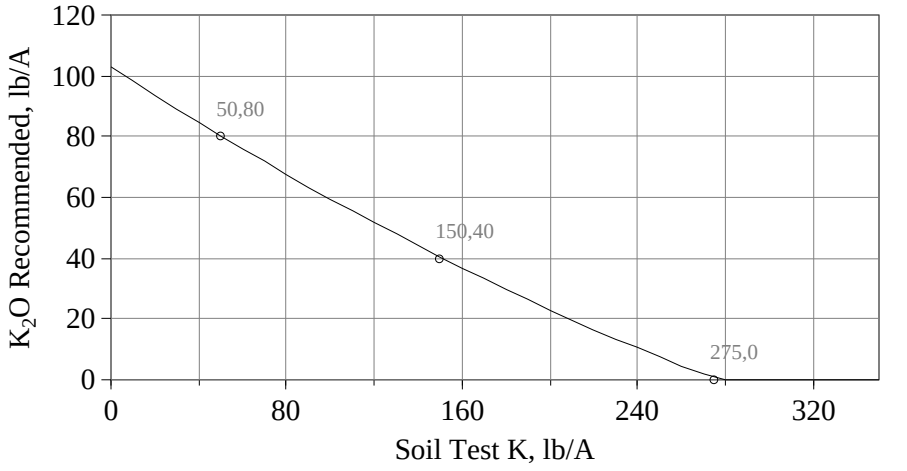
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Crimson Clover (*Code* #030)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

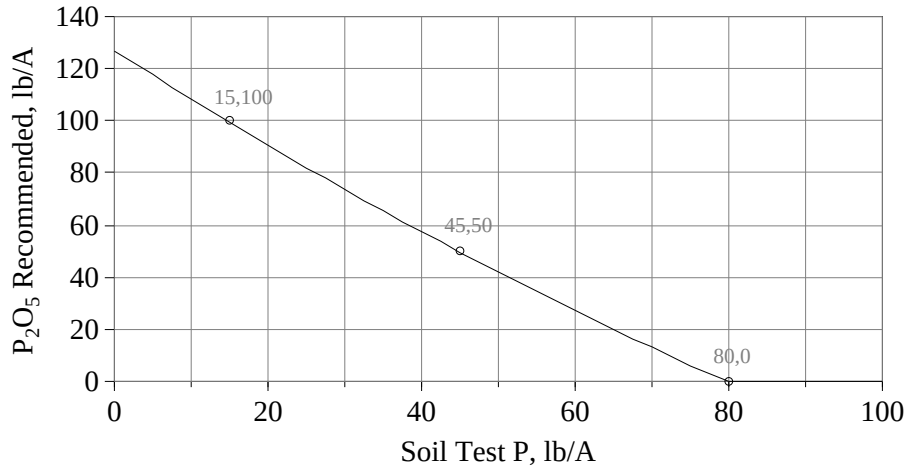
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Crimson Clover (*Code 030*)

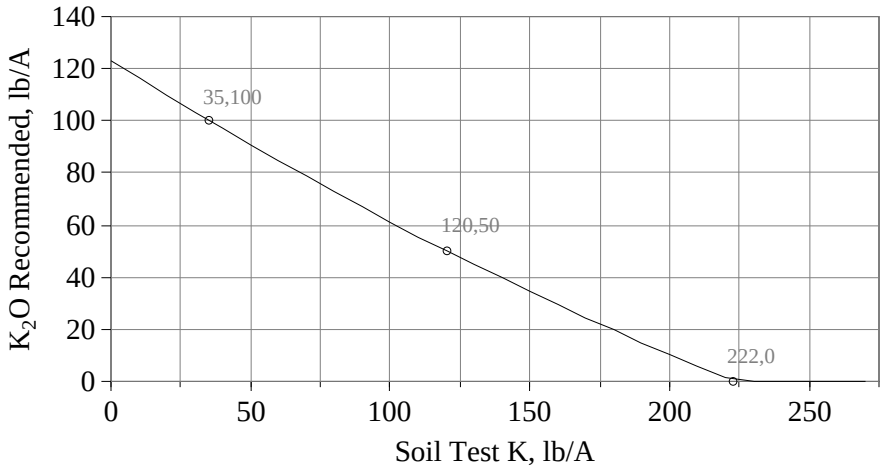
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



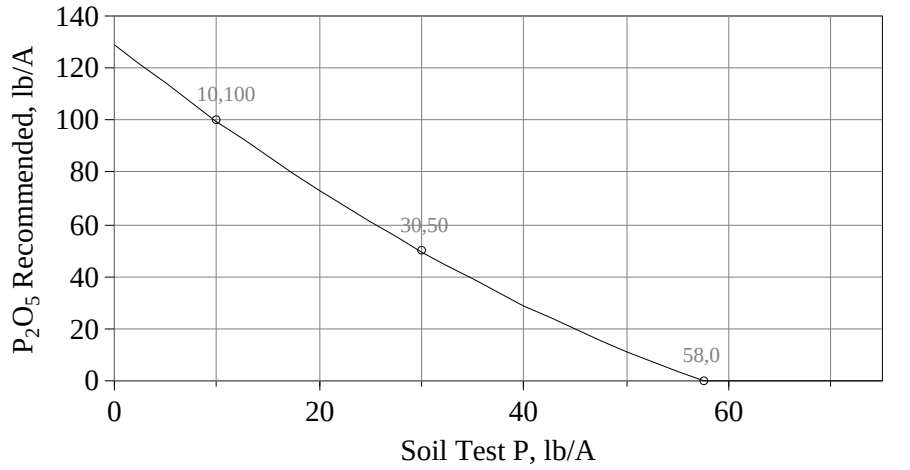
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



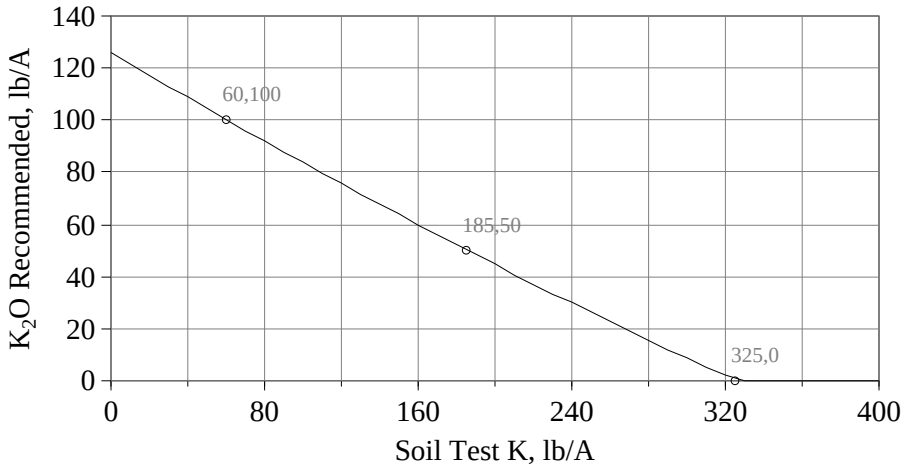
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Dallis Grass Pasture (*Code* #047)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	75-175 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

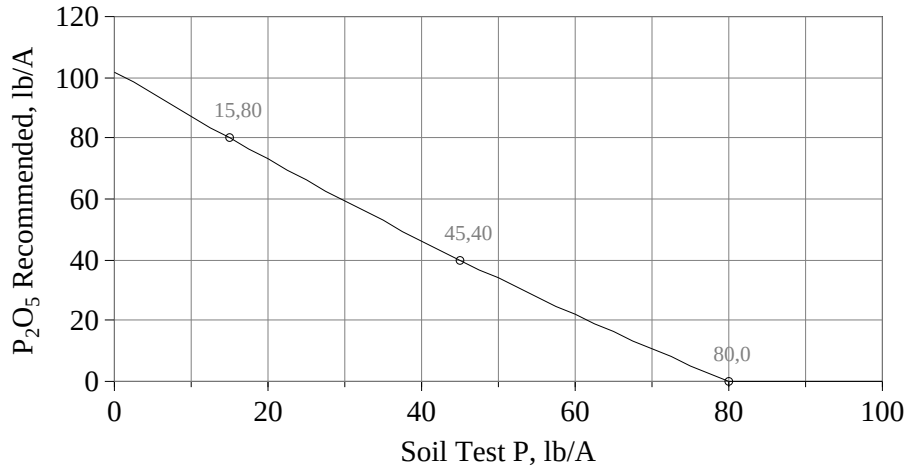
*For pastures not intensively grazed apply 75 to 125 pounds nitrogen per acre. For intensively grazed pastures apply 125 to 175 pounds nitrogen per acre.

If excess forage is common under grazing conditions, split the pasture in half and apply nitrogen to only one section in early April, and to the remaining apply nitrogen in July or August, dependent upon the amount of forage that will be utilized.

Dallis Grass Pasture (*Code 047*)

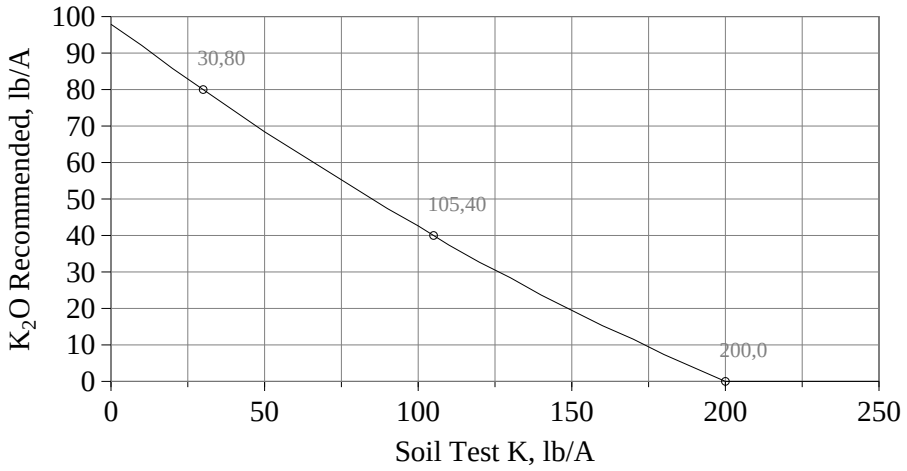
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



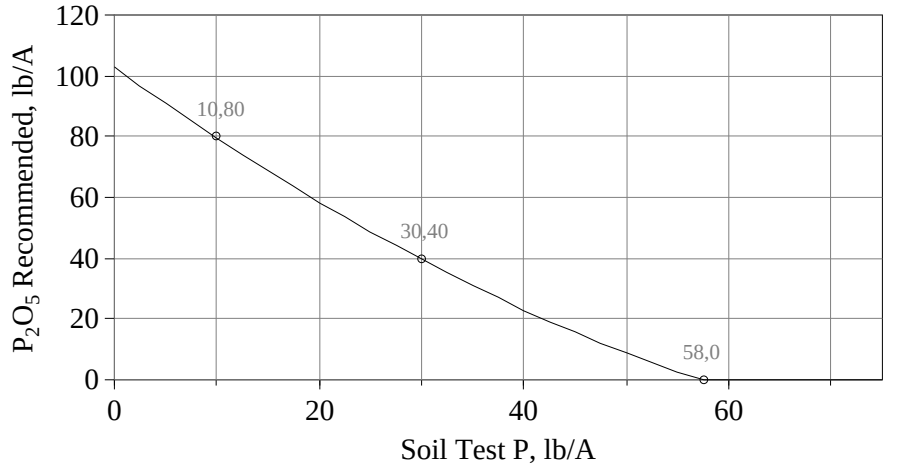
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



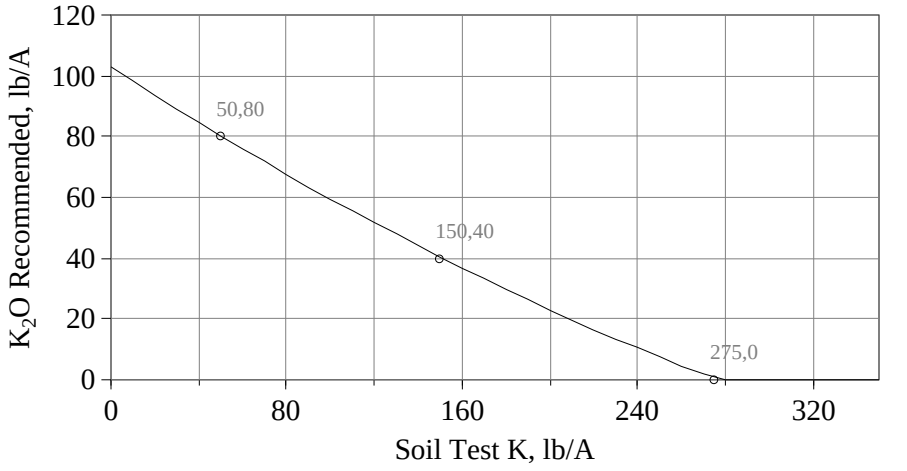
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Fescue Hay (*Code* #740)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	100-200 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

*__For establishment__, apply 30 to 50 pounds of nitrogen per acre.

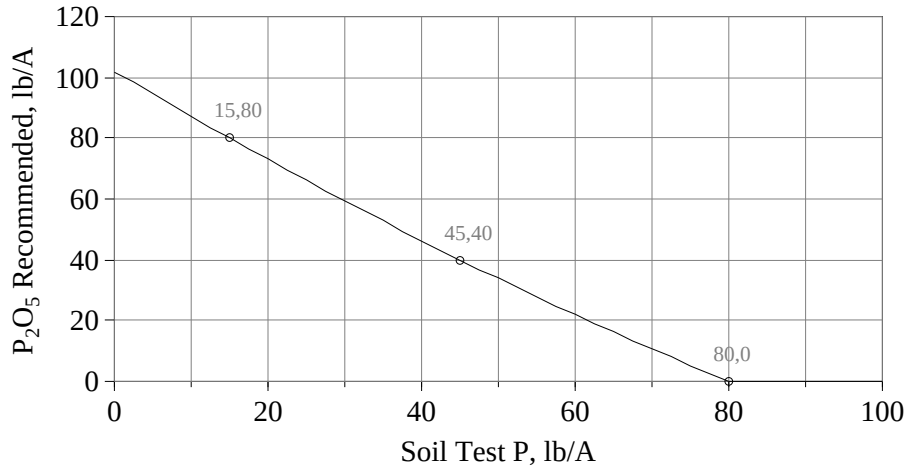
*For two cuttings of hay, apply 60 to 75 pounds of nitrogen per acre in late February and again in September. For three cuttings of hay (recommended), apply 60 to 75 pounds of nitrogen per acre in late February, apply again in May following the first harvest, with a third nitrogen application in September following the second harvest.

Where grass tetany (magnesium deficiency in animals) may be a problem, split the nitrogen and potash fertilizer applications. If the potassium soil test level is very high do not apply potash fertilizer. If the soil magnesium level is low, magnesium should be added to the animal diet.

Fescue Hay (*Code 740*)

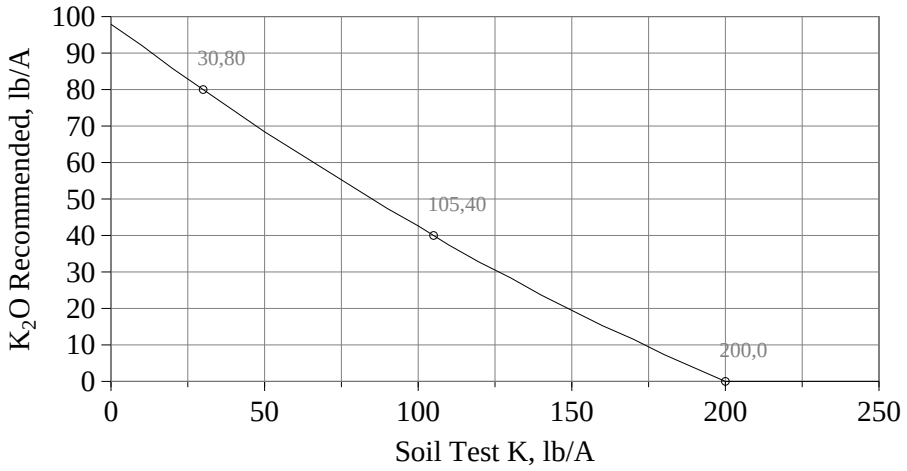
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



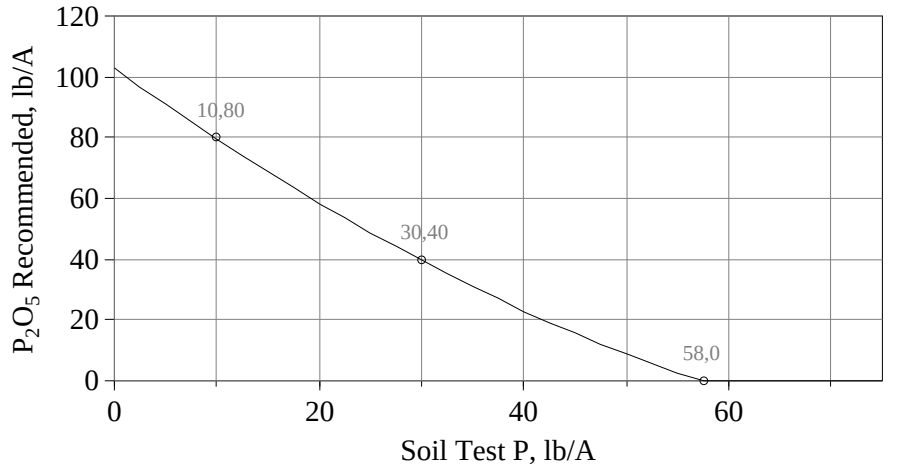
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



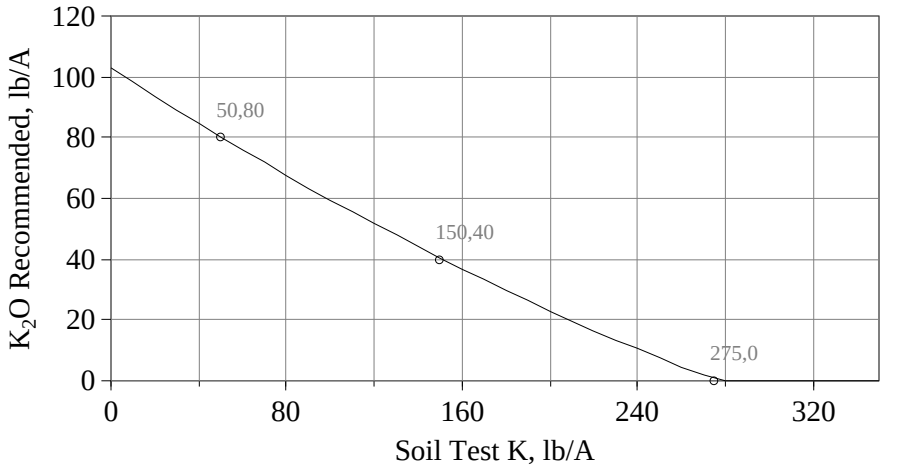
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Fescue Pasture (*Code* #040)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50-100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

*__For establishment__, apply 20 to 50 pounds nitrogen per acre.

*When grazed adjust nitrogen (N) rate according to stocking rate. If 2 acres per cow, apply 50 pounds nitrogen per acre; 1 acre per cow, increase the rate to 100 pounds nitrogen per acre.

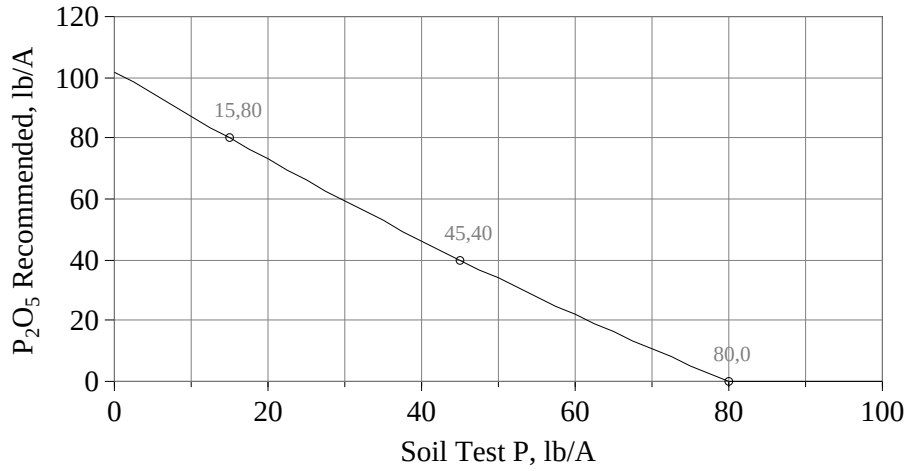
*When harvested for hay as well as grazed, apply 100 pounds nitrogen per acre, applying half in early fall and the remainder in early spring. Increase the potassium application by 20 pounds potash per acre, and apply phosphate (P_2O_5) as recommended.

Where grass tetany (magnesium deficiency in animals) may be a problem, split the nitrogen and potash fertilizer applications. If the potassium soil test level is very high do not apply potash fertilizer. If the soil magnesium level is low, magnesium should be added to the animal diet.

Fescue Pasture (*Code 040*)

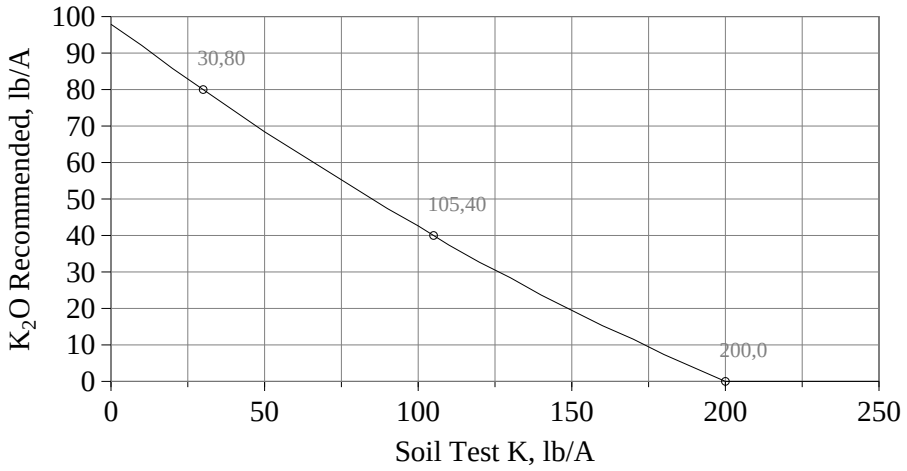
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



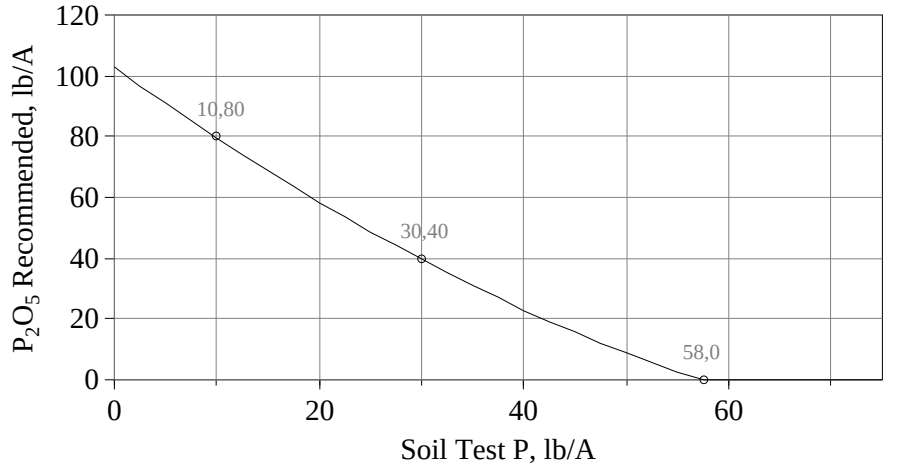
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



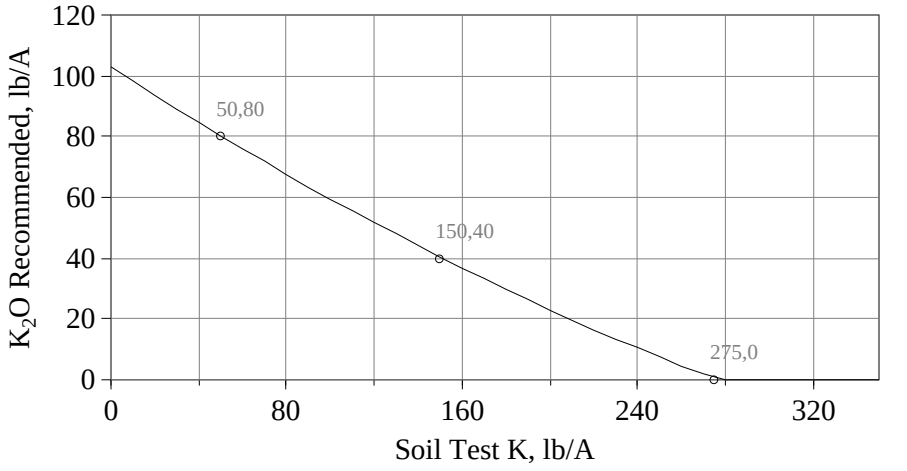
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Fescue-Clover Associations (*Code* #039)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

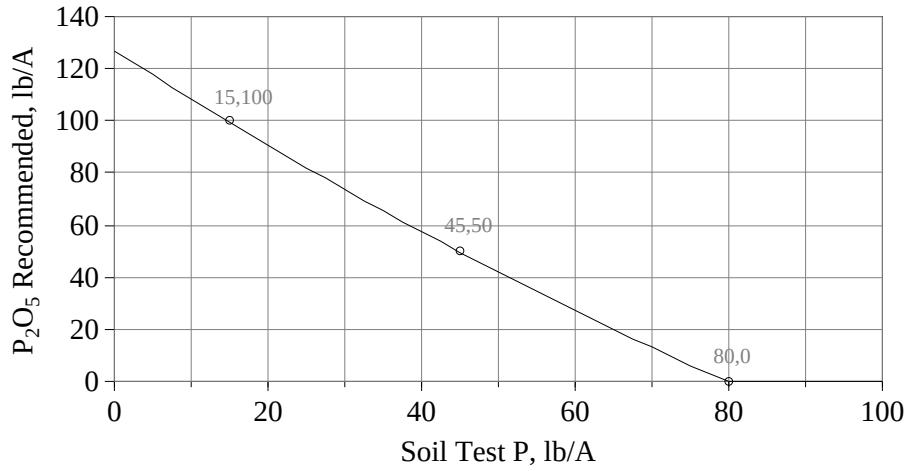
For establishment of fescue, apply 20 to 40 pounds nitrogen per acre at time of seeding. Seed fescue in the fall of year 1 and white clover in the fall of year 2. No nitrogen should be applied in the fall when clover is planted. This will allow the white clover seedlings to compete with the fescue. Thereafter, no nitrogen is needed since white clover should provide adequate nitrogen.

If the legume represents less than 15% of the stand, treat as a grass stand. In this case consult your local County Extension Agent for appropriate recommendation. (Ask for Fescue Pasture Recommendation.)

Fescue-Clover Associations (*Code 039*)

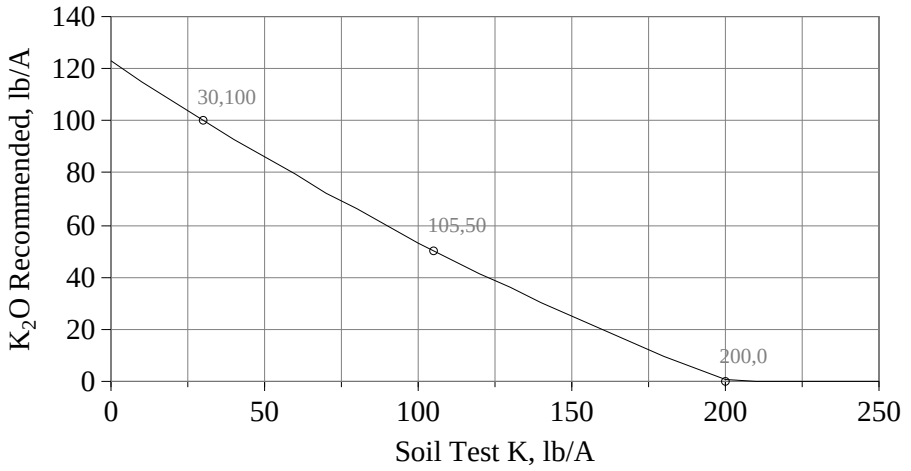
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



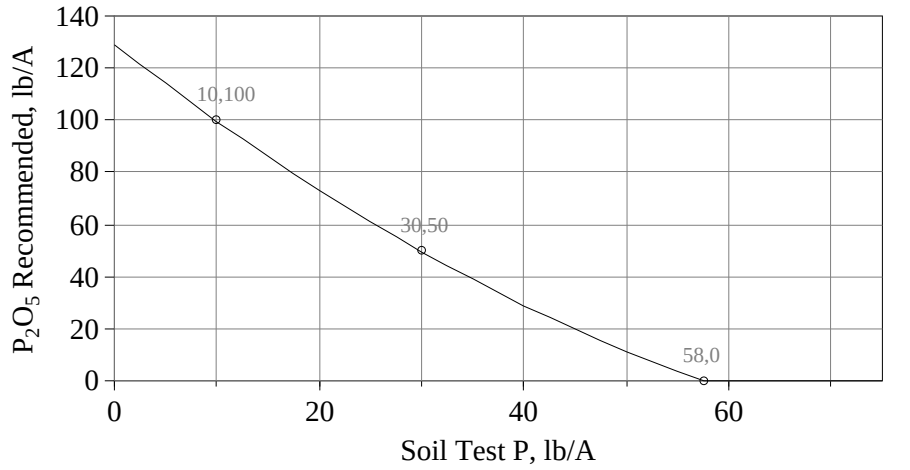
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



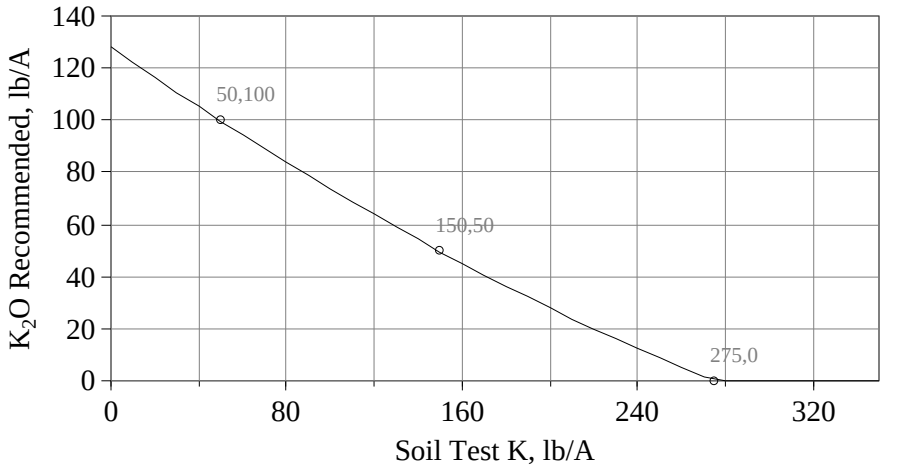
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$



Forage Chicory (*Code* #742)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	180-100-120	180-100-80	180-100-0	180-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	180-60-120	180-60-80	180-60-0	180-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	180-0-120	180-0-80	180-0-0	180-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	180-0-120	180-0-80	180-0-0	180-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	180 pounds nitrogen (N) per acre in split applications
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

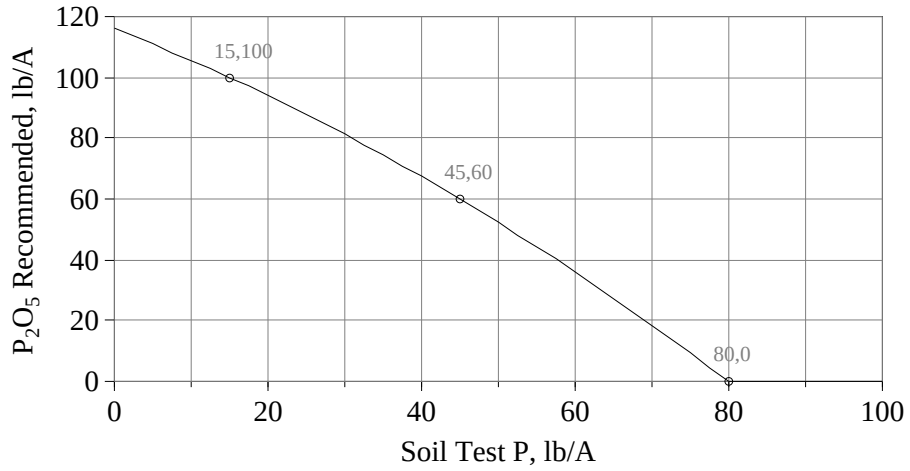
Fact Sheet:

Apply one-third of the nitrogen (N) in March, one-third in June, and one-third in September.

Forage Chicory (*Code 742*)

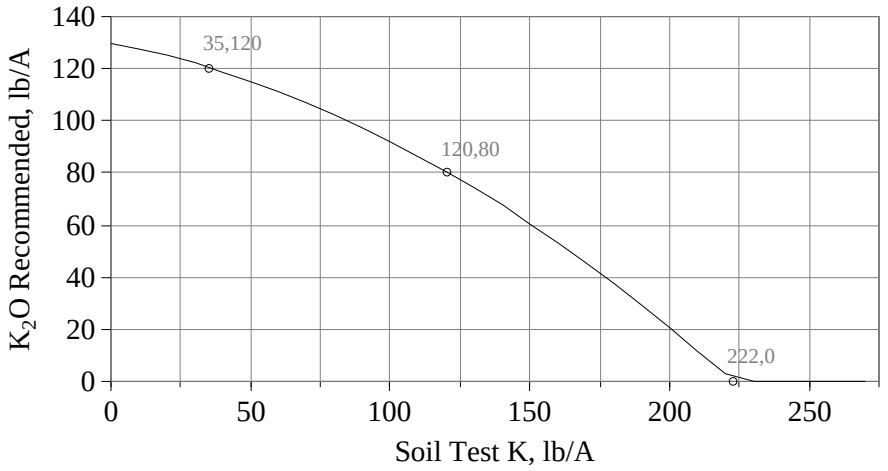
P Recommendations, Coastal Plain

$P_2O_5 = 116 - 0.982P - 0.00586P^2$



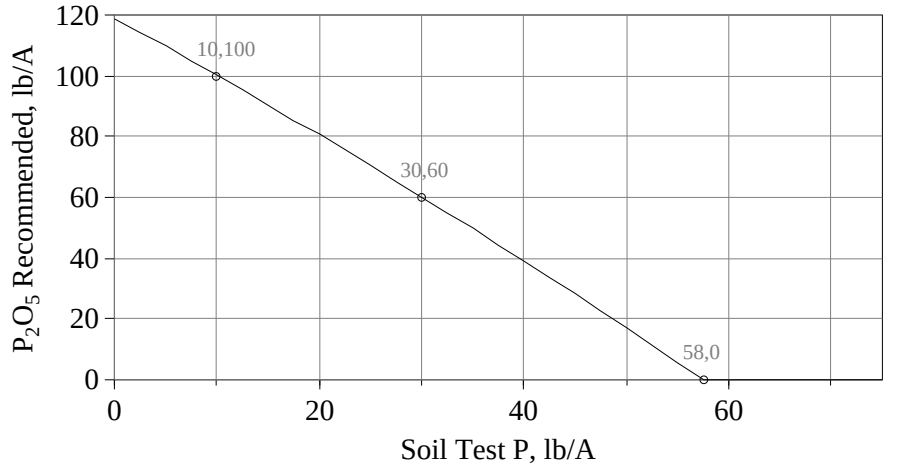
K Recommendations, Coastal Plain

$K_2O = 130 - 0.215K - 0.00165K^2$



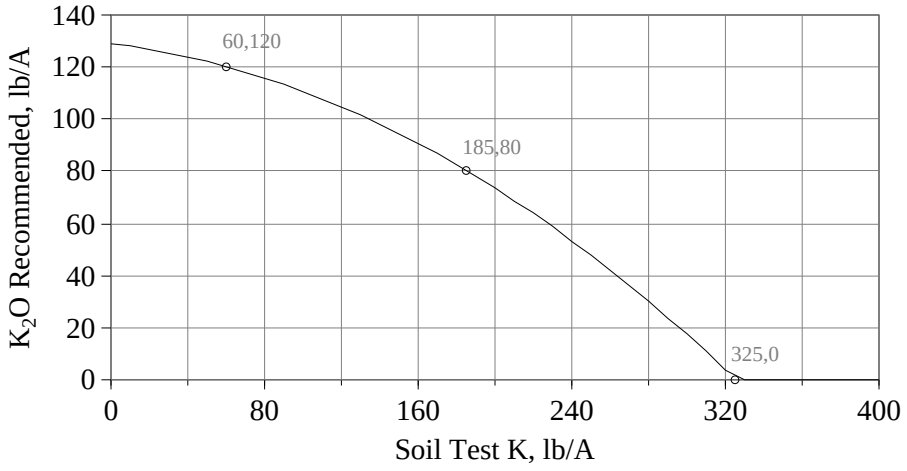
P Recommendations, Piedmont

$P_2O_5 = 119 - 1.847P - 0.00383P^2$



K Recommendations, Piedmont

$K_2O = 129 - 0.087K - 0.00095K^2$



Hybrid Bermudas - Pasture (*Code* #036)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-120	*-60-65	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-120	*-30-65	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-120	*-0-65	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-65	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	150-250 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

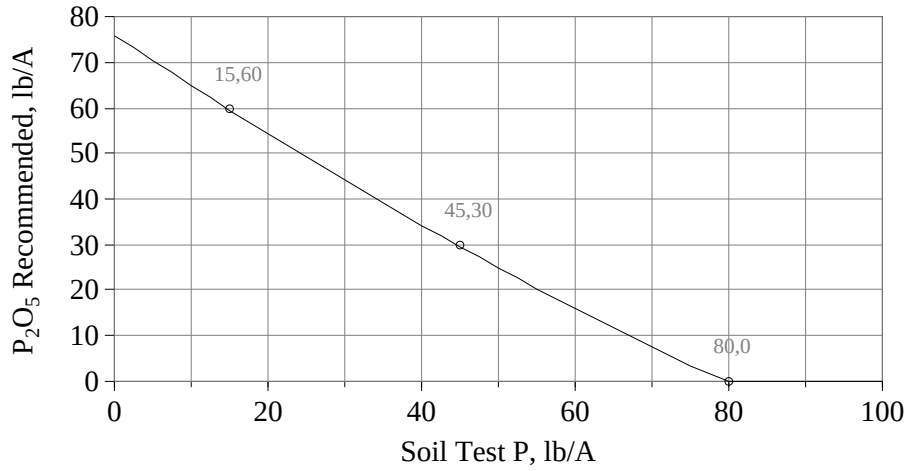
Fact Sheet:

For pastures not intensively grazed, apply 150 to 200 pounds nitrogen per acre. For intensively grazed pastures apply 200 to 250 pounds nitrogen per acre. Apply phosphate (P_2O_5) and potash (K_2O) as recommended above. Split the fertilizer application applying half in early spring and the remainder in mid-summer. NOTE: Under intensive management conditions 3 equal applications of fertilizer applied at 6-week intervals may prove to be more effective.

Hybrid Bermudas - Pasture (*Code 036*)

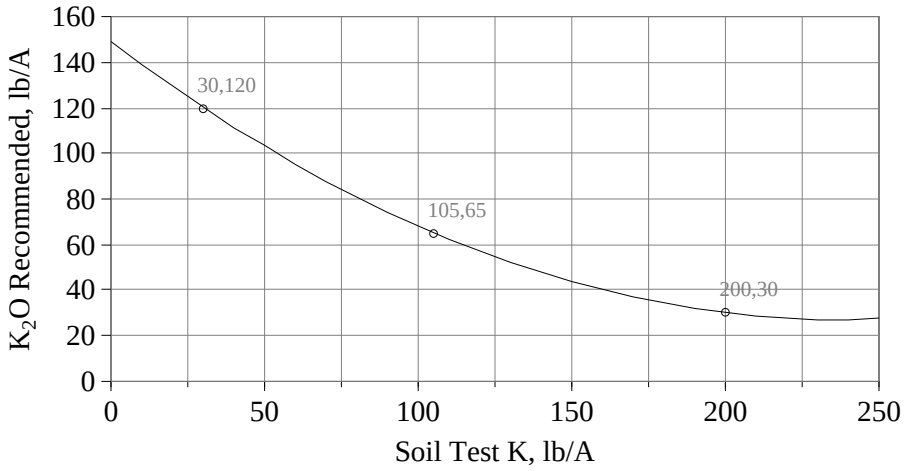
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



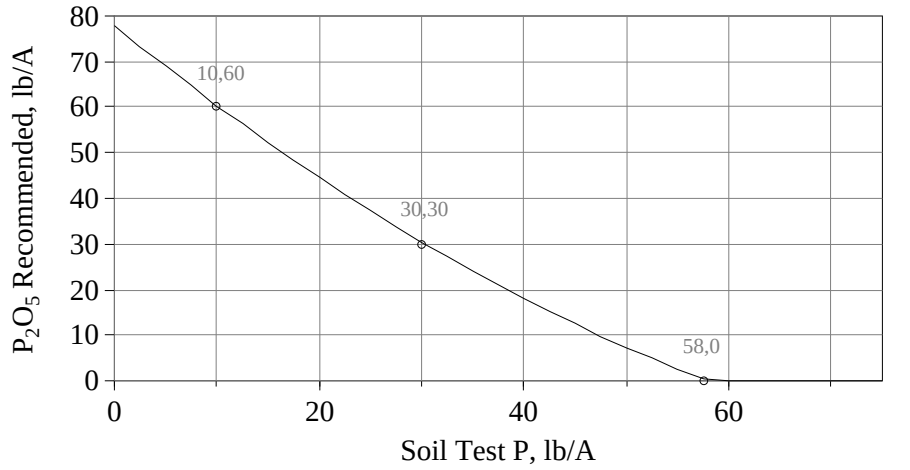
K Recommendations, Coastal Plain

$K_2O = 149 - 1.024K + 0.00215K^2$



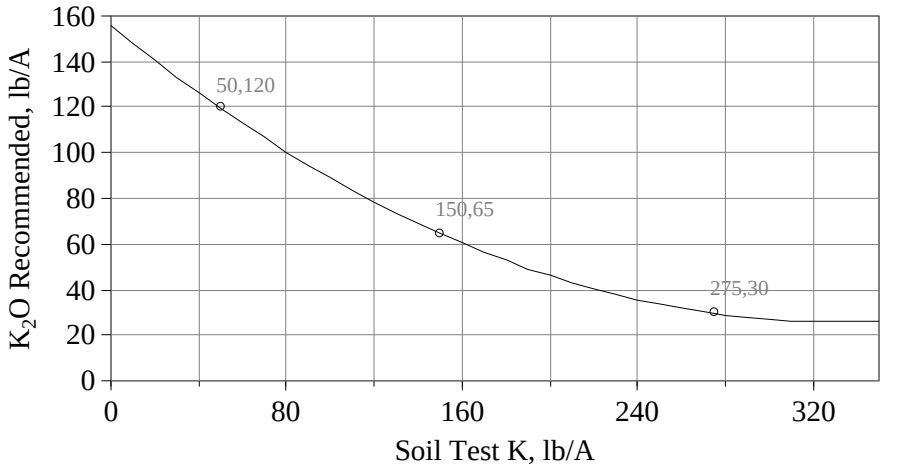
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 156 - 0.790K + 0.00120K^2$



Hybrid Bermudas-Hay (*Code* #038)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-250	*-80-200	*-80-150	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-250	*-60-200	*-60-150	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-250	*-30-200	*-30-150	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-250	*-0-200	*-0-150	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	200-400 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

*Apply nitrogen (N) at the rate of 200 to 400 pounds per acre. Apply 75 to 100 pounds of nitrogen per acre when spring growth begins and 75 to 100 pounds of nitrogen per acre after each harvest. With four harvests, 200 pounds of nitrogen per acre should produce 4 to 5 tons of hay per acre and 400 pounds of nitrogen per acre should produce 7 to 8 tons per acre on fields with good grass stands and in years with normal rainfall.

The phosphate (P_2O_5) and potash (K_2O) recommendations are based on a nitrogen application rate of 200 pounds of nitrogen per acre. If higher nitrogen rates are used increase the rates of phosphate by 10 pounds per acre and potash by 50 pounds per acre for each additional 100 pounds of nitrogen applied.

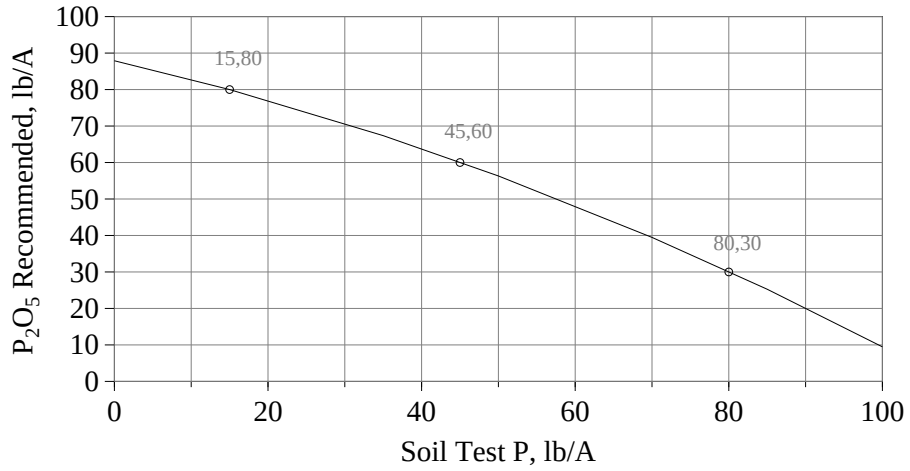
To reduce the chance of winter injury, split the potash (K_2O) application, applying half in the spring and half after the second or third clipping. All of the phosphate may be applied in the spring or at the time the potash is applied.

When high amounts of forage are removed, soil test annually to determine the lime and fertilizer requirements. High application rates of nitrogen fertilizer and high nutrient removal will lower the soil pH. Liming may be necessary annually to maintain the proper pH and adequate levels of calcium (Ca) and magnesium (Mg).

Hybrid Bermudas-Hay (*Code 038*)

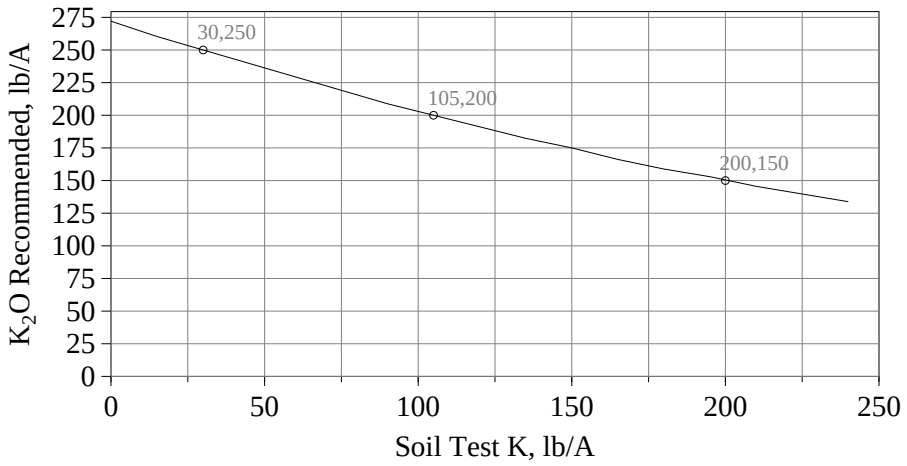
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



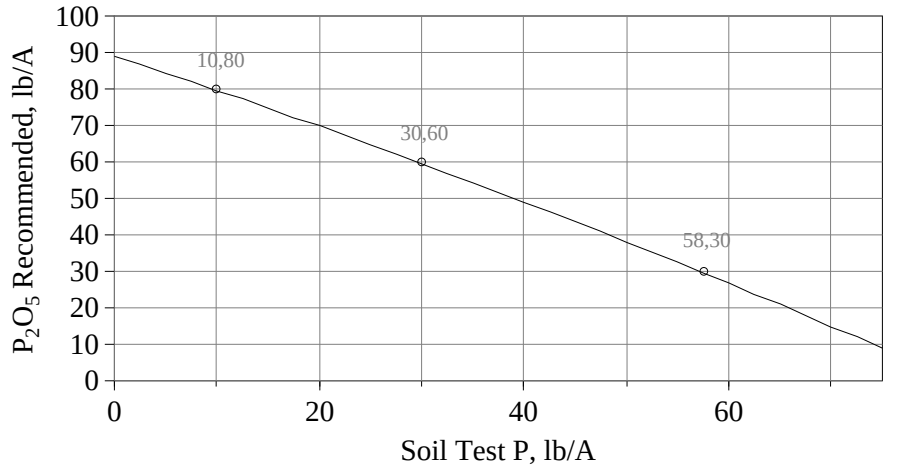
K Recommendations, Coastal Plain

$K_2O = 273 - 0.779K + 0.00083K^2$



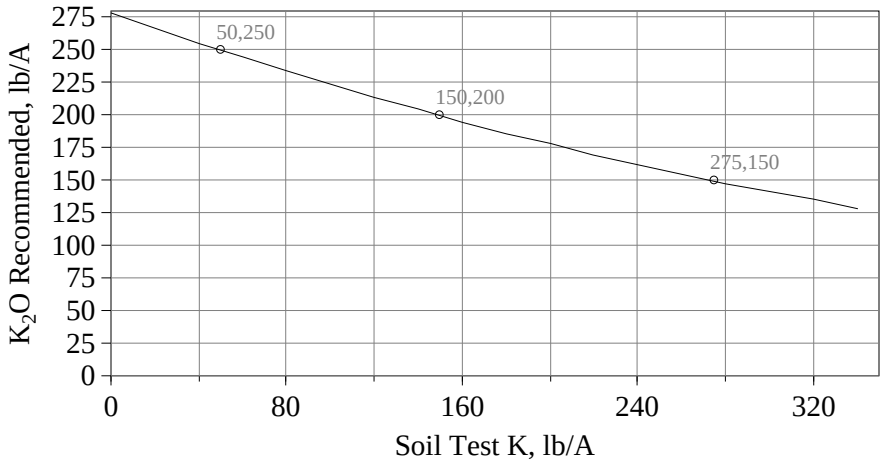
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 278 - 0.588K + 0.00044K^2$



Hybrid Millets (*Code* #043)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-100	*-60-80	*-60-60	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-100	*-40-80	*-40-60	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-20-100	*-20-80	*-20-60	*-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-80	*-0-60	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	180-240 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

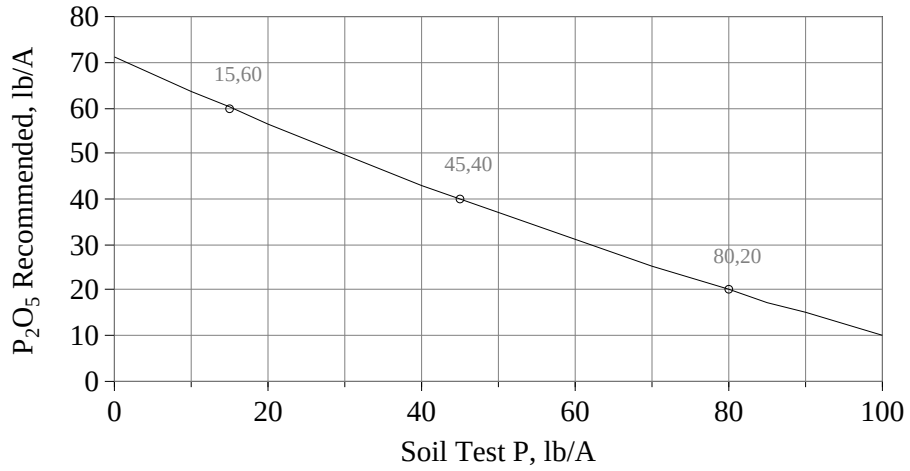
*When harvested for hay or silage, apply 40 pounds of nitrogen (N) per acre at planting, 60 pounds nitrogen per acre after stand establishment, and 60 pounds nitrogen per acre after each harvest except the last. If more than one cutting is anticipated, increase the phosphate (P_2O_5) and potash (K_2O) rates by 25%.

*When used for grazing, apply 40 to 60 pounds of nitrogen per acre for establishment and 50 to 60 pounds of nitrogen per acre each month during the grazing season (June, July, and August).

Hybrid Millets (*Code 043*)

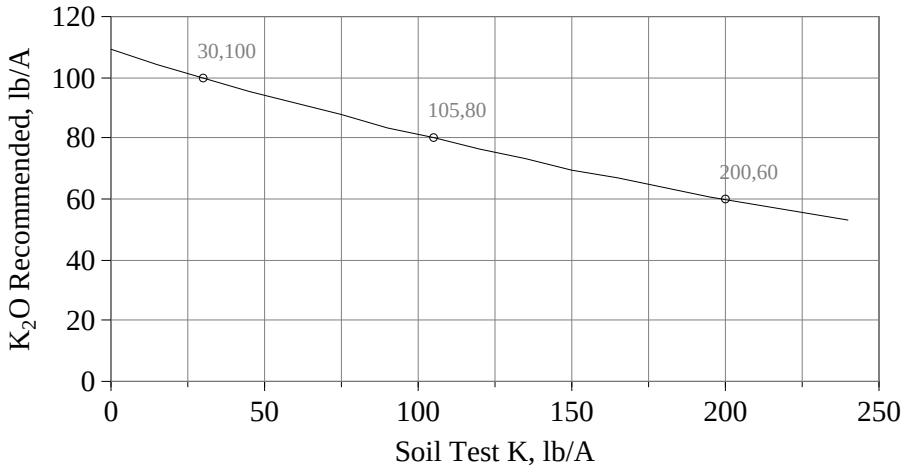
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



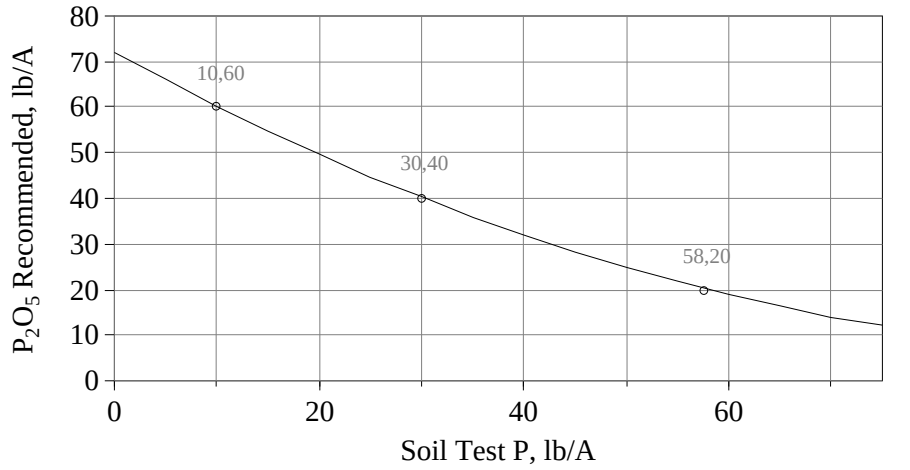
K Recommendations, Coastal Plain

$K_2O = 109 - 0.311K + 0.00033K^2$



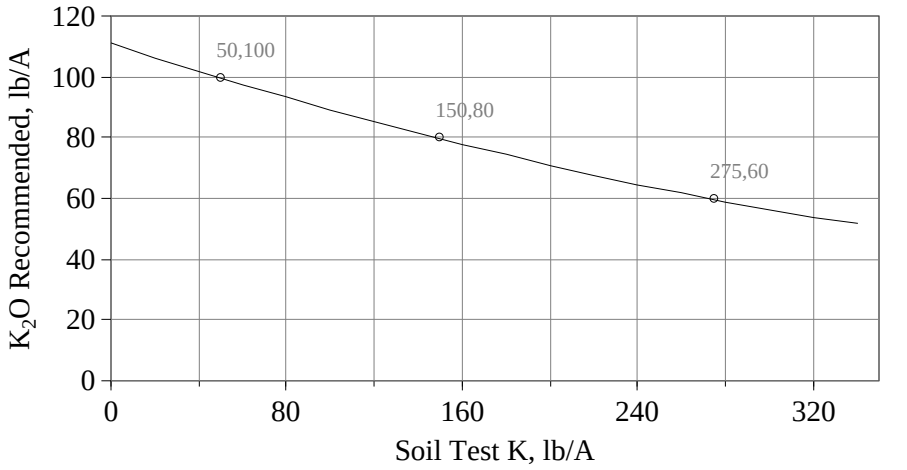
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 111 - 0.236K + 0.00018K^2$



Lupine (*Code* #033)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

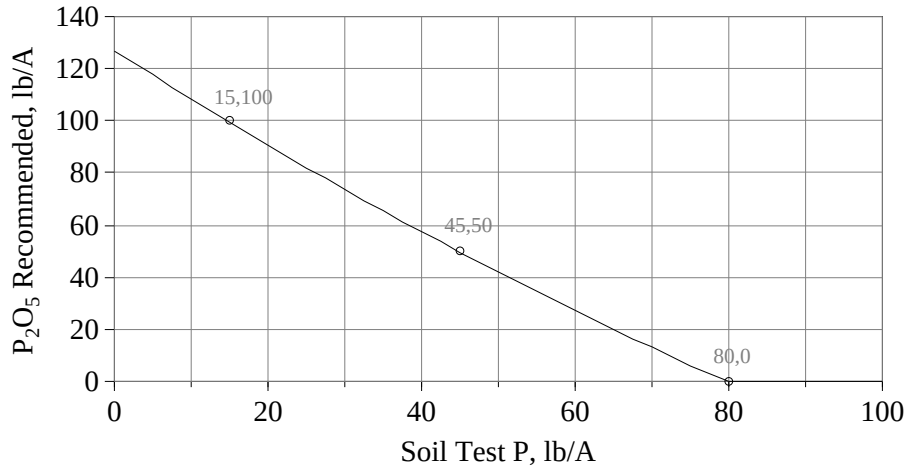
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Lupine (*Code 033*)

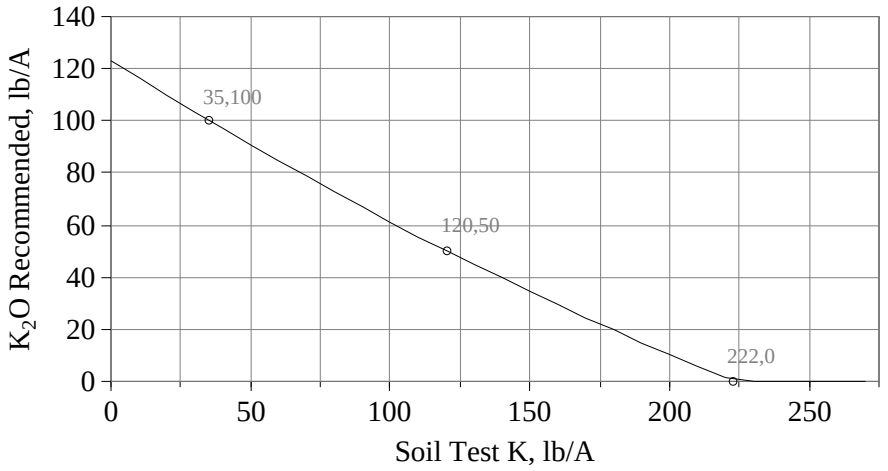
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



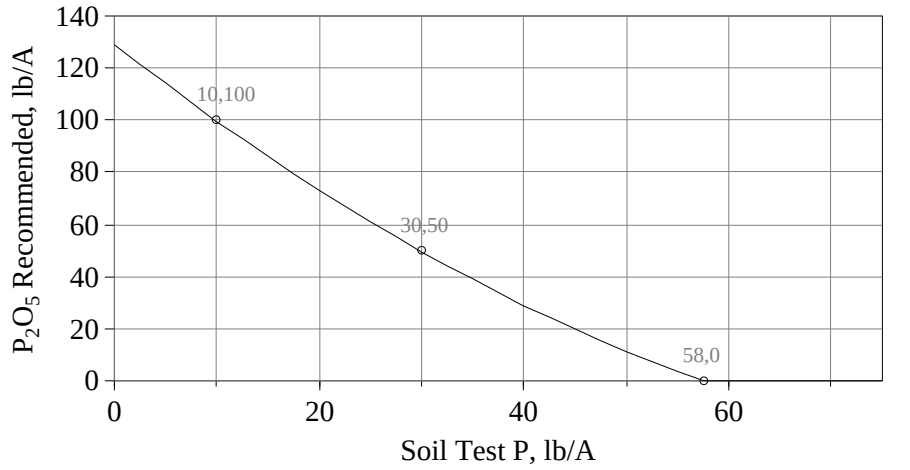
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



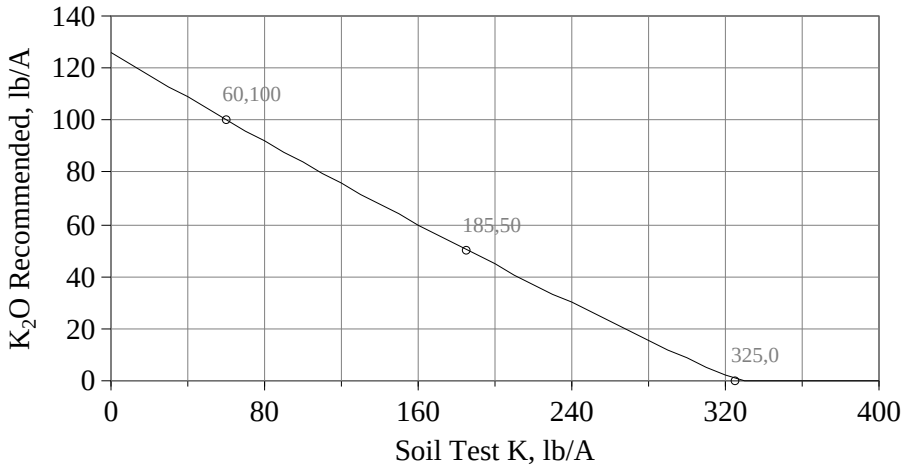
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Orchard Grass Pasture (*Code* #041)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50-100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

*__For establishment__, apply 20 to 50 pounds nitrogen per acre.

*When grazed adjust nitrogen (N) rate according to stocking rate. If 2 acres per cow, apply 50 pounds nitrogen per acre; 1 acre per cow, increase the rate to 100 pounds nitrogen per acre.

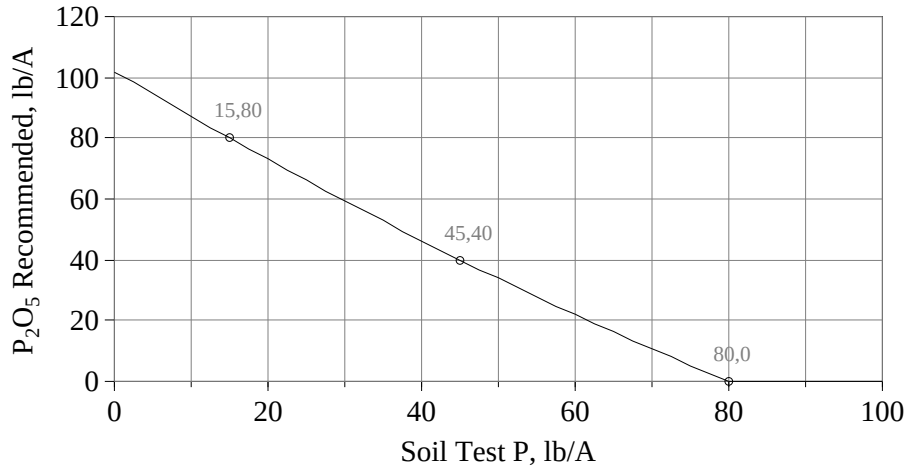
*When harvested for hay as well as grazed, apply 100 pounds nitrogen per acre, applying half in early fall and the remainder in early spring. Increase the potassium application by 20 pounds potash per acre, and apply phosphate (P_2O_5) as recommended.

Where grass tetany (magnesium deficiency in animals) may be a problem, split the nitrogen and potash fertilizer applications. If the potassium soil test level is very high do not apply potash fertilizer. If the soil magnesium level is low, magnesium should be added to the animal diet.

Orchard Grass Pasture (*Code 041*)

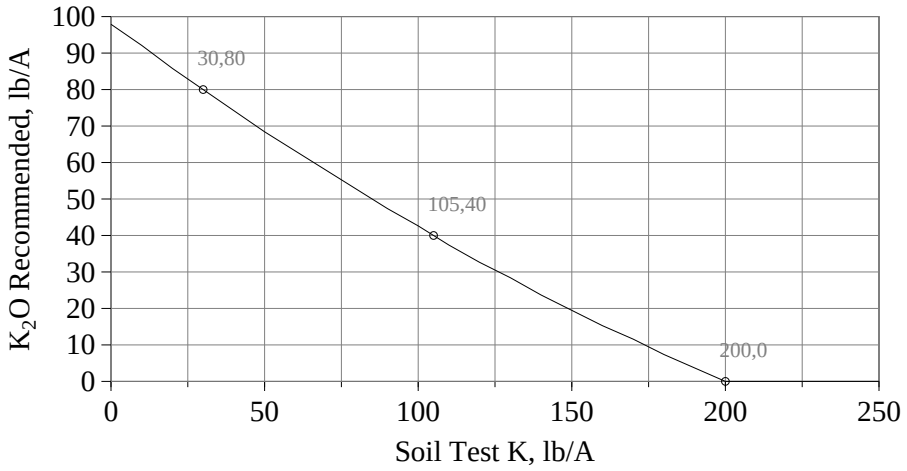
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



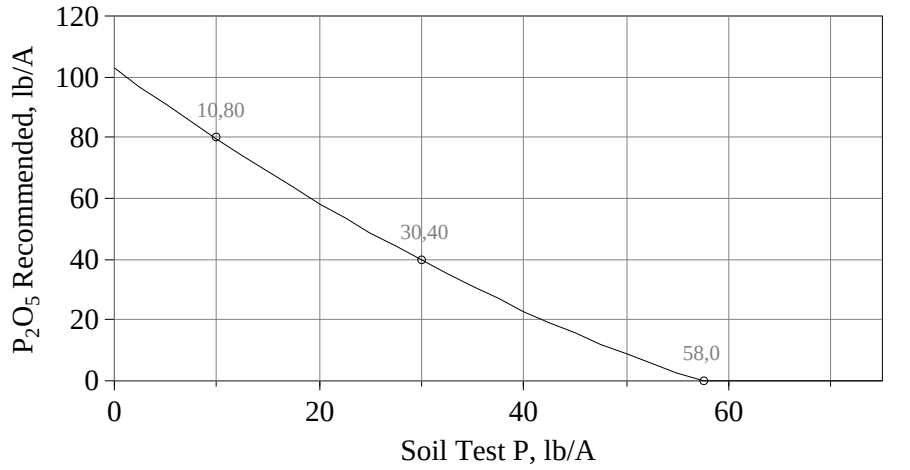
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



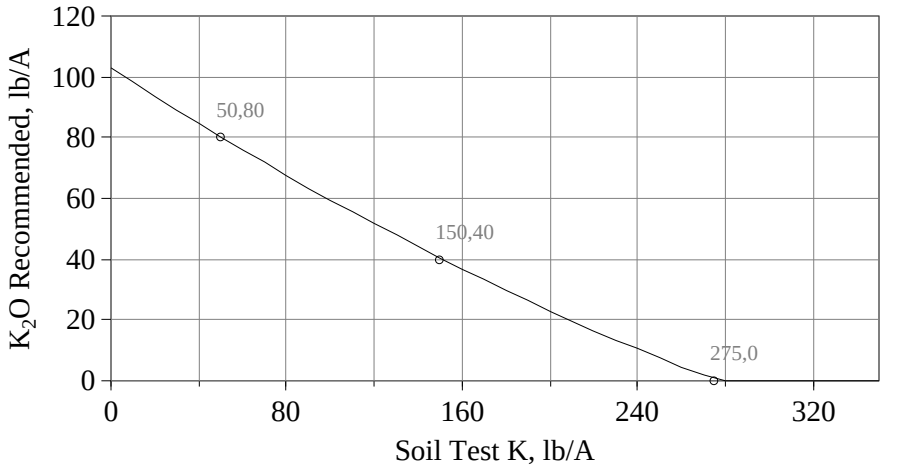
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Perennial Peanuts (*Code* #051)

Soil Test Rating	Potassium			
	Low K Coastal: 0-30 lbs/A	**Medium K** Coastal: 31-60 lbs/A	**High K** Coastal: 61-150 lbs/A	**Very High K** Coastal: 150+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coastal: 0-15 lbs/A	0-100-175	0-100-130	0-100-75	0-100-0
Medium P Coastal: 16-30 lbs/A	0-60-175	0-60-130	0-60-75	0-60-0
High P Coastal: 31-60 lbs/A	0-30-175	0-30-130	0-30-75	0-30-0
Very High P Coastal: 60+ lbs/A	0-0-175	0-0-130	0-0-75	0-0-0

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Because the crop is not cold hardy, it will not be grown in the Piedmont and portions of the upper Coastal Plain.

Apply inoculum when planting.

Yields may be improved by splitting the potassium applications (K_2O) on sandy Coastal Plain soils. Apply half at spring green up, and half after the first cutting of hay.

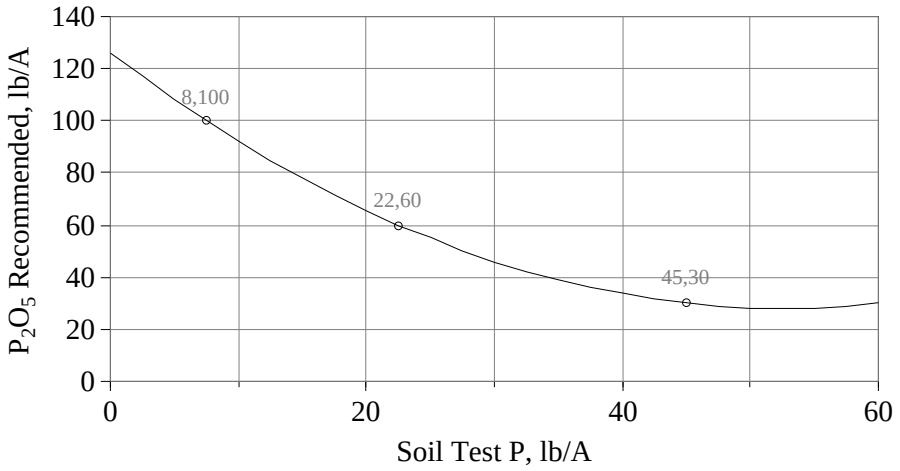
When perennial peanut is grown intensively for hay production, apply 10 to 20 pounds sulfur per acre.

The P and K recommendations are for hay yields of 4 tons per acre. If higher yields are expected, apply an additional 15 pounds of P_2O_5 and 40 pounds of K_2O per each additional ton per acre of expected yield.

Perennial Peanuts (*Code 051*)

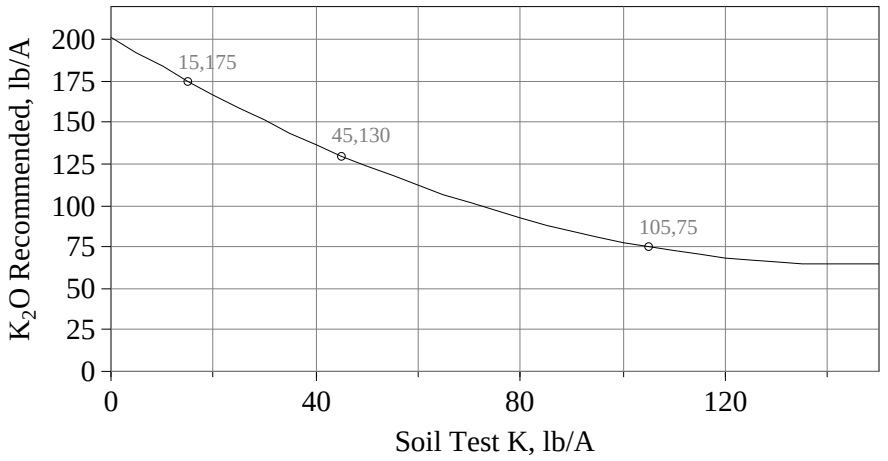
P Recommendations, Coastal Plain

$P_2O_5 = 126 - 3.733P + 0.03556P^2$



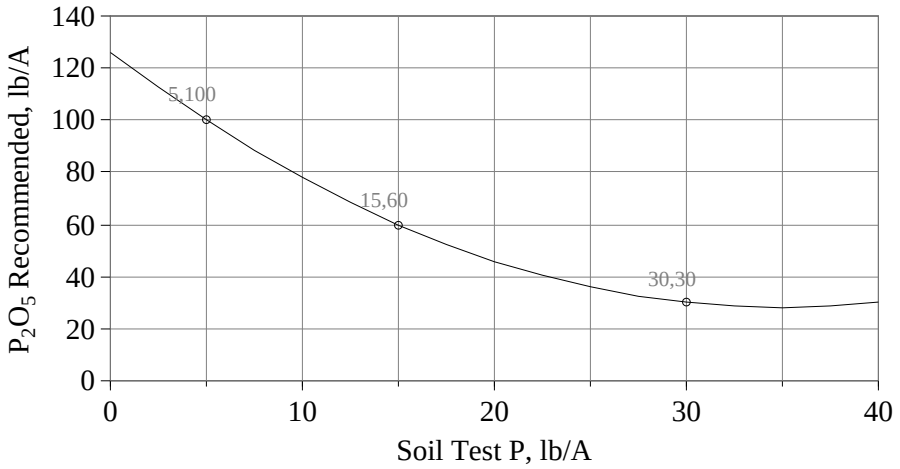
K Recommendations, Coastal Plain

$K_2O = 202 - 1.889K + 0.00648K^2$



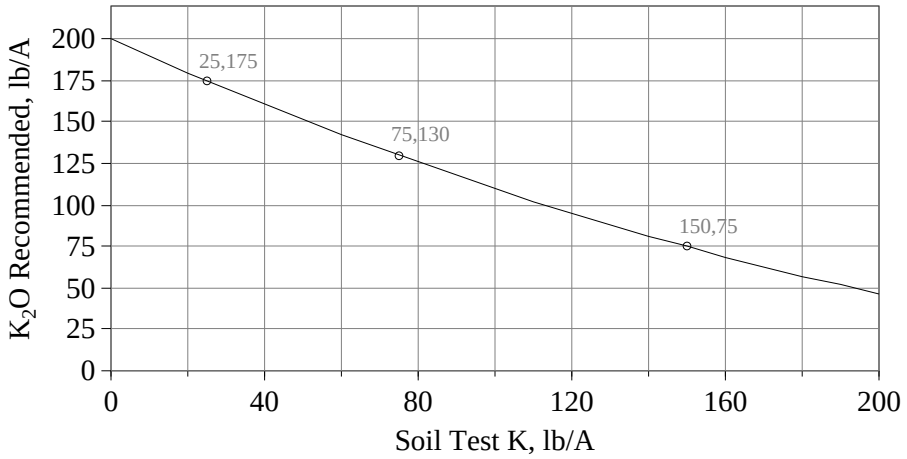
P Recommendations, Piedmont

$P_2O_5 = 126 - 5.600P + 0.08000P^2$



K Recommendations, Piedmont

$K_2O = 200 - 1.033K + 0.00133K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-40-80	0-40-40	0-40-0	0-40-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-20-80	0-20-40	0-20-0	0-20-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-80	0-0-40	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-80	0-0-40	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

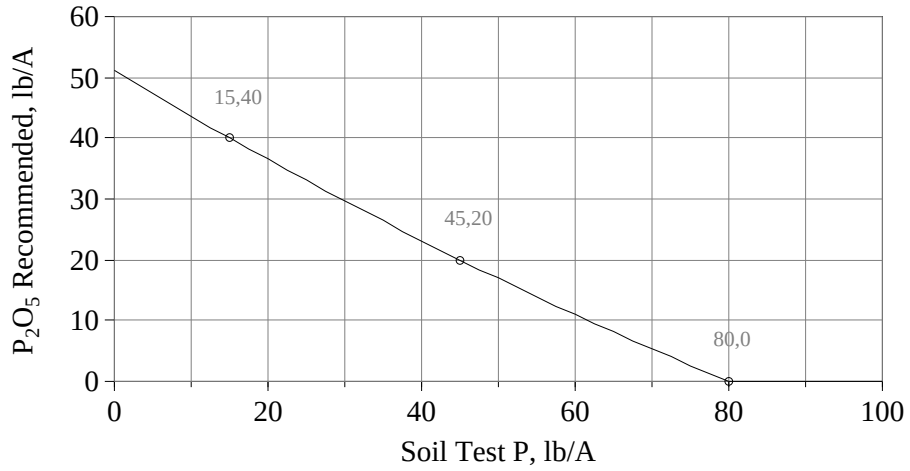
Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Sericea (*Code 048*)

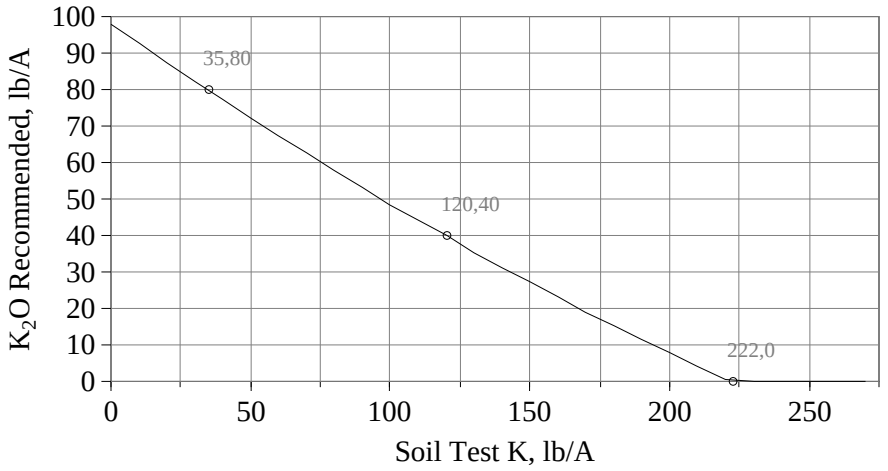
P Recommendations, Coastal Plain

$P_2O_5 = 51 - 0.755P + 0.00147P^2$



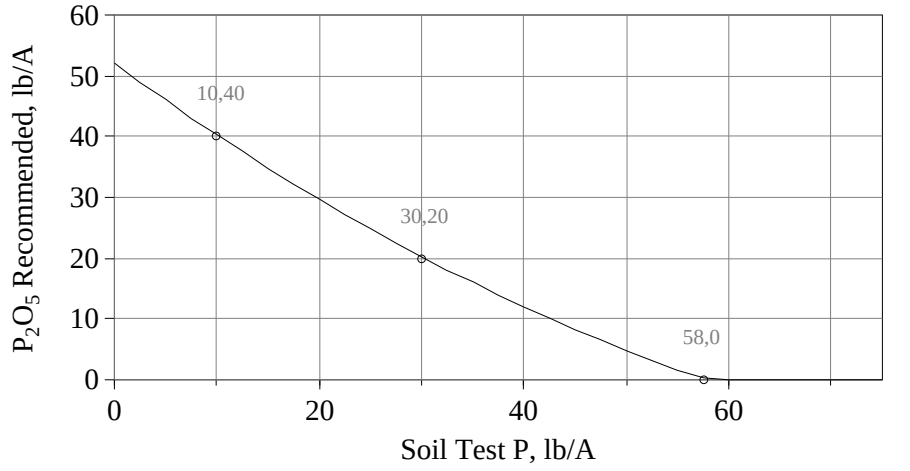
K Recommendations, Coastal Plain

$K_2O = 98 - 0.537K + 0.00043K^2$



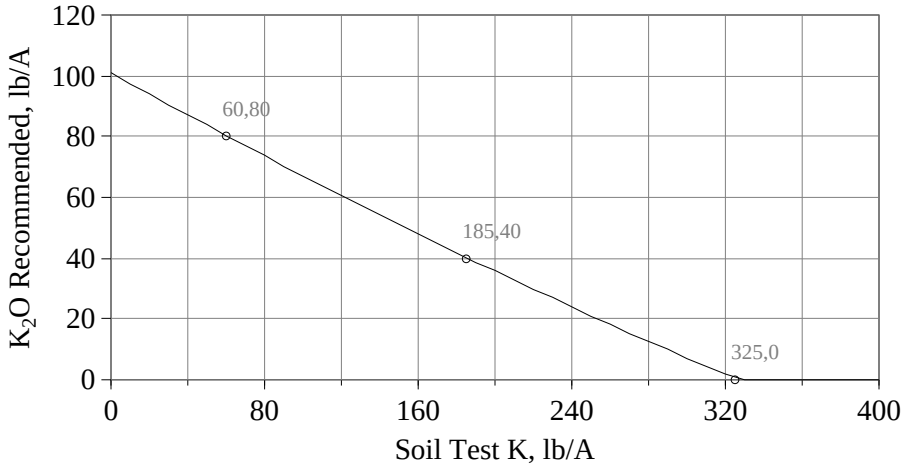
P Recommendations, Piedmont

$P_2O_5 = 52 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 101 - 0.352K + 0.00013K^2$



Sorghum Sudan Hybrids (*Code* #044)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-100	*-60-80	*-60-60	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-100	*-40-80	*-40-60	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-20-100	*-20-80	*-20-60	*-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-80	*-0-60	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	180-240 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

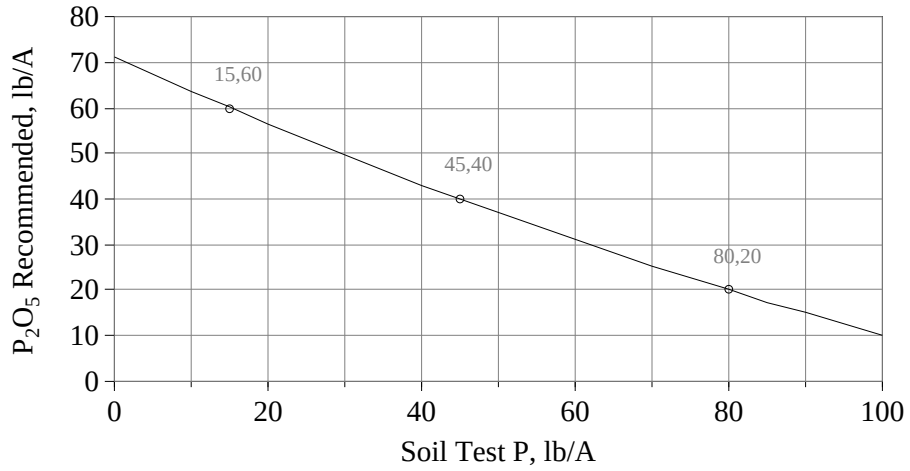
*When harvested for hay or silage, apply 40 pounds of nitrogen (N) per acre at planting, 60 pounds nitrogen per acre after stand establishment, and 60 pounds nitrogen per acre after each harvest except the last. If more than one cutting is anticipated, increase the phosphate (P_2O_5) and potash (K_2O) rates by 25%.

*When used for grazing, apply 40 to 60 pounds of nitrogen per acre for establishment and 50 to 60 pounds of nitrogen per acre each month during the grazing season (June, July, and August).

Sorghum Sudan Hybrids (*Code 044*)

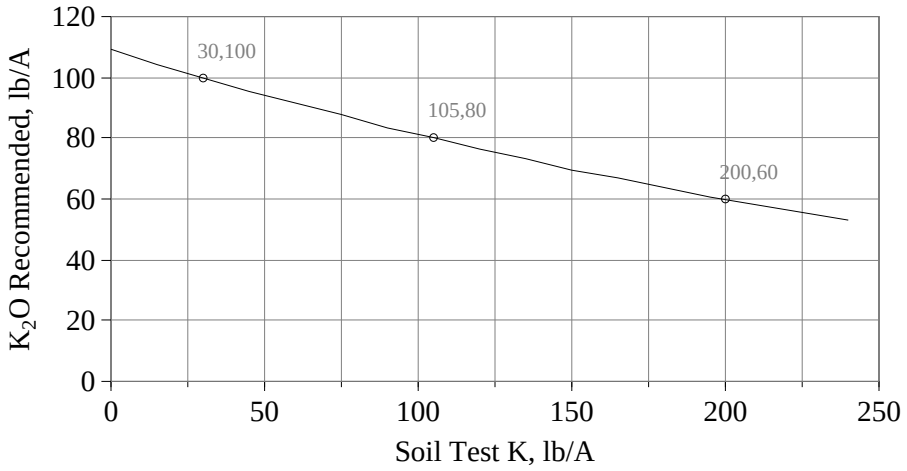
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



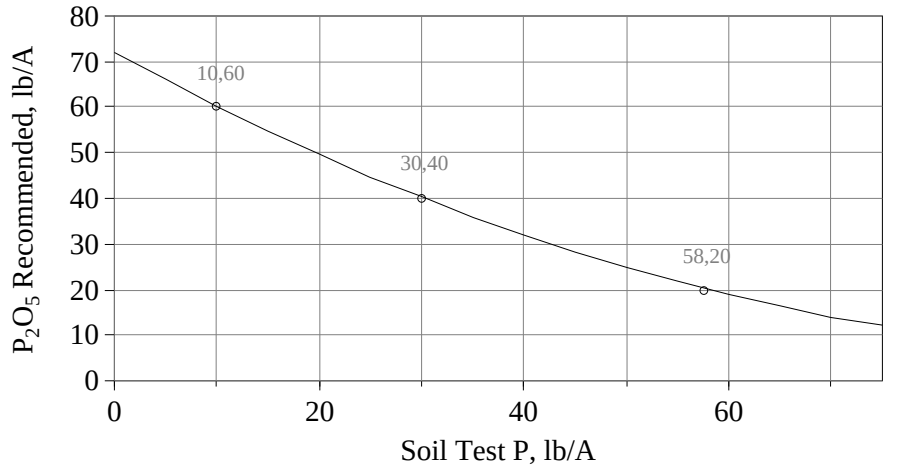
K Recommendations, Coastal Plain

$K_2O = 109 - 0.311K + 0.00033K^2$



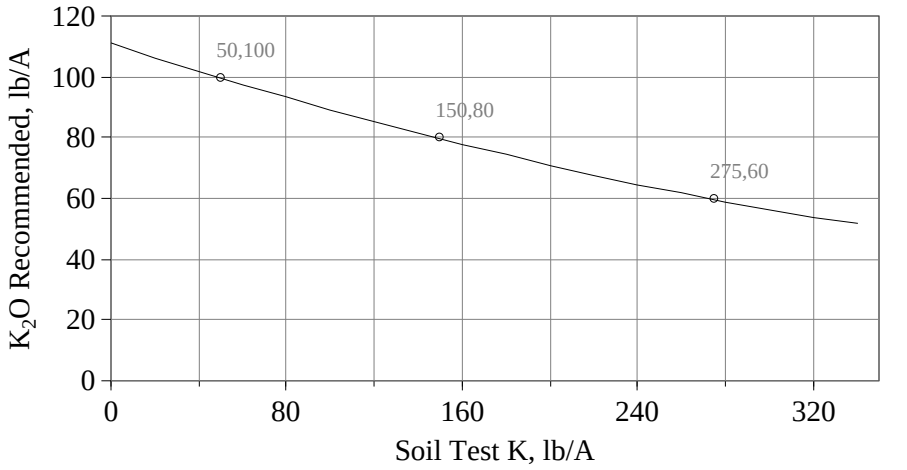
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 111 - 0.236K + 0.00018K^2$



Subterranean Clover (*Code* #031)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

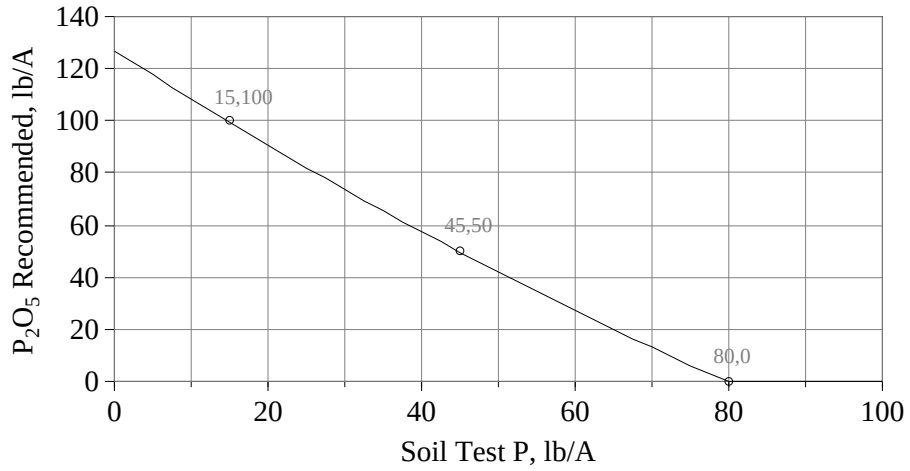
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Subterranean Clover (*Code 031*)

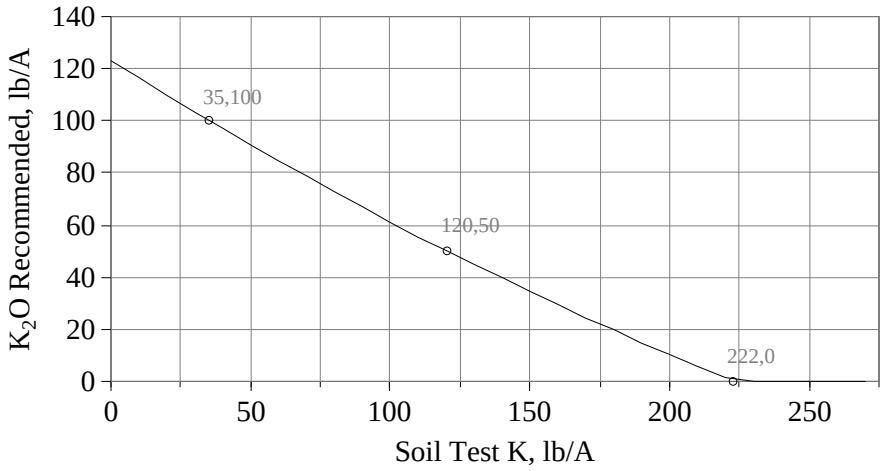
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



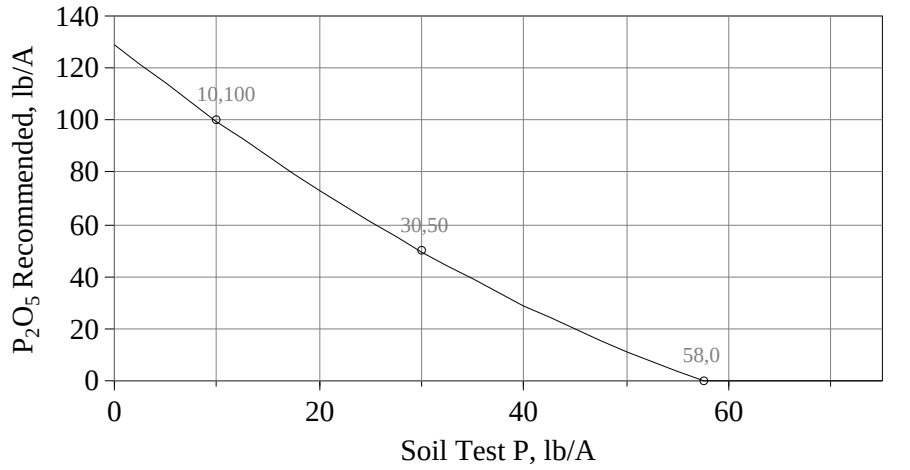
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



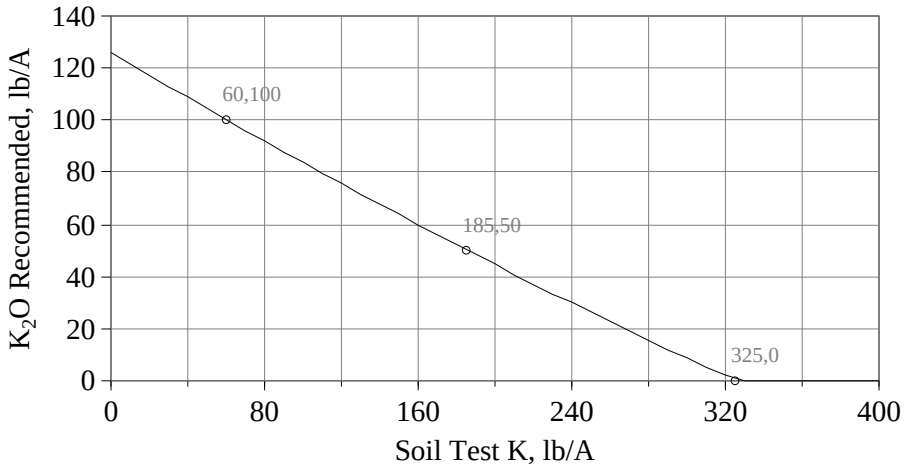
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Summer Perennials Overseeded in Fall (*Code* #049)
(Coastal Bermuda, Common Bermuda, Bahia Grass, Dallis Grass with Arrowleaf, Subterranean, Crimson Clover, or Rye, Ryegrass)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-100	*-100-50	*-100-0	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-50-100	*-50-50	*-50-0	*-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-100	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0-150 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

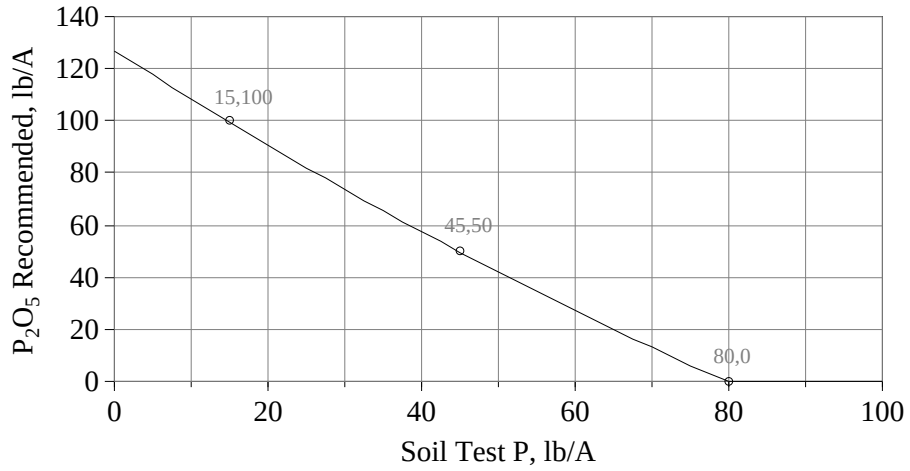
Fact Sheet:

When overseeding with grass, apply 150 pounds of nitrogen (N) in three split applications, 50 pounds nitrogen per acre at planting, 50 pounds nitrogen per acre in the winter, and 50 pounds nitrogen per acre in spring. For grass-legume mixtures, apply 100 pounds nitrogen per acre in two split applications, 50 pounds nitrogen per acre at planting and 50 pounds nitrogen per acre in mid-winter. For legume overseeding, do not apply nitrogen fertilizer.

Summer Perennials Overseeded in Fall (*Code 049*)

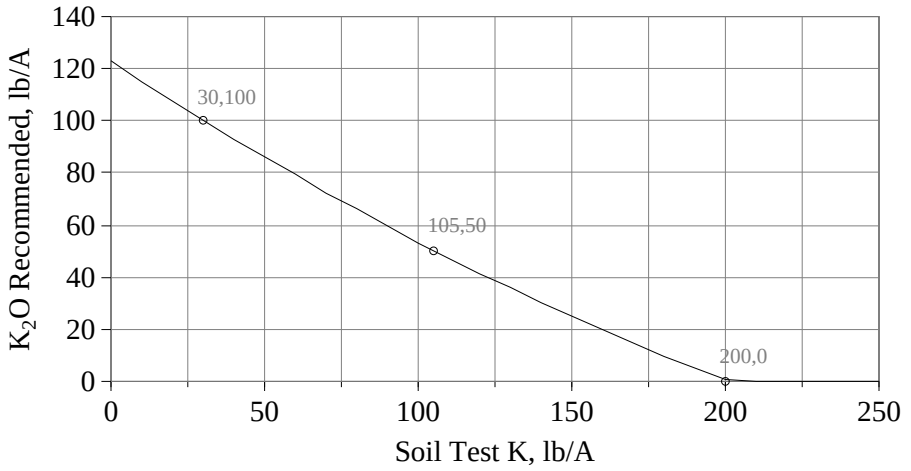
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



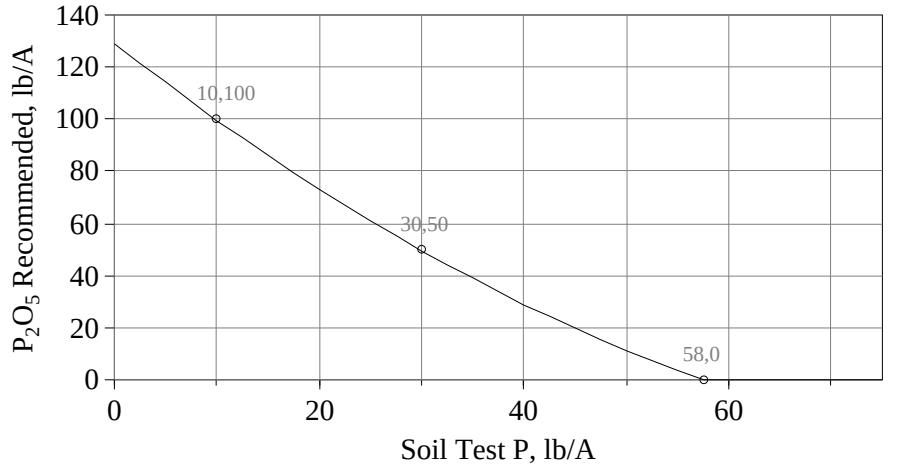
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



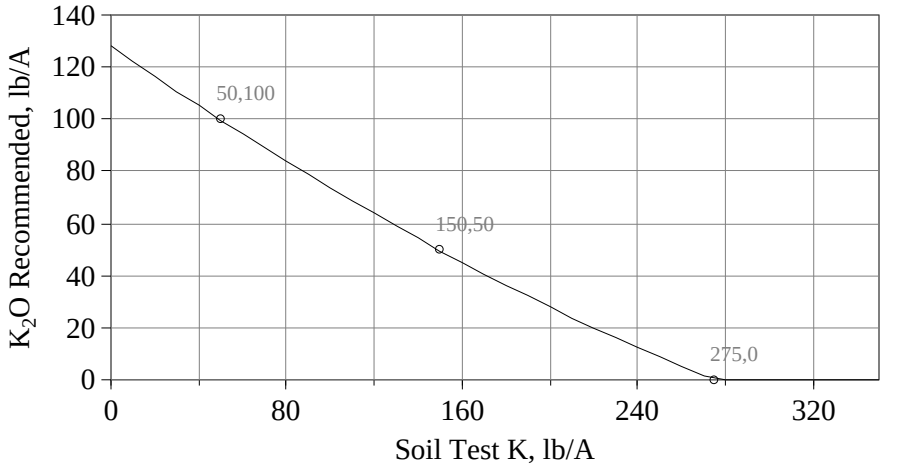
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$



Temporary Winter Grazing (*Code* #050)
(Rye, Oats, Wheat, and/or Ryegrass and Legumes)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-100	*-100-50	*-100-0	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-50-100	*-50-50	*-50-0	*-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-100	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	100-150 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Temporary winter grazing - (small grains - rye, wheat, oats). When used for grazing only, these crops can utilize about 100 pounds of nitrogen per acre during the growing season. Split the nitrogen (N) application, applying 50 pounds nitrogen per acre at planting and 50 pounds nitrogen per acre in late winter before spring growth begins.

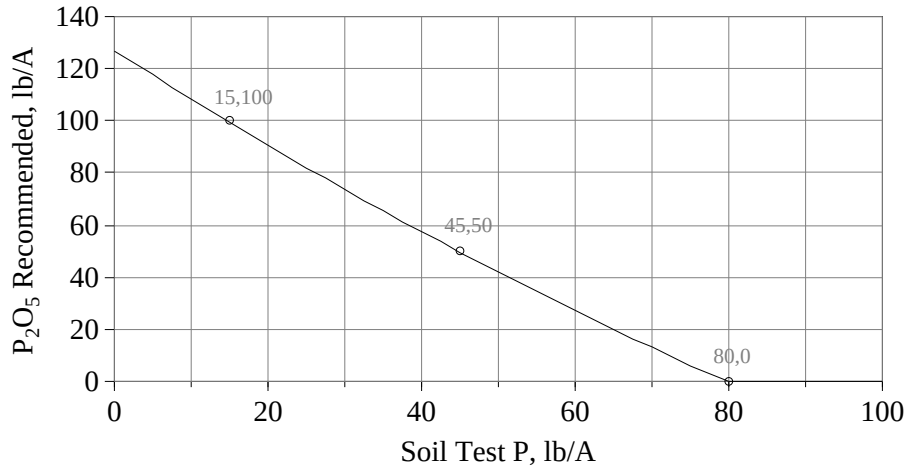
Temporary winter grazing - (ryegrass alone or small grain-ryegrass). Apply 50 pounds nitrogen per acre in the fall at planting, 50 pounds per acre in late winter, and 50 pounds per acre in early spring. Ryegrass has a longer than normal grazing season. The spring application of nitrogen will help extend the grazing period.

Temporary winter grazing - (annual clovers - crimson, arrowleaf with small grains or ryegrass). Apply 30 to 50 pounds nitrogen per acre at planting. Higher rates of nitrogen will stimulate rapid grass growth and shade out the clover. If the stand contains less than 40 to 50% clover, apply 50 pounds nitrogen per acre in late winter or early spring.

