

Cotton - 750 lbs yield goal (Code #500)

| Soil Test Rating | Potassium | | | |
|--|--|--|---|---------------------------------------|
| | Low K | Medium K | High K | Very High K |
| | Coast: 0-70 lbs/A Pied: 0-120 lbs/A | Coast: 71-170 lbs/A Pied: 121-250 lbs/A | Coast: 171-275 lbs/A Pied: 251-400 lbs/A | Coast: 275+ lbs/A Pied: 400+ lbs/A |
| Phosphorus | <i>Recommended Pounds N-P₂O₅-K₂O per Acre</i> | | | |
| 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: | <p>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.</p> <table border="1" style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Coastal Plain</td> <td style="padding: 2px;">Low: 0 - 30 lbs/acre</td> <td style="padding: 2px;">Medium: 31 - 60 lbs/acre</td> <td style="padding: 