Temporary Winter Grazing (*Code 050*)

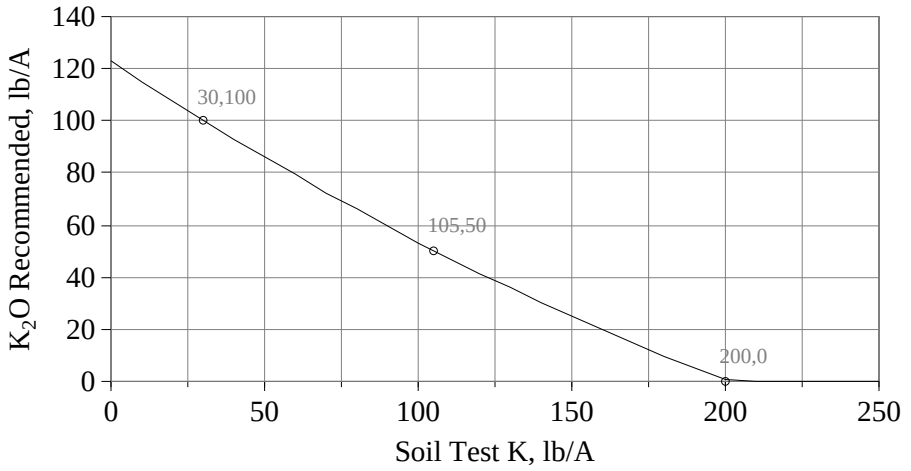
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



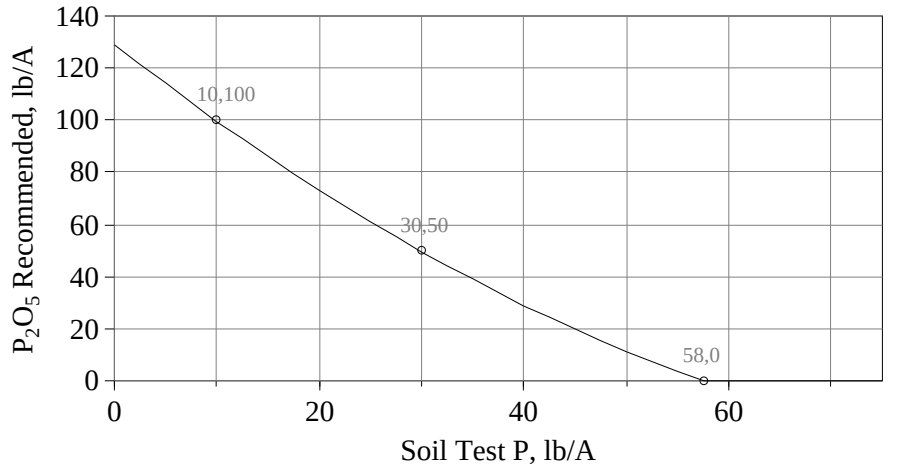
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



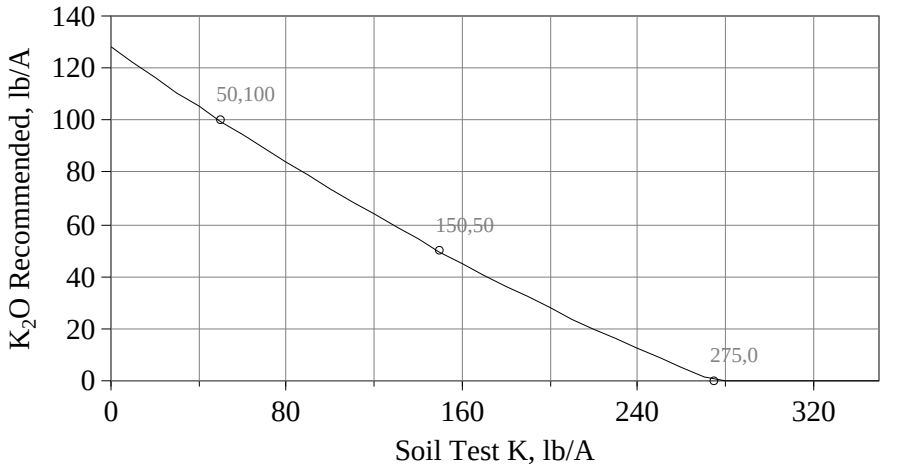
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$



Vetch (*Code* #034)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

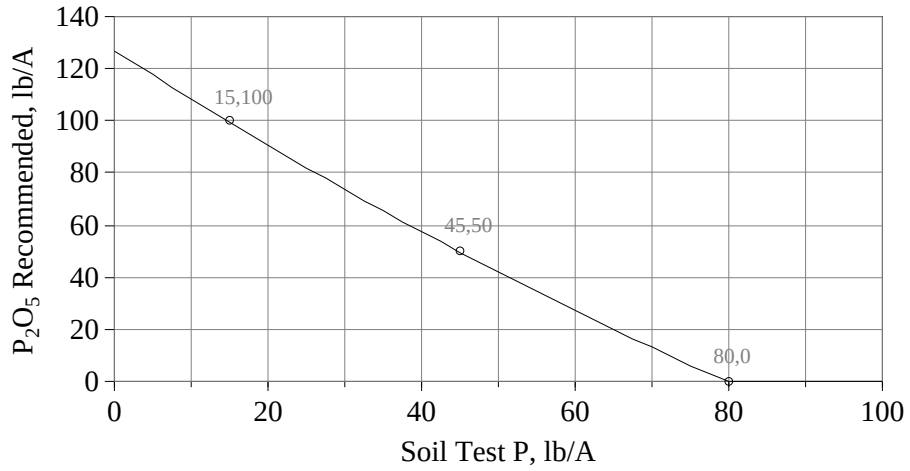
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Vetch (*Code 034*)

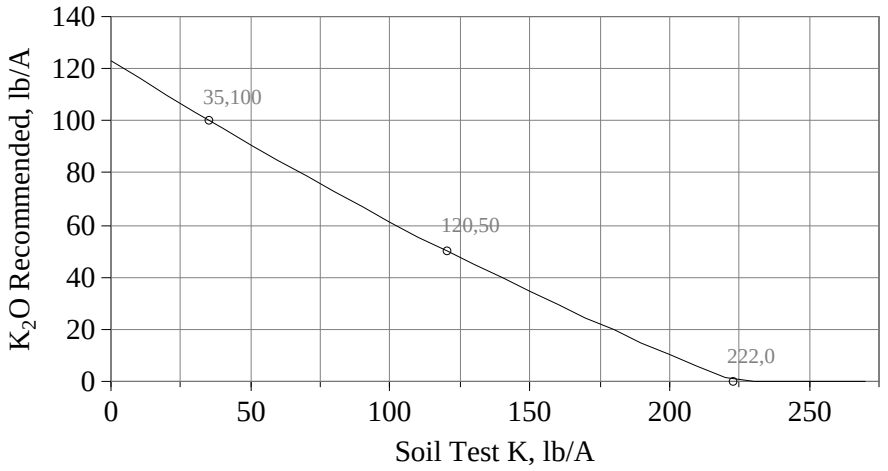
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



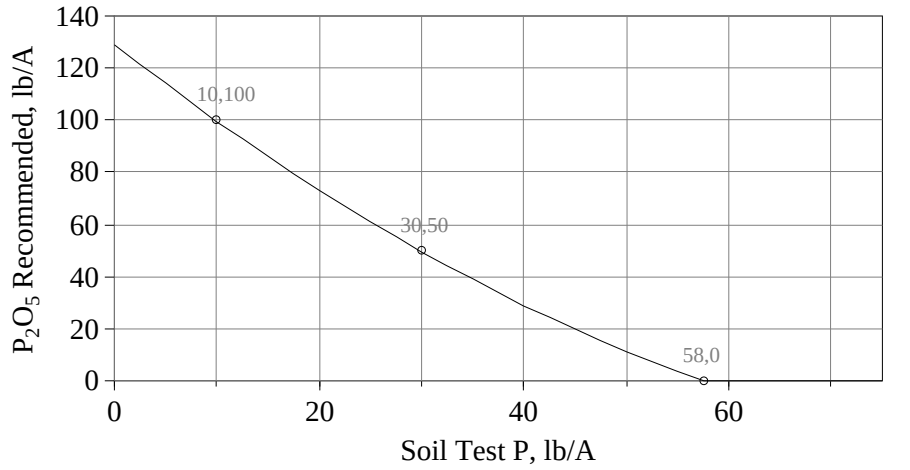
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



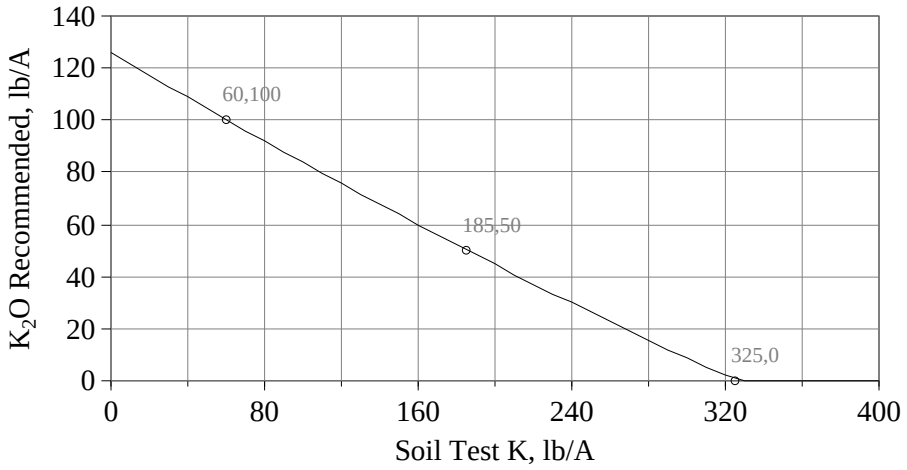
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



White Clover (*Code* #741)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For clover seed production, apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

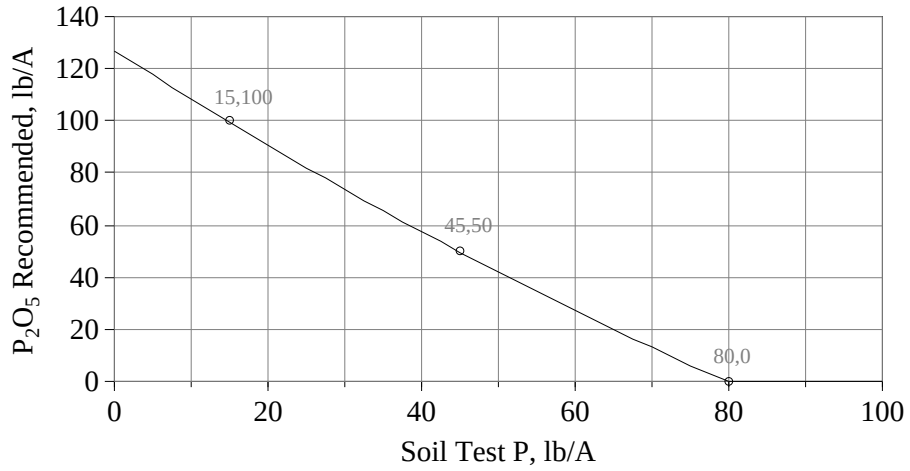
Piedmont only:

For clover seed production, apply 1 pound of boron (B) per acre.

White Clover (*Code 741*)

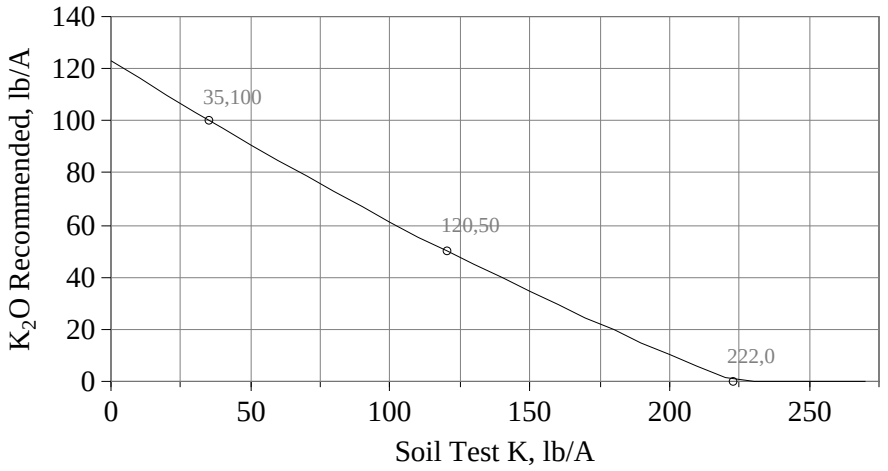
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



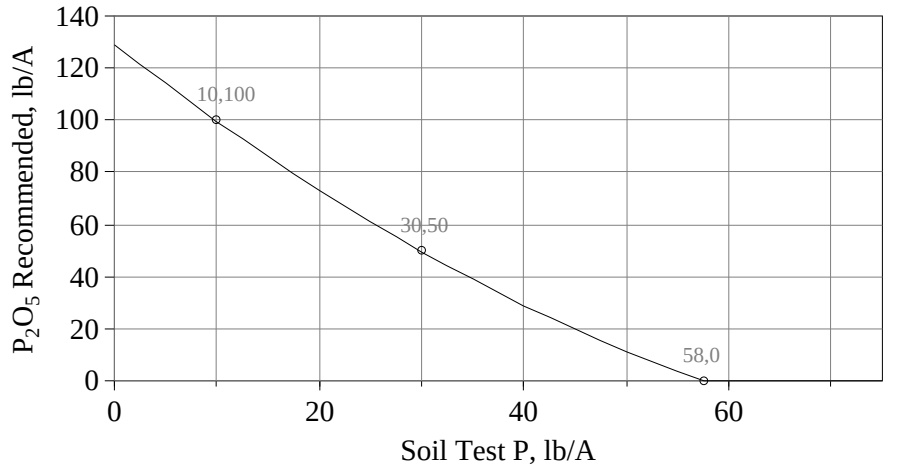
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



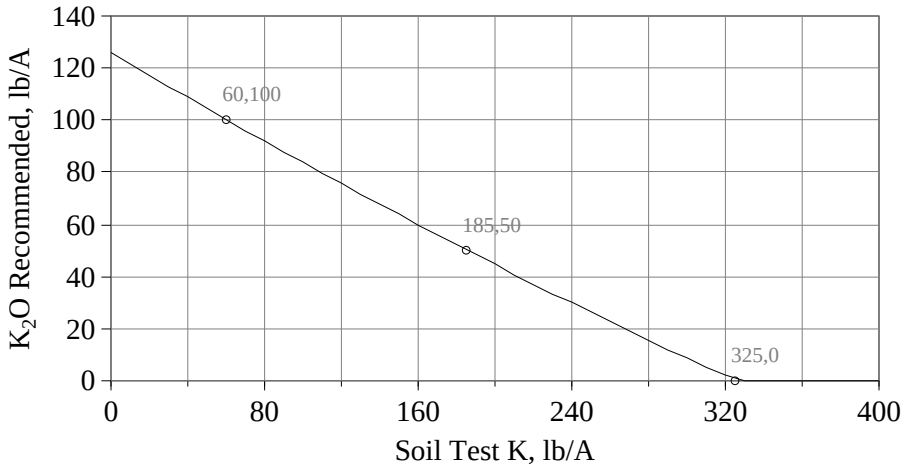
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Arrowleaf Clover (Apache, Yuchi, Amclo, Mechee) (*Code* #027)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Other:	See boron (B) recommendation below.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Coastal Plain only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre. For Coastal Plain Soils only, apply 30 pounds potash per acre when the soil test level is high rather than none at all.

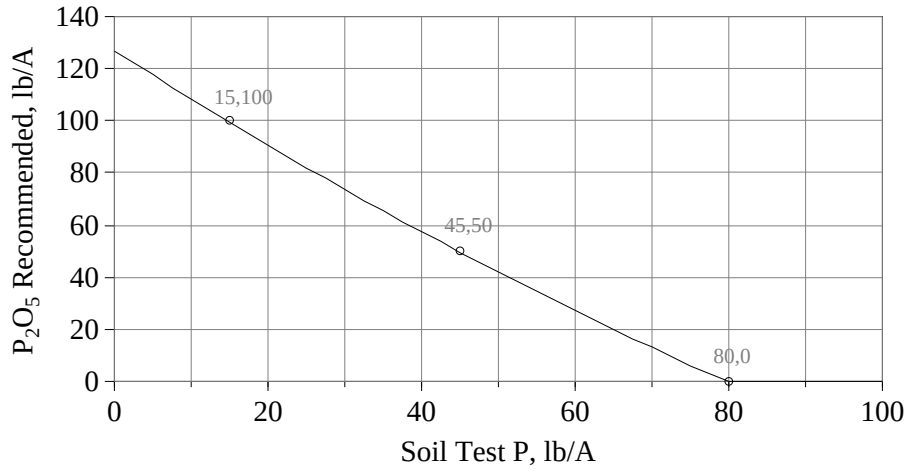
Piedmont only:

For reseeding clovers or clover seed harvest apply 1 pound of boron (B) per acre.

Arrowleaf Clover (Apache, Yuchi, Amclo, Mechee) (*Code 027*)

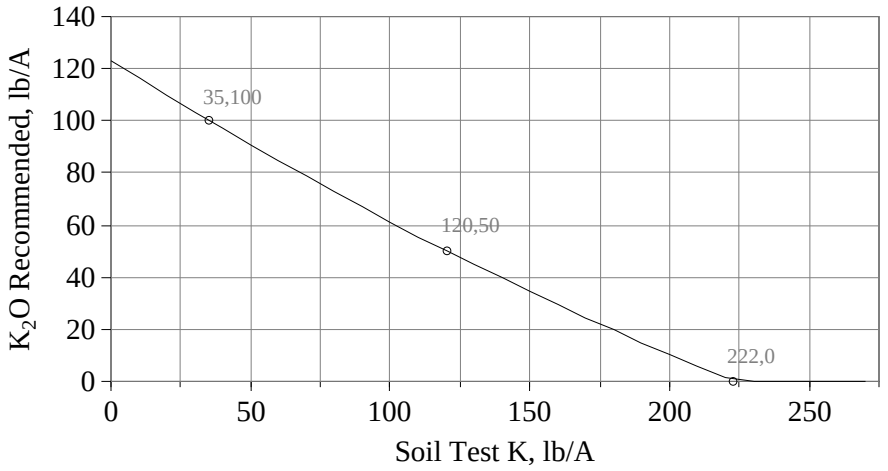
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



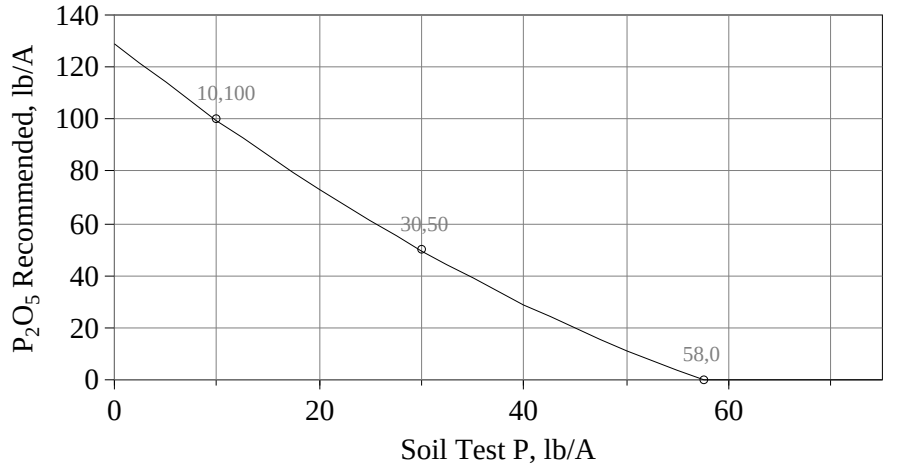
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



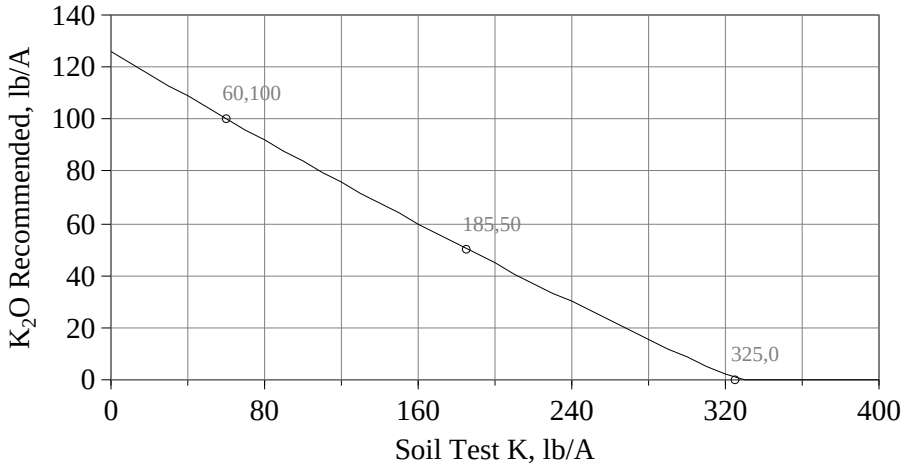
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Switchgrass and other native grasses-Biomass and forage (*Code* #SGB)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-80	*-80-40	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50-75 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

No nitrogen (N) should be applied during the establishment year to prevent competition from grassy weeds.

Biomass/Bioenergy Production

Switchgrass that is harvested for biomass/bioenergy can result in many nutrients being removed from the soil. However, if the biomass is not harvested until the plant has gone completely dormant (late November or later in the fall or winter), many of the nutrients within the plant will have been remobilized and transported to the roots for overwintering.

These nutrients, especially P and K, will be available to the plant next growing season. As a result, soil testing should be done every three years to ensure that the soil is maintained at a pH of 6.0 and does not fall below adequate levels of phosphorus and potassium.

Stands of switchgrass grown as a biomass/bioenergy crop should receive 50 - 75 lbs of nitrogen (N) per acre each year, applied within two weeks of spring green-up. The nitrogen requirement of switchgrass for biomass may be at least partly met through the use of N-fixing, winter annual legumes.

Forage Production

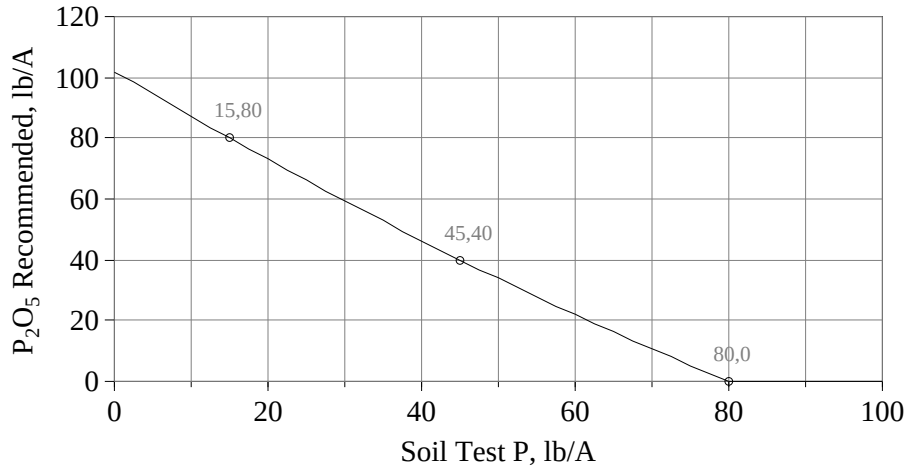
Switchgrass that is harvested as hay will result in many nutrients being removed from the soil. Thus, adequate soil fertility needs to be maintained to avoid yield loss. Soils in switchgrass hay fields should be maintained at a pH of 6.0 and with medium soil test P and K values. These stands should receive 40 - 60 lbs of N per acre at green-up. If soil moisture is adequate and additional forage is desired, additional applications of up to 60 lbs of N per acre should be applied after each subsequent hay harvest (except after the last cutting of the season).

Switchgrass can be grazed if the manager carefully prevents grazing below heights of 8 inches. The N rate on grazed switchgrass pastures should be 30 - 40 lbs at green-up and after each subsequent grazing (if soil moisture is adequate).

Switchgrass and other native grasses-Biomass and forage (*Code SGB*)

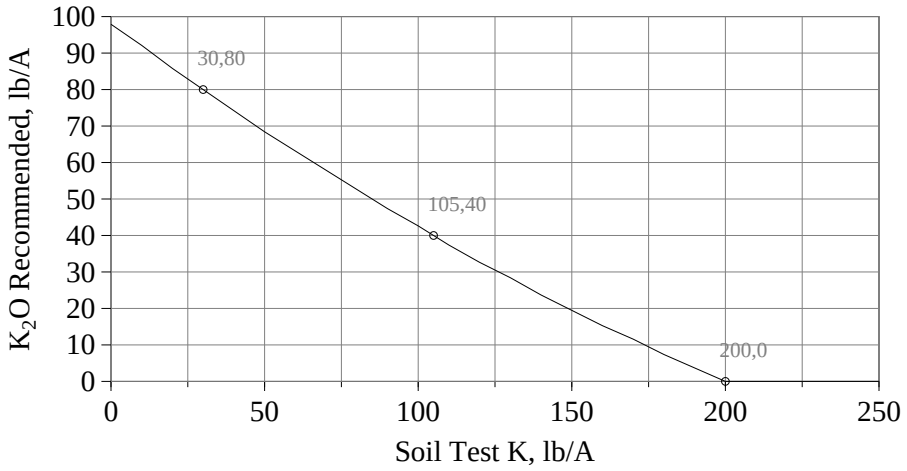
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



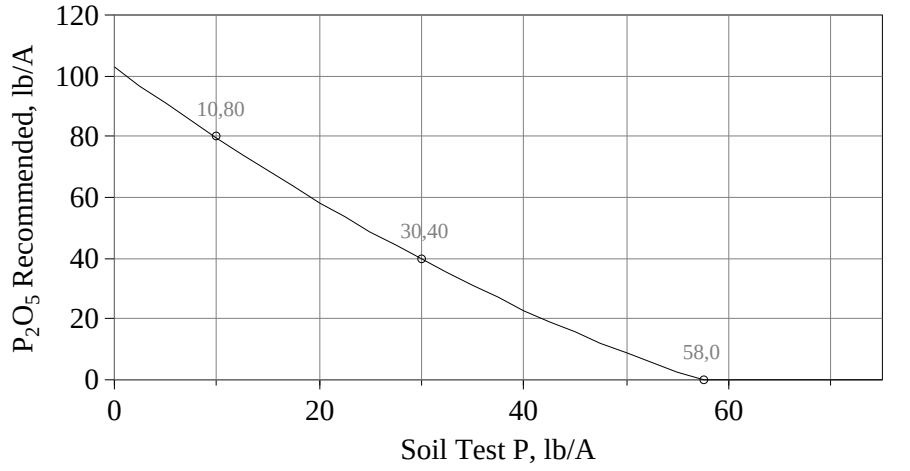
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



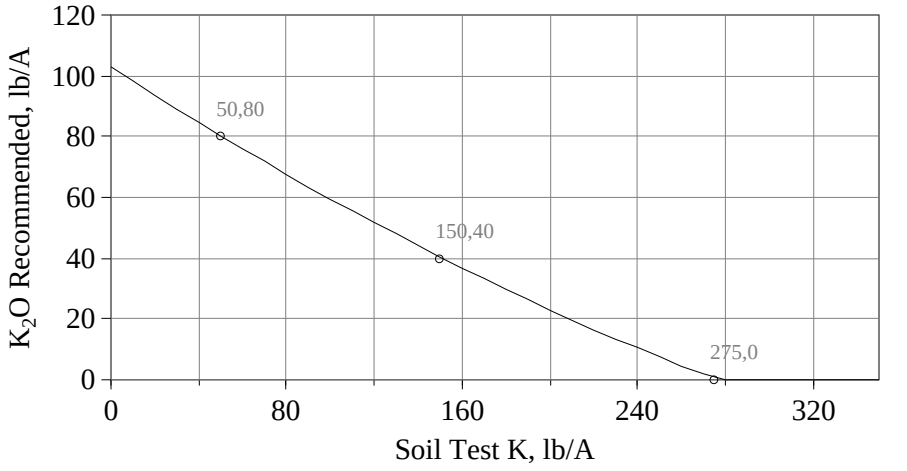
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Switchgrass and other native grasses-Wildlife (*Code* #SGW)

Soil Test Rating	Potassium			
	Low K Coast: 0-30 lbs/A Pied: 0-50 lbs/A	**Medium K** Coast: 31-60 lbs/A Pied: 51-100 lbs/A	**High K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**Very High K** Coast: 150+ lbs/A Pied: 200+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-15 lbs/A Pied: 0-10 lbs/A	*-80-80	*-80-50	*-80-0	*-80-0
Medium P Coast: 16-30 lbs/A Pied: 11-20 lbs/A	*-50-80	*-50-50	*-50-0	*-50-0
High P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-0-80	*-0-50	*-0-0	*-0-0
Very High P Coast: 60+ lbs/A Pied: 40+ lbs/A	*-0-80	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5. If the pH is less than 5.5, see Lime Table D.
Nitrogen:	50-75 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

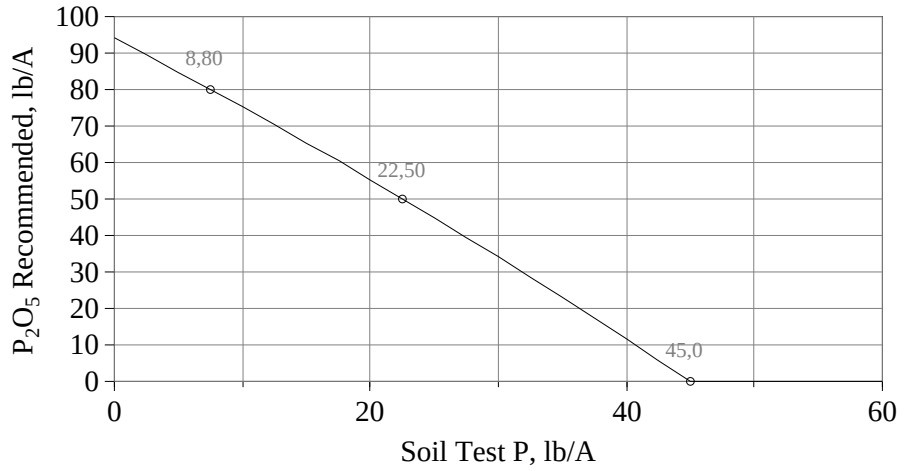
Fact Sheet:

Though it is not as high-yielding when soil fertility is low, switchgrass is very tolerant of low fertility. Even so, if switchgrass is grown for wildlife purposes, some soil amendments may be necessary to maintain the soil pH at 5.5 or greater and with medium-low soil test P and K values. If P and K fertilizer is recommended, it should be applied in the establishment year only. Little, if any, additional N will be necessary.

Switchgrass and other native grasses-Wildlife (*Code SGW*)

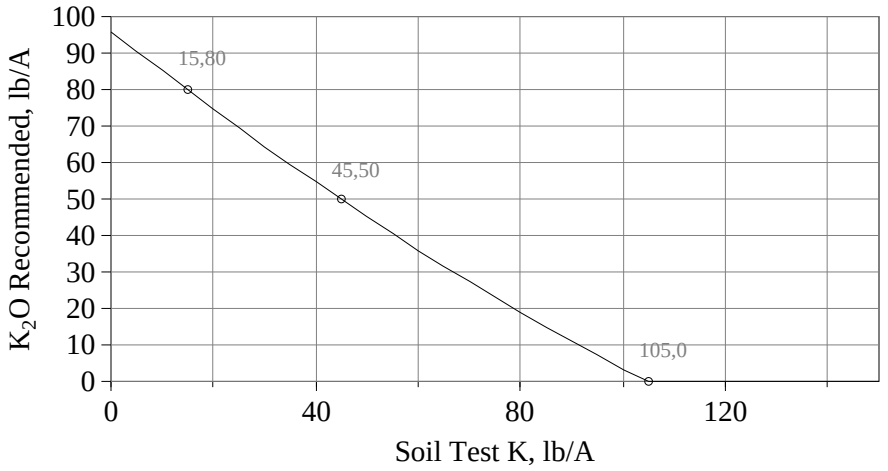
P Recommendations, Coastal Plain

$P_2O_5 = 94 - 1.822P - 0.00593P^2$



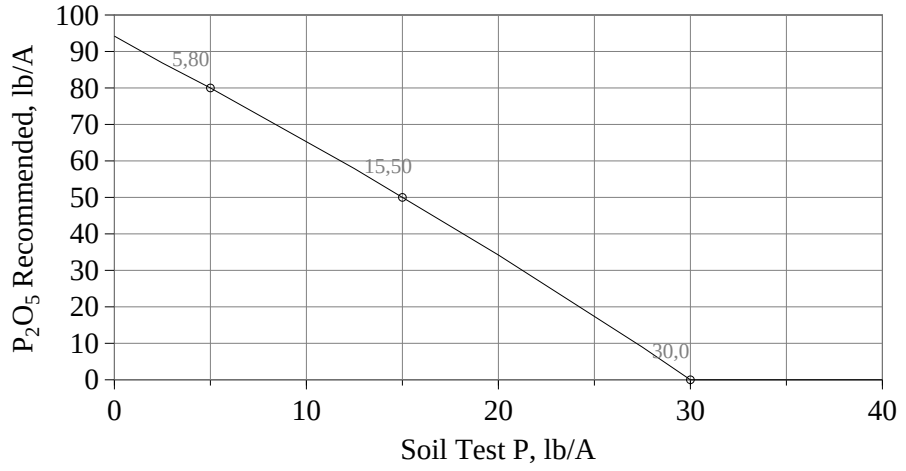
K Recommendations, Coastal Plain

$K_2O = 96 - 1.111K + 0.00185K^2$



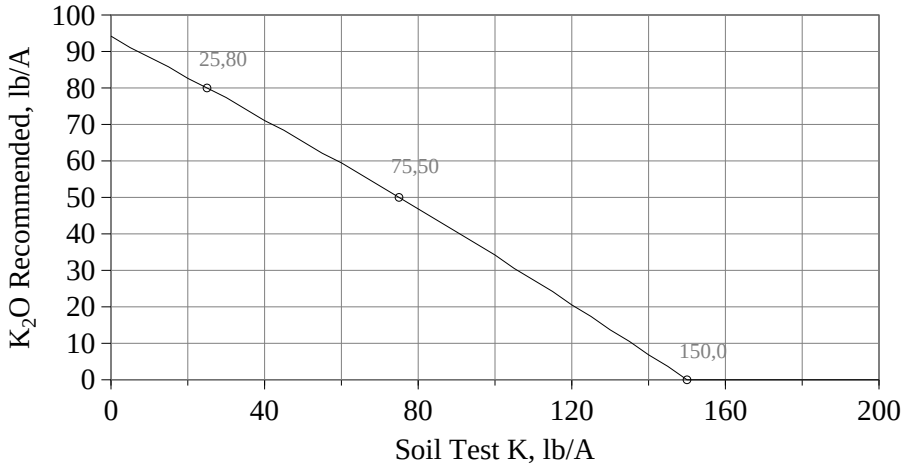
P Recommendations, Piedmont

$P_2O_5 = 94 - 2.733P - 0.01333P^2$



K Recommendations, Piedmont

$K_2O = 94 - 0.547K - 0.00053K^2$



PINE TREES, FIELD NURSERY STOCK, AND CHRISTMAS TREES

Matthew Chappell, Extension Horticulturist – Nursery Production
E. David Dickens – Associate Professor, Forest Productivity

Christmas Trees - Cedar (*Code* #078)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-20-80	*-20-40	*-20-0	*-20-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	0-20 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

Apply the recommended amount of limestone, phosphorus and potassium fertilizer and work into the soil prior to planting.

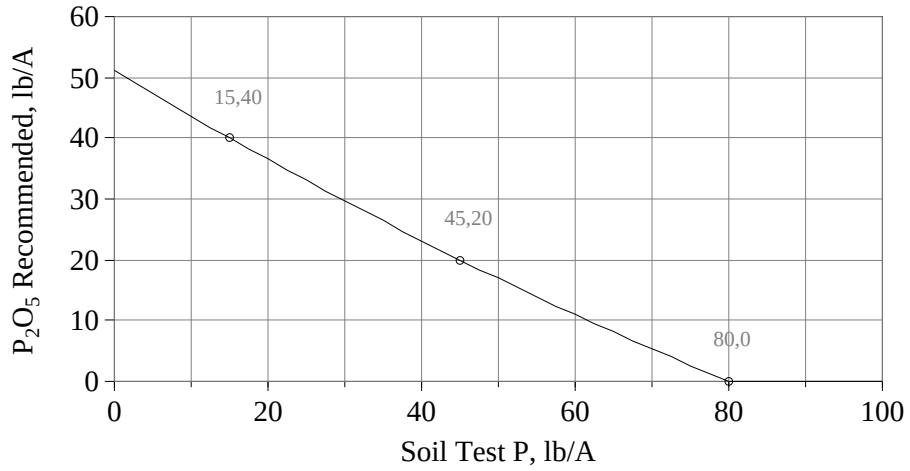
*Nitrogen Recommendation:

Do **NOT** apply Nitrogen during the first growing season. After the first year nitrogen may prove to be beneficial. However, do not apply at rates to exceed 20 pounds nitrogen per acre. Rates in excess of this may cause undesirable growth.

Christmas Trees - Cedar (*Code 078*)

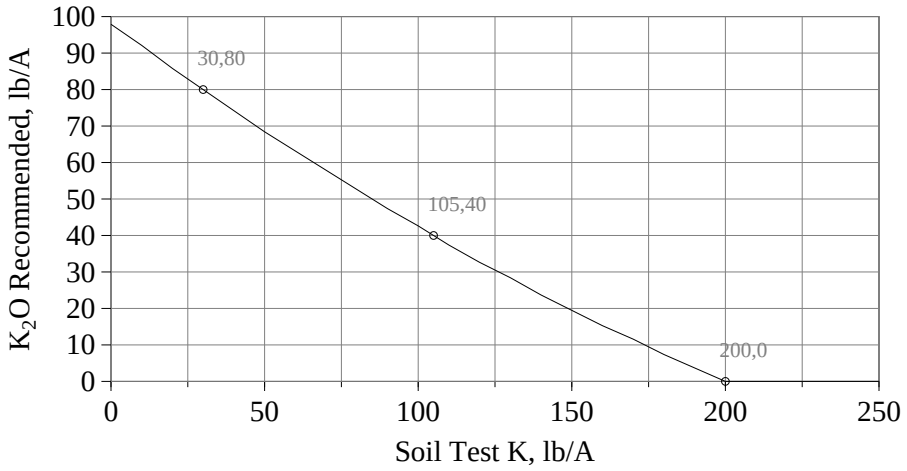
P Recommendations, Coastal Plain

$P_2O_5 = 51 - 0.755P + 0.00147P^2$



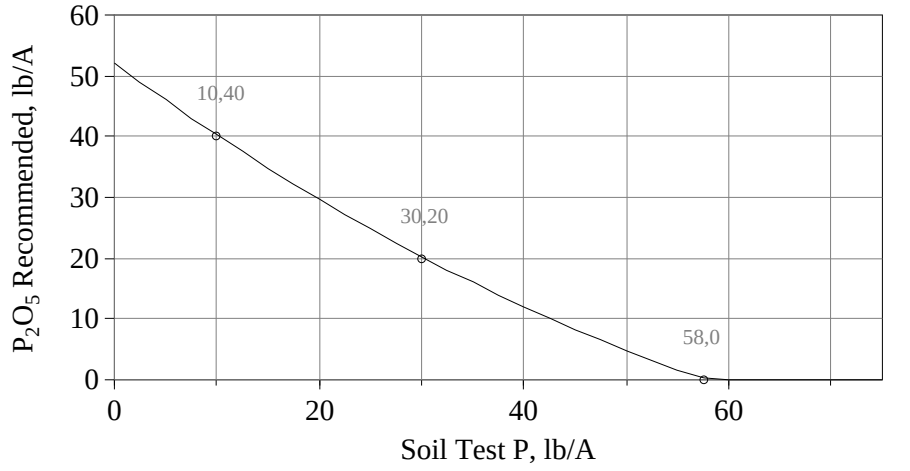
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



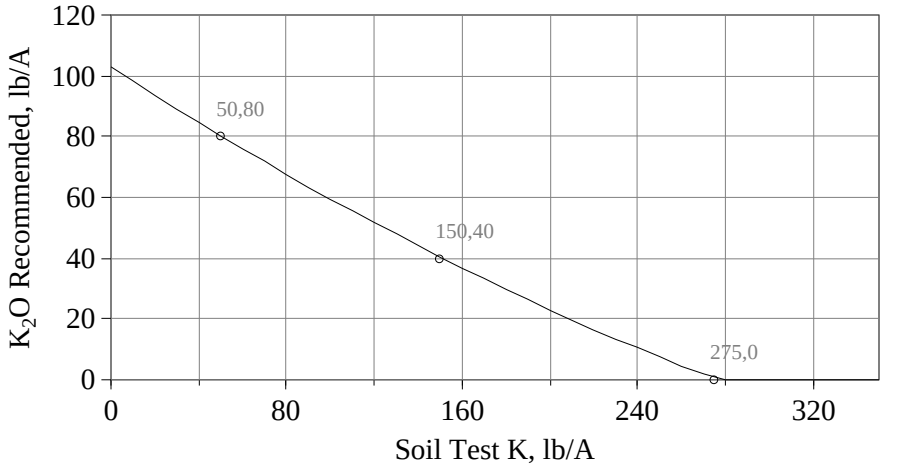
P Recommendations, Piedmont

$P_2O_5 = 52 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Christmas Trees - Pine and Leyland Cypress (*Code* #077)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-40-80	*-40-40	*-40-0	*-40-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-20-80	*-20-40	*-20-0	*-20-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-80	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-80	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D.
Nitrogen:	0-20 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

Apply the recommended amount of limestone, phosphorus and potassium fertilizer and work into the soil prior to planting.

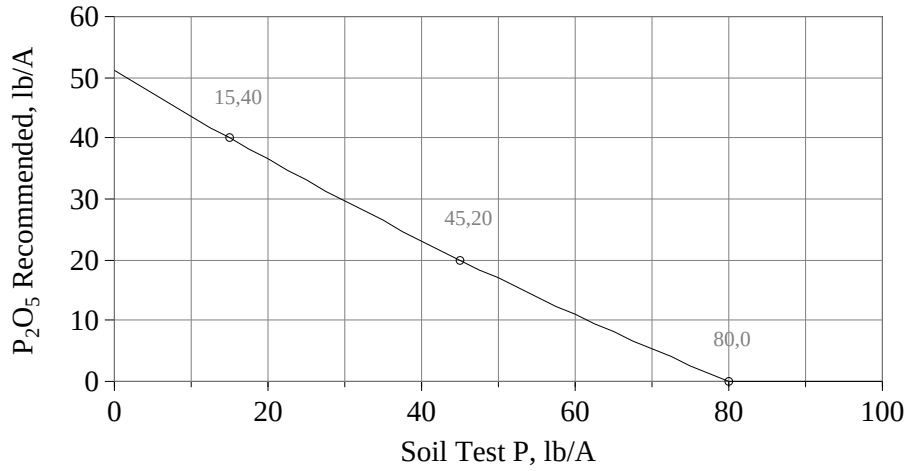
*Nitrogen Recommendation:

Do **NOT** apply Nitrogen during the first growing season. After the first year nitrogen may prove to be beneficial. However, do not apply at rates to exceed 20 pounds nitrogen per acre. Rates in excess of this may cause undesirable growth.

Christmas Trees - Pine and Leyland Cypress (*Code 077*)

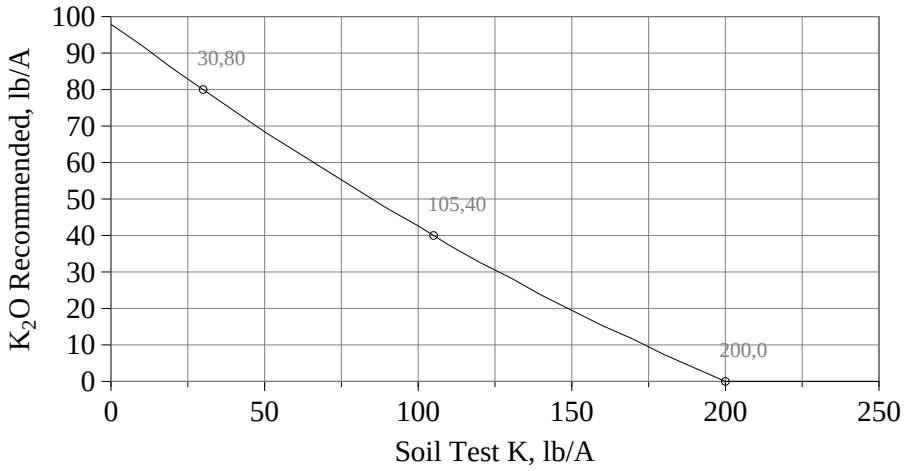
P Recommendations, Coastal Plain

$P_2O_5 = 51 - 0.755P + 0.00147P^2$



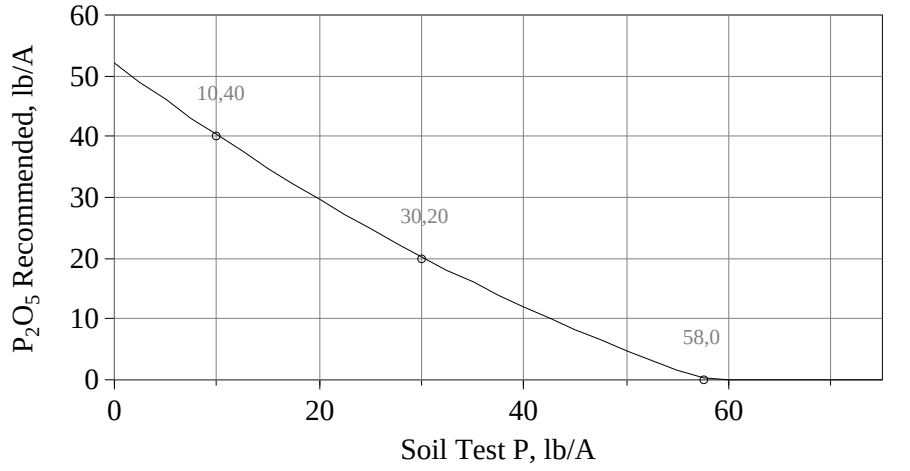
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



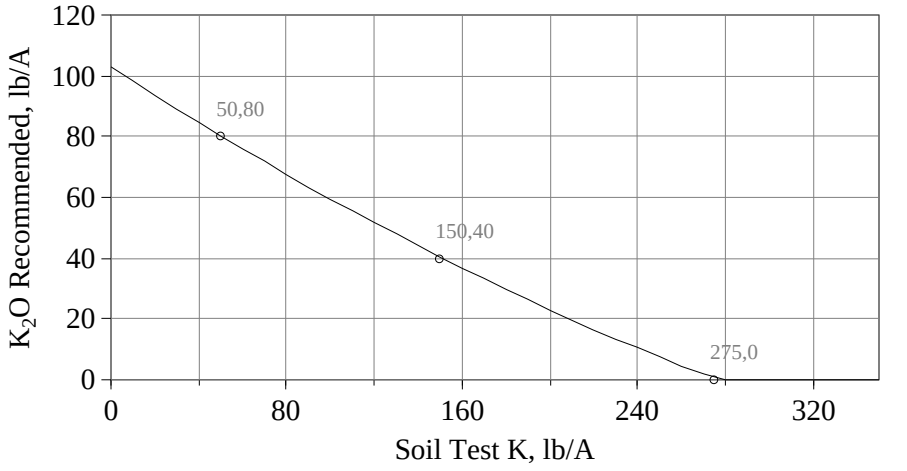
P Recommendations, Piedmont

$P_2O_5 = 52 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Field Nursery - Broadleaf Evergreen (production) (*Code* #075)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-140-140	*-140-70	*-140-0	*-140-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-140	*-70-70	*-70-0	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-140	*-0-70	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-140	*-0-70	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	90-140 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

The recommended rates of nitrogen (N), phosphate (P_2O_5) and potash (K_2O) are based on one (1) acre of treated area. When fertilizers are to be applied by banding or drip irrigation, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 3 feet herbicide/fertilizer band per row, the banded fertilizer rate would be calculated on the basis of 13,068 square feet. (43560 sq. ft. per acre/10 ft. row spacing = 4,356 linear ft.; 4,356 linear feet. x 3 ft. wide herbicide/fertilizer band = 13,068 sq. ft.)

*** For established plantings, two years and older, apply 90 to 140 pounds nitrogen per acre year. Nitrogen may be broadcast over the entire field or may be banded along the planted row in the herbicide/fertilizer band. Nitrogen should be applied in 2 or 3 applications. Make the first application in late winter/early spring prior to bud break, the second in late spring/early summer following the initial growth flush and possibly a late fall application to maintain good winter leaf color. If leaching rains occur on sandy soils, more frequent applications may be required.

Soluble nitrogen fertilizers injected into the drip irrigation water may be applied weekly or bi-weekly. The amount of nitrogen needed for each application can be determined by dividing the yearly nitrogen requirement by the total number of applications planned.

Phosphorus and potassium may be applied by broadcasting, banding in the herbicide band, or by injection into the drip irrigation water. When phosphorus is applied broadcast, the recommended amount can be applied in one application or it may be split into two applications.

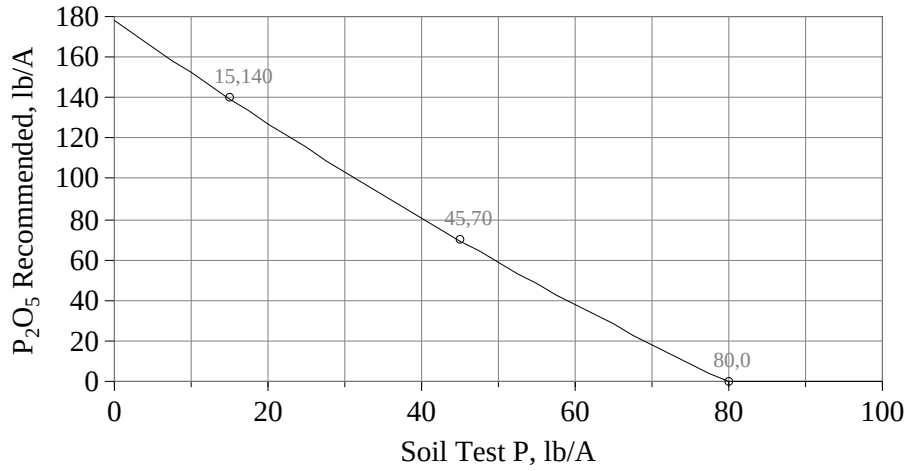
On sandy soils testing low in potassium (K), application of potassium fertilizer should be split into at least 2 applications.

When phosphorus or potassium are applied by drip irrigation, applications can be made weekly or bi-weekly.

Field Nursery - Broadleaf Evergreen (production) (*Code 075*)

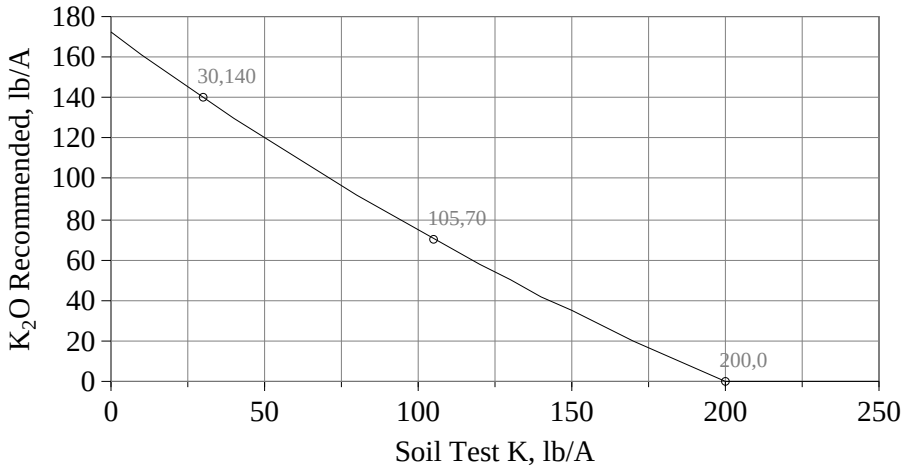
P Recommendations, Coastal Plain

$P_2O_5 = 178 - 2.641P + 0.00513P^2$



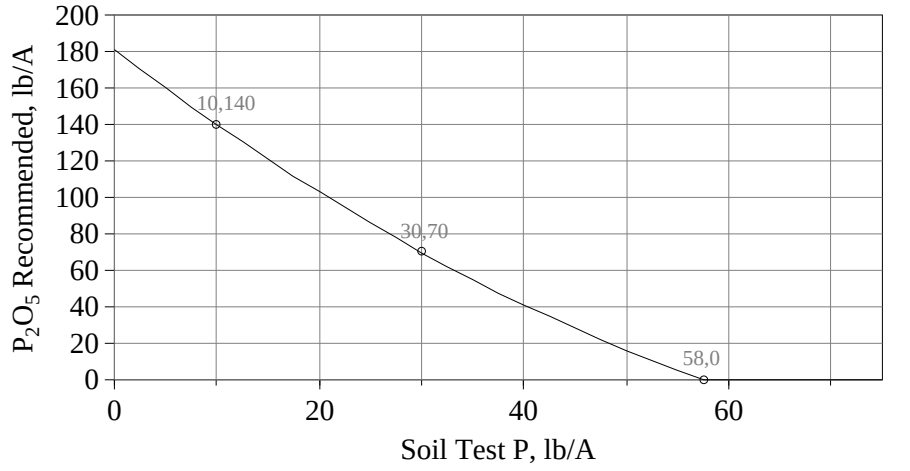
K Recommendations, Coastal Plain

$K_2O = 172 - 1.090K + 0.00116K^2$



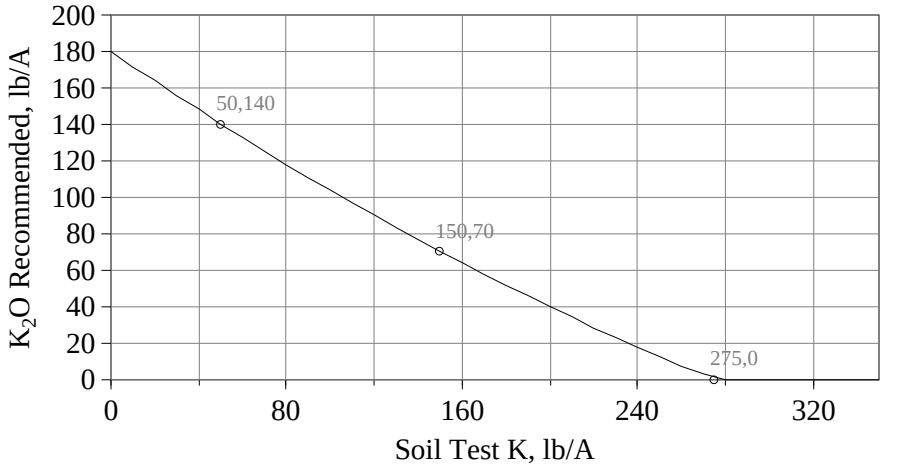
P Recommendations, Piedmont

$P_2O_5 = 181 - 4.304P + 0.02010P^2$



K Recommendations, Piedmont

$K_2O = 180 - 0.824K + 0.00062K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-140-140	*-140-70	*-140-0	*-140-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-140	*-70-70	*-70-0	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-140	*-0-70	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-140	*-0-70	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	220-270 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

The recommended rates of nitrogen (N), phosphate (P_2O_5) and potash (K_2O) are based on one (1) acre of treated area. When fertilizers are to be applied by banding or drip irrigation, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 3 feet herbicide/fertilizer band per row, the banded fertilizer rate would be calculated on the basis of 13,068 square feet. (43560 sq. ft. per acre/10 ft. row spacing = 4,356 linear ft.; 4,356 linear feet. x 3 ft. wide herbicide/fertilizer band = 13,068 sq. ft.)

*** For established plantings, two years and older, apply 220 to 270 pounds nitrogen per acre per year. Nitrogen may be broadcast over the entire field or may be banded along the planted row in the herbicide/fertilizer band. Nitrogen should be applied in 2 or 3 applications. Make the first application in late winter/early spring prior to bud break, the second in late spring/early summer following the initial growth flush and possibly a late fall application after leaf color or leaf drop. If leaching rains occur on sandy soils, more frequent applications may be required.

Soluble nitrogen fertilizers injected into the drip irrigation water may be applied weekly or bi- weekly. The amount of nitrogen needed for each application can be determined by dividing the yearly nitrogen requirement by the total number of applications planned.

Phosphorus and potassium may be applied by broadcasting, banding in the herbicide band, or by injection into the drip irrigation water. When phosphorus is applied broadcast, the recommended amount can be applied in one application or it may be split into two applications.

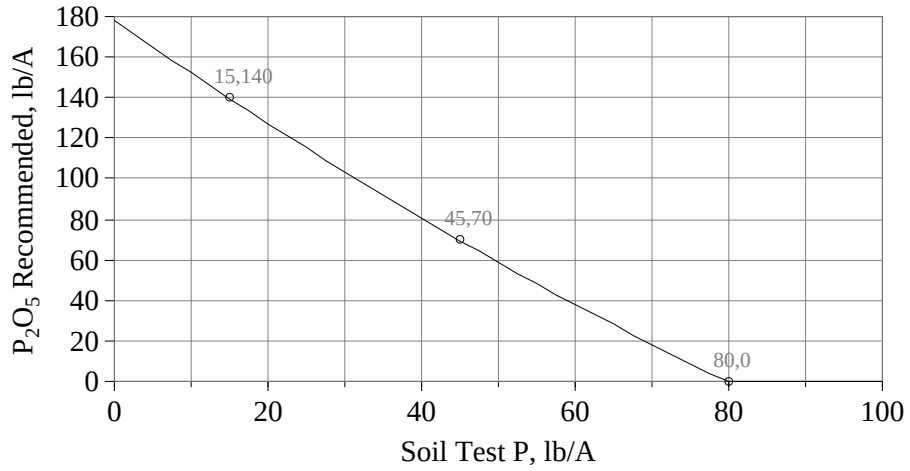
On sandy soils testing low in potassium (K), application of potassium fertilizer should be split into at least 2 applications.

When phosphorus or potassium are applied by drip irrigation, applications can be made weekly or bi-weekly.

Field Nursery - Deciduous Trees & Shrubs (production) (*Code 074*)

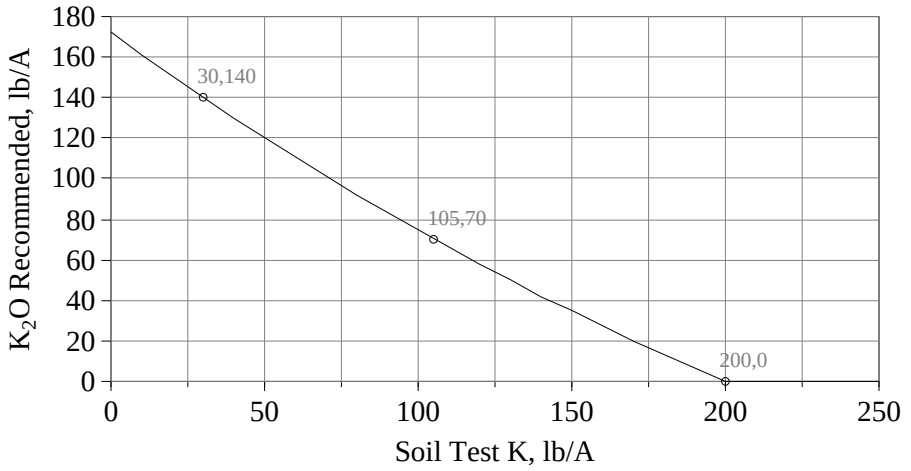
P Recommendations, Coastal Plain

$P_2O_5 = 178 - 2.641P + 0.00513P^2$



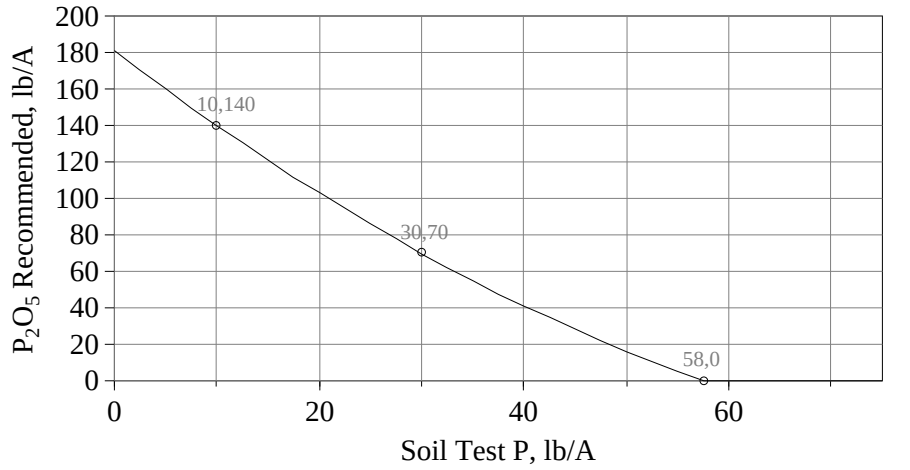
K Recommendations, Coastal Plain

$K_2O = 172 - 1.090K + 0.00116K^2$



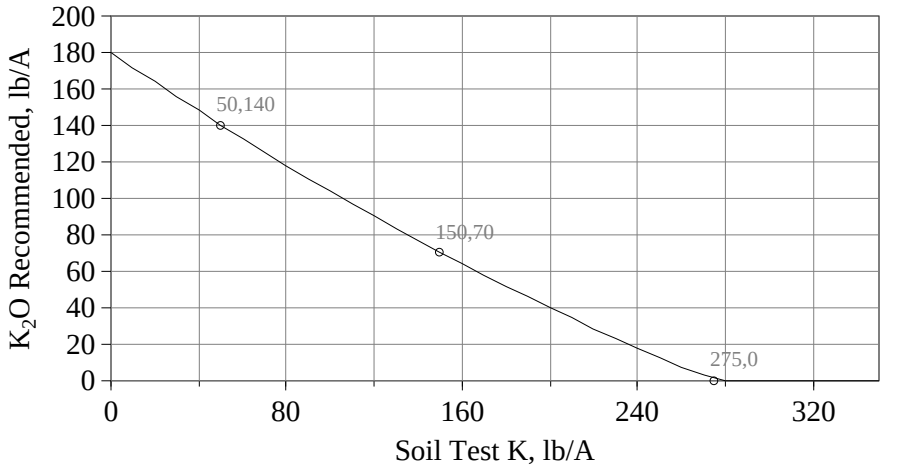
P Recommendations, Piedmont

$P_2O_5 = 181 - 4.304P + 0.02010P^2$



K Recommendations, Piedmont

$K_2O = 180 - 0.824K + 0.00062K^2$



Field Nursery - Deciduous Trees (pre-plant) (*Code* #071)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	50-200-200	50-200-100	50-200-0	50-200-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	50-100-200	50-100-100	50-100-0	50-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	50-0-200	50-0-100	50-0-0	50-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	50-0-200	50-0-100	50-0-0	50-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

The recommended rates of phosphorus and potassium are based on one (1) acre of treated area. When phosphorus and potassium are to be applied by banding, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 5 foot herbicide/fertilizer band per row, the banded rate would be calculated on the basis of 21,780 square feet. (43,560 sq. ft. per acre/10 ft. row spacing = 4,356 linear feet; 4,356 linear ft. x 5 ft. wide herbicide/fertilizer band = 21,780 sq. ft.)

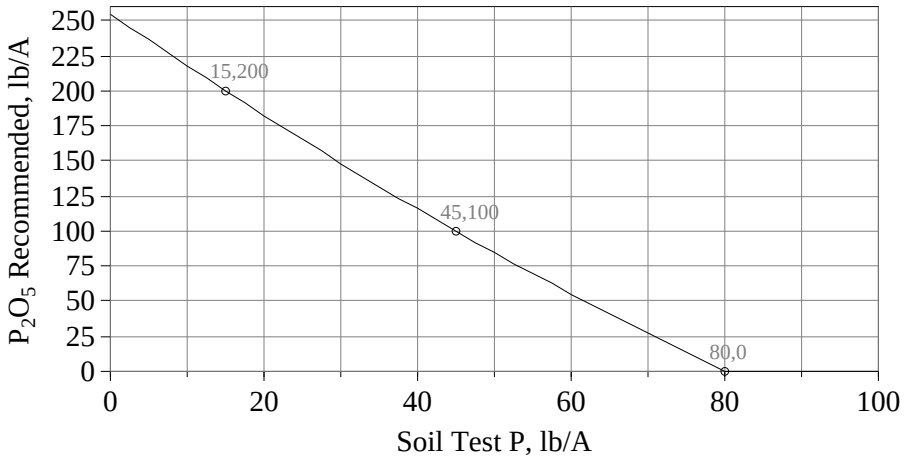
Incorporate recommended amounts of phosphorus, potassium and limestone into the planting rows (band application) for wide row spacings or over the entire field for closely spaced plantings. Apply recommended rates only to the acreage being used for production.

Incorporate nitrogen with other amendments when planting will promptly follow. If planting is to be delayed apply nitrogen immediately after planting.

Field Nursery - Deciduous Trees (pre-plant) (*Code 071*)

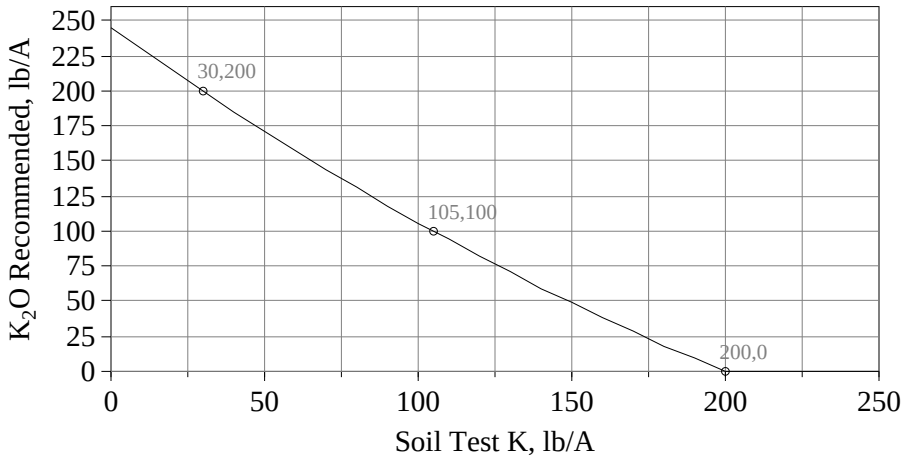
P Recommendations, Coastal Plain

$P_2O_5 = 255 - 3.773P + 0.00733P^2$



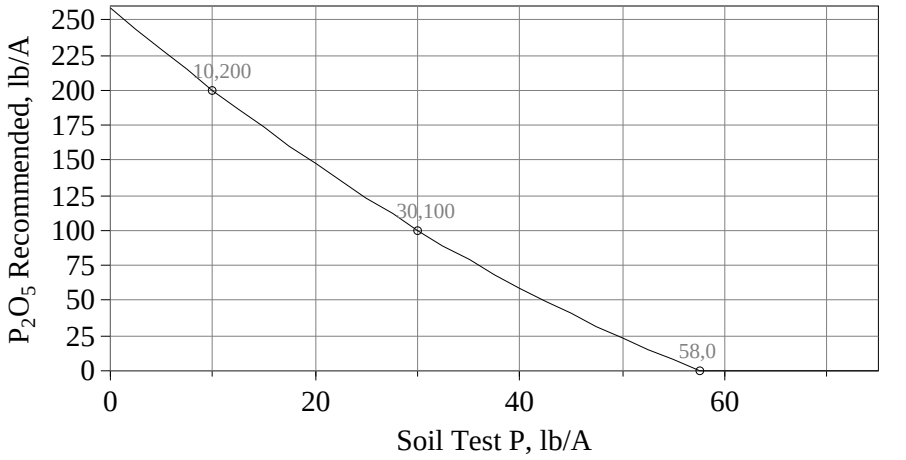
K Recommendations, Coastal Plain

$K_2O = 245 - 1.556K + 0.00165K^2$



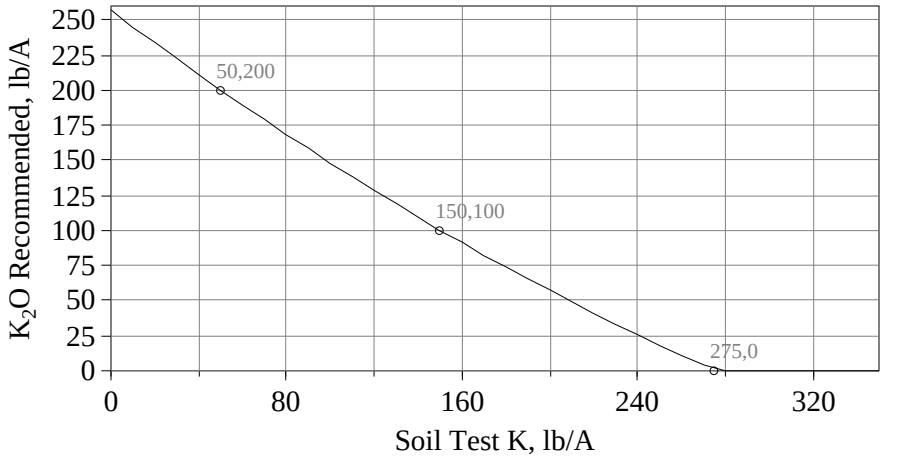
P Recommendations, Piedmont

$P_2O_5 = 259 - 6.148P + 0.02871P^2$



K Recommendations, Piedmont

$K_2O = 257 - 1.178K + 0.00089K^2$



Field Nursery - Evergreens (pre-plant) (*Code* #073)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	50-200-200	50-200-100	50-200-0	50-200-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	50-100-200	50-100-100	50-100-0	50-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	50-0-200	50-0-100	50-0-0	50-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	50-0-200	50-0-100	50-0-0	50-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

The recommended rates of phosphorus and potassium are based on one (1) acre of treated area. When phosphorus and potassium are to be applied by banding, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 5 foot herbicide/fertilizer band per row, the banded rate would be calculated on the basis of 21,780 square feet. (43,560 sq. ft. per acre/10 ft. row spacing = 4,356 linear feet; 4,356 linear ft. x 5 ft. wide herbicide/fertilizer band = 21,780 sq. ft.)

Incorporate recommended amounts of phosphorus, potassium and limestone into the planting rows (band application) for wide row spacings or over the entire field for closely spaced plantings. Apply recommended rates only to the acreage being used for production.

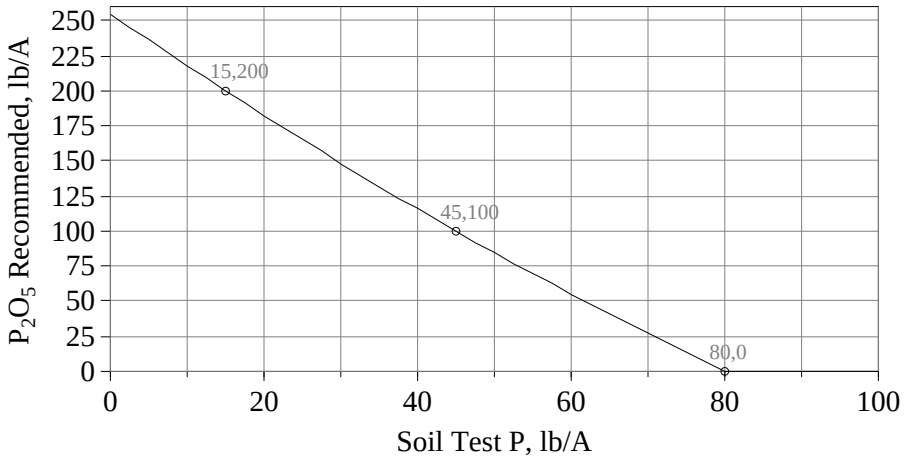
Incorporate nitrogen with other amendments when planting will promptly follow. If planting is to be delayed apply nitrogen immediately after planting.

Field Nursery - Evergreens (pre-plant) (*Code 073*)

V9 - III

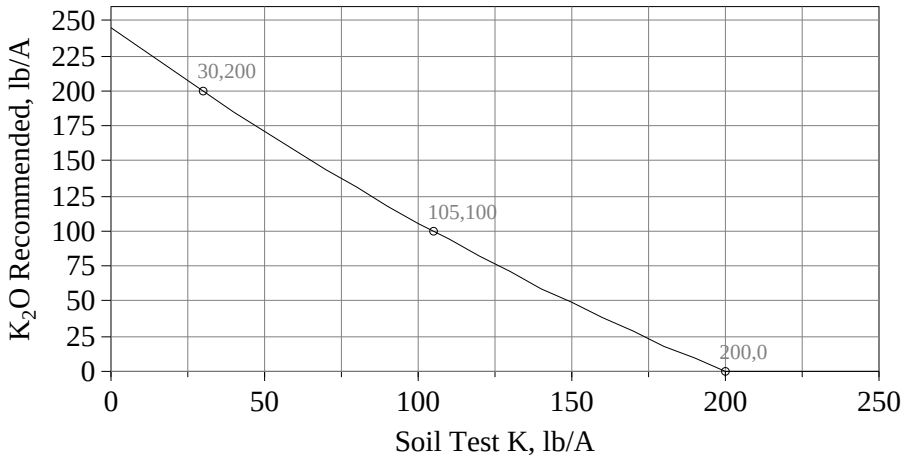
P Recommendations, Coastal Plain

$P_2O_5 = 255 - 3.773P + 0.00733P^2$



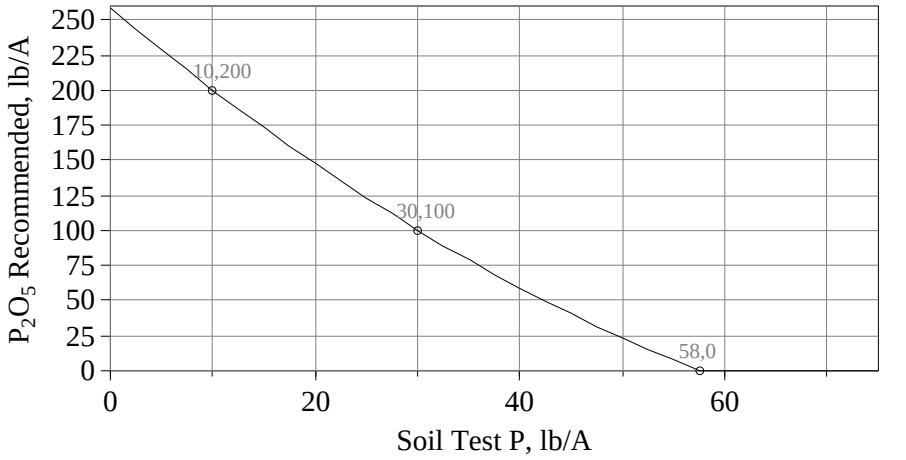
K Recommendations, Coastal Plain

$K_2O = 245 - 1.556K + 0.00165K^2$



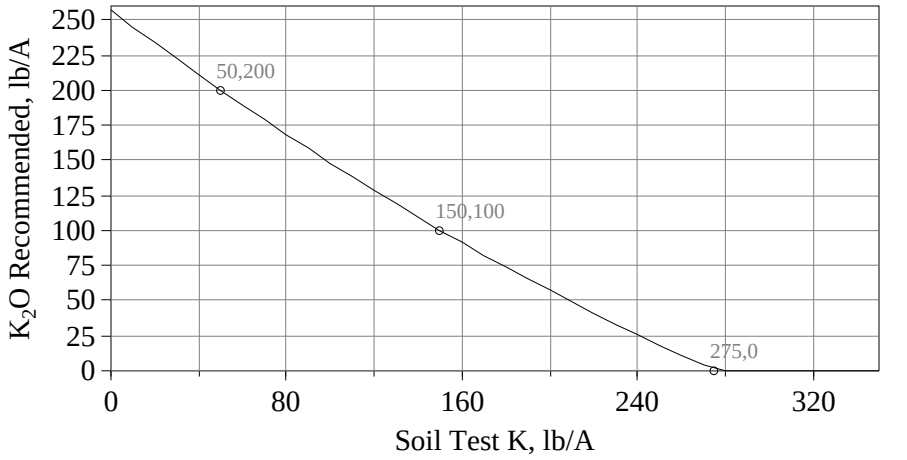
P Recommendations, Piedmont

$P_2O_5 = 259 - 6.148P + 0.02871P^2$



K Recommendations, Piedmont

$K_2O = 257 - 1.178K + 0.00089K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-140-140	*-140-70	*-140-0	*-140-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-140	*-70-70	*-70-0	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-140	*-0-70	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-140	*-0-70	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	175-220 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

The recommended rates of nitrogen (N), phosphate (P_2O_5) and potash (K_2O) are based on one (1) acre of treated area. When fertilizers are to be applied by banding or drip irrigation, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 3 feet herbicide/fertilizer band per row, the banded fertilizer rate would be calculated on the basis of 13,068 square feet. (43560 sq. ft. per acre/10 ft. row spacing = 4,356 linear ft.; 4,356 linear feet. x 3 feet wide herbicide/fertilizer band = 13,068 sq. feet.)

*** For established plantings, two years and older, apply 175 to 220 pounds nitrogen per acre year. Nitrogen may be broadcast over the entire field or may be banded along the planted row in the herbicide/fertilizer band. Nitrogen should be applied in 2 or 3 applications. Make the first application in late winter/early spring prior to bud break, the second in late spring/early summer following the initial growth flush and possibly a late fall application to maintain good winter leaf color. If leaching rains occur on sandy soils, more frequent applications may be required.

Soluble nitrogen fertilizers injected into the drip irrigation water may be applied weekly or bi-weekly. The amount of nitrogen needed for each application can be determined by dividing the yearly nitrogen requirement by the total number of applications planned.

Phosphorus and potassium may be applied by broadcasting, banding in the herbicide band, or by injection into the drip irrigation water. When phosphorus is applied broadcast, the recommended amount can be applied in one application or it may be split into two applications.

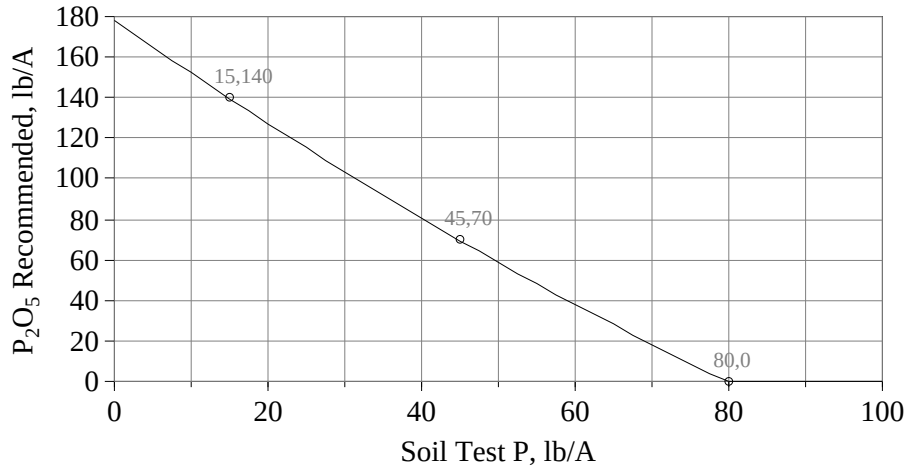
On sandy soils testing low in potassium (K), application of potassium fertilizer should be split into at least 2 applications.

When phosphorus or potassium are applied by drip irrigation, applications can be made weekly or bi-weekly.

Field Nursery - Narrow Leaf Evergreen (production) (*Code 076*)

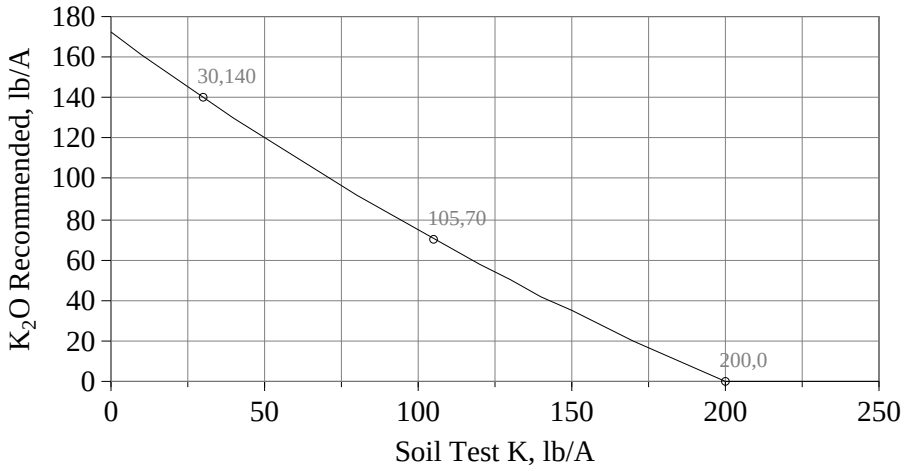
P Recommendations, Coastal Plain

$P_2O_5 = 178 - 2.641P + 0.00513P^2$



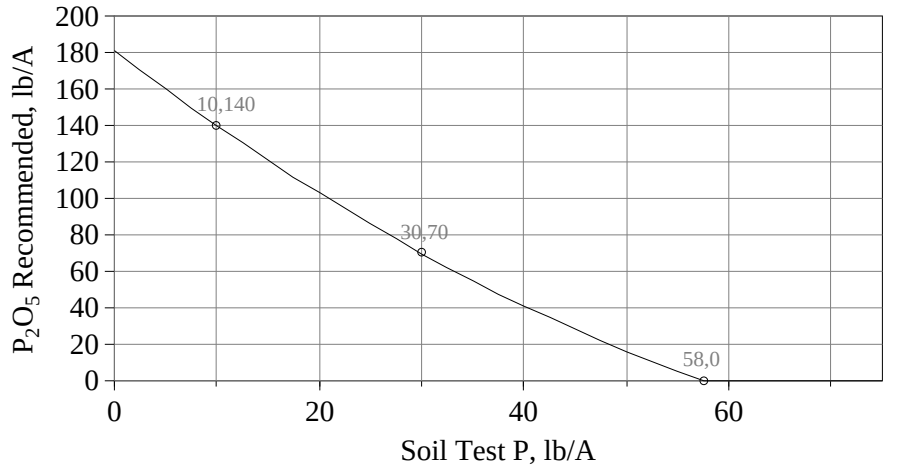
K Recommendations, Coastal Plain

$K_2O = 172 - 1.090K + 0.00116K^2$



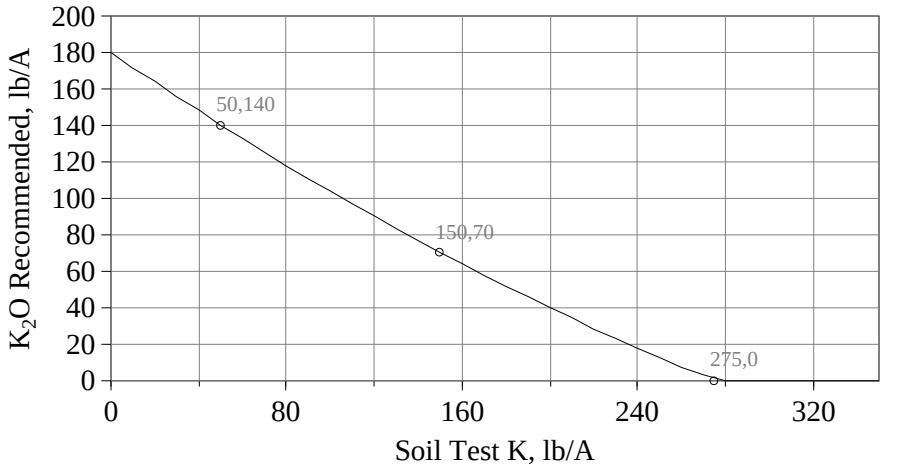
P Recommendations, Piedmont

$P_2O_5 = 181 - 4.304P + 0.02010P^2$



K Recommendations, Piedmont

$K_2O = 180 - 0.824K + 0.00062K^2$



Field Nursery - Shrubs (pre-plant) (*Code* #072)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	50-200-200	50-200-100	50-200-0	50-200-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	50-100-200	50-100-100	50-100-0	50-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	50-0-200	50-0-100	50-0-0	50-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	50-0-200	50-0-100	50-0-0	50-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	50 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

The recommended rates of phosphorus and potassium are based on one (1) acre of treated area. When phosphorus and potassium are to be applied by banding, fertilizer rates should be calculated on the basis of the area treated. For example, using a 10 foot row spacing and a 5 foot herbicide/fertilizer band per row, the banded rate would be calculated on the basis of 21,780 square feet. (43,560 sq. ft. per acre/10 ft. row spacing = 4,356 linear feet; 4,356 linear ft. x 5 ft. wide herbicide/fertilizer band = 21,780 sq. ft.)

Incorporate recommended amounts of phosphorus, potassium and limestone into the planting rows (band application) for wide row spacings or over the entire field for closely spaced plantings. Apply recommended rates only to the acreage being used for production.

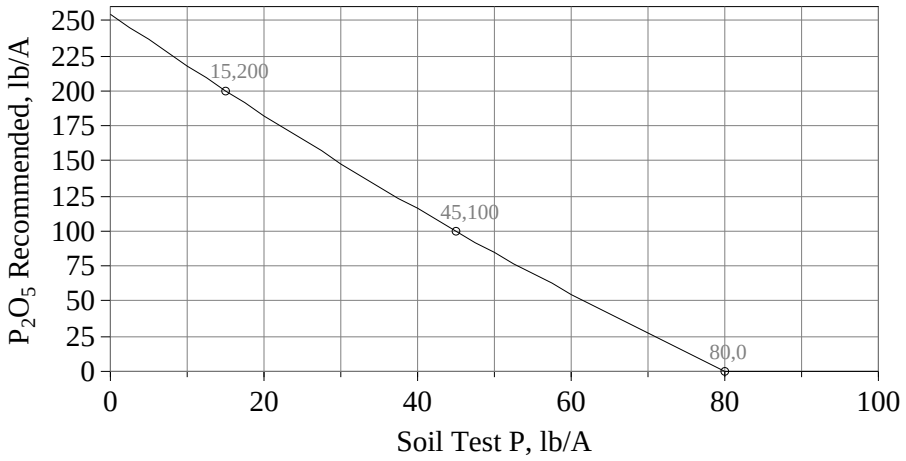
Incorporate nitrogen with other amendments when planting will promptly follow. If planting is to be delayed apply nitrogen immediately after planting.

Field Nursery - Shrubs (pre-plant) (*Code 072*)

V8 - III

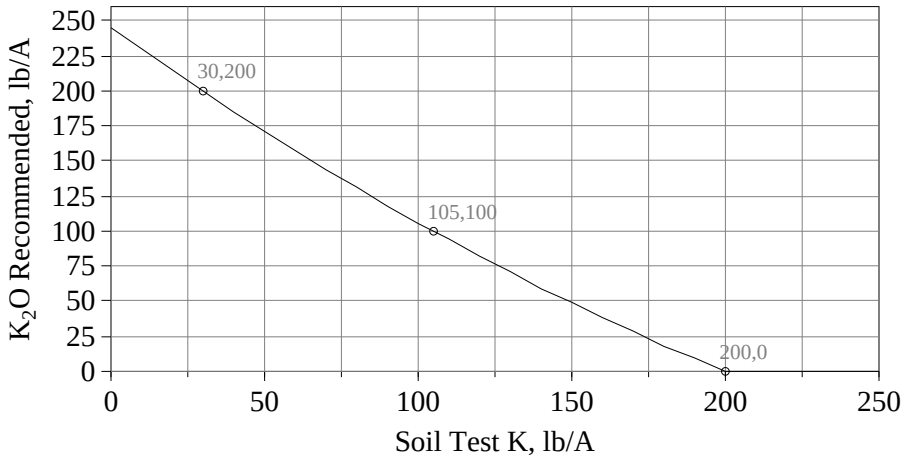
P Recommendations, Coastal Plain

$P_2O_5 = 255 - 3.773P + 0.00733P^2$



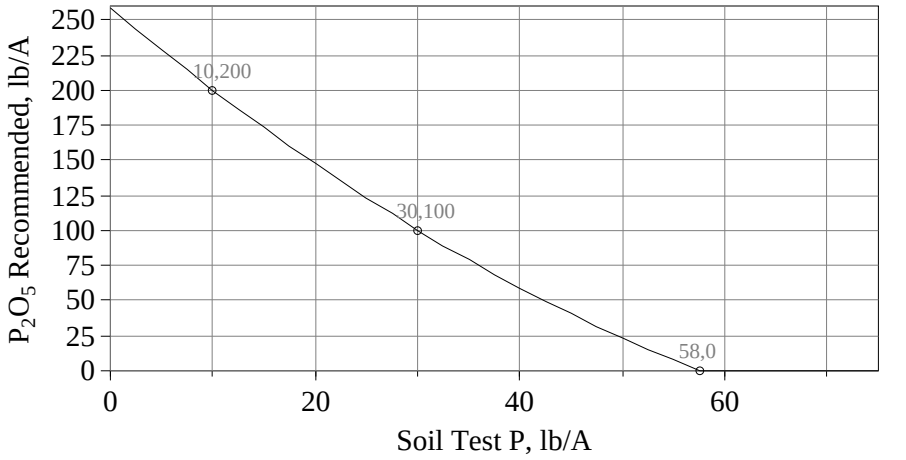
K Recommendations, Coastal Plain

$K_2O = 245 - 1.556K + 0.00165K^2$



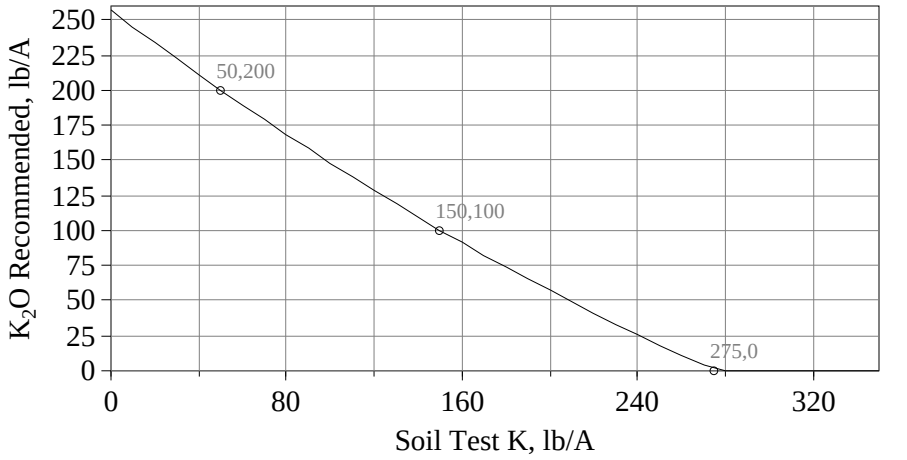
P Recommendations, Piedmont

$P_2O_5 = 259 - 6.148P + 0.02871P^2$



K Recommendations, Piedmont

$K_2O = 257 - 1.178K + 0.00089K^2$



Pine Plantation - Establishment (*Code* #069)
(Long Leaf, Slash, Loblolly)

Successful establishment of a pine plantation depends on many factors; the soil test phosphorus (P) level is one of those. Soil testing begins with proper sampling of soil from the area to be planted. Soil sampling procedures are described in the publication "Proper Soil Sampling and Analysis for Nutrient Needs Determination in Loblolly, Longleaf, and Slash Pine Stands", which is located at http://aesl.ces.uga.edu/publications/soilcirc/.

Fact Sheet

Phosphorus fertilization is likely to be beneficial at establishment on some Coastal Plain soils that are P deficient. These soils include (1) very poorly drained to somewhat poorly drained soils with clay subsoil within 20 inches of the surface are the most responsive, (2) to a lesser extent very poorly drained to somewhat poorly drained soils with clay subsoil from 20 inches to 80 inches from the surface, and (3) Citronelle terraces, fine textured soil phases only. In general, if these soils have a Mehlich I (UGA Ag Service Lab procedure) soil test P level of less than 10 pounds P per acre, planted pines may respond to the added P. More specifically, if the soil test P is less then 6 pounds P per acre, the probability of pine response to P fertilizer is moderate to high; if soil test P is 6 to 10 pounds P per acre, the probability of yield response to P fertilizer is moderate; and if the soil test P is 10 pounds per acre or greater, pine response to P fertilization is unlikely. For detailed soil series information, and P fertilizer rate recommendations, see the publication "Phosphorus Fertilization at Establishment in Loblolly and Slash Pine Stands on Atlantic and Gulf Coastal Plain Sites", which is located at http://aesl.ces.uga.edu/publications/soilcirc/.

Pine Plantation - Maintenance (*Code* #070)
(Long Leaf, Slash, Loblolly)

Successful fertilization of a pine plantation depends on many factors; the soil test level is one of those. Soil testing begins with proper sampling of soil from the area to be planted. Soil sampling procedures are described in the publication "Proper Soil Sampling and Analysis for Nutrient Needs Determination in Loblolly, Longleaf, and Slash Pine Stands", which is located at http://aesl.ces.uga.edu/publications/soilcirc/.

Fact Sheet

Profitable fertilization of pine stands depends on many factors that are outlined in the publication "A checklist for fertilization of loblolly, longleaf and slash pine stands". This publication is located at http://aesl.ces.uga.edu/publications/soilcirc/.

In making decisions about fertilization, numerous stand factors described in this publication should be considered. In addition, soil series and land use history should be combined with the results from the three diagnostic tools listed: 1. Soil testing, 2. Foliage testing, and 3.Leaf Area Index. Finally, the economics in making fertilizer rate decisions should be considered as described in the publication "Mid-rotation rate of return (ROR) estimates with a single nitrogen + phosphorus or nitrogen + phosphorus + potassium fertilizer application in loblolly, longleaf, and slash pine stands". This publication is also available at the two websites given above. A calculator at http://aesl.ces.uga.edu/soil/pine can help you determine the rate of return if you provide rates of N, P, and K fertilizer, their cost, the expected extra growth from fertilization, and the value of the extra wood produced.

Only soil test results are reported for use in individualized nutrition management plans.

FRUITS AND PECANS

Gerard Krewer, Kathy Taylor, and David Lockwood, Extension Horticulturists – Fruit Crops
David E. Kissel, Director – Agricultural & Environmental Services Laboratories
Leticia Sonon, Program Coordinator – Soil, Plant, and Water Laboratory
Lenny Wells, Extension Horticulturist – Pecans

Apples (bearing) (*Code* #115)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-30	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-60	*-30-30	*-30-0	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-30	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-30	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre Piedmont: Low: 0 - 120 lbs/acre; Medium: 121 - 240 lbs/acre; High: >240 lbs/acre
Other:	See calcium (Ca) and boron (B) recommendations on Fact Sheet.

continued -»

Fact Sheet:

Nitrogen Fertilization

Nitrogen (N) rates should be based on terminal shoot growth, variety and rootstock, pruning severity and cropping history. Terminal shoot growth should not exceed 8 to 12 inches on spur-types and 10 to 14 inches on standard trees with full crops. In general, apply 0 to 50 pounds of nitrogen per acre annually. The 0 rate is included for years following severe pruning or where shoot growth was excessive when it may be advisable to withhold nitrogen applications. In no case should nitrogen exceed 0.3 pound per tree for dwarf trees, 0.6 pound per tree for semi-dwarf trees, or 1.0 pound per tree for standard trees. It is strongly recommended, especially in higher density orchards utilizing dwarf trees, that foliar analysis and soil testing be utilized to monitor nutrient status.

Nitrogen application can be split. Apply one-half in March and the other half after the crop size is determined. The second application can be withheld if frost reduces the crop.

Boron

Apply boron annually to aid in reducing cork spot. Make a single application of Solubor at 1 to 2 pounds per 100 gallons (2 to 4 pounds acre) at petal fall or first cover. If soil or plant analysis indicates that boron is low make application of 2 to 4 pounds of Solubor per acre during both petal fall and first cover sprays. Do not premix Solubor with calcium chloride.

Calcium

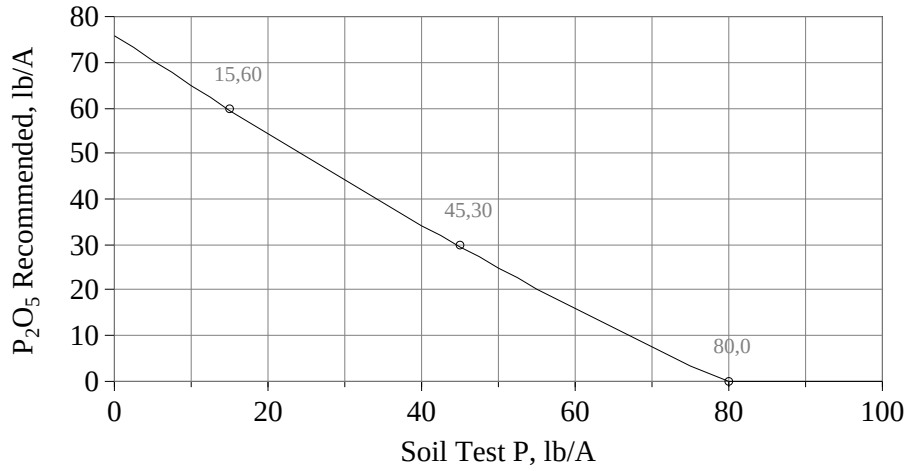
Apply calcium sprays annually to reduce cork spot and bitter pit. Apply in cover sprays at the rate of 2 pounds calcium chloride per 100 gallons (maximum of 3 to 6 pounds per acre in each spray). Higher rates can cause foliage burn and should not be reapplied unless at least 1/2 inch of rain has fallen since the last application. If injury is noticed, reduce calcium chloride to one-half rate the following spray. Calcium nitrate can also be used at 3 pounds per 100 gallons (maximum of 4.5 to 9 pounds per acre each spray). Do not apply when temperatures exceed 90 degrees Fahrenheit.

NOTE: Late season cover spray, particularly 2 to 4 sprays before harvest are the most important for reducing bitter pit.

Apples (bearing) (*Code 115*)

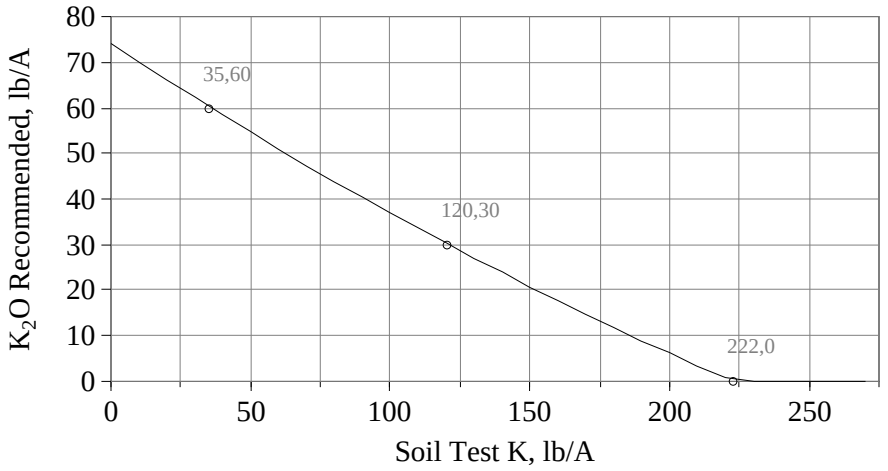
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



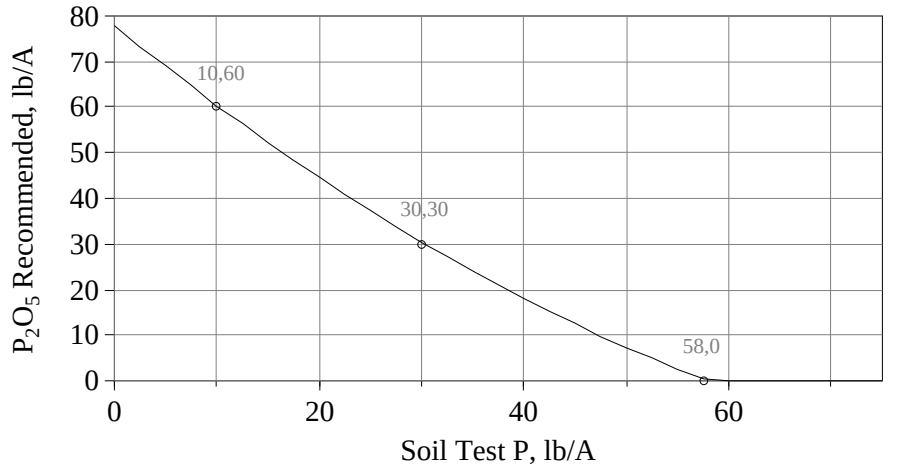
K Recommendations, Coastal Plain

$K_2O = 74 - 0.403K + 0.00032K^2$



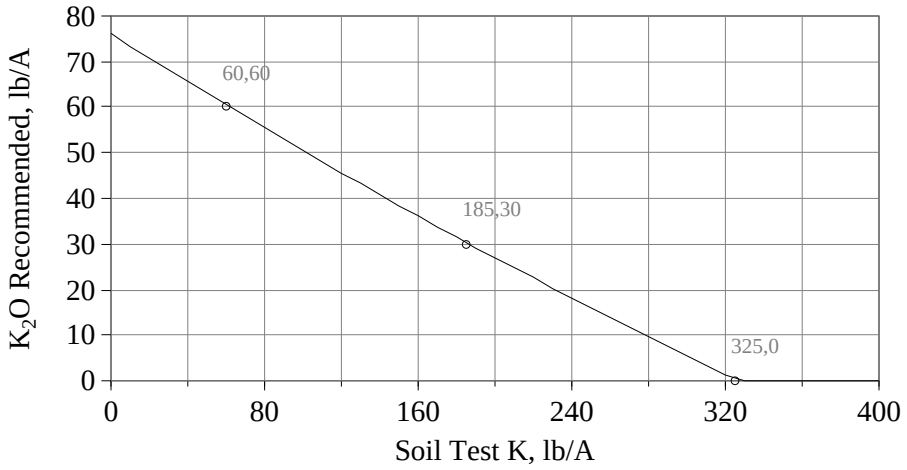
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 76 - 0.265K + 0.00010K^2$



Apples (non-bearing) (*Code* #117)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-30	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-60	*-30-30	*-30-0	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-30	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-30	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen Fertilization

Non-bearing trees - Apply .05 to .15 pounds of nitrogen (N) around each tree in March, April and May. An example would be applications of 1/3 to 1 pound calcium nitrate made at each of 3 months. Ground applications should not be made past June.

Trees coming into bearing - Excess vegetative vigor often delays flower initiation and can increase severity of cork spot. As trees attain bearing size, careful nitrogen fertilizer management is needed to avoid overfertilization. Depending on variety and specific rootstock, plus numerous cultural practices, production typically begins between the 4th and 6th years for standard trees, 3rd to 5th years for semi-dwarf, and 2nd to 3rd years for dwarf trees. As bearing begins, terminal shoot growth should not exceed 8 to 12 inches on spur-types and 10 to 14 inches on standard trees with full crops. In general, apply 0 to 50 pounds of nitrogen per acre annually. The 0 rate is included for years following severe pruning or where shoot growth was excessive when it may be advisable to withhold nitrogen applications. In no case should nitrogen exceed 0.3 pound per tree for dwarf trees, 0.6 pound per tree for semi-dwarf trees, or 1.0 pound per tree for standard trees. It is strongly recommended, especially in higher density orchards utilizing dwarf trees, that foliar analysis and soil testing be utilized to monitor nutrient status.

Nitrogen application can be split. Apply one half in March and the other half after the crop size is determined. The second application can be withheld if frost reduces the crop.

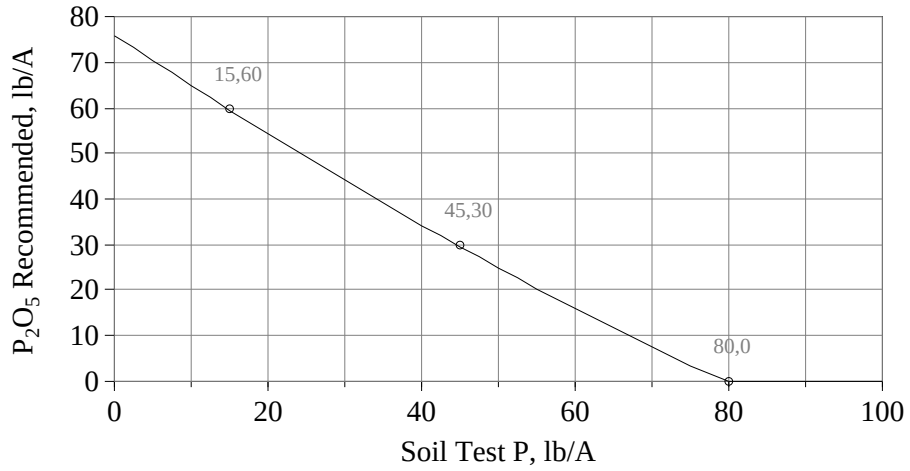
Soil Preparation Prior to Tree Planting

Prior to planting trees, it is recommended that soil be sampled at two depths – 1 to 8 inches and 8 to 16 inches – to see if deep incorporation of lime, phosphorus, and potassium are needed.

Apples (non-bearing) (*Code 117*)

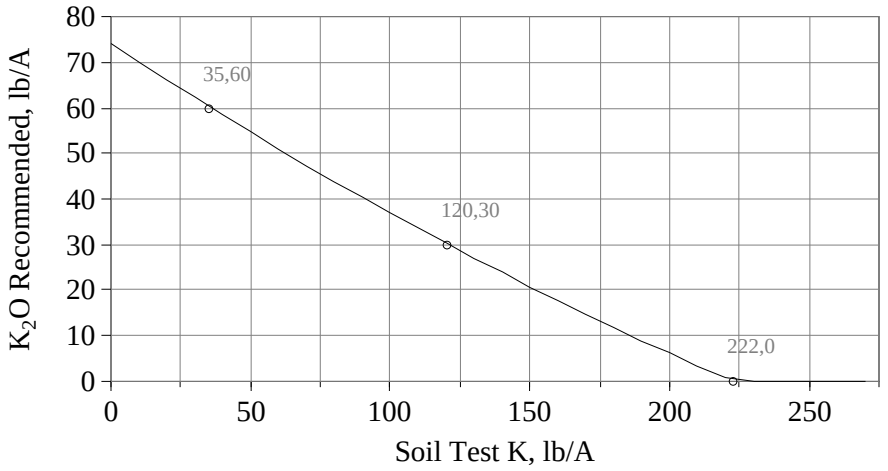
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



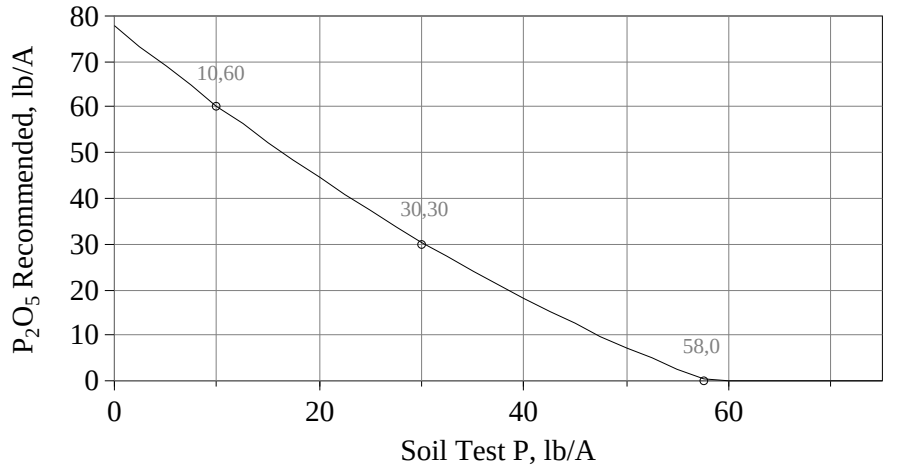
K Recommendations, Coastal Plain

$K_2O = 74 - 0.403K + 0.00032K^2$



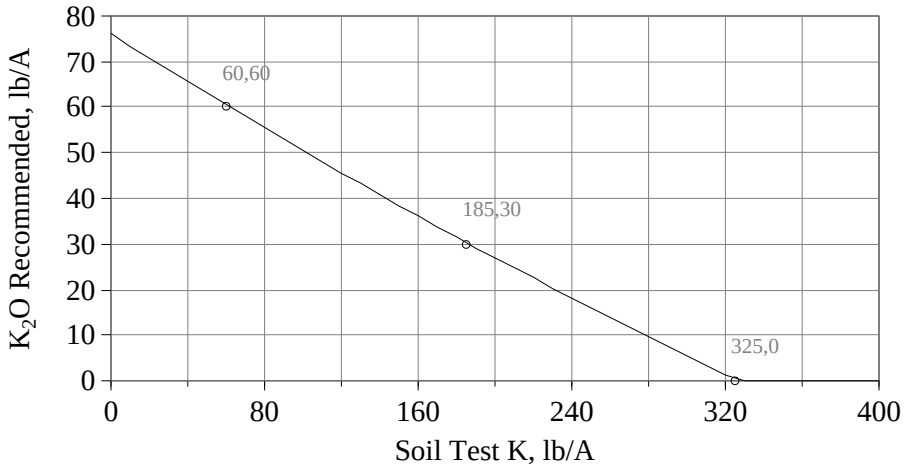
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 76 - 0.265K + 0.00010K^2$



Blackberries (commercial) (*Code* #131)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A				
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A				
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	096ph	096ph	096pkh	096pkh
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	096ph	096ph	096pkh	096pkh

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

096ph. The phosphorus levels are high; therefore, no phosphorus (P) is needed. Apply fertilizer that contains only nitrogen (N) and potassium (K), such as 15-0-15.

096pkh. The phosphorus and potassium levels are high; therefore, no phosphorus (P) or potassium (K) fertilizers are needed. Apply only a nitrogen-containing fertilizer, such as 34-0-0 or 46-0-0.

continued -»

Fact Sheet:

For All Varieties

If soil test phosphorus (P) is less than 20 pounds per acre, apply 300 pounds of 0-46-0 per acre preplant and incorporate in the top 6 to 8 inches of soil to raise available P to a level needed by blackberries.

Fertilizing semi-erect or trailing blackberries planted 4 to 8 feet apart

During the year of establishment, fertilize the planting in March and June (and August if needed). After the plants have been set and settled by rain, sprinkle 1/6th cup (1.3 oz.) of 10-10-10 fertilizer evenly in a 24 inch circle around each plant. Do not pile fertilizer near the plant; this could burn the root system. In June, sprinkle 1/4 cup of 10-10-10 (2 oz.) over a 30 inch circle. Scatter the fertilizer evenly over the circle.

In the second year, fertilize the planting in March and again in June. In March or about the time of bud break, sprinkle one cup (8 oz.) of 10-10-10 over a five foot circle around the plant. Scatter the fertilizer evenly over the circle. In June sprinkle one cup of 10-10-10 fertilizer over the same five foot circle around each plant.

Fertilization in year three and beyond should be as follows. In early March, sprinkle two cups (one pound) of 10-10-10 fertilizer over a six foot circle around each plant. Scatter the fertilizer evenly over the circle. In June sprinkle one cup of 10-10-10 over the same six foot circle around each plant. If new cane growth is excessive (over 12 feet for individual canes), omit this application.

For soils testing high in phosphorus and potassium, use 34-0-0 at 1/3rd the rate of 10-10-10 or 46-0-0 at 1/4th the rate. If phosphorus is high but potassium is low or medium, use 15-0-15 at a 50% higher rate than the 10-10-10.

Fertilizing hedgerow plantings of erect blackberries

During the year of establishment, fertilize the planting in March, June, and August (if needed). If phosphorus and potassium do not test high, use 10-10-10 or a similar fertilizer. Apply 4.5 pounds of 10-10-10 per 100 feet of row (about 160 pounds per acre) at each application. This fertilizer should be sprinkled evenly over a two foot wide band where the plants or root cuttings are planted. This is equivalent to 16 pounds of nitrogen per acre at each application.

Fertilization the second year and thereafter should consist of two applications annually. Apply 11 pounds of 10-10-10 per 100 feet of row (about 400 pounds per acre) over a 3 foot wide band in early March. In June, apply 5.5 pounds of 10-10-10 per 100 feet of row (about 200 pounds per acre) evenly over a 3 foot wide band. For soils testing high in phosphorus and potassium, use 34-0-0 at 1/3rd the rate of 10-10-10 or 46-0-0 at 1/4th the rate. If phosphorus is high but potassium is low or medium, use 15-0-15 at a 50% higher rate than the 10-10-10. On a per acre basis, these fertilizer applications supply 40 pounds of actual nitrogen on the first application and 20 pounds of actual nitrogen on the second application.

Note: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Blueberries-Rabbiteye (commercial) (*Code* #126)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-70 lbs/A	**Medium K** Coast: 71-120 lbs/A Pied: 71-150 lbs/A	**High K** Coast: 121-275 lbs/A Pied: 151-275 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 275+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-75-75	*-75-40	*-75-0	*-75-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-75	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-75	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-75	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	Coastal Plain: 4.0 to 5.0 Piedmont: 4.2 to 5.2
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 125 pounds magnesium sulfate (Epsom salts) per acre.
Sulfur:	If soil pH is greater than 5.3, sulfur will be recommended to decrease soil pH to the sufficient range. If sulfur is applied prior to planting, apply the recommended amount at least six months before planting and mix it into the soil thoroughly to a depth of 6 to 8 inches. If sulfur is recommended for an established crop, apply broadcast no more than 300 pounds of sulfur per acre. Do not apply sulfur when the foliage is wet.
Important:	Read comments on Fact Sheet when preparing fertilizer recommendations.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

If pH is less than 4, then 100 pound of lime per acre should be broadcast for every 0.1 pH increase that is desired to a maximum of 700 pounds per acre.
If the soil test calcium (Ca) level exceeds 900 pounds per acre or if the soil test phosphorus level is greater than 200 pounds per acre the site is not well suited for blueberries without special care.
If soil organic matter is less than 2%, use liberal quantities of peat moss or milled or ground (fine) pine bark mixed with the soil when planting. Following planting mulch heavily with pine bark, rotted pine sawdust, or pine straw if practical.
If soil test phosphorus (P) is less than 20 pounds per acre, apply 300 pounds of 0-46-0 per acre preplant and incorporate in the top 6 to 8 inches of soil to raise available P to a level needed by rabbiteye blueberries.

First Year After Planting
Apply 1 ounce of 10-10-10 per plant in March, May, July, and September (skip September in north Georgia). Spread the fertilizer evenly in a circle 18 inches in diameter with the plant in the center. **Do not pile the fertilizer around the base of the bush.** At a plant spacing of 5 by 12 feet (726 plant per acre) this will require 45 pounds of fertilizer per acre. A minimum of 4 inches of rain or overhead irrigation should be received between fertilizer applications.

Succeeding Years-Standard hand applied rabbiteye fertilizer program with two to four applications per year
If you are obtaining good growth (a foot or more per year) increase your fertilizer amount in accordance with Table 1. However, base your application on plant size, not age. It is very important not to over fertilize small plants. On second year plants fertilize at bud break, May, July, and September (skip Sept. in North Georgia). On bushes three years and four years old which are in production, fertilize at bud break, May (optional) and after harvest in August. On bushes five years old and older, fertilize at bud break and after harvest in August. Diameter of the area fertilized should be approximately equal to the height of the bush. By the fifth year, the fertilizer may be applied in the row (banded application).

When the plants are six years old, or six feet high, they are considered to be mature and you should be at your peak fertilization rate. Note: Fertilizers low in phosphorus (12-4-8, 16-4-8, or 21-0-0 (ammonium sulfate)) should be used only on fields with high and very high phosphorus levels.

Table 1. Rabbiteye blueberry hand applied fertilization with 10-10-10, 12-4-8, 16-4-8, 14-28-14, or ammonium sulfate. Years two through five.

Age of Plant	Plant Height	Plant Diameter	Amount of fertilizer per plant per application-use soil test to determine which material to use					Applications Per Year
1st year	1 foot		(See previous recommendations)					
			10-10-10	12-4-8	16-4-8	14-28-14	Ammonium sulfate (summer application if no P and K needed)	
2nd year	2 feet	24"	1.5 oz.	1.2 oz.	0.93 oz.	1.1 oz.	0.71 oz.	3 or 4
3rd year	3 feet	30"	3.0 oz.	2.5 oz.	1.9 oz.	2.1 oz.	1.4 oz.	2 or 3
4th year	4 feet	36"	4.5 oz.	3.7 oz.	2.8 oz.	3.2 oz.	2.1 oz.	2 or 3
5th year	5 feet	42"	6 oz.	5 oz.	3.75 oz.	4.3 oz.	2.9 oz.	2
6th year+	6 feet	48"	8 oz.	6.7 oz.	5.0 oz.	5.7 oz.	3.8 oz.	2

continued -»

Blueberries-Rabbiteye (commercial) (*Code* #126) continued

Fertilizing rabbiteye blueberries years five and older with banded applications based on row spacing and plant density

Based on soil samples select the common type of fertilizer that best suits your plant needs or have a custom blend prepared. If you want to fertilize without a soil test, the suggested analysis is 10-10-10.

Multiply the ounces per plant in Table 1 with the number of plants per acre. (If the field is planted 5 by 12 = 726 plants per acre, if the field is planted 6 by 12 = 608 plants per acre). Divide by 16 ounces per pound to obtain pounds of fertilizer per acre. For example 6 ounces times 726 plants per acre = 4356 divided by 16 = 272 pounds of fertilizer per acre. Spread the fertilizer in a band four feet in diameter centered on the plant row. Banded applications can also be use in years two and three but double the amount of fertilizer recommended for hand applications since much of the fertilizer will be lost. Banded applications in year four should be 50% more than hand applications (multiply by 1.5).

***Nitrogen recommendation:**

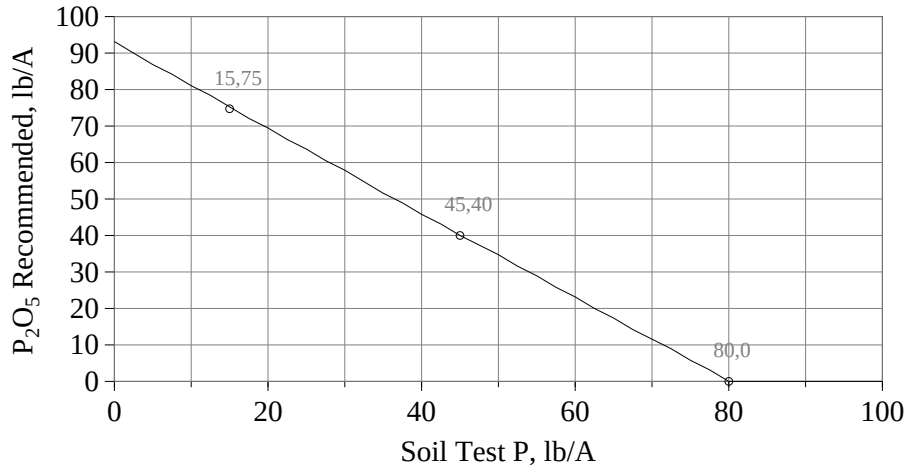
For mature bushes, as a general recommendation, 60 pounds of nitrogen should be applied per acre, half at bud break and half immediately after harvest. Organic or slow-release nitrogen sources such as is found in certain lawn fertilizer formulations are excellent nitrogen sources for blueberries. Part of the nitrogen is readily available while part is available in small amounts over a longer period. However, since such sources of nitrogen are quite expensive, it is suggested that these nitrogen sources be applied individually to bushes.

Soils vary in their natural ability to supply the plant available forms of nitrogen (N). The N fertilizer recommendations given here are based on soils with 1 to 2% organic matter (OM). Soils with higher OM (4 to 6% OM) generally supply more N; therefore, less N fertilizer is needed on high OM soils. Likewise, be aware of conditions that may increase the need for additional N. On new plantings to which pine bark has been added (especially pine bark with white wood), additional N fertilizer may be needed to overcome N tie-up by bacteria. Sufficient nitrogen should be applied to grow good lateral fruit wood 5 to 8 inches in length. However, do not add too much nitrogen because it may lead to growth of highly succulent shoots that are susceptible to Botryosphaeria stem blight. In general, N should not be applied after early September in South Georgia or mid-August in North Georgia. Nitrogen fertilizer is used more efficiently if added through drip irrigation systems; therefore, recommended N rates may be reduced by about 20%. Because of these many complex factors, we recommend plant tissue analysis and grower observations as the most reliable guide for adjusting the rate of N fertilizer to apply. For more information on plant analysis, go to http://aesl.ces.uga.edu/publications/plant/.

Blueberries-Rabbiteye (commercial) (*Code 126*)

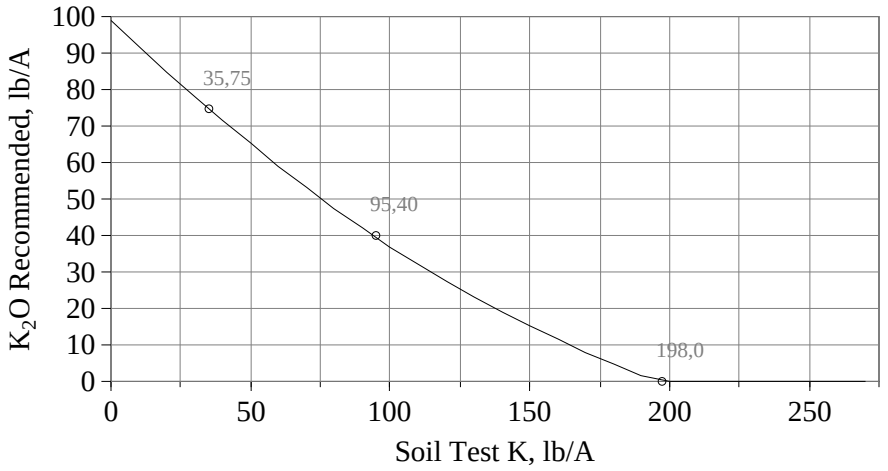
P Recommendations, Coastal Plain

$P_2O_5 = 93 - 1.189P + 0.00037P^2$



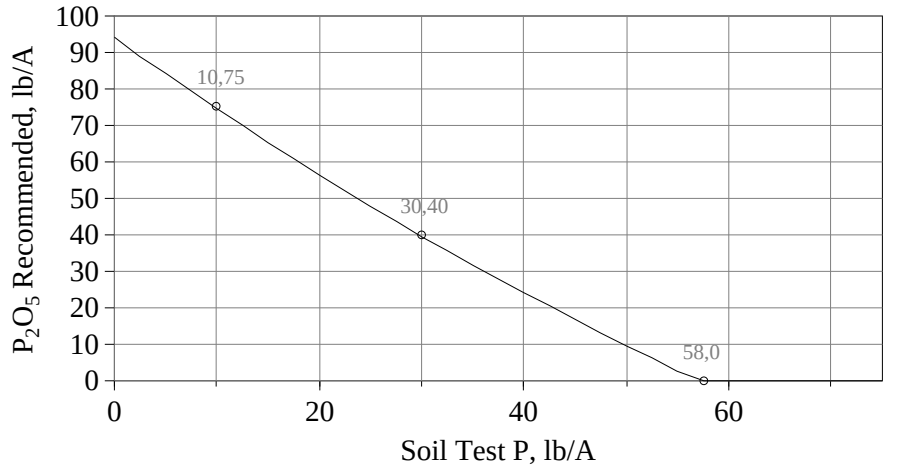
K Recommendations, Coastal Plain

$K_2O = 99 - 0.738K + 0.00119K^2$



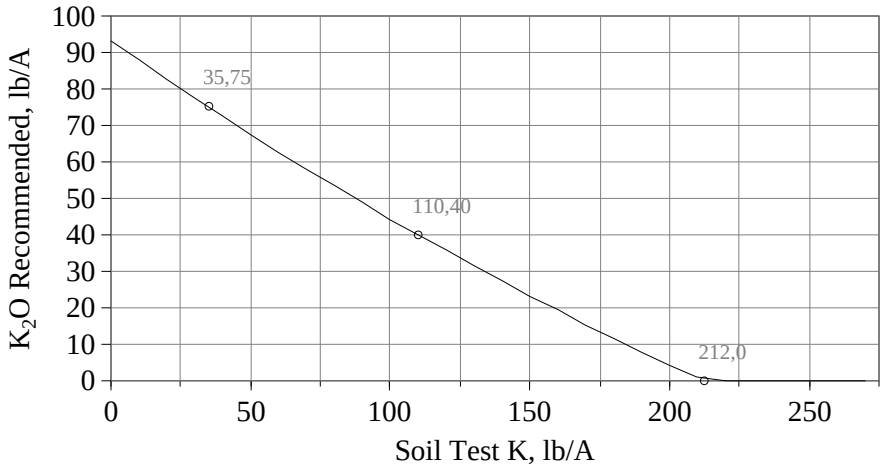
P Recommendations, Piedmont

$P_2O_5 = 94 - 1.999P + 0.00622P^2$



K Recommendations, Piedmont

$K_2O = 93 - 0.529K + 0.00043K^2$



Blueberries-Southern Highbush in Pinebark Beds (*Code* #134)

Because finely ground pine bark has properties different from soil, we do not use the routine soil test for determining the fertilizer requirements of blueberries grown in pine bark beds. Instead, the testing procedure for “Greenhouse and Nursery Soils” (pH, P, K, Ca, Mg, nitrate, ammonium, and soluble salts) is used, primarily as a troubleshooting test to determine if soluble salts and pH may be outside the desirable range. Suggested EC levels (soluble salts) for pine bark substrate are 0.50 to 0.75 mMhos/cm. The pH should be in the desirable range of 4 to 5. In addition, the following table gives values for nutrient concentrations considered insufficient, sufficient, and excessive for woody ornamentals, and which may be used as a partial guide for the production of blueberries grown in pine bark beds. The nutrient ranges, while highly useful for controlled environments such as the greenhouse, may not be as reliable in the field because nutrient levels can sometimes change quickly due to heavy leaching rains. Do not rely heavily on the nutrient ranges in the table because nutrient levels can change quickly with heavy leaching rains. An "insufficient" level does not mean the plants are nutrient deficient.

Recommendations

Range of nutrient concentration in saturation extraction method for soil-less media for optimal production of woody ornamentals during the growing season. Method used by UGA lab.

Element	Parts per million (ppm)		
	Insufficient	Sufficient	Excessive
Nitrogen (nitrate)	<39	40-139	>140
Phosphorus	<3	4-13	>14
Potassium	<49	50-179	>180
Calcium	<69	70-219	>220
Magnesium	<29	30-99	>100

Recommended pH of the saturated extract: pH = 4.0 to 5.0.
Recommended EC of the saturated extract: 0.50 to 0.75.

pH management

Pine bark should have a natural pH between 4.0 and 5.0, ideal for blueberries. High pH irrigation water can raise the pH too much, which may require action by the grower. If the pH increases above 5.0, use ammonium sulfate as a nitrogen source. Acidification of the irrigation water is another option. Many Georgia greenhouse growers and longleaf pine nursery growers normally use sulfuric acid for acidifying the irrigation water for their crops. Elemental sulfur can also be used to lower the pH, but apply a modest amount (300 pounds per treated acre) and wait several months to determine the extent of the pH change before applying more, if needed. At the 300 pound per acre rate, sulfur can be applied over the top on plants in the field. However, do not apply when the leaves are wet. Iron sulfate can also be used to lower the pH of the pine bark and supply iron. On plants already set in the field, use a maximum of one-half pound per cubic yard of pine bark substrate or one-half pound per 54 square feet. This is equivalent to 400 pounds per treated acre if the pine bark is six inches deep. If the pH of the pine bark is below 4.0 use urea as a nitrogen source. It is less acid forming than ammonium sulfate. Liming with dolomitic limestone can be conducted if necessary, but in our experience it has not been needed since most of the deep well irrigation water in the South Georgia blueberry belt is alkaline (pH above 7).

EC management

If EC is consistently below the desirable range, this indicates that plant nutrients may be limiting to the growth of the blueberries. Fertilizer application according to the recommended levels below will raise EC into the desirable range.

Fertilizer management

First year of planting
Young blueberry plants are easily burned by excess fertilizer salts. For this reason, extreme caution must be exercised if you are using a regular dry granular fertilizer on young blueberry plants, especially rooted cuttings. **Slow release or controlled release fertilizers are recommended for this phase of production. Follow manufacturers directions. Use the "low" or "medium" rate for salt sensitive plants.**

Rooted cuttings with controlled release and slow release fertilizer
If rooted cuttings or plug plants are set, typically about a one teaspoon to one tablespoon of fertilizer per plant is applied at each application with two to four applications per year depending on if controlled release or slow release fertilizer is used. This is based on manufacturers’ recommendations for a one gallon container. Some growers are using several applications of controlled release fertilizer per year with regular fertilizer applied monthly. Scatter the fertilizer evenly over a circle about 12 inches in diameter with the plant in the center. Increase amount of fertilizer as plants grow.

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Regular fertilizer in year one

If you plant rooted cuttings or plug plants and decide to use regular fertilizer, apply about one-half teaspoon of premium grade (contains micronutrients) 10-10-10 applied evenly in a circle 12 inches in diameter starting at bud break and continuing every two to three weeks during the early part of the summer. This is equivalent to 30 pounds of nitrogen per acre if broadcast. As the rooted cuttings grow to about a foot in height, if one gallon size plants are set, the rate can be increased to a teaspoon per application and the diameter of the circle increased to 18 inches. Apply every two to three weeks. This is equivalent to 27 pounds of nitrogen per acre if broadcast.

Year one gallon size plants with controlled release and slow release fertilizer

If gallon size plants are set, use the manufacturer's recommendations for production of plants in a three to five gallon container. A typical program might be 1.5 ounces of 13-6-6 slow release fertilizer applied four times per year or 2-2.5 ounces of controlled release "8-9 month" 18-6-12 applied once. Additional fertilizer from a regular, slow release or shorter term controlled release material may be needed to finish the season, since "8-9 month" controlled release fertilizer is based on an average 70 degree F temperature and normally only lasts about five months in Georgia. Apply evenly in a circle about 24 inches in diameter with the plant in the center.

Fertilizing two year old bushes in pine bark beds

Based on recent research from Florida, if you are using regular fertilizer, second year plants should receive about two teaspoons (10.5 grams) of premium grade 10-10-10 or 12-4-8 applied to a circle 24 inches in diameter. This is equivalent to 30 pounds of nitrogen at each application per acre if broadcast. Apply every two weeks during the period growth is desired.

If you are using slow release or controlled release fertilizer spread the fertilizer over an area about three feet in diameter with the plant in the center. The area of the circle in this case would be 7 square feet or 3.5 cubic feet (26 gallons) if the pine bark is six inches deep. **Follow manufacturers directions.** A typical program may be 4 ounces of a slow release material (such as 13-6-6) applied three times per year or 8 ounces of a 8-9 month controlled release material (such as 18-6-12) applied once a year. In late summer an additional application of regular fertilizer may be needed.

Fertilizing bushes three years and older

In most high density southern highbush plantings, bushes three years and older are considered mature and have filled their allotted space. Normally a severe rooftop hedging program is practiced, where the bushes are cut back to about three feet immediately after the harvest is finished (about June 1 in South Georgia). This creates a higher demand for fertilization than plants growing in soil where moderate winter pruning is often the only pruning conducted. Also, since pine bark does not hold phosphate well, there is a need to apply phosphorus throughout the growing season.

Research on fertilizing mature bushes in pine bark is very limited, but there is a large body of grower experience. One grower observation is the significant release of nitrogen from old pine bark beds. After the pine bark has been fertilized and aged for a number of years, plants may not require as much nitrogen as expected late in the season. Leaf nutrient levels and growth should be monitored.

Many growers in Georgia and Florida are using a premium grade (contains micronutrient and secondary nutrients) 10-10-10, 12-4-8, or 18-6-12. Micronutrients (boron, iron, manganese, zinc, etc.) and secondary nutrients (sulfur, magnesium, etc.) may be needed but some micronutrients such as boron and manganese may reach toxic levels in some situations. Leaf nutrient levels should be monitored and fertilizer blends adjusted as needed.

Typically about 100 to 220 pounds of actual nitrogen is applied per year, divided into six to eight applications. A typical program with **regular** fertilizer would be 150-200 pounds per acre of 10-10-10 or 120-135 pounds per acre of 18-6-12 applied in mid-February, mid-March and early April in South Georgia. Avoid application of nitrogen during harvest if the plants look healthy and have adequate nitrogen in the leaves based on leaf analysis. Make sure that plants have adequate potassium in the leaves at harvest. This is an important element for fruit quality. However, excessive application of potassium will induce magnesium deficiency. Starting at hedging June 1, another 150-200 pounds of 10-10-10 or 120-135 pounds per acre of 18-6-12 is applied every three to four weeks until early September in South Georgia.

Soils vary in their natural ability to supply the plant available forms of nitrogen (N). The N fertilizer recommendations given here for Southern Highbush are based on soils with 3 to 5% organic matter (OM). Soils with higher OM generally supply more N; therefore, less N fertilizer is needed on high OM soils. Likewise, be aware of conditions that may increase the need for additional N. On new plantings to which pine bark has been added (especially pine bark with white wood), additional N fertilizer may be needed to overcome N tie-up by bacteria. Sufficient nitrogen should be applied to grow good lateral fruit wood 5 to 8 inches in length. However, do not add too much nitrogen because it may lead to growth of highly succulent shoots that are susceptible to Botryosphaeria stem blight. In general, N should not be applied after early September in South Georgia or mid-August in North Georgia. Nitrogen fertilizer is used more efficiently if added through drip irrigation systems; therefore, recommended N rates may be reduced by about 20%. Because of these many complex factors, we recommend plant tissue analysis and grower observations as the most reliable guide for adjusting the rate of N fertilizer to apply. For more information on plant analysis, go to http://aesl.ces.uga.edu/publications/plant/.

Blueberries-Southern Highbush in Soil or Amended Soil (*Code* #133)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-70 lbs/A	**Medium K** Coast: 71-120 lbs/A Pied: 71-150 lbs/A	**High K** Coast: 121-275 lbs/A Pied: 151-275 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 275+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-75-75	*-75-40	*-75-0	*-75-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-75	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-75	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-75	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	Coastal Plain: 4.0 to 5.0 Piedmont: 4.2 to 5.2
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 125 pounds magnesium sulfate (Epsom salts) per acre.
Sulfur:	If soil pH is greater than 5.3, sulfur will be recommended to decrease soil pH to the sufficient range. If sulfur is applied prior to planting, apply the recommended amount at least six months before planting and mix it into the soil thoroughly to a depth of 6 to 8 inches. If sulfur is recommended for an established crop, apply broadcast no more than 300 pounds of sulfur per acre. Do not apply sulfur when the foliage is wet.
Important:	Read comments on Fact Sheet when preparing fertilizer recommendations.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

If pH is less than 4, then 100 pound of lime per acre should be broadcast for every 0.1 pH increase that is desired to a maximum of 700 pounds per acre.

If the soil test calcium (Ca) level exceeds 900 pounds per acre or if the soil test phosphorus level is greater than 200 pounds per acre the site is not well suited for blueberries.

If soil organic matter is less than 3%, use liberal quantities of peat moss or milled or ground (fine) pine bark mixed with the soil when planting. Following planting, mulch heavily with pine bark, rotted pine sawdust, or pine straw if practical.

If soil test phosphorus (P) is less than 20 pounds per acre, apply 300 pounds of 0-46-0 per acre preplant and incorporate in the top 6 to 8 inches of soil to raise available P to a level needed by southern highbush blueberries.

Rooted cuttings with controlled release and slow release fertilizer
If rooted cuttings or plug plants are set, typically about a one teaspoon to one tablespoon of fertilizer per plant is applied at each application with two to four applications per year depending on if controlled release or slow release fertilizer is used. This is based on manufacturers' recommendations for a one gallon container. Some growers are using several applications of controlled release fertilizer per year with regular fertilizer applied monthly. Scatter the fertilizer evenly over a circle about 12 inches in diameter with the plant in the center. Increase amount of fertilizer as plants grow.

First Year After Planting for One-gallon Plants at Bud Break
Apply 1/2 ounce (1 tablespoon) of 10-10-10 per plant. Spread the fertilizer evenly in a circle 18 inches in diameter with the plant in the center. **Do not pile the fertilizer around the base of the bush because blueberries are sensitive and you can kill them.** Subsequent applications should be made every 4 to 6 weeks during the growing season when a total of at least four inches of rainfall or overhead irrigation has been received. Fertilize until September, and no later than six weeks before the normal first frost date in your area.

Per-Plant Applications for Second and Third Year Plants
If the plants have made **at least 18 inches of growth the first year**, increase the amount of fertilizer the second year to one tablespoon per application for rooted cuttings and 1 ounce (2 tablespoons) for the one gallon size plants at each application. Increase the area in which the fertilizer is applied to **at least a 24 inch circle with the plant in the center for rooted cuttings and 30 inches for one gallon plants**. Make the first application at bud break. Apply every 4 to 6 weeks during the growing season in which a total of at least four inches of rainfall or overhead irrigation has been received. Fertilize until September, but no later than six weeks before normal first frost date in your area. **Banded Applications** of fertilizer can also be used and are listed in Table 1. By year three, plants should be large enough for a banded application of fertilizer with minimum waste of fertilizer. Band the fertilizer in a strip four feet wide centered on the plant row.

Table 1. Maximum growth program with banded fertilizer application on southern highbush and highbush (pounds per acre). Base fertilizer type on soil tests. Band width is four feet.

Year in field	Between row spacing (feet)	10-10-10	12-4-8	14-28-14
1	10	90	75	64
	12	74	62	53
2 and 3	8	225	187	160
	10	180	150	128
	12	149	124	106

continued -»

Fertilizing southern highbush and highbush in soil, year four and after

Bearing southern highbush and highbush growing in soil require about 76-113 pounds of nitrogen per acre per year split into at least four to five applications beginning at bud break and ending in August or September about six weeks before the normal first frost date in your area. Apply about 25 to 38 pounds of nitrogen pre-harvest in spring depending upon distance between the rows (Table 2). It is best to apply one-half the spring fertilizer at early bud break and the second half of the spring fertilizer four weeks later. Starting immediately after harvest, apply about 17 to 25 pounds of nitrogen per acre (depending upon row spacing) every six weeks if you have received at least four inches of rain or irrigation between applications of fertilizer (Table 2). Apply phosphorus and potassium based on soil samples and leaf analysis. Have the fertilizer custom blended or select a common blueberry fertilizer for your fertilizer needs. On soils very high in organic matter (6% or more-rare in Georgia), significant nitrogen is released from the decomposition of the organic matter. On these soils, it may be necessary to reduce the amount of nitrogen applied to 60-80 pounds per year to control excessive plant vigor.

Table 2: Banded fertilizer application of bearing highbush blueberries (pounds/acre). Band width is four feet.

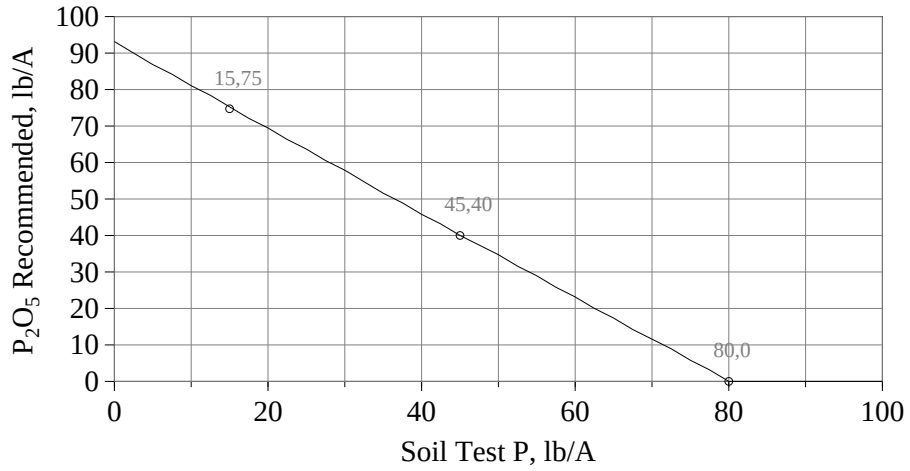
Row spacing	Fertilizer formulation			Time of application
	10-10-10	12-4-8	14-28-14	
8	375	311	268	**Pre-harvest** One-half at bud break and one-half four weeks later
10	300	250	214	
12	249	207	178	
8	250	208	179	**Post-harvest** Every six weeks until six weeks before normal first frost
10	200	167	143	
12	166	138	118	

Soils vary in their natural ability to supply the plant available forms of nitrogen (N). The N fertilizer recommendations given here for Southern Highbush are based on soils with 3 to 5% organic matter (OM). Soils with higher OM generally supply more N; therefore, less N fertilizer is needed on high OM soils. Likewise, be aware of conditions that may increase the need for additional N. On new plantings to which pine bark has been added (especially pine bark with white wood), additional N fertilizer may be needed to overcome N tie-up by bacteria. Sufficient nitrogen should be applied to grow good lateral fruit wood 5 to 8 inches in length. However, do not add too much nitrogen because it may lead to growth of highly succulent shoots that are susceptible to Botryosphaeria stem blight. In general, N should not be applied after early September in South Georgia or mid-August in North Georgia. Nitrogen fertilizer is used more efficiently if added through drip irrigation systems; therefore, recommended N rates may be reduced by about 20%. Because of these many complex factors, we recommend plant tissue analysis and grower observations as the most reliable guide for adjusting the rate of N fertilizer to apply. For more information on plant analysis, go to http://aesl.ces.uga.edu/publications/plant/.

Blueberries-Southern Highbush in Soil or Amended Soil (*Code 133*)

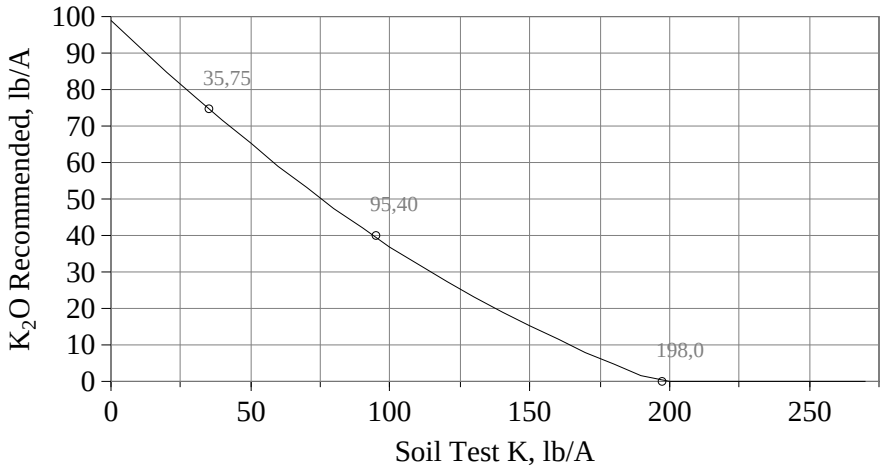
P Recommendations, Coastal Plain

$P_2O_5 = 93 - 1.189P + 0.00037P^2$



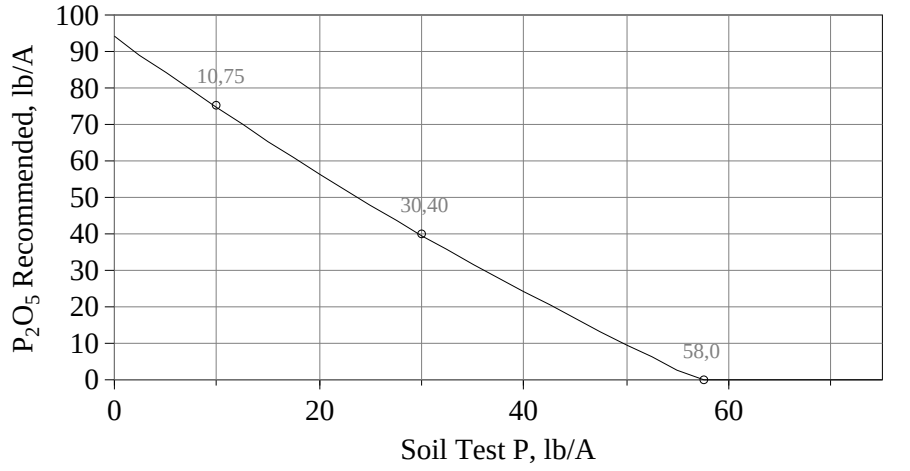
K Recommendations, Coastal Plain

$K_2O = 99 - 0.738K + 0.00119K^2$



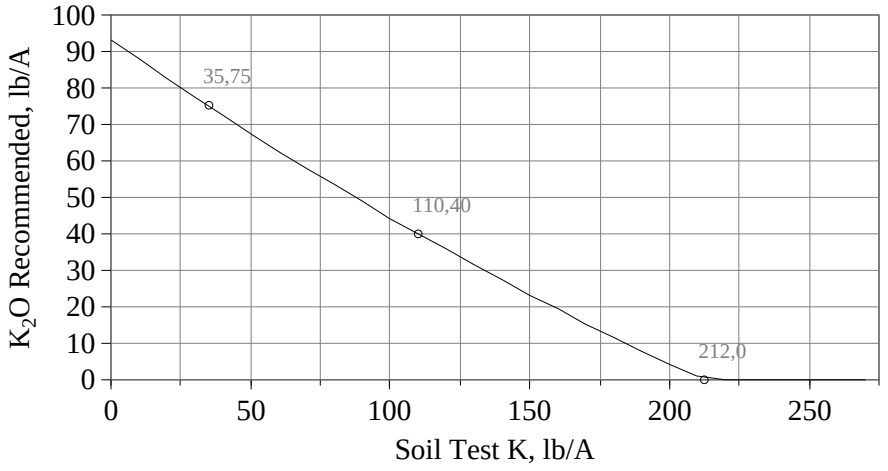
P Recommendations, Piedmont

$P_2O_5 = 94 - 1.999P + 0.00622P^2$



K Recommendations, Piedmont

$K_2O = 93 - 0.529K + 0.00043K^2$



Figs (commercial) (*Code* #129)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	100-100-100	100-100-70	100-100-40	100-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	100-70-100	100-70-70	100-70-40	100-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	100-40-100	100-40-70	100-40-40	100-40-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	100-0-100	100-0-70	100-0-40	100-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C.
Nitrogen:	100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

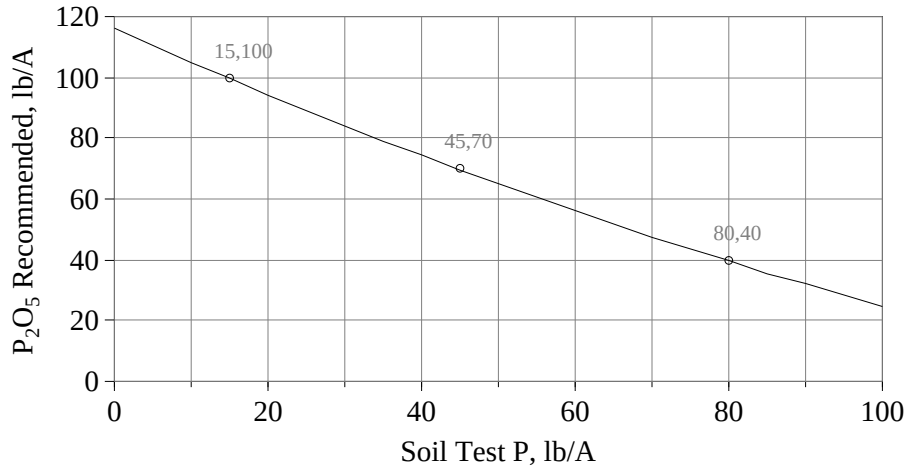
Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

To convert acre recommendations to per plant rate, divide by 100.

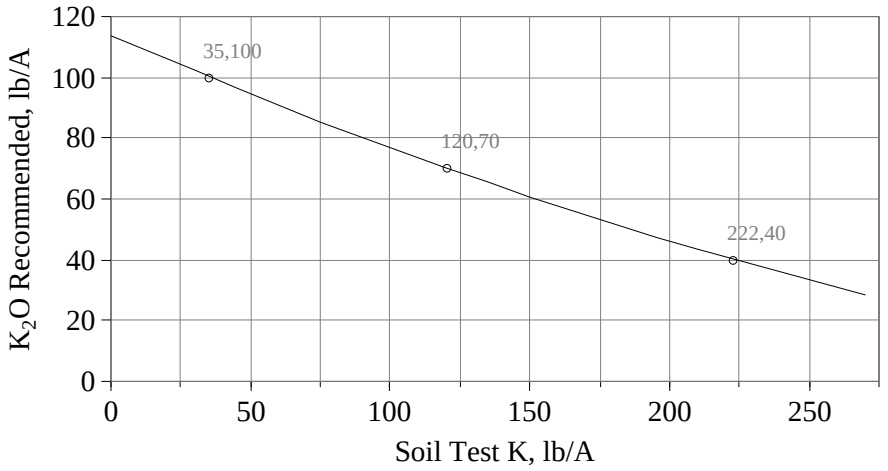
P Recommendations, Coastal Plain

$P_2O_5 = 116 - 1.132P + 0.00220P^2$



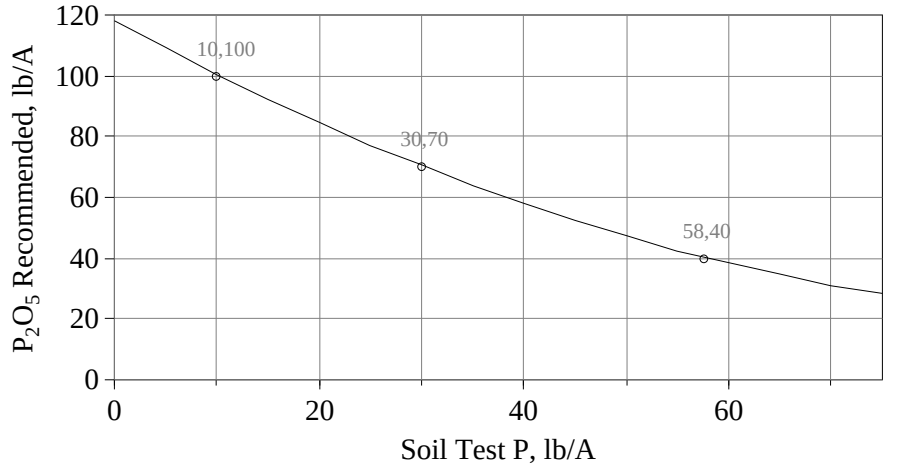
K Recommendations, Coastal Plain

$K_2O = 114 - 0.403K + 0.00032K^2$



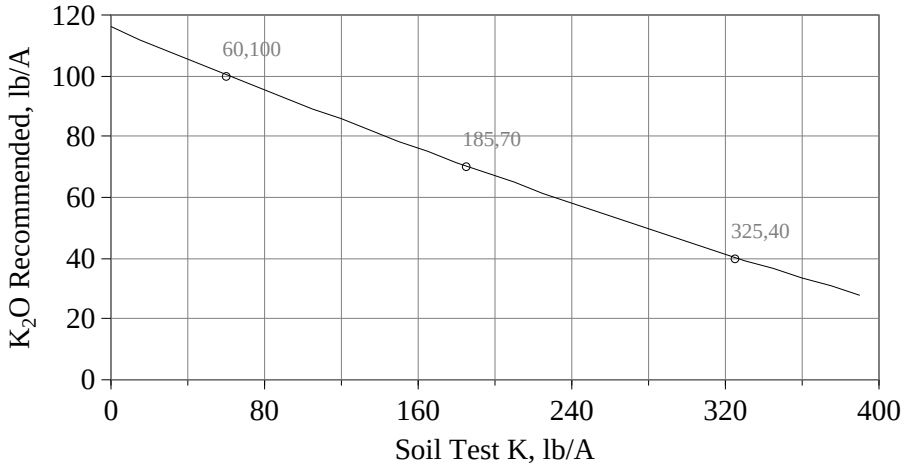
P Recommendations, Piedmont

$P_2O_5 = 118 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 116 - 0.265K + 0.00010K^2$



Grapes (bunch, hybrid) (*Code* #127)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-40	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-60	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

*First year vines - apply 0.15 pounds nitrogen (N) per vine divided into 3 applications; 0.05 pounds nitrogen just before growth begins, 0.05 pounds nitrogen in late May, and 0.05 pounds nitrogen in early July. Broadcast evenly over a 2-foot diameter circle.

*Second year vines - double first year rate and diameter of broadcast circle. Apply in 3 applications as done during first year. Broadcast evenly over a 3-foot diameter circle.

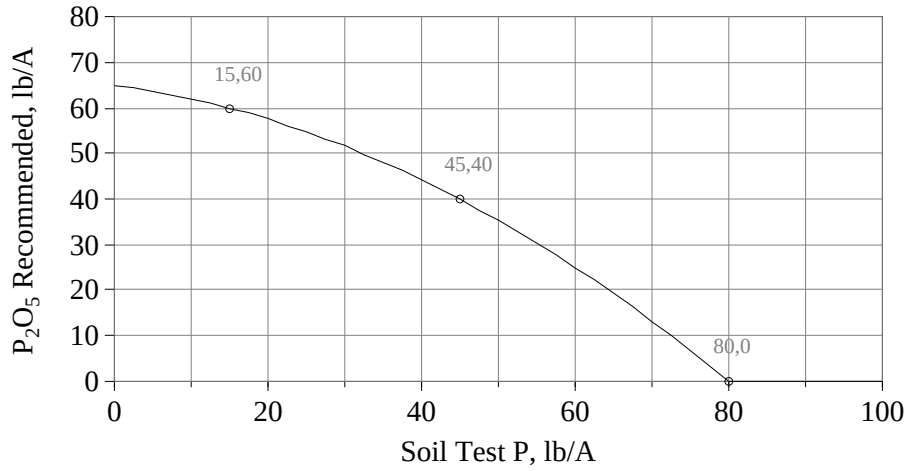
*Third year vines - apply 0.2 pounds nitrogen per vine before growth begins in early spring. After fruit set, apply 0.1 pound of nitrogen per vine if a good crop is set. Broadcast evenly under the vines.

*Mature vineyards - apply 0.25 pounds nitrogen per vine in the early spring before growth begins. After fruit set, apply 0.15 pounds of nitrogen per vine. Broadcast evenly under the vines.

Grapes (bunch, hybrid) (*Code 127*)

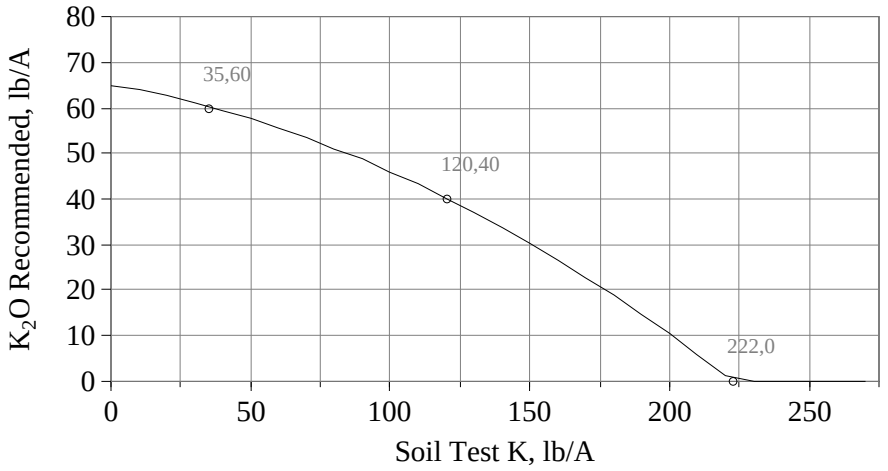
P Recommendations, Coastal Plain

$P_2O_5 = 65 - 0.227P - 0.00733P^2$



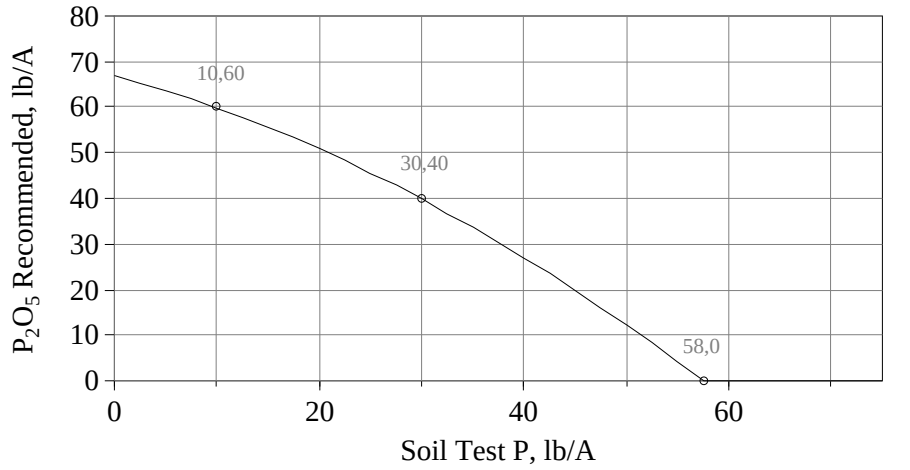
K Recommendations, Coastal Plain

$K_2O = 65 - 0.107K - 0.00083K^2$



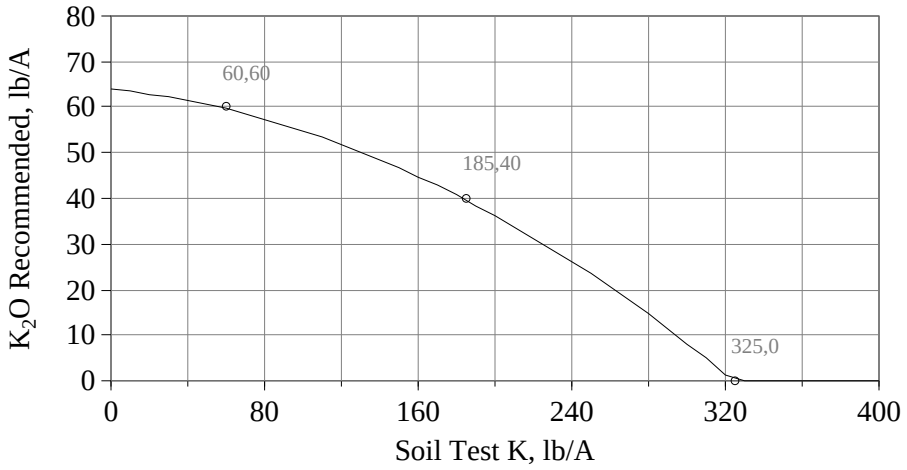
P Recommendations, Piedmont

$P_2O_5 = 67 - 0.617P - 0.00957P^2$



K Recommendations, Piedmont

$K_2O = 64 - 0.045K - 0.00047K^2$



Grapes (muscadine) (*Code* #128)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-40	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-60	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre (125 pounds Epsom salts per acre).

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

***Nitrogen recommendation:**

First year vines – Apply one ounce of premium grade 10-10-10 fertilizer or its equivalent per vine starting after growth begins in the spring and repeat at four to six week intervals if at least four inches of rain or overhead irrigation have been received since the last fertilization. Apply the fertilizer fairly evenly in a circle 18 inches in diameter with the vine in the center. Reduce the rate or frequency of fertilizations if you see any fertilizer burn. The total number of fertilizer applications for the year will probably be four to five in South Georgia and three to four in North Georgia. Do not fertilize the vines after late August in South Georgia and late July in North Georgia. Slow release nursery fertilizers also give good results with fewer fertilizer applications. Follow the manufacturer's directions on the bag.

Second year vines - Timing and method of applications should be similar to the first year. However, the rate should be increased to four ounces of premium grade 10-10-10 or its equivalent and the diameter of the broadcast circle should be increased to three and one half to four feet.

Third year vines - If the vines have grown off well, apply two pounds of premium grade 10-10-10 fertilizer or its equivalent per vine in March, plus one pound of 10-10-10 fertilizer per vine in May. Evenly spread these applications along the row in a three-foot wide band or apply them in a six-foot diameter circle around each vine.

Mature vineyards - To fertilize an established vineyard, muscadines usually need about 50 pounds of nitrogen per acre applied near bud break followed by about 30 pounds of nitrogen per acre after fruit set. Phosphorus and potassium should be applied according to the soil test. On heavy or rich soils only a single application of nitrogen at bud break may be needed. The desired amount of vegetative growth per year is about three feet. If growth exceeds four feet, reduce the amount of nitrogen applied in future years.

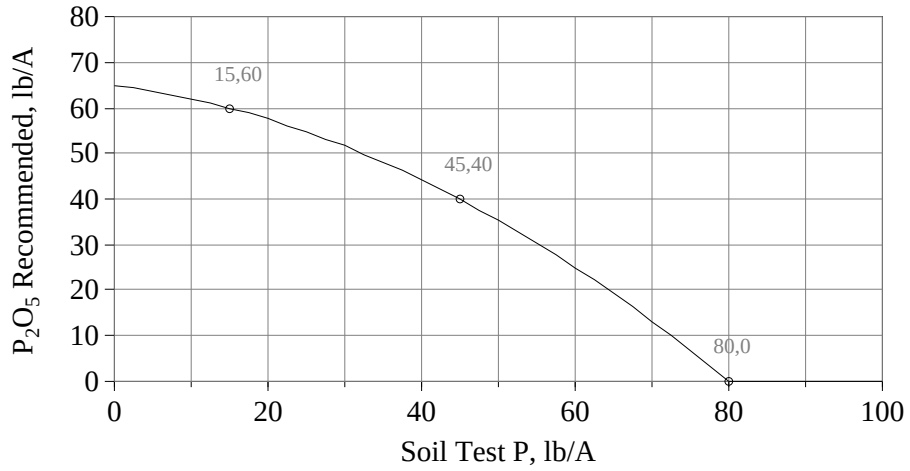
Magnesium deficiency, which shows up later in the season, is of concern to muscadine producers since in severe cases the fruit may shatter prematurely. Symptoms are a yellowing between the veins of older leaves. The yellowing progresses up the shoots as the leaves grow older. If magnesium in the soil is low, follow the recommendation provided. If plant analysis indicates a magnesium deficiency, apply 25 pounds magnesium per acre.

Occasionally, it is necessary to apply boron in some vineyards to realize maximum yields, since boron deficiency can cause poor fruit set. If a boron shortage is confirmed by a leaf analysis test, apply five pounds of borax (10% boron) per acre to the soil surface or spray the vines with one pound of Solubor (20% boron) per acre just before bloom. Do not exceed boron recommendations. Excessive boron will injure or kill the plants.

Grapes (muscadine) (*Code 128*)

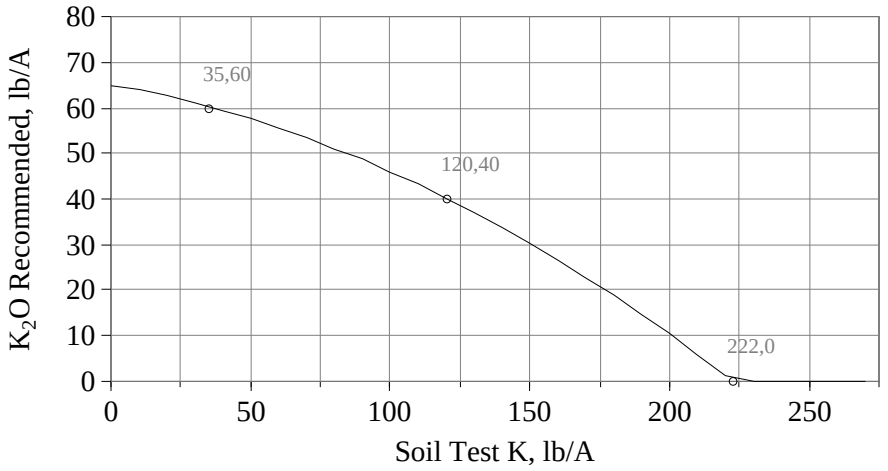
P Recommendations, Coastal Plain

$P_2O_5 = 65 - 0.227P - 0.00733P^2$



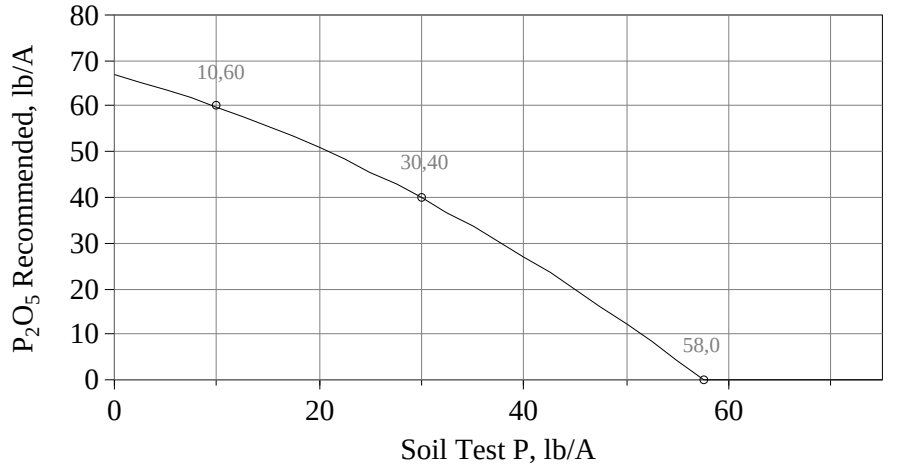
K Recommendations, Coastal Plain

$K_2O = 65 - 0.107K - 0.00083K^2$



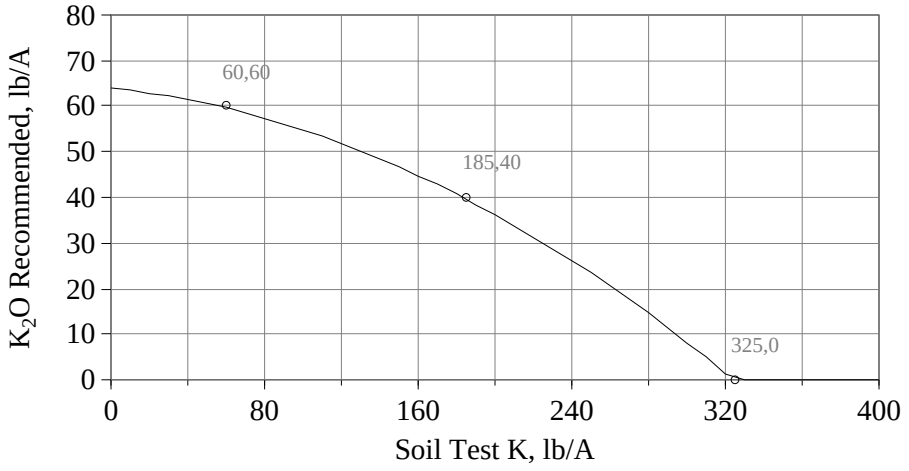
P Recommendations, Piedmont

$P_2O_5 = 67 - 0.617P - 0.00957P^2$



K Recommendations, Piedmont

$K_2O = 64 - 0.045K - 0.00047K^2$



Nectarines (bearing) (*Code* #119)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

If more than two (2) tons limestone per acre is recommended, apply half this year and the other half next year. Avoid, when possible, applying lime when fruit and/or foliage are on the tree. Late fall is the most ideal time to lime. If soil test magnesium is not low and a faster reaction is desired, apply a fast reacting lime source such as hydrated lime. The conversion rate for hydrated lime is as follows:

Lime Recommendation	**Alternate Lime Source**
Dolomitic Limestone	**Hydrated Lime***
tons per acre	tons per acre
1	0.75
2	1.50

*Since hydrated lime is quite fine, it should be applied using an easy flow or similar applicator.

continued -»

Fact Sheet:

Nitrogen Fertilization

Bearing Trees should be fertilized based on plant analysis, soil test, crop load and visual plant indicators such as terminal shoot growth and leaf color. Rates and timing will vary with variety, soil type, crop load, pruning severity and tree vigor in order to obtain annual terminal shoot growth of 18 to 24 inches with a normal crop load.

As a general guideline, trees should be fertilized as follows:

1. **Late January to mid-February (month before anticipated break)** - Apply 30 pounds of nitrogen per acre in the herbicide band. Early timing is for extreme South Georgia. Rate increases to as much as 60 pounds if there are competing plants in landscape.

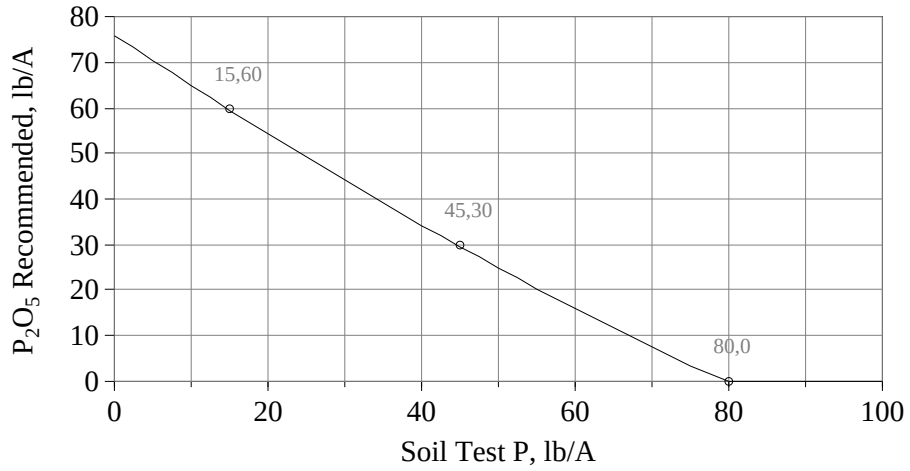
2. **Post-harvest (no later than mid-August – Middle Georgia; mid-September – South Georgia)** - Apply 20 to 30 pounds of nitrogen per acre in the herbicide band. Earlier timing is for earlier varieties.

If mid to late season leaf color and shoot growth on bearing trees is poor with leaf nitrogen levels less than 2.75%, apply the post-harvest nitrogen after harvest; but no later than mid-August in Middle Georgia or mid-September in South Georgia.

Nectarines (bearing) (*Code 119*)

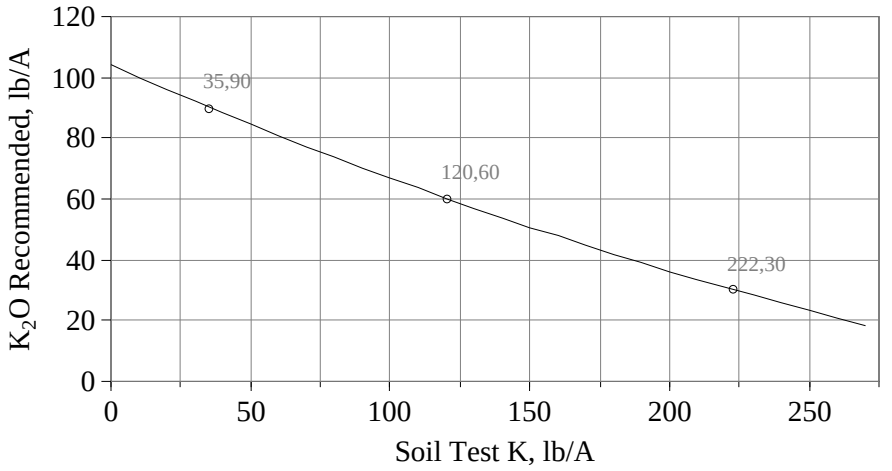
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



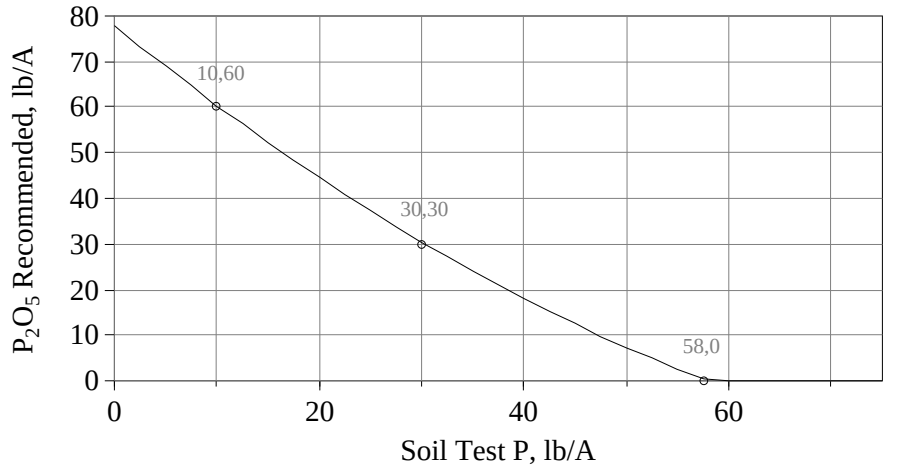
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



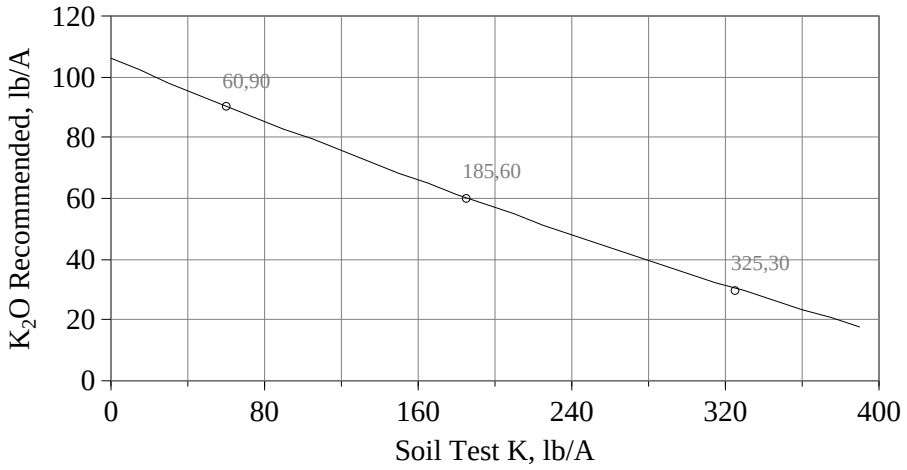
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Nectarines (non-bearing) (*Code* #122)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. See special lime recommendations below.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

Special Lime Recommendations:

Proper soil pH (6.0 to 6.5) is one of the keys to increasing tree survival and maximizing production. As lime does not readily move down through undisturbed soil, pre-plant soil preparation is the key to deriving the benefits of liming. Sites should be subsoiled in two directions (cross-checked) and lime should be turned in with deep plowing. Such pre-plant site preparation helps trees develop a large root system throughout the desired planting area.

Pre-plant Liming

Soil pH		Recommendation, tons/A	
		Broadcast and	
Surface	Subsoil	Plowed Deep	Disk In
(0-6 in)	(8-14 in)		
below 5.5	below 5.5	3	1
5.5-6.0	below 5.5	2	1
5.5-6.0	5.5-6.0	1	1
5.5-6.0	6.0+	0	1
6.0+	below 5.5	2	0
6.0+	5.5-6.0	1	0
6.0+	6.0+	0	0
6.0+ but soil Ca less than 400 lbs/acre		0	1

Fact Sheet:

***Nitrogen fertilization**

First-year trees should be fertilized three times during their first season as follows:

1. **March** - (after ground has been settled by rain) broadcast evenly over a 3-foot diameter circle 1/2 to 1 pound of 10-10-10 per tree. Avoid placing fertilizer near trunk.
2. **Mid to late May** - Broadcast evenly over a 3-foot diameter circle 1 pound of calcium nitrate or 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per tree.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after **AUGUST 15** since late application can increase susceptibility to cold injury.

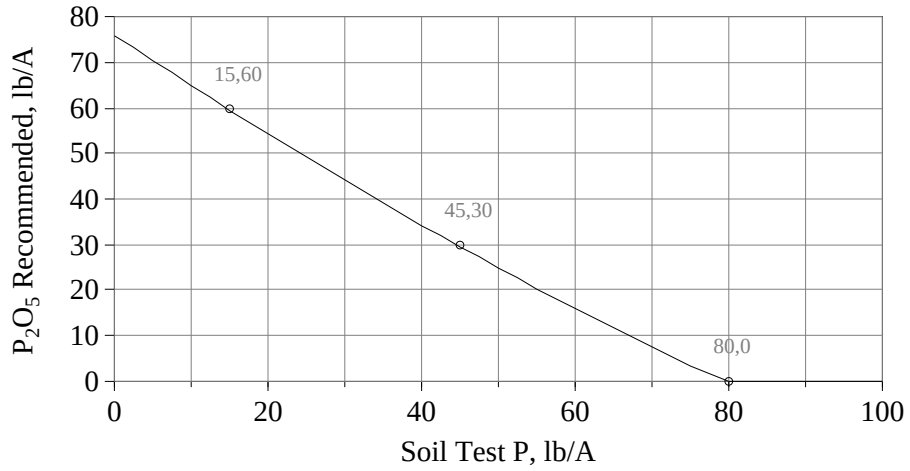
Second-year trees should be fertilized three times during the season.

1. **Late-February (month before growth starts)** - Apply 250 pounds of 10-10-10 fertilizer per orchard acre, broadcast evenly in a 5 to 6 feet wide band (2 to 3 feet wide on each side of trees).
2. **Mid-May** - Apply 150 pounds of calcium nitrate or 75 pounds of 34-0-0 or 55 pounds of 46-0-0 per orchard acre in a 5 to 6 feet wide band.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after August 15.

Nectarines (non-bearing) (*Code 122*)

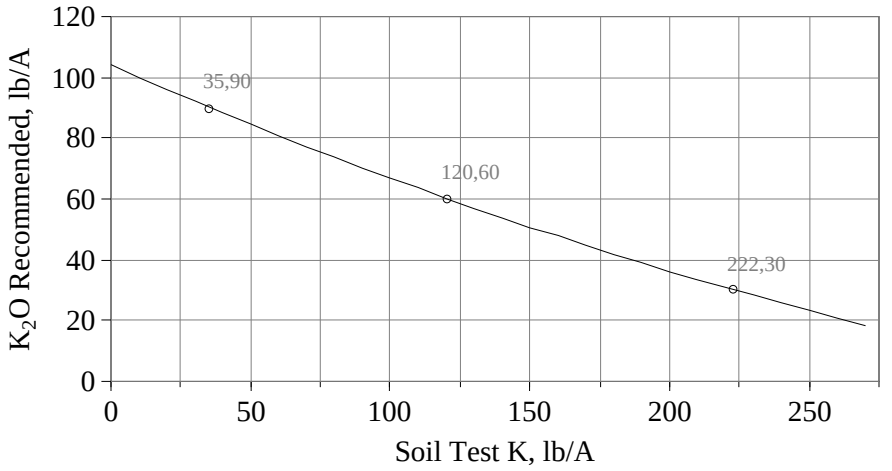
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



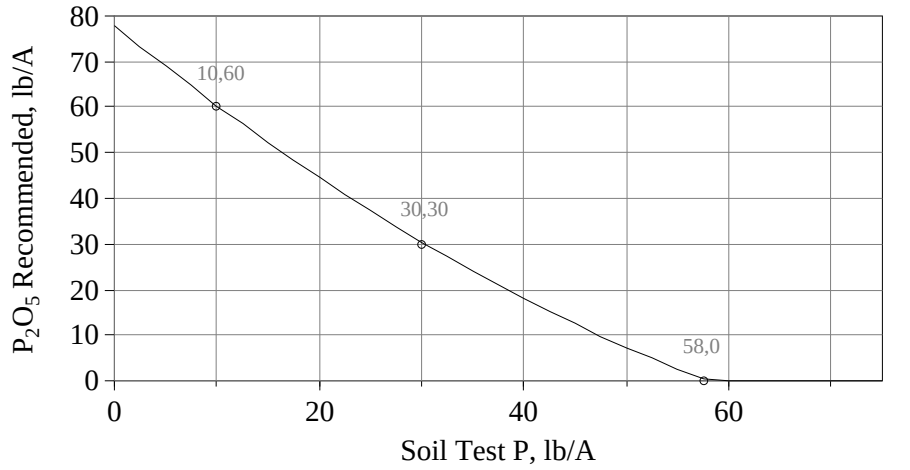
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



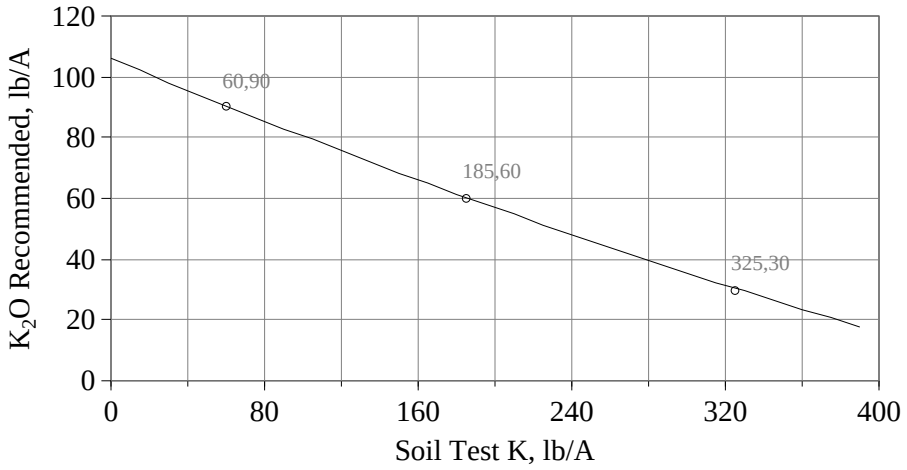
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Peaches (bearing) (*Code* #120)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

If more than two (2) tons limestone per acre is recommended, apply half this year and the other half next year. Avoid, when possible, applying lime when fruit and/or foliage are on the tree. Late fall is the most ideal time to lime. If soil test magnesium is not low and a faster reaction is desired, apply a fast reacting lime source such as hydrated lime. The conversion rate for hydrated lime is as follows:

Lime Recommendation	**Alternate Lime Source**
Dolomitic Limestone	**Hydrated Lime***
tons per acre	tons per acre
1	0.75
2	1.50

*Since hydrated lime is quite fine, it should be applied using an easy flow or similar applicator.

continued -»

Fact Sheet:

Nitrogen Fertilization

Bearing Trees should be fertilized based on plant analysis, soil test, crop load and visual plant indicators such as terminal shoot growth and leaf color. Rates and timing will vary with variety, soil type, crop load, pruning severity and tree vigor in order to obtain annual terminal shoot growth of 18 to 24 inches with a normal crop load.

As a general guideline, trees should be fertilized as follows:

1. **Late January to mid-February (month before anticipated break)** - Apply 30 pounds of nitrogen per acre in the herbicide band. Early timing is for extreme South Georgia. Rate increases to as much as 60 pounds if there are competing plants in landscape.

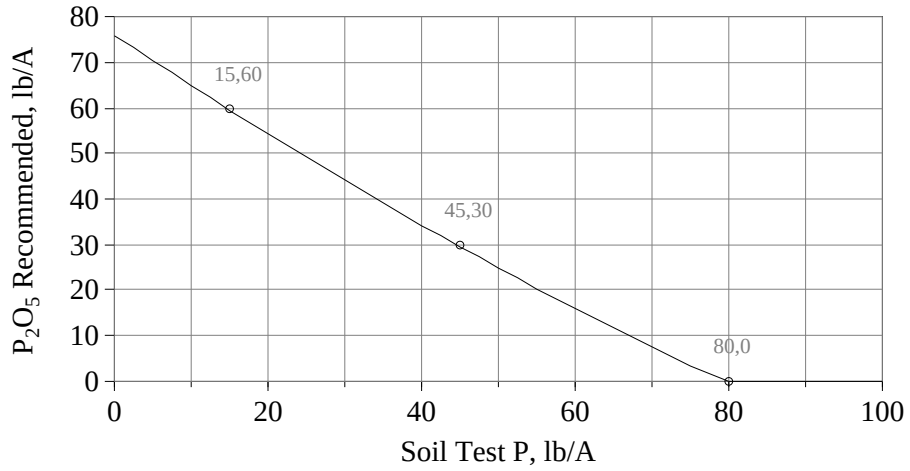
2. **Post-harvest (no later than mid-August – Middle Georgia; mid-September – South Georgia)** - Apply 20 to 30 pounds of nitrogen per acre in the herbicide band. Earlier timing is for earlier varieties.

If mid to late season leaf color and shoot growth on bearing trees is poor with leaf nitrogen levels less than 2.75%, apply the post-harvest nitrogen after harvest; but no later than mid-August in Middle Georgia or mid-September in South Georgia.

Peaches (bearing) (*Code 120*)

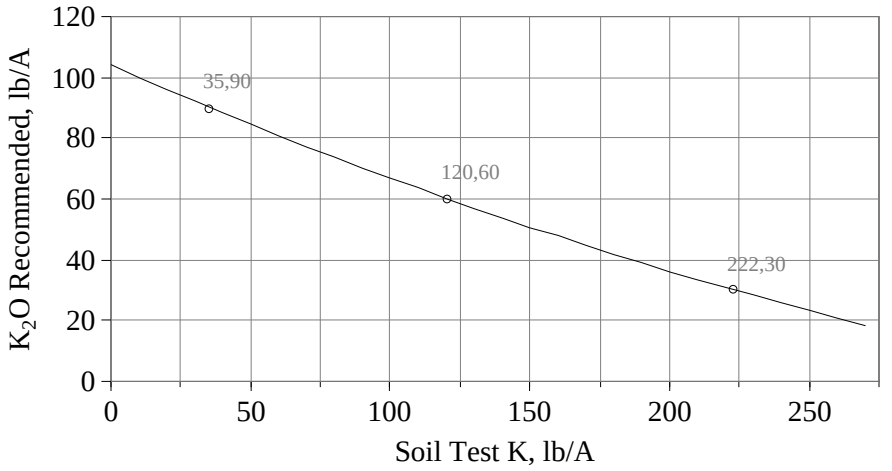
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



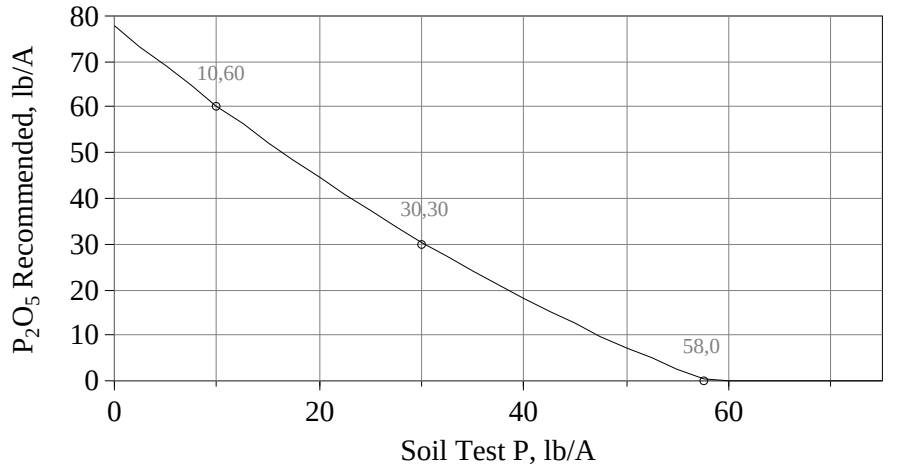
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



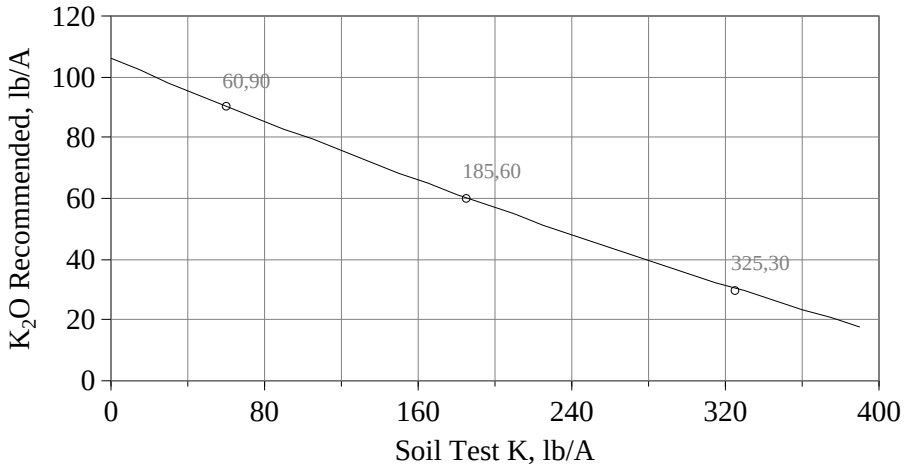
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Peaches (non-bearing) (*Code* #123)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. See special lime recommendations below.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

Special Lime Recommendations:

Proper soil pH (6.0 to 6.5) is one of the keys to increasing tree survival and maximizing production. As lime does not readily move down through undisturbed soil, pre-plant soil preparation is the key to deriving the benefits of liming. Sites should be subsoiled in two directions (cross-checked) and lime should be turned in with deep plowing. Such pre-plant site preparation helps trees develop a large root system throughout the desired planting area.

Pre-plant Liming

Soil pH		Recommendation, tons/A	
		Broadcast and	
Surface	Subsoil	Plowed Deep	Disk In
(0-6 in)	(8-14 in)		
below 5.5	below 5.5	3	1
5.5-6.0	below 5.5	2	1
5.5-6.0	5.5-6.0	1	1
5.5-6.0	6.0+	0	1
6.0+	below 5.5	2	0
6.0+	5.5-6.0	1	0
6.0+	6.0+	0	0
6.0+ but soil Ca less than 400 lbs/acre		0	1

Fact Sheet:

***Nitrogen fertilization**

First-year trees should be fertilized three times during their first season as follows:

1. **March** - (after ground has been settled by rain) broadcast evenly over a 3-foot diameter circle 1/2 to 1 pound of 10-10-10 per tree. Avoid placing fertilizer near trunk.
2. **Mid to late May** - Broadcast evenly over a 3-foot diameter circle 1 pound of calcium nitrate or 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per tree.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after **AUGUST 15** since late application can increase susceptibility to cold injury.

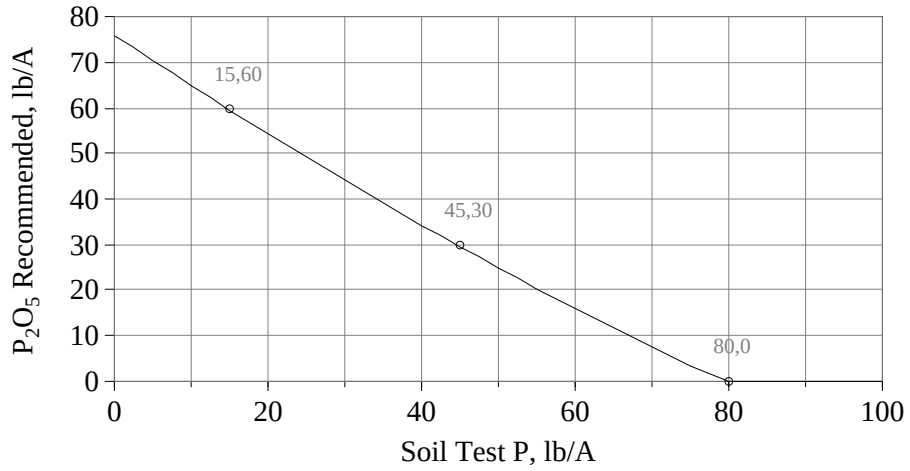
Second-year trees should be fertilized three times during the season.

1. **Late-February (month before growth starts)** - Apply 250 pounds of 10-10-10 fertilizer per orchard acre, broadcast evenly in a 5 to 6 feet wide band (2 to 3 feet wide on each side of trees).
2. **Mid-May** - Apply 150 pounds of calcium nitrate or 75 pounds of 34-0-0 or 55 pounds of 46-0-0 per orchard acre in a 5 to 6 feet wide band.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after August 15.

Peaches (non-bearing) (*Code 123*)

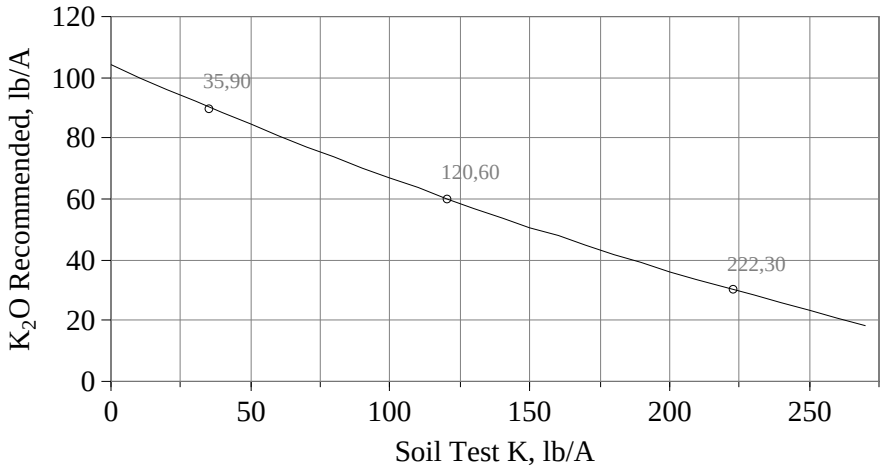
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



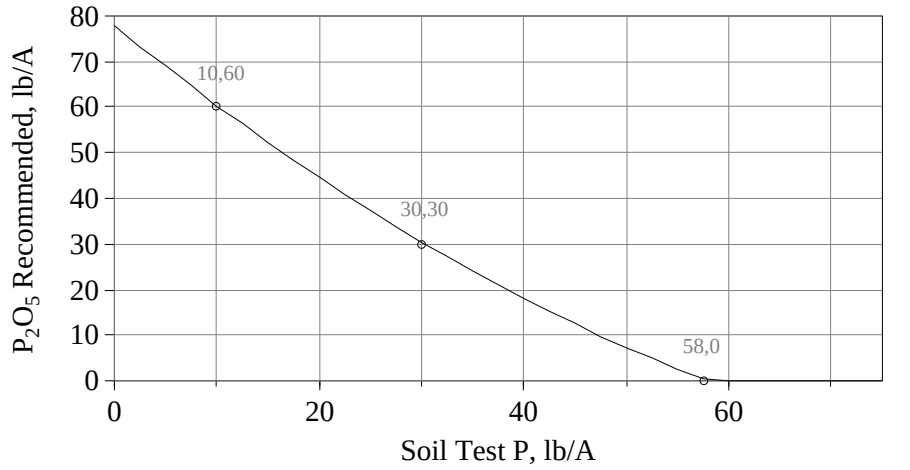
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



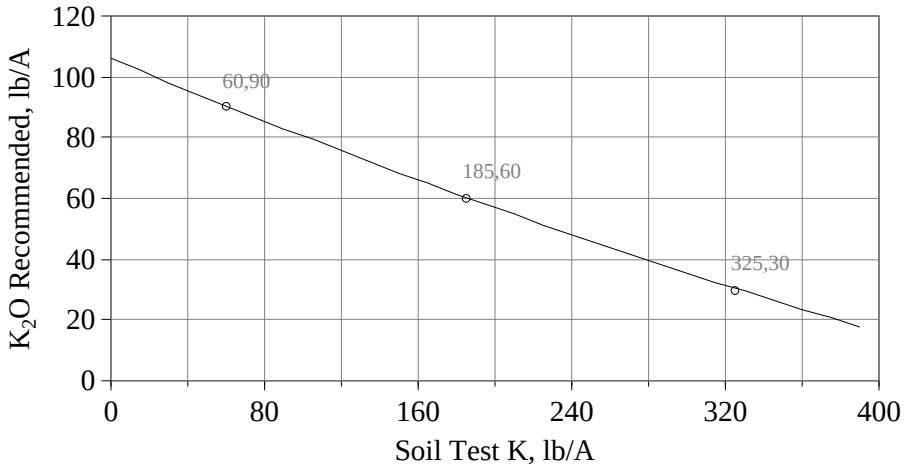
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Pears (bearing) (*Code* #116)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-30	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-60	*-30-30	*-30-0	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-30	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-30	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre Piedmont: Low: 0 - 120 lbs/acre; Medium: 121 - 240 lbs/acre; High: >240 lbs/acre
Other:	See calcium (Ca) and boron (B) recommendations on Fact Sheet.

continued -»

Fact Sheet:

Nitrogen Fertilization

Nitrogen (N) rates should be based on terminal shoot growth, variety and rootstock, pruning severity and cropping history. Terminal shoot growth should not exceed 8 to 12 inches on spur-types and 10 to 14 inches on standard trees with full crops. In general, apply 0 to 50 pounds of nitrogen per acre annually. The 0 rate is included for years following severe pruning or where shoot growth was excessive when it may be advisable to withhold nitrogen applications. In no case should nitrogen exceed 0.3 pound per tree for dwarf trees, 0.6 pound per tree for semi-dwarf trees, or 1.0 pound per tree for standard trees. It is strongly recommended, especially in higher density orchards utilizing dwarf trees, that foliar analysis and soil testing be utilized to monitor nutrient status.

Nitrogen application can be split. Apply one-half in March and the other half after the crop size is determined. The second application can be withheld if frost reduces the crop.

Boron

Apply boron annually to aid in reducing cork spot. Make a single application of Solubor at 1 to 2 pounds per 100 gallons (2 to 4 pounds acre) at petal fall or first cover. If soil or plant analysis indicates that boron is low make application of 2 to 4 pounds of Solubor per acre during both petal fall and first cover sprays. Do not premix Solubor with calcium chloride.

Calcium

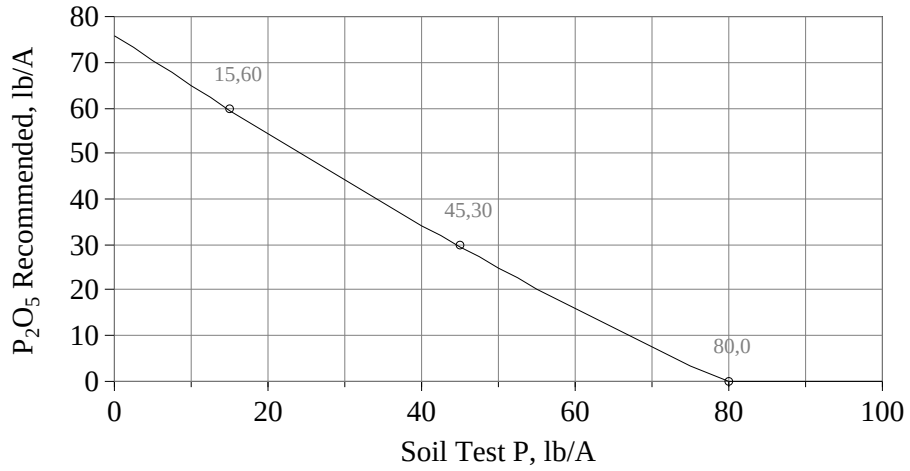
Apply calcium sprays annually to reduce cork spot and bitter pit. Apply in cover sprays at the rate of 2 pounds calcium chloride per 100 gallons (maximum of 3 to 6 pounds per acre in each spray). Higher rates can cause foliage burn and should not be reapplied unless at least 1/2 inch of rain has fallen since the last application. If injury is noticed, reduce calcium chloride to one-half rate the following spray. Calcium nitrate can also be used at 3 pounds per 100 gallons (maximum of 4.5 to 9 pounds per acre each spray). Do not apply when temperatures exceed 90 degrees Fahrenheit.

NOTE: Late season cover spray, particularly 2 to 4 sprays before harvest are the most important for reducing bitter pit.

Pears (bearing) (*Code 116*)

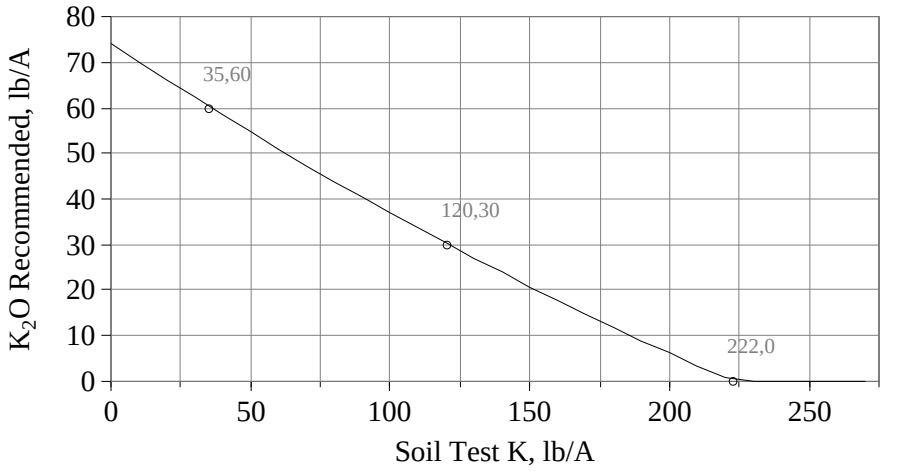
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



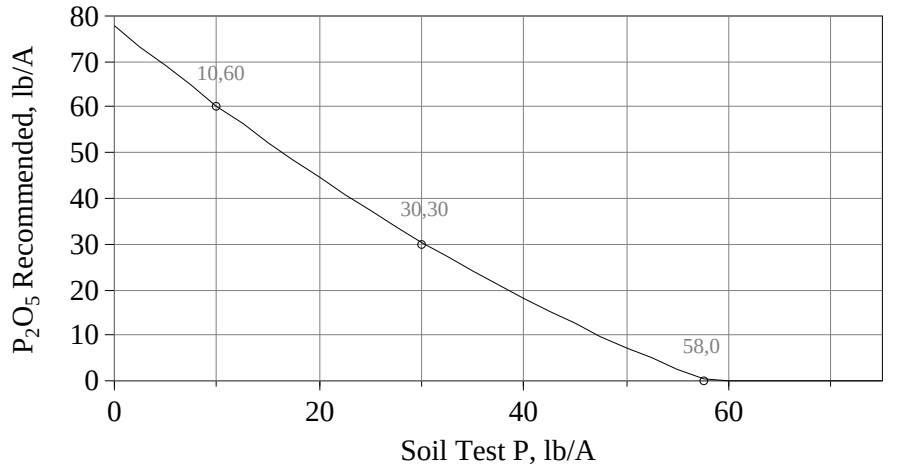
K Recommendations, Coastal Plain

$K_2O = 74 - 0.403K + 0.00032K^2$



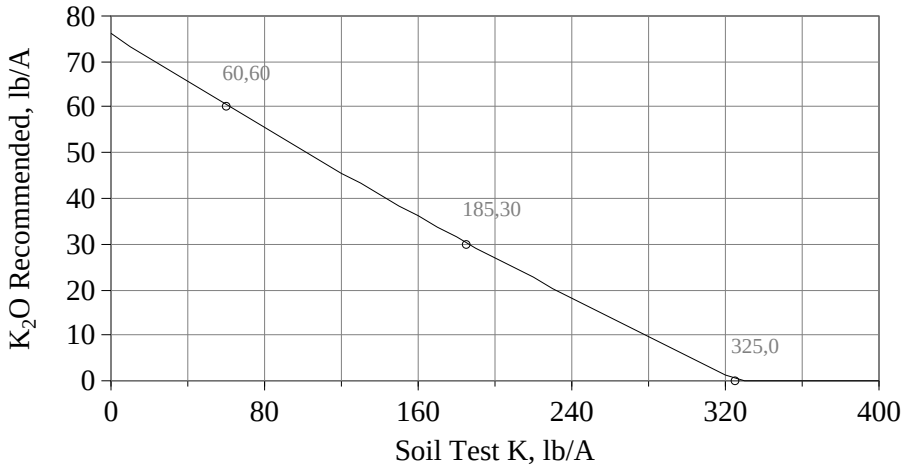
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 76 - 0.265K + 0.00010K^2$



Pears (non-bearing) (*Code* #118)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-30	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-60	*-30-30	*-30-0	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-30	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-30	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen Fertilization

Non-bearing trees - Apply .05 to .15 pounds of nitrogen (N) around each tree in March, April and May. An example would be applications of 1/3 to 1 pound calcium nitrate made at each of 3 months. Ground applications should not be made past June.

Trees coming into bearing - Excess vegetative vigor often delays flower initiation and can increase severity of cork spot. As trees attain bearing size, careful nitrogen fertilizer management is needed to avoid overfertilization. Depending on variety and specific rootstock, plus numerous cultural practices, production typically begins between the 4th and 6th years for standard trees, 3rd to 5th years for semi-dwarf, and 2nd to 3rd years for dwarf trees. As bearing begins, terminal shoot growth should not exceed 8 to 12 inches on spur-types and 10 to 14 inches on standard trees with full crops. In general, apply 0 to 50 pounds of nitrogen per acre annually. The 0 rate is included for years following severe pruning or where shoot growth was excessive when it may be advisable to withhold nitrogen applications. In no case should nitrogen exceed 0.3 pound per tree for dwarf trees, 0.6 pound per tree for semi-dwarf trees, or 1.0 pound per tree for standard trees. It is strongly recommended, especially in higher density orchards utilizing dwarf trees, that foliar analysis and soil testing be utilized to monitor nutrient status.

Nitrogen application can be split. Apply one half in March and the other half after the crop size is determined. The second application can be withheld if frost reduces the crop.

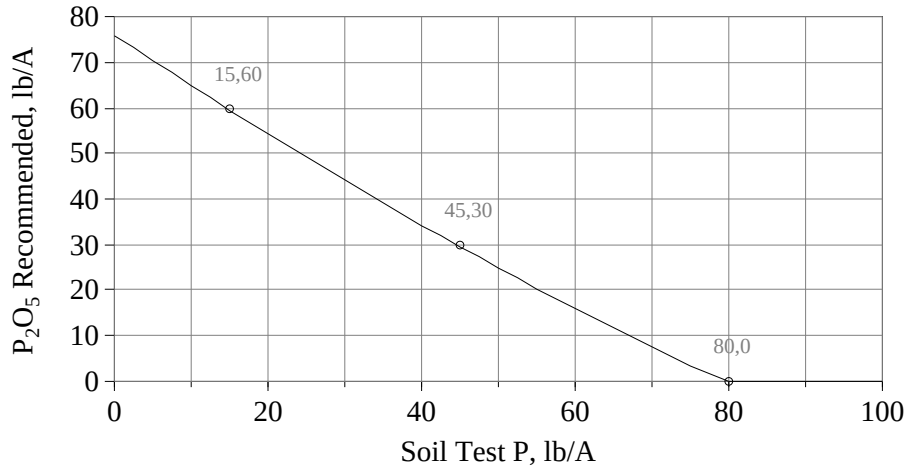
Soil Preparation Prior to Tree Planting

Prior to planting trees, it is recommended that soil be sampled at two depths – 1 to 8 inches and 8 to 16 inches – to see if deep incorporation of lime, phosphorus, and potassium are needed.

Pears (non-bearing) (*Code 118*)

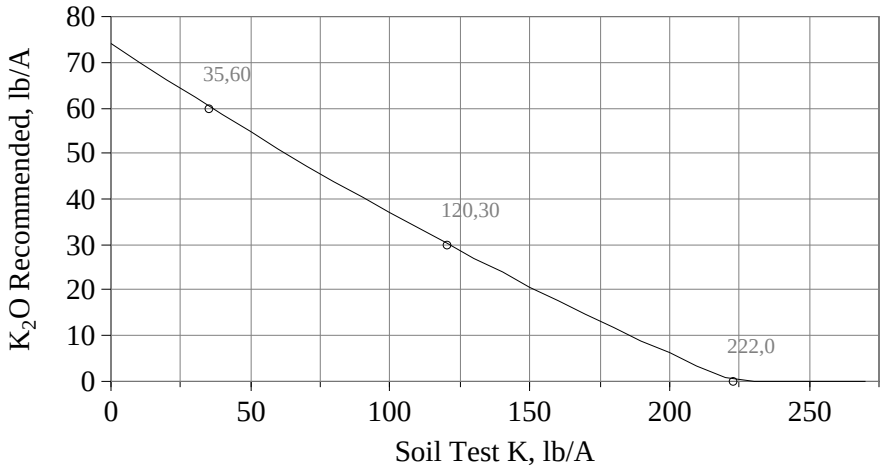
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



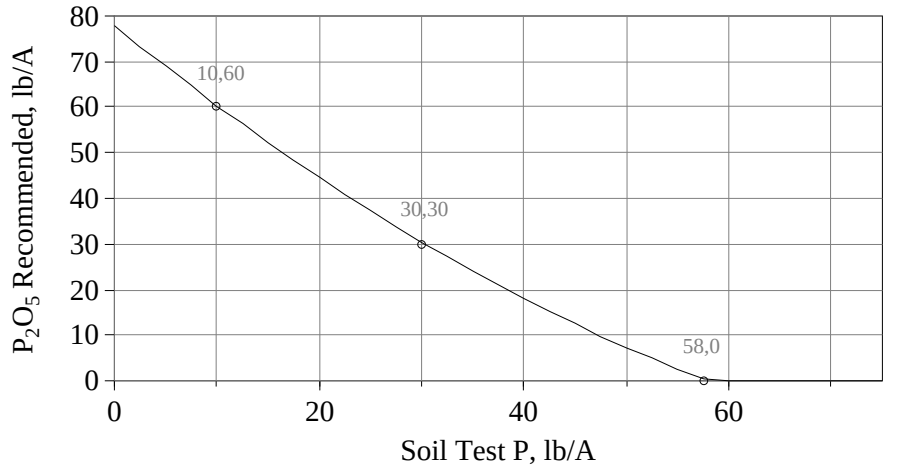
K Recommendations, Coastal Plain

$K_2O = 74 - 0.403K + 0.00032K^2$



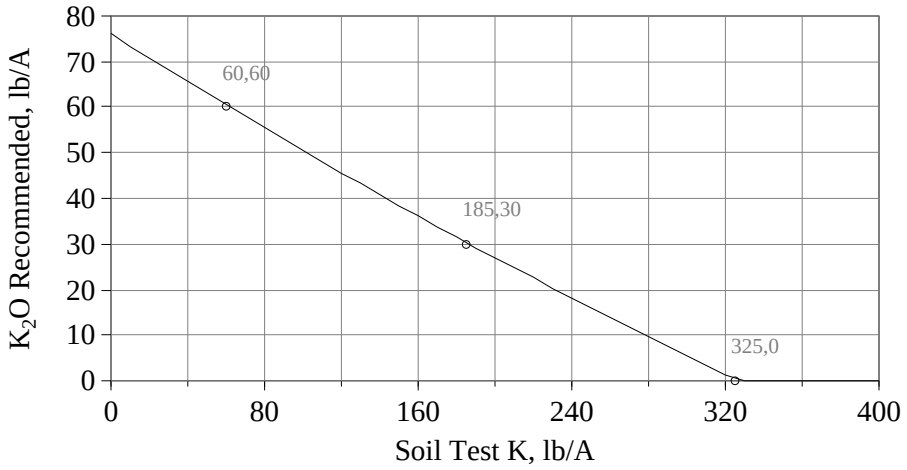
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 76 - 0.265K + 0.00010K^2$



Pecans (*Code* #125)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-40	*-60-0	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-60	*-40-40	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-60	*-0-40	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-40	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	A plant analysis recommendation can be used to modify a fertilizer recommendation based on a soil test.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

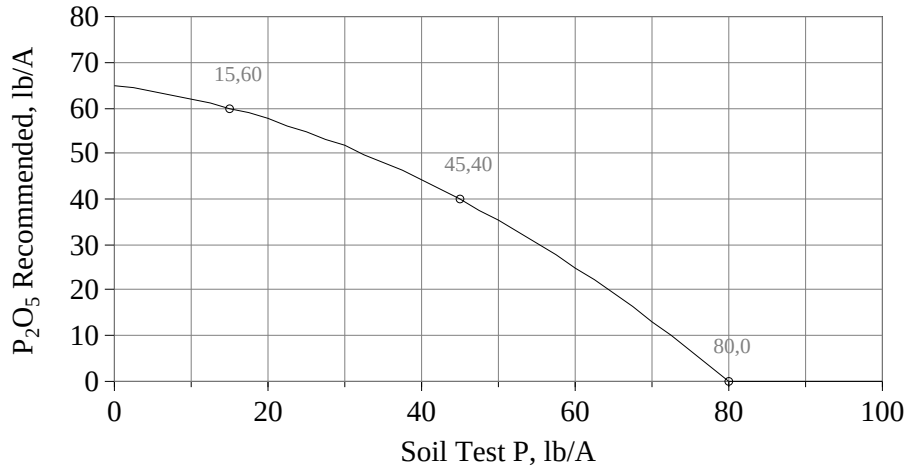
Fact Sheet:

*For Commercial Groves, adjust the nitrogen (N) rate so that annual shoot growth is between 8 to 12 inches on at least 50% of the trees. This can normally be attained by applying 100 to 200 pounds nitrogen per acre.

Pecans (*Code 125*)

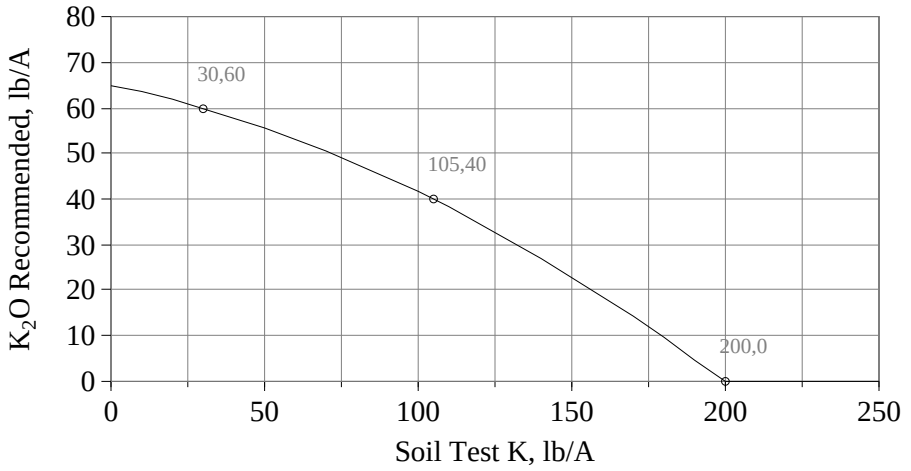
P Recommendations, Coastal Plain

$P_2O_5 = 65 - 0.227P - 0.00733P^2$



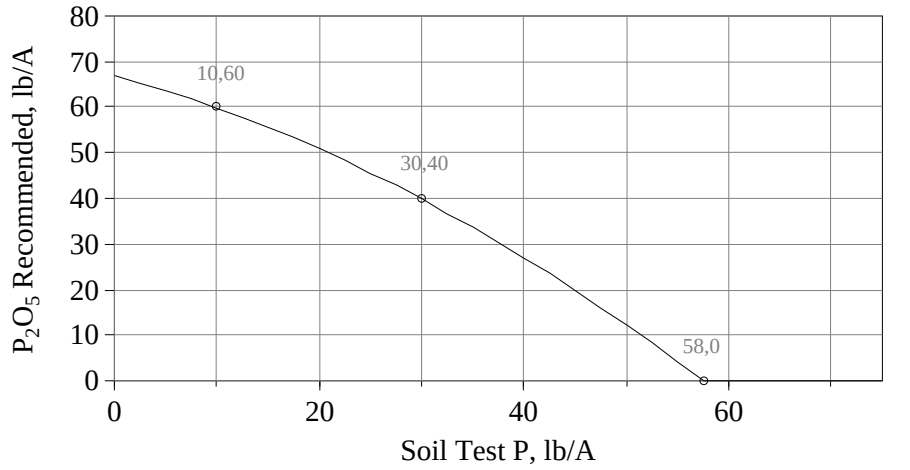
K Recommendations, Coastal Plain

$K_2O = 65 - 0.144K - 0.00091K^2$



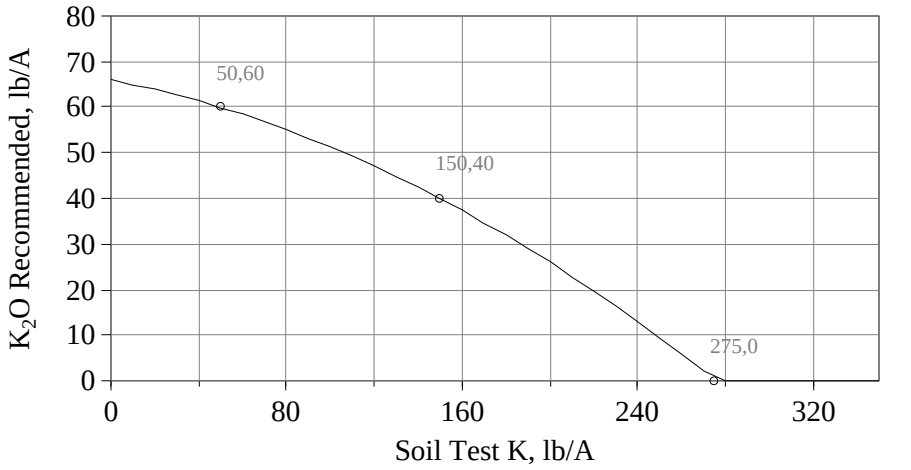
P Recommendations, Piedmont

$P_2O_5 = 67 - 0.617P - 0.00957P^2$



K Recommendations, Piedmont

$K_2O = 66 - 0.094K - 0.00053K^2$



Plums (bearing) (*Code* #121)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

If more than two (2) tons limestone per acre is recommended, apply half this year and the other half next year. Avoid, when possible, applying lime when fruit and/or foliage are on the tree. Late fall is the most ideal time to lime. If soil test magnesium is not low and a faster reaction is desired, apply a fast reacting lime source such as hydrated lime. The conversion rate for hydrated lime is as follows:

Lime Recommendation	**Alternate Lime Source**
Dolomitic Limestone	**Hydrated Lime***
tons per acre	tons per acre
1	0.75
2	1.50

*Since hydrated lime is quite fine, it should be applied using an easy flow or similar applicator.

continued -»

Fact Sheet:

Nitrogen Fertilization

Bearing Trees should be fertilized based on plant analysis, soil test, crop load and visual plant indicators such as terminal shoot growth and leaf color. Rates and timing will vary with variety, soil type, crop load, pruning severity and tree vigor in order to obtain annual terminal shoot growth of 18 to 24 inches with a normal crop load.

As a general guideline, trees should be fertilized as follows:

1. **Late January to mid-February (month before anticipated break)** - Apply 30 pounds of nitrogen per acre in the herbicide band. Early timing is for extreme South Georgia. Rate increases to as much as 60 pounds if there are competing plants in landscape.

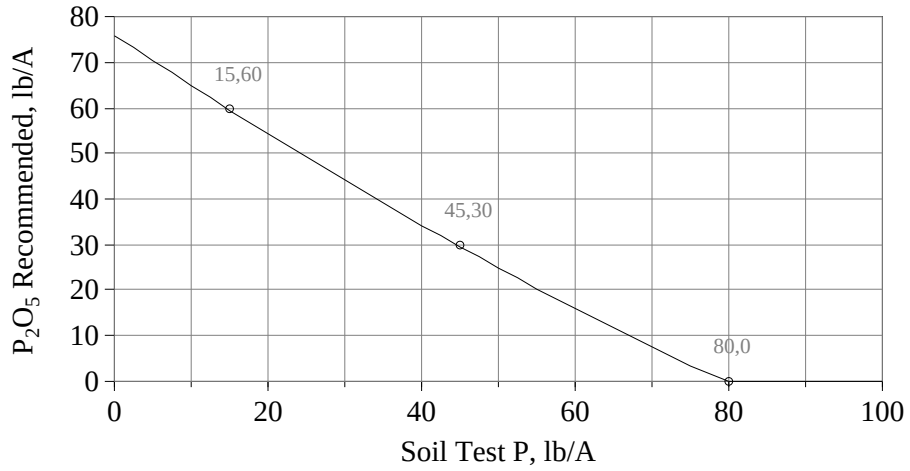
2. **Post-harvest (no later than mid-August – Middle Georgia; mid-September – South Georgia)** - Apply 20 to 30 pounds of nitrogen per acre in the herbicide band. Earlier timing is for earlier varieties.

If mid to late season leaf color and shoot growth on bearing trees is poor with leaf nitrogen levels less than 2.75%, apply the post-harvest nitrogen after harvest; but no later than mid-August in Middle Georgia or mid-September in South Georgia.

Plums (bearing) (*Code 121*)

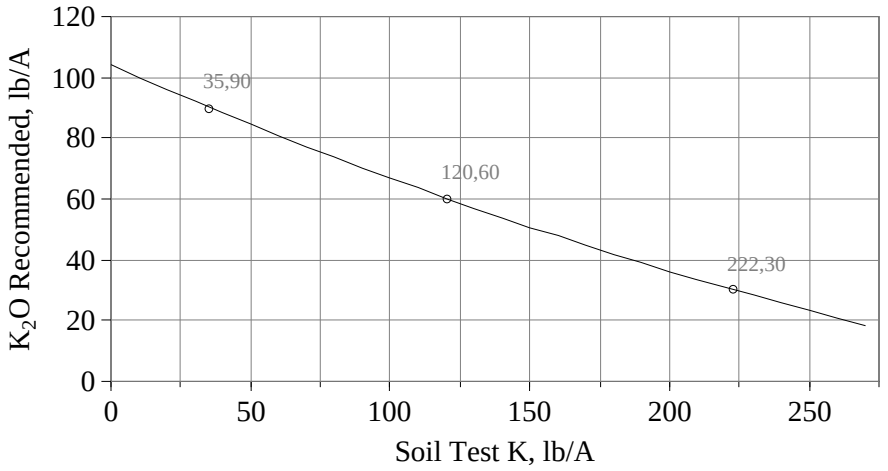
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



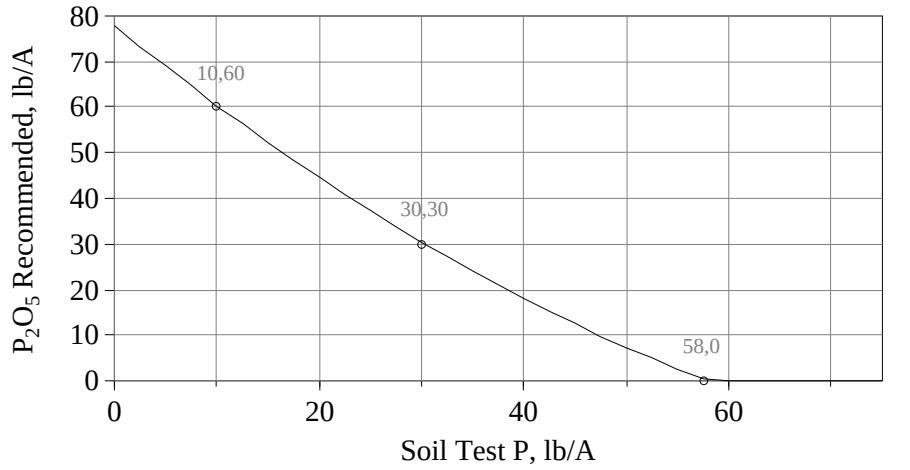
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



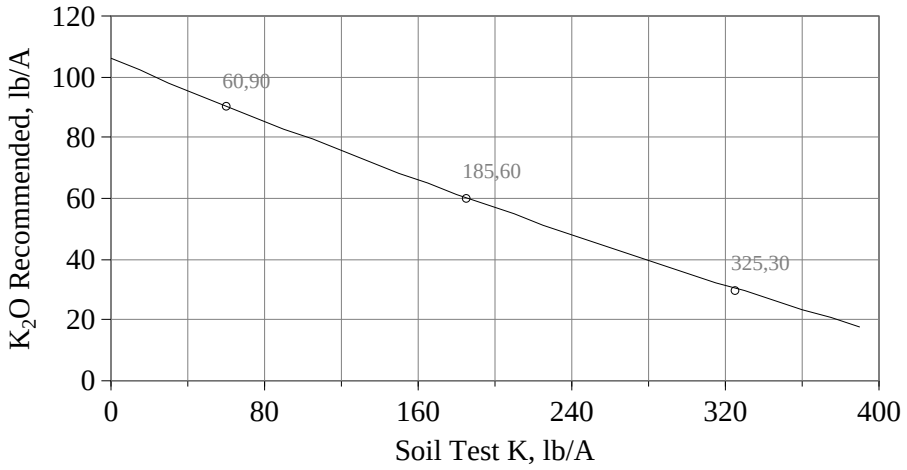
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Plums (non-bearing) (*Code* #124)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-90	*-60-60	*-60-30	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-30-90	*-30-60	*-30-30	*-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-90	*-0-60	*-0-30	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-60	*-0-30	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. See special lime recommendations below.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

Special Lime Recommendations:

Proper soil pH (6.0 to 6.5) is one of the keys to increasing tree survival and maximizing production. As lime does not readily move down through undisturbed soil, pre-plant soil preparation is the key to deriving the benefits of liming. Sites should be subsoiled in two directions (cross-checked) and lime should be turned in with deep plowing. Such pre-plant site preparation helps trees develop a large root system throughout the desired planting area.

Pre-plant Liming

Soil pH		Recommendation, tons/A	
		Broadcast and	
Surface	Subsoil	Plowed Deep	Disk In
(0-6 in)	(8-14 in)		
below 5.5	below 5.5	3	1
5.5-6.0	below 5.5	2	1
5.5-6.0	5.5-6.0	1	1
5.5-6.0	6.0+	0	1
6.0+	below 5.5	2	0
6.0+	5.5-6.0	1	0
6.0+	6.0+	0	0
6.0+ but soil Ca less than 400 lbs/acre		0	1

Fact Sheet:

***Nitrogen fertilization**

First-year trees should be fertilized three times during their first season as follows:

1. **March** - (after ground has been settled by rain) broadcast evenly over a 3-foot diameter circle 1/2 to 1 pound of 10-10-10 per tree. Avoid placing fertilizer near trunk.
2. **Mid to late May** - Broadcast evenly over a 3-foot diameter circle 1 pound of calcium nitrate or 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per tree.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after **AUGUST 15** since late application can increase susceptibility to cold injury.

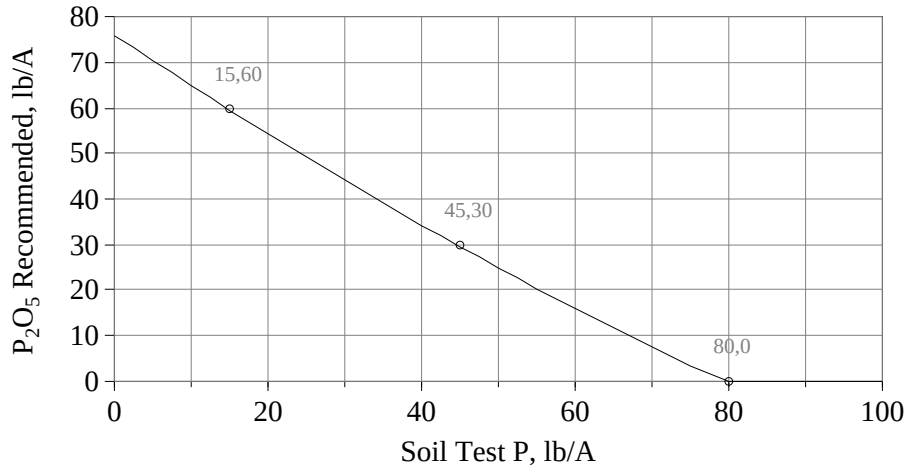
Second-year trees should be fertilized three times during the season.

1. **Late-February (month before growth starts)** - Apply 250 pounds of 10-10-10 fertilizer per orchard acre, broadcast evenly in a 5 to 6 feet wide band (2 to 3 feet wide on each side of trees).
2. **Mid-May** - Apply 150 pounds of calcium nitrate or 75 pounds of 34-0-0 or 55 pounds of 46-0-0 per orchard acre in a 5 to 6 feet wide band.
3. **Early to mid-July** - Repeat application as made in May. Do not apply after August 15.

Plums (non-bearing) (*Code 124*)

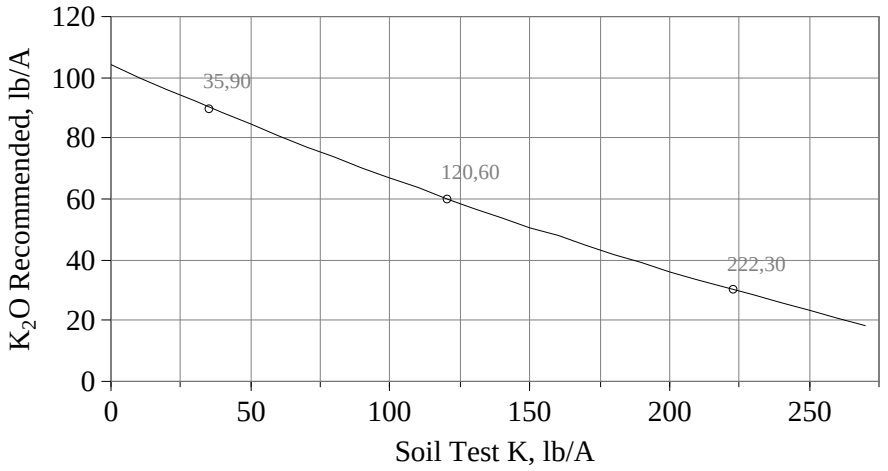
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



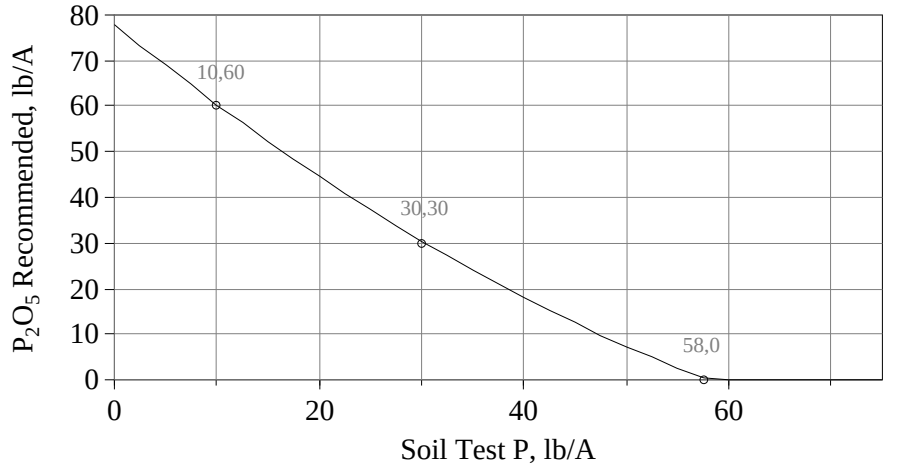
K Recommendations, Coastal Plain

$K_2O = 104 - 0.403K + 0.00032K^2$



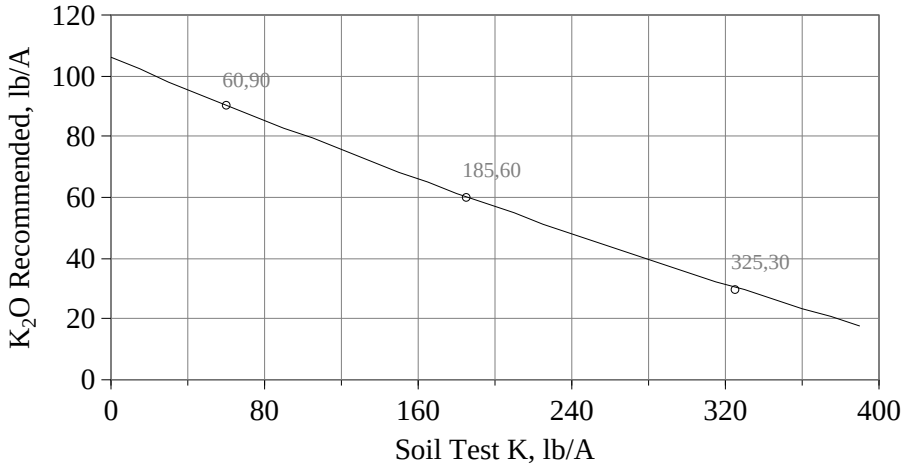
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.265K + 0.00010K^2$



Raspberries (commercial) (*Code* #132)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A				
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A				
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	096ph	096ph	096pkh	096pkh
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	096ph	096ph	096pkh	096pkh

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

096ph. The phosphorus levels are high; therefore, no phosphorus (P) is needed. Apply fertilizer that contains only nitrogen (N) and potassium (K), such as 15-0-15.

096pkh. The phosphorus and potassium levels are high; therefore, no phosphorus (P) or potassium (K) fertilizers are needed. Apply only a nitrogen-containing fertilizer, such as 34-0-0 or 46-0-0.

continued -»

Fact Sheet:

For All Varieties

If soil test phosphorus (P) is less than 20 pounds per acre, apply 300 pounds of 0-46-0 per acre preplant and incorporate in the top 6 to 8 inches of soil to raise available P to a level needed by raspberries.

Trailing Raspberries such as "Dorman Red" (6 to 8 feet apart):

Brambles do best when fertilized twice a year. After the plants have been set and settled by rain, sprinkle 1/6 cup of 10-10-10 fertilizer in a 24-inch circle around each plant. In June, sprinkle 1/4 cup of 10-10-10 fertilizer over a 30-inch circle. These two applications should satisfy the fertilizer needs of the plants for the first year.

The nutritional needs of the plants in the second year should be supplied as follows:

1. In early March or about the time of bud break, sprinkle one cup of 10-10-10 fertilizer over a five-foot circle around each plant.
2. In June sprinkle one cup of 10-10-10 fertilizer over the same five-foot circle around each plant.

Fertilization in succeeding years should be as follows:

1. In early March sprinkle evenly two cups of 10-10-10 fertilizer over a six-foot circle around each plant.
2. In June sprinkle evenly one cup of 10-10-10 fertilizer over the same six-foot circle around each plant. If new cane growth is excessive (over 12 feet for individual canes), omit this application.

Hedgerow Planting of Floricane Varieties such as "Latham" (summer fruiting):

During the year of establishment, fertilize the planting in March, June, and August (if needed). Apply 4½ pounds of 10-10-10 fertilizer per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 2-foot wide band where the plants or root cuttings are planted. Do not apply an excessive amount of fertilizer near newly set plants.

Fertilization the second year and thereafter should consist of two applications annually. Apply 11 pounds of 10-10-10 fertilizer per 100 feet of row over a 3-foot wide band in early March. In June, apply 5½ pounds of 10-10-10 fertilizer per 100 feet of row evenly over a 3-foot wide band.

Hedgerow Planting of Primocane Raspberry Varieties (late summer and fall fruiting varieties such as "Heritage" and "Redwing" pruned to ground level each winter):

During the year of establishment, fertilize the planting in March and June. Apply 4½ pounds of 10-10-10 fertilizer per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 2-foot wide band down the row. Do not apply an excessive amount of fertilizer near newly set plants.

In the second year, fertilize the planting in March and June. Apply 9 pounds of 10-10-10 per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 3-foot wide band down the row.

In the third year and after, fertilize the planting in March and June. Apply 13 pounds of 10-10-10 per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 4-foot wide band down the row.

Note 1: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Note 2: On soils testing high in phosphorus and potassium, substitute 34-0-0 for 10-10-10 at one-third the rate or 46-0-0 at one-fourth the rate.

Note 3: On soils testing high in phosphorus and low or medium in potassium, use 15-0-15 at a 50% higher rate than the 10-10-10.

Strawberries-Plasticulture (*Code* #130)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-130	*-120-70	*-120-0	*-120-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-90-130	*-90-70	*-90-0	*-90-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-130	*-60-70	*-60-0	*-60-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-130	*-0-70	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre Piedmont: Low: 0 - 120 lbs/acre; Medium: 121 - 240 lbs/acre; High: >240 lbs/acre
Boron:	Apply 0.5 pound of boron (B) per acre in the preplant fertilizer.
Sulfur:	Apply 12 pounds sulfur (S) per acre on coarse textured soils (sands, loamy sands, sandy loams).

continued -»

Fact Sheet:

Nitrogen

Coarse Textured Soils (sands, loamy sands, sandy loams):

Apply a total of 110-120 pounds nitrogen(N) per acre. Higher rate of N can affect fruit quality. Broadcast 60 pounds nitrogen in the fall prior to bedding. Apply 50-60 pounds nitrogen in the spring through the drip system. Begin applications when vigorous spring growth begins. This is usually early in mid-February in south Georgia and several weeks later in middle Georgia. Apply at a rate equivalent to 0.60 pounds nitrogen per acre per day throughout the flowering and fruiting season. The nitrogen can be injected daily, weekly, or bi-weekly. On very coarse sands daily or weekly is preferable. Nitrogen can be supplied through the drip system using either nitrogen solutions or calcium nitrate ($CaNO_3$).

Heavy Textured Soils (sandy clay loams or heavier):

Apply a total of 80-90 pounds nitrogen per acre. Broadcast 40 pounds nitrogen in the fall prior to bedding. Apply 40-50 pounds nitrogen in the spring through the drip system. Begin applications when vigorous spring growth begins. This is early to mid-February in south Georgia and several weeks later in middle Georgia. Apply at a rate equivalent to 0.50 pounds nitrogen per acre per day throughout the flowering and fruiting season. The nitrogen can be injected daily, weekly, or bi-weekly. Nitrogen can be supplied through the drip system using either nitrogen solutions or calcium nitrate ($CaNO_3$).

Phosphorus and Potassium

All of the phosphorus(P_2O_5) and potassium (K_2O) should be applied in the fall prior to bedding. If a spring application of phosphorus is made apply in one application and limit the application rate to 10 to 15 pounds P_2O_5 per acre. Recent research shows that all the potassium (K_2O) can be applied preplant. If additional potassium is needed it can be injected into the drip system.

Boron

Do not exceed 0.5 pounds boron(B) in the preplant fertilizer application. Base any spring applied boron through the drip system or foliar sprays on leaf analysis.

Sulfur

Sulfur(S) is recommended on sands, loamy sands and sandy loams. Apply 12 pounds of sulfur per acre in the preplant fertilizer or 1 pound sulfur per acre per week for 12 weeks through the drip system. Nitrogen-Sulfur solutions or magnesium sulfate can be used to supply the sulfur.

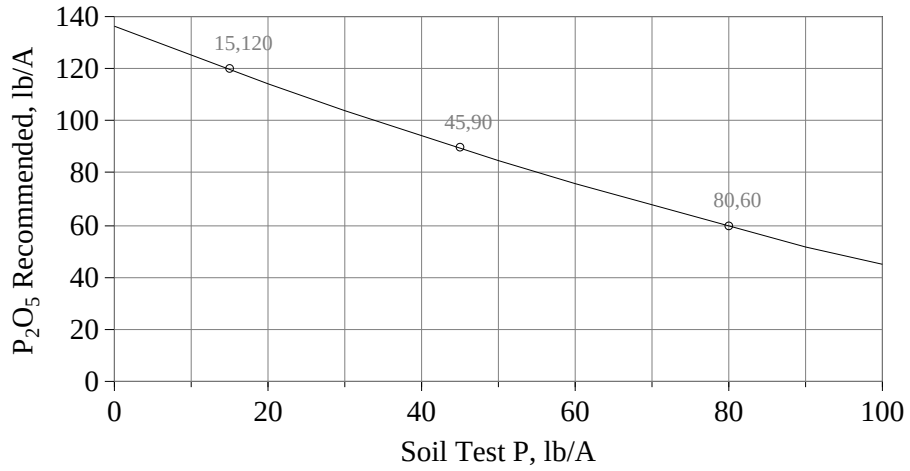
Plant Analysis

Plants should be monitored throughout the season using plant analysis. Check with your County Agent for sampling procedures.

Strawberries-Plasticulture (*Code 130*)

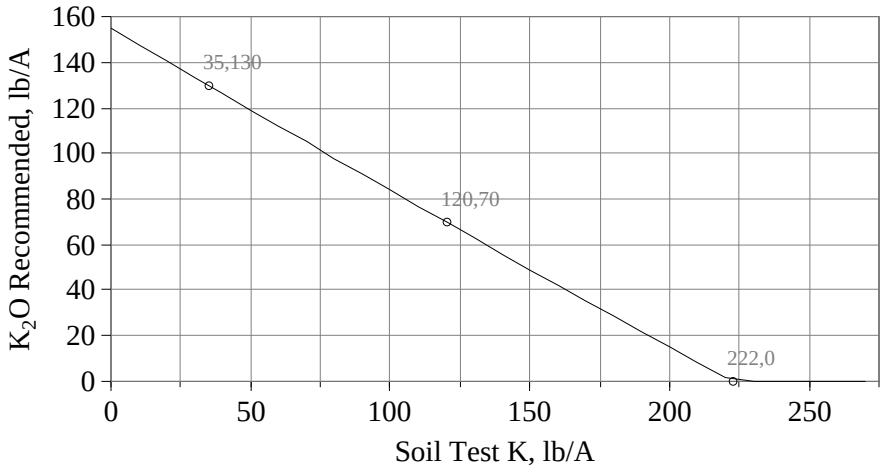
P Recommendations, Coastal Plain

$P_2O_5 = 136 - 1.132P + 0.00220P^2$



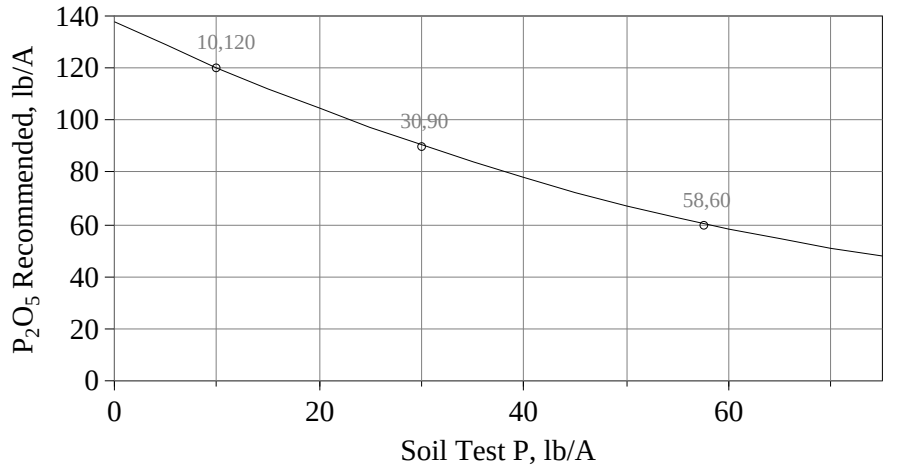
K Recommendations, Coastal Plain

$K_2O = 155 - 0.724K + 0.00012K^2$



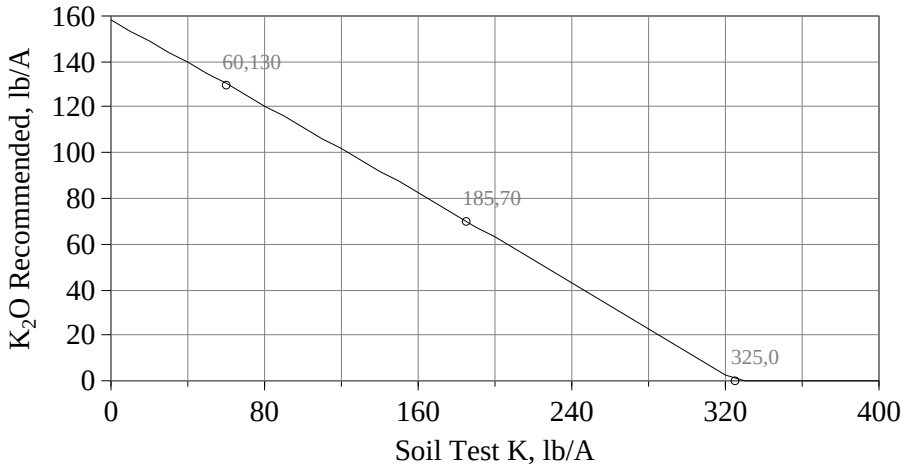
P Recommendations, Piedmont

$P_2O_5 = 138 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 158 - 0.460K - 0.00008K^2$



Olives (*Code* #OLV)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-80-100	*-80-50	*-80-0	*-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-100	*-40-50	*-40-0	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-100	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	80-100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

Because the crop is not cold hardy, it may not survive in the Piedmont.

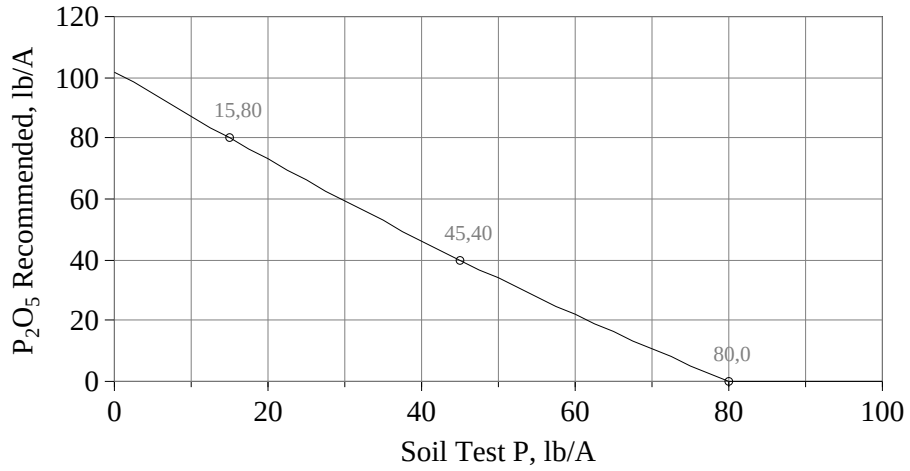
Generally, a total of 80 to 100 pounds of N per acre are needed for high density plantings (600 trees per acre), with half applied at the initiation of spring growth and the other half by mid May.

Low levels of B may occur on very sandy and low organic matter soils (less than 1% OM). Olive leaf analysis is the best guide for knowing if boron fertilization is needed.

Olives (*Code OLV*)

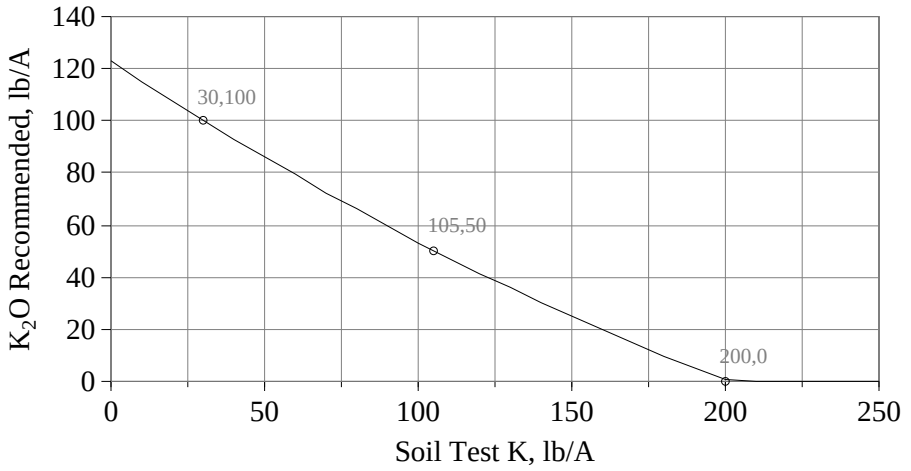
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



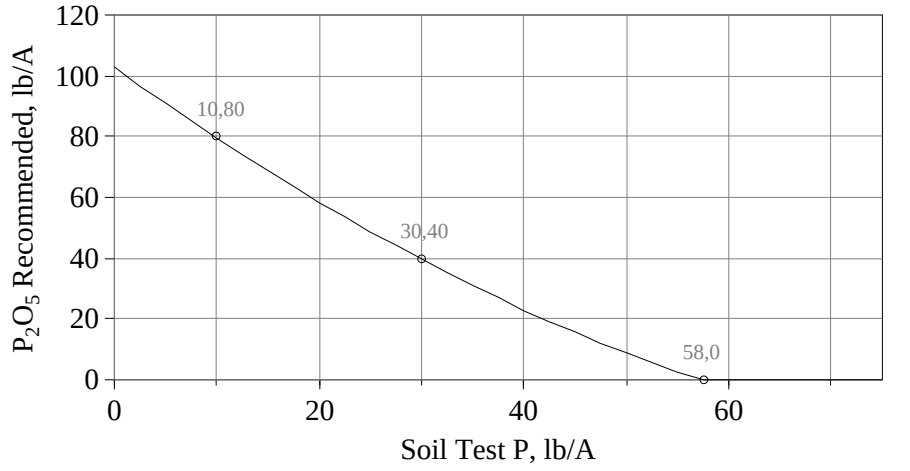
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



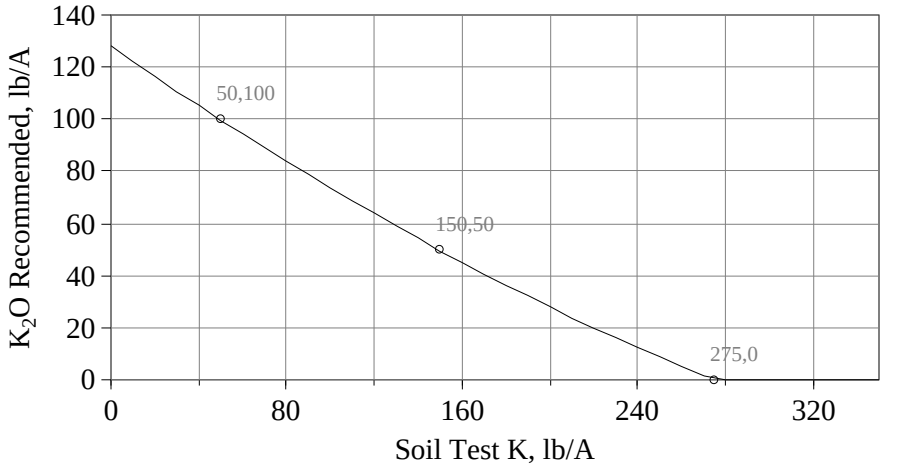
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-165	*-200-50	*-200-0	*-200-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-165	*-80-50	*-80-0	*-80-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-165	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-165	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

Comments

Soil Sampling Depth - Sample the top 6 to 8 inches or the depth of tillage prior to establishing the vineyard. Sample the top 4 inches in later years.

Proper soil preparation prior to planting is essential to protect the investment in vines. Because phosphorus (P) and ag lime are especially slow to move in the soil, it will benefit the vines to incorporate any recommended lime and P with tillage to a depth of at least 6 to 8 inches prior to planting. If soil test P is very low, large amounts of P fertilizer will be recommended to supply P for future years. Although potassium (K) is a bit more mobile, it too should be incorporated along with the P and lime prior to planting. Dolomitic lime is recommended so that adequate magnesium (Mg) is also supplied. The P and K recommendations provided are primarily for land preparation prior to establishment. After the vines are established, use petiole analysis for P and K, as well as other nutrient recommendations. If P, K, and lime are applied prior to planting and according to a soil test, then nitrogen (N) is recommended as follows for the first three years and for mature vineyards.

continued -»

***Nitrogen (N) recommendation:**

First year vines – Apply one-fourth (¼) ounce of 46-0-0 fertilizer or its equivalent per vine starting after growth begins in the spring and repeat at four to six week intervals if at least four inches of rain or overhead irrigation have been received since the last fertilization. Apply the fertilizer fairly evenly in a circle 18 inches in diameter with the vine in the center. Reduce the rate or frequency of fertilizations if you see any fertilizer burn. The total number of fertilizer applications for the year will probably be four to five in South Georgia and three to four in North Georgia. Do not fertilize the vines after late August in South Georgia and late July in North Georgia. Slow release nursery fertilizers also give good results with fewer fertilizer applications. Follow the manufacturer's directions on the bag.

Second year vines - Timing and method of applications should be similar to the first year. However, the rate should be increased to one ounce of 46-0-0 or its equivalent and the diameter of the broadcast circle should be increased to three and one half to four feet. During the second year and thereafter, petiole analysis is recommended to determine if any additional P and K or other nutrients may be needed.

Third year vines - If the vines have grown off well, apply one-half pound of 46-0-0 fertilizer or its equivalent per vine in March, plus one-fourth pound of 46-0-0 fertilizer per vine in May. Evenly spread these applications along the row in a three-foot wide band or apply them in a six-foot diameter circle around each vine.

Mature vineyards - To fertilize an established vineyard, wine grapes usually need 45 to 50 pounds of N per acre annually, with 2/3 (30 pounds of N per acre) applied between bud break and bloom, and the remaining 1/3 applied after fruit set. The N can be applied in a 4 to 5 foot wide band under the trellis or injected through the irrigation system. A petiole test at full bloom can help determine if additional N, and how much, may be needed after fruit set. Adequate N is essential, but too much N can result in excessive vegetative growth, which may cause more disease pressure and may require extra pruning. Any P, K, or lime and micronutrients should be applied according to the soil test and petiole test results. The desired amount of vegetative growth per year is about three feet. If growth exceeds four feet, reduce the amount of N applied in future years.

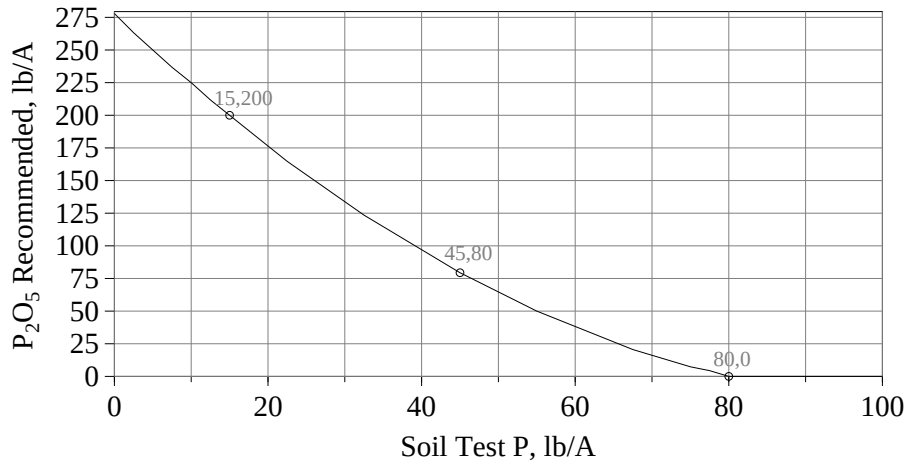
Magnesium deficiency, which shows up later in the season, is of concern to wine grape producers since in severe cases the fruit may shatter prematurely. Symptoms are a yellowing between the veins of older leaves. The yellowing progresses up the shoots as the leaves grow older. If Mg in the soil is low, follow the recommendation provided. If plant analysis indicates a Mg deficiency, apply 25 pounds Mg per acre as magnesium sulfate or other forms of soluble Mg. For more immediate correction, spray foliage with 5 to 10 pounds of magnesium sulfate in 100 gallons of water per acre.

Low levels of boron (B) may occur on very sandy soils and soils low in organic matter (less than 1%). If B petiole level (samples collected at full bloom) is less than 30 ppm, apply ¼ to ½ pound of actual B per acre in each of two foliar applications of soluble B fertilizer. Make the first application at 2 weeks prior to bloom and the second at bloom, but no earlier than 10 days after the first application. Apply no more than ½ pound of actual B per acre in each spray using enough water to cover the flower clusters thoroughly. Do not exceed this rate of application and do not reduce the 10 day interval between applications as plant damage may occur. As an alternative to 2 spring foliar applications of soluble B, a single foliar application may be made in the fall, using no more than one pound of actual B in 150 gallons of water per acre. A postharvest foliar application in fall may be more effective and present less potential for plant damage than two half-rate foliar applications in spring. Broadcasting B at five pounds of borax (10% boron) per acre to the soil surface in a strip under vines in spring may be used as an option to foliar applications.

Wine Grapes (*Code WGP*)

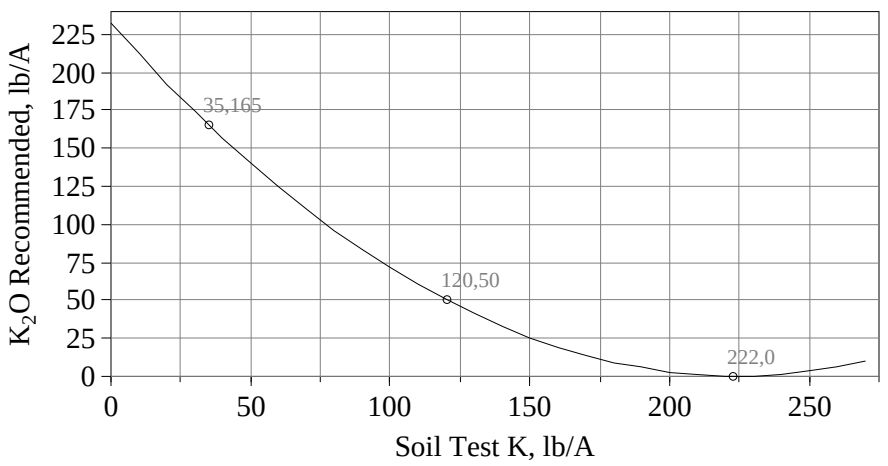
P Recommendations, Coastal Plain

$P_2O_5 = 278 - 5.582P + 0.02637P^2$



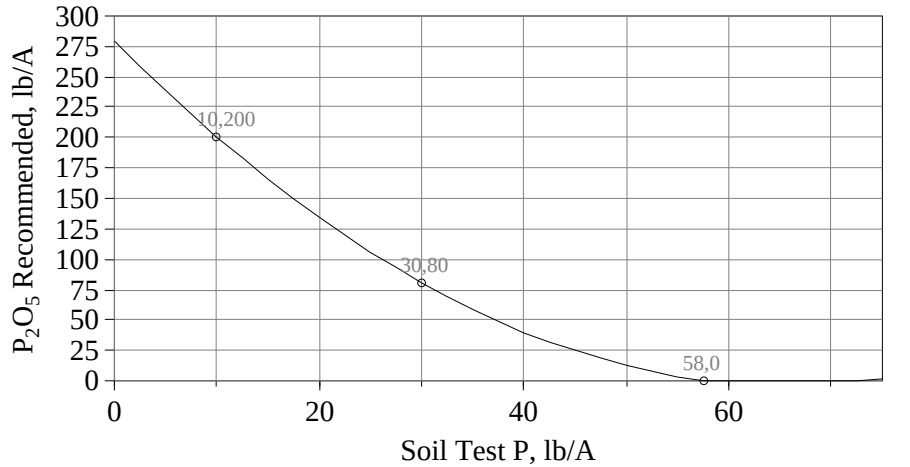
K Recommendations, Coastal Plain

$K_2O = 232 - 2.067K + 0.00461K^2$



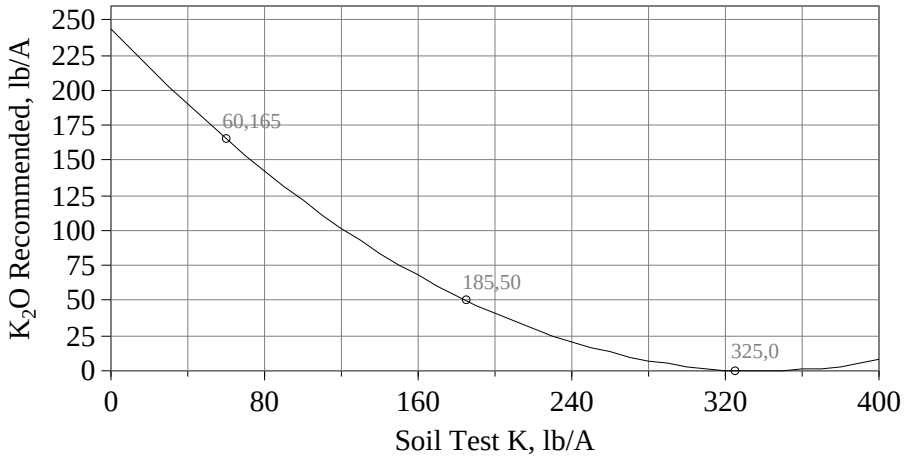
P Recommendations, Piedmont

$P_2O_5 = 280 - 8.603P + 0.06507P^2$



K Recommendations, Piedmont

$K_2O = 244 - 1.439K + 0.00212K^2$



VEGETABLES

Terry W. Kelley and George Boyhan, Extension Horticulturists – Vegetable Crops
David E. Kissel, Director – Agricultural & Environmental Services Laboratories

Asparagus (*Code* #140)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-160-240	*-160-160	*-160-80	*-160-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-120-240	*-120-160	*-120-80	*-120-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-240	*-60-160	*-60-80	*-60-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-240	*-0-160	*-0-80	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 50-80 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 50-60 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population, and method and timing of applications.

For the first year, split the fertilizer application, applying half mixed in the row at planting and the remainder when the spears emerge. For second and following years, the fertilizer application should be split; apply half around February 1 in Coastal Plain and March 1 in Piedmont and northern sections of Georgia and the remainder after harvest. (In 2 applications in Coastal Plains.)

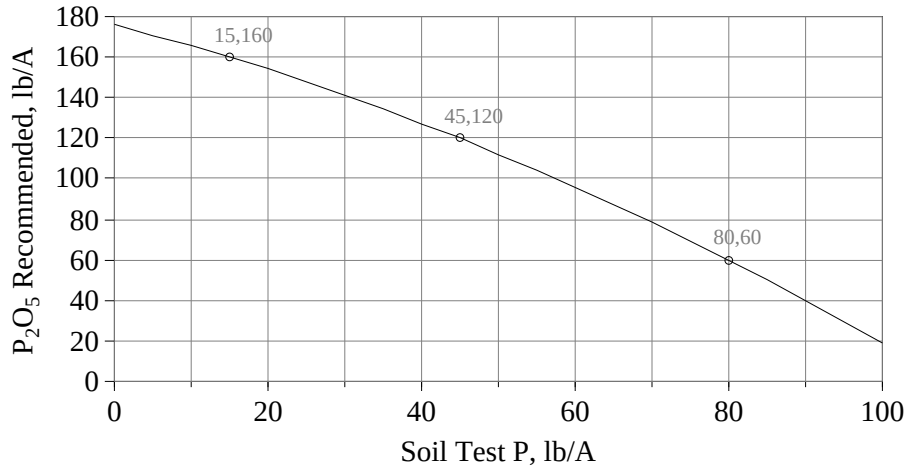
For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

Asparagus (*Code 140*)

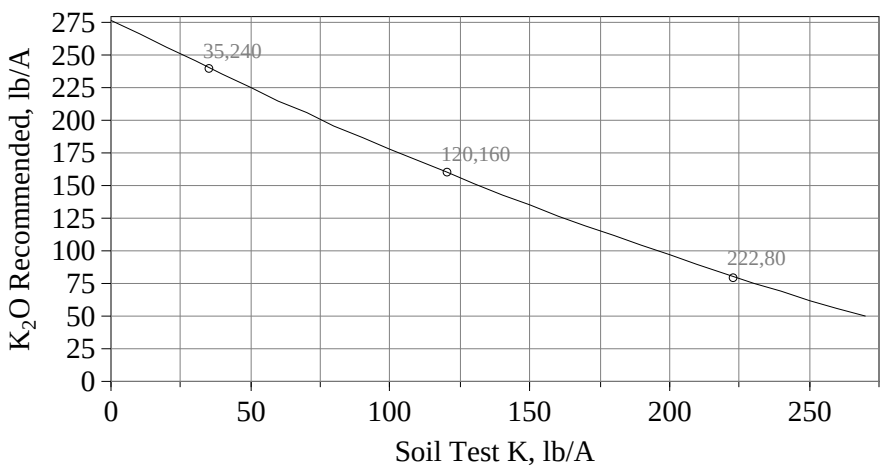
P Recommendations, Coastal Plain

$P_2O_5 = 176 - 0.982P - 0.00586P^2$



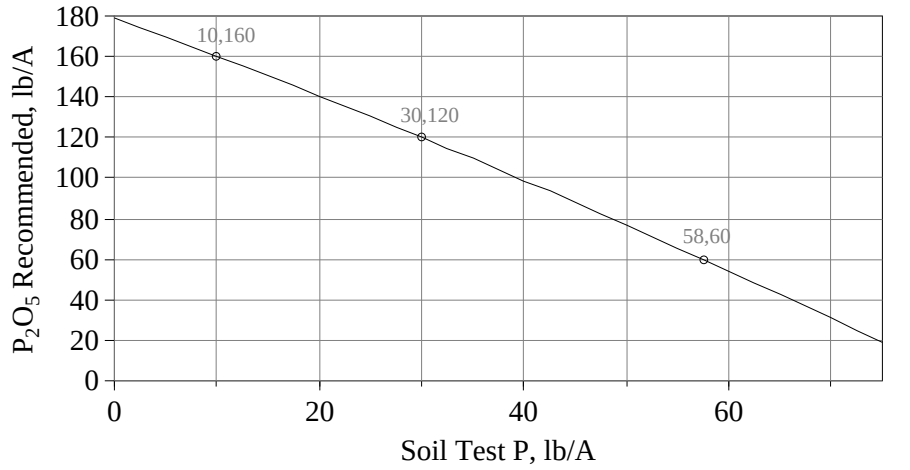
K Recommendations, Coastal Plain

$K_2O = 277 - 1.074K + 0.00086K^2$



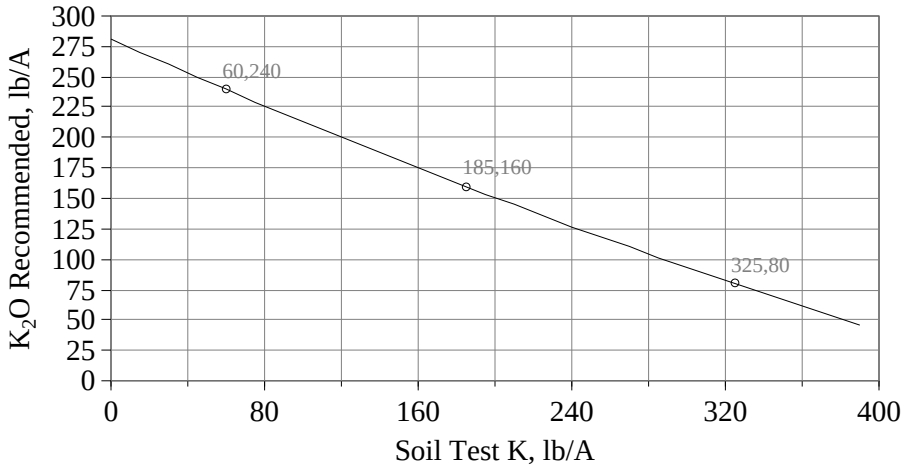
P Recommendations, Piedmont

$P_2O_5 = 179 - 1.847P - 0.00383P^2$



K Recommendations, Piedmont

$K_2O = 281 - 0.704K + 0.00026K^2$



Basil (and other herbs not listed) (*Code* #165)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-100	*-120-70	*-120-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-100-120	*-100-100	*-100-70	*-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-70-120	*-70-100	*-70-70	*-70-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-100	*-0-70	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 125 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 100 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

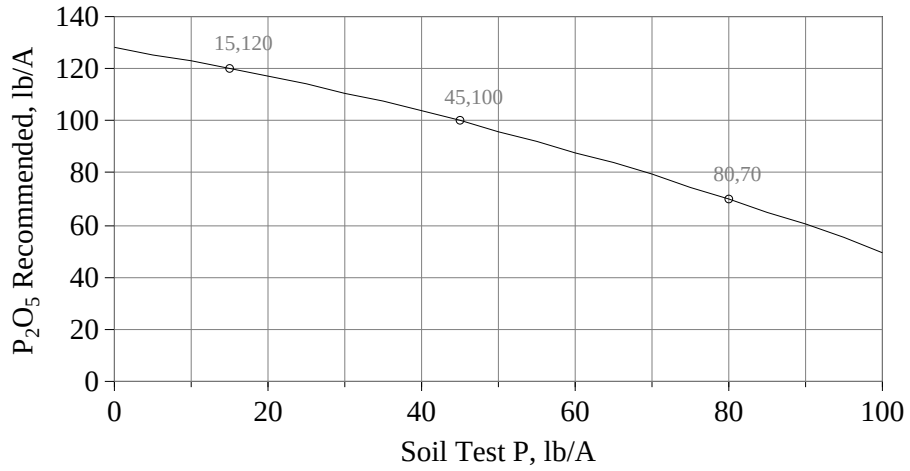
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Basil (and other herbs not listed) (*Code 165*)

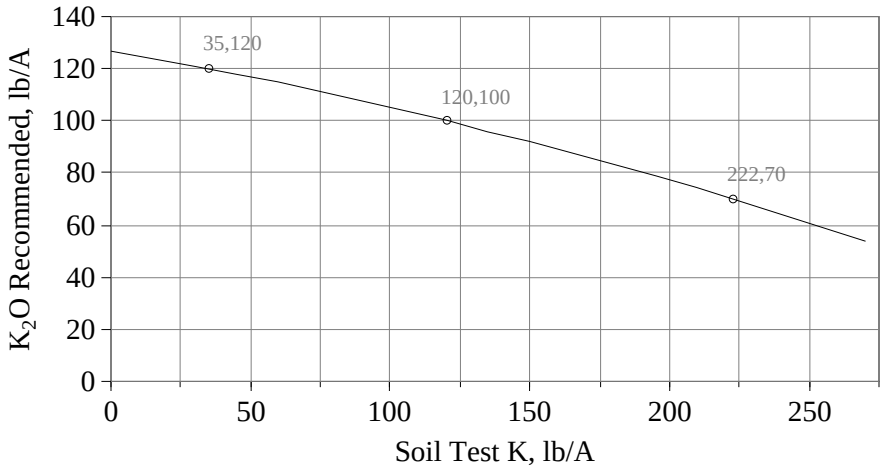
P Recommendations, Coastal Plain

$P_2O_5 = 128 - 0.491P - 0.00293P^2$



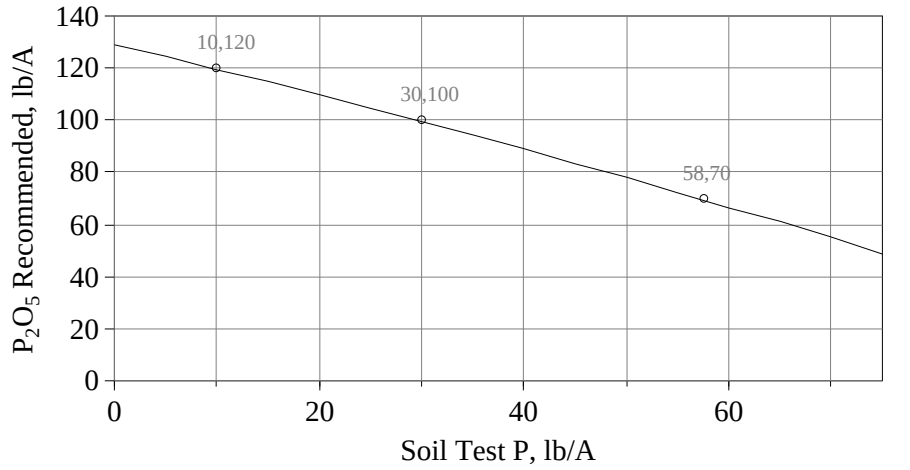
K Recommendations, Coastal Plain

$K_2O = 127 - 0.187K - 0.00031K^2$



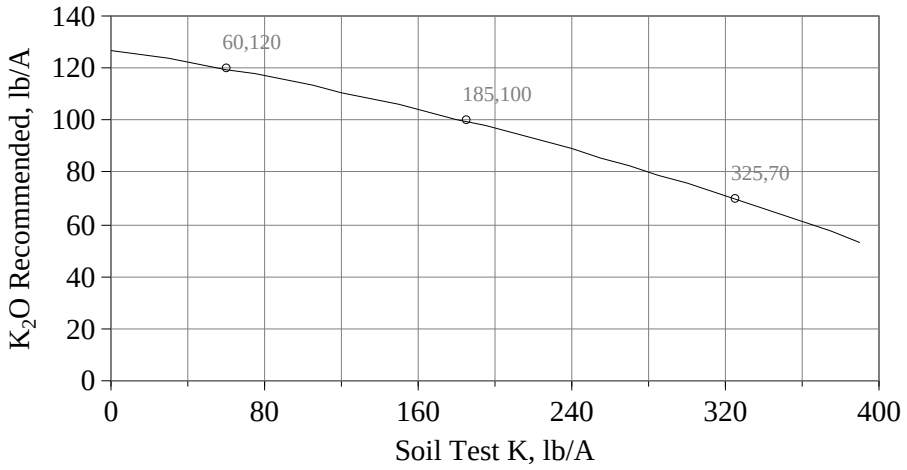
P Recommendations, Piedmont

$P_2O_5 = 129 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 127 - 0.111K - 0.00020K^2$



Beets (*Code* #144)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-180-180	*-180-120	*-180-60	*-180-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-120-180	*-120-120	*-120-60	*-120-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-180	*-60-120	*-60-60	*-60-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-30-180	*-30-120	*-30-60	*-30-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-130 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90-110 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

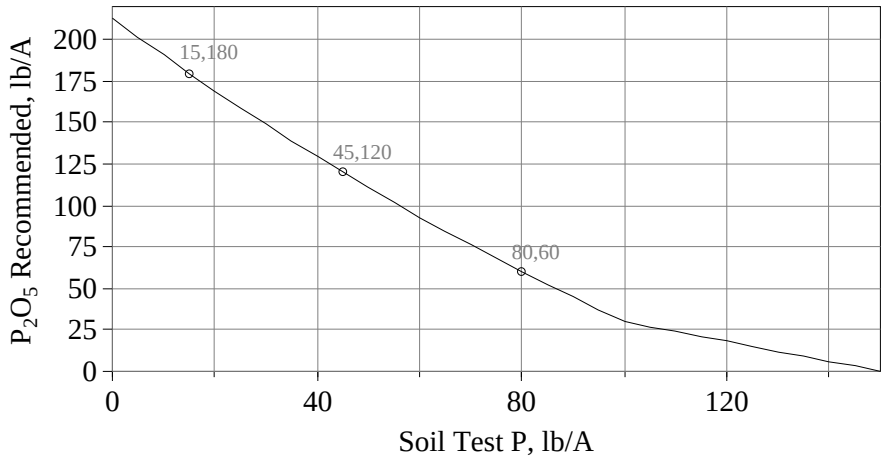
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Beets (*Code 144*)

P Recommendations, Coastal Plain

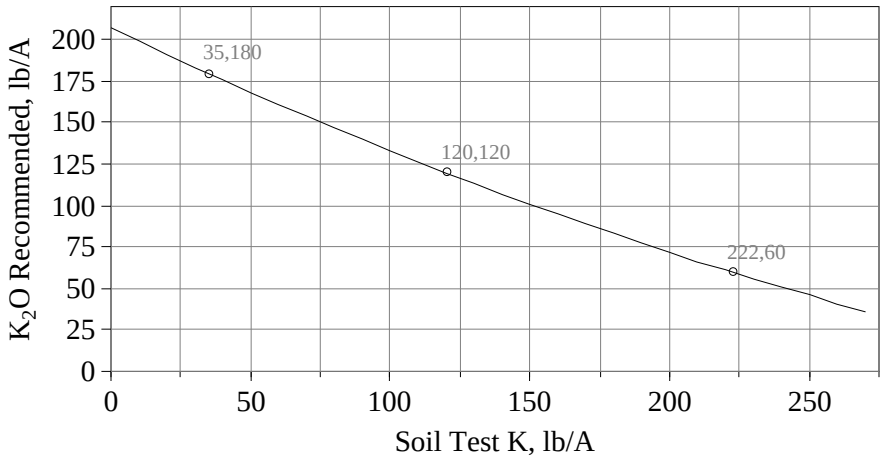
if (P < 100) $P_2O_5 = 213 - 2.264P + 0.00440P^2$

if (P ≥ 100) $P_2O_5 = 90 - 0.60P$



K Recommendations, Coastal Plain

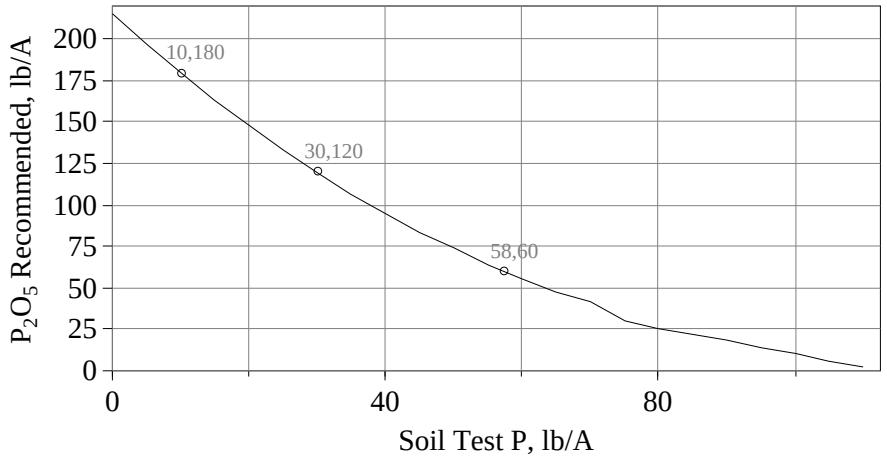
$K_2O = 207 - 0.805K + 0.00064K^2$



P Recommendations, Piedmont

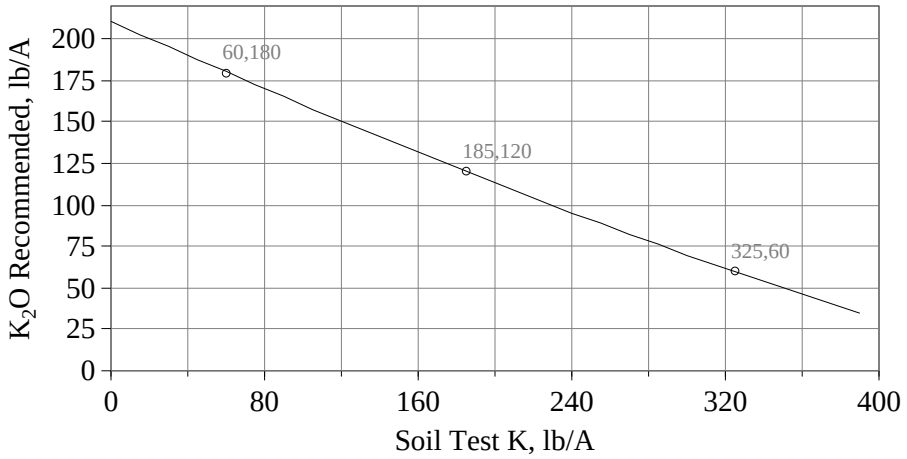
if (P < 75) $P_2O_5 = 215 - 3.689P + 0.01722P^2$

if (P ≥ 75) $P_2O_5 = 90 - 0.80P$



K Recommendations, Piedmont

$K_2O = 211 - 0.527K + 0.00019K^2$



Broccoli, fresh market (*Code* #146)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

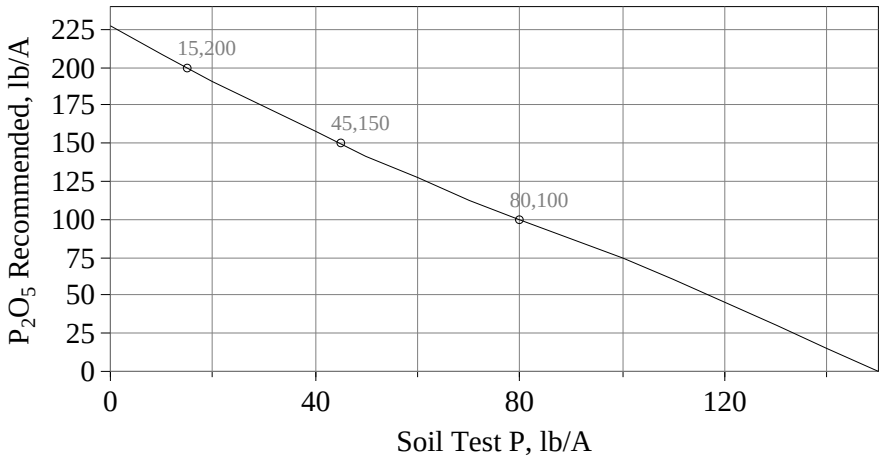
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Broccoli, fresh market (*Code 146*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

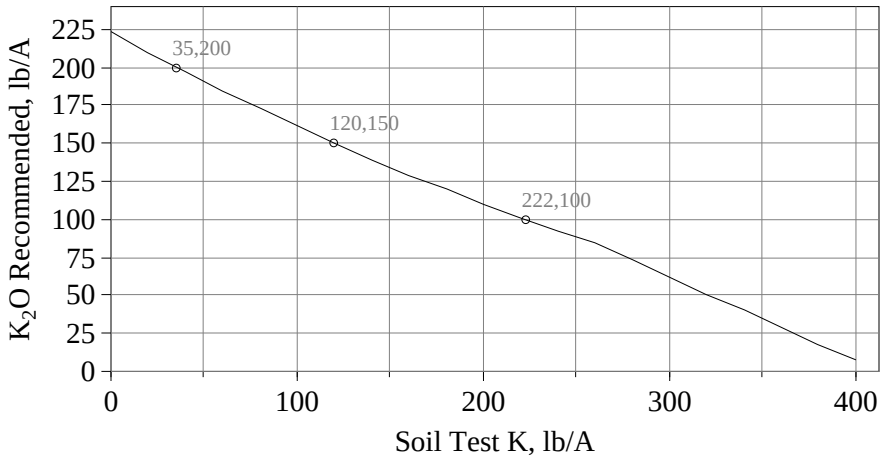
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

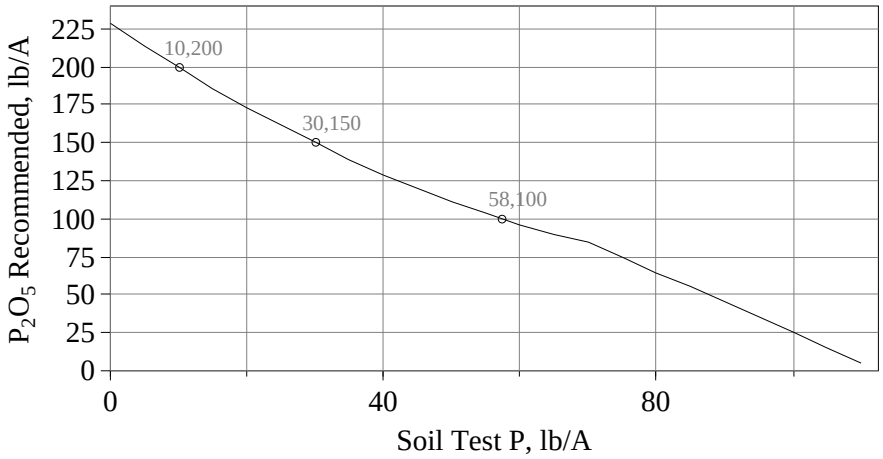
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

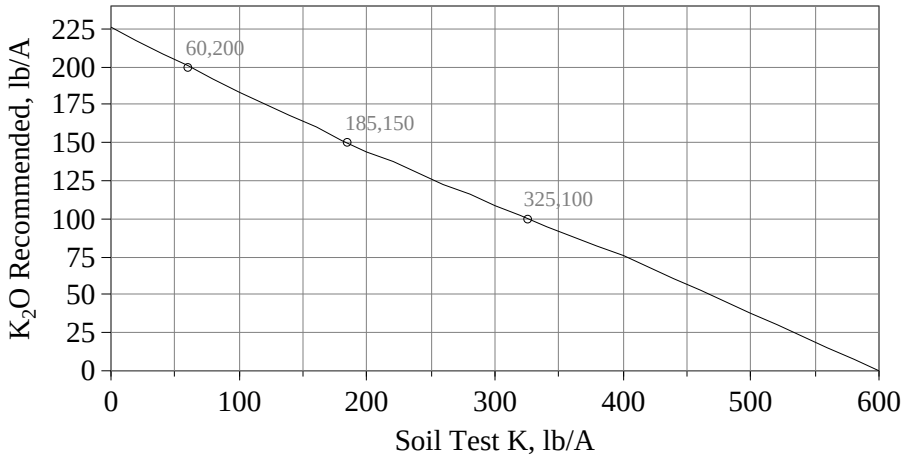
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Cabbage, fresh market (*Code* #147)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

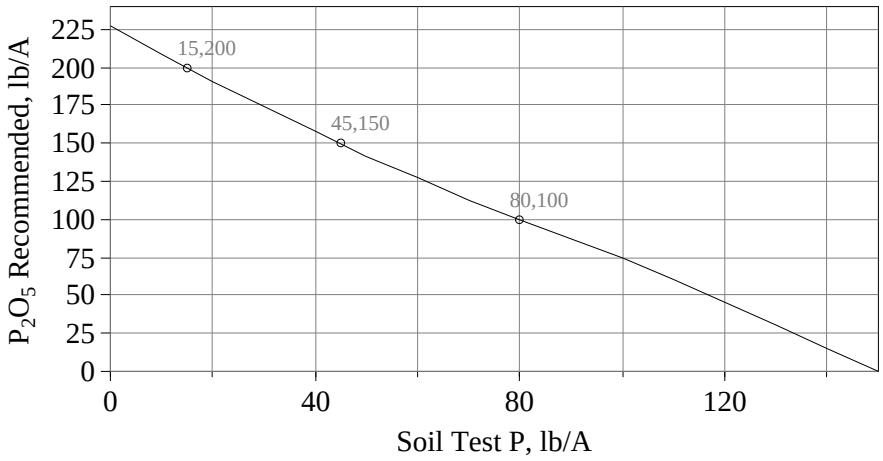
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Cabbage, fresh market (*Code 147*)

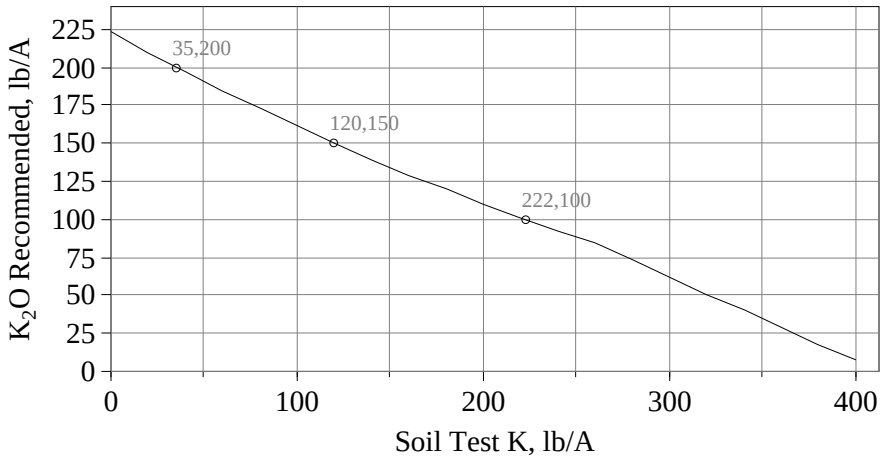
P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



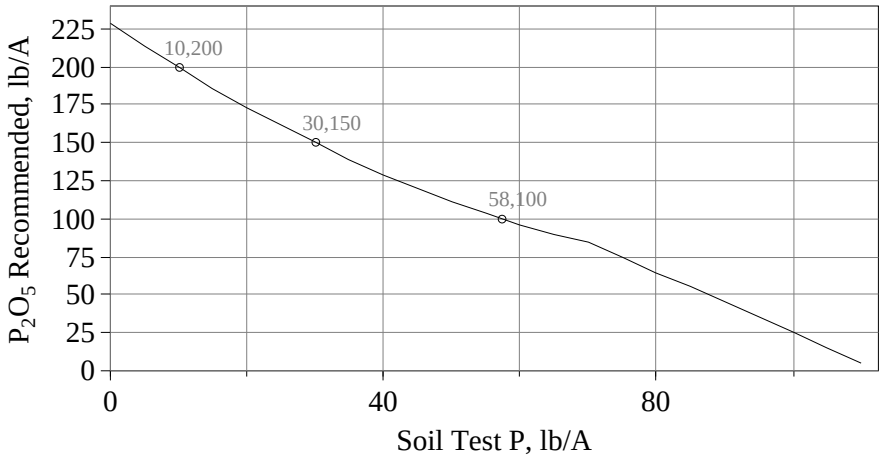
K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$
if (K ≥ 275) $K_2O = 227 - 0.55K$



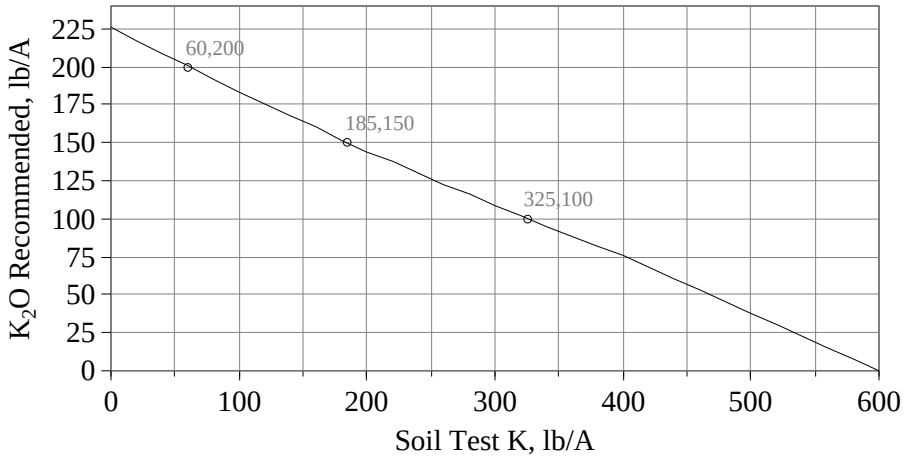
P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$
if (K ≥ 400) $K_2O = 228 - 0.38K$



Cantaloupes (*Code* #160)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches below the seeds or roots.

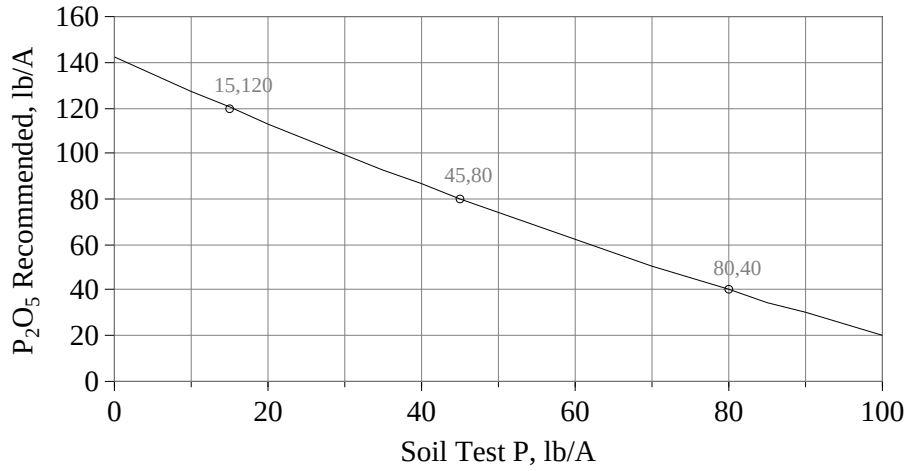
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, apply one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Cantaloupes (*Code 160*)

P Recommendations, Coastal Plain

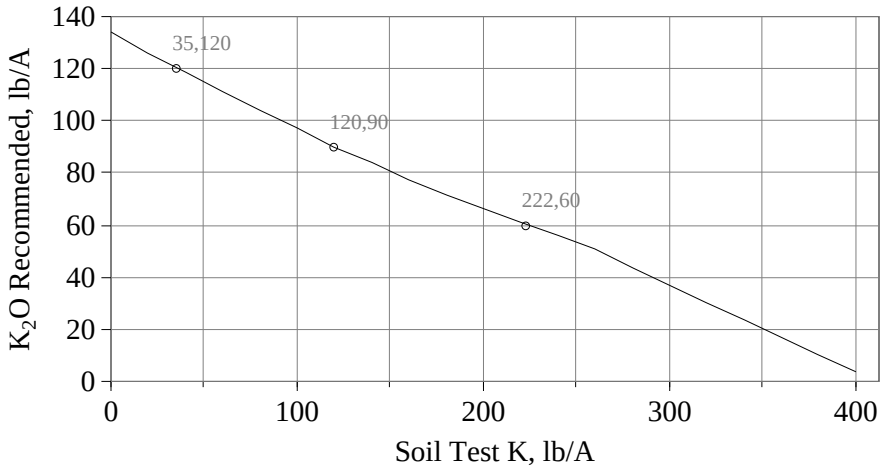
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

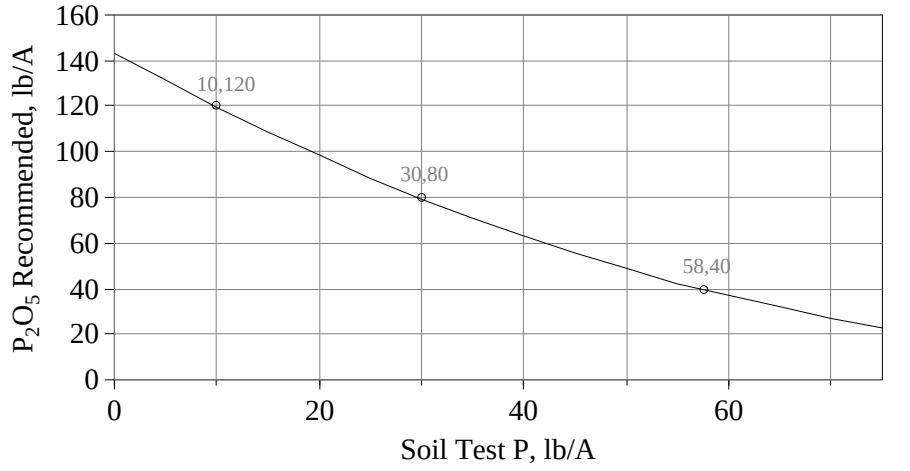
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

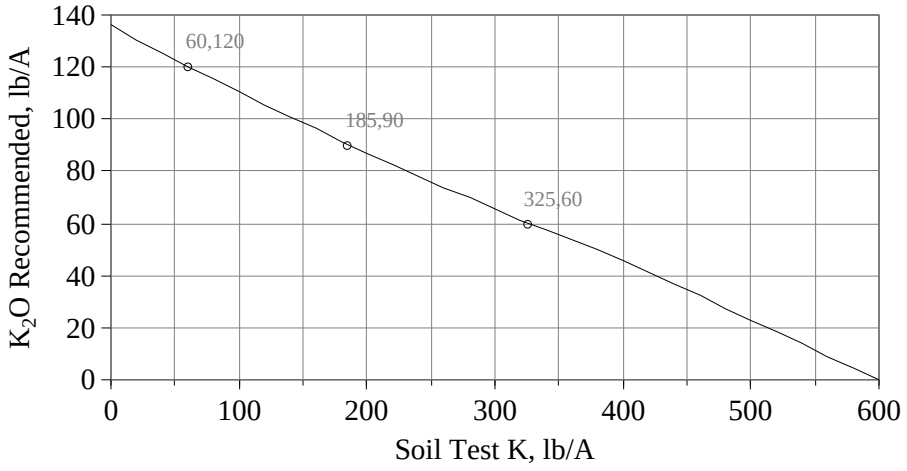
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Carrots (*Code* #145)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-180-180	*-180-120	*-180-60	*-180-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-120-180	*-120-120	*-120-60	*-120-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-180	*-60-120	*-60-60	*-60-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-30-180	*-30-120	*-30-60	*-30-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-130 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90-110 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

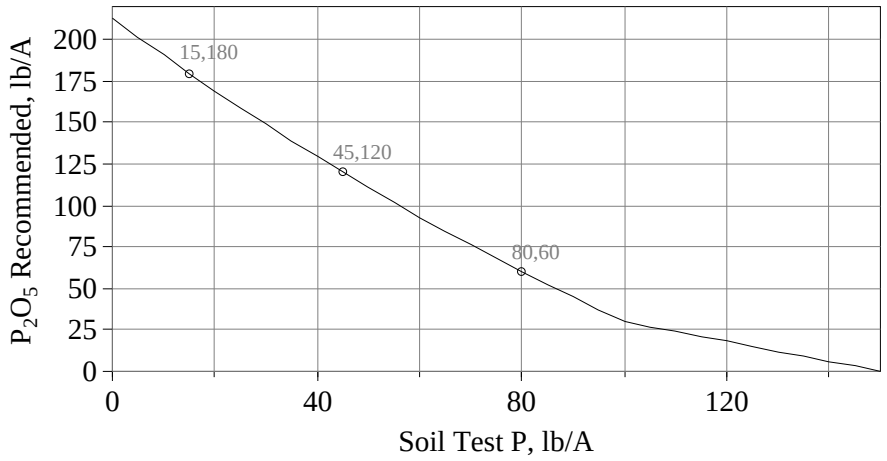
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Carrots (*Code 145*)

P Recommendations, Coastal Plain

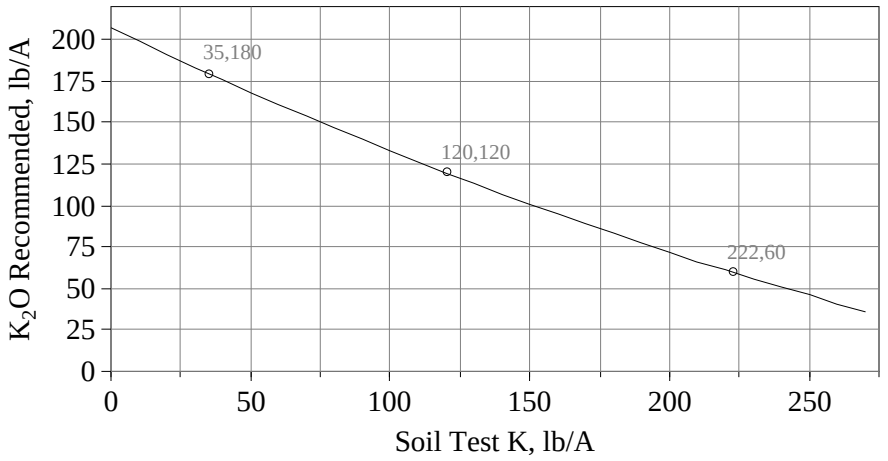
if (P < 100) $P_2O_5 = 213 - 2.264P + 0.00440P^2$

if (P ≥ 100) $P_2O_5 = 90 - 0.60P$



K Recommendations, Coastal Plain

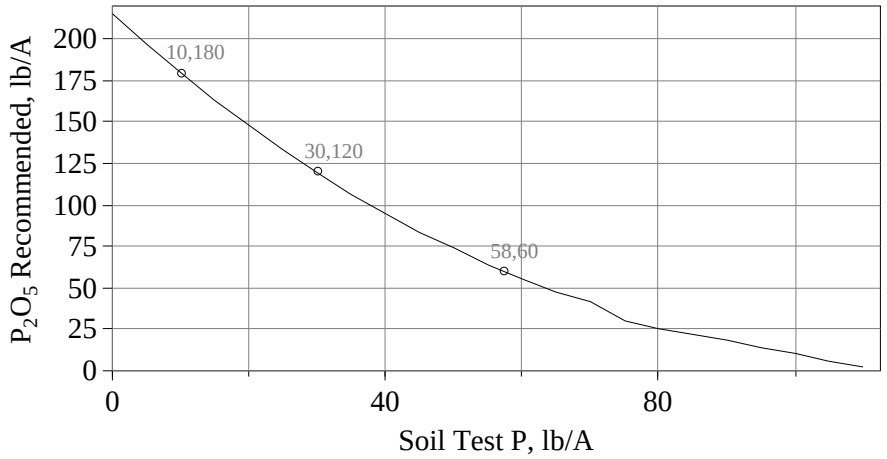
$K_2O = 207 - 0.805K + 0.00064K^2$



P Recommendations, Piedmont

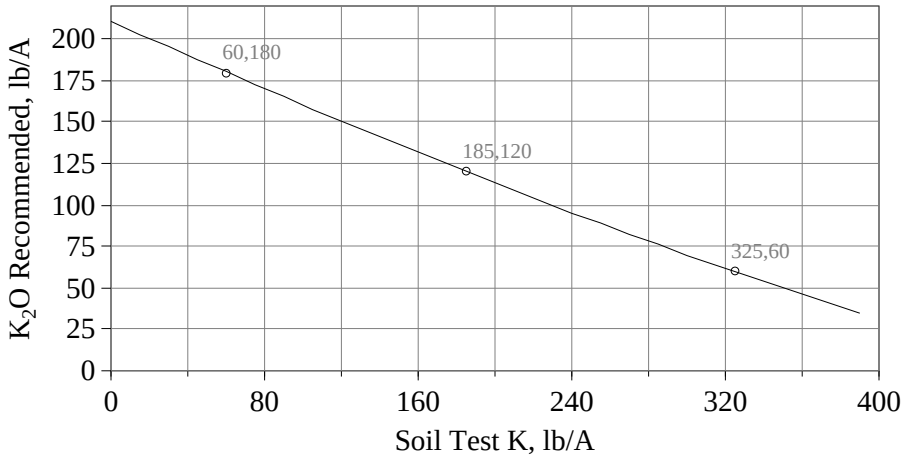
if (P < 75) $P_2O_5 = 215 - 3.689P + 0.01722P^2$

if (P ≥ 75) $P_2O_5 = 90 - 0.80P$



K Recommendations, Piedmont

$K_2O = 211 - 0.527K + 0.00019K^2$



Cauliflower, fresh market (*Code* #148)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

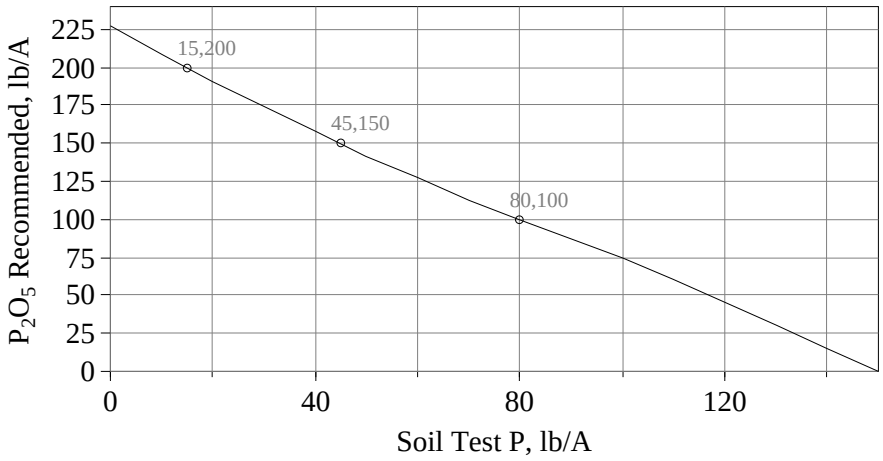
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Cauliflower, fresh market (*Code 148*)

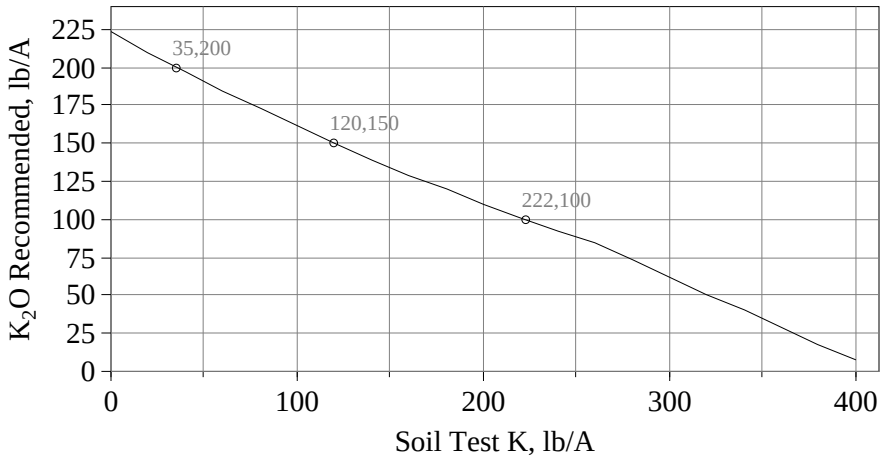
P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



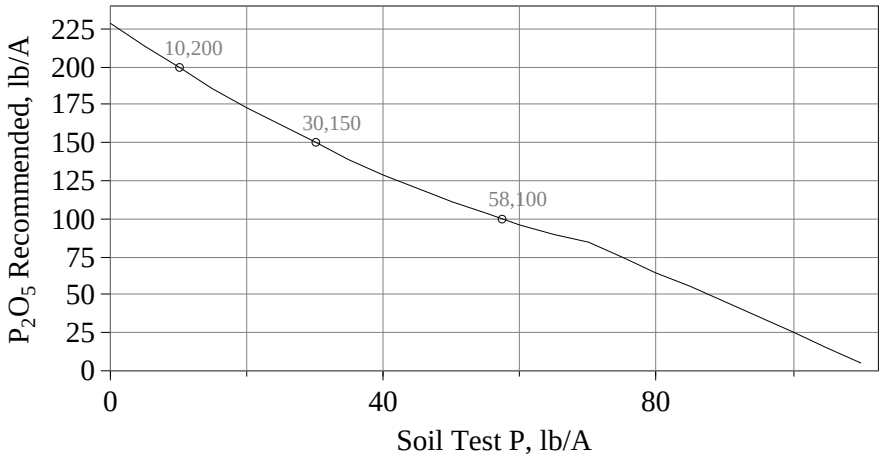
K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$
if (K ≥ 275) $K_2O = 227 - 0.55K$



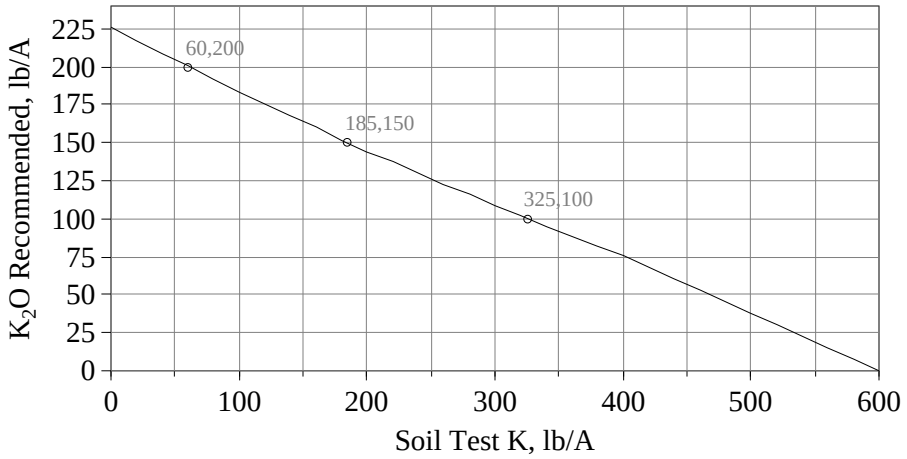
P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$
if (K ≥ 400) $K_2O = 228 - 0.38K$



Chives (*Code* #185)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-90-90	*-90-75	*-90-40	*-90-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-75-90	*-75-75	*-75-40	*-75-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-90	*-40-75	*-40-40	*-40-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-75	*-0-40	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 110 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

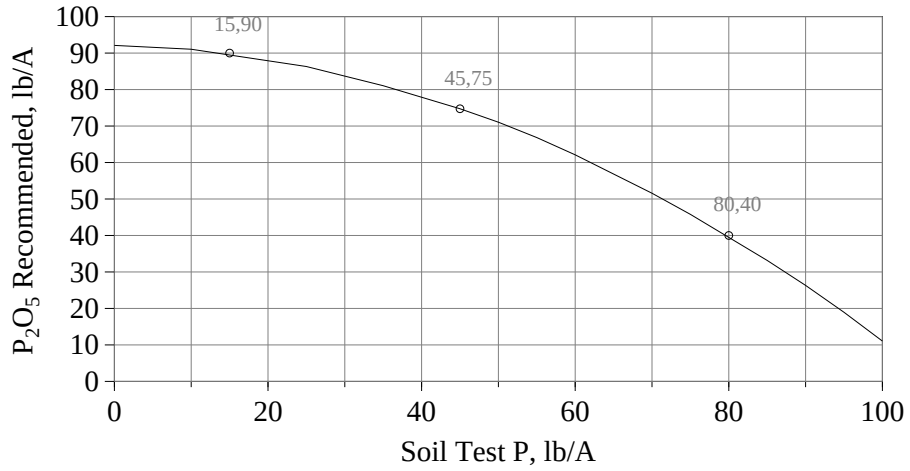
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Chives (*Code 185*)

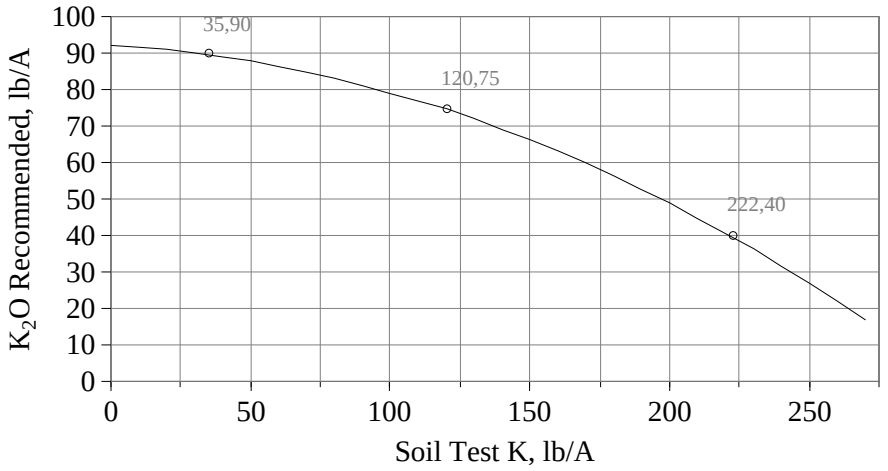
P Recommendations, Coastal Plain

$P_2O_5 = 92 - 0.039P - 0.00769P^2$



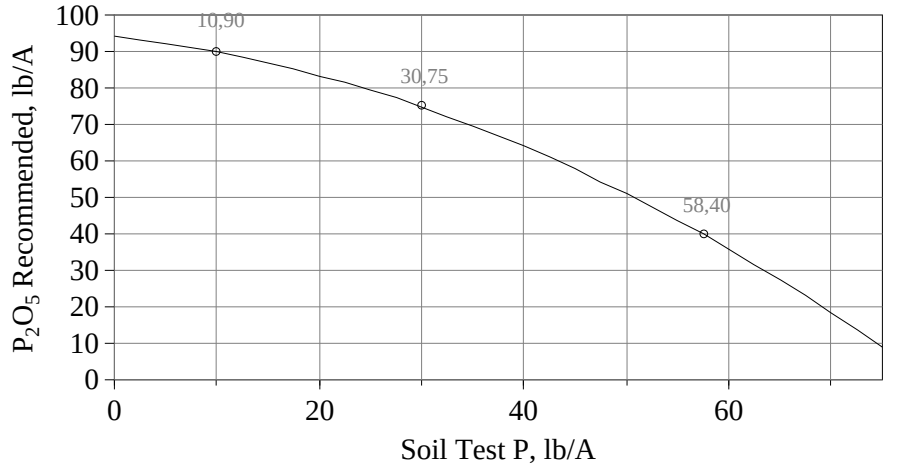
K Recommendations, Coastal Plain

$K_2O = 92 - 0.040K - 0.00088K^2$



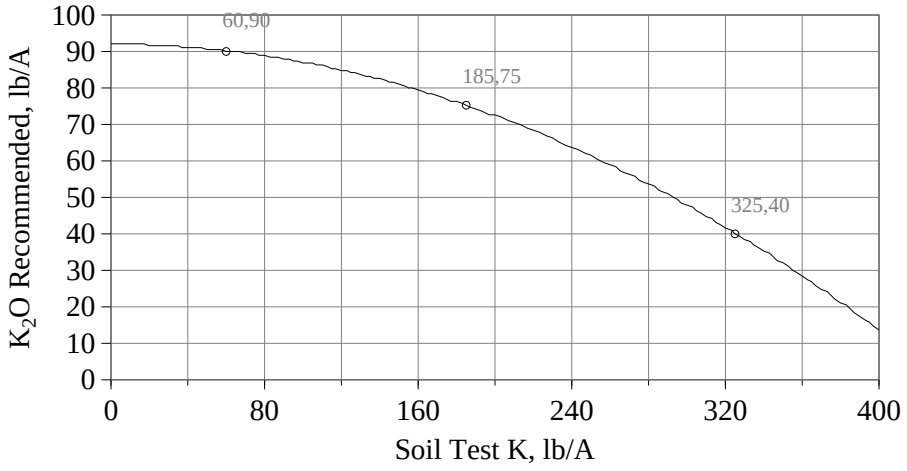
P Recommendations, Piedmont

$P_2O_5 = 94 - 0.310P - 0.01100P^2$



K Recommendations, Piedmont

$K_2O = 92 + 0.000K - 0.00049K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-100	*-120-70	*-120-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-100-120	*-100-100	*-100-70	*-100-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-70-120	*-70-100	*-70-70	*-70-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-100	*-0-70	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 125 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 100 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

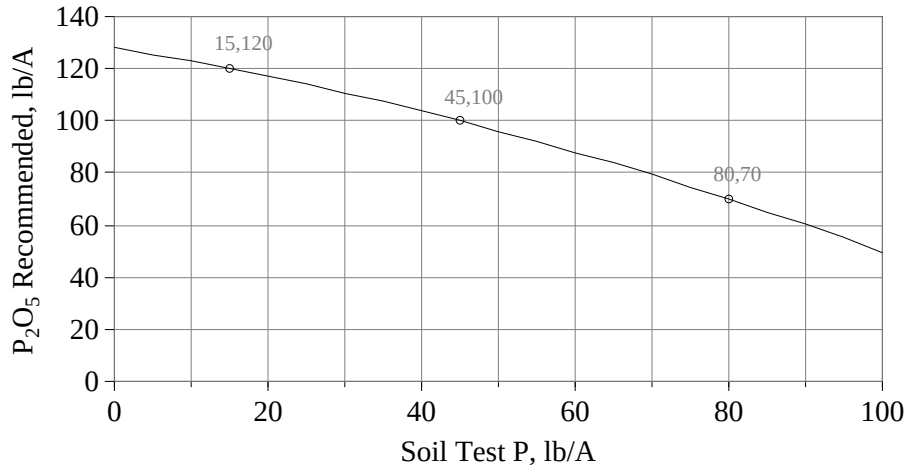
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Cilantro (*Code 184*)

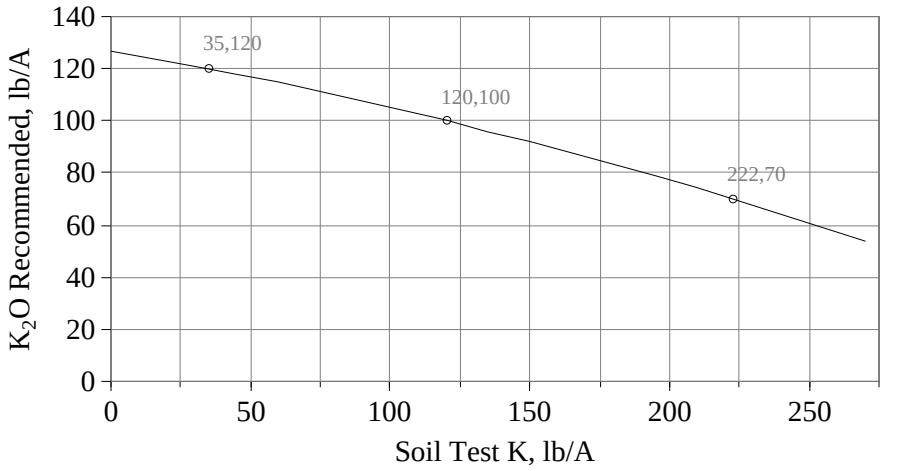
P Recommendations, Coastal Plain

$P_2O_5 = 128 - 0.491P - 0.00293P^2$



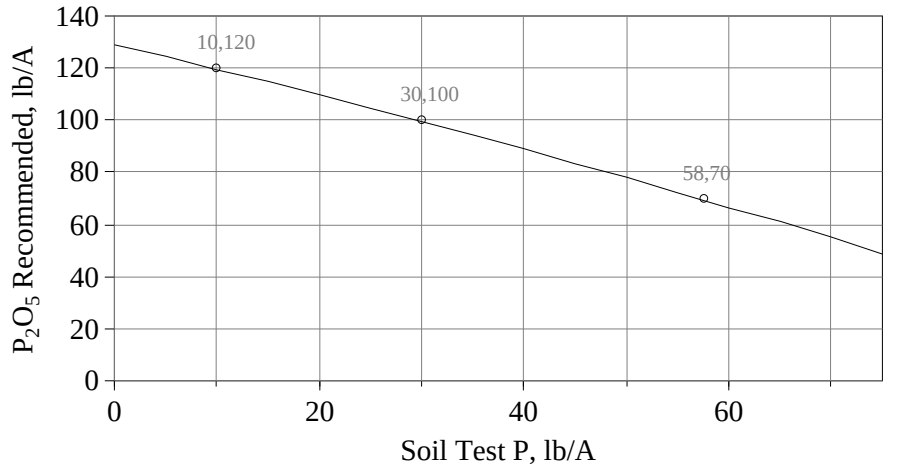
K Recommendations, Coastal Plain

$K_2O = 127 - 0.187K - 0.00031K^2$



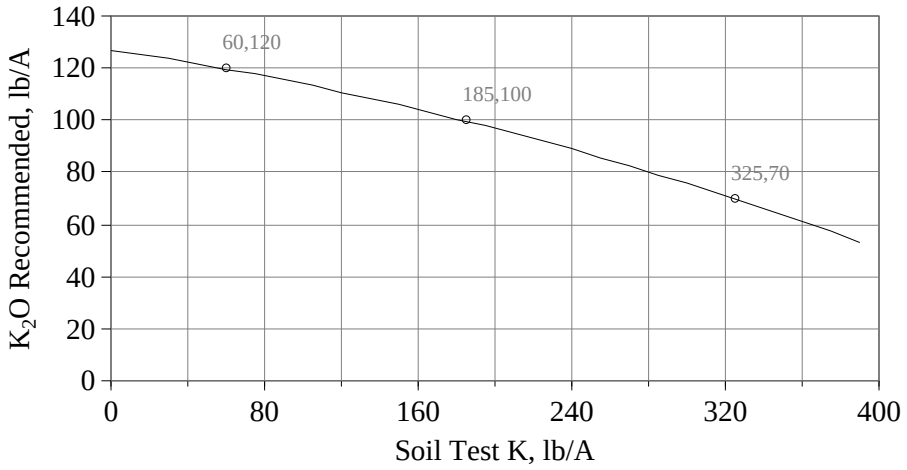
P Recommendations, Piedmont

$P_2O_5 = 129 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 127 - 0.111K - 0.00020K^2$



Collards, fresh market (*Code* #149)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

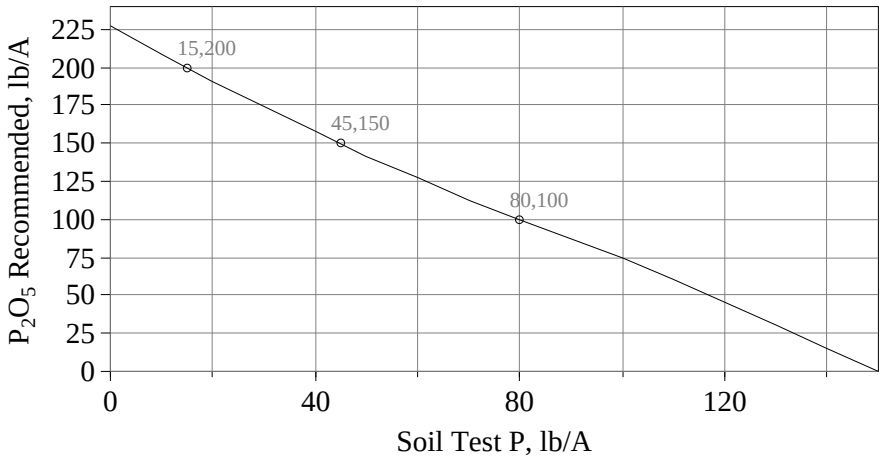
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Collards, fresh market (*Code 149*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

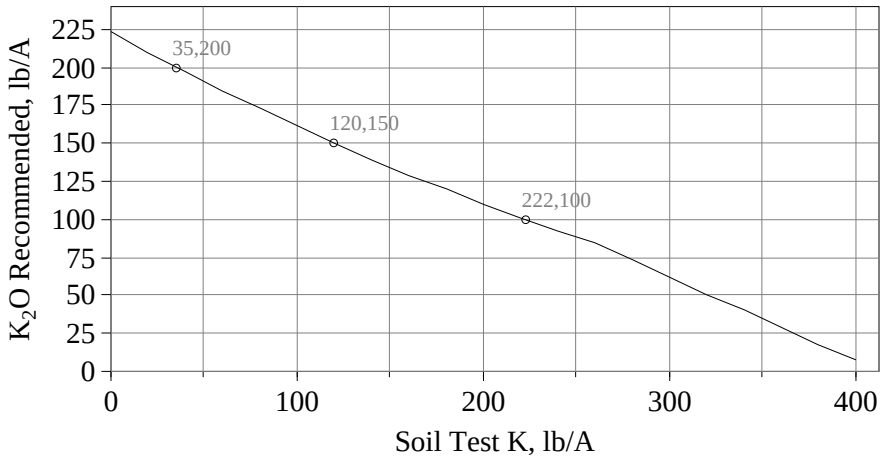
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

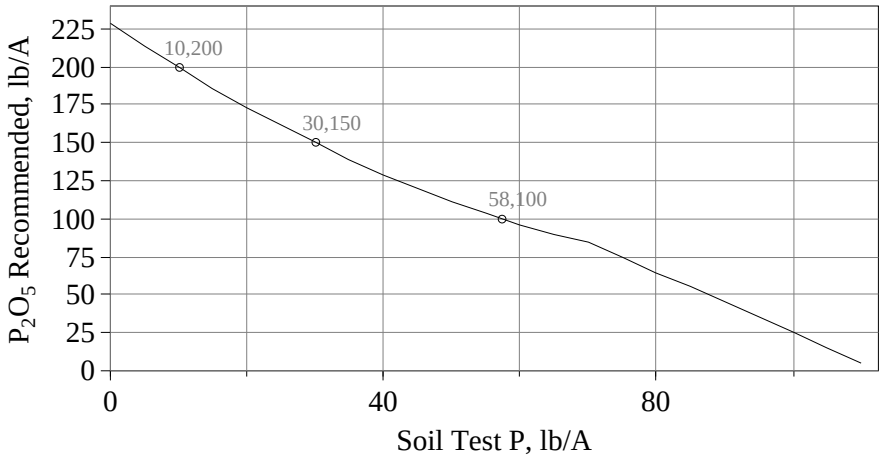
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

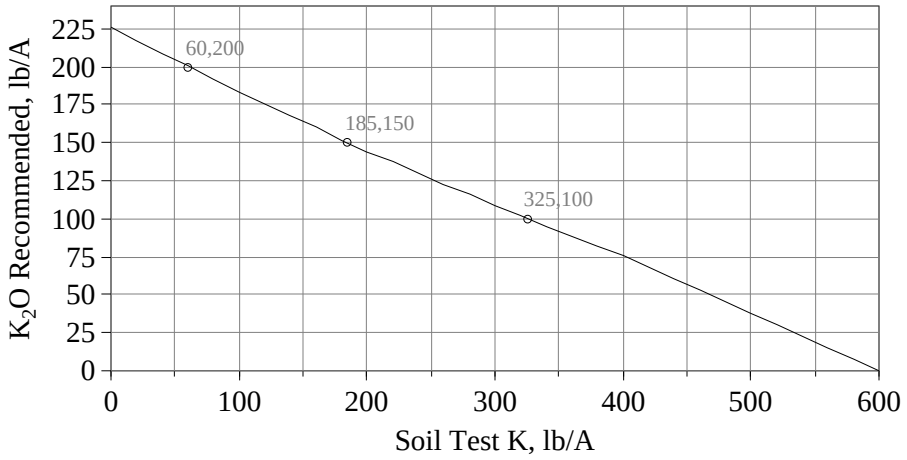
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Cucumbers (*Code* #159)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches below the seeds or roots.

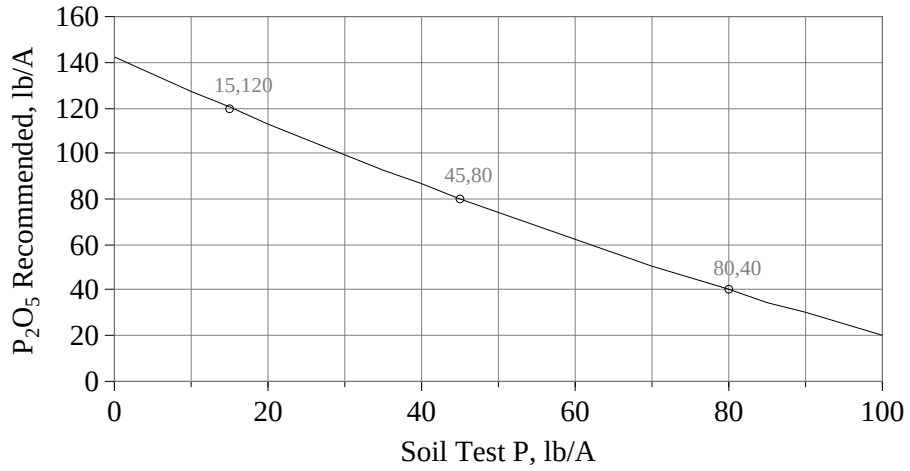
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, apply one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Cucumbers (*Code 159*)

P Recommendations, Coastal Plain

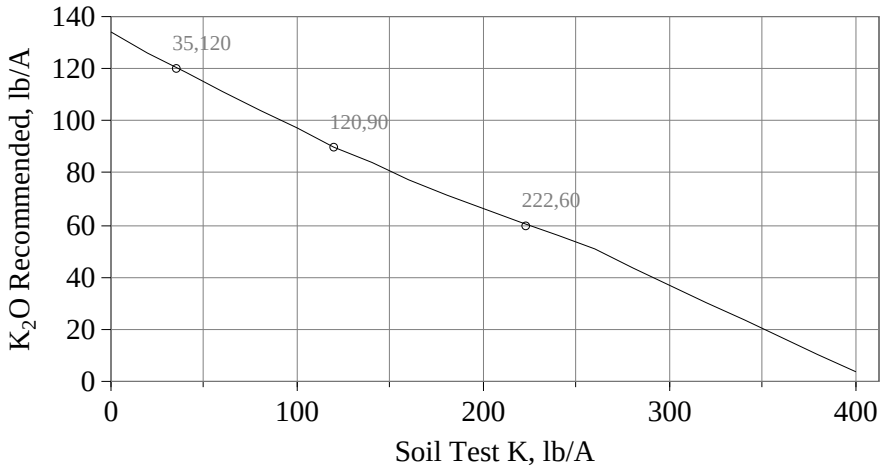
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

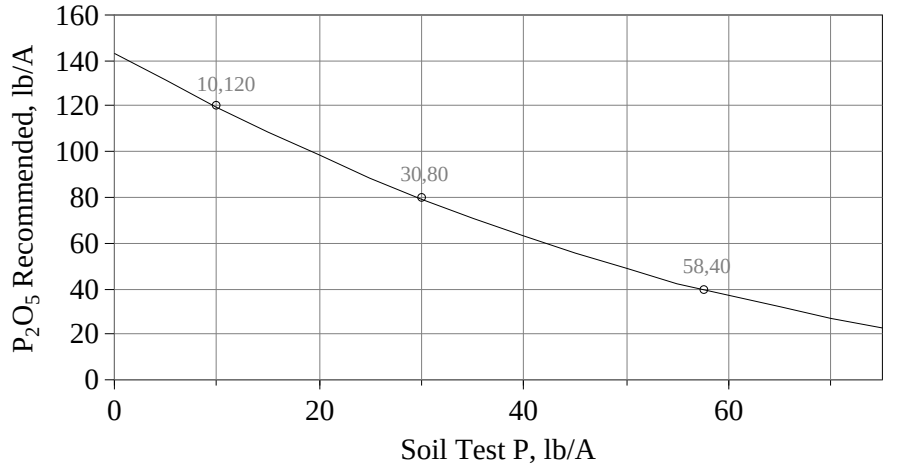
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

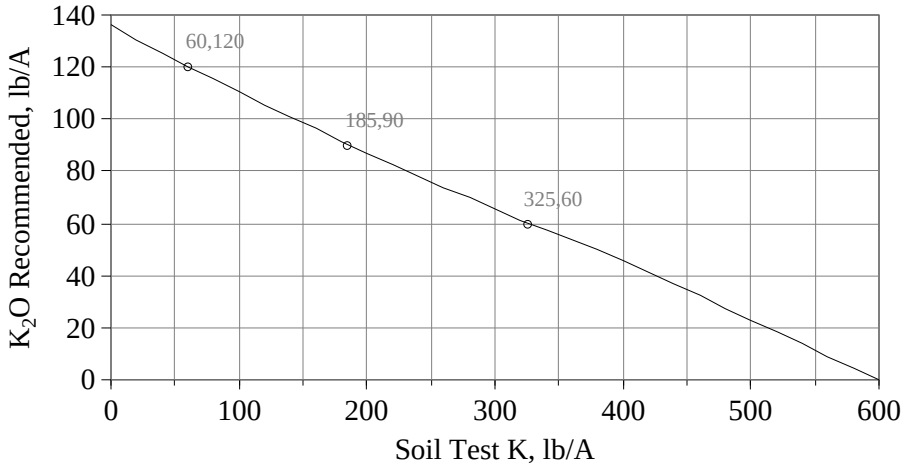
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Eggplant (*Code* #164)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 125-175 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 125-150 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Sidedress with 30 pounds of the recommended nitrogen per acre when the first fruits are the size of a hen's egg.

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

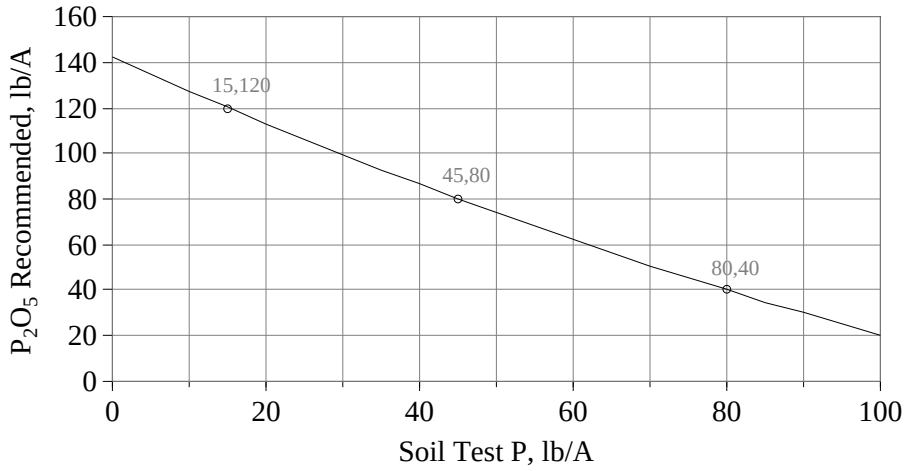
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Eggplant (*Code 164*)

P Recommendations, Coastal Plain

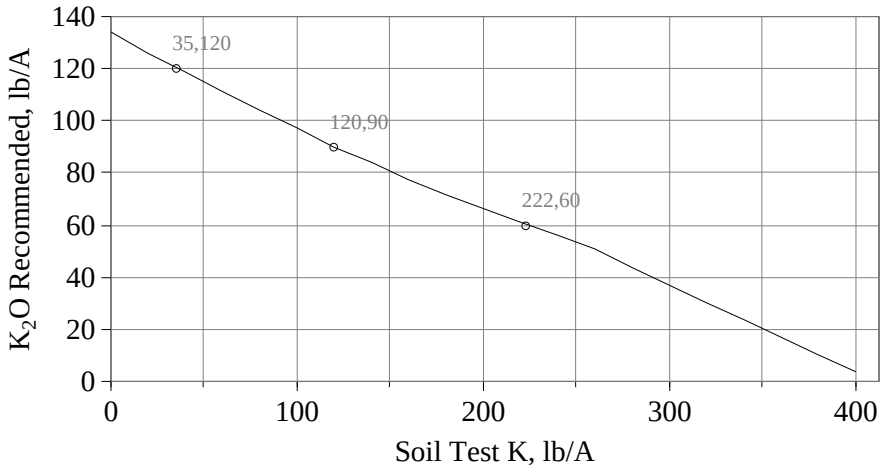
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

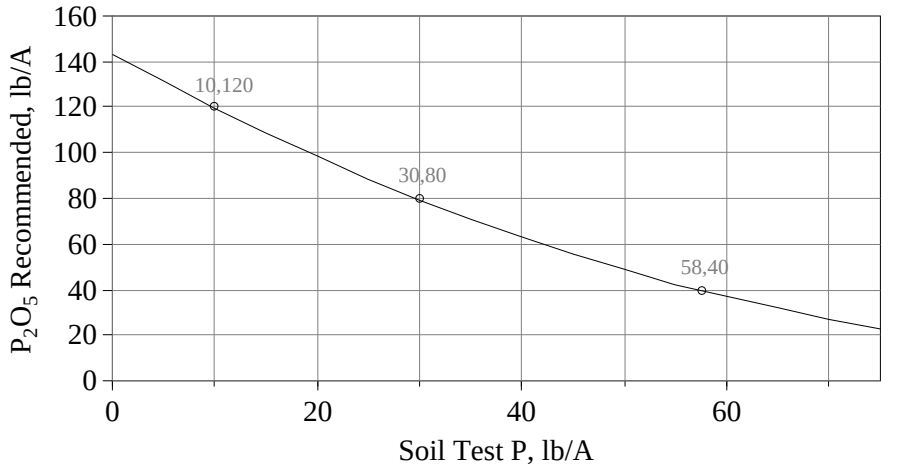
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

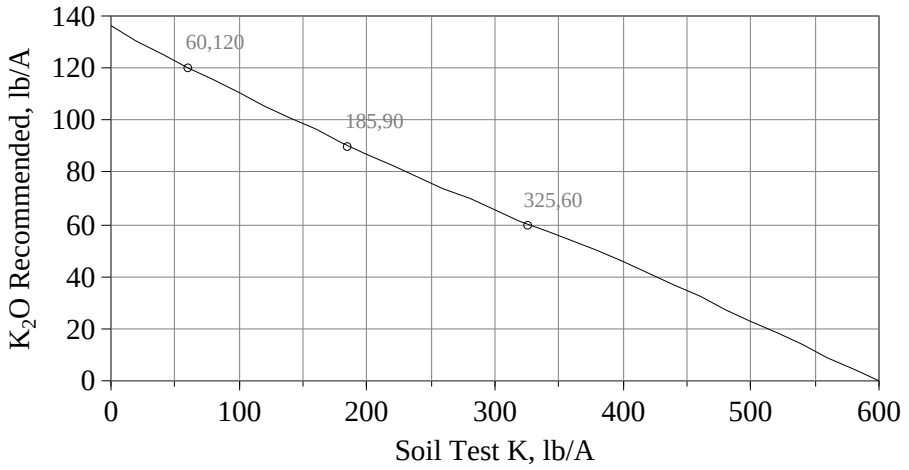
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Endive (*Code* #183)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-130-130	*-130-95	*-130-0	*-130-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-95-130	*-95-95	*-95-0	*-95-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-130	*-0-95	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-130	*-0-95	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 200 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

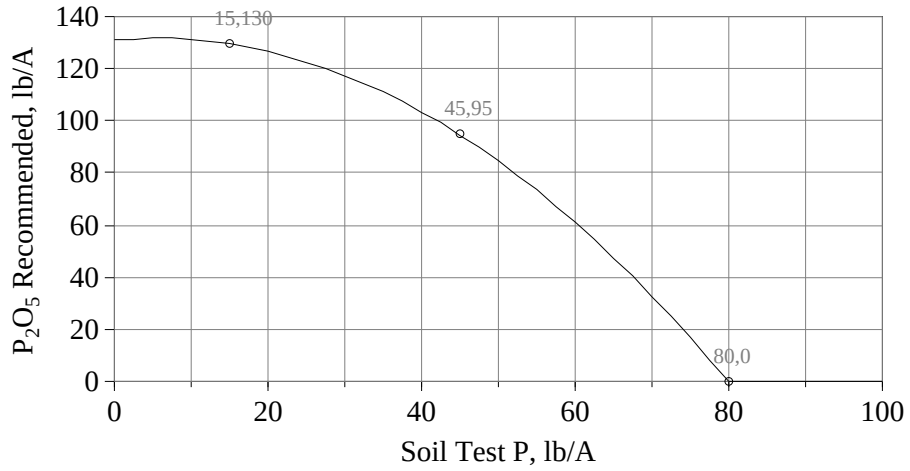
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Endive (*Code 183*)

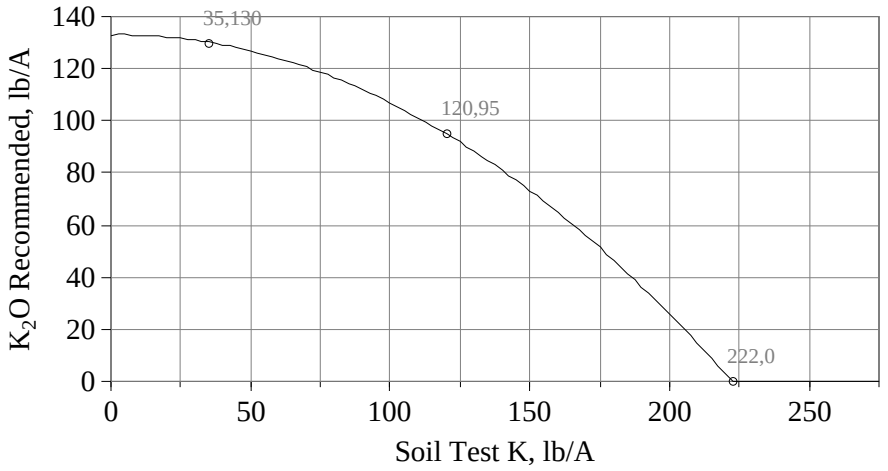
P Recommendations, Coastal Plain

$P_2O_5 = 131 + 0.262P - 0.02381P^2$



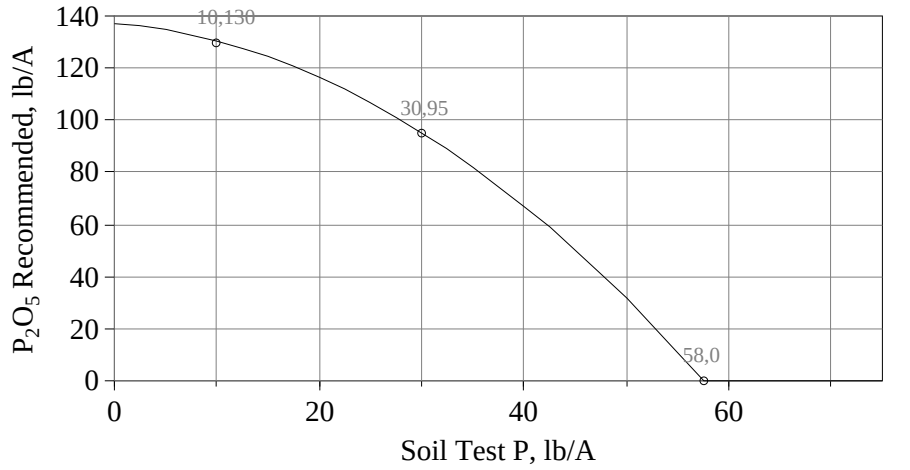
K Recommendations, Coastal Plain

$K_2O = 133 + 0.014K - 0.00275K^2$



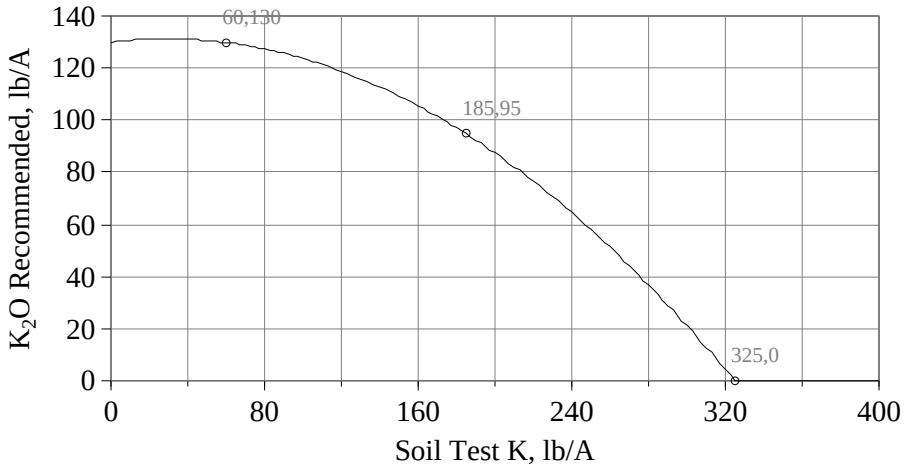
P Recommendations, Piedmont

$P_2O_5 = 137 - 0.314P - 0.03589P^2$



K Recommendations, Piedmont

$K_2O = 130 + 0.087K - 0.00150K^2$



English Peas (*Code* #173)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-90-120	*-90-90	*-90-60	*-90-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-120	*-60-90	*-60-60	*-60-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-45-120	*-45-90	*-45-60	*-45-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 75-100 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 50-75 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

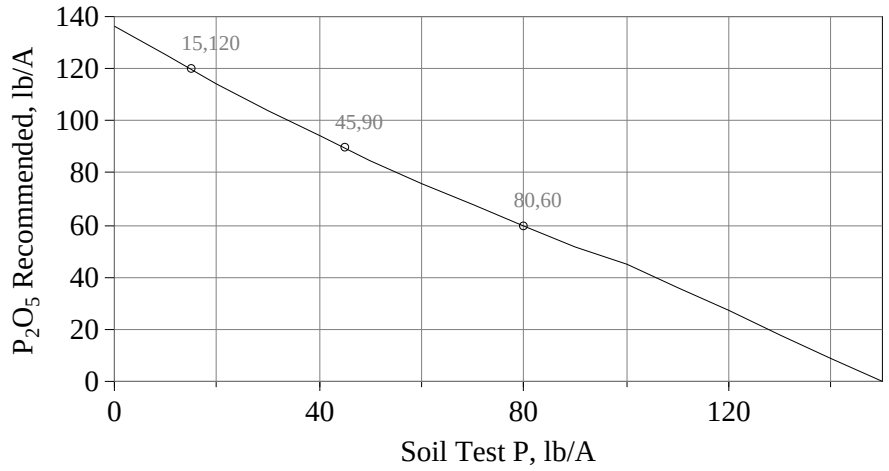
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

English Peas (*Code 173*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 136 - 1.132P + 0.00220P^2$

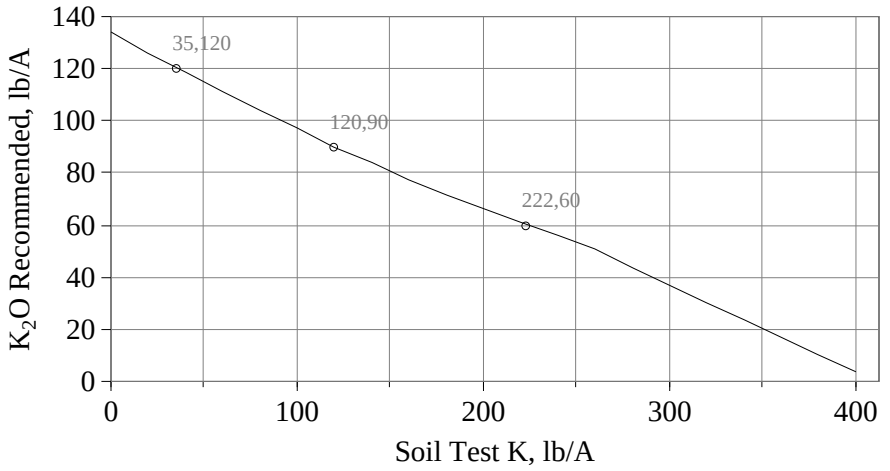
if (P ≥ 100) $P_2O_5 = 135 - 0.90P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

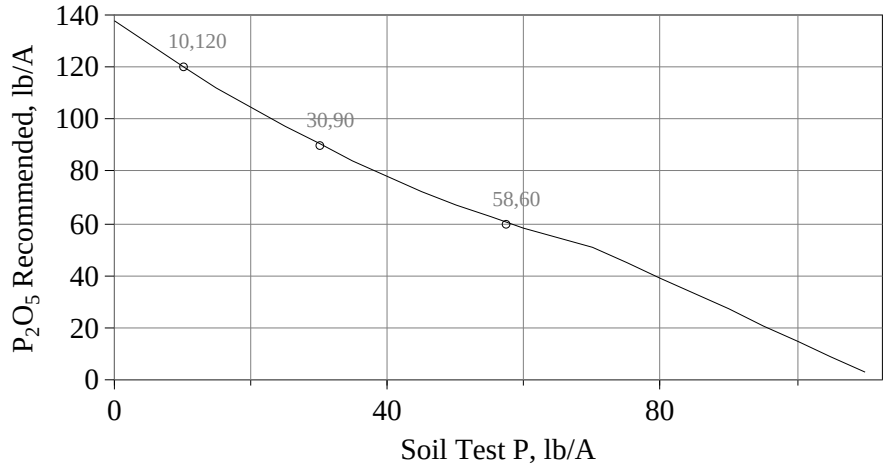
if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 138 - 1.844P + 0.00861P^2$

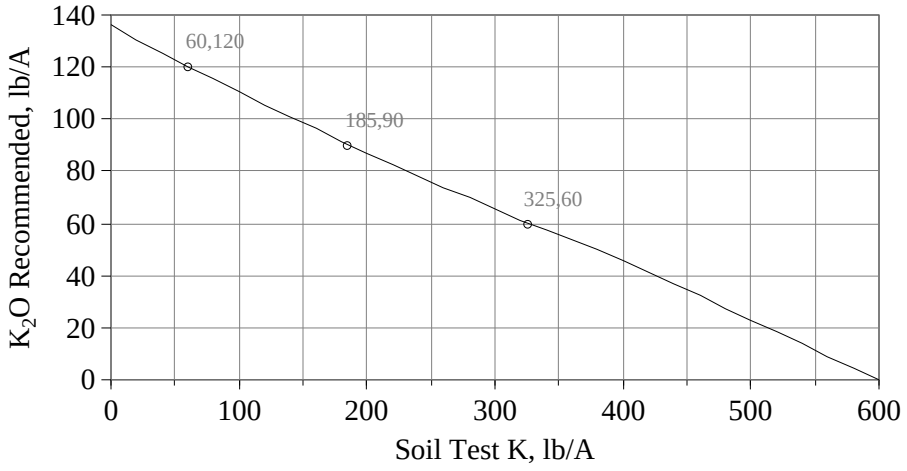
if (P ≥ 75) $P_2O_5 = 135 - 1.20P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Greenhouse Tomatoes (*Code* #180)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-70-200	*-70-150	*-70-100	*-70-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

*Common problems are overfertilization with nitrogen (N) and inadequate levels of calcium (Ca) and magnesium (Mg). For best results, be sure the soil pH is 6.0 or greater. Do not apply substantial quantities of nitrogen fertilizer before planting, since most of the nitrogen needs can be supplied by means of the irrigation water during the growing season. The initial nitrogen application should not exceed 60 pounds nitrogen per acre. However, if the soil is high in fertility, do not apply more than 30 pounds nitrogen per acre. Slow release nitrogen fertilizers have not been effective nitrogen suppliers and are not recommended. No additional nitrogen fertilizer should be applied until the first fruit set. Applications of nitrogen should be determined based on plant analysis results and interpretations.

Monitor the nutrient status of the plant with plant analysis to determine the nutrient balance and additional fertilizer needs. This is particularly important when plants are grown in an artificial soil mix.

When artificial mixes are used, be sure to add the additional calcium in the form of larger quantities of limestone and gypsum. It is generally advisable to leave the osmocote out of the mix. The needed nitrogen can be supplied through the irrigation water. For a 50-50 peat-vermiculite mix, per cubic yard of mix apply:

- 12.0 pounds dolomitic limestone
- 2.5 pounds 0-20-0 (superphosphate)
- 1.5 pounds calcium nitrate
- 5.0 pounds calcium sulfate (gypsum)
- 5.0 pounds 7-40-0 MagAmp
- 1.0 ounces iron (chelated such as NaFe 138 or 330)
- 6.0 ounces Frited Trace Element 503*

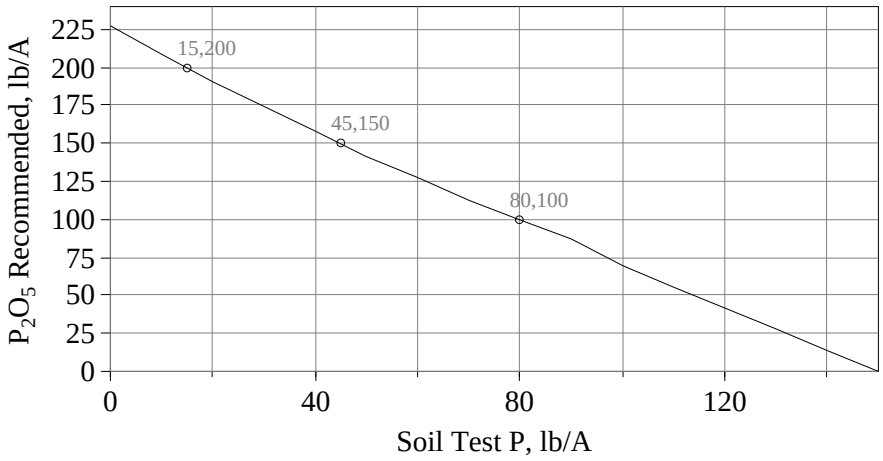
*If not available, apply 0.5 ounces sodium borate (borax) per cubic yard.

Greenhouse Tomatoes (*Code 180*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

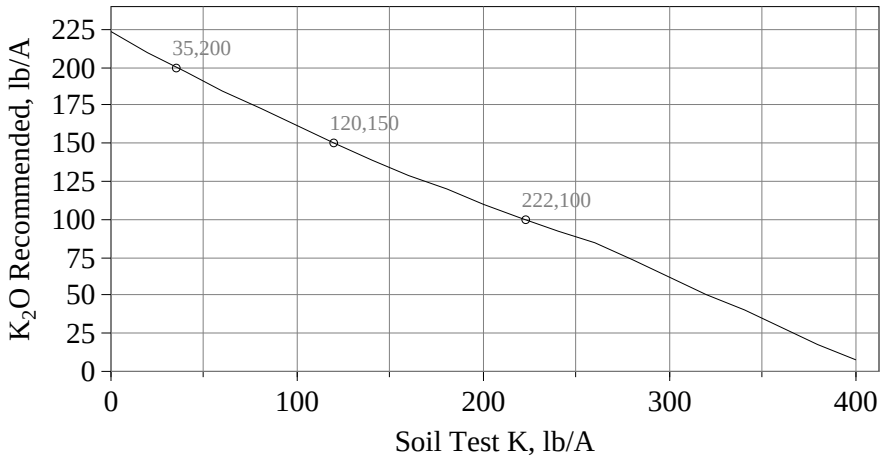
if (P ≥ 100) $P_2O_5 = 210 - 1.40P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

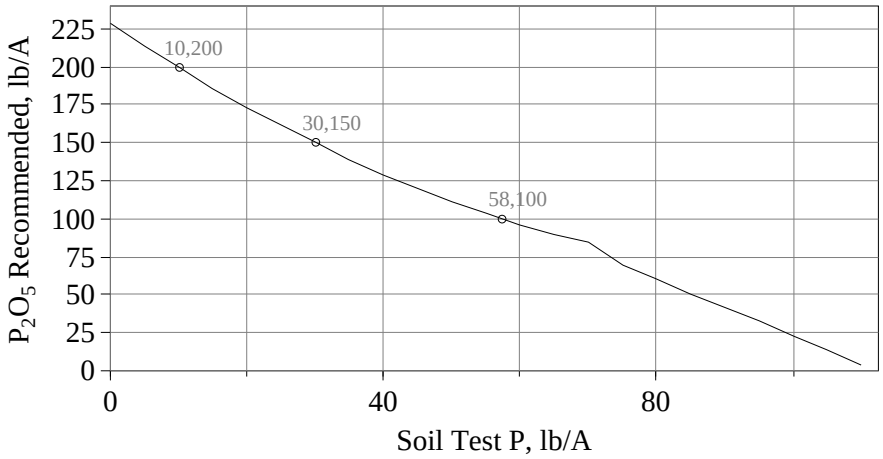
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

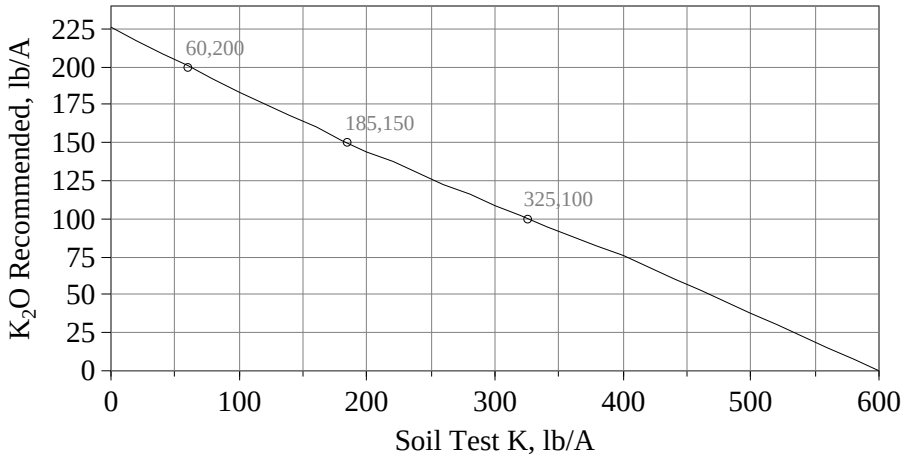
if (P ≥ 75) $P_2O_5 = 210 - 1.87P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Irish Potatoes (*Code* #177)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-70-200	*-70-150	*-70-100	*-70-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C.
Nitrogen:	Coastal Plain 150-200 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 120-150 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) applications will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

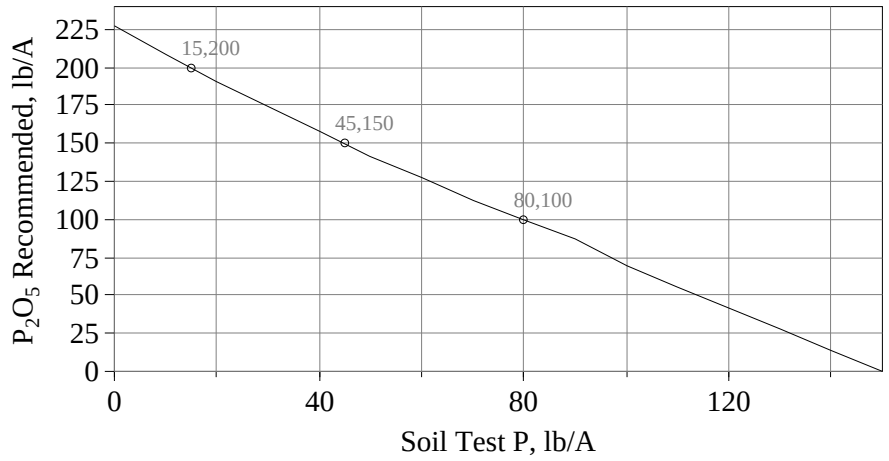
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Irish Potatoes (*Code 177*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

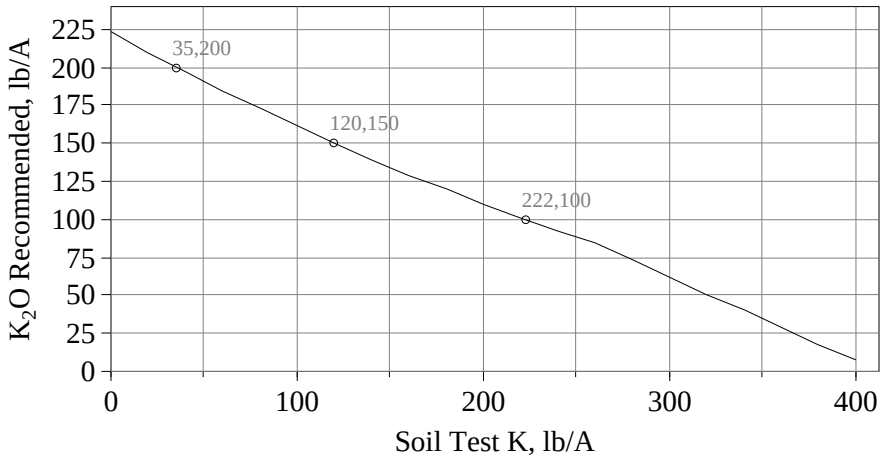
if (P ≥ 100) $P_2O_5 = 210 - 1.40P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

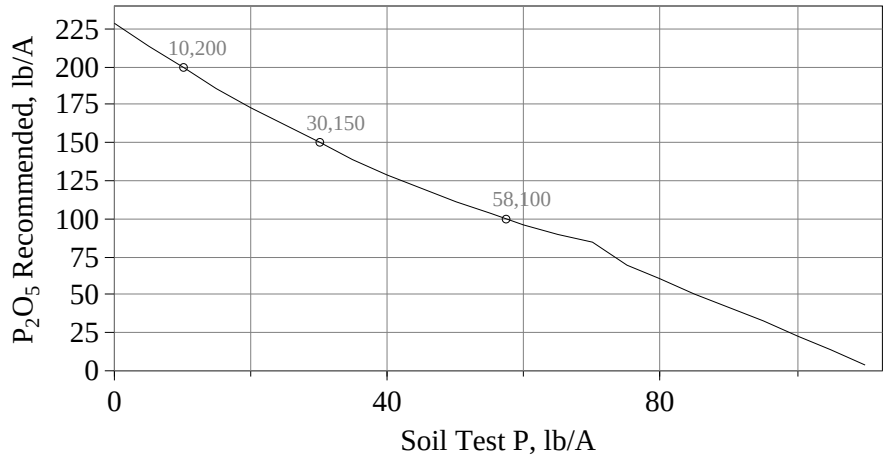
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

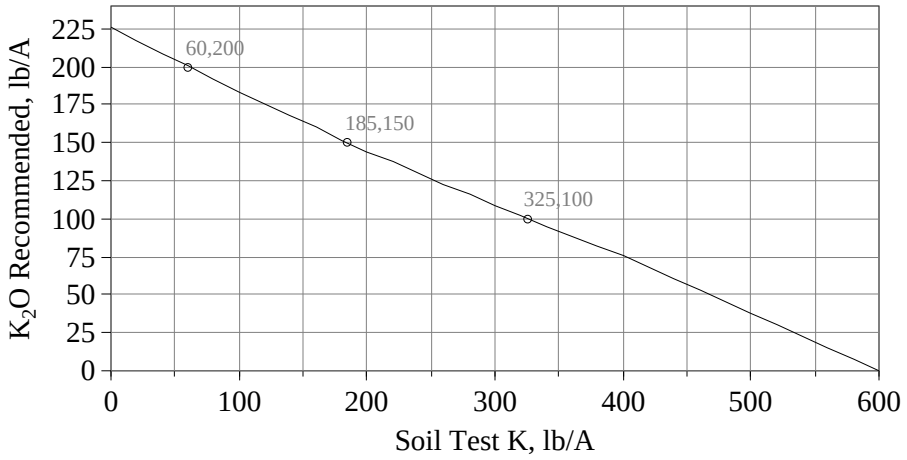
if (P ≥ 75) $P_2O_5 = 210 - 1.87P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Kale, fresh market (*Code* #150)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

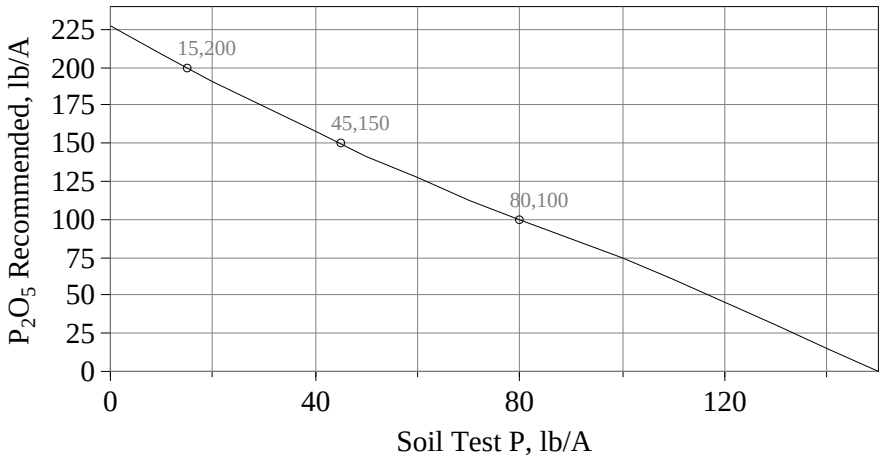
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Kale, fresh market (*Code 150*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

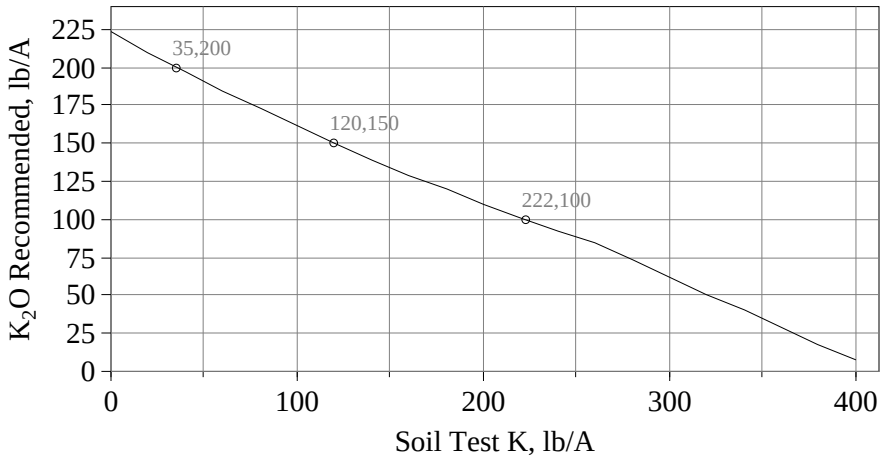
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

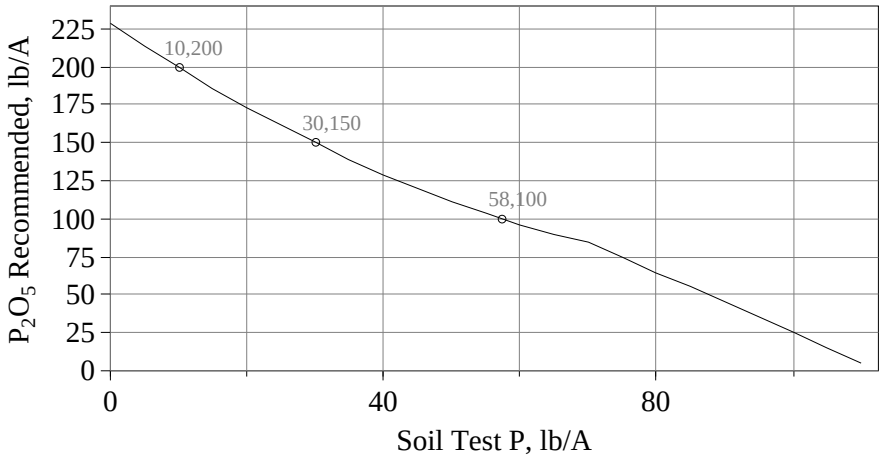
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

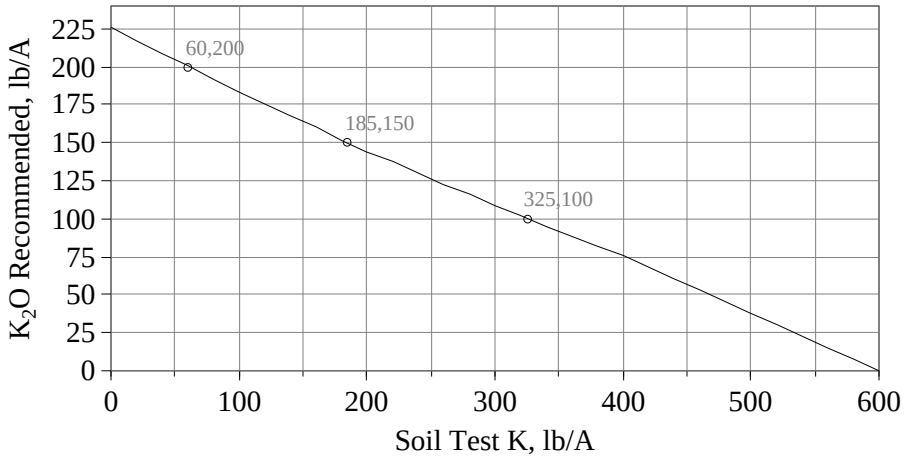
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Lettuce, fresh market (*Code* #154)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 125-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 75-125 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

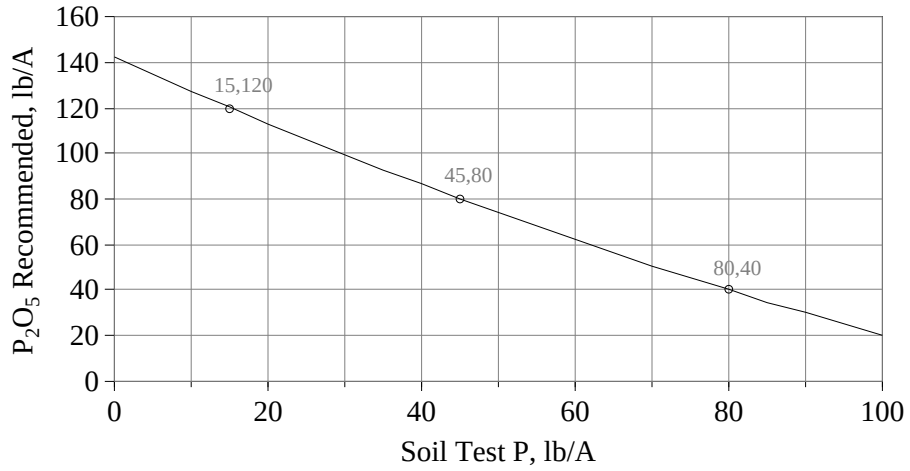
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Lettuce, fresh market (*Code 154*)

P Recommendations, Coastal Plain

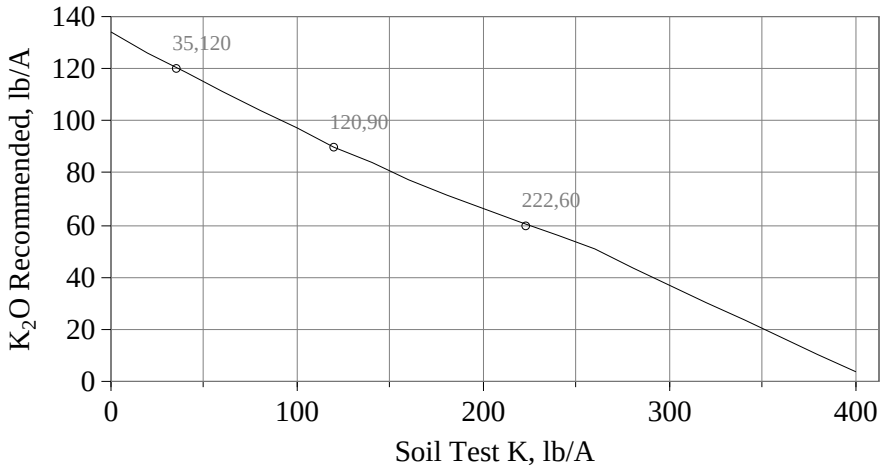
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

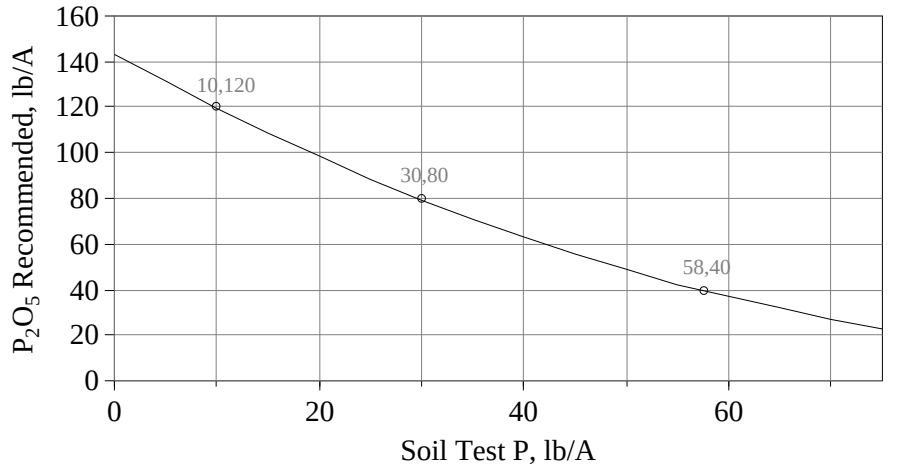
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

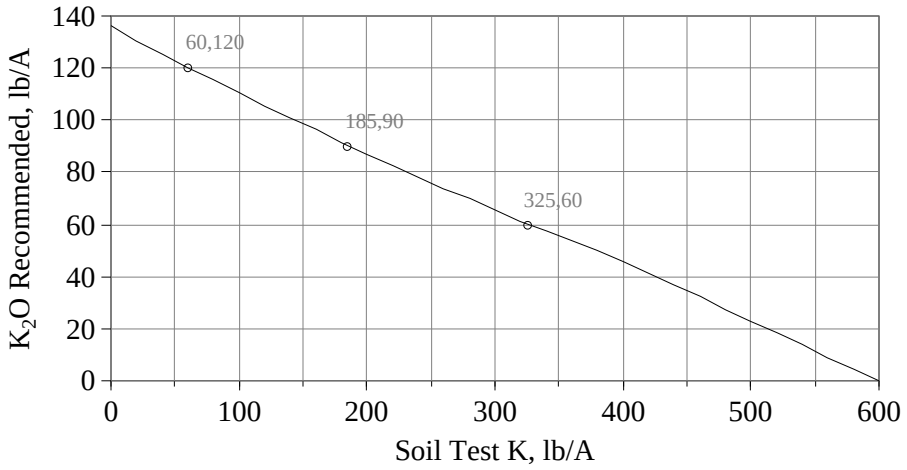
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Lima Beans (*Code* #142)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-90-90	*-90-70	*-90-50	*-90-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-90	*-70-70	*-70-50	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-90	*-50-70	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-70	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 70-100 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 60-80 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

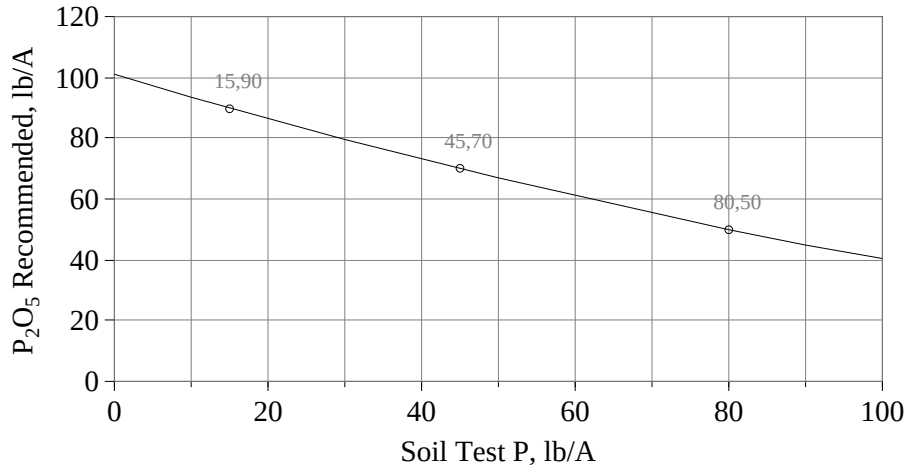
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If all the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Lima Beans (*Code 142*)

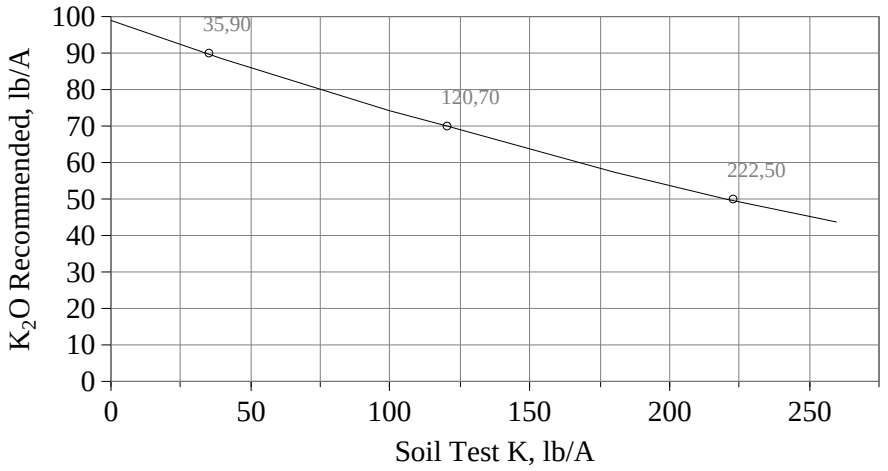
P Recommendations, Coastal Plain

$P_2O_5 = 101 - 0.755P + 0.00147P^2$



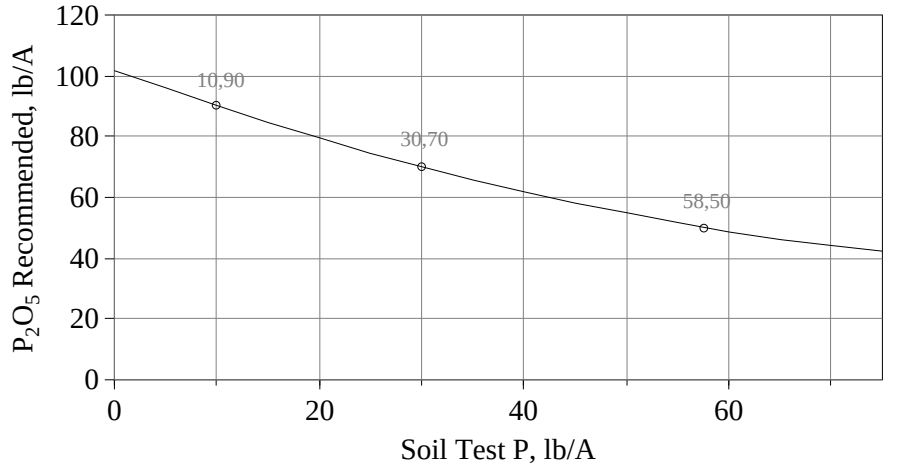
K Recommendations, Coastal Plain

$K_2O = 99 - 0.268K + 0.00021K^2$



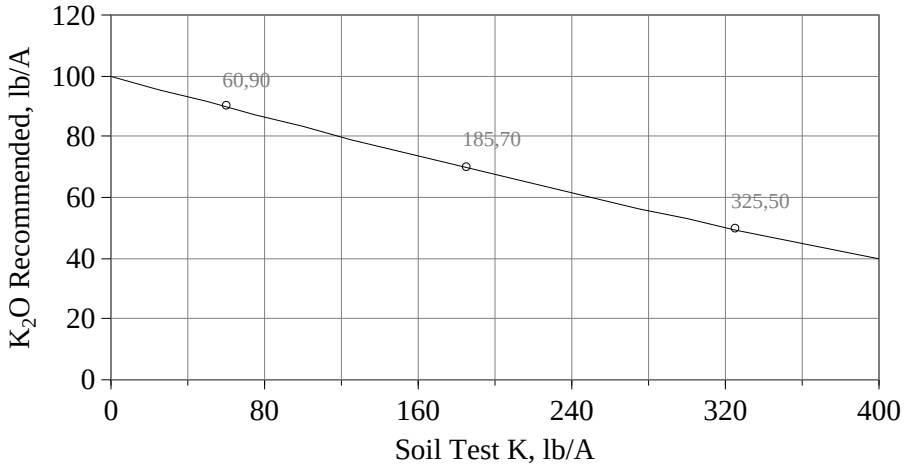
P Recommendations, Piedmont

$P_2O_5 = 102 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 100 - 0.175K + 0.00006K^2$



Mustard, fresh market (*Code* #151)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

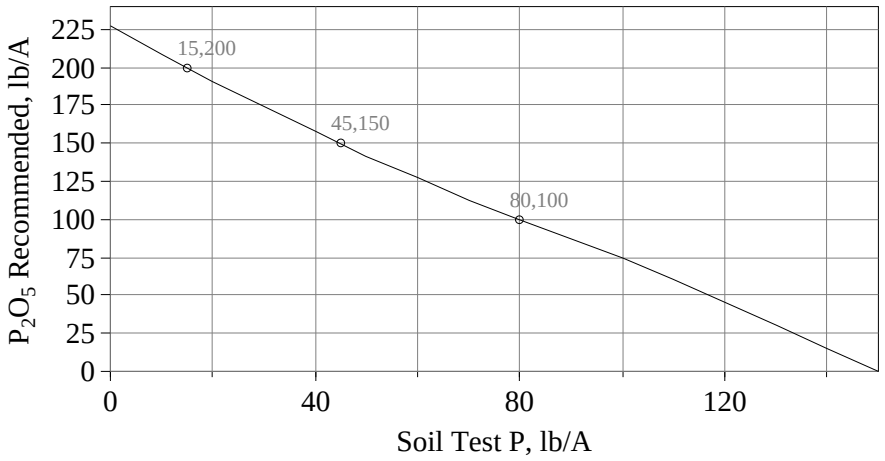
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Mustard, fresh market (*Code 151*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

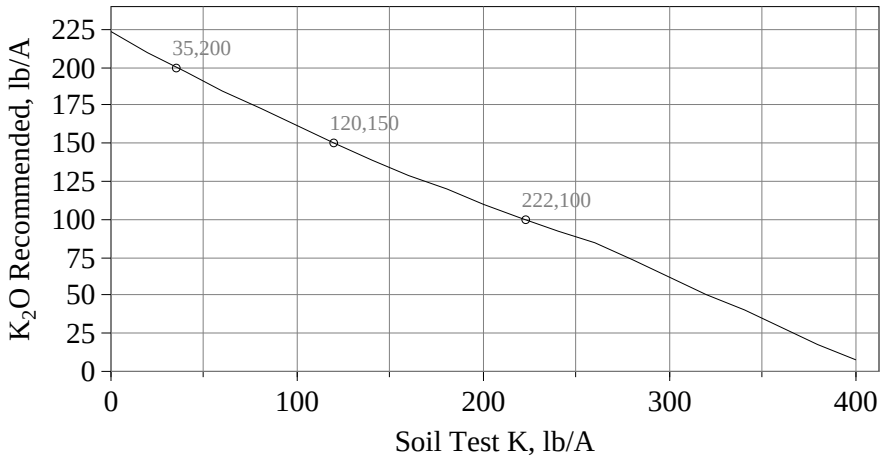
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

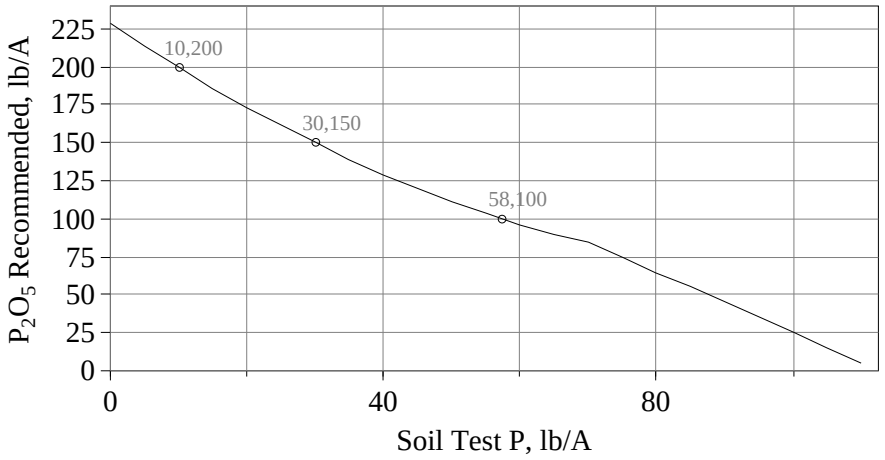
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

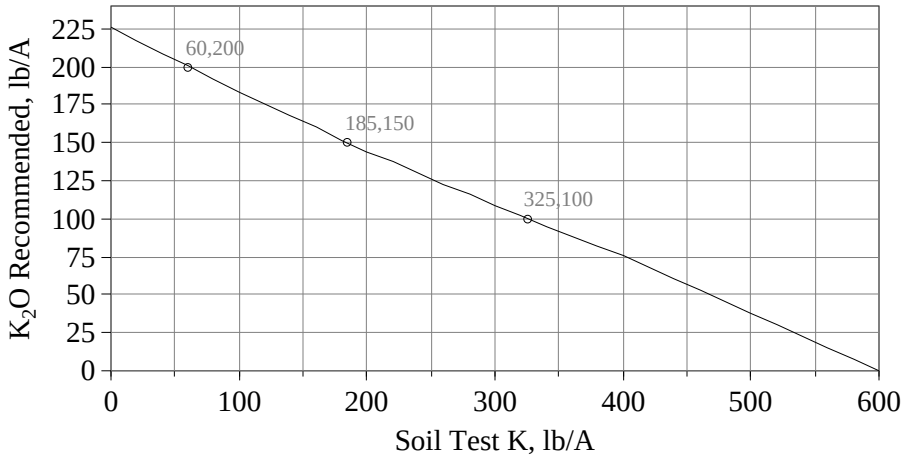
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 125-175 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 100-125 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

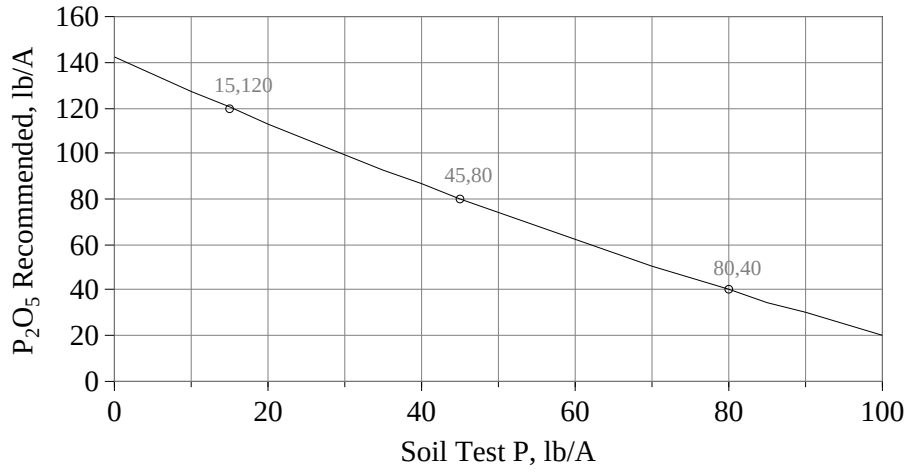
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Okra (*Code 170*)

P Recommendations, Coastal Plain

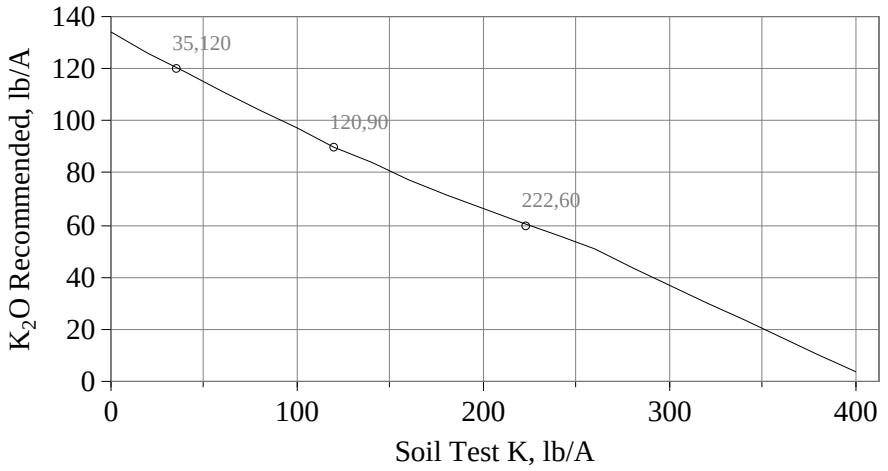
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

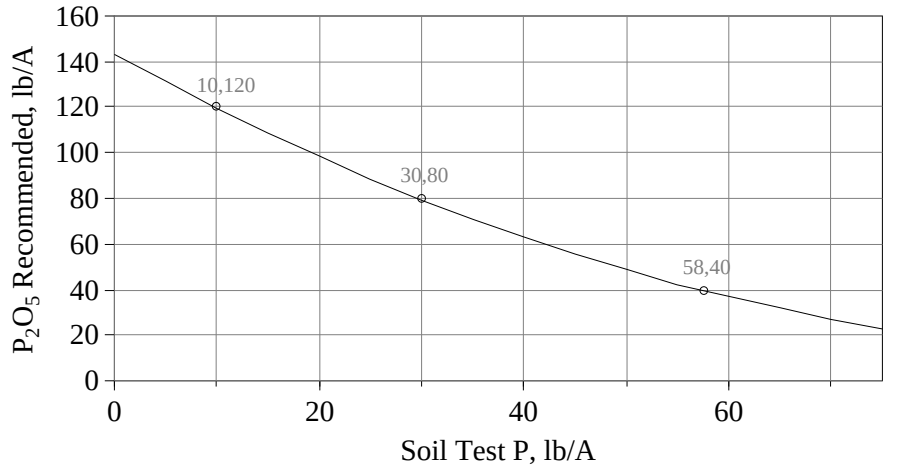
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

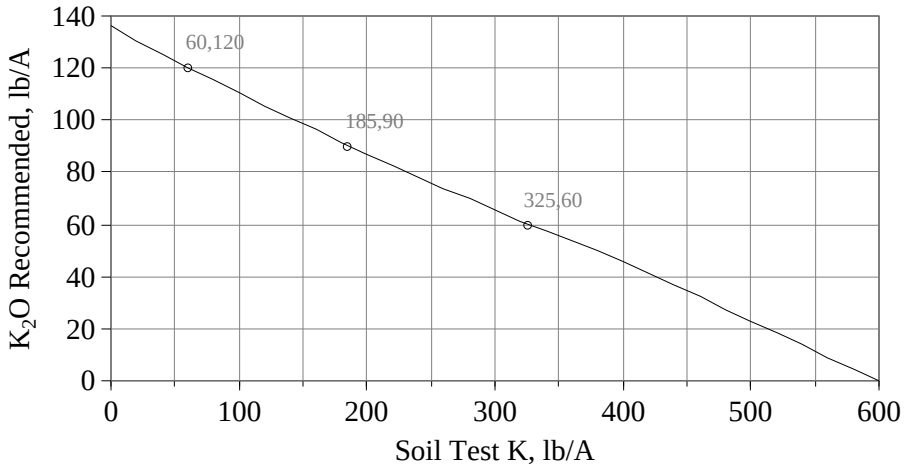
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Onions (green bunching) (*Code* #171)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90-130 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 20 pounds of sulfur (S) per acre preplant on Coastal Plain soils.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

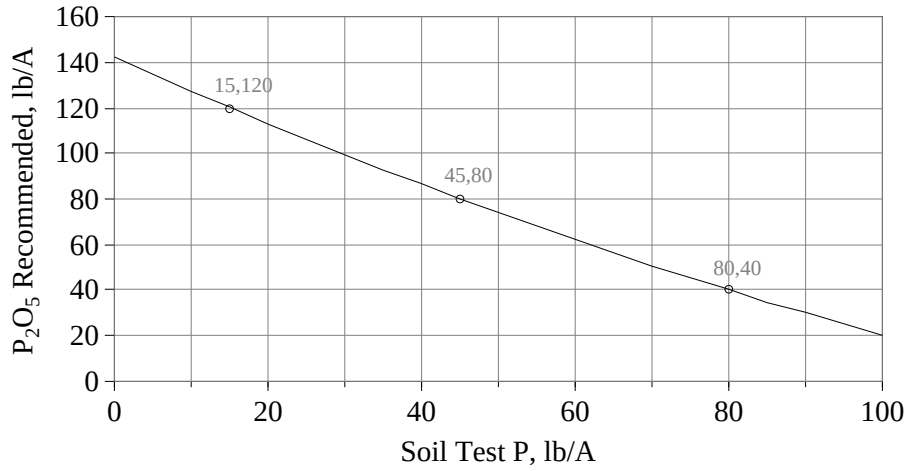
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Apply 20 pounds of sulfur (S) per acre preplant on Coastal Plain soils.

Onions (green bunching) (*Code 171*)

P Recommendations, Coastal Plain

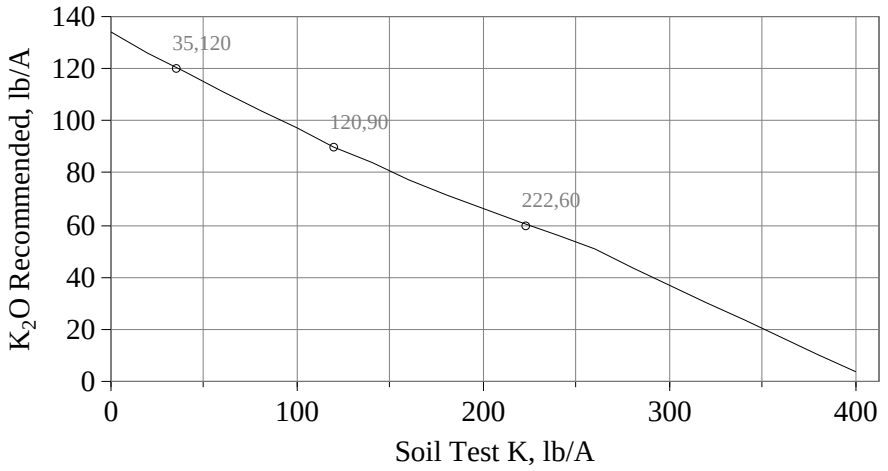
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

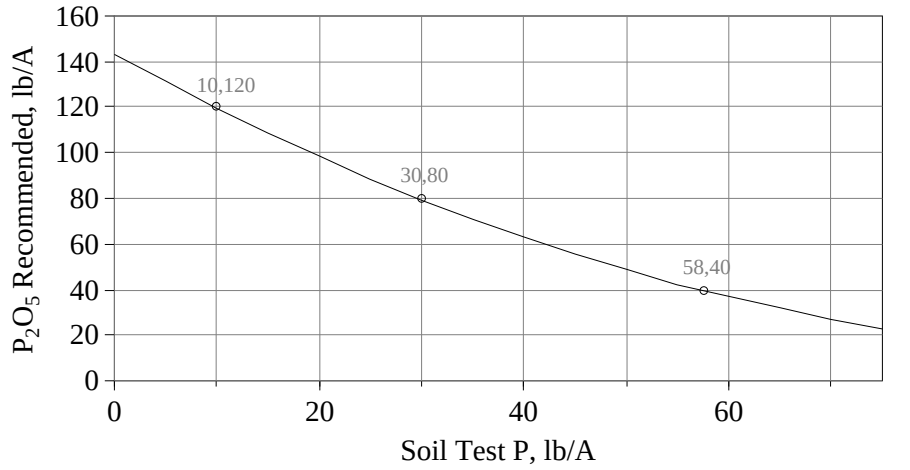
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

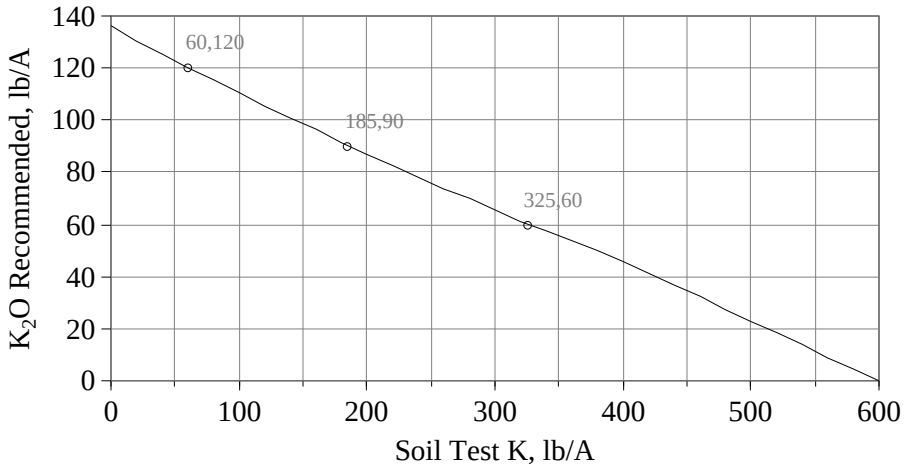
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Onions (mature and dry) (*Code* #172)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-90-120	*-90-90	*-90-60	*-90-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-120	*-60-90	*-60-60	*-60-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-45-120	*-45-90	*-45-60	*-45-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 125-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 110-130 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	See Fact Sheet
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications. Avoid high nitrogen applications until after danger of excessive cold weather. Apply the last nitrogen applications at least 4 weeks prior to harvest.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

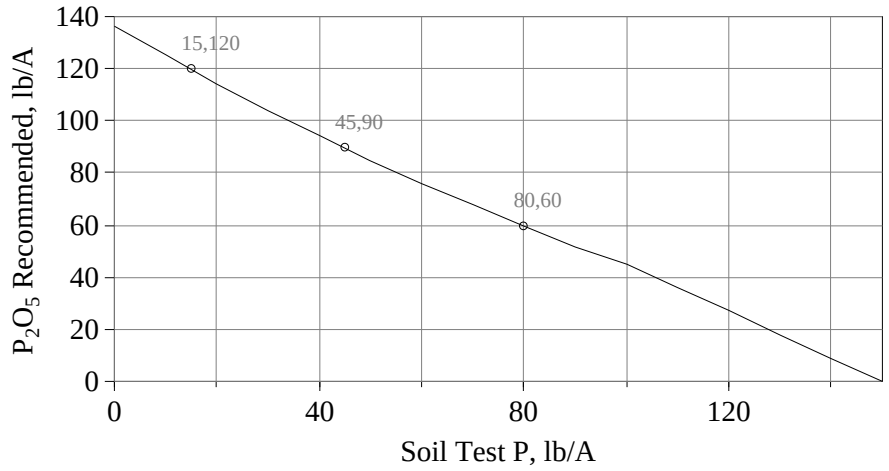
Apply 40 to 60 pounds sulfur per acre. On sandy soils applications should be split with the last application being made prior to the end of January. Applications later than this may increase pungency.

Onions (mature and dry) (*Code 172*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 136 - 1.132P + 0.00220P^2$

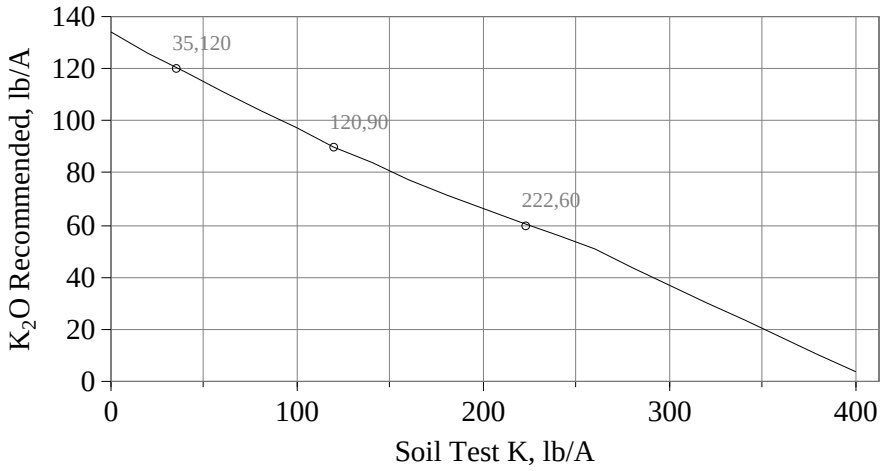
if (P ≥ 100) $P_2O_5 = 135 - 0.90P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

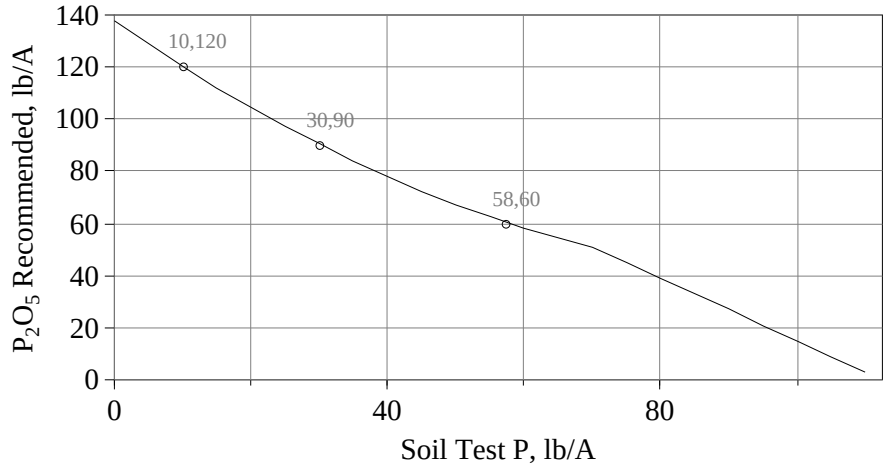
if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 138 - 1.844P + 0.00861P^2$

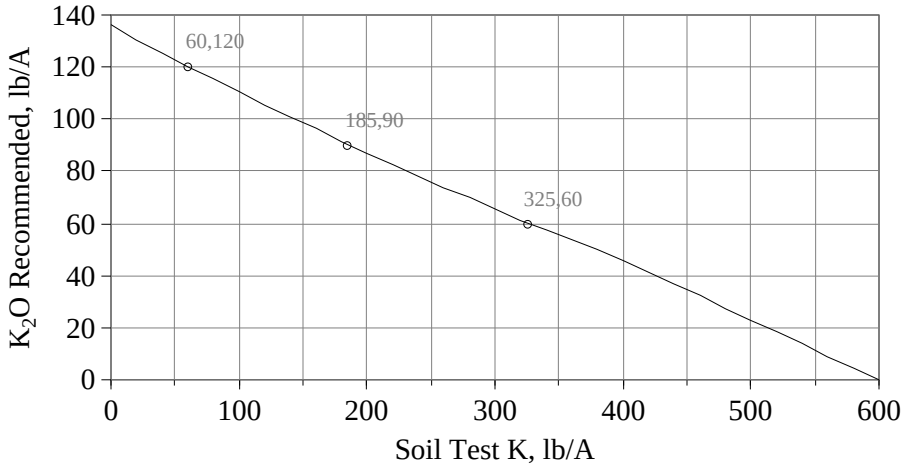
if (P ≥ 75) $P_2O_5 = 135 - 1.20P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Onions (plantbed) (*Code* #169)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-130 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre preplant on Coastal Plain soils.
Boron:	Apply 1 pound of boron (B) per acre. This application should be split into two applications.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, and method and timing of applications.

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of P_2O_5 and K_2O 1½ to 2 times.

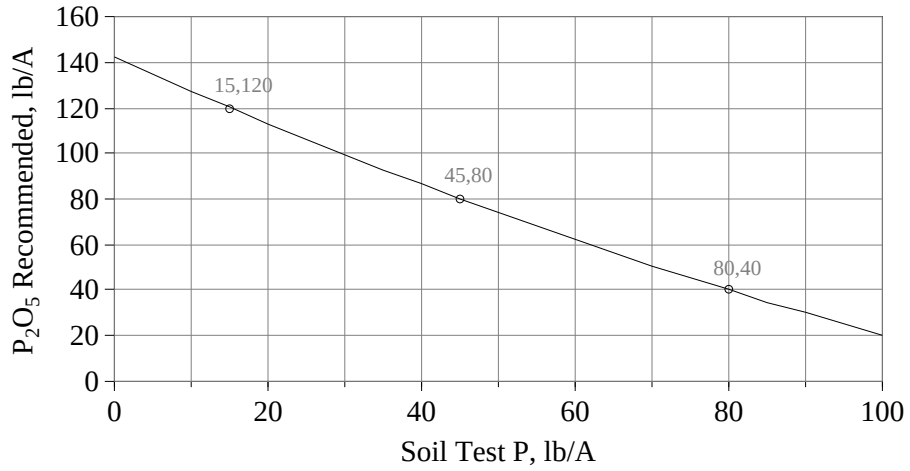
Apply 10 pounds of sulfur (S) per acre preplant on Coastal Plain soils.

Apply 1 pound of boron (B) per acre. This application should be split into two applications.

Onions (plantbed) (*Code 169*)

P Recommendations, Coastal Plain

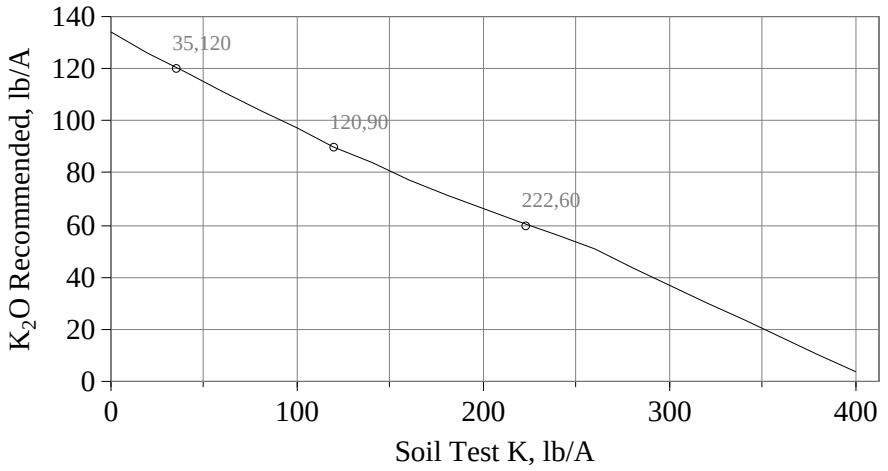
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

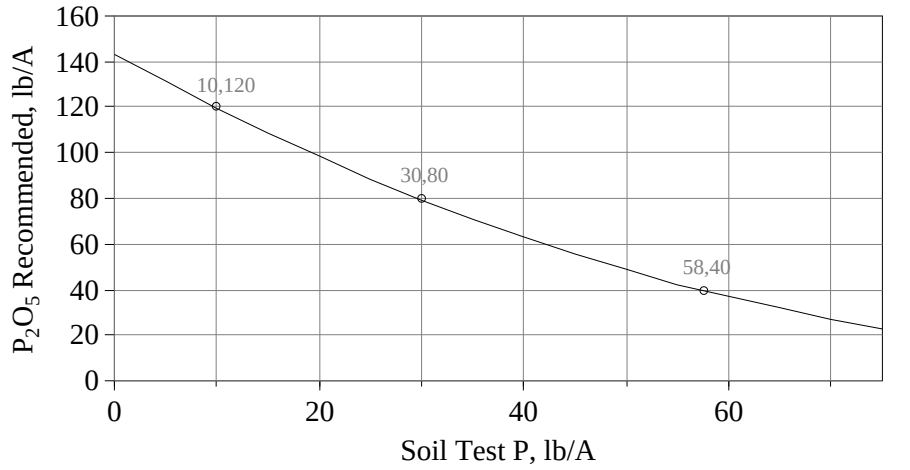
if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

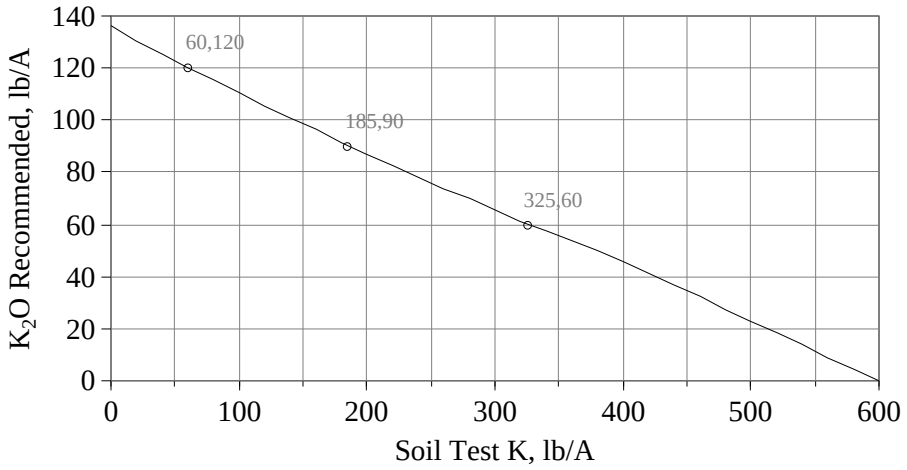
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Parsley (*Code* #166)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-130-130	*-130-95	*-130-0	*-130-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-95-130	*-95-95	*-95-0	*-95-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-130	*-0-95	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-130	*-0-95	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 140 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

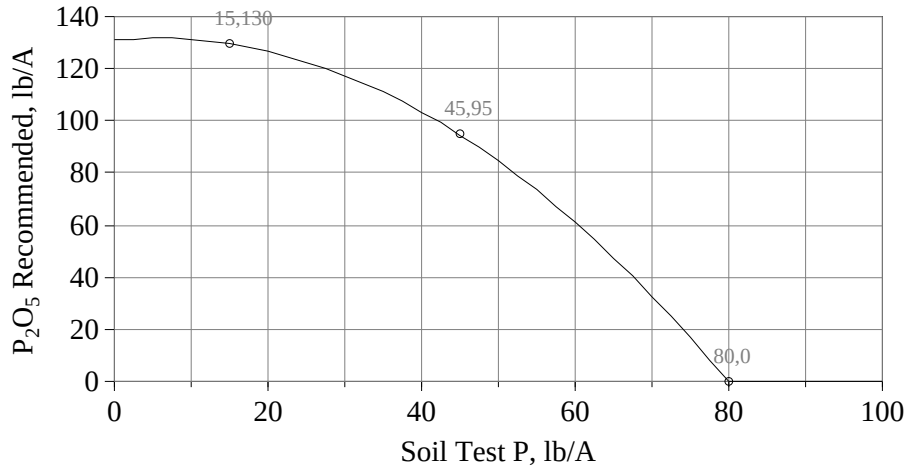
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Parsley (*Code 166*)

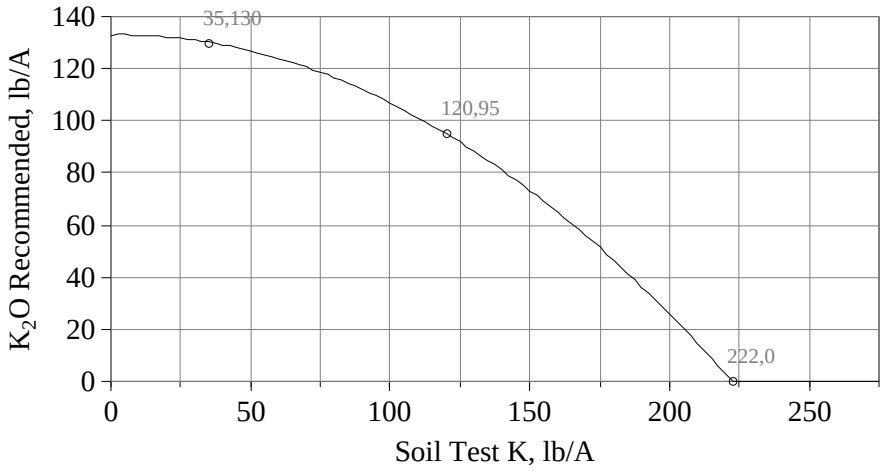
P Recommendations, Coastal Plain

$P_2O_5 = 131 + 0.262P - 0.02381P^2$



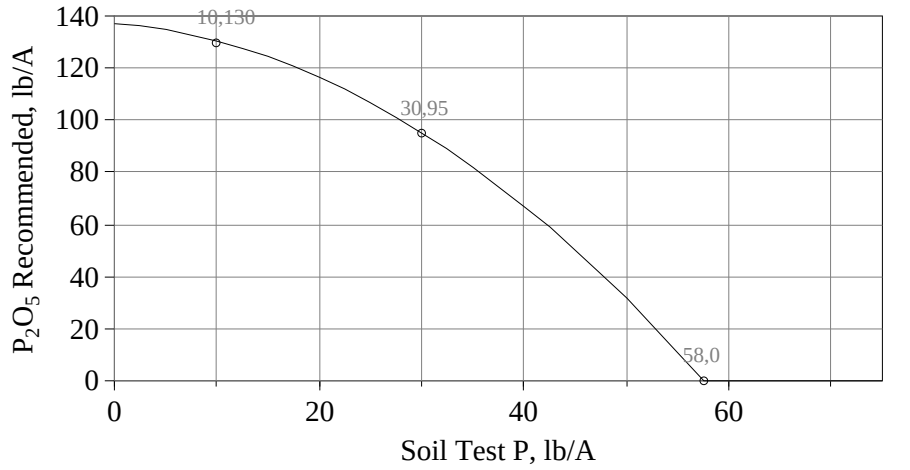
K Recommendations, Coastal Plain

$K_2O = 133 + 0.014K - 0.00275K^2$



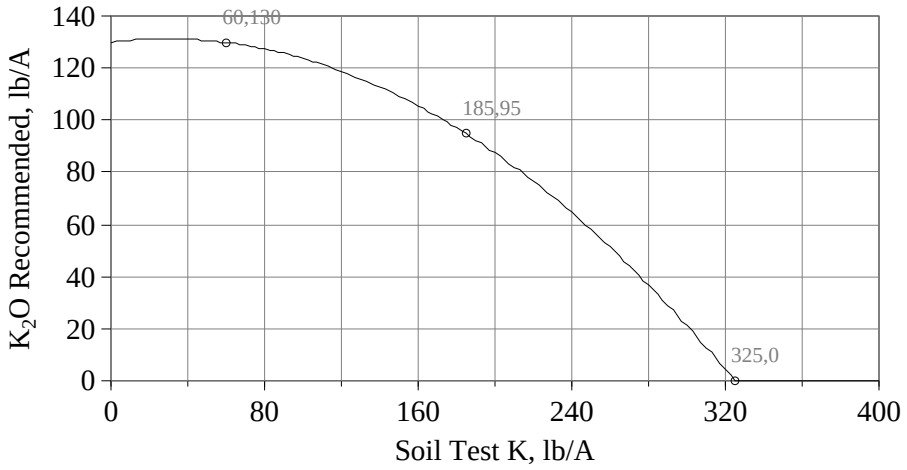
P Recommendations, Piedmont

$P_2O_5 = 137 - 0.314P - 0.03589P^2$



K Recommendations, Piedmont

$K_2O = 130 + 0.087K - 0.00150K^2$



Pepper (Bell and Pimento) (*Code* #175)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 150-200 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 100-150 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Approximately one-third to one-half of the recommended rate of nitrogen (N) should be applied after fruit set as follows:

> Sidedress with 25 pounds nitrogen per acre when first fruits are the size of a quarter. Three weeks later, sidedress with an additional 25 pounds nitrogen per acre.

Nitrogen rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

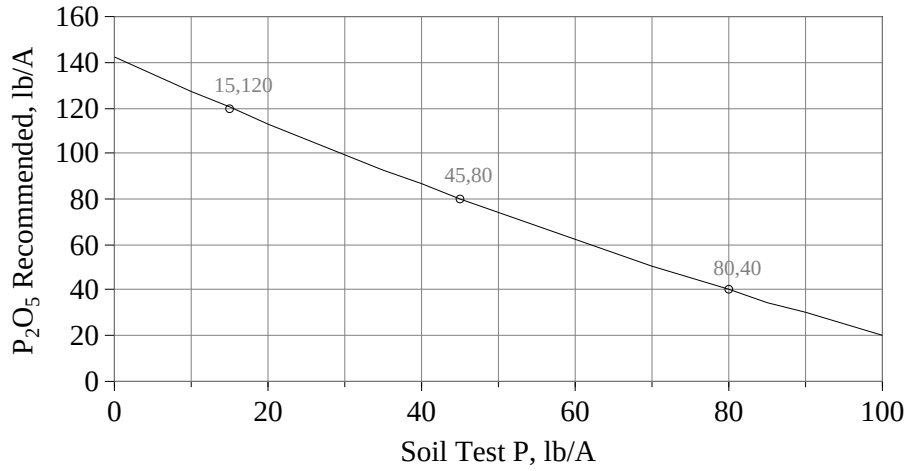
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Pepper (Bell and Pimento) (*Code 175*)

P Recommendations, Coastal Plain

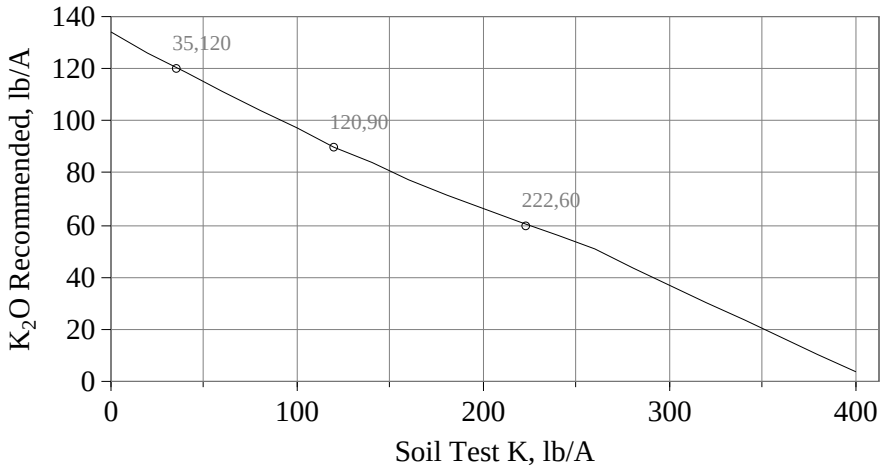
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

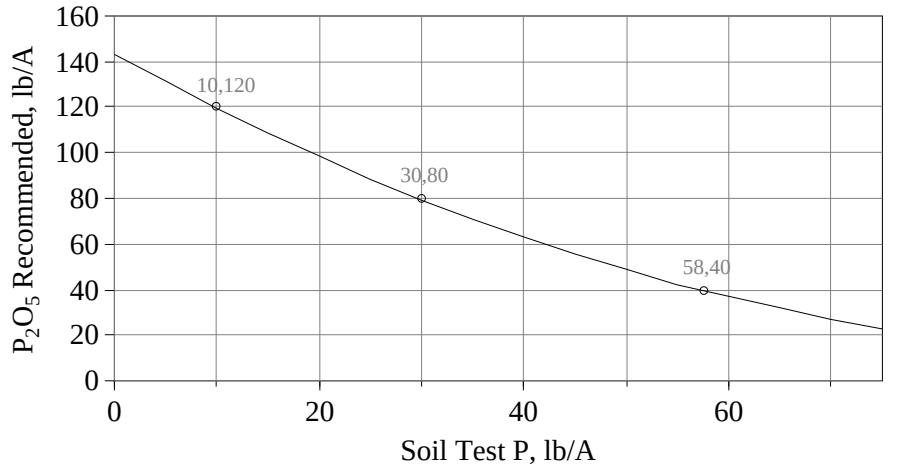
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

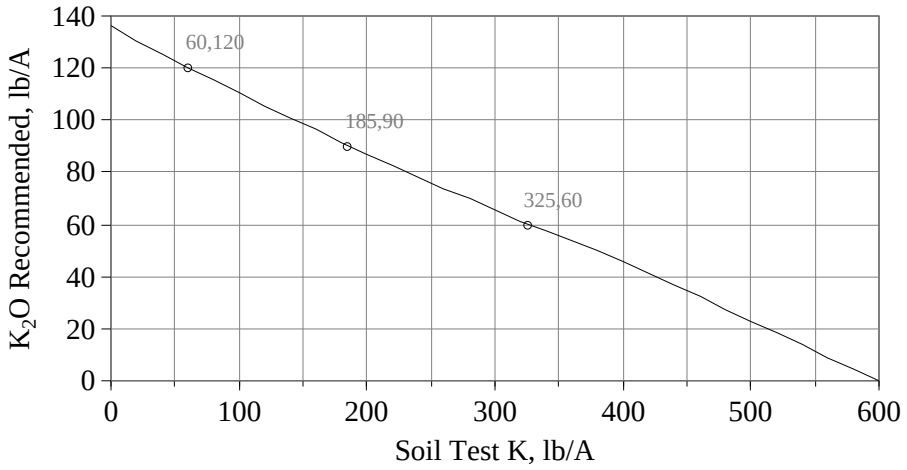
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Pepper Transplants (*Code* #176)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-50	*-100-35	*-100-20	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-50	*-60-35	*-60-20	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-50	*-30-35	*-30-20	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-50	*-0-35	*-0-20	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 40 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 50 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

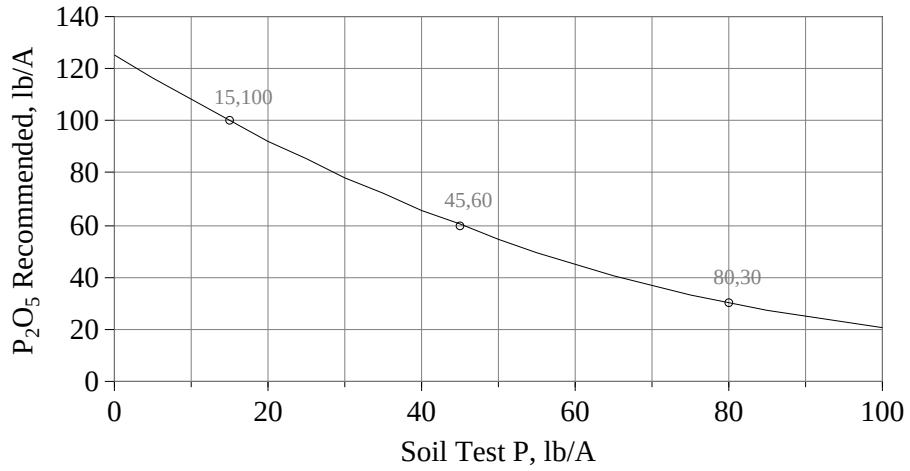
The complete fertilizer should be placed 1 to 1.5 inches directly beneath the seed for best results.

In addition to the recommendations given, sidedress with 30 to 40 pounds nitrogen per acre as soon as the plants are large enough to cultivate. Additional sidedressed nitrogen (N) will be necessary if leaching rains occur.

Pepper Transplants (*Code 176*)

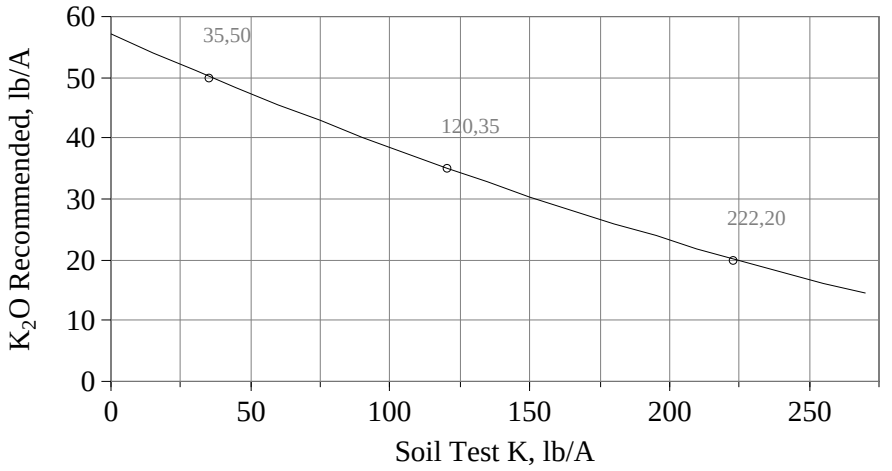
P Recommendations, Coastal Plain

$P_2O_5 = 125 - 1.773P + 0.00733P^2$



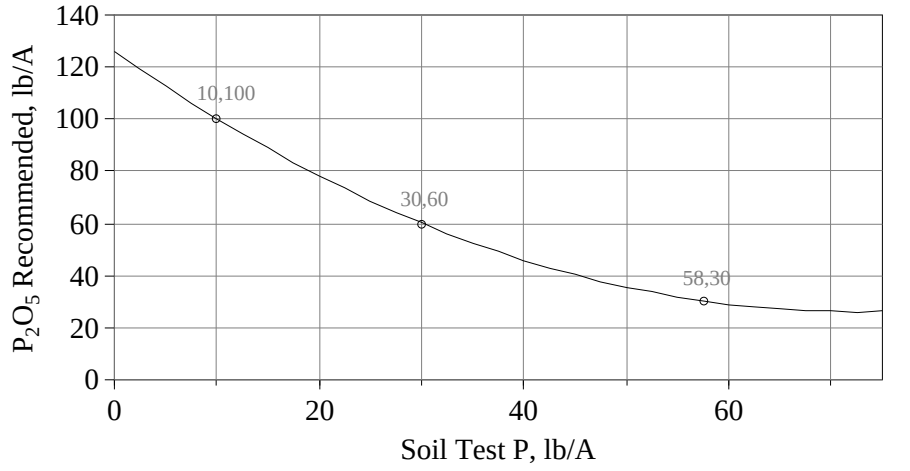
K Recommendations, Coastal Plain

$K_2O = 57 - 0.201K + 0.00016K^2$



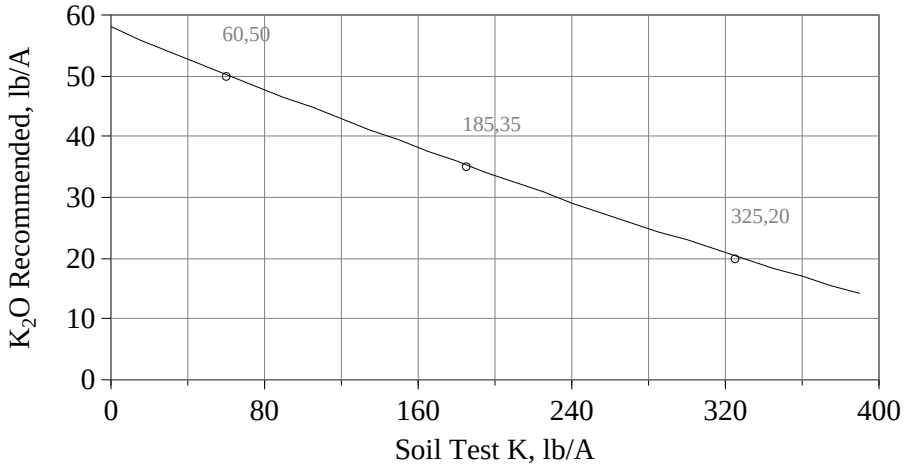
P Recommendations, Piedmont

$P_2O_5 = 126 - 2.766P + 0.01914P^2$



K Recommendations, Piedmont

$K_2O = 58 - 0.132K + 0.00005K^2$



Pole Beans (*Code* #143)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-90-90	*-90-70	*-90-50	*-90-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-90	*-70-70	*-70-50	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-90	*-50-70	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-70	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-140 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 90-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Sidedress nitrogen should be applied in split applications. Apply the first application 3 weeks after planting and the second application just prior to blossoming.

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

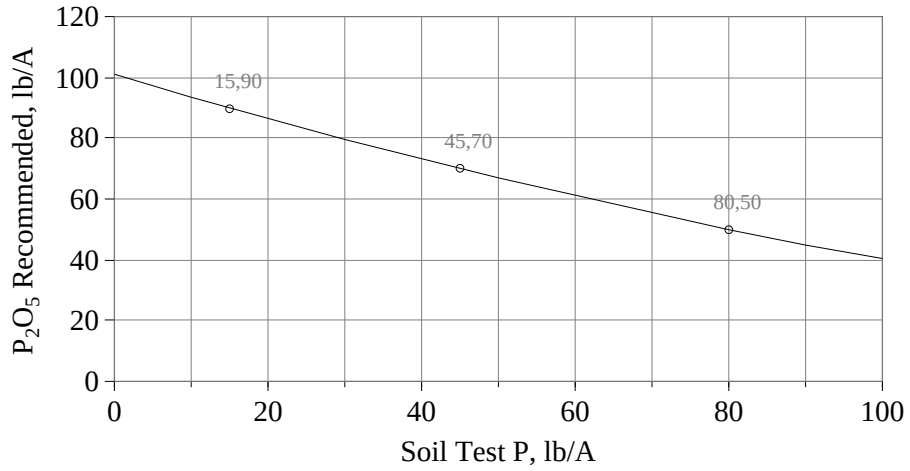
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Pole Beans (*Code 143*)

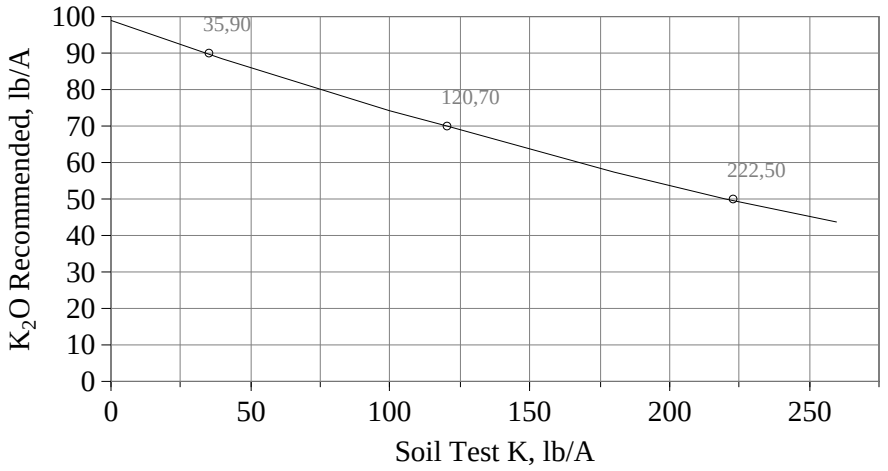
P Recommendations, Coastal Plain

$P_2O_5 = 101 - 0.755P + 0.00147P^2$



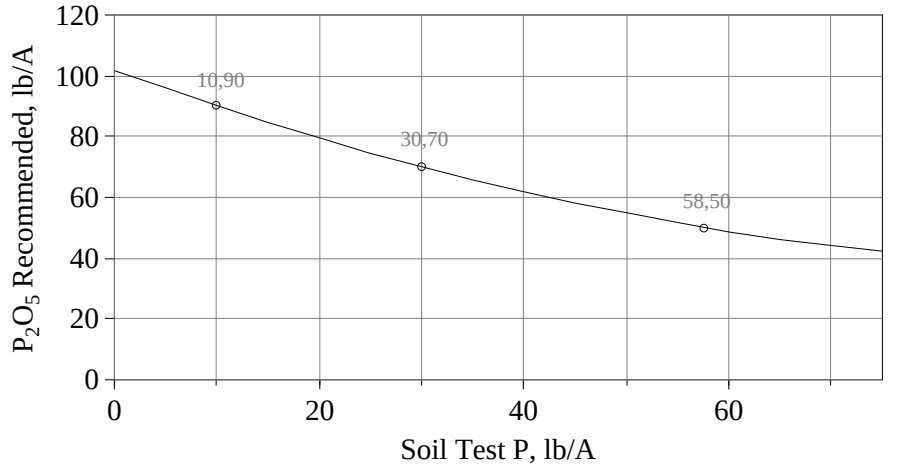
K Recommendations, Coastal Plain

$K_2O = 99 - 0.268K + 0.00021K^2$



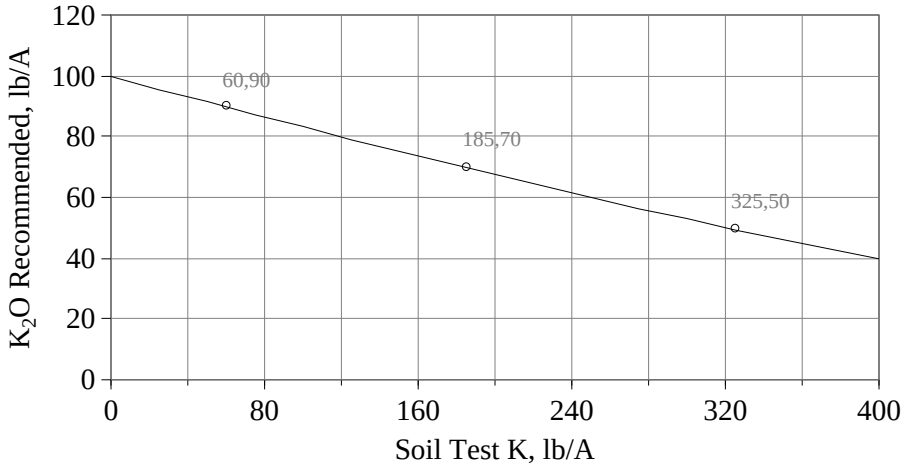
P Recommendations, Piedmont

$P_2O_5 = 102 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 100 - 0.175K + 0.00006K^2$



Pumpkin (*Code* #162)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches below the seeds or roots.

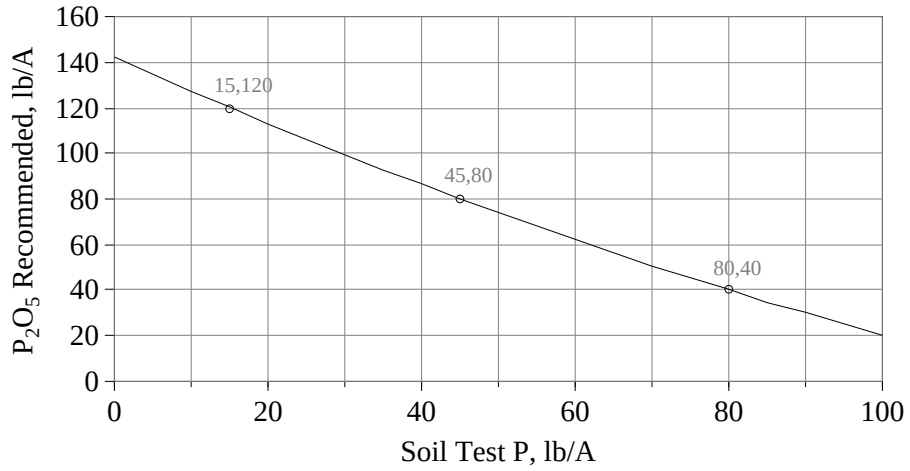
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, apply one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Pumpkin (*Code 162*)

P Recommendations, Coastal Plain

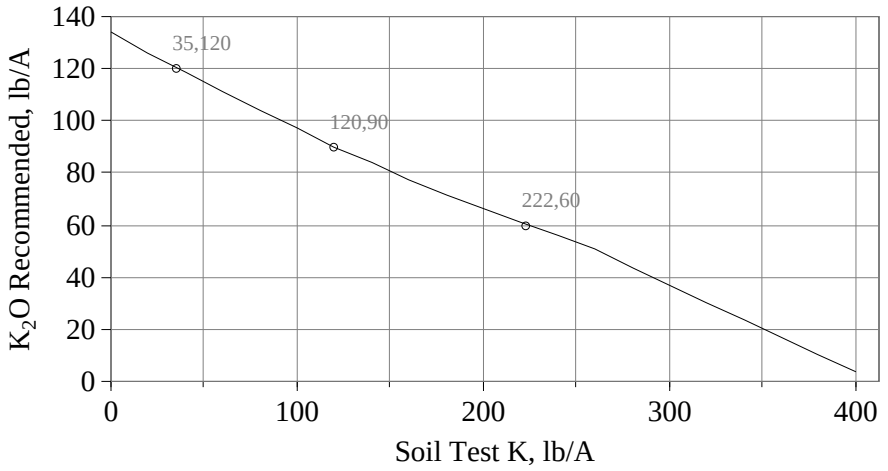
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

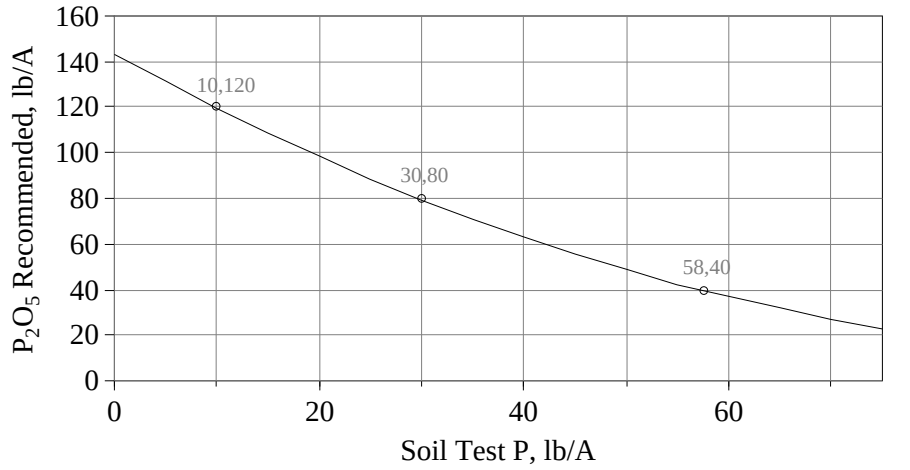
if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

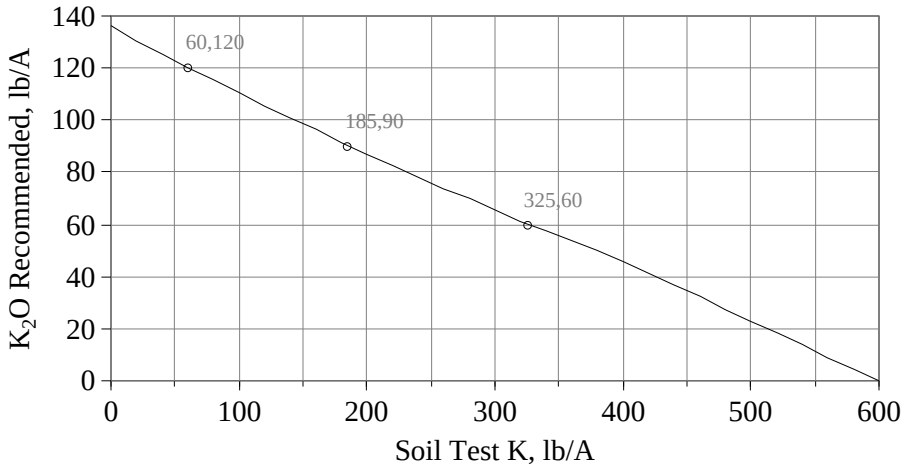
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Radishes (*Code* #167)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 90-120 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-100 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

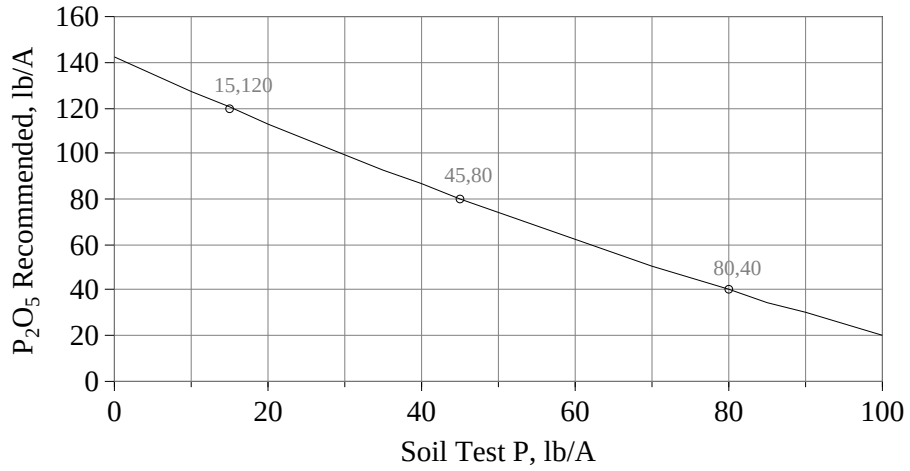
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Radishes (*Code 167*)

P Recommendations, Coastal Plain

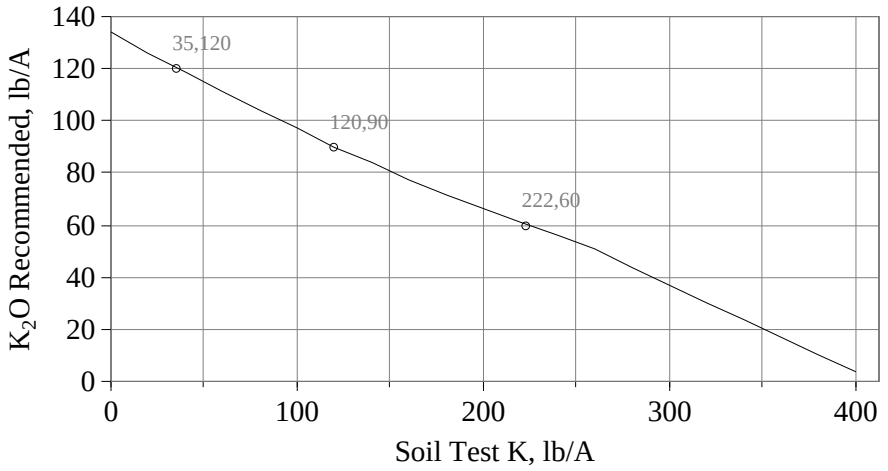
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

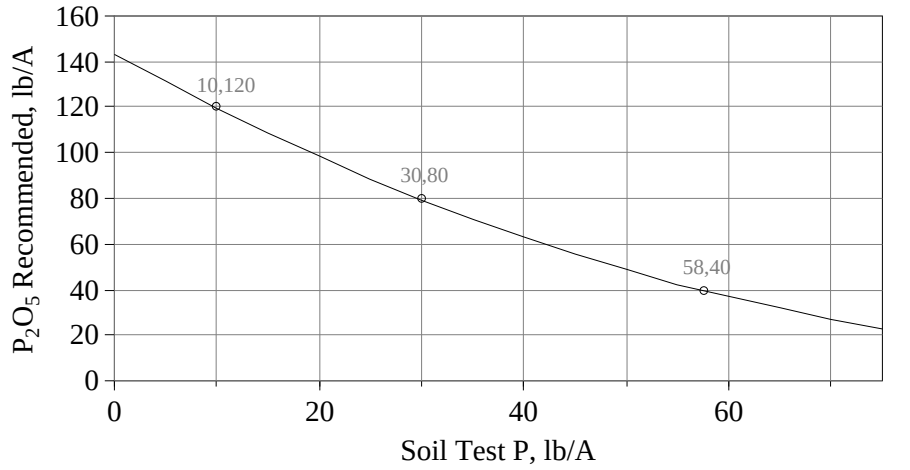
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

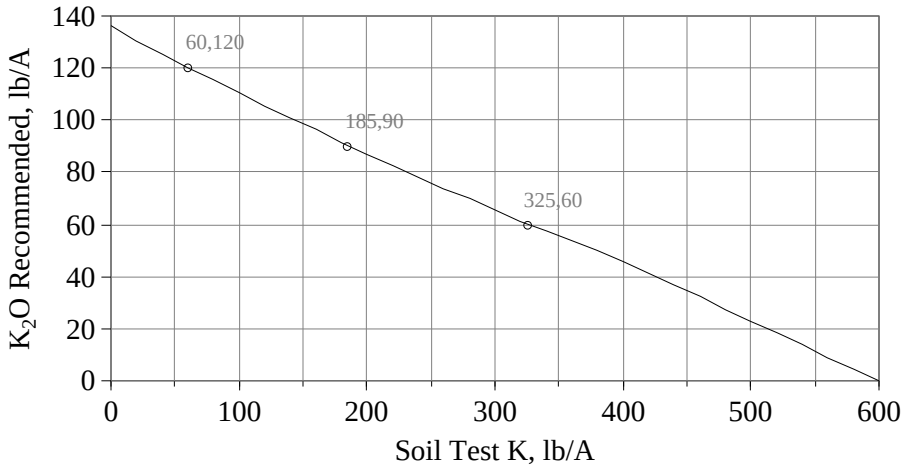
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Rhubarb (*Code* #168)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 90-120 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-100 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

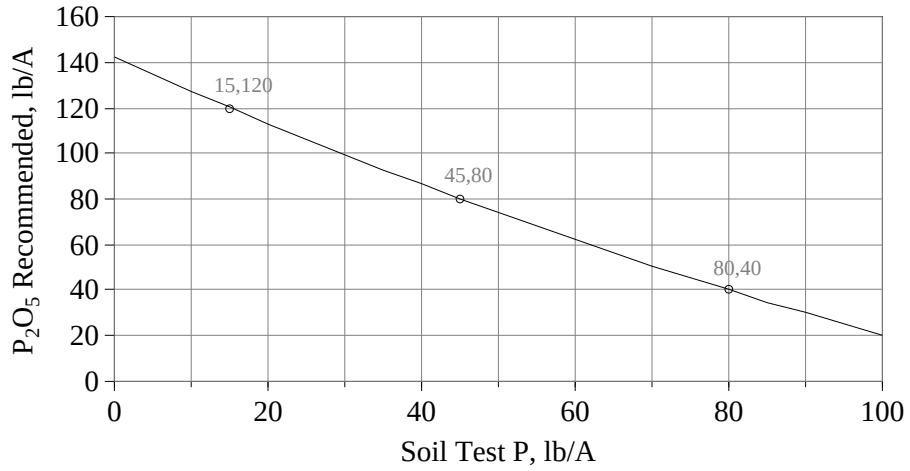
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Rhubarb (*Code 168*)

P Recommendations, Coastal Plain

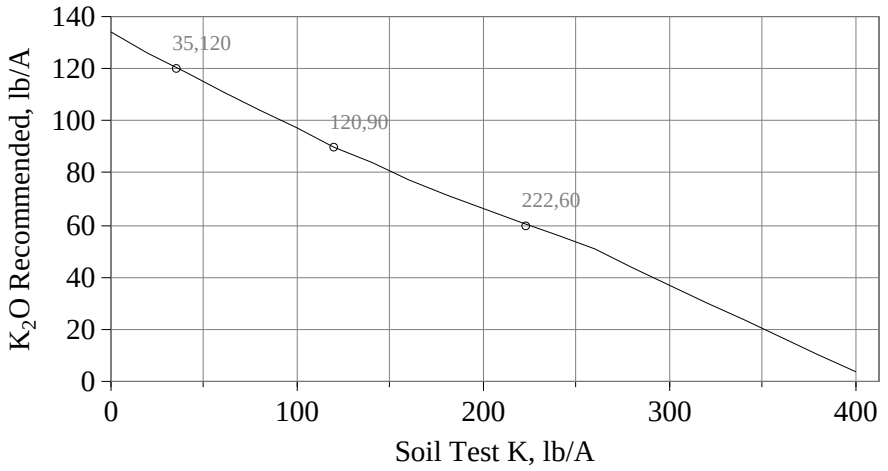
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

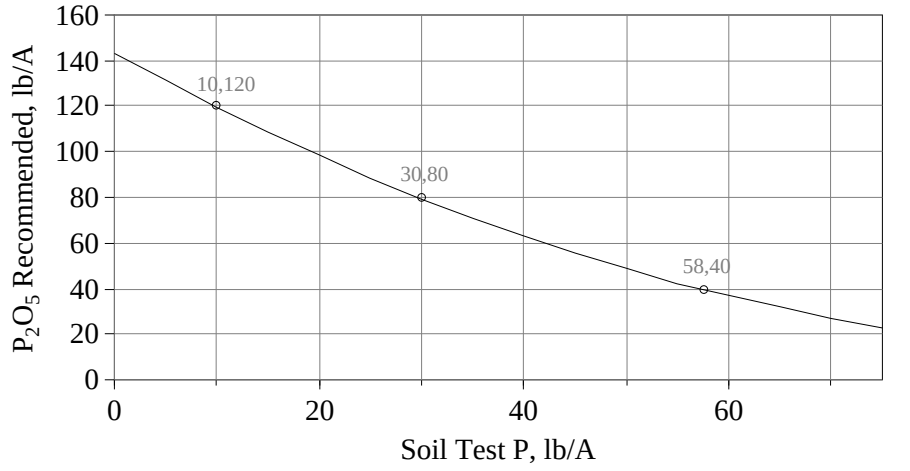
if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

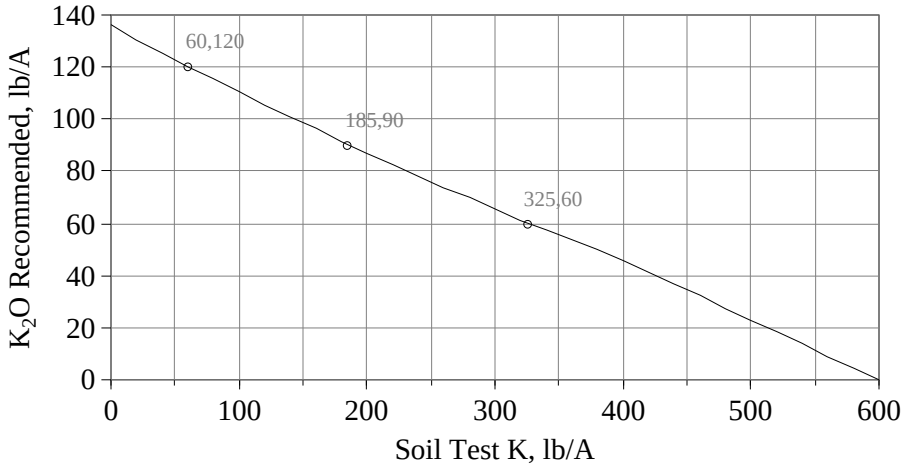
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Snap Beans (*Code* #141)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-90-90	*-90-70	*-90-50	*-90-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-70-90	*-70-70	*-70-50	*-70-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-90	*-50-70	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-90	*-0-70	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 70-100 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 60-80 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

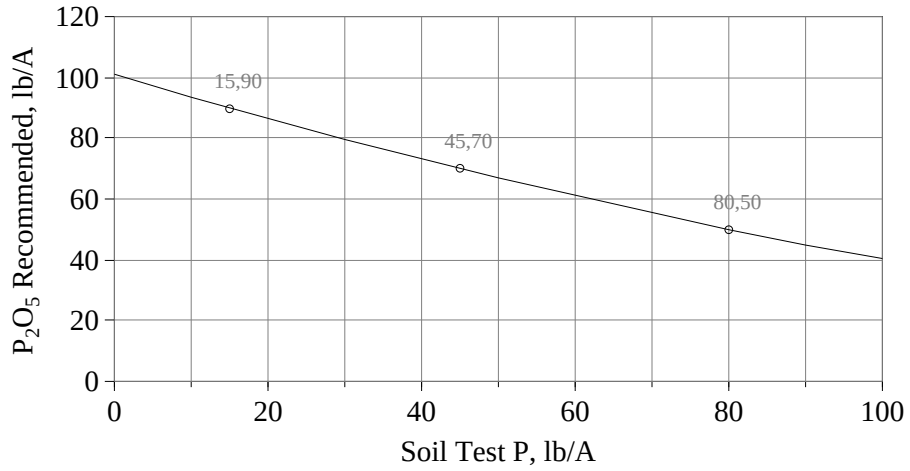
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If all the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Snap Beans (*Code 141*)

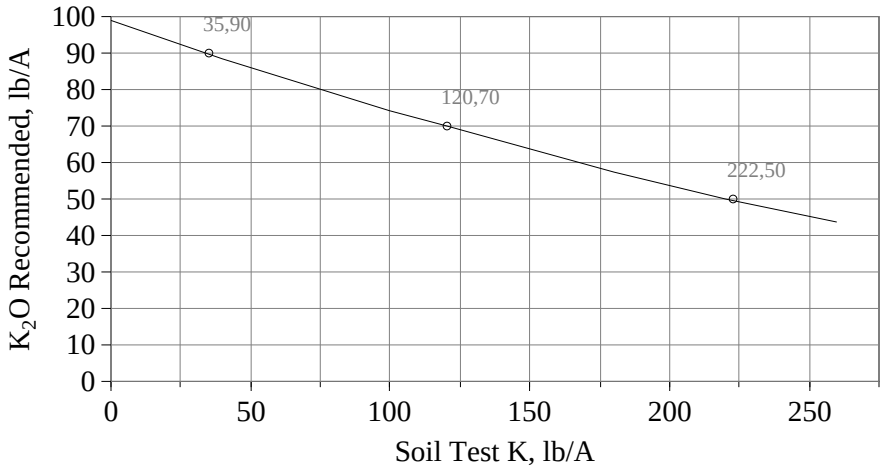
P Recommendations, Coastal Plain

$P_2O_5 = 101 - 0.755P + 0.00147P^2$



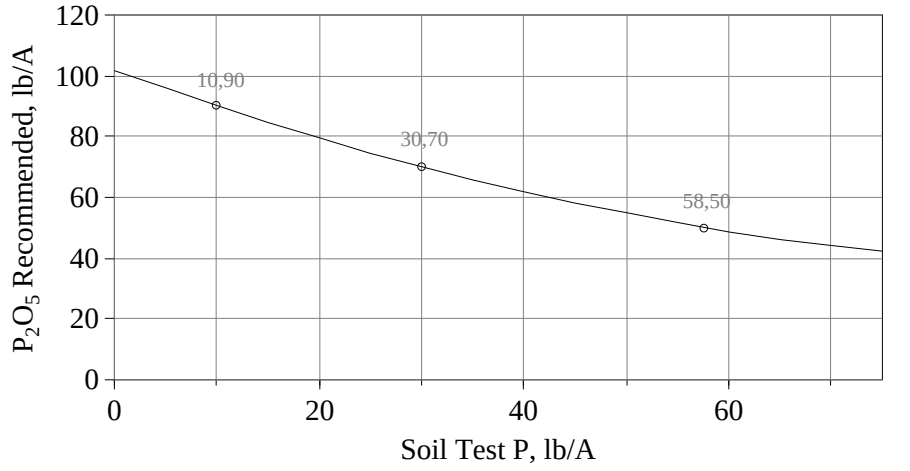
K Recommendations, Coastal Plain

$K_2O = 99 - 0.268K + 0.00021K^2$



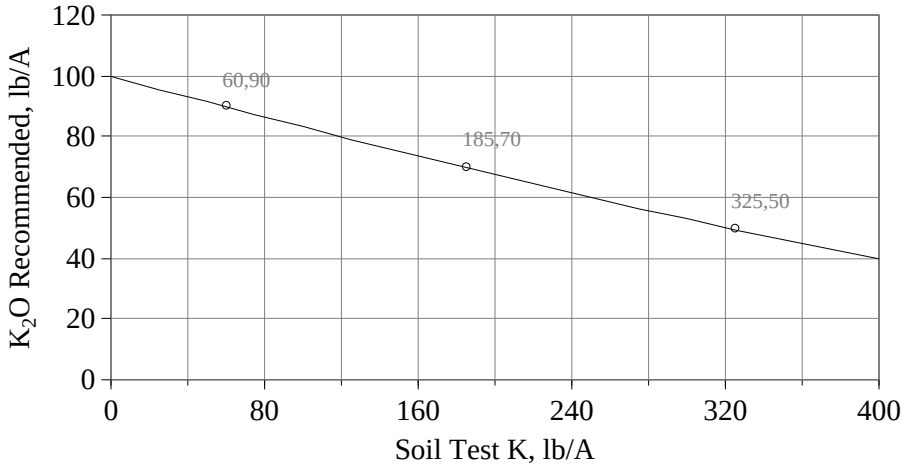
P Recommendations, Piedmont

$P_2O_5 = 102 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 100 - 0.175K + 0.00006K^2$



Southern Peas (*Code* #174)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-60-60	*-60-40	*-60-20	*-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-40-60	*-40-40	*-40-20	*-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-20-60	*-20-40	*-20-20	*-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-60	*-0-40	*-0-20	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 50-75 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 40-60 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications. On light soils apply half of the nitrogen at planting and the remainder 2 to 3 weeks after emergence.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

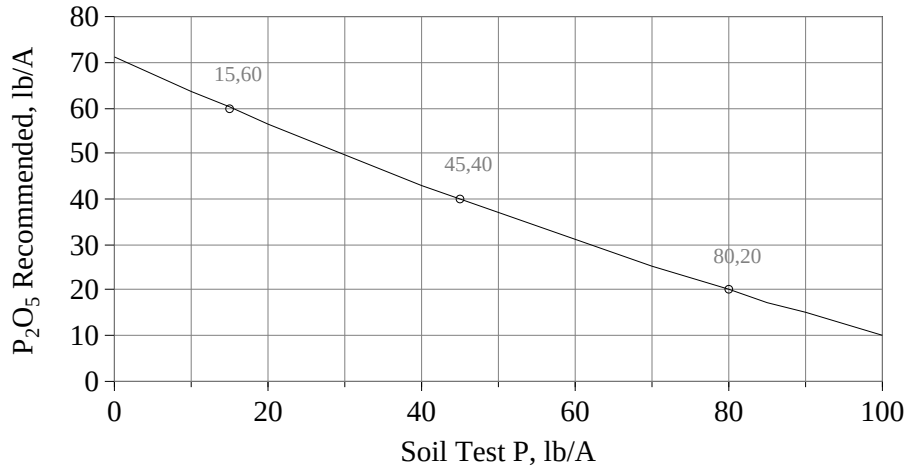
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Southern Peas (*Code 174*)

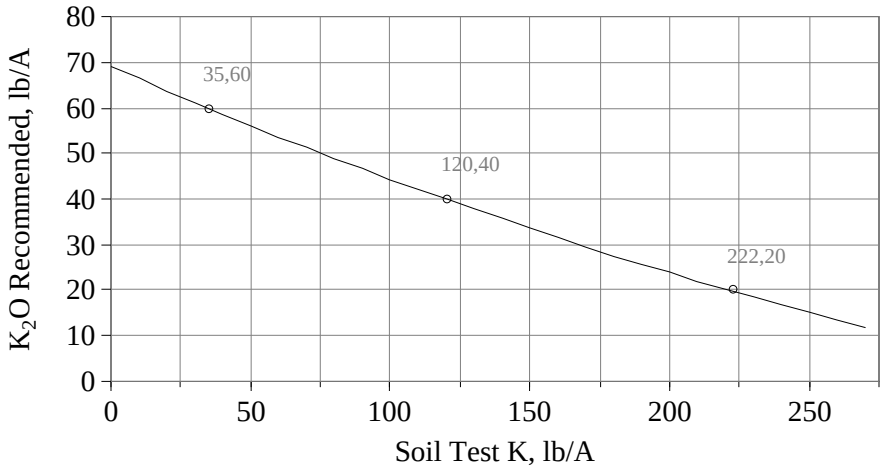
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



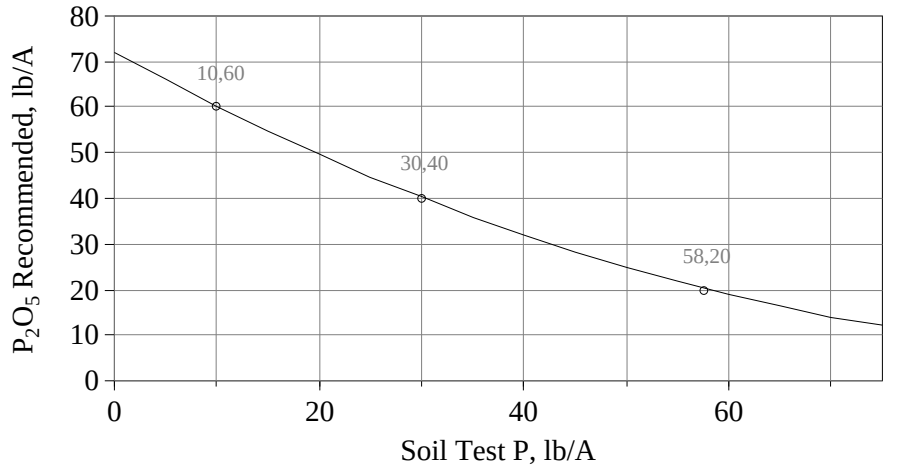
K Recommendations, Coastal Plain

$K_2O = 69 - 0.268K + 0.00021K^2$



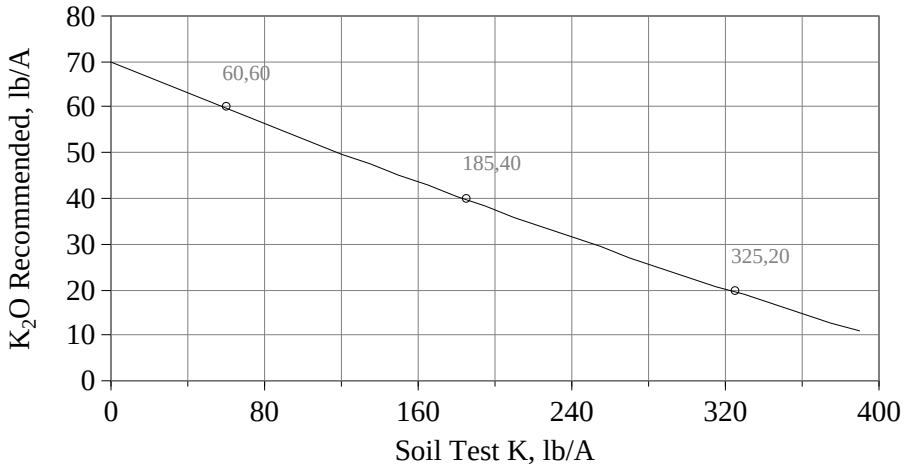
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 70 - 0.175K + 0.00006K^2$



Spinach, fresh market (*Code* #152)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

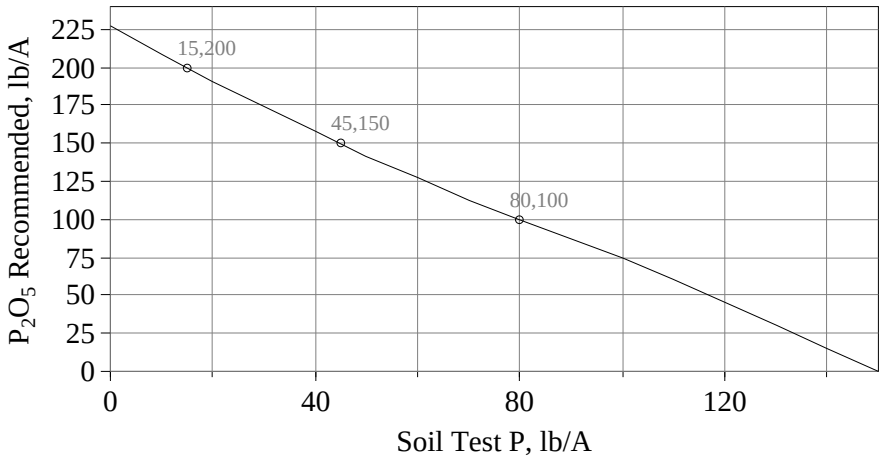
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Spinach, fresh market (*Code 152*)

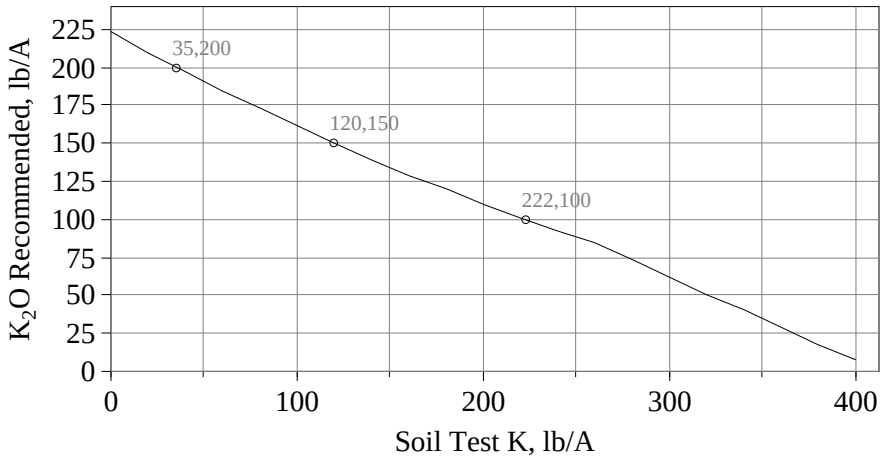
P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



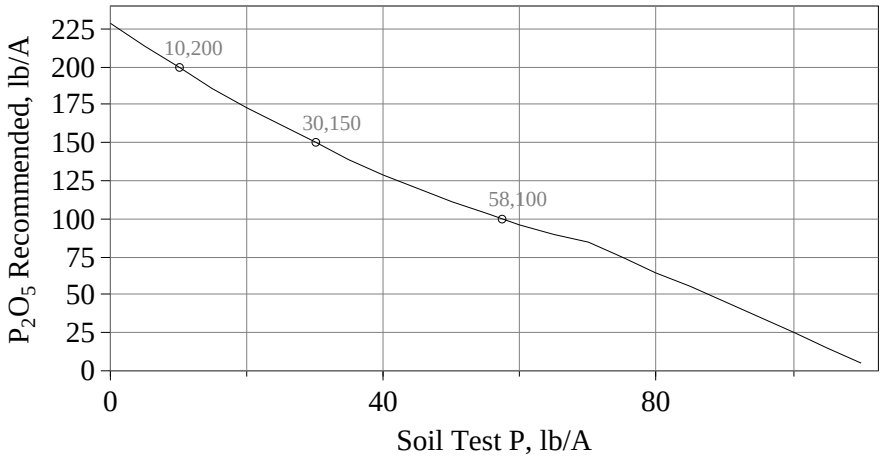
K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$
if (K ≥ 275) $K_2O = 227 - 0.55K$



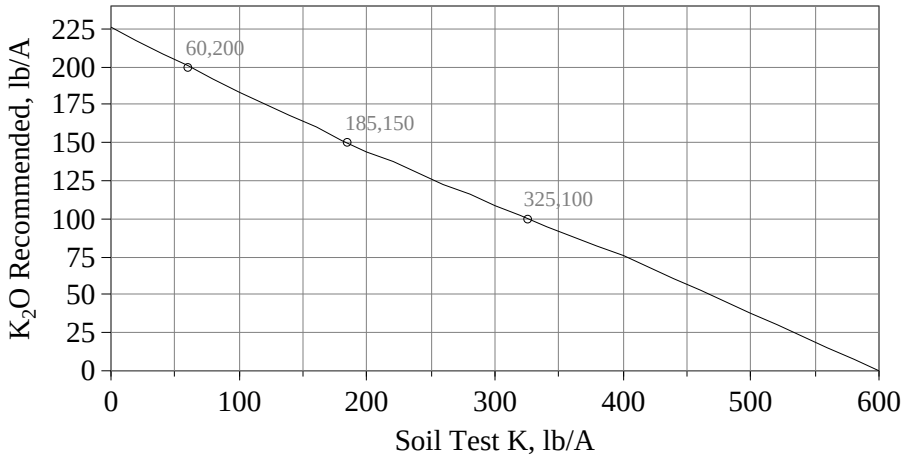
P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$
if (K ≥ 400) $K_2O = 228 - 0.38K$



Squash (*Code* #161)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches below the seeds or roots.

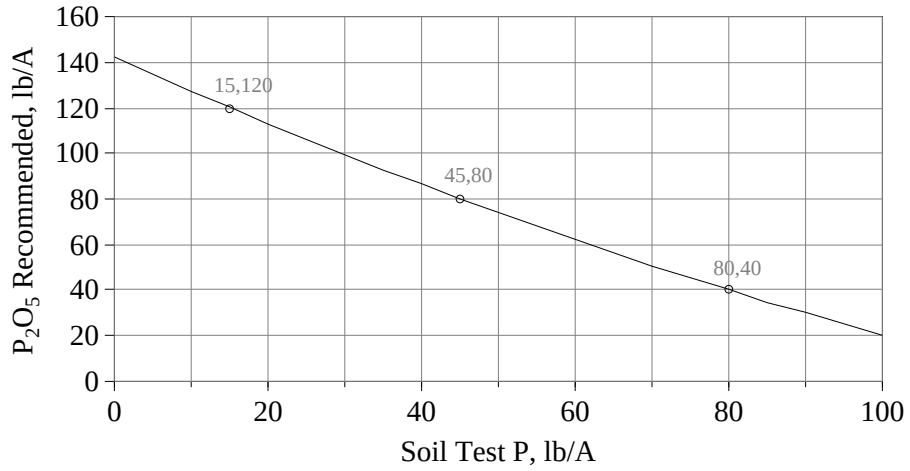
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, apply one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Squash (*Code 161*)

P Recommendations, Coastal Plain

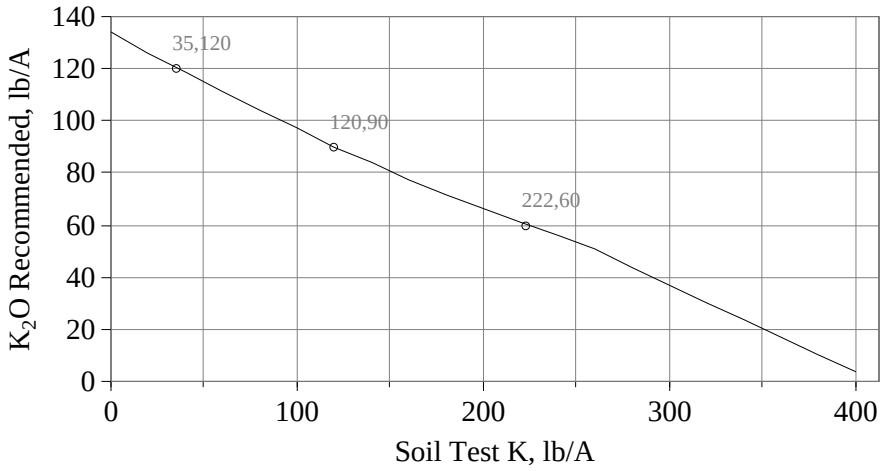
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

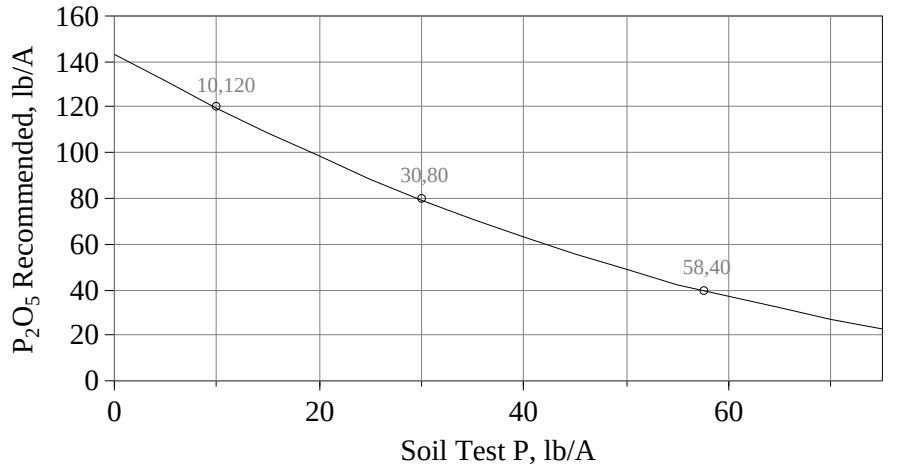
if ($K < 275$) $K_2O = 134 - 0.403K + 0.00032K^2$

if ($K \geq 275$) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

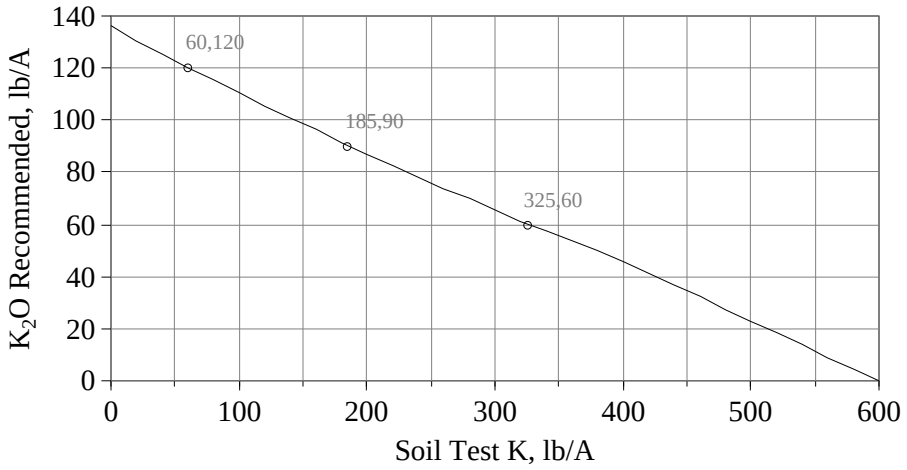
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if ($K < 400$) $K_2O = 136 - 0.265K + 0.00010K^2$

if ($K \geq 400$) $K_2O = 138 - 0.23K$



Staked Tomatoes (*Code* #181)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-70-200	*-70-150	*-70-100	*-70-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 150-200 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 100-150 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Apply an additional 30 pounds nitrogen per acre every two or three weeks when production is extended over a long period of time.

Nitrogen (N) application rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

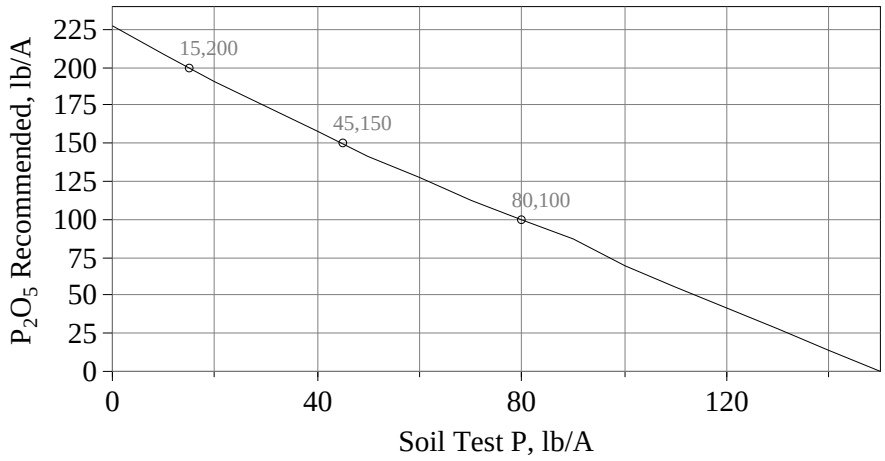
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Staked Tomatoes (*Code 181*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$

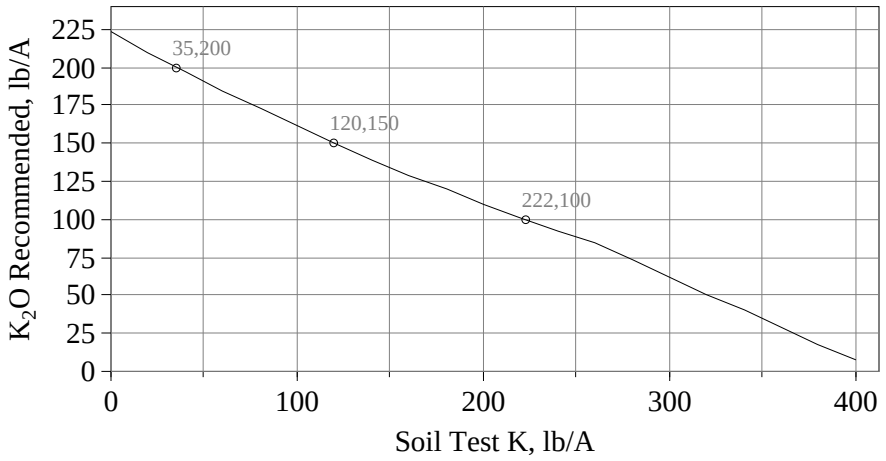
if (P ≥ 100) $P_2O_5 = 210 - 1.40P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$

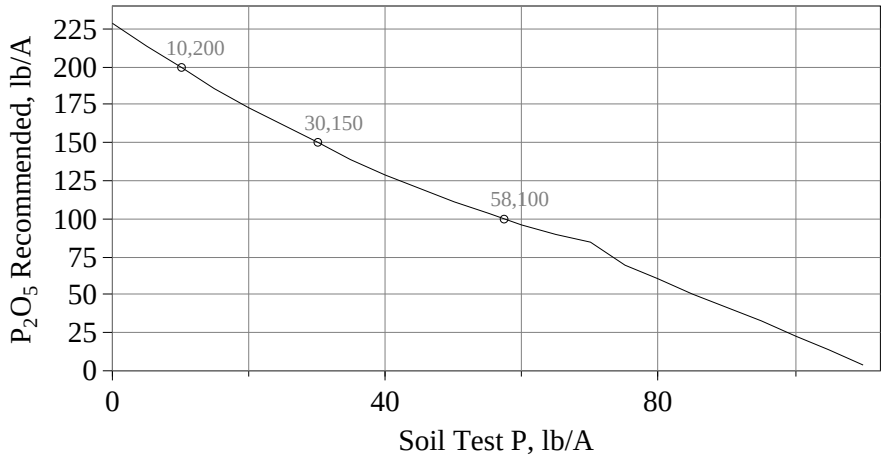
if (K ≥ 275) $K_2O = 227 - 0.55K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$

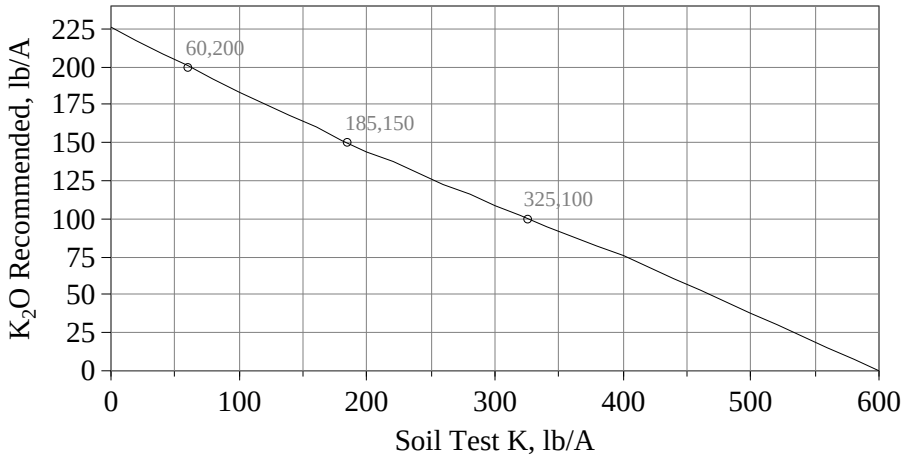
if (P ≥ 75) $P_2O_5 = 210 - 1.87P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$

if (K ≥ 400) $K_2O = 228 - 0.38K$



Sweet Corn (*Code* #158)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-90-120	*-90-90	*-90-60	*-90-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-120	*-60-90	*-60-60	*-60-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-45-120	*-45-90	*-45-60	*-45-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 200-250 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-200 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 - 20 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

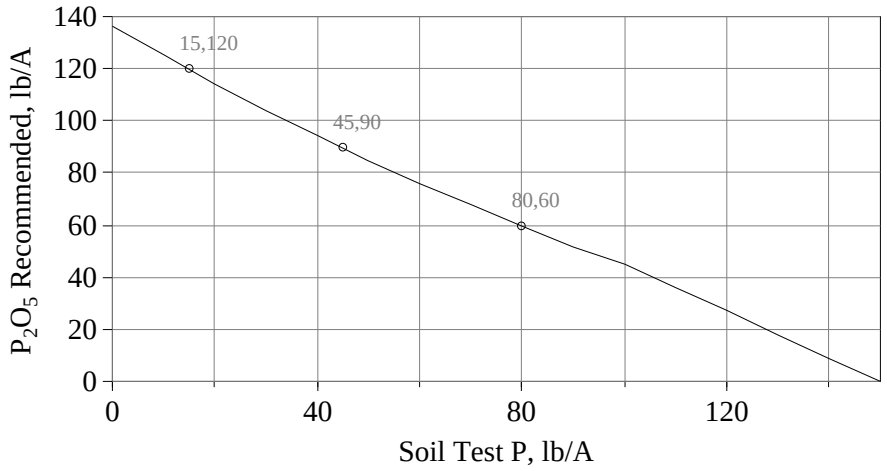
For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Sweet Corn (*Code 158*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 136 - 1.132P + 0.00220P^2$

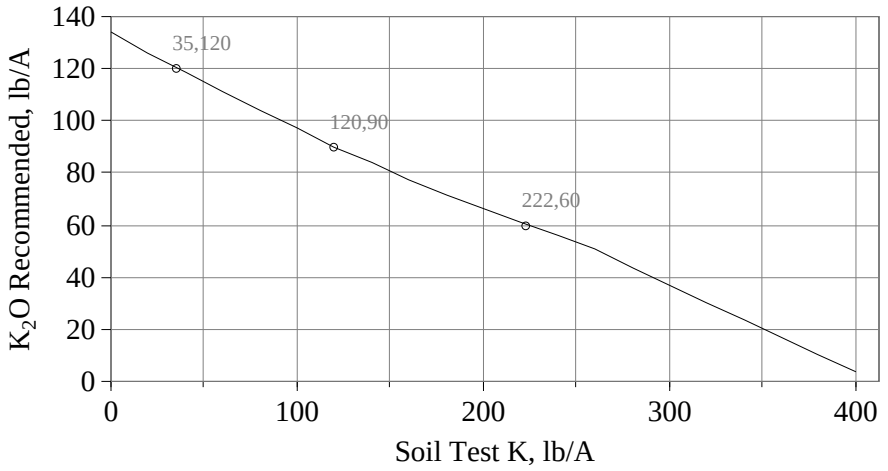
if (P ≥ 100) $P_2O_5 = 135 - 0.90P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

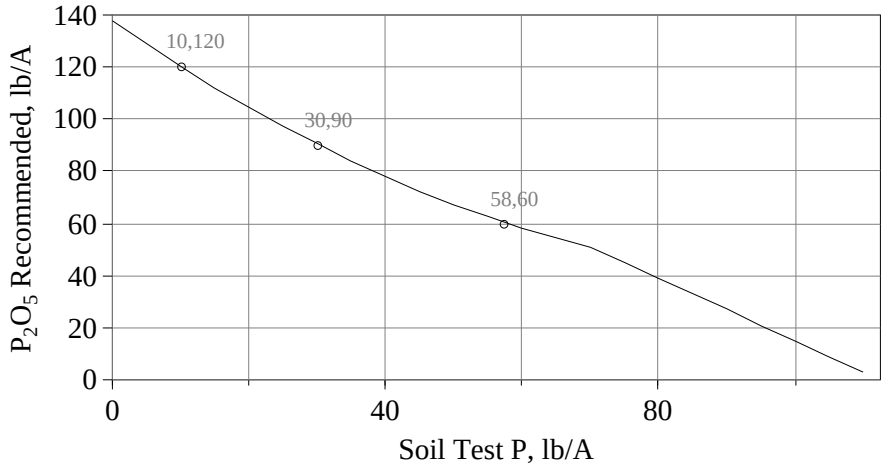
if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 138 - 1.844P + 0.00861P^2$

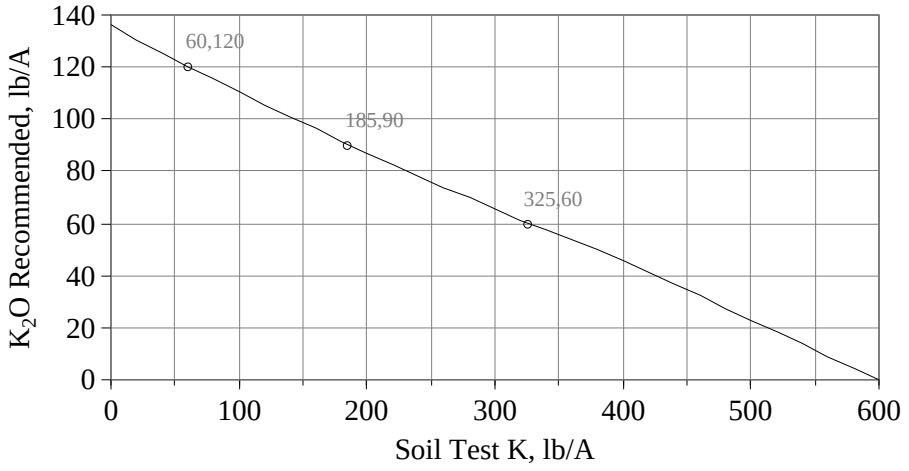
if (P ≥ 75) $P_2O_5 = 135 - 1.20P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



Sweet Potatoes (*Code* #178)

Soil Test Rating	**Potassium**			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-180-180	*-180-120	*-180-60	*-180-30
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-120-180	*-120-120	*-120-60	*-120-30
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-60-180	*-60-120	*-60-60	*-60-30
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-30-180	*-30-120	*-30-60	*-30-30

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C.
Nitrogen:	Coastal Plain 60-90 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 50-80 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder at the first and second cultivation. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

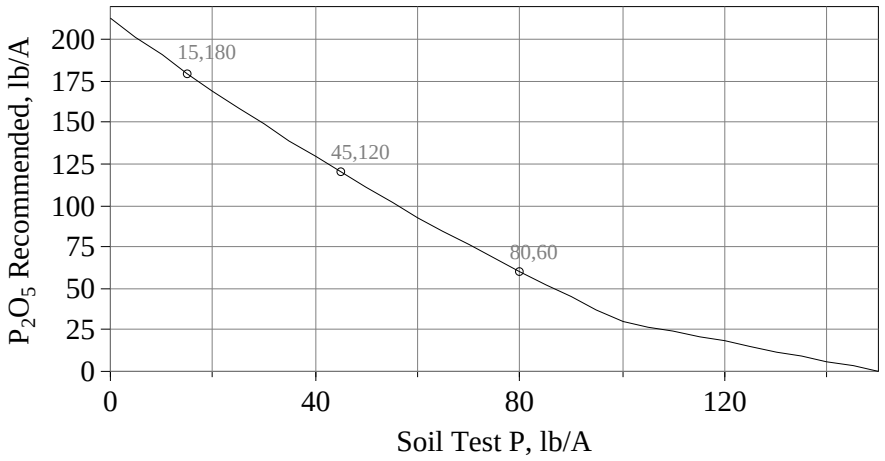
If the soil pH is greater than 5.6, apply 8 pounds per acre of manganese (Mn).

Sweet Potatoes (*Code 178*)

P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 213 - 2.264P + 0.00440P^2$

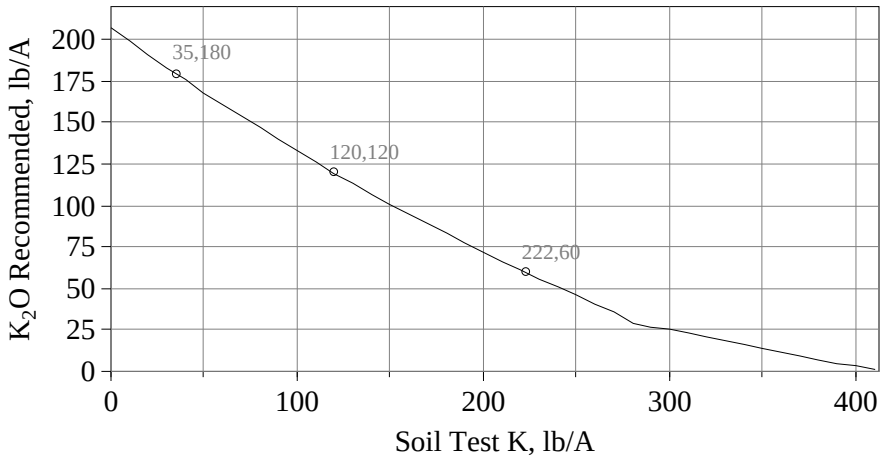
if (P ≥ 100) $P_2O_5 = 90 - 0.60P$



K Recommendations, Coastal Plain

if (K < 275) $K_2O = 207 - 0.805K + 0.00064K^2$

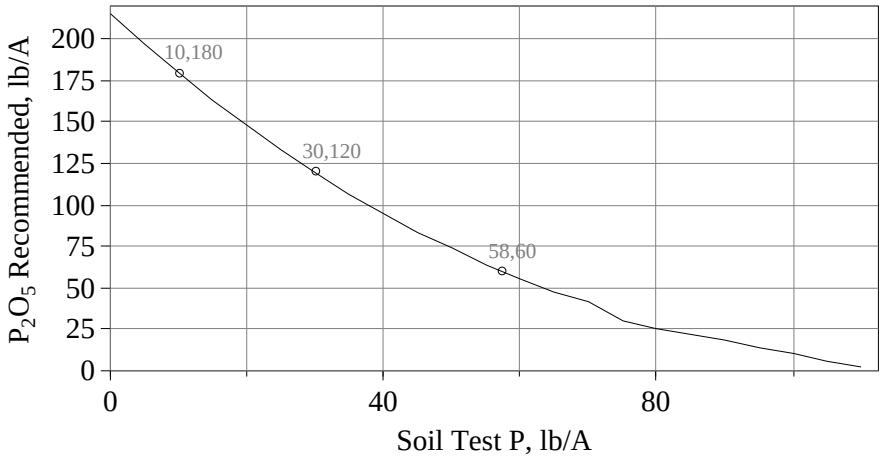
if (K ≥ 275) $K_2O = 91 - 0.22K$



P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 215 - 3.689P + 0.01722P^2$

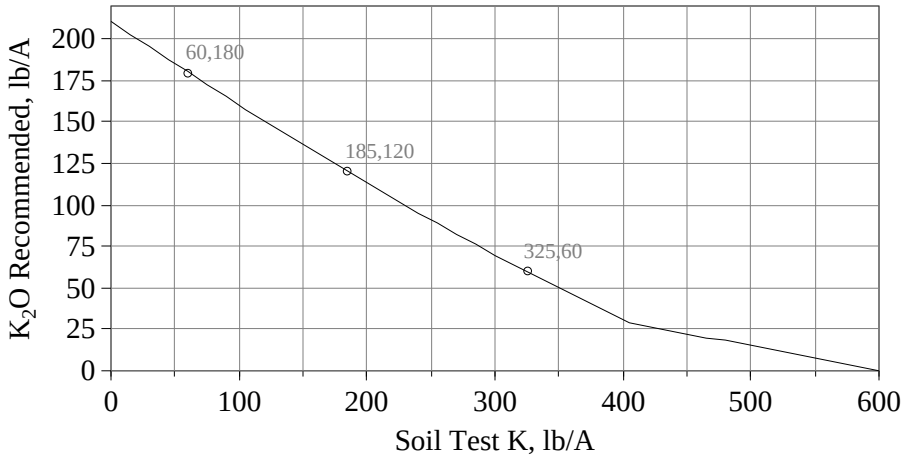
if (P ≥ 75) $P_2O_5 = 90 - 0.80P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 211 - 0.527K + 0.00019K^2$

if (K ≥ 400) $K_2O = 90 - 0.15K$



Tomato Transplants (*Code* #182)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-50	*-100-35	*-100-20	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-50	*-60-35	*-60-20	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-30-50	*-30-35	*-30-20	*-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-50	*-0-35	*-0-20	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 40 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 50 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Boron:	Apply 1 pound of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Fact Sheet:

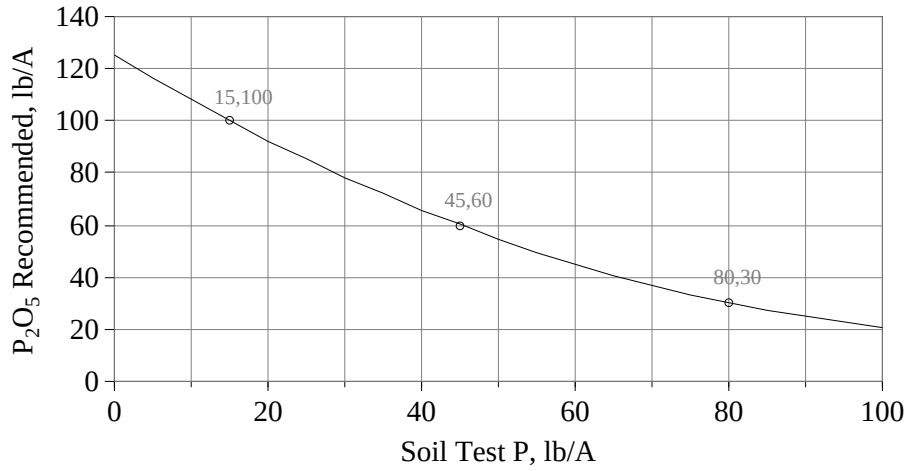
The complete fertilizer (nitrogen-phosphate-potash) should be placed 1 to 1.5 inches directly beneath the seed.

If the soil test phosphorus (P) is low, broadcast 70 pounds of phosphate per acre prior to planting; if the soil test phosphorus is medium broadcast 40 pounds of phosphate per acre prior to planting. The phosphate (P_2O_5) applied in the broadcast application should be deducted from the total amount of phosphate recommended.

Tomato Transplants (*Code 182*)

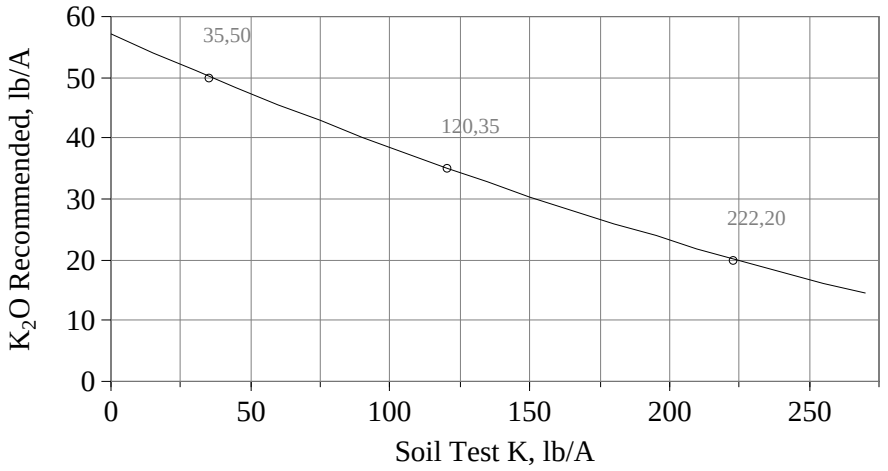
P Recommendations, Coastal Plain

$P_2O_5 = 125 - 1.773P + 0.00733P^2$



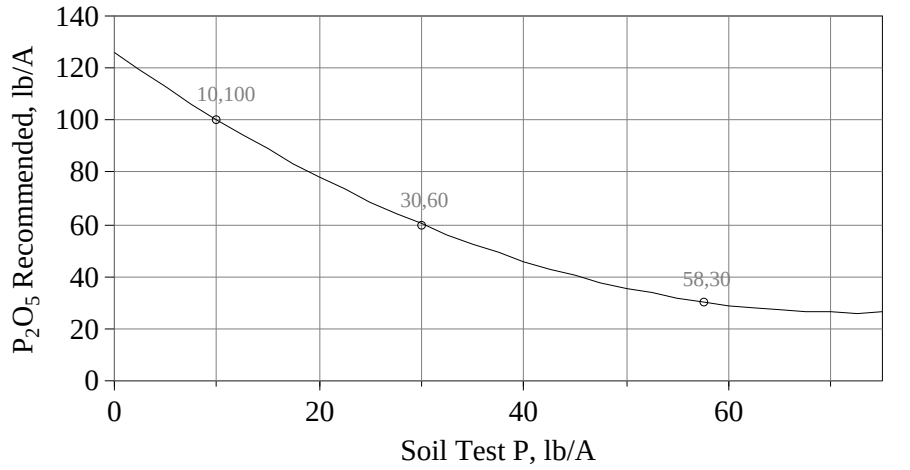
K Recommendations, Coastal Plain

$K_2O = 57 - 0.201K + 0.00016K^2$



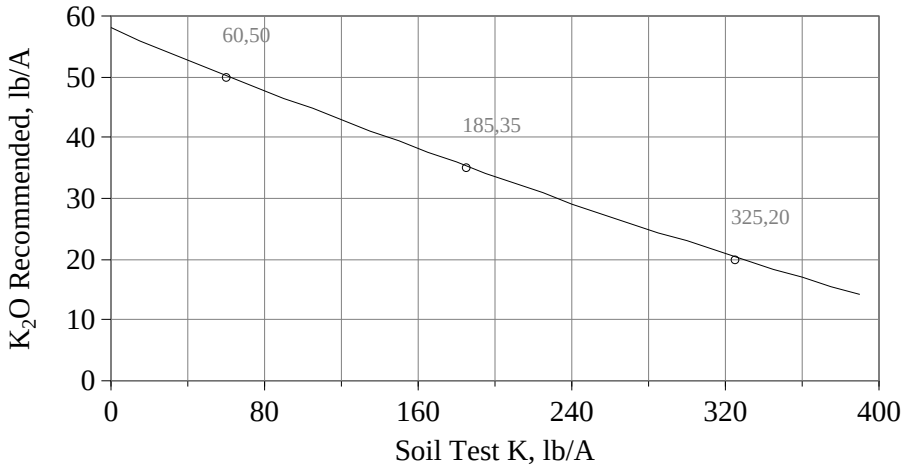
P Recommendations, Piedmont

$P_2O_5 = 126 - 2.766P + 0.01914P^2$



K Recommendations, Piedmont

$K_2O = 58 - 0.132K + 0.00005K^2$



Turnips, fresh market (*Code* #153)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-200-200	*-200-150	*-200-100	*-200-75
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-150-200	*-150-150	*-150-100	*-150-75
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-100-200	*-100-150	*-100-100	*-100-75
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-75-200	*-75-150	*-75-100	*-75-75

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.3 to 6.8. If the pH is less than 6.3, see Lime Table B.
Nitrogen:	Coastal Plain 175-225 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 150-180 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 2 pounds of boron (B) per acre.
Calcium:	If soil test calcium is less than 800 pounds/acre and pH is 6.5 or greater, apply 1,000 pounds gypsum per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For transplants, apply a starter solution using 3 pounds of 10-34-0 per 50 gallons of water.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches to the side of the seeds or plants and 2 to 3 inches below the seeds or roots.

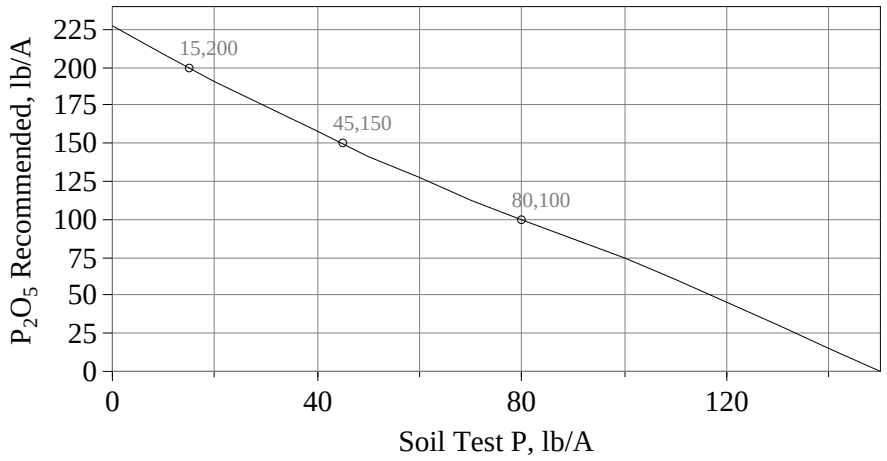
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, applying one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Turnips, fresh market (*Code 153*)

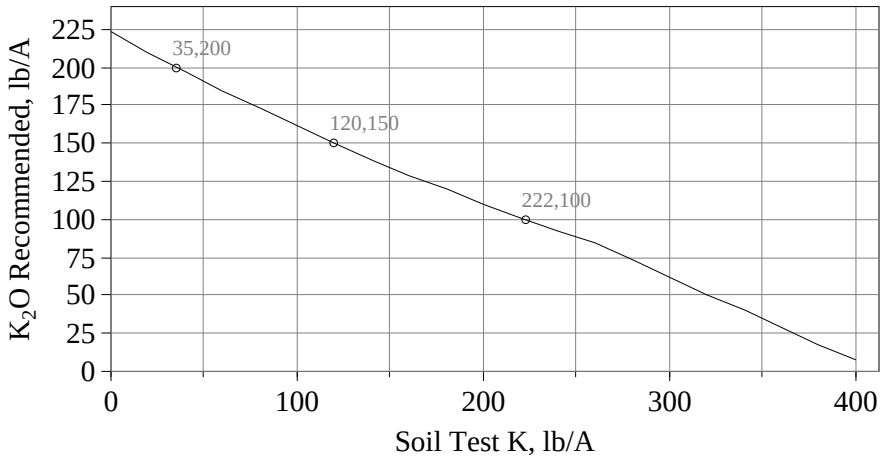
P Recommendations, Coastal Plain

if (P < 100) $P_2O_5 = 227 - 1.886P + 0.00366P^2$
if (P ≥ 100) $P_2O_5 = 225 - 1.50P$



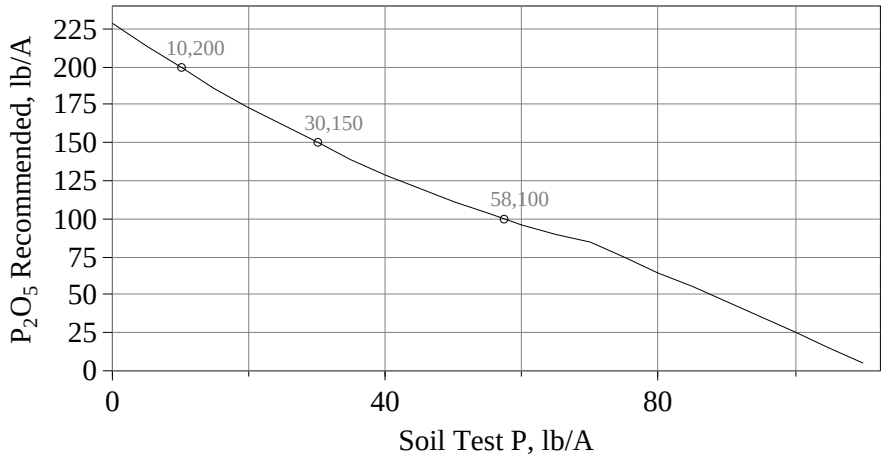
K Recommendations, Coastal Plain

if (K < 275) $K_2O = 223 - 0.672K + 0.00054K^2$
if (K ≥ 275) $K_2O = 227 - 0.55K$



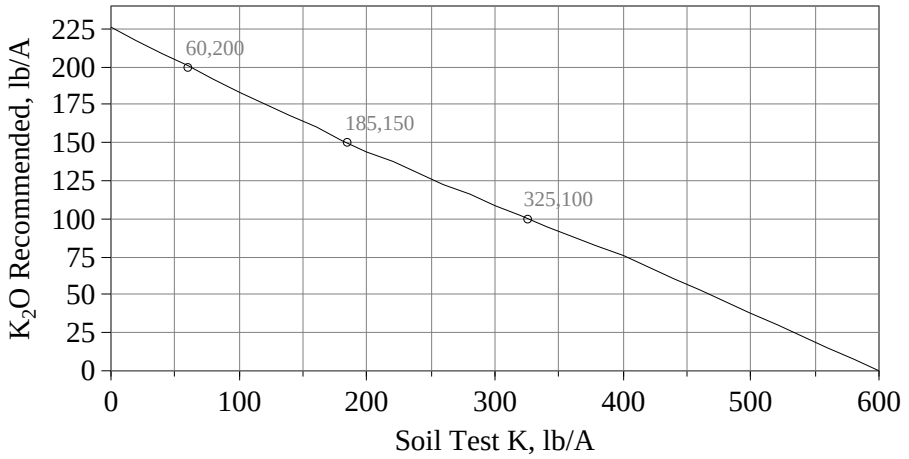
P Recommendations, Piedmont

if (P < 75) $P_2O_5 = 229 - 3.074P + 0.01435P^2$
if (P ≥ 75) $P_2O_5 = 225 - 2.00P$



K Recommendations, Piedmont

if (K < 400) $K_2O = 226 - 0.439K + 0.00016K^2$
if (K ≥ 400) $K_2O = 228 - 0.38K$



Watermelon (*Code* #163)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-120-120	*-120-90	*-120-60	*-120-45
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-80-120	*-80-90	*-80-60	*-80-45
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-40-120	*-40-90	*-40-60	*-40-45
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-90	*-0-60	*-0-45

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	Coastal Plain 100-150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 80-120 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.
Sulfur:	Apply 10 pounds of sulfur (S) per acre.
Boron:	Apply 1 pound of boron (B) per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Fact Sheet:

Apply only 60 pounds nitrogen per acre if early yields are an important consideration.

Nitrogen (N) rates will vary depending on rainfall, soil type, irrigation, plant population and method and timing of applications.

For early growth stimulation apply a pop-up fertilizer using 100 to 150 pounds of 10-34-0 or similar material per acre. Apply the fertilizer 2 to 3 inches below the seeds or roots.

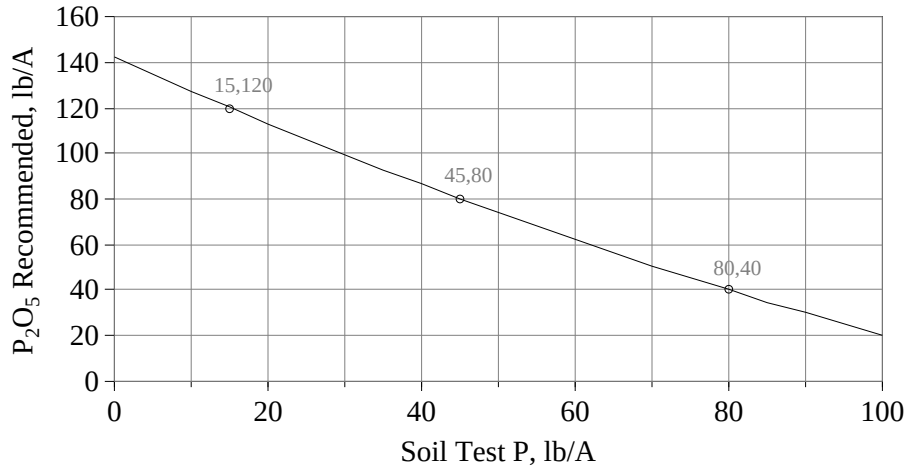
Sulfate of potash magnesia may be used to supply a portion of the recommended potash (K_2O) and to also supply magnesium (Mg) and sulfur (S).

For more efficient use of fertilizer split the applications, apply one-third to one-half down (banded or incorporated in the bed) and the remainder in 1 to 3 applications. If the fertilizer is broadcast, increase the application rates of phosphate (P_2O_5) and potash (K_2O) 1½ to 2 times.

Watermelon (*Code 163*)

P Recommendations, Coastal Plain

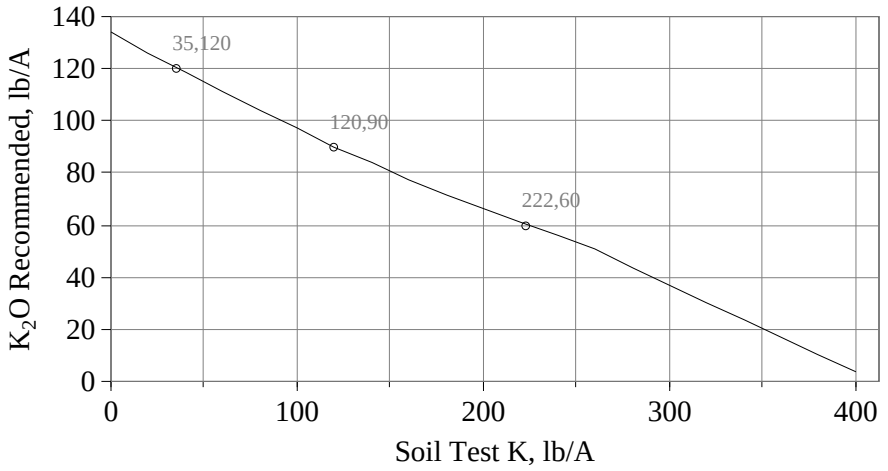
$P_2O_5 = 142 - 1.509P + 0.00293P^2$



K Recommendations, Coastal Plain

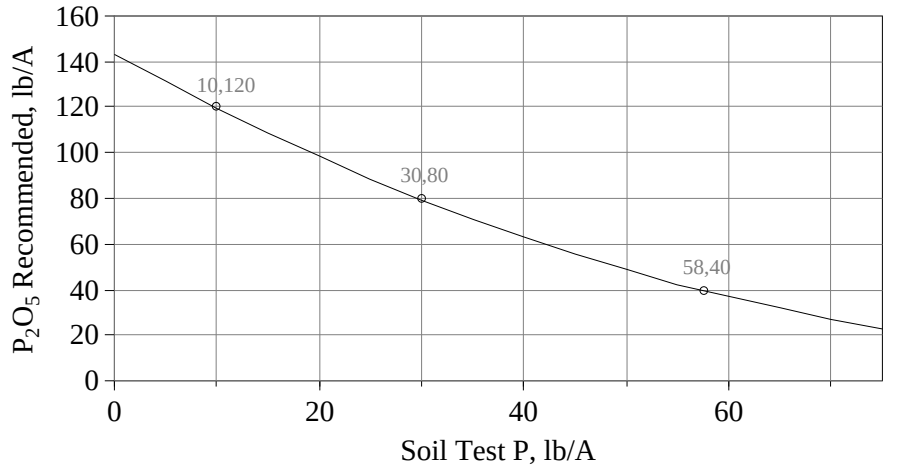
if (K < 275) $K_2O = 134 - 0.403K + 0.00032K^2$

if (K ≥ 275) $K_2O = 136 - 0.33K$



P Recommendations, Piedmont

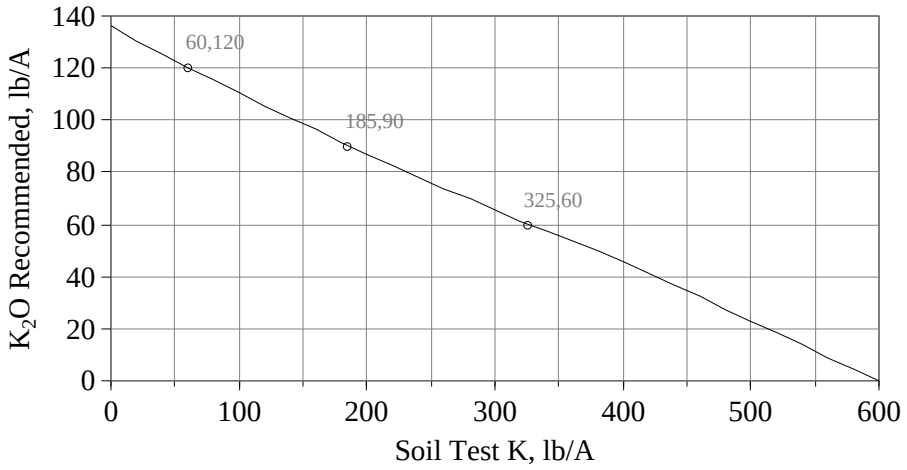
$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

if (K < 400) $K_2O = 136 - 0.265K + 0.00010K^2$

if (K ≥ 400) $K_2O = 138 - 0.23K$



SOD PRODUCTION

Clint Waltz, Extension Agronomist – Turf

Sod Production Centipede (*Code* #769)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-180-180	*-180-90	*-180-0	*-180-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-90-180	*-90-90	*-90-0	*-90-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-180	*-0-90	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-180	*-0-90	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	130-200 pounds nitrogen (N) per acre. Rate will depend on length of growing season, weed control, and desired growth.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre
Other:	See iron (Fe) recommendation on Fact Sheet.

continued -»

Fact Sheet:

It is best to incorporate lime, phosphate (P_2O_5), and potash (K_2O) prior to reestablishment. If no tillage is conducted after harvest, it is still better to apply these materials prior to sod knitting.

If more than 100 pounds of phosphate and 100 pounds of potash are recommended, it is preferable to split the applications.

*Apply nitrogen at the rate of 45 pounds of nitrogen (N) per acre following spring green up and every 4 to 6 weeks until 90% covered. If more rapid cover is desired and other production practices (mowing, irrigation, weed control) are not a problem increase the nitrogen rate accordingly to obtain the desired growth. Do not exceed 200 pounds nitrogen per acre per year.

Once coverage is obtained reduce nitrogen fertilization to a normal maintenance program.

The last fertilizer application of the year should have equal amounts of nitrogen and potash and should be applied no later than one month before the normal first killing frost.

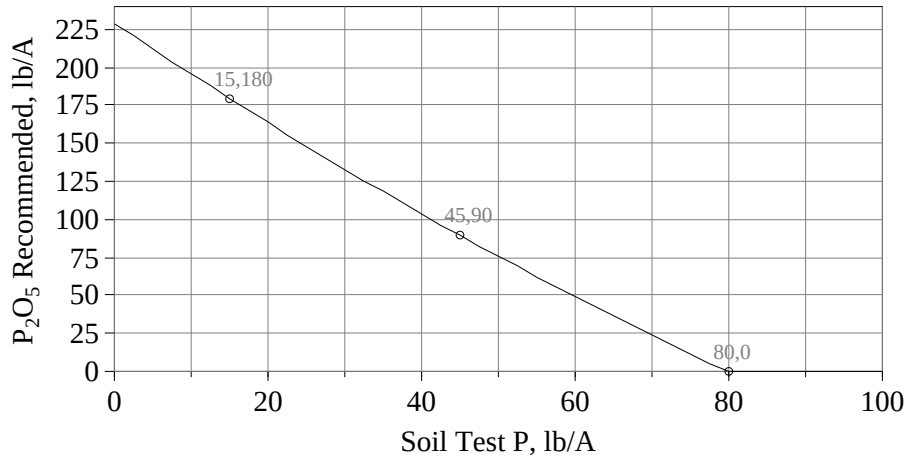
Iron chlorosis and other spring greenup problems are most frequently associated with low soil temperatures, high nitrogen rates, high mowing heights, and thatch problems. Although iron applications will temporarily alleviate these symptoms, adhering to recommended fertilizer, mowing and thatch control practices is the best way to control iron chlorosis.

If the grass shows iron (Fe) deficiency symptoms (yellowing between the veins) apply a foliar application of iron as iron sulfate or iron chelate at a rate of 1 pound Fe per acre in sufficient water to wet the foliage (20 to 25 gallons per acre). If applied to the grass on a hot day (95 to 100 F) reduce the rate to 0.5 pound Fe per acre. If symptoms persist repeat the applications in 7 to 10 days.

Sod Production Centipede (*Code 769*)

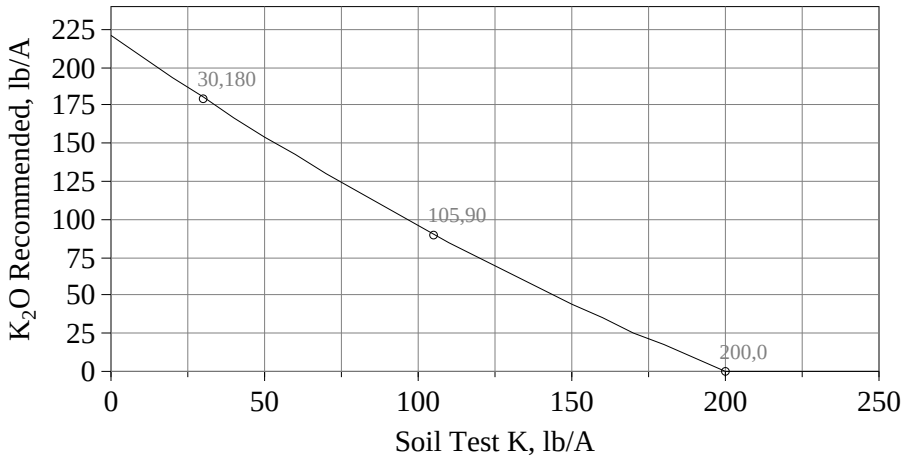
P Recommendations, Coastal Plain

$P_2O_5 = 229 - 3.395P + 0.00659P^2$



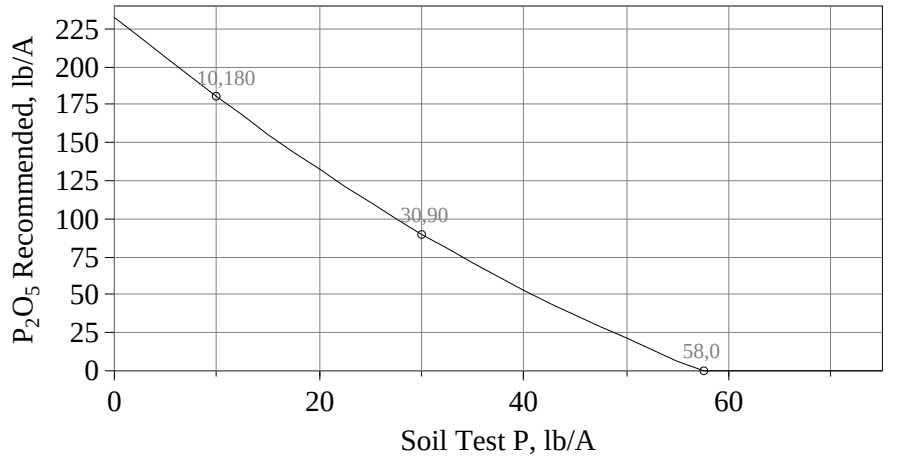
K Recommendations, Coastal Plain

$K_2O = 221 - 1.401K + 0.00149K^2$



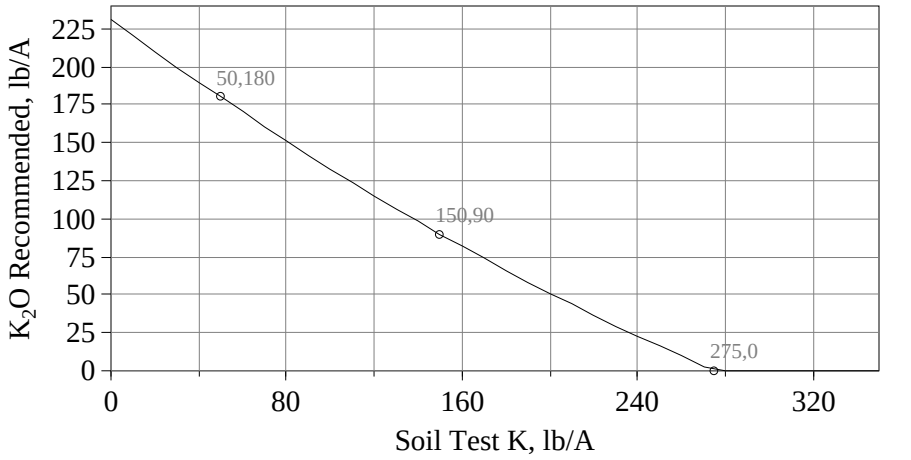
P Recommendations, Piedmont

$P_2O_5 = 233 - 5.534P + 0.02584P^2$



K Recommendations, Piedmont

$K_2O = 231 - 1.060K + 0.00080K^2$



Sod Production Hybrid Bermudas (*Code* #768)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-190-200	*-190-110	*-190-50	*-190-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-110-200	*-110-110	*-110-50	*-110-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-200	*-50-110	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-200	*-0-110	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	240-300 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

It is best to incorporate lime, phosphate (P_2O_5) and potash (K_2O) prior to reestablishment. If no tillage is conducted after harvest, it is still better to apply these materials prior to sod knitting.

If more than 100 pounds of phosphate and 100 pounds of potash are recommended, it is preferable to split the applications, unless they are made after harvesting on exposed soil or tilled into the soil.

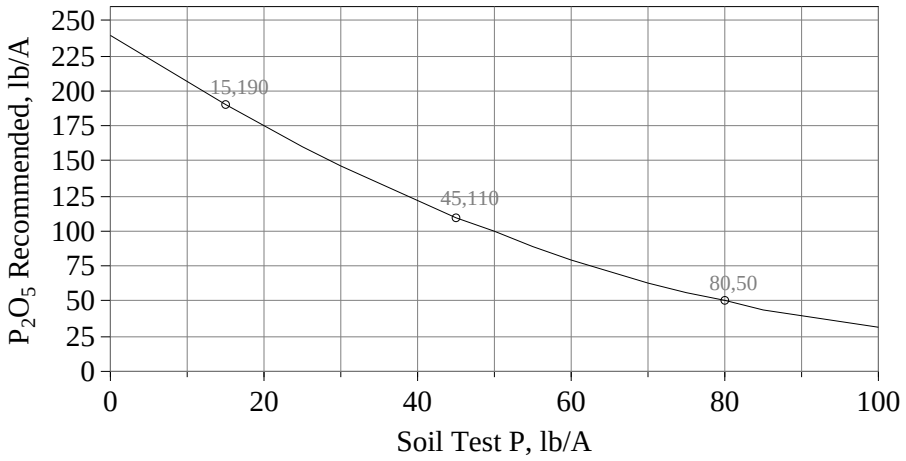
*Apply nitrogen at the rate of 40 to 50 pounds nitrogen per acre per month of active growth. If more rapid cover is desired and other production practices (mowing, irrigation, weed control) are not a problem, increase the nitrogen rate accordingly to obtain the desired growth.

The last fertilizer application of the year should have equal amounts of nitrogen and potash and should be applied no later than one month before the normal first killing frost.

Sod Production Hybrid Bermudas (*Code 768*)

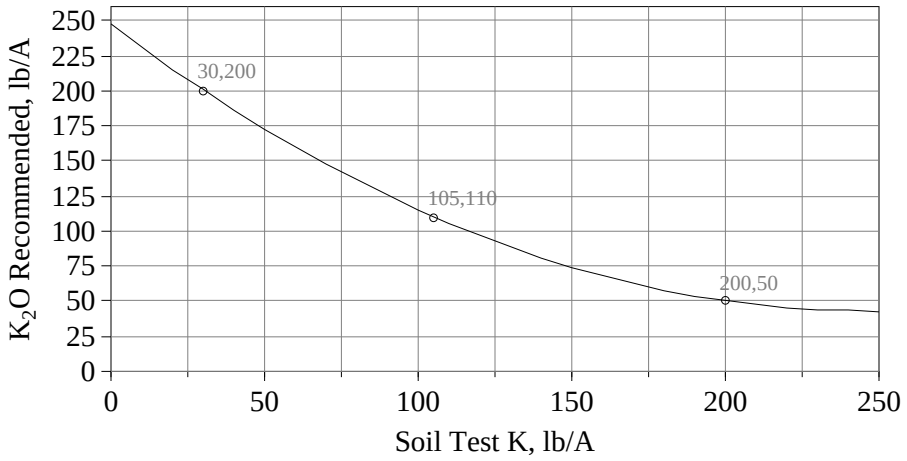
P Recommendations, Coastal Plain

$P_2O_5 = 240 - 3.546P + 0.01465P^2$



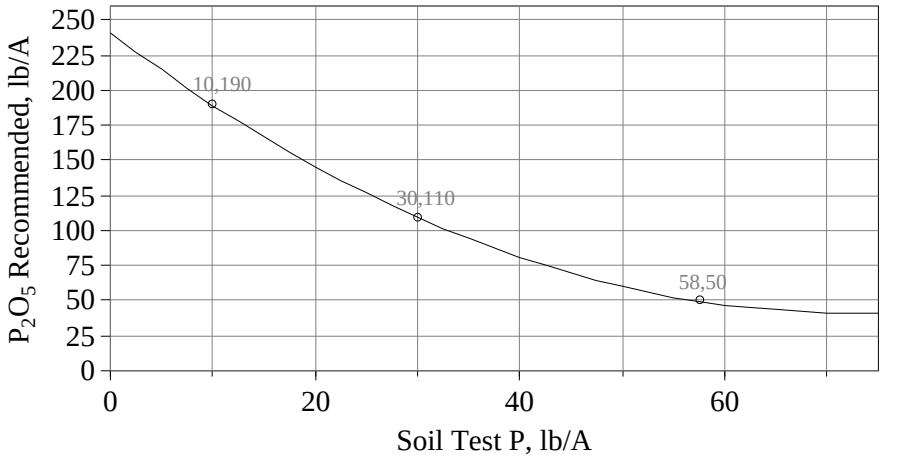
K Recommendations, Coastal Plain

$K_2O = 247 - 1.651K + 0.00334K^2$



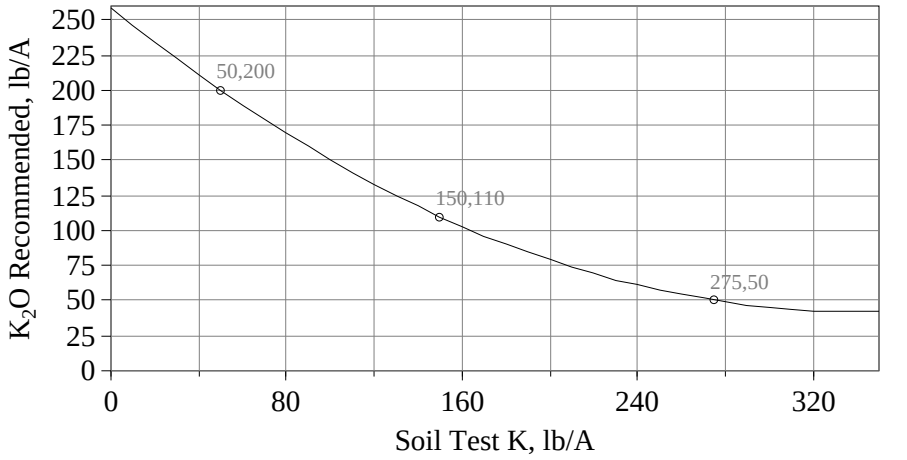
P Recommendations, Piedmont

$P_2O_5 = 241 - 5.531P + 0.03828P^2$



K Recommendations, Piedmont

$K_2O = 259 - 1.274K + 0.00187K^2$



Sod Production St. Augustine (*Code* #771)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-190-200	*-190-110	*-190-50	*-190-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-110-200	*-110-110	*-110-50	*-110-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-200	*-50-110	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-200	*-0-110	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	210-270 pounds nitrogen (N) per acre. Rate will depend on length of growing season, weed control, and desired growth.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

It is best to incorporate the recommended amounts of limestone, phosphate (P_2O_5), and potash (K_2O) prior to reestablishment. If no tillage is conducted after harvest, it is still preferable to apply limestone and fertilizer prior to sod knitting.

If more than 100 pounds of phosphate and 100 pounds of potash are recommended, it is preferable to split the applications, unless they are made after harvesting on exposed soil or tilled into the soil.

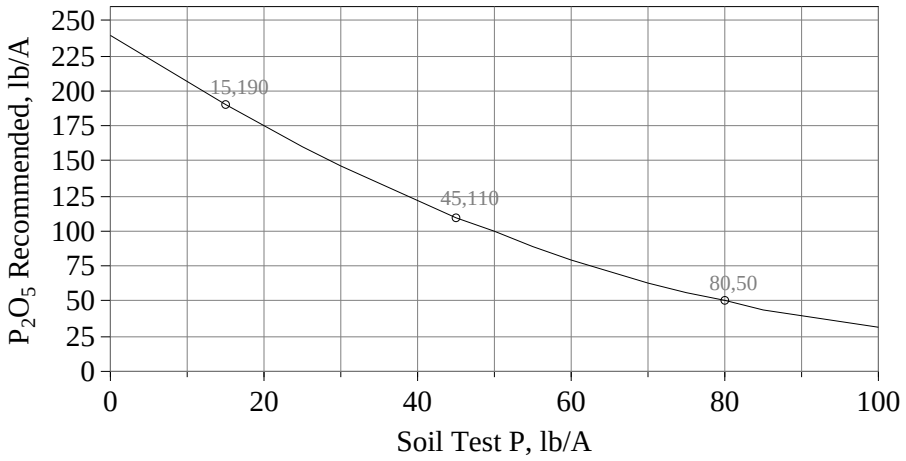
*Apply nitrogen at the rate of 35 to 45 pounds nitrogen per acre when spring growth begins and repeat monthly through the growing season. If more rapid cover is desired and other production practices (mowing, irrigation, weed control) are not a problem, increase the nitrogen rate accordingly to obtain the desired growth.

The last fertilizer application of the year should have equal amounts of nitrogen and potash and should be applied no later than one month before the normal first killing frost.

Sod Production St. Augustine (*Code 771*)

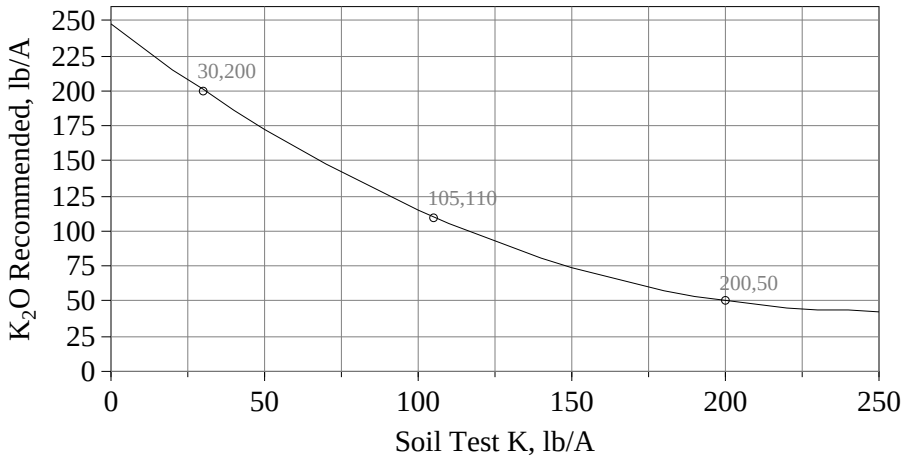
P Recommendations, Coastal Plain

$P_2O_5 = 240 - 3.546P + 0.01465P^2$



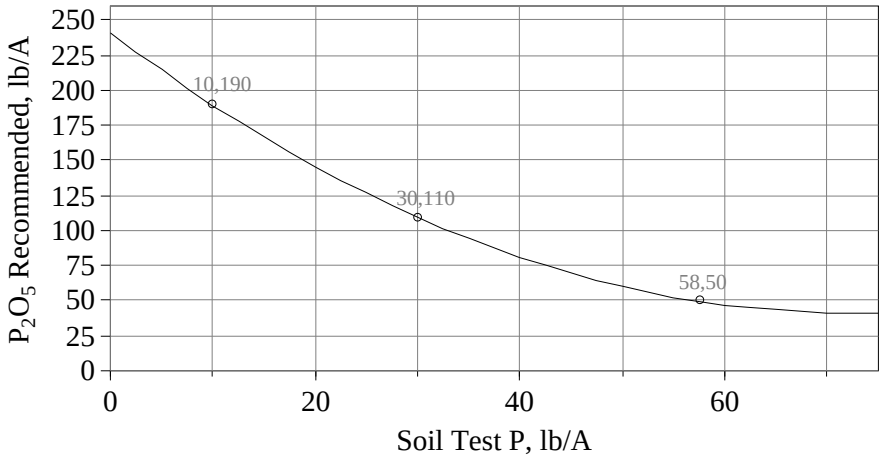
K Recommendations, Coastal Plain

$K_2O = 247 - 1.651K + 0.00334K^2$



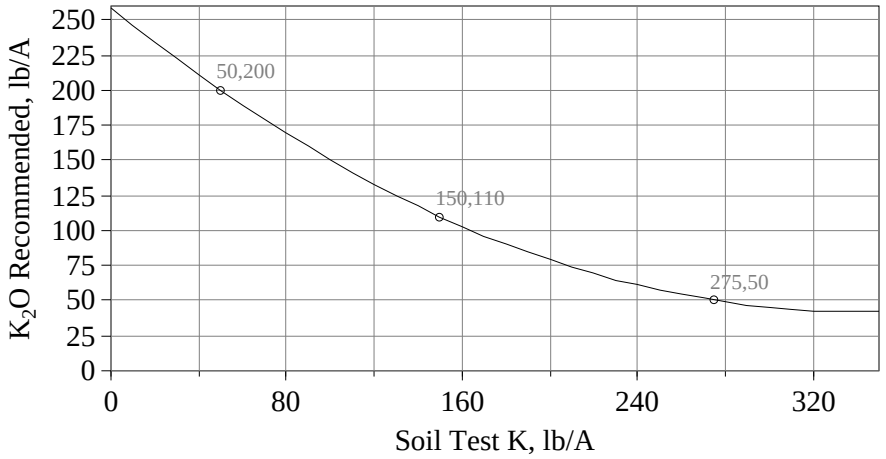
P Recommendations, Piedmont

$P_2O_5 = 241 - 5.531P + 0.03828P^2$



K Recommendations, Piedmont

$K_2O = 259 - 1.274K + 0.00187K^2$



Sod Production Tall Fescue (*Code* #772)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-190-200	*-190-110	*-190-50	*-190-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-110-200	*-110-110	*-110-50	*-110-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-200	*-50-110	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-200	*-0-110	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	90-135 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

It is best to incorporate lime, phosphate (P_2O_5), and potash (K_2O) prior to reestablishment. If no tillage is conducted after harvest, it is still better to apply these materials prior to sod knitting.

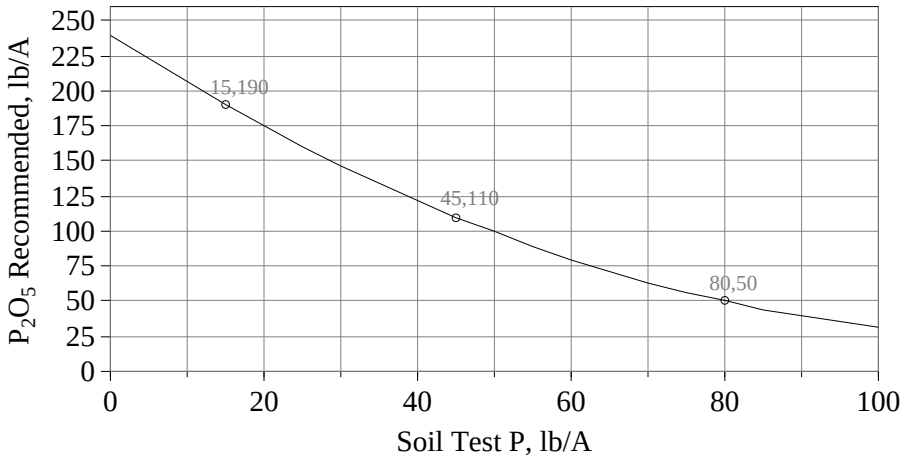
If more than 100 pounds of phosphate and 100 pounds of potash are recommended, it is preferable to split the applications, unless they are made after harvesting on exposed soil or tilled into the soil.

*Apply 45 pounds of nitrogen (N) per acre after seedling emergence and an additional 45 pounds nitrogen per acre four weeks later. If more rapid cover is desired and other production practices (mowing, irrigation, weed control) are not a problem, increase the nitrogen rate accordingly to obtain the desired growth. High nitrogen application rates during spring and prior to harvesting should be avoided since this may encourage disease problems and drought stress.

Sod Production Tall Fescue (*Code 772*)

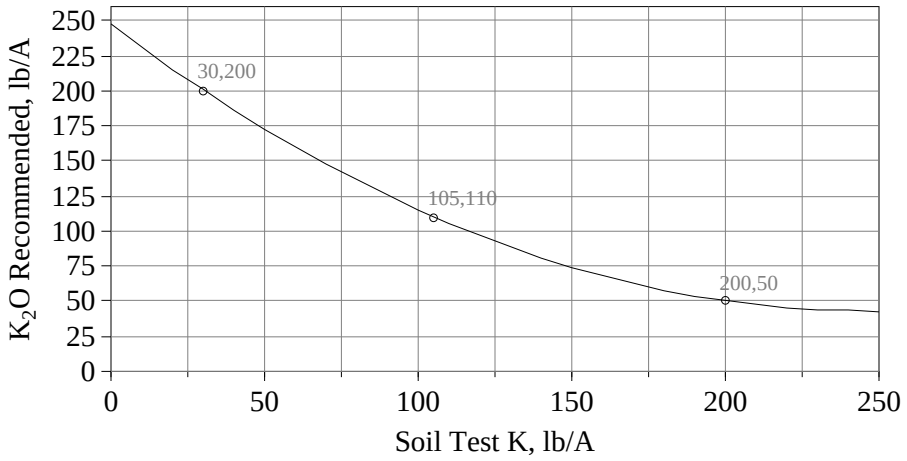
P Recommendations, Coastal Plain

$P_2O_5 = 240 - 3.546P + 0.01465P^2$



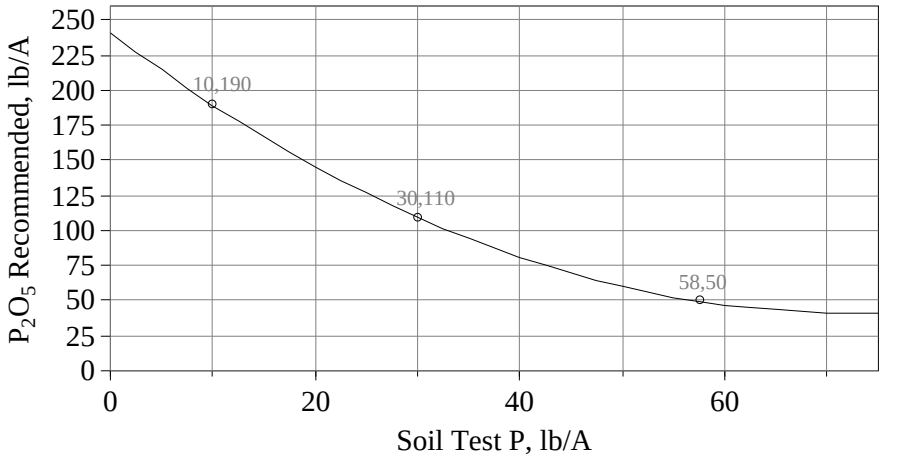
K Recommendations, Coastal Plain

$K_2O = 247 - 1.651K + 0.00334K^2$



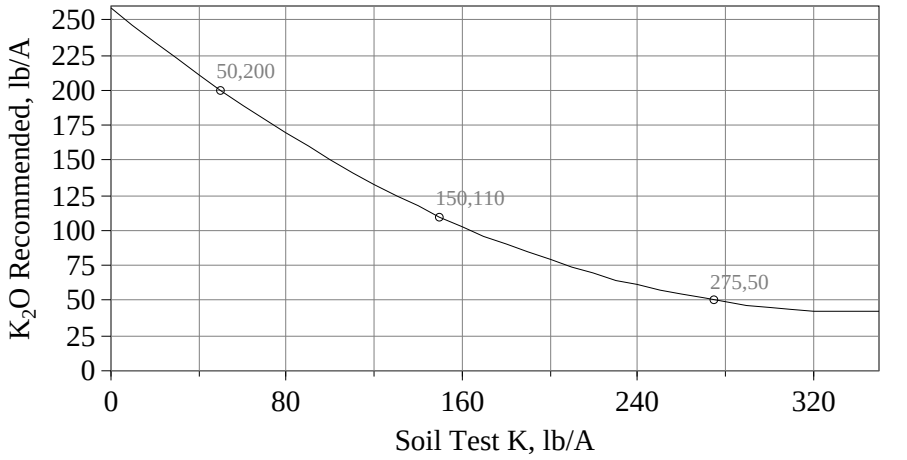
P Recommendations, Piedmont

$P_2O_5 = 241 - 5.531P + 0.03828P^2$



K Recommendations, Piedmont

$K_2O = 259 - 1.274K + 0.00187K^2$



Sod Production Zoysia (*Code* #770)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-190-200	*-190-110	*-190-50	*-190-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-110-200	*-110-110	*-110-50	*-110-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-50-200	*-50-110	*-50-50	*-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-200	*-0-110	*-0-50	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	210-270 pounds nitrogen (N) per acre. Rate will depend on length of growing season, weed control, and desired growth.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

It is best to incorporate the recommended amounts of limestone, phosphate (P_2O_5), and potash (K_2O) prior to reestablishment. If no tillage is conducted after harvest, it is still preferable to apply limestone and fertilizer prior to sod knitting.

If more than 100 pounds of phosphate and 100 pounds of potash are recommended, it is preferable to split the applications, unless they are made after harvesting on exposed soil or tilled into the soil.

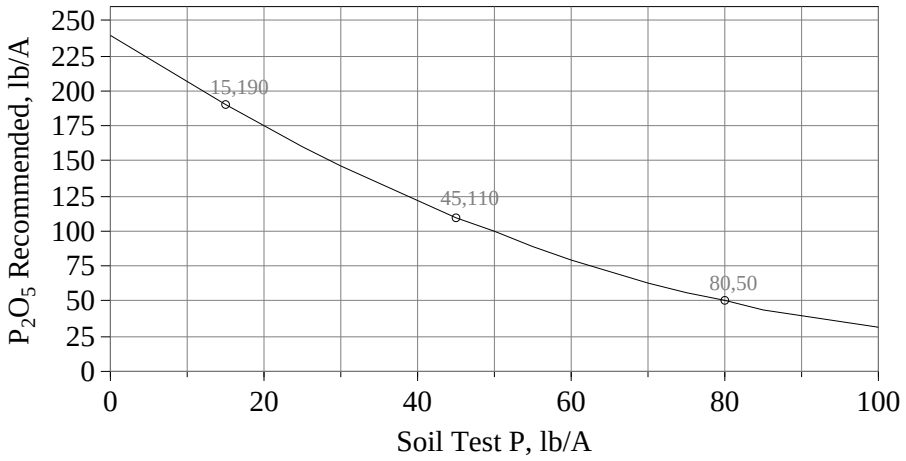
*Apply nitrogen at the rate of 35 to 45 pounds nitrogen per acre when spring growth begins and repeat monthly through the growing season. If more rapid cover is desired and other production practices (mowing, irrigation, weed control) are not a problem, increase the nitrogen rate accordingly to obtain the desired growth.

The last fertilizer application of the year should have equal amounts of nitrogen and potash and should be applied no later than one month before the normal first killing frost.

Sod Production Zoysia (*Code 770*)

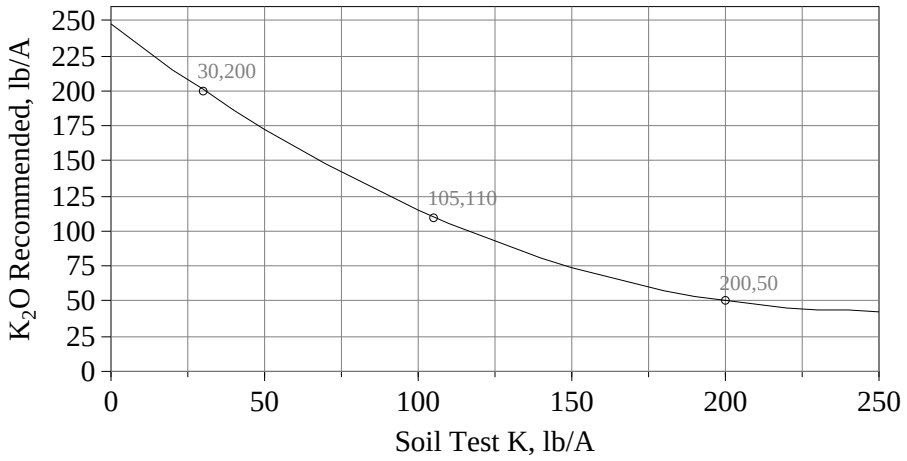
P Recommendations, Coastal Plain

$P_2O_5 = 240 - 3.546P + 0.01465P^2$



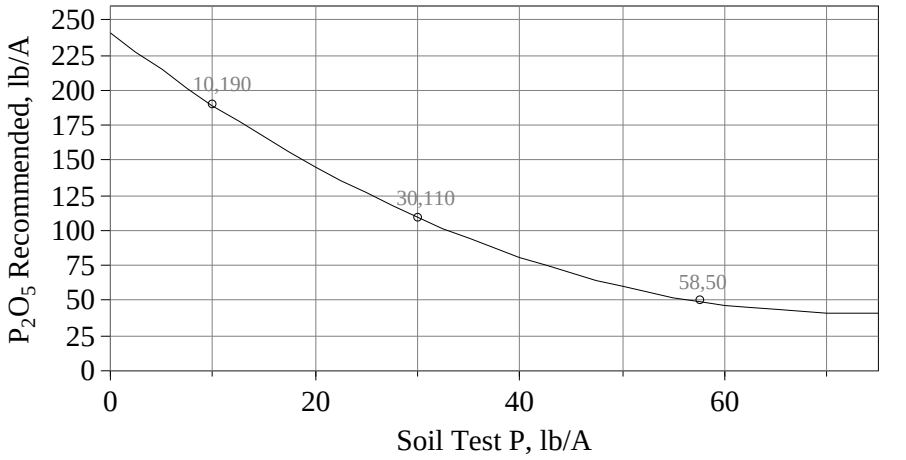
K Recommendations, Coastal Plain

$K_2O = 247 - 1.651K + 0.00334K^2$



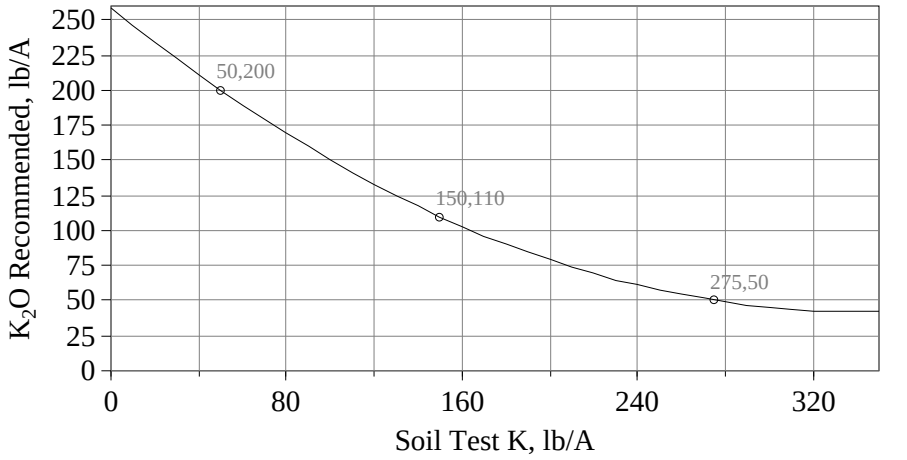
P Recommendations, Piedmont

$P_2O_5 = 241 - 5.531P + 0.03828P^2$



K Recommendations, Piedmont

$K_2O = 259 - 1.274K + 0.00187K^2$



ORNAMENTALS AND FLOWERS (NURSERY FIELD PRODUCTION)

Gary L. Wade, Extension Horticulturist – Landscape Management
Matthew Chappell, Extension Horticulturist – Nursery Production
David E. Kissel, Director – Agricultural & Environmental Services Laboratories

Annual Flowers (commercial) (*Code* #887)

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	882	882	883	883
Medium P 51-100 lbs/A	882	882	883	883
High P 101-200 lbs/A	184	184	185	185
Very High P 200+ lbs/A	184	184	185	185

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

184. Prior to planting, incorporate 1½ cups of 15-0-15 fertilizer per 100 square feet. If this fertilizer is not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Repeat at 6 week intervals. Keep fertilizer off the foliage or wash off immediately.

185. Prior to planting, incorporate 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of bed area. Repeat at 6 week intervals. Keep fertilizer off the foliage or wash off immediately.

882. Prior to planting, incorporate 1 pound (2 cups) of 8-8-8 or 10-10-10 per 100 square feet. Repeat at 6 week intervals; keep fertilizer off the foliage or wash off immediately. If a slow-release fertilizer product is used, follow manufacturer's recommendation for application rate.

883. Prior to planting, incorporate 1/2 pound of 20% superphosphate, and 1/4 pound of 34-0-0 or 1/5 pound of 46-0-0 per 100 square feet. Repeat at 6 week intervals; keep fertilizer off the foliage or wash off immediately.

Azaleas (commercial) (*Code* #880)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	861	861	862	862
Medium P 51-100 lbs/A	861	861	862	862
High P 101-200 lbs/A	863	863	164	164
Very High P 200+ lbs/A	863	863	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

861. Apply 16-4-8 or 12-4-8 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If an azalea-camellia special fertilizer is used follow directions on the container. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

862. Apply ordinary superphosphate (20% P_2O_5) at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet). Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Retest after two months to determine future fertilizer needs.

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863. Apply 15-0-15 or 14-0-14 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis at a rate of 5 pounds per 1000 square feet. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

Fact Sheet:

If the soil pH is 6.0 or greater, apply wettable sulfur at a rate of 1 pound per 100 square feet (10 pounds per 1,000 square feet). Then water well. Apply the sulfur evenly out to and slightly beyond the dripline. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label for the material used.

Camellias (commercial) (*Code* #882)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	861	861	862	862
Medium P 51-100 lbs/A	861	861	862	862
High P 101-200 lbs/A	863	863	164	164
Very High P 200+ lbs/A	863	863	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

861. Apply 16-4-8 or 12-4-8 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If an azalea-camellia special fertilizer is used follow directions on the container. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

862. Apply ordinary superphosphate (20% P_2O_5) at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet). Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Retest after two months to determine future fertilizer needs.

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863. Apply 15-0-15 or 14-0-14 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis at a rate of 5 pounds per 1000 square feet. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

Fact Sheet:

If the soil pH is 6.0 or greater, apply wettable sulfur at a rate of 1 pound per 100 square feet (10 pounds per 1,000 square feet). Then water well. Apply the sulfur evenly out to and slightly beyond the dripline. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label for the material used.

General Ornamental Shrubs (commercial) (*Code* #883)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	866	866	867	867
Medium P 51-100 lbs/A	866	866	867	867
High P 101-200 lbs/A	868	868	169	169
Very High P 200+ lbs/A	868	868	169	169

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

169. Additional phosphorus and potassium fertilizer is not recommended at the present time since soil levels of both phosphorus and potassium are high. If plants are abnormally light green, nitrogen may be needed at the following suggested rates and times. Per 100 square feet, apply 5 ounces of 34-0-0 (2/3 cup), or 4 ounces of 46-0-0 (1/2 cup), or 8 ounces of 21-0-0 (1 cup) during early to mid growing season (up to August 1). Fertilizers with similar analysis may be substituted for these. Uniformly spread fertilizer over an area extending well beyond the end of branch spread. Be careful not to exceed the recommended rate because foliar scorching may occur. Apply fertilizer to the soil and avoid getting it on the leaves. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

866. Apply 16-4-8 or 12-4-8 analysis at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) when spring growth begins and repeat in May and again in July. If these analyses are not available apply 8-8-8 or 10-10-10 at a rate of 3/4 pound per 100 square feet (7½ pounds per 1,000 square feet) when spring growth begins and repeat in May and again in July. Uniformly spread fertilizer on the soil surface extending it well beyond the end of branch spread. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

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General Ornamental Shrubs (commercial) (*Code* #883) continued

867. Apply superphosphate (20% P_2O_5) at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) and 34-0-0 at a rate of 5 ounces (2/3 cup) per 100 square feet (3 pounds per 1,000 square feet) (or alternatively, the superphosphate rate plus 3¾ ounces of 46-0-0 (1/2 cup) per 100 square feet (2¼ pounds per 1,000 square feet)) when spring growth begins. Uniformly spread fertilizer on the soil surface extending it well beyond the end of branch spread. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

868. Apply 15-0-15 or 14-0-14 analysis fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March and again in May and July. If these analyses are not available, substitute 16-4-8 or 12-4-8 at the same rate. Uniformly spread fertilizer on the soil surface extending it well beyond the end of branch spread. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

Ground Cover (commercial) (*Code* #884)
(Ajuga, Ivy, Junipers, Liriope, Vinca)

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	171	171	172	172
Medium P 51-100 lbs/A	171	171	172	172
High P 101-200 lbs/A	173	173	174	174
Very High P 200+ lbs/A	173	173	174	174

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

171. Apply 10-10-10 analysis fertilizer at a rate of 2 cups per 100 square feet. The fertilizer can be applied any time during the growing season. Preferred application time is March and July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

172. Apply 1 cup of 0-20-0, and 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet. The fertilizer can be applied any time during the growing season. Preferred application time is March and July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

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Ground Cover (commercial) (*Code* #884) continued

173. Per 100 square feet apply 1/2 pound (1 cup) of 15-0-15 or 3/4 pound (1½ cups) of 12-4-8. The fertilizer can be applied any time during the growing season. It would be preferred to apply in March and again in July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

174. Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet. The fertilizer can be applied any time during the growing season. It would be preferred to apply in March and again in July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	176	176	176	176
Medium P 51-100 lbs/A	176	176	176	176
High P 101-200 lbs/A	178	178	179	179
Very High P 200+ lbs/A	178	178	179	179

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

176. Estimate canopy spread in square feet (width x width). Apply 2 cups of 10-10-10 fertilizer per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline, if possible. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

178. Estimate canopy spread in square feet (width x width). Apply 1½ cups of a 15-0-15 fertilizer for each 100 square feet of canopy spread. If this is not available, apply the same amount of a 16-4-8 or 12-4-8 analysis. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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179. Since phosphorus and potassium levels are adequate, only nitrogen fertilizer is needed. Estimate canopy spread in square feet (width x width). Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Fact Sheet:

Fertilization of deciduous trees and shrubs should begin as buds swell, approximately two weeks before bud break. Thereafter, if using conventional fertilizers, reapply fertilizer every 16-20 weeks with the last fertilizer application occurring in August (North GA) or September (South GA). Fertilization of broadleaf evergreen and needled evergreen trees and shrubs with conventional fertilizers should coincide with the emergence of new growth in the spring and again in the early fall; as most evergreen trees and shrubs have two active growing periods annually and undergo a dormant period during summer months. Fertilization outside of active growing periods is not necessary. Applying conventional fertilizers to any ornamental plant in late fall or early winter can cause significant winter damage and should be avoided.

In both deciduous and evergreen trees and shrubs, the use of controlled-release (syn: slow-release) fertilizers can be used to minimize the number of fertilizer applications annually. Controlled release products are available that only need to be applied once annually, typically coinciding with the onset of spring growth.

Perennial Flowers (commercial) (*Code* #888)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	887	887	888	888
Medium P 51-100 lbs/A	887	887	888	888
High P 101-200 lbs/A	189	189	190	190
Very High P 200+ lbs/A	189	189	190	190

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

189. Apply 1/2 pound (1 cup) 14-0-14, 15-0-15, or 16-0-16 per 100 square feet of bed area at planting or early spring and again in mid summer. If these fertilizer analyses are not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

190. Apply 1/3 pound (3/4 cup) of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

887. Apply 1 pound (2 cups) 8-8-8 or 10-10-10 per 100 square feet of bed area at planting or early spring and again in mid summer. Keep fertilizer off the foliage or wash off immediately. If slow-release type fertilizers are used, follow manufacturer's recommendations for application rate.

888. Apply 1/2 pound of 20% superphosphate, and 1/4 pound 34-0-0 or 1/5 pound of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Keep fertilizer off the foliage or wash off immediately.

Rhododendrons (commercial) (*Code* #881)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	861	861	862	862
Medium P 51-100 lbs/A	861	861	862	862
High P 101-200 lbs/A	863	863	164	164
Very High P 200+ lbs/A	863	863	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

861. Apply 16-4-8 or 12-4-8 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If an azalea-camellia special fertilizer is used follow directions on the container. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

862. Apply ordinary superphosphate (20% P_2O_5) at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet). Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Retest after two months to determine future fertilizer needs.

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863. Apply 15-0-15 or 14-0-14 fertilizer at a rate of 1/2 pound per 100 square feet (5 pounds per 1,000 square feet) in March, May, and July. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis at a rate of 5 pounds per 1000 square feet. Uniformly spread the fertilizer on the soil surface extending it beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems.

Fact Sheet:

If the soil pH is 6.0 or greater, apply wettable sulfur at a rate of 1 pound per 100 square feet (10 pounds per 1,000 square feet). Then water well. Apply the sulfur evenly out to and slightly beyond the dripline. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label for the material used.

Roses (commercial) (*Code* #890)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	893	893	894	894
Medium P 51-100 lbs/A	893	893	894	894
High P 101-200 lbs/A	895	895	196	196
Very High P 200+ lbs/A	895	895	196	196

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table A and the soil depth adjustment table that immediately follows the lime tables. If pH is greater than 7.2, apply 5 pounds aluminum sulfate per 100 square feet (5 teaspoons per square foot) to reduce soil pH. Mix thoroughly with soil. Retest in one month.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

196. Per plant, extending out 18 inches from the trunk, evenly broadcast 2 tablespoons of 21-0-0, or 1 rounded tablespoon of 34-0-0, or 2 teaspoons of 46-0-0 fertilizer in March and continue each month through early September. If this is not available substitute a 16-4-8 or 12-4-8 analysis at the same rate. For young plants less than 18 inches in height reduce the rate by half. For large plants 5 feet and over, double the rate. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

893. Per plant, extending out to 18 inches from the trunk, evenly broadcast 1/4 cup of 16-4-8 or 12-4-8 analysis fertilizer per month from March until early September. Reduce the rate by half for young bushes less than 18 inches in height. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. If a rose special fertilizer is used, follow manufacturer's recommendation for application rate.

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Roses (commercial) (*Code* #890) continued

894. Per plant, extending out to 18 inches from the trunk, evenly broadcast 2 tablespoons of 20% superphosphate in March. After one month apply 1/4 cup 16-4-8 or 12-4-8 each month until early September. Reduce the rate by half for young bushes less than 18 inches in height. Double the rate for large bushes 5 feet or above in height. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. If a rose special fertilizer is used, follow manufacturer's recommendation for application rate.

895. Per plant, extending out 18 inches from the trunk, evenly broadcast 1/4 cup of a 15-0-15 fertilizer in March and continue each month through early September. If this is not available substitute a 16-4-8 or 12-4-8 analysis at the same rate. For young plants less than 18 inches in height reduce the rate by half. For large plants 5 feet and over, double the rate. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. If a rose special fertilizer is used, follow manufacturer's recommendation for application rate.

Shade Trees (commercial) (*Code* #886)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	176	176	176	176
Medium P 51-100 lbs/A	176	176	176	176
High P 101-200 lbs/A	178	178	179	179
Very High P 200+ lbs/A	178	178	179	179

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

176. Estimate canopy spread in square feet (width x width). Apply 2 cups of 10-10-10 fertilizer per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline, if possible. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

178. Estimate canopy spread in square feet (width x width). Apply 1½ cups of a 15-0-15 fertilizer for each 100 square feet of canopy spread. If this is not available, apply the same amount of a 16-4-8 or 12-4-8 analysis. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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179. Since phosphorus and potassium levels are adequate, only nitrogen fertilizer is needed. Estimate canopy spread in square feet (width x width). Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Fact Sheet:

Fertilization of deciduous trees and shrubs should begin as buds swell, approximately two weeks before bud break. Thereafter, if using conventional fertilizers, reapply fertilizer every 16-20 weeks with the last fertilizer application occurring in August (North GA) or September (South GA). Fertilization of broadleaf evergreen and needled evergreen trees and shrubs with conventional fertilizers should coincide with the emergence of new growth in the spring and again in the early fall; as most evergreen trees and shrubs have two active growing periods annually and undergo a dormant period during summer months. Fertilization outside of active growing periods is not necessary. Applying conventional fertilizers to any ornamental plant in late fall or early winter can cause significant winter damage and should be avoided.

In both deciduous and evergreen trees and shrubs, the use of controlled-release (syn: slow-release) fertilizers can be used to minimize the number of fertilizer applications annually. Controlled release products are available that only need to be applied once annually, typically coinciding with the onset of spring growth.

Spring Flowering Bulbs (commercial) (*Code* #891)

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	897	897	896	896
Medium P 51-100 lbs/A	897	897	896	896
High P 101-200 lbs/A	199	199	200	200
Very High P 200+ lbs/A	199	199	200	200

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

199. Prior to planting, incorporate 1½ cup of 15-0-15 per 100 square feet of bed area. If these fertilizer analyses are not available, substitute a 16-4-8 analysis at the same rate. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

200. Prior to planting, incorporate 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of bed area. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

896. Prior to planting, incorporate 1/3 pound of 34-0-0 (3/4 cup) or 1/4 pound of 46-0-0 (1/2 cup), and 2 cups 20% superphosphate per 100 square feet. Topdress at the same rate when the plants emerge; keep fertilizer off the foliage or wash off immediately.

897. Prior to planting, incorporate 1 pound (2 cups) of 8-8-8 or 10-10-10 per 100 square feet. Topdress at the same rate when the plants emerge; keep fertilizer off the foliage or wash off immediately. If a slow-release fertilizer is used, follow manufacturer's recommendation for application rate.

Summer Bulbs (commercial) (*Code* #889)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	887	887	888	888
Medium P 51-100 lbs/A	887	887	888	888
High P 101-200 lbs/A	189	189	190	190
Very High P 200+ lbs/A	189	189	190	190

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

189. Apply 1/2 pound (1 cup) 14-0-14, 15-0-15, or 16-0-16 per 100 square feet of bed area at planting or early spring and again in mid summer. If these fertilizer analyses are not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

190. Apply 1/3 pound (3/4 cup) of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

887. Apply 1 pound (2 cups) 8-8-8 or 10-10-10 per 100 square feet of bed area at planting or early spring and again in mid summer. Keep fertilizer off the foliage or wash off immediately. If slow-release type fertilizers are used, follow manufacturer's recommendations for application rate.

888. Apply 1/2 pound of 20% superphosphate, and 1/4 pound 34-0-0 or 1/5 pound of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Keep fertilizer off the foliage or wash off immediately.

HOME LAWNS

David E. Kissel, Director – Agricultural & Environmental Services Laboratories
Clint Waltz, Extension Agronomist – Turf

Centipede Lawn - Establishment (*Code* #CLE)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	2-1-1 (CE1)	2-1-1 (CE1)	2-1-0 (CE2)	2-1-0 (CE2)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	2-1/2-1 (CE1)	2-1/2-1 (CE1)	2-1/2-0 (CE2)	2-1/2-0 (CE2)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	2-0-1 (CE3)	2-0-1 (CE3)	2-0-0 (CE4)	2-0-0 (CE4)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	2-0-1 (CE3)	2-0-1 (CE3)	2-0-0 (CE4)	2-0-0 (CE4)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	1-2 pounds nitrogen (N) per 1000 square feet
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre
Other:	Note iron recommendations on Fact Sheet.

Comments:

CE1. Incorporate 7 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 4 pounds of 15-0-15 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

CE2. Incorporate 7 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1.5 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

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CE3. Incorporate 5 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 5 pounds of 15-0-15 per 1000 square feet again in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

CE4. Incorporate 2 pounds of 34-0-0 or 1.5 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1.5 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

Fact Sheet:

If grass is showing iron (Fe) deficiency symptoms (yellowing between the veins), apply liquid formulation of chelated iron or ferrous sulfate at label recommended rates periodically during the growing season. Do not apply foliar applications of iron to grass during the day after temperatures exceed 90 degrees.

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Centipede Lawn - Maintenance (*Code* #CLM)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	2-1-1 (CM1)	2-1-1 (CM1)	2-1-0 (CM1)	2-1-0 (CM1)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	2-1/2-1 (CM2)	2-1/2-1 (CM2)	2-1/2-0 (CM3)	2-1/2-0 (CM3)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	2-0-1 (CM4)	2-0-1 (CM4)	2-0-0 (CM5)	2-0-0 (CM5)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	2-0-1 (CM4)	2-0-1 (CM4)	2-0-0 (CM5)	2-0-0 (CM5)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.0 to 6.0. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	1-2 pounds nitrogen (N) per 1000 square feet
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre
Other:	Note iron recommendations on Fact Sheet.

Comments:

CM1. Apply 5 pounds of 10-10-10 per 1000 square feet after spring green-up and again in mid-summer.

CM2. Apply 4 pounds of 16-4-8 per 1000 square feet after spring green-up and again in mid-summer.

CM3. Apply 5 pounds of 10-10-10 per 1000 square feet after spring green-up. In mid-summer, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

CM4. Apply 4 pounds of 15-0-15 per 1000 square feet after spring green-up and again in mid-summer.

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CM5. Apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet after spring green-up and again in mid-summer. Do not apply phosphorus or potassium. CAUTION: Centipede grass is extremely sensitive to high phosphorus levels. For further information, contact your County Agent.

Fact Sheet:

If grass is showing iron (Fe) deficiency symptoms (yellowing between the veins), apply liquid formulation of chelated iron or ferrous sulfate at label recommended rates periodically during the growing season. Do not apply foliar applications of iron to grass during the day after temperatures exceed 90 degrees.

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

If the lime recommendation is greater than 50 pounds per 1000 square feet, split the application and apply only half of the recommended amount. Wait 4 months and then retest for soil pH and lime requirement only. Take All disease of centipedegrass and St. Augustinegrass may sometimes occur if too much lime is applied; retesting before applying more lime is a precautionary measure to avoid problems with Take All disease.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Common Bermuda Lawn (*Code* #052)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-2-3 (036)	3-2-1 (037)	3-2-0 (038)	3-2-0 (038)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (039)	3-1-1 (040)	3-1-0 (041)	3-1-0 (041)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-3 (042)	3-0-1 (043)	3-0-0 (044)	3-0-0 (044)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (042)	3-0-1 (043)	3-0-0 (044)	3-0-0 (044)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

036. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 6 pounds of 16-4-8 per 1000 square feet.

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037. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

038. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 15 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

039. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

040. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

041. **For establishment**, incorporate 6 pounds of 16-4-8 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

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042. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Apply 6 pounds of 15-0-15 per 1000 square feet monthly during the growing season through September as color and growth are desired. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 15-0-15 per 1000 square feet when spring growth begins and in mid-June, early August, and September as color and growth are desired.

043. **For establishment**, incorporate 7 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 15-0-15 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

044. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet when spring growth begins and in mid-June, early August, and September as color and growth are desired.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Cool Season Grass Mixtures (*Code* #059)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	4-2-3 (067)	4-2-1 (068)	4-2-0 (069)	4-2-0 (069)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	4-1-3 (070)	4-1-1 (071)	4-1-0 (072)	4-1-0 (072)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	4-0-3 (073)	4-0-1 (074)	4-0-0 (075)	4-0-0 (075)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	4-0-3 (073)	4-0-1 (074)	4-0-0 (075)	4-0-0 (075)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-5 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

067. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 9 pounds of 16-4-8 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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068. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

069. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

070. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

071. **For establishment**, incorporate 12 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September and November. In February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

072. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

073. **For establishment**, incorporate 15 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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074. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September and February. In November, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

075. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in September, November, and February. In May, reduce the application to 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply a fertilizer when grass is wet.

Hybrid Bermuda Lawn (*Code* #053)
(Tifton 328 or Tifgreen; Tifton 419 or Tifway; Tifway 2)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-2-3 (036)	3-2-1 (037)	3-2-0 (038)	3-2-0 (038)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (039)	3-1-1 (040)	3-1-0 (041)	3-1-0 (041)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-3 (042)	3-0-1 (043)	3-0-0 (044)	3-0-0 (044)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (042)	3-0-1 (043)	3-0-0 (044)	3-0-0 (044)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

036. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 6 pounds of 16-4-8 per 1000 square feet.

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037. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

038. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 15 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

039. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

040. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

041. **For establishment**, incorporate 6 pounds of 16-4-8 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

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042. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Apply 6 pounds of 15-0-15 per 1000 square feet monthly during the growing season through September as color and growth are desired. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 15-0-15 per 1000 square feet when spring growth begins and in mid-June, early August, and September as color and growth are desired.

043. **For establishment**, incorporate 7 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 15-0-15 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

044. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet when spring growth begins and in mid-June, early August, and September as color and growth are desired.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Kentucky Bluegrass (*Code* #057)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-P_2O_5-K_2O per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	4-2-3 (067)	4-2-1 (068)	4-2-0 (069)	4-2-0 (069)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	4-1-3 (070)	4-1-1 (071)	4-1-0 (072)	4-1-0 (072)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	4-0-3 (073)	4-0-1 (074)	4-0-0 (075)	4-0-0 (075)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	4-0-3 (073)	4-0-1 (074)	4-0-0 (075)	4-0-0 (075)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-5 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

067. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 9 pounds of 16-4-8 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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068. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

069. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

070. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

071. **For establishment**, incorporate 12 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September and November. In February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

072. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

073. **For establishment**, incorporate 15 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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074. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September and February. In November, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

075. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in September, November, and February. In May, reduce the application to 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply a fertilizer when grass is wet.

Ryegrass for Overseeding Lawns (*Code* #060)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-1-3 (077)	3-1-1 (078)	3-1-1 (078)	3-1-0 (078)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (077)	3-1-1 (078)	3-1-1 (078)	3-1-0 (079)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-1-3 (077)	3-1-1 (078)	3-1-1 (079)	3-1-0 (079)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (077)	3-0-1 (079)	3-0-1 (079)	3-0-0 (079)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

077. Apply 6 pounds of 16-4-8 per 1000 square feet at the time of seeding and repeat in early spring. If more growth or color is desired, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet as needed.

078. Apply 10 pounds of 10-10-10 per 1000 square feet at the time of overseeding. Apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in early spring and repeat as needed to obtain the desired growth and color.

079. Apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet two weeks after overseeding. Repeat the application in early spring and as needed to obtain the desired growth and color.

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Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Seashore Paspalum (*Code* #SSP)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-1-1 (S47)	3-1-1 (S47)	3-1-0 (S48)	3-1-0 (S48)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1/2-1 (S49)	3-1/2-1 (S49)	3-1/2-0 (S50)	3-1/2-0 (S50)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-1 (S51)	3-0-1 (S51)	3-0-0 (S52)	3-0-0 (S52)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-1 (S51)	3-0-1 (S51)	3-0-0 (S52)	3-0-0 (S52)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

S47. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 16-4-8 per 1000 square feet after spring green-up and again in mid-summer. The last fertilizer application should be made prior to September 1.

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S48. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet after spring green-up. In mid-summer, apply 4½ pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. The last nitrogen application should be made prior to September 1.

S49. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 9 pounds of 16-4-8 per 1000 square feet after spring green-up. In mid-summer, apply 4½ pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. The last nitrogen application should be made prior to September 1.

S50. **For establishment**, incorporate 7 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 5 pounds of 10-10-10, and 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet after spring green-up. In mid-summer, apply 4½ pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. The last nitrogen application should be made prior to September 1.

S51. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 15-0-15 per 1000 square feet after spring green-up. In mid-summer, apply 4½ pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. The last nitrogen application should be made prior to September 1.

S52. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in mid-summer. Follow this fertilization program for the first year only, then use the maintenance fertilization program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 4½ pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet after spring green-up and again in mid-summer. Do not apply phosphorus or potassium. For further information, contact your County Agent. The last nitrogen application should be made prior to September 1.

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Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Maintain minimal nitrogen fertility rates, over fertilization can lead to development of thatch.

These recommendations are for non-salt affected sites. In the case of salt affected soils, contact local County Extension Agent or turfgrass specialist for additional assistance.

St. Augustine Lawn (*Code* #055)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-2-3 (056)	3-2-1 (057)	3-2-0 (058)	3-2-0 (058)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (059)	3-1-1 (060)	3-1-0 (061)	3-1-0 (061)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-3 (062)	3-0-1 (063)	3-0-0 (064)	3-0-0 (064)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (062)	3-0-1 (063)	3-0-0 (064)	3-0-0 (064)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

056. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 6 pounds of 16-4-8 per 1000 square feet.

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057. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins and in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

058. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 15 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

059. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

060. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

061. **For establishment**, incorporate 6 pounds of 16-4-8 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 when spring growth begins. In mid-June, early August, and September, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

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062. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. By 3 weeks after emergence, apply 6 pounds of 15-0-15 per 1000 square feet monthly during the growing season through September as color and growth are desired. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

063. **For establishment**, incorporate 7 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 15-0-15 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet.

064. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet monthly during the growing season through September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

If the lime recommendation is greater than 50 pounds per 1000 square feet, split the application and apply only half of the recommended amount. Wait 4 months and then retest for soil pH and lime requirement only. Take All disease of centipedegrass and St. Augustinegrass may sometimes occur if too much lime is applied; retesting before applying more lime is a precautionary measure to avoid problems with Take All disease.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

Tall Fescue Lawn (*Code* #058)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-2-3 (067)	3-2-1 (068)	3-2-0 (069)	3-2-0 (069)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (070)	3-1-1 (071)	3-1-0 (072)	3-1-0 (072)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-3 (073)	3-0-1 (074)	3-0-0 (075)	3-0-0 (075)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (073)	3-0-1 (074)	3-0-0 (075)	3-0-0 (075)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

067. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 8 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 9 pounds of 16-4-8 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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068. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

069. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September and November. In February, apply 4 pounds of 34-0-0 or 3 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

070. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

071. **For establishment**, incorporate 12 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 16-4-8 per 1000 square feet in September and November. In February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

072. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet in September. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

073. **For establishment**, incorporate 15 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September, November, and February. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

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074. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 7 pounds of 15-0-15 per 1000 square feet in September and February. In November, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. In May, apply 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

075. **For establishment**, incorporate 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding. In November and February, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet. Follow this fertilization program for the first year only, then use the maintenance recommendation for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 3 pounds of 34-0-0 or 2 pounds of 46-0-0 per 1000 square feet in September, November, and February. In May, reduce the application to 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply a fertilizer when grass is wet.

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	3-2-3 (Z01)	3-2-1 (Z02)	3-2-0 (Z03)	3-2-0 (Z03)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	3-1-3 (Z04)	3-1-1 (Z05)	3-1-0 (Z06)	3-1-0 (Z06)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	3-0-3 (Z07)	3-0-1 (Z08)	3-0-0 (Z09)	3-0-0 (Z09)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	3-0-3 (Z07)	3-0-1 (Z08)	3-0-0 (Z09)	3-0-0 (Z09)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-3 pounds nitrogen (N) per 1000 square feet, depending on color and growth desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

Z01. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 6 pounds of 16-4-8 per 1000 square feet.

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Z02. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 10 pounds of 10-10-10 per 1000 square feet when spring growth begins and in September. In mid-June and early August, apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet.

Z03. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 6 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 15 pounds of 10-10-10 per 1000 square feet when spring growth begins. In mid-June, early August, and September, apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet.

Z04. **For establishment**, incorporate 15 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 10-10-10 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 4 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

Z05. **For establishment**, incorporate 10 pounds of 10-10-10 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 5 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 4 pounds of 16-4-8 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

Z06. **For establishment**, incorporate 6 pounds of 16-4-8 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 16-4-8 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 6 pounds of 10-10-10 when spring growth begins. In mid-June, early August, and September, apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet.

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Z07. **For establishment**, incorporate 10 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. By 3 weeks after emergence, apply 6 pounds of 15-0-15 per 1000 square feet monthly during the growing season through September as color and growth are desired. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 4 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

Z08. **For establishment**, incorporate 7 pounds of 15-0-15 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through August. To improve winter hardiness, apply 4 pounds of 15-0-15 per 1000 square feet in September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 4 pounds of 15-0-15 per 1000 square feet when spring growth begins and again in September. In mid-June and early August, apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet.

Z09. **For establishment**, incorporate 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet into the top 4 to 6 inches of soil prior to seeding, sprigging, or sodding. Then apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet monthly during the growing season through September. Follow this fertilizer program for the first year only, then use the maintenance fertilizer program for the next 2 to 3 years. Retest 2 to 3 years after establishment.

For maintenance, apply 2 pounds of 34-0-0 or 1 1/3 pound of 46-0-0 per 1000 square feet when spring growth begins and again in mid-June, early August, and September.

Fact Sheet:

Clippings do not contribute to thatch under proper management and thus, do not need to be removed. If they are removed, increase the fertilizer application rate by 30%.

CAUTION: Water lawn thoroughly immediately after applying fertilizer. Do not apply fertilizer when grass is wet.

GOLF COURSES

Clint Waltz, Extension Agronomist – Turf

Bentgrass Golf Greens (*Code* #061)

Soil Test Rating ***All Soils***	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*Recommended Pounds N-P_20_5-K_20 per 1000 square feet (See Comments)*			
Low P 0-50 lbs/A	6-3-6 (082)	6-3-4 (083)	6-3-2 (084)	6-3-0 (085)
Medium P 51-100 lbs/A	6-2-6 (086)	6-2-4 (087)	6-2-2 (088)	6-2-0 (089)
High P 101-200 lbs/A	6-0-6 (090)	6-0-4 (091)	6-0-2 (092)	6-0-0 (093)
Very High P 200+ lbs/A	6-0-6 (090)	6-0-4 (091)	6-0-2 (092)	6-0-0 (093)

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	4-12 pounds nitrogen (N) per 1000 square feet. Rate will depend on number of growing months and soil texture.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

For established greens, apply up to 10 pounds limestone per 1000 square feet during the growing season and up to 20 pounds if dormant with a frequency of about every 4-6 months until the total limestone recommendation is reached.

082. Per 1000 square feet, apply 6 pounds of nitrogen (N), 3 pounds of phosphate (P_2O_5), and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash in February, September, and November. Apply 1 pound of nitrogen and potash in May, October, and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

083. Per 1000 square feet, apply 6 pounds of nitrogen (N), 3 pounds of phosphate (P_2O_5), and 4 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash in February, September, and November. Apply 1 pound of nitrogen in October and December. Apply 1 pound of nitrogen and potash in May. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

continued -»

Bentgrass Golf Greens (*Code* #061) continued

084. Per 1000 square feet, apply 6 pounds of nitrogen (N), 3 pounds of phosphate (P_2O_5) and 2 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash in February and November. Apply 1 pound of phosphate in October. Apply 1 pound of nitrogen in May, September, October, and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

085. Per 1000 square feet, apply 6 pounds of nitrogen (N) and 3 pounds of phosphate (P_2O_5) for the year. Apply 1 pound of nitrogen in February, May, September, October, November, and December. Apply 1½ pounds of phosphate in February and November. Additional nitrogen and potash (K_2O) may be required on sand or very coarse-textured greens to maintain desired growth rate.

086. Per 1000 square feet, apply 6 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash in February and November. Apply 1 pound of nitrogen and potash in May, September, October, and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

087. Per 1000 square feet, apply 6 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 4 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/3 pound of phosphate, and 2/3 pound of potash in February, May, September, October, November and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

088. Per 1000 square feet, apply 6 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 2 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash in May and December. Apply 1 pound of nitrogen in February, September, October, and November. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

089. Per 1000 square feet, apply 6 pounds of nitrogen (N) and 2 pounds of phosphate (P_2O_5) for the year. Apply 1 pound of nitrogen in February, May, September, October, November, and December. Apply 1 pound of phosphate in February and November. Additional nitrogen and potash (K_2O) may be required on sand or very coarse-textured greens to maintain desired growth rate.

090. Per 1000 square feet, apply 6 pounds of nitrogen (N) and potash (K_2O) for the year. Apply 1 pound of nitrogen and potash in February, May, September, October, November, and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

091. Per 1000 square feet, apply 6 pounds of nitrogen (N) and 4 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen and potash in February, May, September and December. Apply 1 pound of nitrogen in October and November. Additional nitrogen and potash may be required on sand or on very coarse-textured greens to maintain desired growth rate.

092. Per 1000 square feet, apply 6 pounds of nitrogen (N) and 2 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen and potash in May and September. Apply 1 pound of nitrogen in February, October, November, and December. Additional nitrogen and potash may be required on sand or very coarse-textured greens to maintain desired growth rate.

093. Per 1000 square feet, apply 6 pounds of nitrogen (N) for the year. Apply 1 pound of nitrogen in February, May, September, October, November, and December. Additional nitrogen and potash (K_2O) may be required for sand or for very coarse-textured greens to maintain desired growth rate.

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Fact Sheet:

The source of nitrogen can affect the rate and time which nitrogen is applied. Fast release sources of nitrogen can be applied at anytime. However, if applied during the summer the rate should not exceed 1/2 pound per 1000 square feet; if applied in the fall or spring the rate should not exceed 1 pound per 1000 square feet. Exercise caution in the use of fast release nitrogen sources on established putting greens due to the danger of foliar burn. When applying, spread uniformly and always water in thoroughly immediately following application.

If slow release nitrogen sources are used, adjust nitrogen rates based on the release properties of the material. Excess nitrogen present during the summer will lead to excessive bentgrass stress.

Suggested summer maintenance fertilization program:

If water soluble nitrogen materials are used as the source of nitrogen, application of 1/4 to 1/2 pound nitrogen (N) per 1000 square feet per month during the summer can be beneficial to bentgrass. However, if water insoluble (WIN) sources of nitrogen make up half of the total nitrogen applied for the year reduce the application to 0 to 1/4 pound nitrogen per 1000 square feet per month during the summer.

On sand greens testing low in potassium(K), application of 1/2 pound of potash (K_2O) per 1000 square feet per month during the summer may be beneficial.

Bermuda Golf Greens (Overseeded) (*Code* #062)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P 0-50 lbs/A	12-9-9 (096)	12-9-6 (097)	12-9-3 (098)	12-9-0 (099)
Medium P 51-100 lbs/A	12-4-9 (100)	12-4-6 (101)	12-4-3 (102)	12-4-0 (103)
High P 101-200 lbs/A	12-2-9 (104)	12-2-6 (105)	12-2-3 (106)	12-2-0 (107)
Very High P 200+ lbs/A	12-0-9 (108)	12-0-6 (109)	12-0-3 (110)	12-0-0 (111)

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	9-18 pounds nitrogen (N) per 1000 square feet. Rate will depend on length of growing season, soil texture, and whether or not greens are overseeded.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	General Rule: Greens with heavy soil will require less N than those with high percentage of sand.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

For established greens, apply up to 10 pounds limestone per 1000 square feet during the growing season and up to 20 pounds if dormant with a frequency of about every 4-6 months until the total limestone recommendation is reached.

096. Per 1000 square feet, apply 12 pounds of nitrogen (N), and 9 pounds of phosphate (P_2O_5), and 9 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash when bermuda growth begins in the spring and again at 8 monthly intervals during the growing season. Ryegrass overseeding growth and color can be encouraged with monthly applications of 1 pound of nitrogen in November, December, and February.

097. Per 1000 square feet, apply 12 pounds of nitrogen (N), 9 pounds of phosphate (P_2O_5), and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash when spring growth begins and again monthly from June through October. Also, apply an additional 3 pounds of phosphate when spring growth begins. Apply 1 pound of nitrogen at 6 intervals to obtain the desired growth and color.

continued -»

098. Per 1000 square feet, apply 12 pounds of nitrogen (N), 9 pounds of phosphate (P_2O_5), and 3 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate, and potash when spring growth begins, again in July and September. Apply 1 pound of nitrogen at 9 intervals to obtain the growth and color. Also apply 3 pounds of phosphate when spring growth begins and again in July.

099. Per 1000 square feet, apply 12 pounds of nitrogen (N), 9 pounds of phosphate (P_2O_5) for the year. Apply 1 pound of nitrogen at monthly intervals to maintain desired growth and color. Also apply 3 pounds of phosphate when spring growth begins and again in July and September.

100. Per 1000 square feet, apply 12 pounds of nitrogen (N), 4 pounds of phosphate (P_2O_5), and 9 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/3 pound of phosphate, and 2/3 pound of potash at month intervals during the year. Also, apply 1 pound of potash in the fall.

101. Per 1000 square feet, apply 12 pounds of nitrogen (N), 4 pounds of phosphate (P_2O_5), and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/3 pound of phosphate, and 2/3 pound of potash when bermuda growth begins in the spring and again at 8 monthly intervals during the growing season. Also, apply 1 pound of P_2O_5 when bermuda growth begins in the spring. Ryegrass overseeding growth and color can be encouraged with monthly applications of 1 pound of nitrogen in November, December and February.

102. Per 1000 square feet, apply 12 pounds of nitrogen (N), 4 pounds of phosphate (P_2O_5), and 3 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, phosphate and potash when bermuda growth begins in the spring and again in July and October. Also, apply 1 pound of phosphate when bermuda growth begins in the spring. Apply 1 pound of nitrogen at 9 intervals during the year to obtain desired growth and color.

103. Per 1000 square feet, apply 12 pounds of nitrogen (N) and 4 pound of phosphate (P_2O_5) for the year. Apply 1 pound of nitrogen at monthly intervals to maintain desired growth and color. Apply 4 pounds of phosphate when spring growth begins.

104. Per 1000 square feet, apply 12 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 9 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/4 pound of phosphate, and 1/2 pound of potash when bermuda growth begins in the spring and again at seven monthly intervals during the growing season. Apply 1 pound of nitrogen and potash in October, November, December, and February.

105. Per 1000 square feet, apply 12 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/4 pound of phosphate, and 1/2 pound of potash when bermuda growth begins in the spring and again at seven monthly intervals during the growing season. Apply 1 pound of nitrogen and potash in October and November. Ryegrass overseeding growth and color can be encouraged with applications of 1 pound of nitrogen in December and February.

106. Per 1000 square feet, apply 12 pounds of nitrogen (N), 2 pounds of phosphate (P_2O_5), and 3 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen, 1/3 pound of phosphate, and 2/3 pound of potash when bermuda growth begins in the spring and again monthly from June through October. Apply 1 pound of nitrogen at six intervals to obtain the desired growth and color.

107. Per 1000 square feet, apply 12 pounds of nitrogen (N) and 2 pounds of phosphate (P_2O_5) for the year. Apply 1 pound of nitrogen at monthly intervals to maintain desired growth and color. Apply 2 pounds of phosphate when spring growth begins.

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Bermuda Golf Greens (Overseeded) (*Code* #062) continued

108. Per 1000 square feet, apply 12 pounds of nitrogen (N) and 9 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen and potash when bermuda growth begins in the spring and again at eight monthly intervals. Ryegrass overseeding growth and color can be encouraged with applications of 1 pound of nitrogen in November, December, and February.

109. Per 1000 square feet, apply 12 pounds of nitrogen (N) and 6 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen and potash when bermuda growth begins in the spring and again at monthly intervals from June through October. Apply 1 pound of nitrogen at 6 intervals to obtain the desired growth and color.

110. Per 1000 square feet, apply 12 pounds of nitrogen (N) and 3 pounds of potash (K_2O) for the year. Apply 1 pound of nitrogen and potash when bermuda growth begins in the spring and again in July and October. Apply 1 pound of nitrogen at 9 intervals to obtain the desired growth and color.

111. Per 1000 square feet, apply 12 pounds of nitrogen (N) for the year. Apply 1 pound of nitrogen at monthly intervals to maintain desired growth and color.

Golf Fairways (*Code* #063)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	4-2-4 (112)	4-2-2 (113)	4-2-1 (114)	4-2-0 (115)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	4-1-4 (116)	4-1-2 (117)	4-1-1 (118)	4-1-0 (119)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	4-0-4 (120)	4-0-2 (121)	4-0-1 (122)	4-0-0 (123)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	4-0-4 (120)	4-0-2 (121)	4-0-1 (122)	4-0-0 (123)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	4-7 pounds nitrogen (N) per 1000 square feet. (High rate will be needed on irrigated fairways and tees, and if clippings are removed).
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre

Comments:

112. For **warm season grasses**: Per 1000 square feet apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins and again in June. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in July and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in February and September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in May and November. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

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113. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June and July. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in May and November. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in February and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

114. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in June. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in November, February, and May. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in November. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

115. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 2 pounds of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 10 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 2 pounds of phosphate in September. Example: Use a 0 to 1 to 0 ratio fertilizer such as 10 pounds of 0-20-0.

116. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in June, July, and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in November, February, and May. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

117. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), 1/4 pound of phosphate (P_2O_5), and 1/2 pound of potash (K_2O) when spring growth begins and in June, July, and September. Example: Use a 4 to 1 to 2 ratio fertilizer such as 6 pounds of 16-4-8.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, 1/4 pound of phosphate, and 1/2 pound of potash in February, May, September, and November. Example: Use a 4 to 1 to 2 ratio fertilizer such as 6 pounds of 16-4-8.

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118. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in February, May, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

119. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in September. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

120. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in February, May, September, and November. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

121. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in June and July. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in May and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in February and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

122. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in February, May, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

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123. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

Golf Tees (*Code* #064)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	4-2-4 (112)	4-2-2 (113)	4-2-1 (114)	4-2-0 (115)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	4-1-4 (116)	4-1-2 (117)	4-1-1 (118)	4-1-0 (119)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	4-0-4 (120)	4-0-2 (121)	4-0-1 (122)	4-0-0 (123)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	4-0-4 (120)	4-0-2 (121)	4-0-1 (122)	4-0-0 (123)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	4-7 pounds nitrogen (N) per 1000 square feet. (High rate will be needed on irrigated fairways and tees, and if clippings are removed).
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

112. For **warm season grasses**: Per 1000 square feet apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins and again in June. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in July and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in February and September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in May and November. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

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113. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June and July. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in May and November. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in February and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

114. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in June. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in November, February, and May. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in November. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

115. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 2 pounds of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 10 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 2 pounds of phosphate in September. Example: Use a 0 to 1 to 0 ratio fertilizer such as 10 pounds of 0-20-0.

116. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in June, July, and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen and potash in November, February, and May. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

117. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), 1/4 pound of phosphate (P_2O_5), and 1/2 pound of potash (K_2O) when spring growth begins and in June, July, and September. Example: Use a 4 to 1 to 2 ratio fertilizer such as 6 pounds of 16-4-8.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, 1/4 pound of phosphate, and 1/2 pound of potash in February, May, September, and November. Example: Use a 4 to 1 to 2 ratio fertilizer such as 6 pounds of 16-4-8.

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118. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen, phosphate, and potash in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen in February, May, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

119. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate in September. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

120. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in February, May, September, and November. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15.

121. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in June and July. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in May and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in February and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

122. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen and potash in September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in February, May, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

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123. For **warm season grasses**: Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and again in June, July, and September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

    For **cool season grasses**: Per 1000 square feet, apply 1 pound of nitrogen in February, May, September, and November. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

Fact Sheet:

If clippings are removed from tees, increase fertilizer rate by 50 percent. If tees or fairways are overseeded, apply 1 pound of nitrogen per 1000 square feet during each winter month.

INDUSTRIAL/BUSINESS LAWNS

David E. Kissel, Director – Agricultural & Environmental Services Laboratories
Clint Waltz, Extension Agronomist – Turf

Industrial/Business Lawns - Bermuda (*Code* #790)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-2-3	*-2-1	*-2-0	*-2-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1-3	*-1-1	*-1-0	*-1-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-3	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-3	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre

Fact Sheet:

Apply 0.75 to 1.25 pounds of N per 1000 square feet when spring growth begins and again in mid-June, early August, and September. If more or less growth and color are desired adjust the rate accordingly.

The recommended amounts of P_2O_5 and K_2O can be applied in one application in early spring or may be applied in split applications, especially when two pounds per 1000 square feet are recommended.

The last fertilizer application of the year should have near equal amounts of N and K_2O and should be applied no later than one month before the normal first killing frost.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

Industrial/Business Lawns - Centipede Establishment (*Code* #BCE)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-1-1	*-1-1	*-1-0	*-1-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1/2-1	*-1/2-1	*-1/2-0	*-1/2-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-1	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-1	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	1-2 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre
Other:	See iron (Fe) recommendation on Fact Sheet.

continued -»

Fact Sheet:

Apply 1/2 to 1 pound of N per 1000 square feet 2 to 3 weeks following spring green-up and again in mid-summer. Adjust the nitrogen rate based on the rate of growth and color desired. The lower rate is generally sufficient for low maintenance lawns and heavy textured soils, whereas, the higher rate is sufficient for higher maintenance lawns and coarse textured soils.

Apply the recommended amounts of P_2O_5 and K_2O following spring green-up.

If the grass shows iron (Fe) deficiency symptoms (yellowing between the veins) apply a foliar application of iron as iron sulfate or iron chelate at a rate of 0.4 ounces Fe per 1000 square feet in sufficient water to wet the foliage (1/2 gallon per 1000 square feet). If applied to the grass on a hot day (95-100 degrees F) reduce the rate to 0.2 ounces Fe per 1000 square feet. If symptoms persist repeat the applications in 7 to 10 days.

Iron chlorosis and other spring green-up problems with centipede grass are most frequently associated with high N rates, high mowing heights, and thatch problems. Although iron applications will temporarily ease these symptoms, correcting the source of the problem is the only long term solution.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

Industrial/Business Lawns - Centipede Maintenance (*Code* #BCM)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-1-1	*-1-1	*-1-0	*-1-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1/2-1	*-1/2-1	*-1/2-0	*-1/2-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-1	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-1	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.0 to 6.0. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	1-2 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone. Coastal Plain: Low: 0 - 30 lbs/acre; Medium: 31 - 60 lbs/acre; High: >60 lbs/acre Piedmont: Low: 0 - 60 lbs/acre; Medium: 61 - 120 lbs/acre; High: >120 lbs/acre
Other:	See iron (Fe) recommendation on Fact Sheet.

continued -»

Fact Sheet:

Apply 1/2 to 1 pound of N per 1000 square feet 2 to 3 weeks following spring green-up and again in mid-summer. Adjust the nitrogen rate based on the rate of growth and color desired. The lower rate is generally sufficient for low maintenance lawns and heavy textured soils, whereas, the higher rate is sufficient for higher maintenance lawns and coarse textured soils.

Apply the recommended amounts of P_2O_5 and K_2O following spring green-up.

If the grass shows iron (Fe) deficiency symptoms (yellowing between the veins) apply a foliar application of iron as iron sulfate or iron chelate at a rate of 0.4 ounces Fe per 1000 square feet in sufficient water to wet the foliage (1/2 gallon per 1000 square feet). If applied to the grass on a hot day (95-100 degrees F) reduce the rate to 0.2 ounces Fe per 1000 square feet. If symptoms persist repeat the applications in 7 to 10 days.

Iron chlorosis and other spring green-up problems with centipede grass are most frequently associated with high N rates, high mowing heights, and thatch problems. Although iron applications will temporarily ease these symptoms, correcting the source of the problem is the only long term solution.

If the lime recommendation is greater than 50 pounds per 1000 square feet, split the application and apply only half of the recommended amount. Wait 4 months and then retest for soil pH and lime requirement only. Take All disease of centipedegrass and St. Augustinegrass may sometimes occur if too much lime is applied; retesting before applying more lime is a precautionary measure to avoid problems with Take All disease.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

Industrial/Business Lawns - St. Augustine (*Code* #792)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-2-3	*-2-1	*-2-0	*-2-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1-3	*-1-1	*-1-0	*-1-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-3	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-3	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

continued -»

Fact Sheet:

Apply 0.75 to 1.25 pound of N per 1000 square feet when spring growth begins and again in June, July and September. Under good management a 1 pound/1000 square feet rate will generally produce good turf. If more or less growth and color are desired adjust the rate accordingly.

The recommended amounts of P_2O_5 and K_2O can be applied in one application in early spring or may be applied in split applications, especially when two pounds per 1000 square feet are recommended.

The last fertilizer application of the year should have near equal amounts of N and K_2O and should be applied no later than one month before the normal first killing frost.

If the lime recommendation is greater than 50 pounds per 1000 square feet, split the application and apply only half of the recommended amount. Wait 4 months and then retest for soil pH and lime requirement only. Take All disease of centipedegrass and St. Augustinegrass may sometimes occur if too much lime is applied; retesting before applying more lime is a precautionary measure to avoid problems with Take All disease.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

Industrial/Business Lawns - Tall Fescue (*Code* #794)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-2-3	*-2-1	*-2-0	*-2-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1-3	*-1-1	*-1-0	*-1-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-3	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-3	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.5. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-4 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Apply 1 pound of N per 1000 square feet in September, November and February. This rate of nitrogen will generally produce a good turf, however, the N rate may be increased or decreased to obtain the desired rate of growth and color. During years with early and warm springs, application of 0.5 pound of N per 1000 square feet in May could be beneficial.

The recommended amounts of P_2O_5 and K_2O can be applied in one application in early spring or may be applied in split applications, especially when two pounds per 1000 square feet are recommended.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

Industrial/Business Lawns - Zoysia (*Code* #793)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-2-3	*-2-1	*-2-0	*-2-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-1-3	*-1-1	*-1-0	*-1-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-3	*-0-1	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-3	*-0-1	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	2-3 pounds nitrogen (N) per 1000 square feet. The rate selected will be determined by the amount of growth and color desired.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Apply 0.75 to 1.25 pound of N per 1000 square feet when spring growth begins and again in June, July and September. Under good management a 1 pound/1000 square feet rate will generally produce good turf. If more or less growth and color are desired adjust the rate accordingly.

The recommended amounts of P_2O_5 and K_2O can be applied in one application in early spring or may be applied in split applications, especially when two pounds per 1000 square feet are recommended.

The last fertilizer application of the year should have near equal amounts of N and K_2O and should be applied no later than one month before the normal first killing frost.

Clippings do not contribute to thatch under proper management and thus should not be removed. Recycling clippings can reduce nitrogen fertilizer needs by 30% and is more environmentally sound.

OTHER TURF

Clint Waltz, Extension Agronomist – Turf
David E. Kissel, Director – Agricultural & Environmental Services Laboratories

Athletic Field (*Code* #065)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per 1000 square feet (See Comments)*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	6-2-4 (125)	6-2-2 (126)	6-2-1 (127)	6-2-0 (128)
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	6-1-4 (129)	6-1-2 (130)	6-1-1 (131)	6-1-0 (132)
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	6-0-4 (133)	6-0-2 (134)	6-0-1 (135)	6-0-0 (136)
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	6-0-4 (133)	6-0-2 (134)	6-0-1 (135)	6-0-0 (136)

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Nitrogen:	5-7 pounds nitrogen (N) per 1000 square feet. (The higher rates will be needed under irrigated conditions or if clippings are removed.)
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Comments:

125. Per 1000 square feet, apply 1 pound of nitrogen (N), 1/3 pound of phosphate (P_2O_5), and 2/3 pound of potash (K_2O) when spring growth begins and monthly from May through September. Example: Use a 3 to 1 to 2 ratio fertilizer such as 8 pounds of 12-4-8.

126. Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen monthly from May through August. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

continued -»

127. Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5) and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

128. Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 2 pounds of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 10 pounds of 0-20-0.

129. Per 1000 square feet, apply 1 pound of nitrogen (N), 1/3 pound of phosphate (P_2O_5), and 2/3 pound of potash (K_2O) when spring growth begins and again in June and September. Example: Use a 3 to 1 to 2 ratio fertilizer such as 8 pounds of 12-4-8. Apply 1 pound of nitrogen and potash in July and August. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in May. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

130. Per 1000 square feet, apply 1 pound of nitrogen (N), 1/3 pound of phosphate (P_2O_5), and 2/3 pound of potash (K_2O) when spring growth begins and again in June and September. Example: Use a 3 to 1 to 2 ratio fertilizer such as 8 pounds of 12-4-8. Apply 1 pound of nitrogen in May, July, and August. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

131. Per 1000 square feet, apply 1 pound of nitrogen (N), phosphate (P_2O_5), and potash (K_2O) when spring growth begins. Example: Use a 1 to 1 to 1 ratio fertilizer such as 10 pounds of 10-10-10. Apply 1 pound of nitrogen monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

132. Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0. Apply 1 pound of phosphate (P_2O_5) when spring growth begins. Example: Use a 0 to 1 to 0 ratio fertilizer such as 5 pounds of 0-20-0.

133. Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in May, August, and September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen in June and July. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

134. Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins and again in September. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen monthly from May through August. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

135. Per 1000 square feet, apply 1 pound of nitrogen (N) and potash (K_2O) when spring growth begins. Example: Use a 1 to 0 to 1 ratio fertilizer such as 7 pounds of 15-0-15. Apply 1 pound of nitrogen monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

136. Per 1000 square feet, apply 1 pound of nitrogen (N) when spring growth begins and monthly from May through September. Example: Use a 1 to 0 to 0 ratio fertilizer such as 3 pounds of 34-0-0 or 2 pounds of 46-0-0.

Roadside Turf - Establishment (*Code* #066)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	120-120-120	120-120-80	120-120-40	120-120-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	120-80-120	120-80-80	120-80-40	120-80-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	120-40-120	120-40-80	120-40-40	120-40-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	120-0-120	120-0-80	120-0-40	120-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	120 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

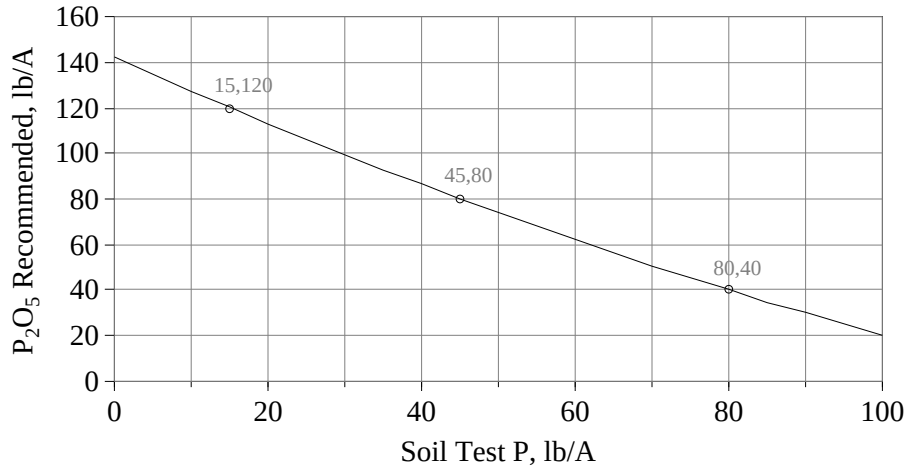
Fact Sheet:

Before planting, mix recommended lime and fertilizer into the soil. Include no more than 80 pounds nitrogen (N) per acre in the initial application. One month after seeding, apply remaining nitrogen if the primary stand is grass.

Roadside Turf - Establishment (*Code 066*)

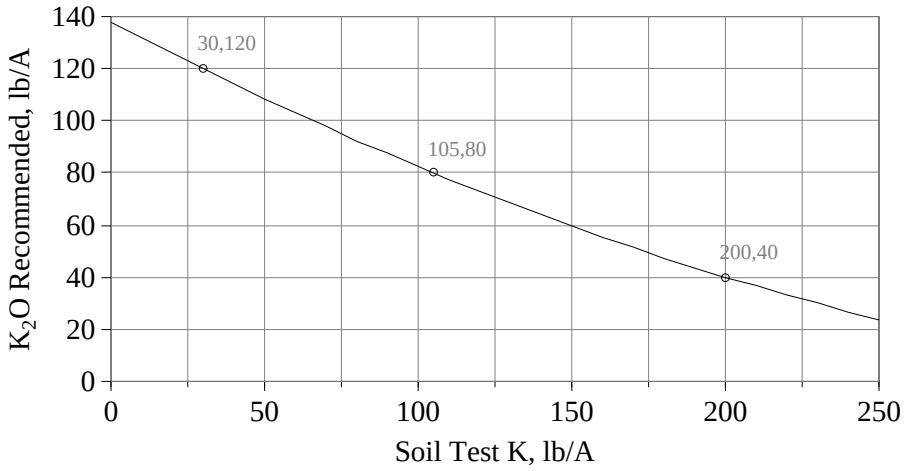
P Recommendations, Coastal Plain

$P_2O_5 = 142 - 1.509P + 0.00293P^2$



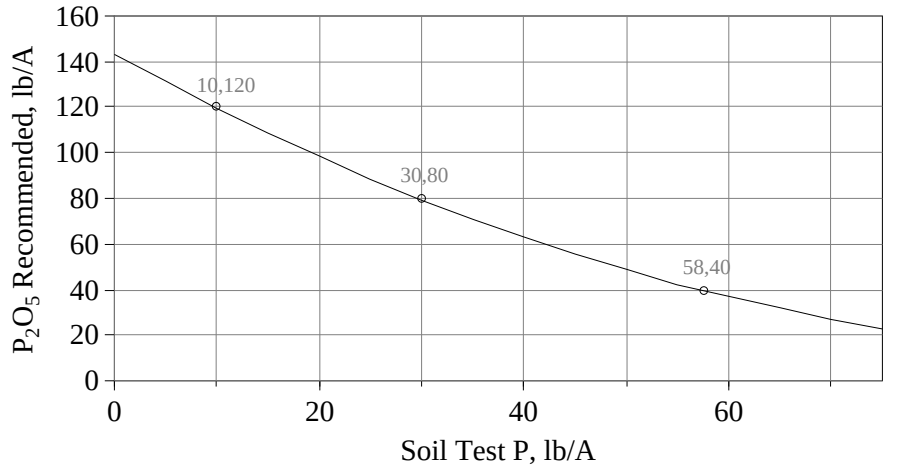
K Recommendations, Coastal Plain

$K_2O = 138 - 0.622K + 0.00066K^2$



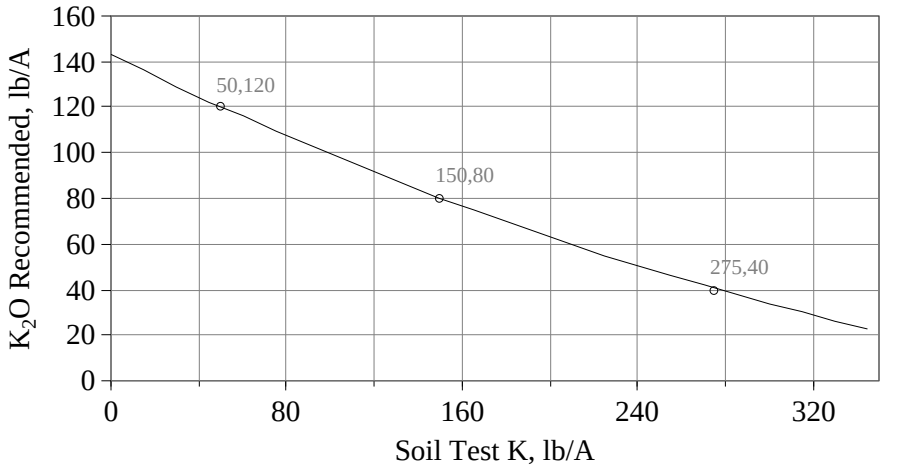
P Recommendations, Piedmont

$P_2O_5 = 143 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 143 - 0.472K + 0.00036K^2$



Roadside Turf - Maintenance (*Code* #067)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-60-60	60-60-30	60-60-0	60-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-30-60	60-30-30	60-30-0	60-30-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-0-60	60-0-30	60-0-0	60-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-0-60	60-0-30	60-0-0	60-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

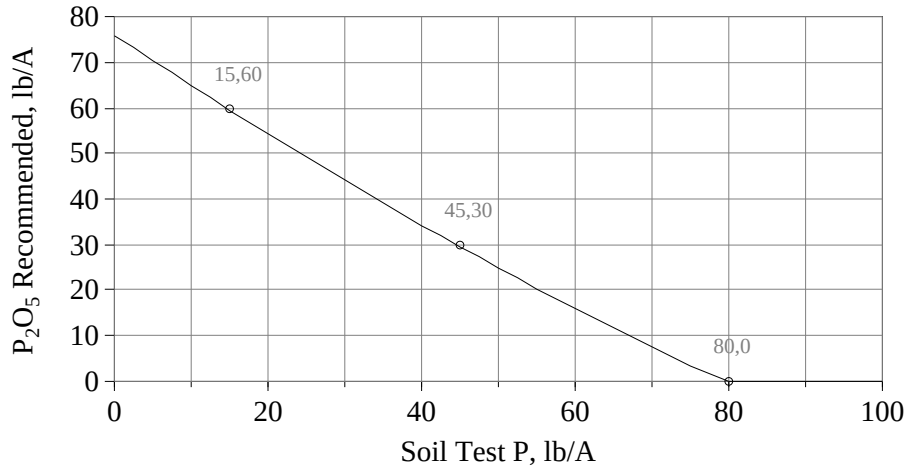
Fact Sheet:

Adjust the nitrogen (N) rate to regulate growth and mowing requirement. If the stand is 50% or more legume, do not apply nitrogen fertilizer.

Roadside Turf - Maintenance (*Code 067*)

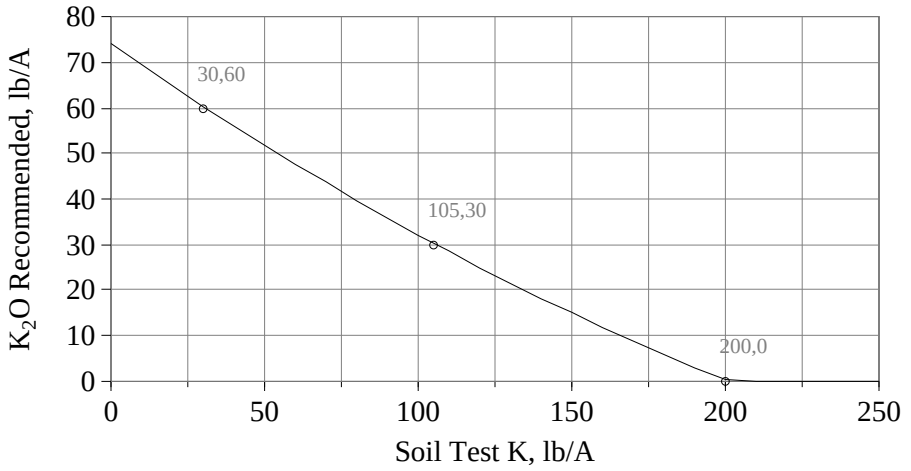
P Recommendations, Coastal Plain

$P_2O_5 = 76 - 1.132P + 0.00220P^2$



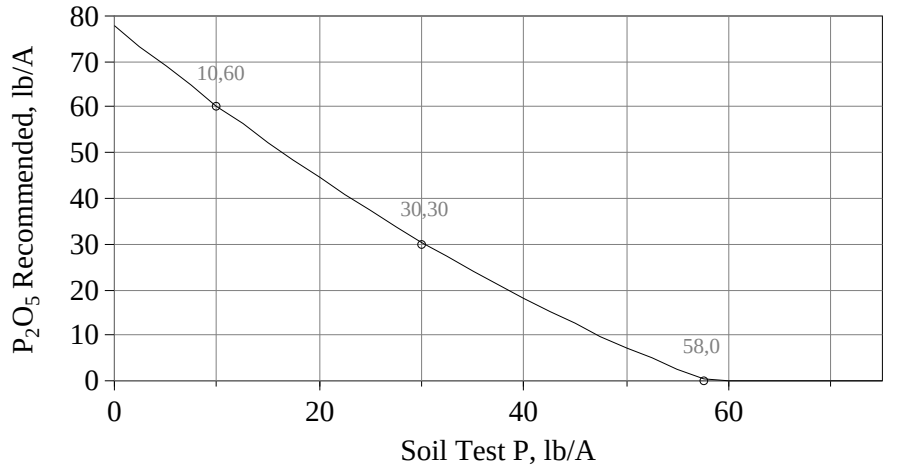
K Recommendations, Coastal Plain

$K_2O = 74 - 0.468K + 0.00050K^2$



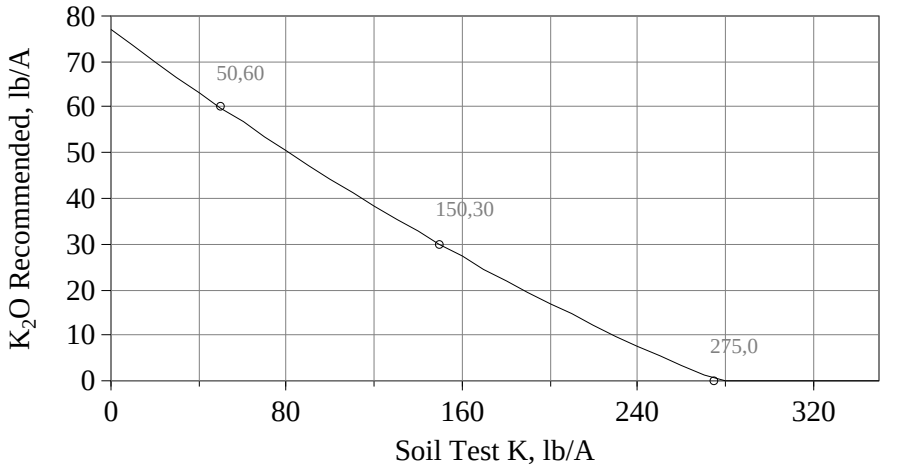
P Recommendations, Piedmont

$P_2O_5 = 78 - 1.844P + 0.00861P^2$



K Recommendations, Piedmont

$K_2O = 77 - 0.354K + 0.00027K^2$



HOME LANDSCAPE PLANTS

Bob Westerfield, Extension Horticulturist – Consumer Ornamentals and Vegetables

Annual Flowers (*Code* #087)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	182	182	183	183
Medium P 51-100 lbs/A	182	182	183	183
High P 101-200 lbs/A	184	184	185	185
Very High P 200+ lbs/A	184	184	185	185

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

182. Prior to planting, incorporate 1 pound (2 cups) of 10-10-10 fertilizer per 100 square feet. Repeat at 6 week intervals or as indicated by plant vigor. Keep fertilizer off the foliage or wash off immediately.

183. Prior to planting, incorporate 1 cup of 0-20-0, and 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 fertilizer per 100 square feet. Repeat at 6 week intervals. Keep fertilizer off the foliage or wash off immediately.

184. Prior to planting, incorporate 1½ cups of 15-0-15 fertilizer per 100 square feet. If this fertilizer is not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Repeat at 6 week intervals. Keep fertilizer off the foliage or wash off immediately.

185. Prior to planting, incorporate 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of bed area. Repeat at 6 week intervals. Keep fertilizer off the foliage or wash off immediately.

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	161	161	162	162
Medium P 51-100 lbs/A	161	161	162	162
High P 101-200 lbs/A	163	163	164	164
Very High P 200+ lbs/A	163	163	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	If soil pH is greater than 6.0, see Fact Sheet.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

161. Apply 10-10-10 fertilizer at a rate of 1/4 cup per 10 square feet (2 cups per 100 square feet). If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

162. Apply 0-20-0 at a rate of 1 cup per 100 square feet immediately after bloom. If 0-20-0 is not available, apply 0-46-0 at a rate of 1/2 cup per 100 square feet. Also, per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

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163. Apply 15-0-15 fertilizer at a rate of 1¼ cup per 100 square feet. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis. If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

Fact Sheet:

If the soil pH is 6.0 or greater, apply 1/2 cup of wettable sulfur per 10 square feet. Apply evenly out to and slightly beyond the dripline. Work into the soil surface, then water. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label.

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	161	161	162	162
Medium P 51-100 lbs/A	161	161	162	162
High P 101-200 lbs/A	163	163	164	164
Very High P 200+ lbs/A	163	163	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	If soil pH is greater than 6.0, see Fact Sheet.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

161. Apply 10-10-10 fertilizer at a rate of 1/4 cup per 10 square feet (2 cups per 100 square feet). If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

162. Apply 0-20-0 at a rate of 1 cup per 100 square feet immediately after bloom. If 0-20-0 is not available, apply 0-46-0 at a rate of 1/2 cup per 100 square feet. Also, per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

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163. Apply 15-0-15 fertilizer at a rate of 1¼ cup per 100 square feet. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis. If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

Fact Sheet:

If the soil pH is 6.0 or greater, apply 1/2 cup of wettable sulfur per 10 square feet. Apply evenly out to and slightly beyond the dripline. Work into the soil surface, then water. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label.

General Ornamental Shrubs (*Code* #083)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	166	166	167	167
Medium P 51-100 lbs/A	166	166	167	167
High P 101-200 lbs/A	168	168	169	169
Very High P 200+ lbs/A	168	168	169	169

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

166. Apply 10-10-10 or 12-4-8 analysis at a rate of 2 tablespoons per 10 square feet under the plant canopy (1 cup per 100 square feet) when spring growth begins. Repeat in May and July. Uniformly spread fertilizer over area extending 6" from the trunk to well beyond the branch spread. It is not necessary to remove the mulch before applying the fertilizer. Avoid getting fertilizer on the leaves. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

167. Apply 0-20-0 at a rate of 1½ cups per 100 square feet. If 0-20-0 is not available, apply 0-46-0 at a rate of 1/2 cup per 100 square feet. If these are not available, fertilizers with similar analysis may be substituted. If plants are abnormally light green, nitrogen may be needed at the following suggested rates and times. Per 100 square feet, apply 5 ounces of 34-0-0 (2/3 cup), or 4 ounces of 46-0-0 (1/2 cup), or 8 ounces of 21-0-0 (1 cup) during early to mid growing season (up to August 1). If these are not available, fertilizers with a similar analysis may be substituted. Uniformly spread fertilizer over an area extending well beyond the end of branch spread. Be careful not to exceed the recommended rate because foliar scorching may occur. Apply fertilizer to the soil and avoid getting it on the leaves. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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168. Apply 15-0-15 or 14-0-14 analysis fertilizer at a rate of 2/3 cup per 100 square feet in March, May, and July. Uniformly spread fertilizer under the plant canopy and over an area extending well beyond the end of branch spread. It is not necessary to remove the mulch before applying the fertilizer. Apply fertilizer to the soil and avoid getting it on the leaves. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

169. Additional phosphorus and potassium fertilizer is not recommended at the present time since soil levels of both phosphorus and potassium are high. If plants are abnormally light green, nitrogen may be needed at the following suggested rates and times. Per 100 square feet, apply 5 ounces of 34-0-0 (2/3 cup), or 4 ounces of 46-0-0 (1/2 cup), or 8 ounces of 21-0-0 (1 cup) during early to mid growing season (up to August 1). Fertilizers with similar analysis may be substituted for these. Uniformly spread fertilizer over an area extending well beyond the end of branch spread. Be careful not to exceed the recommended rate because foliar scorching may occur. Apply fertilizer to the soil and avoid getting it on the leaves. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	G02	G02	G03	G03
Medium P 51-100 lbs/A	G02	G02	G01	G01
High P 101-200 lbs/A	G04	G01	G01	G01
Very High P 200+ lbs/A	G04	G01	G01	G01

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

Apply lime and incorporate into soil to 6" or depth of tillage prior to planting.

G01. To maintain fertility and supply organic matter, apply 30 pounds of composted animal manure per 1,000 square feet in the spring.

G02. Apply 5-10-15 fertilizer broadcast at a rate of 5 pounds per 1,000 square feet. Alternatively, apply 30 pounds of composted animal manure per 1,000 square feet in the spring.

G03. Apply ordinary superphosphate (20% P_2O_5) at a rate of 2 pounds per 1,000 square feet in the spring. Alternatively, apply 30 pounds of composted animal manure per 1,000 square feet in the spring.

G04. Apply 0-0-60 fertilizer at a rate of 1.5 pounds per 1,000 square feet in the spring. Alternatively, apply 30 pounds of composted animal manure per 1,000 square feet in the spring.

Ground Cover (*Code* #084)
(Ajuga, Ivy, Junipers, Liriope, Vinca, Periwinkle)

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	171	171	172	172
Medium P 51-100 lbs/A	171	171	172	172
High P 101-200 lbs/A	173	173	174	174
Very High P 200+ lbs/A	173	173	174	174

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

171. Apply 10-10-10 analysis fertilizer at a rate of 2 cups per 100 square feet. The fertilizer can be applied any time during the growing season. Preferred application time is March and July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

172. Apply 1 cup of 0-20-0, and 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet. The fertilizer can be applied any time during the growing season. Preferred application time is March and July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

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173. Per 100 square feet apply 1/2 pound (1 cup) of 15-0-15 or 3/4 pound (1½ cups) of 12-4-8. The fertilizer can be applied any time during the growing season. It would be preferred to apply in March and again in July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

174. Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet. The fertilizer can be applied any time during the growing season. It would be preferred to apply in March and again in July. Newly planted ground covers will benefit from light feedings (half the recommended rates above) monthly from March to August. **Caution:** Broadcast the fertilizer evenly over the ground cover bed when the foliage is dry, then brush and wash the fertilizer off the foliage.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	176	176	176	176
Medium P 51-100 lbs/A	176	176	176	176
High P 101-200 lbs/A	178	178	179	179
Very High P 200+ lbs/A	178	178	179	179

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

176. Estimate canopy spread in square feet (width x width). Apply 2 cups of 10-10-10 fertilizer per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline, if possible. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

178. Estimate canopy spread in square feet (width x width). Apply 1½ cups of a 15-0-15 fertilizer for each 100 square feet of canopy spread. If this is not available, apply the same amount of a 16-4-8 or 12-4-8 analysis. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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179. Since phosphorus and potassium levels are adequate, only nitrogen fertilizer is needed. Estimate canopy spread in square feet (width x width). Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Fact Sheet:

Fertilization of deciduous trees and shrubs should begin as buds swell, approximately two weeks before bud break. Thereafter, if using conventional fertilizers, reapply fertilizer every 16-20 weeks with the last fertilizer application occurring in August (North GA) or September (South GA). Fertilization of broadleaf evergreen and needled evergreen trees and shrubs with conventional fertilizers should coincide with the emergence of new growth in the spring and again in the early fall; as most evergreen trees and shrubs have two active growing periods annually and undergo a dormant period during summer months. Fertilization outside of active growing periods is not necessary. Applying conventional fertilizers to any ornamental plant in late fall or early winter can cause significant winter damage and should be avoided.

In both deciduous and evergreen trees and shrubs, the use of controlled-release (syn: slow-release) fertilizers can be used to minimize the number of fertilizer applications annually. Controlled release products are available that only need to be applied once annually, typically coinciding with the onset of spring growth.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	187	187	188	188
Medium P 51-100 lbs/A	187	187	188	188
High P 101-200 lbs/A	189	189	190	190
Very High P 200+ lbs/A	189	189	190	190

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

187. Apply 1 pound (2 cups) 8-8-8 or 10-10-10 per 100 square feet of bed area at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

188. Apply 1/4 cup of superphosphate, and 1 tablespoon of 34-0-0 or 2 teaspoons of 46-0-0 per 10 square feet (1 cup of superphosphate, and 3/4 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet) at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

189. Apply 1/2 pound (1 cup) 14-0-14, 15-0-15, or 16-0-16 per 100 square feet of bed area at planting or early spring and again in mid summer. If these fertilizer analyses are not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

190. Apply 1/3 pound (3/4 cup) of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

Rhododendrons (*Code* #081)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	161	161	162	162
Medium P 51-100 lbs/A	161	161	162	162
High P 101-200 lbs/A	163	163	164	164
Very High P 200+ lbs/A	163	163	164	164

Recommendations:

Recommended pH:	5.0 to 5.5. If the pH is less than 5.0, see Lime Table D and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	If soil pH is greater than 6.0, see Fact Sheet.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

161. Apply 10-10-10 fertilizer at a rate of 1/4 cup per 10 square feet (2 cups per 100 square feet). If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

162. Apply 0-20-0 at a rate of 1 cup per 100 square feet immediately after bloom. If 0-20-0 is not available, apply 0-46-0 at a rate of 1/2 cup per 100 square feet. Also, per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

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163. Apply 15-0-15 fertilizer at a rate of 1¼ cup per 100 square feet. If these analyses are not available, substitute a 16-4-8 or 12-4-8 analysis. If the fertilizer contains minor elements like manganese and zinc, it is preferred. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

164. Only nitrogen fertilizer is needed at this test level. Per 100 square feet, apply 1/2 cup of 34-0-0, or 1/3 cup of 46-0-0, or 1 cup of 21-0-0. Two-thirds of the fertilizer should be applied immediately after bloom when growth is most active and the remaining one-third applied in mid-June. Uniformly spread the fertilizer underneath the canopy and extending beyond the dripline of the foliage. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse the fertilizer from the leaves and stems. Irrigate after application.

Fact Sheet:

If the soil pH is 6.0 or greater, apply 1/2 cup of wettable sulfur per 10 square feet. Apply evenly out to and slightly beyond the dripline. Work into the soil surface, then water. If sulfur contacts foliage, wash it off immediately after application. On soils where the soil pH is 6.0 or greater and/or where plants show iron (Fe) deficiency symptoms (yellowing of the upper leaves between the veins with the veins remaining green), apply chelated iron following directions on the label.

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	193	193	194	194
Medium P 51-100 lbs/A	193	193	194	194
High P 101-200 lbs/A	195	195	196	196
Very High P 200+ lbs/A	195	195	196	196

Recommendations:

Recommended pH:	6.0 to 7.0. If the pH is less than 6.0, see Lime Table A and the soil depth adjustment table that immediately follows the lime tables. If pH is greater than 7.2, apply 5 pounds aluminum sulfate per 100 square feet (5 teaspoons per square foot) to reduce soil pH. Mix thoroughly with soil. Retest in one month.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

193. Per plant, extending out to 18 inches from the trunk, evenly broadcast 3 tablespoons of 16-4-8 or 12-4-8 analysis fertilizer per month from March until early September. Reduce the rate by half for young bushes less than 18 inches in height. A rose-special fertilizer may also be used – follow bag recommendations. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

194. Per plant, extending out to 18 inches from the trunk, evenly broadcast 2 tablespoons of 20% superphosphate in March. After one month apply 3 tablespoons 16-4-8 or 12-4-8 each month until early September. Reduce the rate by half for young bushes less than 18 inches in height. Double the rate for large bushes 5 feet or above in height. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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195. Per plant, extending out 18 inches from the trunk, evenly broadcast 3 tablespoons of a 15-0-15 fertilizer in March and continue each month through early September. If this is not available substitute a 16-4-8 or 12-4-8 analysis at the same rate. For young plants less than 18 inches in height reduce the rate by half. For large plants 5 feet and over, double the rate. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

196. Per plant, extending out 18 inches from the trunk, evenly broadcast 2 tablespoons of 21-0-0, or 1 rounded tablespoon of 34-0-0, or 2 teaspoons of 46-0-0 fertilizer in March and continue each month through early September. If this is not available substitute a 16-4-8 or 12-4-8 analysis at the same rate. For young plants less than 18 inches in height reduce the rate by half. For large plants 5 feet and over, double the rate. It is not necessary to remove the mulch before applying the fertilizer. Brush or rinse any fertilizer from the leaves and stems. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	176	176	176	176
Medium P 51-100 lbs/A	176	176	176	176
High P 101-200 lbs/A	178	178	179	179
Very High P 200+ lbs/A	178	178	179	179

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

176. Estimate canopy spread in square feet (width x width). Apply 2 cups of 10-10-10 fertilizer per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline, if possible. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

178. Estimate canopy spread in square feet (width x width). Apply 1½ cups of a 15-0-15 fertilizer for each 100 square feet of canopy spread. If this is not available, apply the same amount of a 16-4-8 or 12-4-8 analysis. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

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179. Since phosphorus and potassium levels are adequate, only nitrogen fertilizer is needed. Estimate canopy spread in square feet (width x width). Apply 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of canopy spread. Reduce the rate by one-half for conifers such as pine, cedar, hemlocks, and juniper or for trees located in a fertilized lawn. Broadcast the fertilizer evenly underneath the foliage mass and extending well beyond the dripline. Apply only when lawn grass is dry. Nitrogen fertilizer is most efficiently used and poses less risk of environmental contamination if applied to dry soil and watered into the soil the same day.

Fact Sheet:

Fertilization of deciduous trees and shrubs should begin as buds swell, approximately two weeks before bud break. Thereafter, if using conventional fertilizers, reapply fertilizer every 16-20 weeks with the last fertilizer application occurring in August (North GA) or September (South GA). Fertilization of broadleaf evergreen and needled evergreen trees and shrubs with conventional fertilizers should coincide with the emergence of new growth in the spring and again in the early fall; as most evergreen trees and shrubs have two active growing periods annually and undergo a dormant period during summer months. Fertilization outside of active growing periods is not necessary. Applying conventional fertilizers to any ornamental plant in late fall or early winter can cause significant winter damage and should be avoided.

In both deciduous and evergreen trees and shrubs, the use of controlled-release (syn: slow-release) fertilizers can be used to minimize the number of fertilizer applications annually. Controlled release products are available that only need to be applied once annually, typically coinciding with the onset of spring growth.

Spring Flowering Bulbs (*Code* #091)

Soil Test Rating *All Soils*	Potassium			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	197	197	198	198
Medium P 51-100 lbs/A	197	197	198	198
High P 101-200 lbs/A	199	199	200	200
Very High P 200+ lbs/A	199	199	200	200

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

197. Prior to planting, incorporate 1 pound (2 cups) of 8-8-8 or 10-10-10 per 100 square feet. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

198. Prior to planting, incorporate 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0, and 1 cup superphosphate per 100 square feet. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

199. Prior to planting, incorporate 1½ cup of 15-0-15 per 100 square feet of bed area. If these fertilizer analyses are not available, substitute a 16-4-8 analysis at the same rate. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

200. Prior to planting, incorporate 2/3 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet of bed area. Topdress at the same rate when the plants emerge. Keep fertilizer off the foliage or wash off immediately.

Soil Test Rating *All Soils*	**Potassium**			
	Low K 0-150 lbs/A	**Medium K** 151-250 lbs/A	**High K** 251-450 lbs/A	**Very High K** 450+ lbs/A
Phosphorus	*See Comments*			
Low P 0-50 lbs/A	187	187	188	188
Medium P 51-100 lbs/A	187	187	188	188
High P 101-200 lbs/A	189	189	190	190
Very High P 200+ lbs/A	189	189	190	190

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

Fifty pounds of limestone per 1000 square feet is equivalent to 5 pounds (6½ cups) per 100 square feet. (If lime recommendation is greater than 50 pounds per 1000 square feet, increase the per cup rate proportionately.)

187. Apply 1 pound (2 cups) 8-8-8 or 10-10-10 per 100 square feet of bed area at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

188. Apply 1/4 cup of superphosphate, and 1 tablespoon of 34-0-0 or 2 teaspoons of 46-0-0 per 10 square feet (1 cup of superphosphate, and 3/4 cup of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet) at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

189. Apply 1/2 pound (1 cup) 14-0-14, 15-0-15, or 16-0-16 per 100 square feet of bed area at planting or early spring and again in mid summer. If these fertilizer analyses are not available, substitute a 12-4-8 or 16-4-8 analysis at the same rate. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

190. Apply 1/3 pound (3/4 cup) of 34-0-0 or 1/2 cup of 46-0-0 per 100 square feet at planting or early spring and again in mid summer. Apply when the foliage is dry. Keep fertilizer off the foliage or wash off immediately.

HOME GARDEN

Bob Westerfield, Extension Horticulturist – Consumer Ornamentals and Vegetables
Leticia Sonon, Program Coordinator – Soil, Plant, and Water Laboratory

Apples - Home Garden (*Code* #095)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	210	210	210	210
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	210	210	210	210
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	210	210	210	210
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	210	210	210	210

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

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Comments:

210. To fertilize apple trees the year they are planted, broadcast over a two-foot circle one cup of 10-10-10 fertilizer about one month after planting. In June following planting, broadcast another cup of 10-10-10 fertilizer around the tree.

Fertilization schedules in the first and subsequent years are summarized in the table below.

Fertilizer Application Rates for Apple Trees in Home Gardens

	Standard (full size) Trees		Semi-dwarf Trees		Dwarf Trees	
Tree Age	**cups 10-10-10 per tree**	**Area of application**	**cups 10-10-10 per tree**	**Area of application**	**cups 10-10-10 per tree**	**Area of application**
Planting (Year 1)	1 cup 1 month after planting	2 ft. circle around tree	1 cup 1 month after planting	2 ft. circle around tree	½ cup 1 month after planting	2 ft. circle around tree
	1 cup in June	2 ft. circle	1 cup in June	2 ft. circle	½ cup in June	2 ft. circle
2	2 cups in early spring	3 ft. circle	2 cups in early spring	3 ft. circle	1 cup in early spring	3 ft. circle
	2 cups in June	3 ft. circle	2 cups in June	3 ft. circle	1 cup in June	3 ft. circle
3	5 cups in spring	4 ft. circle	5 cups in spring	4 ft. circle	2 cups in spring	4 ft. circle
4	6 cups in spring	5 ft. circle	6 cups in spring	5 ft. circle	2 cups in spring	4 ft. circle
5	7 cups in spring	6 ft. circle	7 cups in spring	6 ft. circle	3 cups in spring	5 ft. circle
6	8 cups in spring	7 ft. circle	8 cups in spring	7 ft. circle		
7	9 cups in spring	8 ft. circle				
*8+	10 cups in spring	9 ft. circle				

*In year 8 and later, if soil test results indicate that both P and K are high or very high, substitute 34-0-0 at six cups for standard trees, four cups for semi-dwarf trees, and two cups for dwarf trees; or 46-0-0 at four cups for standard trees, three cups for semi-dwarf trees, and two cups for dwarf trees.

Once the trees begin to bear, use shoot growth as a measure to determine if you need to reduce or supplement the fertilization rates previously suggested. Ten to 14 inches of growth are ideal for bearing trees. If growth is more than this, reduce the rate of fertilization. If growth is less, apply a little extra fertilizer the next season.

CAUTION: When fertilizing, never dump large amounts in a small area. Root burn may result. Also, keep fertilizer six inches or more away from the trunk. Always broadcast the fertilizer evenly over the recommended area.

If in any given year you severely prune the tree, do not apply any fertilizer that year. Likewise, if growth is excessive, omit fertilizer for a year or two until growth is reduced to a desirable amount (terminal growth on bearing trees averaging 10 to 16 inches per year).

NOTE: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Blackberries - Home Garden (*Code* #096)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A				
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A				
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	096ph	096ph	096pkh	096pkh
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	096ph	096ph	096pkh	096pkh

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

096ph. The phosphorus levels are high; therefore, no phosphorus (P) is needed. Apply fertilizer that contains only nitrogen (N) and potassium (K), such as 15-0-15.

096pkh. The phosphorus and potassium levels are high; therefore, no phosphorus (P) or potassium (K) fertilizers are needed. Apply only a nitrogen-containing fertilizer, such as 34-0-0 or 46-0-0.

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Fact Sheet:

Trailing or Semi-erect Blackberries (6 to 8 feet apart):

Brambles do best when fertilized twice a year. About a month after planting, sprinkle 1/6 cup of 10-10-10 fertilizer in a 24-inch circle around each plant. In June, sprinkle 1/4 cup of 10-10-10 fertilizer over a 30-inch circle. These two applications should satisfy the fertilizer needs of the plants for the first year.

The nutritional needs of the plants in the second year should be supplied as follows:

1. In early March sprinkle one cup of 10-10-10 fertilizer over a five-foot circle around each plant.
2. In June sprinkle one cup of 10-10-10 fertilizer over the same five-foot circle around each plant.

Fertilization in succeeding years should be as follows:

1. In early March sprinkle two cups of 10-10-10 fertilizer over a six-foot circle around each plant.
2. In June sprinkle one cup of 10-10-10 fertilizer over the same six-foot circle around each plant. If new cane growth is excessive (over 12 feet for individual canes), omit this application.

Hedgerow Planting of Erect Blackberries:

During the year of establishment, fertilize the planting in March, June, and August (if needed). Apply 4½ pounds of 10-10-10 fertilizer per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 2-foot wide band where the plants or root cuttings are planted.

Fertilization the second year and thereafter should consist of two applications annually. Apply 11 pounds of 10-10-10 fertilizer per 100 feet of row over a 3-foot wide band in early March. In June, apply 5½ pounds of 10-10-10 fertilizer per 100 feet of row evenly over a 3-foot wide band.

Note 1: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Note 2: On soils testing high in phosphorus and potassium, substitute 34-0-0 for 10-10-10 at one-third the rate or 46-0-0 at one-fourth the rate.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-70 lbs/A	**Medium K** Coast: 71-120 lbs/A Pied: 71-150 lbs/A	**High K** Coast: 121-275 lbs/A Pied: 151-275 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 275+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	212	212	212	212
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	212	212	212	212
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	212	212	212	212
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	212	212	212	212

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	Coastal Plain: 4.0 to 5.0 Piedmont: 4.2 to 5.2
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 3 ounces magnesium sulfate (Epsom salts) per plant.
Sulfur:	If soil pH is greater than 5.3, sulfur will be recommended to decrease soil pH to the sufficient range. If sulfur is applied prior to planting, apply the recommended amount at least six months before planting and mix it into the soil thoroughly to a depth of 6 to 8 inches. If sulfur is recommended for an established crop, apply broadcast no more than 300 pounds of sulfur per acre. Do not apply sulfur when the foliage is wet.
Important:	Read comments on Fact Sheet when preparing fertilizer recommendations.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

212. These recommendations are for rabbiteye blueberries. For southern highbush and highbush, see Commercial Southern Highbush Recommendations (Code #133).

If the soil test calcium (Ca) level exceeds 900 pounds per acre or if the soil test phosphorus level is greater than 200 pounds per acre the site is not well suited for blueberries. Try to find a better site.

If soil organic matter is less than 2%, use liberal quantities of peat moss or pine bark mixed with the soil when planting. Following planting mulch heavily with pine bark, rotted sawdust, or pine straw if practical.

Plant the blueberry bush the same depth it grew in the nursery and spread the roots apart if pot bound.

After the plant has been settled by rain, apply 2 tablespoons (1 ounce) 10-10-10 or 12-4-8 or 4 level tablespoons (2 ounces) of azalea special fertilizer (4-8-8) evenly over a circle of 18-inch diameter centered on the plant. Refertilize at the same rate in May and July if rainfall or overhead irrigation has been adequate (at least 4 inches since the previous fertilization). **Blueberries are sensitive to excess fertilizer salts. Do not pile fertilizer at base of the plant.** In March and July of the second year apply 2 ounces 10-10-10 or 12-4-8 or 4 ounces 4-8-8 evenly over a circle of 2-foot diameter centered on the plant. In later years each bush should receive 1 ounce 10-10-10 or 12-4-8 or 2 ounces 4-8-8 per foot of bush height to a maximum of 6 ounces per application for 10-10-10 or 12-4-8 and 12 ounces per application for 4-8-8. Increase the area the fertilizer is broadcast over also. If both phosphorus (P) and potassium (K) soil test levels are high or very high, ammonium sulfate (21-0-0) can be used at 1/2 the rate of 10-10-10 or 46-0-0 at 1/4 the rate of 10-10-10. Avoid use of nitrate nitrogen (sodium nitrate, calcium nitrate, etc.) on blueberries.

Soils vary in their natural ability to supply the plant available forms of nitrogen (N). The N fertilizer recommendations given here are based on soils with 1 to 2% organic matter (OM). Soils with higher OM (4 to 6% OM) generally supply more N; therefore, less N fertilizer is needed on high OM soils. Likewise, be aware of conditions that may increase the need for additional N. On new plantings to which pine bark has been added (especially pine bark with white wood), additional N fertilizer may be needed to overcome N tie-up by bacteria. Sufficient nitrogen should be applied to grow good lateral fruit wood 5 to 8 inches in length. However, do not add too much nitrogen because it may lead to growth of highly succulent shoots that are susceptible to Botryosphaeria stem blight. In general, N should not be applied after early September in South Georgia or mid-August in North Georgia. Nitrogen fertilizer is used more efficiently if added through drip irrigation systems; therefore, recommended N rates may be reduced by about 20%. Because of these many complex factors, we recommend plant tissue analysis and grower observations as the most reliable guide for adjusting the rate of N fertilizer to apply. For more information on plant analysis, go to http://aesl.ces.uga.edu/publications/plant/.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	213	213	213	213
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	213	213	213	213
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	213	213	213	213
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	213	213	213	213

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

213. After the plants have been settled by a drenching rain and before growth starts, apply one ounce of 10-10-10 fertilizer in a 24 inch diameter circle around each plant. Keep the fertilizer at least 6 inches from the vine. Repeat at monthly intervals until mid-July.

On two-year old vines, double the first year rate and use the same monthly intervals. Bearing vines will need from 1 to 4 pounds of 10-10-10 per plant applied in March. If growth is poor on producing vines, apply 1 pound of 10-10-10 per plant in May.

Some Georgia soils are inherently low in magnesium and foliar magnesium deficiency frequently becomes noticeable in mid-summer. This deficiency is characterized by a yellowing between the leaf veins on the older grape leaves. If the soil pH is sufficiently low to warrant liming, use dolomitic lime to help prevent magnesium deficiency in future years. Otherwise, magnesium sulfate (Epsom salts) should be applied and watered in. For young plants, apply 2 ounces around each vine, keeping the salts away from the trunk six or more inches. Apply four to six ounces per mature, bearing vine. It may require 2 to 3 years of magnesium application to increase the level sufficiently for best plant performance.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	214	214	214	214
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	214	214	214	214
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	214	214	214	214
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	214	214	214	214

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

214. Newly-planted trees should not be fertilized until growth begins in the spring. Suggested fertilizer rates and schedule for the first three years are given below. Fertilizer applications should not be made between August 1 and February 15 during the first two years to avoid inducing untimely growth flushes during the winter.

During the first year, spread fertilizer in a 30-inch circle, and avoid placing any against the trunk. In subsequent years the fertilized area should be gradually increased. A good rule of thumb to follow is to fertilize an area twice the diameter of the tree canopy.

Ordinary lawn and shrub fertilizer may be used for citrus trees. However, this type of fertilizer may only contain the primary elements nitrogen, phosphorus, and potassium. For best performance from citrus plants, a fertilizer which contains the secondary and micronutrients, magnesium, manganese and copper is very beneficial. The latter two elements, plus zinc and boron as needed, may also be supplied through nutritional sprays. Some garden centers and nurseries sell special citrus fertilizers which contain the micronutrients.

Suggested Fertilizer Schedule For Young Citrus Trees*				
(pounds of 10-10-10 fertilizer per tree)				
Growing Season	**March 1**	**April 15-30**	**June 1-15**	**July 15-30**
First	**1/3****	**1/2**	**2/3**	**1**
Second	**1**	**1-1/4**	**1-1/2**	**1-3/4**
Third	**1-3/4**	**2**	**2-1/2**	**3**

*This schedule is designed for citrus plants which develop into medium to large trees. Only half these amounts or less will be needed for small, shrubby citrus plants such as kumquats, limequats, calamondins, etc.

**Make this application after growth begins in the spring, usually 4 to 6 weeks after planting.

Note: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	215	215	215	215
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	215	215	215	215
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	215	215	215	215
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	215	215	215	215

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

215. For plants one to two years old, apply 1/3 pound of 8-8-8 or 10-10-10 fertilizer each month from the beginning of growth through the end of July.

For a bush 12 to 15 feet tall, apply 4 pounds of 8-8-8 or 10-10-10 in late winter, early June, and mid-July. For plants less than 12 feet in height, use about 1 pound of 8-8-8 or 10-10-10 for each foot of height and split into three applications as given above. If the fruit are not reaching maturity and ripening properly, excess fertilizer or drought may be the problem and fertilization should be reduced.

NOTE: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Herbs (homeowner) (*Code* #114)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	114a	114a	114b	114b
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	114c	114d	114e	114e
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	114f	114g	114h	114i
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	114f	114j	114j	114k

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Zinc:	If the Zn soil test level is low, apply 5 pounds of zinc per acre.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

114a. Broadcast 23 pounds of 6-12-12 per 1000 square feet, or apply 8 pounds of 6-12-12 per 100 linear feet of row.

114b. Broadcast 25 pounds of 6-8-6 per 1000 square feet, or apply 10 pounds of 6-8-6 per 100 linear feet of row.

114c. Broadcast 20 pounds of 5-10-15, plus 1 pound of 34-0-0 or 3/4 pound of 46-0-0 per 1000 square feet; or apply 7 pounds of 5-10-15, plus 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per 100 linear feet of row.

114d. Broadcast 17 pounds of 6-12-12, plus 1 pound of 34-0-0 or 3/4 pound of 46-0-0 per 1000 square feet; or apply 6 pounds of 6-12-12, plus 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per 100 linear feet of row.

continued -»

Herbs (homeowner) (*Code* #114) continued

114e. Broadcast 25 pounds of 6-8-6 per 1000 square feet, or apply 9 pounds of 6-8-6 per 100 linear feet of row.

114f. Broadcast 18 pounds of 5-10-15, plus 1½ pounds of 34-0-0 or 1 pound of 46-0-0 per 1000 square feet; or apply 7 pounds of 5-10-15, plus 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 per 100 linear feet of row.

114g. Broadcast 14 pounds of 5-10-15, plus 1 pound of 34-0-0 or 3/4 pound of 46-0-0 per 1000 square feet; or apply 5 pounds of 10-10-10 or 6 pounds of 8-8-8 per 100 linear feet of row.

114h. Broadcast 14 pounds of 10-10-10, or 18 pounds of 8-8-8 per 1000 square feet, or apply 5 pounds of 10-10-10 or 6 pounds of 8-8-8 per 100 linear feet of row.

114i. Broadcast 14 pounds of 10-10-10, or 18 pounds of 8-8-8 per 1000 square feet, or apply 5 pounds of 10-10-10 or 6 pounds of 8-8-8 per 100 linear feet of row. If the soil test phosphorus (P) level exceeds 100 or the potassium (K) level exceeds 400, a straight nitrogen source may be substituted for the complete fertilizer. Broadcast 2 pounds of 34-0-0, or 1½ pounds of 46-0-0, or 4 pounds of calcium nitrate or sodium nitrate per 1000 square feet prior to seeding or planting; and then about 3 weeks after the plants are established sidedress with 3/4 to 1 pound of 34-0-0, or 1/2 to 3/4 pound of 46-0-0, or 1½ to 2 pounds of calcium nitrate or sodium nitrate per 100 linear feet of row.

114j. Broadcast 10 pounds of 5-10-15 plus 3 pounds of 34-0-0 (or 2 pounds of 46-0-0) per 1000 square feet; or apply 3 pounds of 5-10-15 plus 1 pound of 34-0-0 (or 2/3 pound of 46-0-0) per 100 linear feet of row.

114k. Broadcast 6 pounds of 6-12-12 plus 3 pounds of 34-0-0 (or 2 pounds of 46-0-0) per 1000 square feet; or apply 2 pounds of 6-12-12 plus 1 pound of 34-0-0 (or 2/3 pound of 46-0-0) per 100 linear feet of row. If the soil test phosphorus (P) level exceeds 100 or the potassium (K) level exceeds 400, a straight nitrogen source may be substituted for the complete fertilizer.

Broadcast one of the following:

- 2 pounds 34-0-0
- 1½ pounds 46-0-0
- 4 pounds calcium nitrate
- 4 pounds sodium nitrate

per 1000 square feet prior to seeding or planting and then about 3 weeks after the plants are established sidedress with one of the following:

- 3/4 to 1 pound 34-0-0
- 2/3 pound 46-0-0
- 1½ to 2 pounds calcium nitrate
- 1½ to 2 pounds sodium nitrate

per 100 linear feet of row.

Home Vegetable Garden (*Code* #112)
(Beans, Beets, Broccoli, Cantaloupes, Corn, Cucumbers, Eggplant, Greens (Kale, Mustard, Turnip, Collards), Okra, English peas, Peppers, Radish, Squash, Watermelon, Sweet potatoes)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	240	240	240	240
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	240	240	240	240
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	241	242	242	243
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	244	244	245	246

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 3 pounds Epsom salts per 1000 square feet.
Zinc:	If soil test Zn level is low (<= 2 pounds/acre), dissolve 1 tablespoon of zinc sulfate in a half gallon of water and apply per 100 feet of row.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

240. Broadcast 30 pounds of 10-10-10 per 1000 square feet, or apply 10 pounds of 10-10-10 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

241. Broadcast 10 pounds of 10-10-10 plus 15 pounds of 15-0-15 per 1000 square feet, or apply 3 pounds of 10-10-10 plus 5 pounds of 15-0-15 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

242. Broadcast 20 pounds of 16-4-8 per 1000 square feet, or apply 7 pounds of 16-4-8 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

243. Broadcast 10 pounds of 10-10-10, plus 6 pounds of 34-0-0 or 4½ pounds of 46-0-0 per 1000 square feet; or apply 3 pounds of 10-10-10, plus 2 pounds of 34-0-0 or 1½ pounds of 46-0-0 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

continued -»

244. Broadcast 20 pounds of 15-0-15 per 1000 square feet, or apply 7 pounds of 15-0-15 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

245. Broadcast 5 pounds of 34-0-0 or 3¾ pounds of 46-0-0, plus 10 pounds of 15-0-15 per 1000 square feet; or apply 2 pounds of 34-0-0 or 1½ pounds of 46-0-0, plus 3 pounds of 15-0-15 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

246. Broadcast 10 pounds of 34-0-0 or 7½ pounds of 46-0-0 per 1000 square feet; or apply 3 pounds of 34-0-0 or 2¼ pounds of 46-0-0 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

Fact Sheet:

Apply 1 tablespoon of borax per 100 feet of row to broccoli and root crops such as turnips and beets. This can be applied by mixing the borax thoroughly with approximately 1 quart of soil in a container and then applying the mixture along the row; or it can be mixed with a quart of water and applied to the soil in solution.

For better fertilizer availability on sandy soils, apply half of the recommended fertilizer just before planting and the remainder when the crop is half grown. In years with unusually heavy rainfall on sandy soils, 3 pounds of 34-0-0 or 2 pounds of 46-0-0 may be added to replace nutrients lost from the soil due to heavy rains.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	216	216	216	216
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	216	216	216	216
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	216	216	216	216
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	216	216	216	216

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

216. Apply 1 ounce of 10-10-10 in February, May, and July of the first year. Keep fertilizer at least 6 inches away from trunk and scatter in a circle. Apply 2 ounces of 10-10-10 in February, May, and July the second year. Increase the rate to 4 to 8 ounces per plant per application the third year. For vines four years or older apply 8 ounces of 10-10-10 per plant in February and July.

Note: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	217	217	217	217
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	217	217	217	217
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	217	217	217	217
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	217	217	217	217

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	5.5 to 6.0. If the pH is less than 5.5, see Lime Table C and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 3 ounces magnesium sulfate (Epsom salts) per plant for one and two-year old vines, and 5 ounces per plant for other vines.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

217. First year - Apply fertilizer three times: (1) 1/2 pound of 10-10-10 or equivalent after the plants have been settled by rain, (2) 1/8 pound of 34-0-0 or 1/10 pound of 46-0-0 in late May, and (3) 1/8 pound of 34-0-0 or 1/10 pound of 46-0-0 in early July. Broadcast each application over a two-foot circle with the vine in the center.

Second year - Timing and method are the same as the first year. Double the rate for each application. Increase the diameter of the broadcast circle to four feet.

Third year - If the vine has grown well the first two years and you expect a crop, apply two pounds of 10-10-10 or equivalent per vine in March. Apply one pound of 10-10-10 per vine in May. Broadcast in a six-foot circle if plants have not done well, fertilize as instructed for the second year.

Established vines - Apply three to five pounds of 10-10-10 or equivalent per plant in March of each year. If soil test phosphorus (P) is high or very high and potassium (K) is low or medium, substitute 15-0-15 at 2 to 4 pounds per plant. If both soil test P and K are high or very high, apply 1 to 1½ pounds of 34-0-0 or 3/4 to 1 pound of 46-0-0 per plant in March. Then apply 1/2 pound of 34-0-0 or 1/3 pound of 46-0-0 around June 1.

Check the soil pH about every three years.

Special fertilization - Grapes have a relatively high requirement for magnesium. A shortage of magnesium shows up as yellowing between the veins of older leaves, and progresses up the shoots as the leaves grow older. Premature fruit fall may also result. This should also appear as low magnesium in the soil test results.

To prevent or correct magnesium deficiency, apply Epsom salts at the rate of two to four ounces for one- and two-year-old vines; four to six ounces for older vines. Be sure to evenly broadcast Epsom salts over a three to six foot area.

Note: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	218	218	218	218
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	218	218	218	218
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	218	218	219	219
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	218	218	219	219

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

218. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. Seven to ten days after planting, when plants have been settled by a drenching rain or irrigation, broadcast over an area three feet in diameter one cup of 10-10-10 fertilizer. In May and in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one cup of 10-10-10 fertilizer for each year of tree age to a maximum of 10 cups for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

continued -»

219. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. After the trees have been planted and settled by a drenching rain, broadcast over an area three feet in diameter 1/3 cup of 34-0-0, or 1/4 cup of 46-0-0, or 2/3 cup of calcium nitrate. Do this in March. In May and again in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one-third cup of 34-0-0 or one-fourth cup of 46-0-0 for each year of tree age, to a maximum of 3 cups of 34-0-0 or 2 cups of 46-0-0 for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	218	218	218	218
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	218	218	218	218
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	218	218	219	219
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	218	218	219	219

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

218. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. Seven to ten days after planting, when plants have been settled by a drenching rain or irrigation, broadcast over an area three feet in diameter one cup of 10-10-10 fertilizer. In May and in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one cup of 10-10-10 fertilizer for each year of tree age to a maximum of 10 cups for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

continued -»

219. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. After the trees have been planted and settled by a drenching rain, broadcast over an area three feet in diameter 1/3 cup of 34-0-0, or 1/4 cup of 46-0-0, or 2/3 cup of calcium nitrate. Do this in March. In May and again in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one-third cup of 34-0-0 or one-fourth cup of 46-0-0 for each year of tree age, to a maximum of 3 cups of 34-0-0 or 2 cups of 46-0-0 for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

Pears - Home Garden (*Code* #107)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	220	220	220	220
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	220	220	220	220
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	220	220	220	220
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	220	220	220	220

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

220. To fertilize pear trees the year they are planted, broadcast over a two-foot circle 1/2 cup of 10-10-10 fertilizer about one month after planting. In June following planting, broadcast another 1/2 cup of 10-10-10 fertilizer around the tree.

Fertilization schedules in the first and subsequent years are summarized in the table below.

Fertilizer Application Rates for Pear Trees in Home Gardens

	Standard (full size) Trees		Semi-dwarf Trees		Dwarf Trees	
Tree Age	**cups 10-10-10 per tree**	**Area of application**	**cups 10-10-10 per tree**	**Area of application**	**cups 10-10-10 per tree**	**Area of application**
Planting (Year 1)	½ cup 1 month after planting	2 ft. circle around tree	½ cup 1 month after planting	2 ft. circle around tree	½ cup 1 month after planting	2 ft. circle around tree
	½ cup in June	2 ft. circle	½ cup in June	2 ft. circle	½ cup in June	2 ft. circle
2	1 cup in early spring	3 ft. circle	1 cup in early spring	3 ft. circle	1 cup in early spring	3 ft. circle
	1 cup in June	3 ft. circle	1 cup in June	3 ft. circle	1 cup in June	3 ft. circle
3	2½ cups in spring	4 ft. circle	2½ cups in spring	4 ft. circle	1 cup in spring	4 ft. circle
4	3 cups in spring	5 ft. circle	3 cups in spring	5 ft. circle	1 cup in spring	4 ft. circle
5	3½ cups in spring	6 ft. circle	3½ cups in spring	6 ft. circle	2 cups in spring	5 ft. circle
6	4 cups in spring	7 ft. circle	4 cups in spring	7 ft. circle		
7	4½ cups in spring	8 ft. circle				
*8+	5 cups in spring	9 ft. circle				

*In year 8 and later, if soil test results indicate that both P and K are high or very high, substitute 34-0-0 at three cups for standard trees, two cups for semi-dwarf trees, and one cup for dwarf trees; or 46-0-0 at two cups for standard trees, 1½ cups for semi-dwarf trees, and 3/4 cup for dwarf trees.

Once the trees begin to bear, use shoot growth as a measure to determine if you need to reduce or supplement the fertilization rates previously suggested. Six inches of growth are ideal for bearing trees. If growth is more than this, reduce the rate of fertilization. If growth is less, apply a little extra fertilizer the next season.

CAUTION: When fertilizing, never dump large amounts in a small area. Root burn may result. Also, keep fertilizer six inches or more away from the trunk. Always broadcast the fertilizer evenly over the recommended area.

If in any given year you severely prune the tree, do not apply any fertilizer that year. Likewise, if growth is excessive, omit fertilizer for a year or two until growth is reduced to a desirable amount (terminal growth on bearing trees averaging 10 to 16 inches per year).

NOTE: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Pecans (bearing) - Home Garden (*Code* #109)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	225	225	225	225
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	225	225	225	225
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	225	225	226	226
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	225	225	226	226

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	See zinc (Zn) recommendation on Fact Sheet.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

225. Per tree, broadcast 4 pounds of 10-10-10 for each inch of trunk diameter (measured 4½ feet above soil level) in March or April. If the trees are to produce a good crop terminal growth should be approximately 6 inches each year. If the desired terminal growth is not obtained, adjust the fertilizer rate accordingly.

226. Per tree, broadcast 2½ pounds of 16-4-8 or 3 pounds of 12-4-8 for each inch of trunk diameter (measured 4½ feet above soil level in March or April. If the trees are to produce a good crop terminal growth should be approximately 6 inches each year. If the desired terminal growth is not obtained, adjust the fertilizer rate accordingly.

continued -»

Fact Sheet:

Zinc nutrition is very important in pecan production. Zinc needs are best determined by analysis of leaf samples taken in July or early August. Mailing kits and instructions for taking samples are available at your County Extension Office. In the absence of a plant analysis, soil apply 1 pound of zinc sulfate to young trees and 3 to 5 pounds per larger trees each year.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	222	222	222	222
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	222	222	222	222
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	222	222	223	223
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	222	222	223	223

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.
Other:	See zinc (Zn) recommendation on Fact Sheet.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

222. Fertilize newly planted trees with 1 pound of 10-10-10 fertilizer distributed in a 25 square foot circle around the tree in June or July. The following year, apply 1 pound of 10-10-10 fertilizer in March, May, and June for each inch of trunk diameter (measured one foot above soil surface). In the third year following transplanting, apply 4 pounds of 10-10-10 per inch of trunk diameter measured 1 foot above the soil surface. Applications may be split between March and June. Do not place fertilizer within 12 inches of the trunk.

223. Fertilize newly planted trees with 3/4 pound of 16-4-8 or 1 pound of 12-4-8 fertilizer distributed in a 25 square foot circle around the tree in June or July. The following year, apply 3/4 pound of 16-4-8 or 1 pound of 12-4-8 fertilizer in March, May, and June for each inch of trunk diameter (measured one foot above soil surface). In the third year following transplanting, apply 3 pounds of 16-4-8 or 4 pounds of 12-4-8 per inch of trunk diameter measured 1 foot above the soil surface. Applications may be split between March and June. Do not place fertilizer within 12 inches of the trunk.

continued -»

Fact Sheet:

Apply 1 pound of zinc sulfate per tree for the first three years following planting. Spread the zinc sulfate in a circle around the tree outside of the planting hole.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	218	218	218	218
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	218	218	218	218
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	218	218	219	219
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	218	218	219	219

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

218. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. Seven to ten days after planting, when plants have been settled by a drenching rain or irrigation, broadcast over an area three feet in diameter one cup of 10-10-10 fertilizer. In May and in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one cup of 10-10-10 fertilizer for each year of tree age to a maximum of 10 cups for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

continued -»

219. Adjust the soil pH to 6.5 before planting. This pH adjustment should be made to at least a foot of depth and over an area approximately 100 square feet where the tree will be planted. After the trees have been planted and settled by a drenching rain, broadcast over an area three feet in diameter 1/3 cup of 34-0-0, or 1/4 cup of 46-0-0, or 2/3 cup of calcium nitrate. Do this in March. In May and again in July, broadcast over an area two feet in diameter one-fourth cup of 34-0-0, or one-sixth cup of 46-0-0, or one-half cup of calcium nitrate. Beginning the second year (and succeeding years) fertilize the trees twice annually. The first application should be made in early March and the second in July. Use these rules of thumb for the two fertilizer applications:

    1. March application - Apply one-third cup of 34-0-0 or one-fourth cup of 46-0-0 for each year of tree age, to a maximum of 3 cups of 34-0-0 or 2 cups of 46-0-0 for mature trees.
    2. July application - Apply one-half cup of 34-0-0, or one-third cup of 46-0-0, or one cup of calcium nitrate per tree per year of tree age to a maximum of four cups for mature trees.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A				
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A				
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	096ph	096ph	096pkh	096pkh
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	096ph	096ph	096pkh	096pkh

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

Comments:

096ph. The phosphorus levels are high; therefore, no phosphorus (P) is needed. Apply fertilizer that contains only nitrogen (N) and potassium (K), such as 15-0-15.

096pkh. The phosphorus and potassium levels are high; therefore, no phosphorus (P) or potassium (K) fertilizers are needed. Apply only a nitrogen-containing fertilizer, such as 34-0-0 or 46-0-0.

continued -»

Fact Sheet:

Trailing Raspberries such as "Dorman Red" (6 to 8 feet apart):

Brambles do best when fertilized twice a year. About a month after planting, sprinkle 1/6 cup of 10-10-10 fertilizer in a 24-inch circle around each plant. In June, sprinkle 1/4 cup of 10-10-10 fertilizer over a 30-inch circle. These two applications should satisfy the fertilizer needs of the plants for the first year.

The nutritional needs of the plants in the second year should be supplied as follows:

1. In early March sprinkle one cup of 10-10-10 fertilizer over a five-foot circle around each plant.
2. In June sprinkle one cup of 10-10-10 fertilizer over the same five-foot circle around each plant.

Fertilization in succeeding years should be as follows:

1. In early March sprinkle two cups of 10-10-10 fertilizer over a six-foot circle around each plant.
2. In June sprinkle one cup of 10-10-10 fertilizer over the same six-foot circle around each plant. If new cane growth is excessive (over 12 feet for individual canes), omit this application.

Hedgerow Planting of Floricane Varieties such as "Latham" (summer fruiting):

During the year of establishment, fertilize the planting in March, June, and August (if needed). Apply 4½ pounds of 10-10-10 fertilizer per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 2-foot wide band where the plants or root cuttings are planted.

Fertilization the second year and thereafter should consist of two applications annually. Apply 11 pounds of 10-10-10 fertilizer per 100 feet of row over a 3-foot wide band in early March. In June, apply 5½ pounds of 10-10-10 fertilizer per 100 feet of row evenly over a 3-foot wide band.

Hedgerow Planting of Primocane Raspberry Varieties (late summer and fall fruiting varieties such as "Heritage" and "Redwing" pruned to ground level each winter):

During the year of establishment, fertilize the planting in March and June. Apply 4½ pounds of 10-10-10 fertilizer per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 2-foot wide band down the row. Do not apply an excessive amount of fertilizer near newly set plants.

In the second year, fertilize the planting in March and June. Apply 9 pounds of 10-10-10 per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 3-foot wide band down the row.

In the third year and after, fertilize the planting in March and June. Apply 13 pounds of 10-10-10 per 100 foot of row at each application. This fertilizer should be sprinkled evenly over a 4-foot wide band down the row.

Note 1: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

Note 2: On soils testing high in Phosphorus and Potassium, substitute 34-0-0 for 10-10-10 at one-third the rate or 46-0-0 at one-fourth the rate.

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*See Comments*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	228	228	228	228
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	228	228	228	228
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	228	228	228	228
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	228	228	228	228

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B and the soil depth adjustment table that immediately follows the lime tables.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre
Piedmont	Low: 0 - 120 lbs/acre	Medium: 121 - 240 lbs/acre	High: >240 lbs/acre

continued -»

Comments:

228. Once a berry planting is established (1 year old for fall planted and 6 to 8 months old for spring planted areas), fertilizer needs are the same. However, in the early stages of growth the following procedures are suggested.

For Annual Hill Culture Fall Plantings:

Two weeks before setting plants, incorporate 1 pound of 10-10-10 per 100 square feet. When growth begins in the spring, broadcast 1/2 pound of 10-10-10 per 100 square feet; at peak bloom, apply 1.0 pound of 10-10-10 or equivalent per 100 square feet.

For Spring Plantings (matted row system):

First Year:

After the cover crop has been turned under, broadcast and incorporate 2 pounds of 10-10-10 per 100 square feet about a week before planting.

Fertilize again in mid-June and late September by broadcasting 1.0 pound of 10-10-10 per 100 square feet. Always apply fertilizer to the plants when the foliage is dry, and sweep the plants with a broom or leaf rake immediately following application.

Second and Succeeding Years:

After renovating, broadcast 1¾ pounds of 10-10-10 fertilizer per 100 square feet, and water it in. Fertilizer should be applied two more times during summer and fall. This should be done in mid-July and again in mid to late September by broadcasting 1.0 pound of 10-10-10 per 100 square feet.

Just prior to the beginning of growth in late winter, apply 1/2 pound of 10-10-10 or equivalent per 100 square feet.

Continue this schedule for the life of the planting.

Note: A pint of 10-10-10 fertilizer weighs approximately 1 pound; 3/4 pint of limestone weighs approximately 1 pound.

WILDLIFE PLOTS

Keith Fielder, County Extension Coordinator, Putnam County
Leticia Sonon, Program Coordinator – Soil, Plant, and Water Laboratory
Paul Vendrell, Program Coordinator – Feed and Environmental Water Laboratory
David E. Kissel, Director – Agricultural & Environmental Services Laboratories

Dove Fields - Brown Top Millet, Proso, Sesame, and Buckwheat (*Code* #W10)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-60-80	60-60-50	60-60-30	60-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-40-80	60-40-50	60-40-30	60-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-20-80	60-20-50	60-20-30	60-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-0-80	60-0-50	60-0-30	60-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

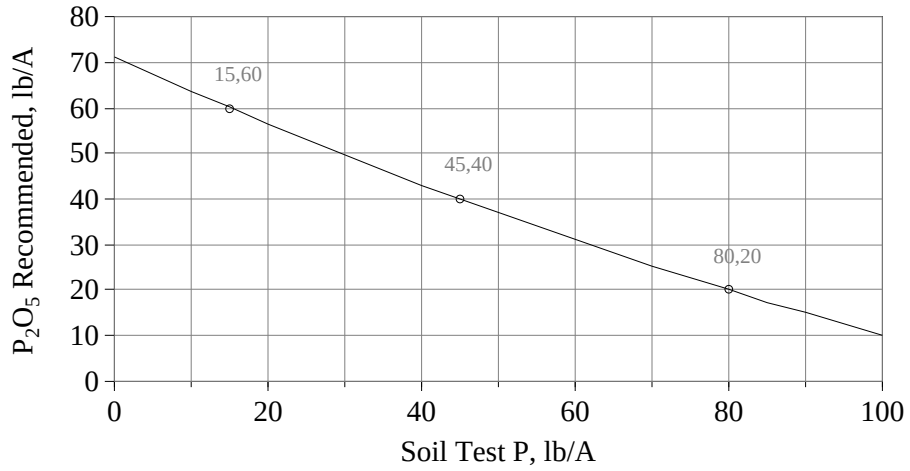
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Dove Fields - Brown Top Millet, Proso, Sesame, and Buckwheat (*Code W10*)

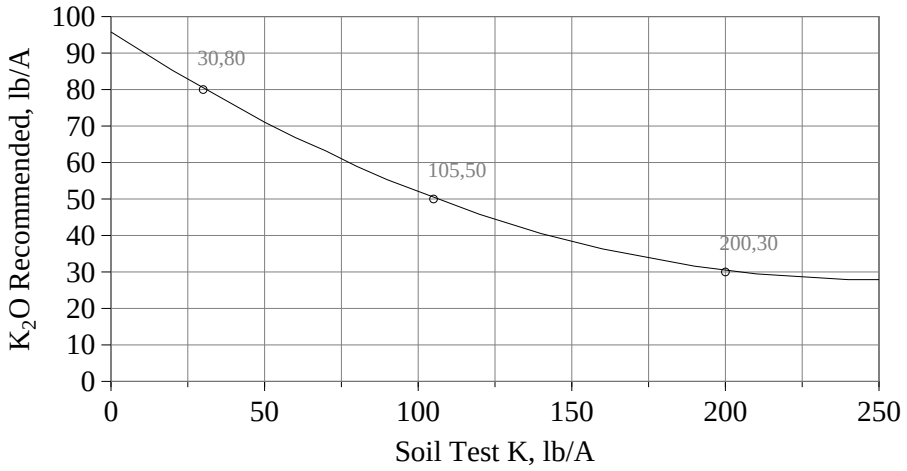
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



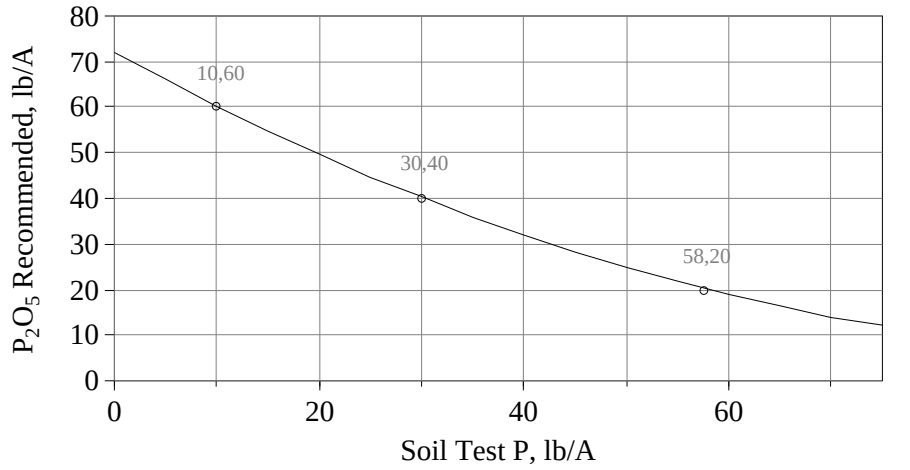
K Recommendations, Coastal Plain

$K_2O = 96 - 0.550K + 0.00111K^2$



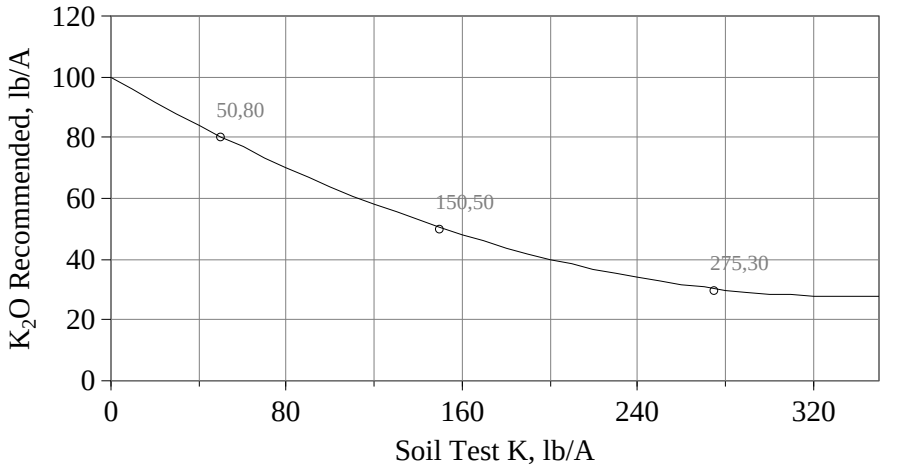
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 100 - 0.424K + 0.00062K^2$



Dove Fields - Corn or Grain Sorghum (*Code* #W12)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	100-80-80	100-80-40	100-80-20	100-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	100-45-80	100-45-40	100-45-20	100-45-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	100-20-80	100-20-40	100-20-20	100-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	100-0-80	100-0-40	100-0-20	100-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

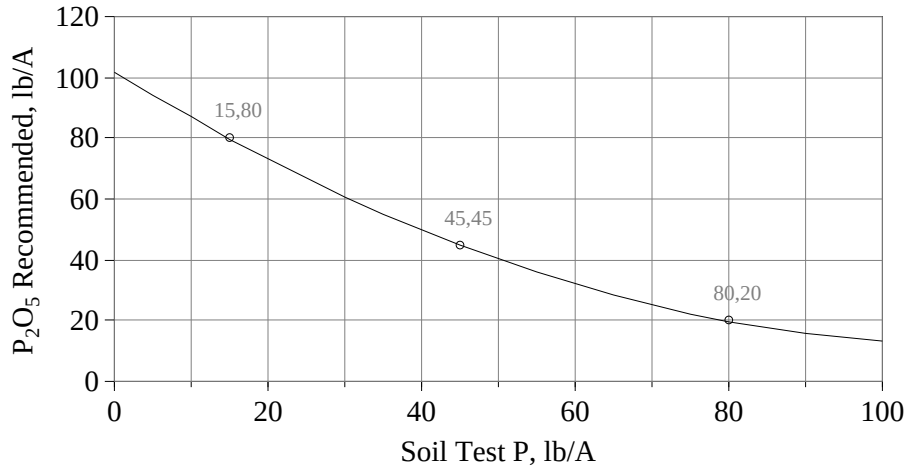
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	100 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Dove Fields - Corn or Grain Sorghum (*Code W12*)

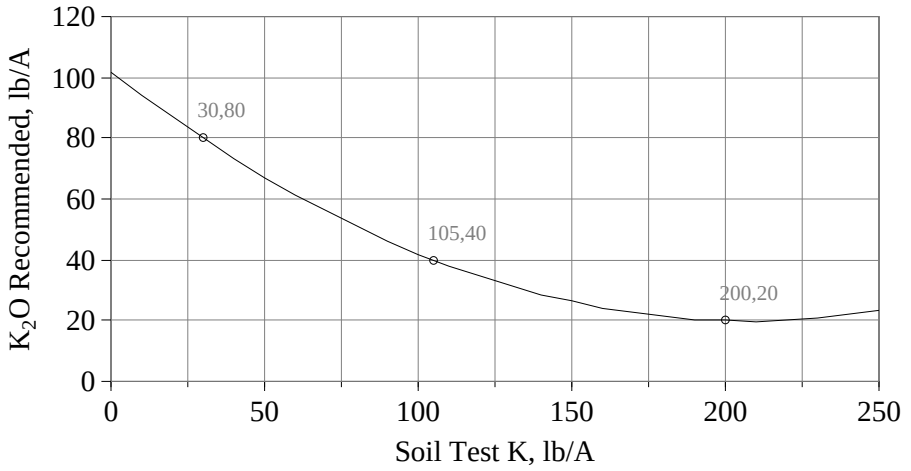
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.584P + 0.00696P^2$



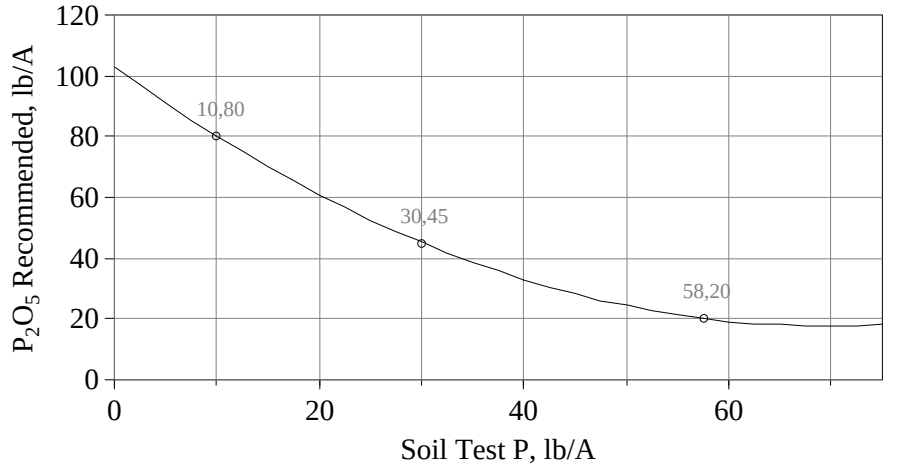
K Recommendations, Coastal Plain

$K_2O = 102 - 0.790K + 0.00190K^2$



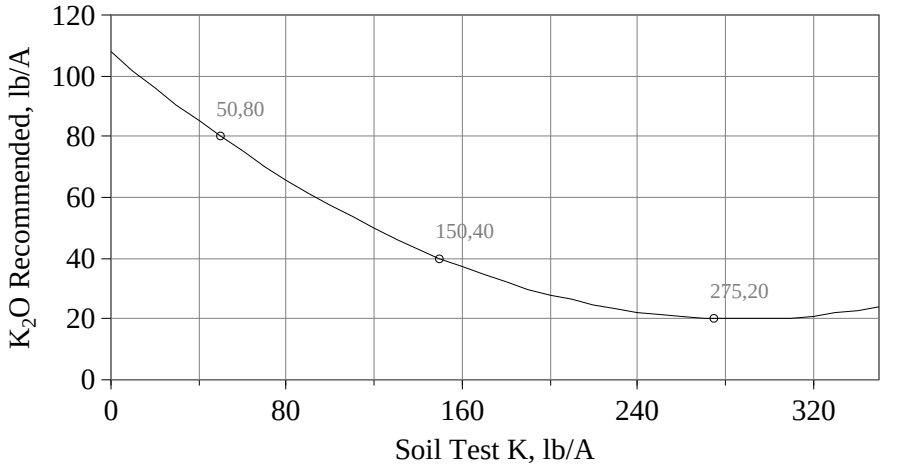
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.458P + 0.01770P^2$



K Recommendations, Piedmont

$K_2O = 108 - 0.614K + 0.00107K^2$



Dove Fields - Peredovic Sunflower (*Code* #W11)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-80	80-80-50	80-80-30	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-80	80-60-50	80-60-30	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-80	80-30-50	80-30-30	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-80	80-0-50	80-0-30	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

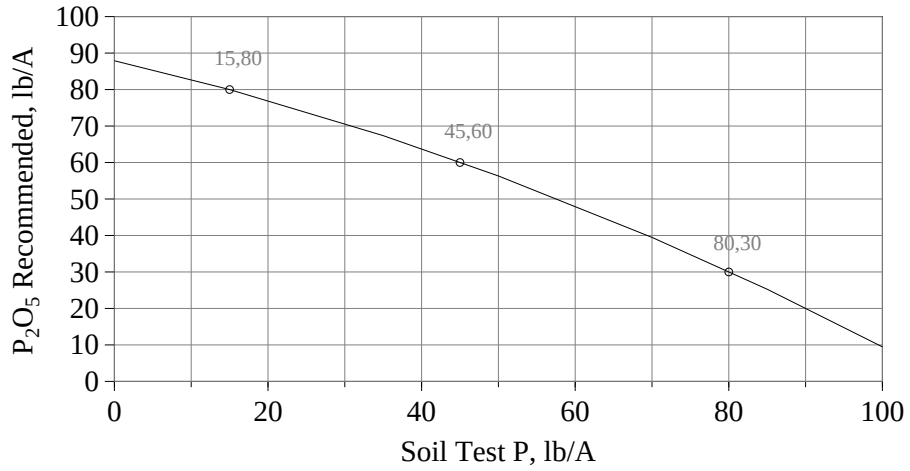
Fact Sheet:

Split the nitrogen (N) application, applying half prior to or at planting and the remainder before the 6th leaf stage.

Dove Fields - Peredovic Sunflower (*Code W11*)

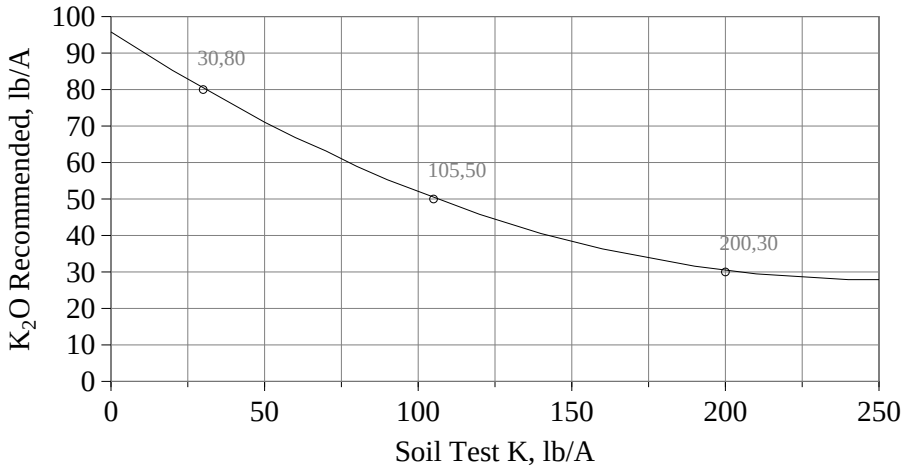
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



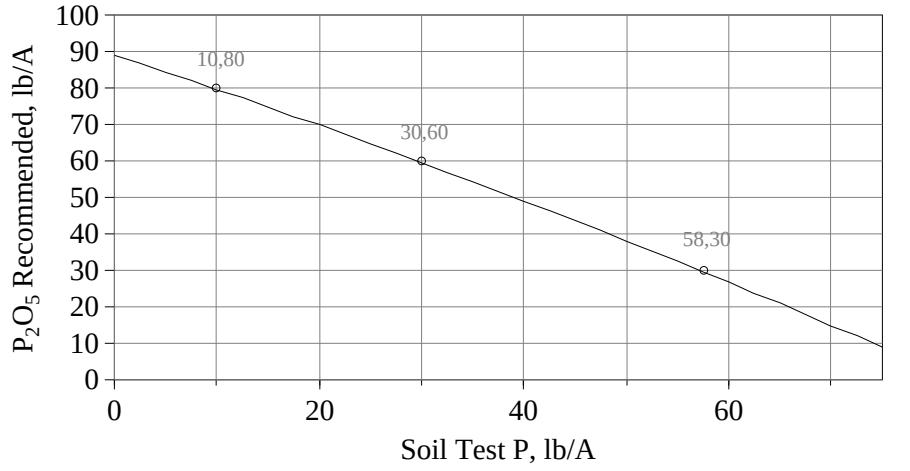
K Recommendations, Coastal Plain

$K_2O = 96 - 0.550K + 0.00111K^2$



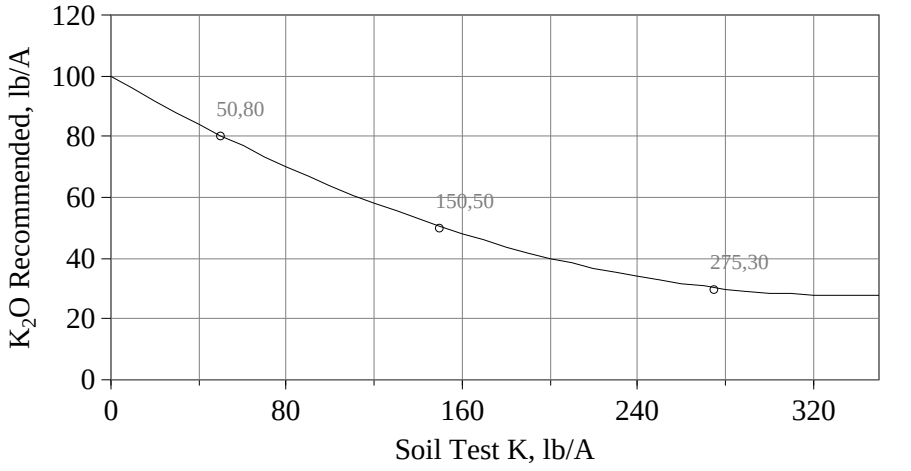
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 100 - 0.424K + 0.00062K^2$



Fall Deer - Alfalfa (*Code* #W09)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-160-200	0-160-125	0-160-60	0-160-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-120-200	0-120-125	0-120-60	0-120-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-50-200	0-50-125	0-50-60	0-50-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-200	0-0-125	0-0-60	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.5 to 7.0. If the pH is less than 6.5, see Lime Table A.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

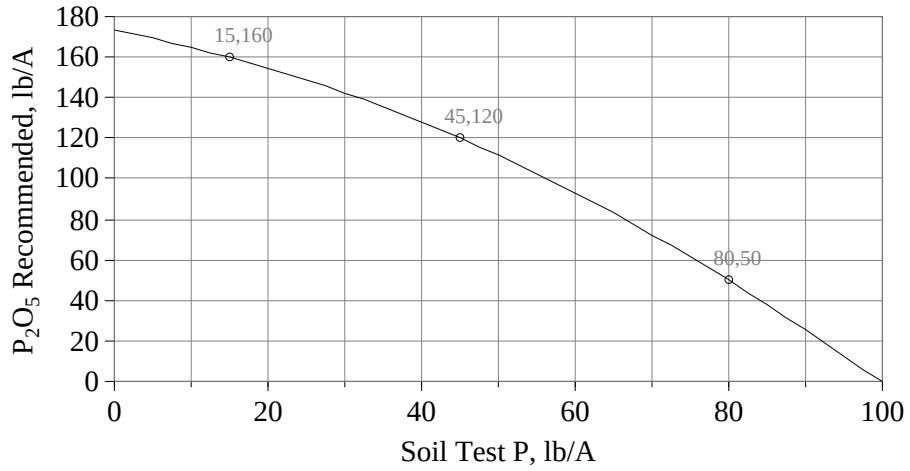
When establishing alfalfa: Per 60 pounds of seed, apply 1/4 ounce of molybdenum (2/3 ounce of sodium molybdate) in just enough water to slightly moisten the seed. (CAUTION: DO NOT EXCEED THE RECOMMENDED AMOUNT OF MOLYBDENUM.)

For maintenance, apply 3 pounds of boron (B) per acre annually. Apply 3 ounces of molybdenum (Mo) (8 ounces of sodium molybdate) in 25 gallons of water per acre every two years. Apply the foliar application of Mo in late winter or in spring before new shoots reach 2 to 3 inches in height. To extend the life of alfalfa stands, apply half of the potash (K_2O) in spring and half in late summer.

Fall Deer - Alfalfa (*Code W09*)

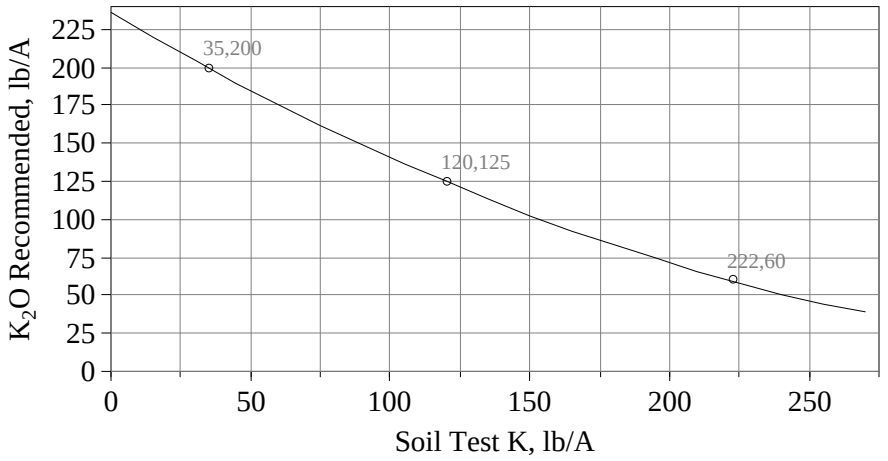
P Recommendations, Coastal Plain

$P_2O_5 = 173 - 0.718P - 0.01026P^2$



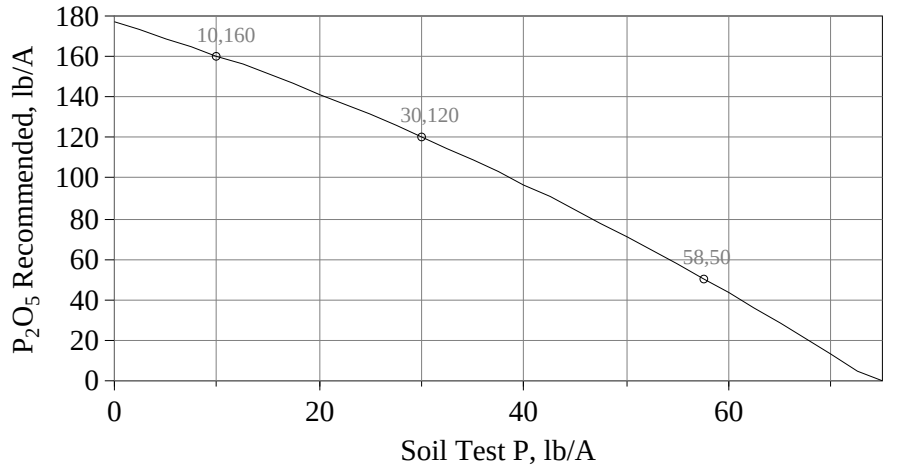
K Recommendations, Coastal Plain

$K_2O = 236 - 1.087K + 0.00132K^2$



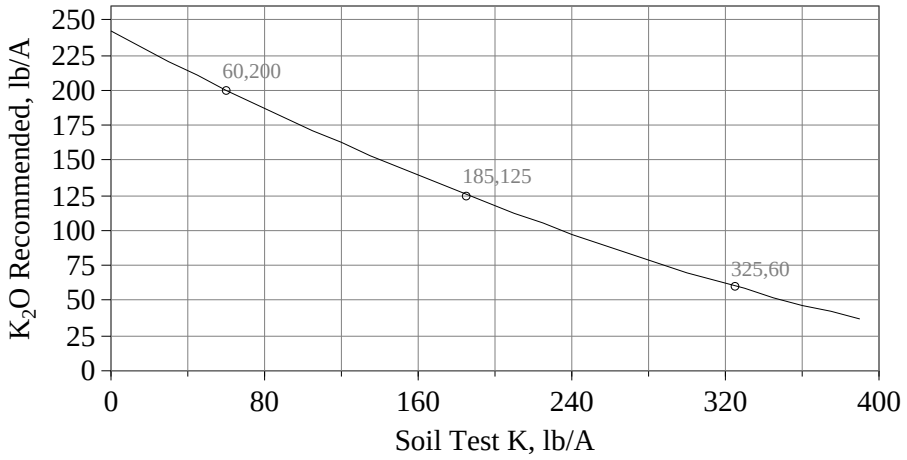
P Recommendations, Piedmont

$P_2O_5 = 177 - 1.541P - 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 242 - 0.725K + 0.00051K^2$



Fall Deer - Forage Chicory (*Code* #W08)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-120	*-100-80	*-100-0	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-60-120	*-60-80	*-60-0	*-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-120	*-0-80	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-120	*-0-80	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	Coastal Plain 150 pounds nitrogen (N) per acre. Piedmont, Mountain, Limestone Valley 125 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

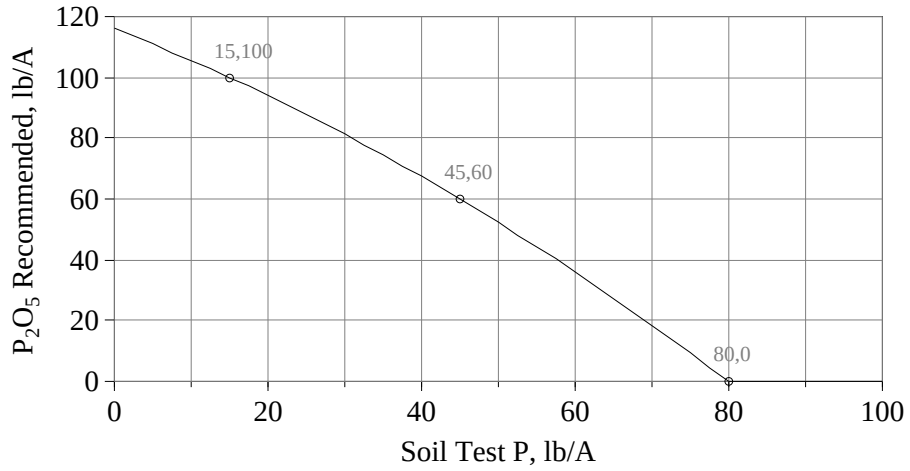
Fact Sheet:

Apply half of nitrogen (N) in fall at planting and half in late winter.

Fall Deer - Forage Chicory (*Code W08*)

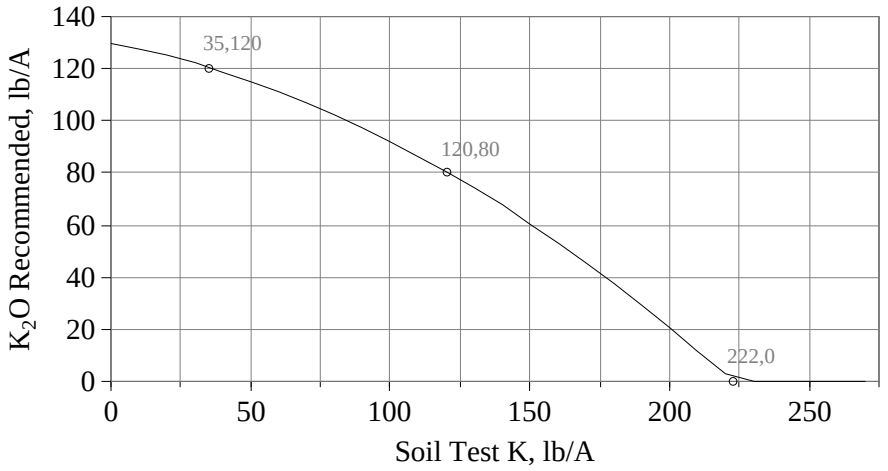
P Recommendations, Coastal Plain

$P_2O_5 = 116 - 0.982P - 0.00586P^2$



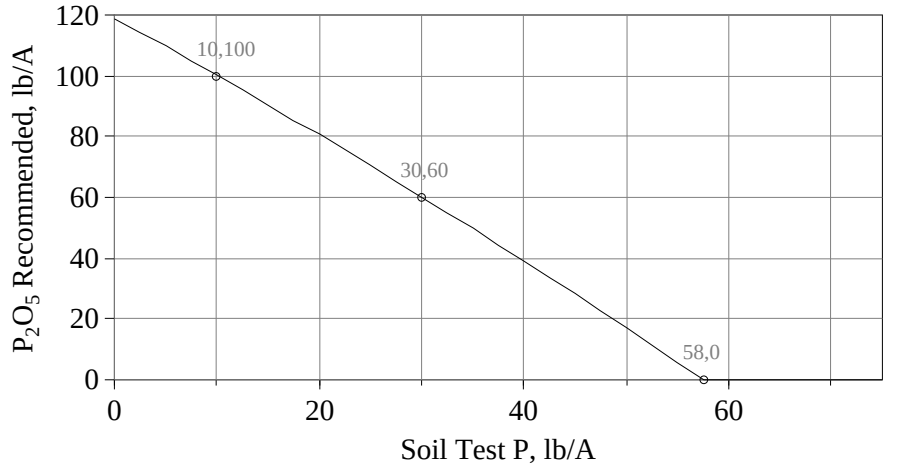
K Recommendations, Coastal Plain

$K_2O = 130 - 0.215K - 0.00165K^2$



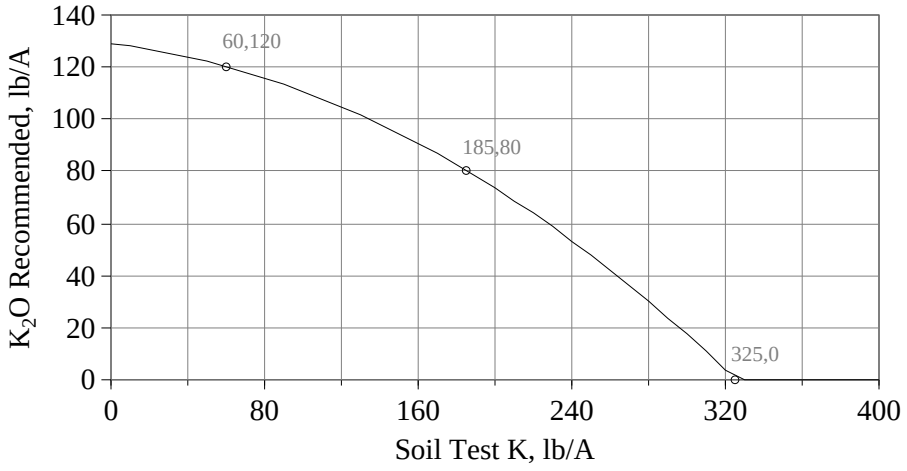
P Recommendations, Piedmont

$P_2O_5 = 119 - 1.847P - 0.00383P^2$



K Recommendations, Piedmont

$K_2O = 129 - 0.087K - 0.00095K^2$



Fall Deer Mix - Brassicas (*Code* #W05)
(Rape, Turnips, Collards)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	80-80-100	80-80-60	80-80-40	80-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	80-60-100	80-60-60	80-60-40	80-60-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	80-30-100	80-30-60	80-30-40	80-30-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	80-0-100	80-0-60	80-0-40	80-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	80 pounds nitrogen (N) per acre.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

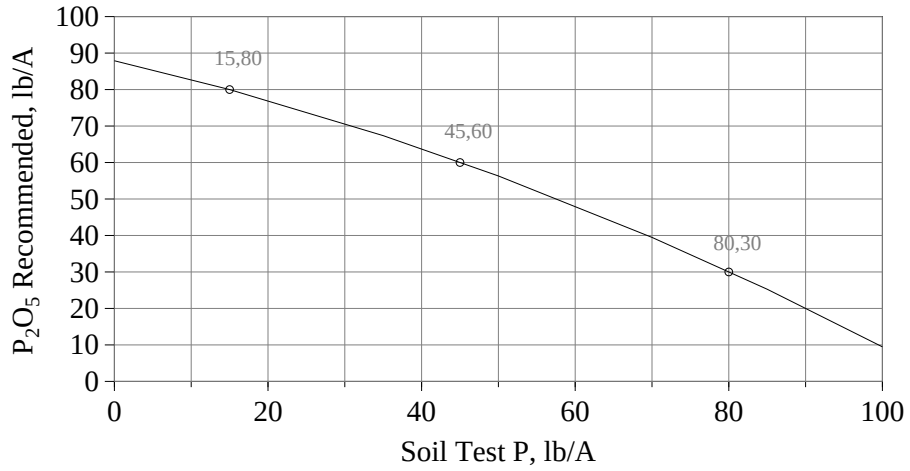
Fact Sheet:

These crops can utilize about 80 pounds of nitrogen per acre during the growing season. Split the nitrogen application, applying 40 pounds of nitrogen per acre at planting and 40 pounds nitrogen per acre in late winter.

Fall Deer Mix - Brassicas (*Code W05*)

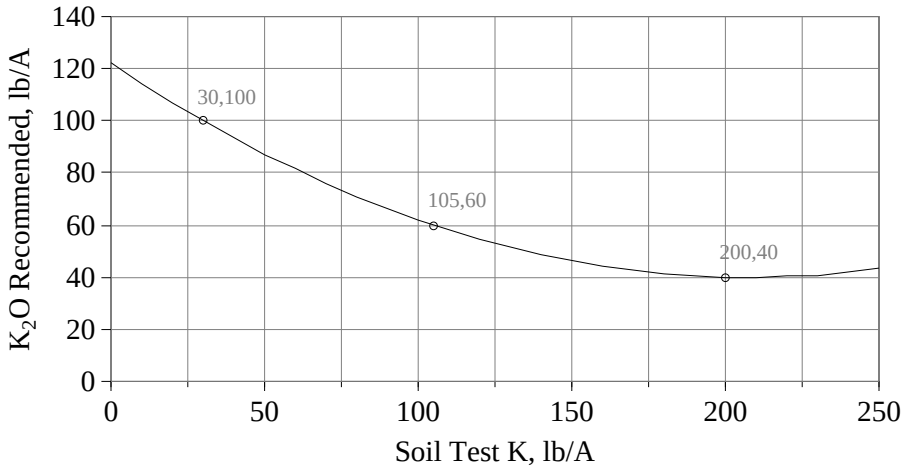
P Recommendations, Coastal Plain

$P_2O_5 = 88 - 0.491P - 0.00293P^2$



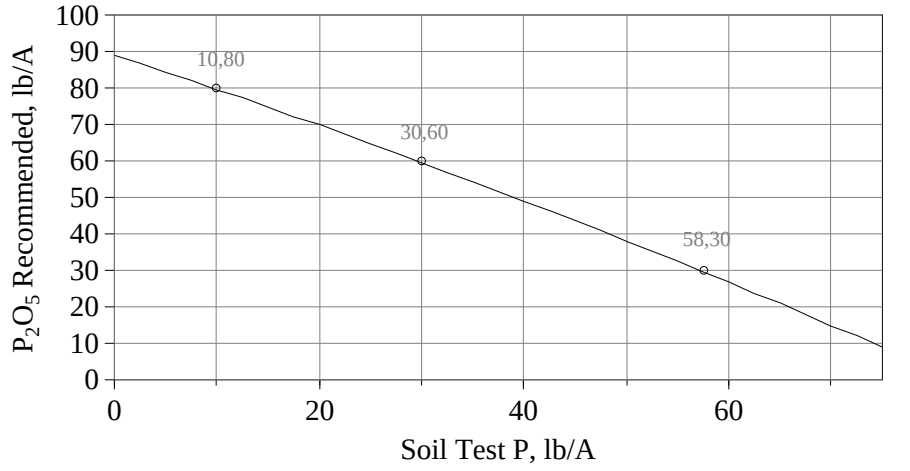
K Recommendations, Coastal Plain

$K_2O = 122 - 0.790K + 0.00190K^2$



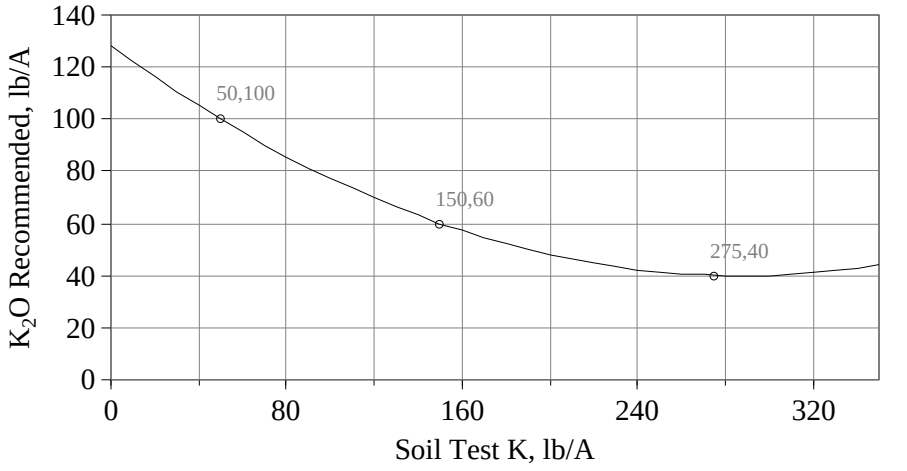
P Recommendations, Piedmont

$P_2O_5 = 89 - 0.924P - 0.00191P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.614K + 0.00107K^2$



Fall Deer Mix - Cool season annual grasses (*Code* #W04)
(Ryegrass, Wheat, Oats, Rye)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-100	*-100-50	*-100-0	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-50-100	*-50-50	*-50-0	*-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-100	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

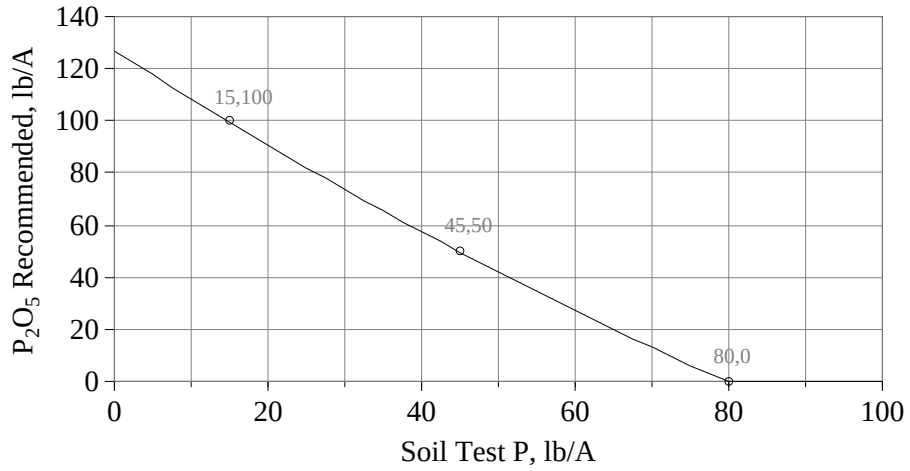
Small grains - rye, wheat, oats. These crops can utilize about 100 pounds of nitrogen per acre during the growing season. Split the nitrogen (N) application, applying 50 pounds nitrogen per acre at planting and 50 pounds nitrogen per acre in late winter.

Ryegrass alone or small grain-ryegrass. Apply 50 pounds nitrogen per acre in the fall at planting, 50 pounds per acre in late winter, and 50 pounds per acre in early spring. Ryegrass has a longer than normal grazing season. The spring and winter application of nitrogen will help extend the grazing period if that is desired.

Fall Deer Mix - Cool season annual grasses (*Code W04*)

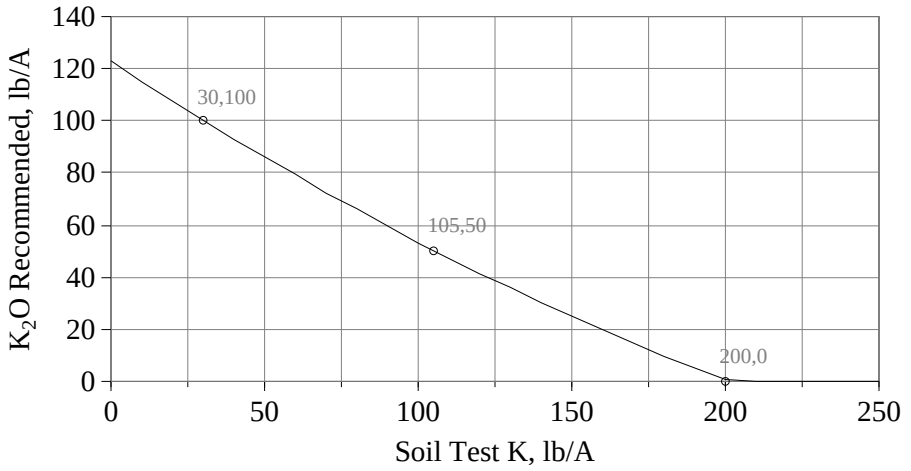
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



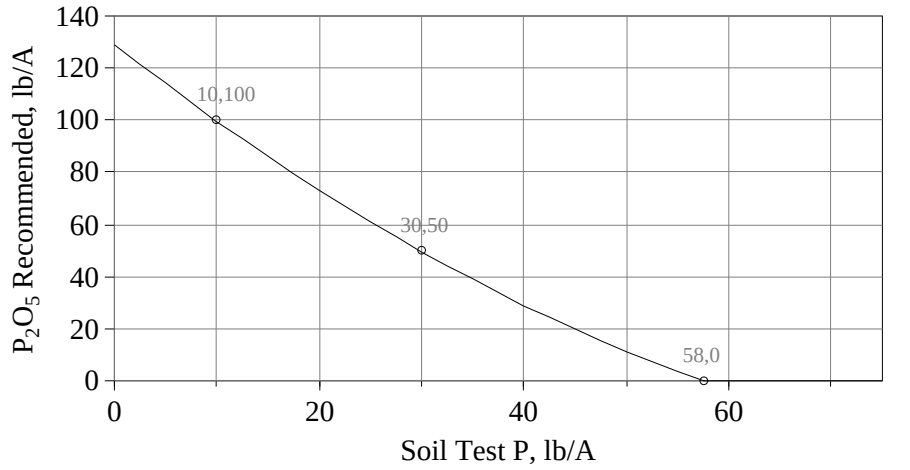
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



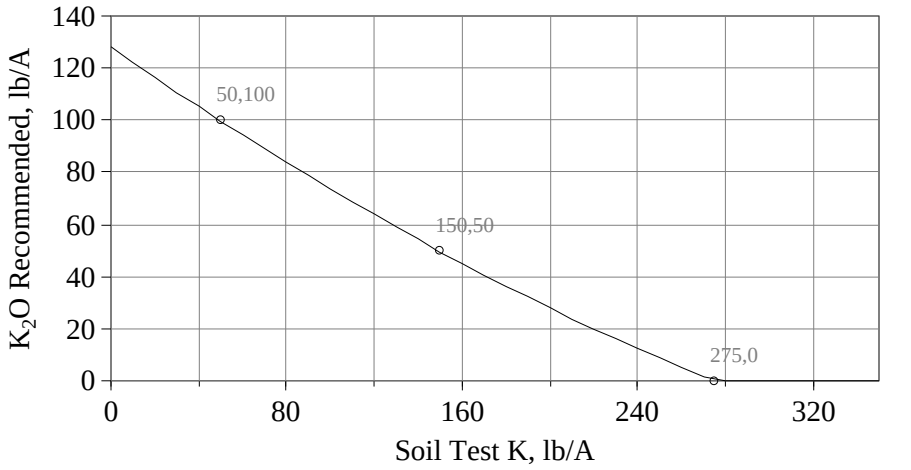
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$



Fall Deer Mix - Cool Season Grasses with Clover (*Code* #W06)
(Ryegrass, Wheat, Oats, Rye, Clover)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	50-80-80	50-80-40	50-80-0	50-80-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	50-40-80	50-40-40	50-40-0	50-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	50-0-80	50-0-40	50-0-0	50-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	50-0-80	50-0-40	50-0-0	50-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	50 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

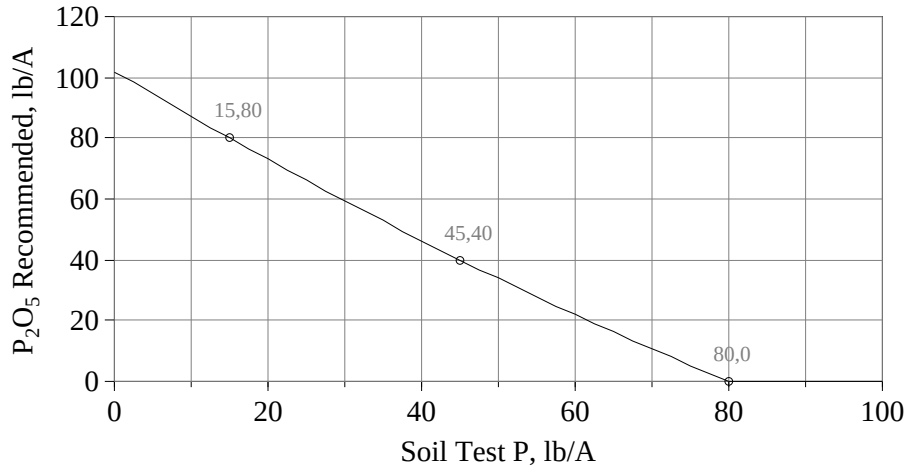
Fact Sheet:

Apply half of the nitrogen (N), and all of the phosphate (P_2O_5) and potash (K_2O) at planting. Apply remaining nitrogen as topdress in late winter.

Fall Deer Mix - Cool Season Grasses with Clover (*Code W06*)

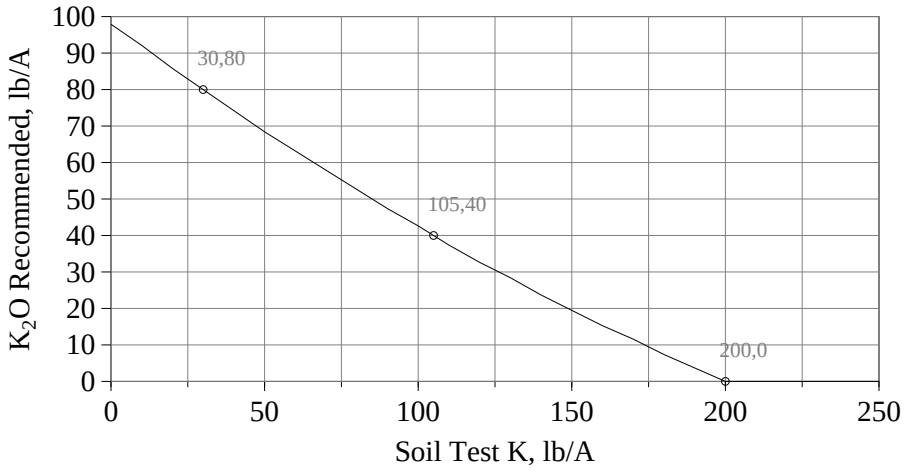
P Recommendations, Coastal Plain

$P_2O_5 = 102 - 1.509P + 0.00293P^2$



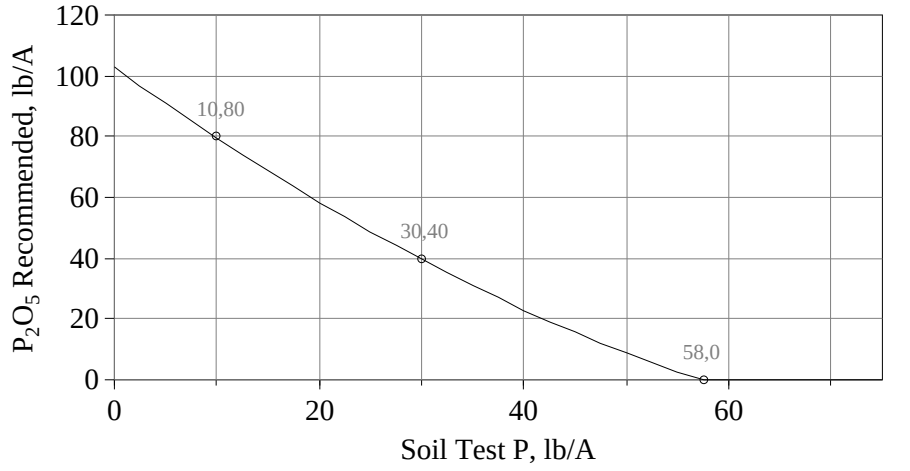
K Recommendations, Coastal Plain

$K_2O = 98 - 0.622K + 0.00066K^2$



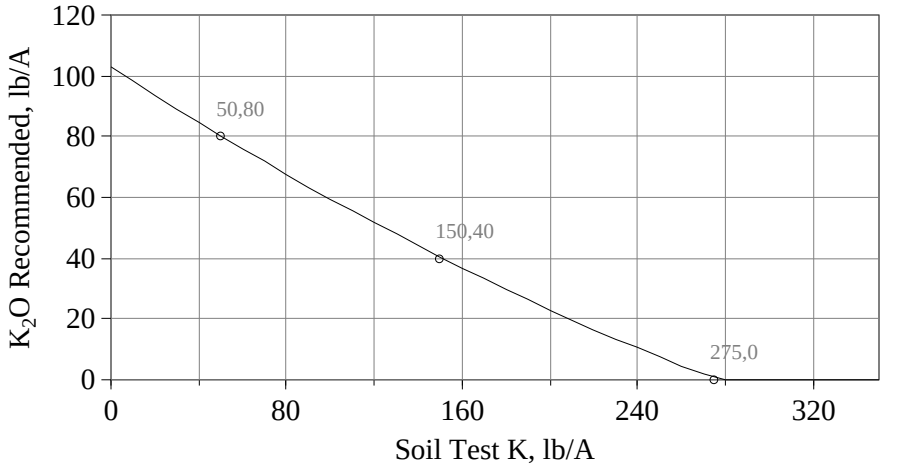
P Recommendations, Piedmont

$P_2O_5 = 103 - 2.459P + 0.01148P^2$



K Recommendations, Piedmont

$K_2O = 103 - 0.472K + 0.00036K^2$



Fall Deer Mix - Legumes (*Code* #W07)
(Whites, Ladino, Austrian Winter Peas, Red Crimson, Arrowleaf, etc.)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-100-100	0-100-50	0-100-0	0-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-50-100	0-50-50	0-50-0	0-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-50	0-0-0	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-50	0-0-0	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

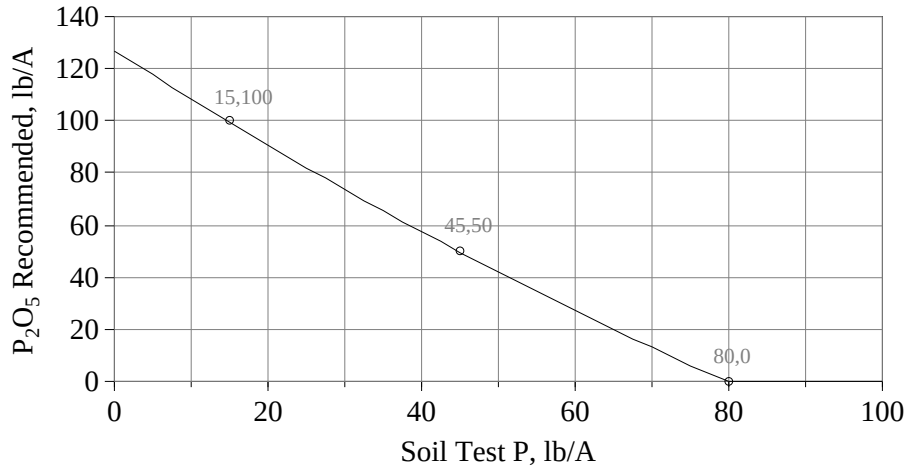
Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fall Deer Mix - Legumes (*Code W07*)

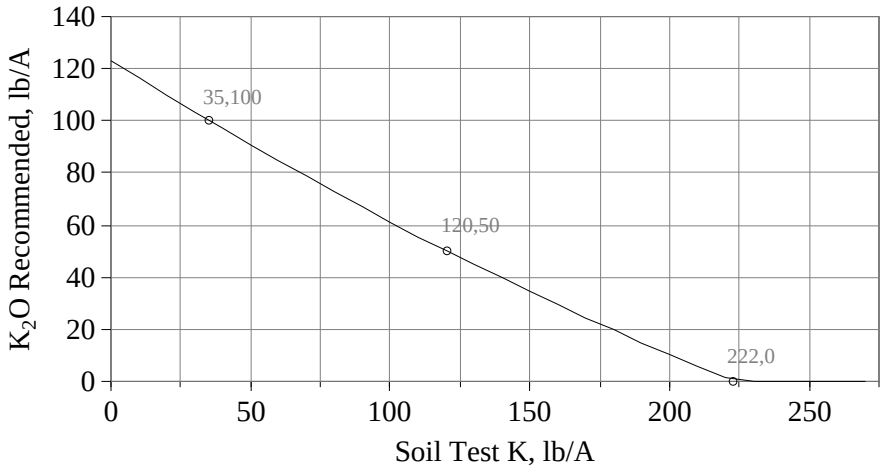
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



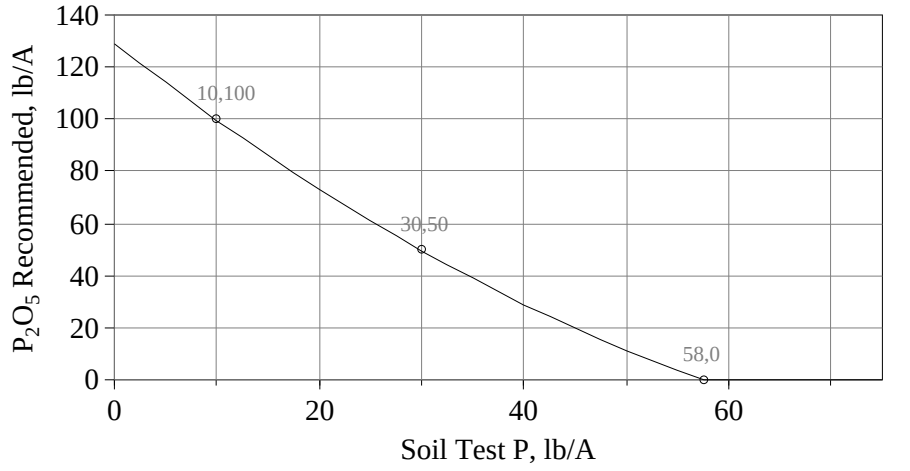
K Recommendations, Coastal Plain

$K_2O = 123 - 0.672K + 0.00054K^2$



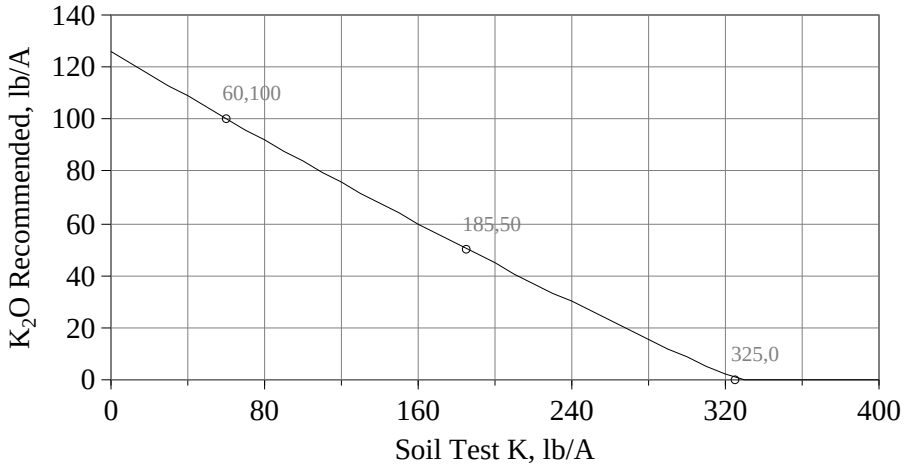
P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 126 - 0.439K + 0.00016K^2$



Summer Deer Mix (Grass only) (*Code* #W02)
(Proso Millet, Brown Top Millet, Buckwheat)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	60-60-100	60-60-80	60-60-40	60-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	60-40-100	60-40-80	60-40-40	60-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	60-20-100	60-20-80	60-20-40	60-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	60-0-100	60-0-80	60-0-40	60-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

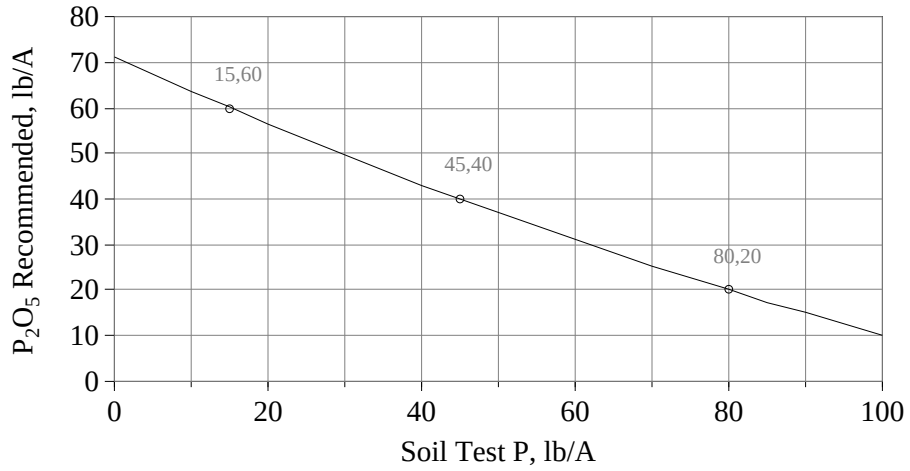
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	60 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Summer Deer Mix (Grass only) (*Code W02*)

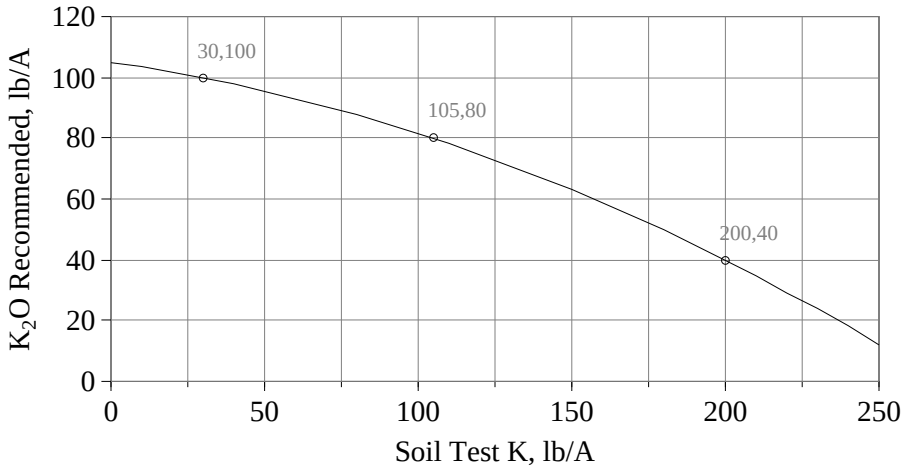
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



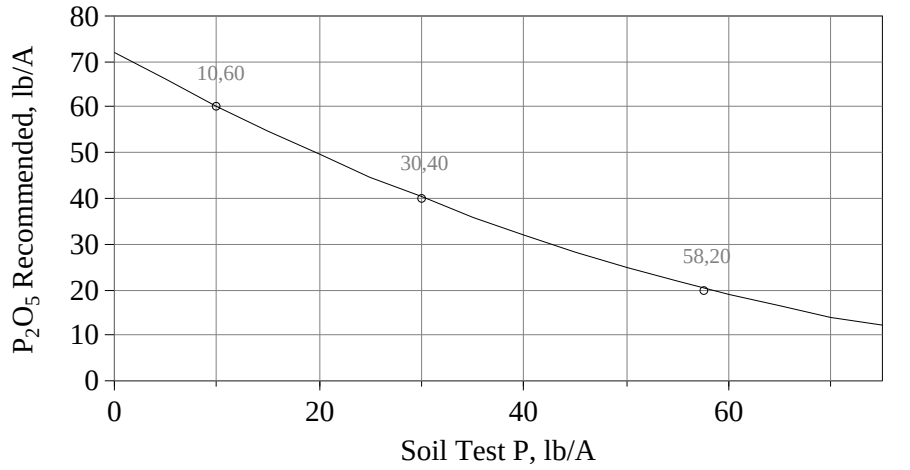
K Recommendations, Coastal Plain

$K_2O = 105 - 0.144K - 0.00091K^2$



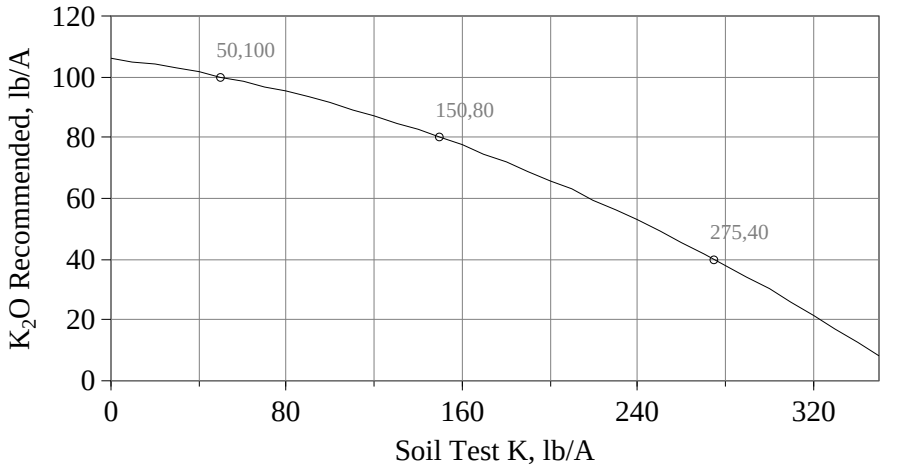
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.094K - 0.00053K^2$



Summer Deer Mix (Legume only) (*Code* #W01)
(Lab lab, Forage soybean, Velvet bean)

Soil Test Rating	Potassium			
	Low K Coast: 0-70 lbs/A Pied: 0-120 lbs/A	**Medium K** Coast: 71-170 lbs/A Pied: 121-250 lbs/A	**High K** Coast: 171-275 lbs/A Pied: 251-400 lbs/A	**Very High K** Coast: 275+ lbs/A Pied: 400+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	0-70-100	0-70-80	0-70-40	0-70-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	0-40-100	0-40-80	0-40-40	0-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	0-0-100	0-0-80	0-0-40	0-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	0-0-100	0-0-80	0-0-40	0-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0 to 6.5. If the pH is less than 6.0, see Lime Table B.
Nitrogen:	0 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

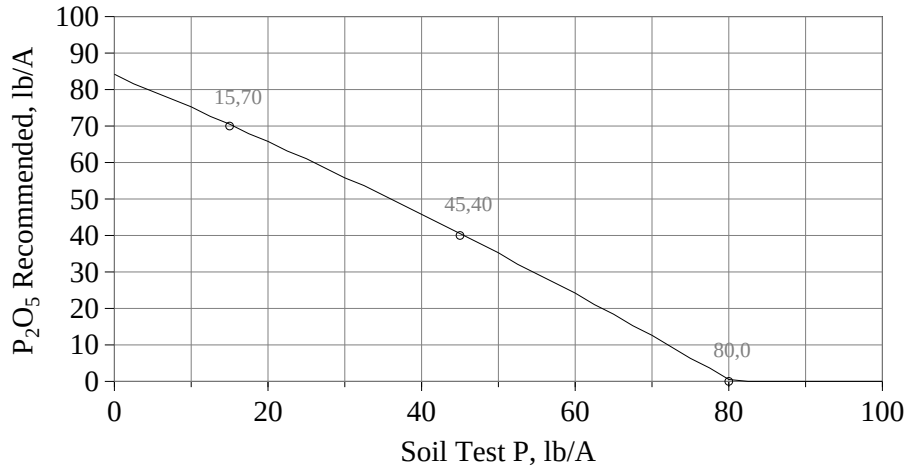
Fact Sheet:

Inoculate seed at planting.

Summer Deer Mix (Legume only) (*Code W01*)

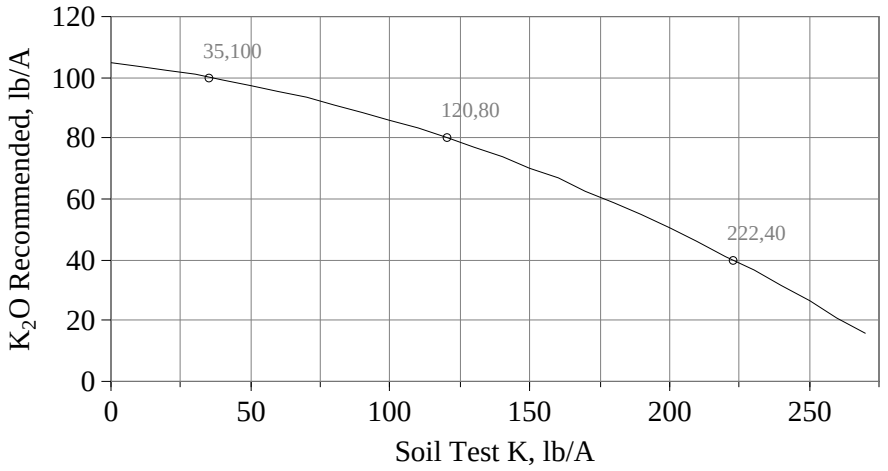
P Recommendations, Coastal Plain

$P_2O_5 = 84 - 0.868P - 0.00220P^2$



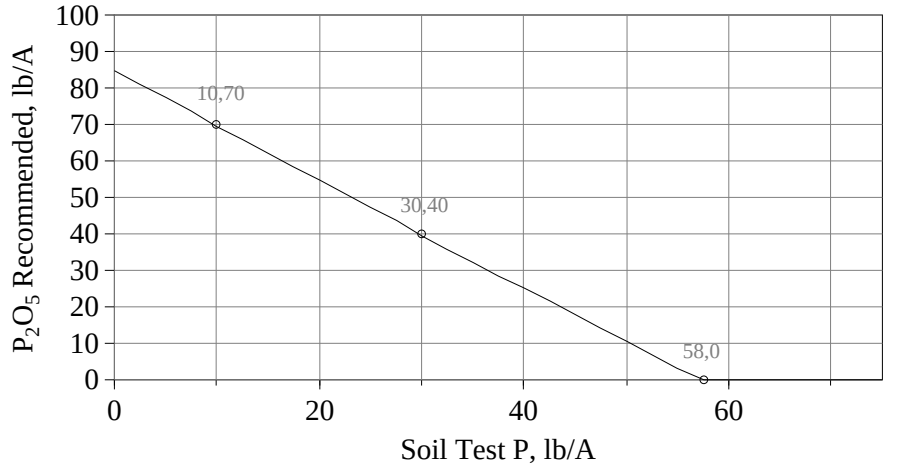
K Recommendations, Coastal Plain

$K_2O = 105 - 0.107K - 0.00083K^2$



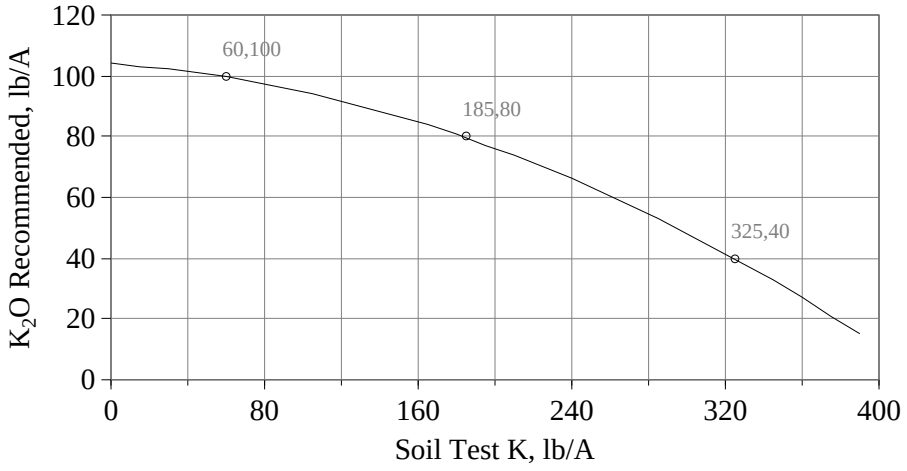
P Recommendations, Piedmont

$P_2O_5 = 85 - 1.538P + 0.00096P^2$



K Recommendations, Piedmont

$K_2O = 104 - 0.045K - 0.00047K^2$



Summer Deer Mix (Legumes and Grass) (*Code* #W03)
(Lab lab, Forage soybean, Velvet bean, Proso, Brown top millet, Buckwheat)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	30-60-100	30-60-80	30-60-40	30-60-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	30-40-100	30-40-80	30-40-40	30-40-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	30-20-100	30-20-80	30-20-40	30-20-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	30-0-100	30-0-80	30-0-40	30-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

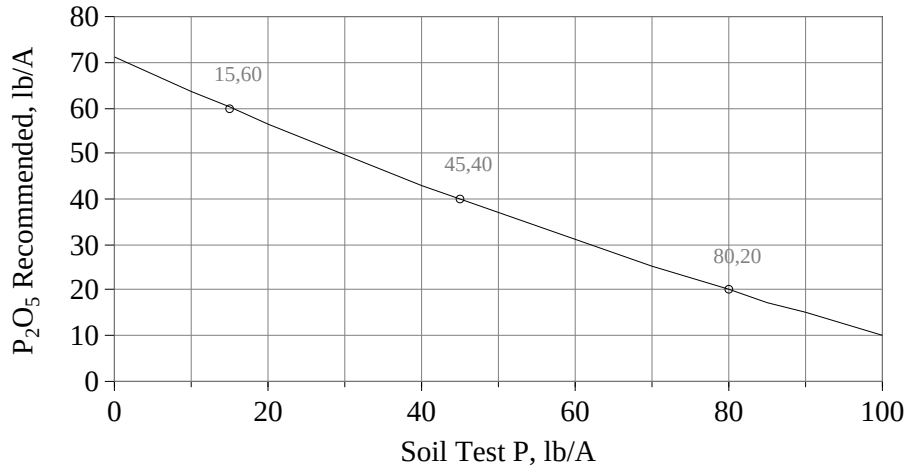
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	30 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Summer Deer Mix (Legumes and Grass) (*Code W03*)

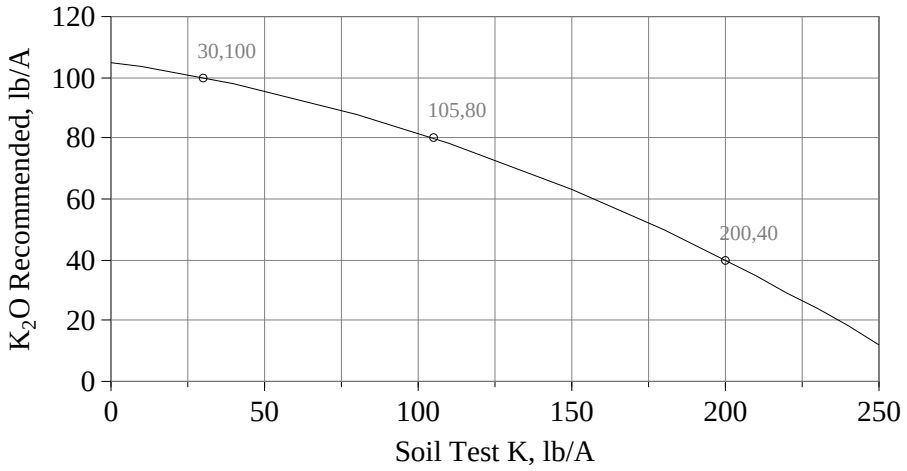
P Recommendations, Coastal Plain

$P_2O_5 = 71 - 0.755P + 0.00147P^2$



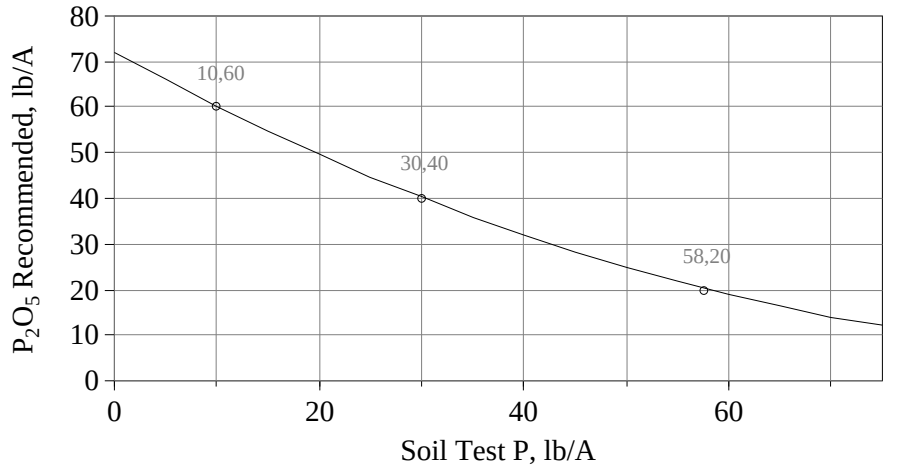
K Recommendations, Coastal Plain

$K_2O = 105 - 0.144K - 0.00091K^2$



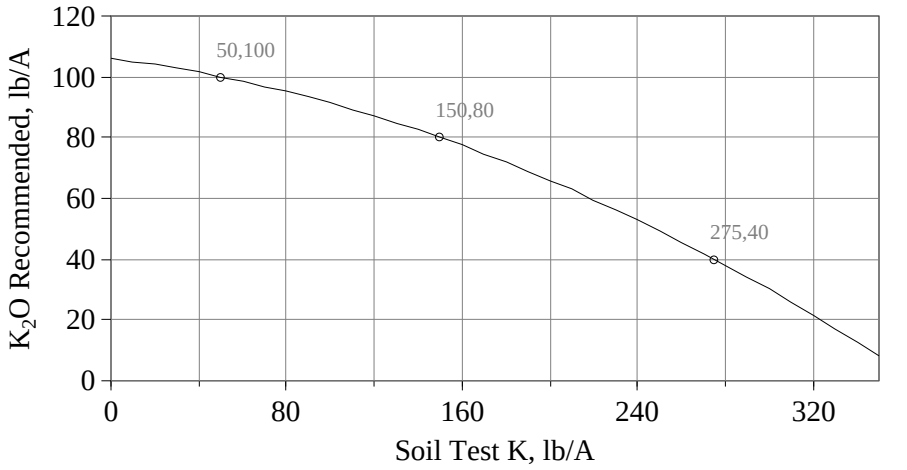
P Recommendations, Piedmont

$P_2O_5 = 72 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 106 - 0.094K - 0.00053K^2$



Wildlife Plots - Chufa (*Code* #191)

Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	40-40-40	40-40-20	40-40-0	40-40-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	40-20-40	40-20-20	40-20-0	40-20-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	40-0-40	40-0-20	40-0-0	40-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	40-0-40	40-0-20	40-0-0	40-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

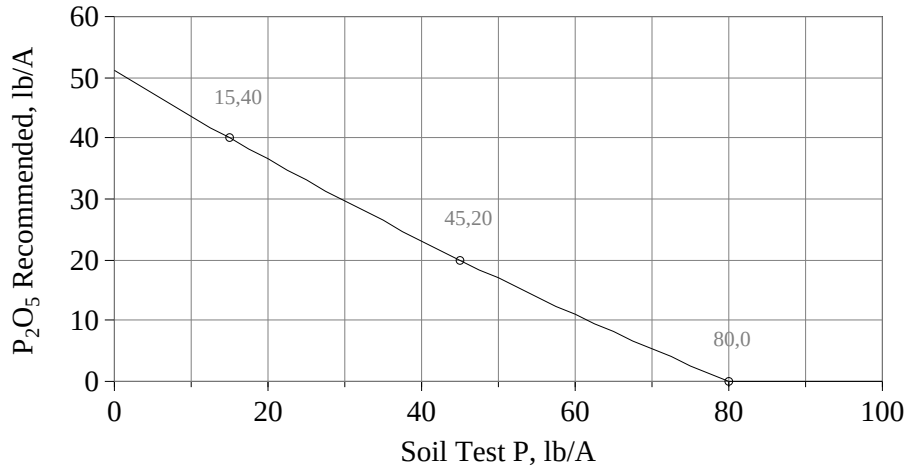
Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Nitrogen:	40 pounds nitrogen (N) per acre
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Wildlife Plots - Chufa (*Code 191*)

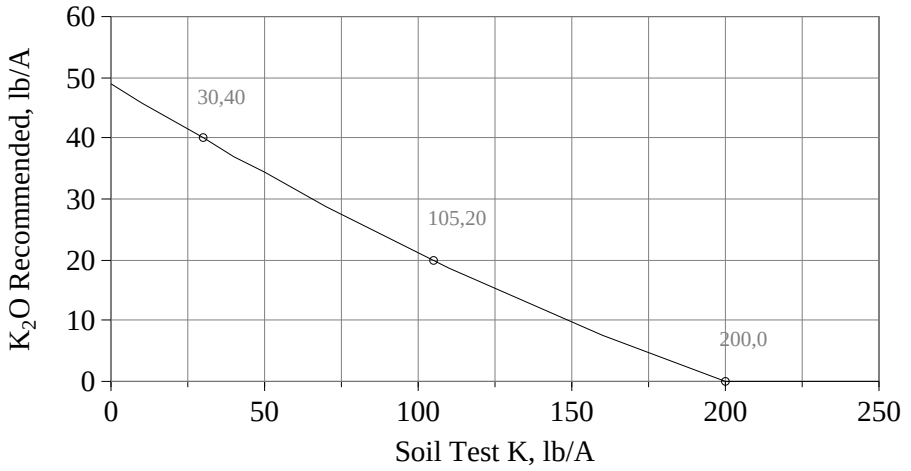
P Recommendations, Coastal Plain

$P_2O_5 = 51 - 0.755P + 0.00147P^2$



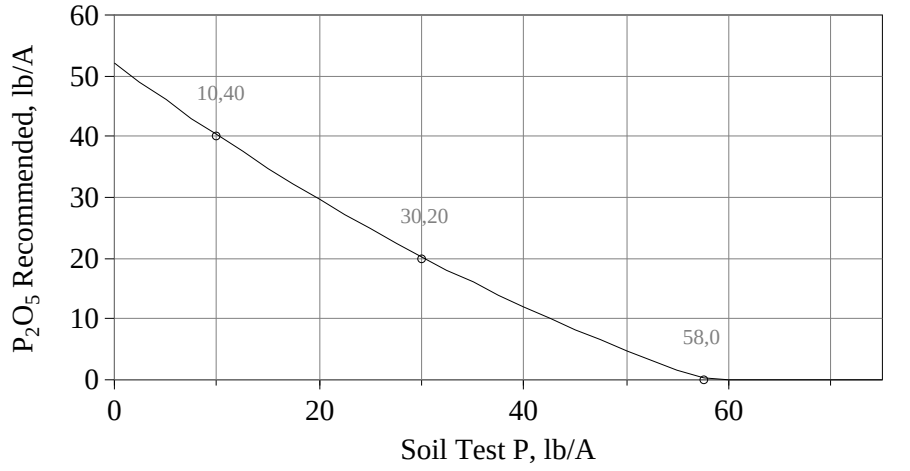
K Recommendations, Coastal Plain

$K_2O = 49 - 0.311K + 0.00033K^2$



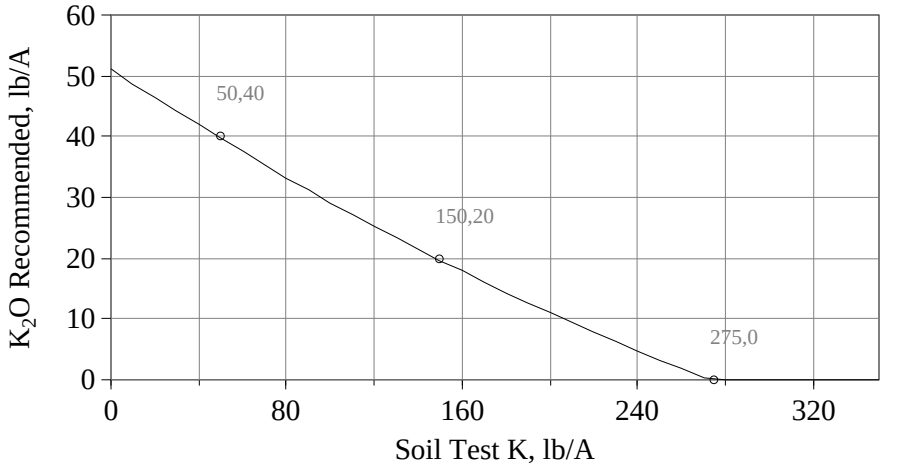
P Recommendations, Piedmont

$P_2O_5 = 52 - 1.230P + 0.00574P^2$



K Recommendations, Piedmont

$K_2O = 51 - 0.236K + 0.00018K^2$



Soil Test Rating	Potassium			
	Low K Coast: 0-60 lbs/A Pied: 0-100 lbs/A	**Medium K** Coast: 61-150 lbs/A Pied: 101-200 lbs/A	**High K** Coast: 151-250 lbs/A Pied: 201-350 lbs/A	**Very High K** Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	*Recommended Pounds N-$P_2 0_5$-$K_2 0$ per Acre*			
Low P Coast: 0-30 lbs/A Pied: 0-20 lbs/A	*-100-100	*-100-50	*-100-0	*-100-0
Medium P Coast: 31-60 lbs/A Pied: 21-40 lbs/A	*-50-100	*-50-50	*-50-0	*-50-0
High P Coast: 61-100 lbs/A Pied: 41-75 lbs/A	*-0-100	*-0-50	*-0-0	*-0-0
Very High P Coast: 100+ lbs/A Pied: 75+ lbs/A	*-0-100	*-0-50	*-0-0	*-0-0

Coast = Coastal Plain Pied = Piedmont, Mountain, and Limestone Valley

Recommendations:

Recommended pH:	6.0. If the pH is less than 6.0, see Lime Table C.
Magnesium:	If soil test Mg level is low and lime is recommended, use dolomitic limestone; if soil test Mg is low and lime is not recommended, apply 25 pounds of Mg/Acre.

Coastal Plain	Low: 0 - 30 lbs/acre	Medium: 31 - 60 lbs/acre	High: >60 lbs/acre
Piedmont	Low: 0 - 60 lbs/acre	Medium: 61 - 120 lbs/acre	High: >120 lbs/acre

Fact Sheet:

Temporary winter grazing - (small grains - rye, wheat, oats). These crops can utilize about 100 pounds of nitrogen per acre during the growing season. Split the nitrogen (N) application, applying 50 pounds nitrogen per acre at planting and 50 pounds nitrogen per acre in late winter if spring grazing is desired.

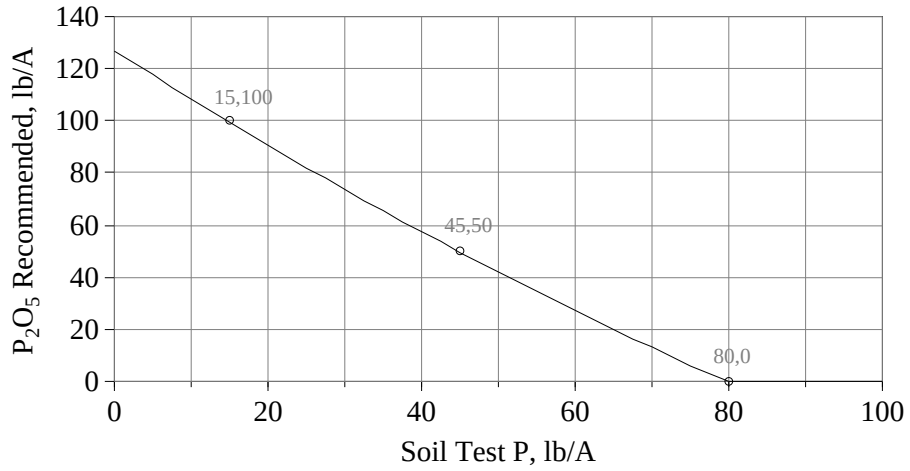
Temporary winter grazing - (ryegrass alone or small grain-ryegrass). Apply 50 pounds nitrogen per acre in the fall at planting, 50 pounds per acre in late winter, and 50 pounds per acre in early spring. Ryegrass has a longer than normal grazing season. The spring and winter application of nitrogen will help extend the grazing period if that is desired.

Temporary winter grazing - (annual clovers - crimson, arrowleaf with small grains or ryegrass). Apply 30 to 50 pounds nitrogen per acre at planting. Higher rates of nitrogen will stimulate rapid grass growth and shade out the clover. If the stand contains less than 40 to 50% clover, apply 50 pounds nitrogen per acre in late winter or early spring to extend the grazing period. If only clover or other legumes such as lespedeza or vetch are planted, inoculate the seed and omit the nitrogen fertilizer.

Wildlife Plots - Temporary Winter Grazing (*Code 190*)

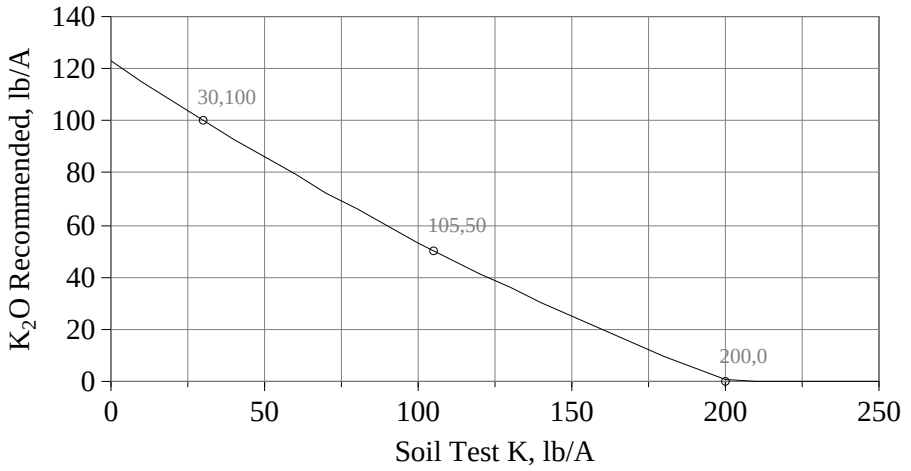
P Recommendations, Coastal Plain

$P_2O_5 = 127 - 1.886P + 0.00366P^2$



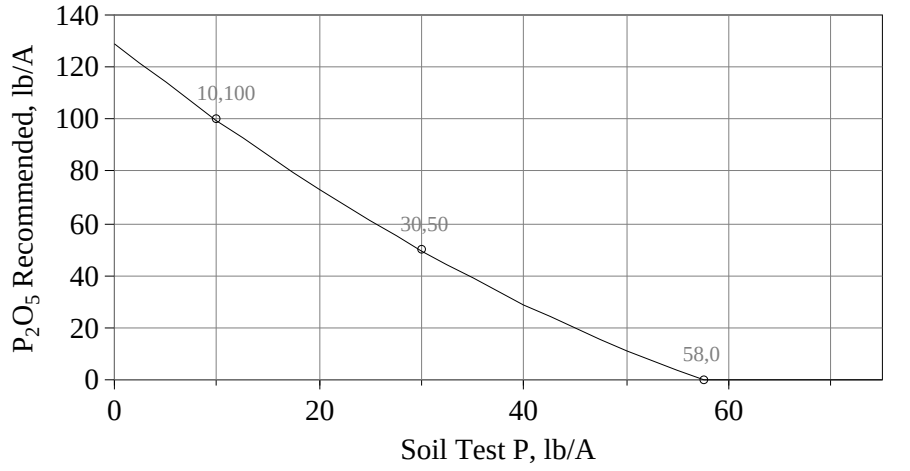
K Recommendations, Coastal Plain

$K_2O = 123 - 0.779K + 0.00083K^2$



P Recommendations, Piedmont

$P_2O_5 = 129 - 3.074P + 0.01435P^2$



K Recommendations, Piedmont

$K_2O = 128 - 0.588K + 0.00044K^2$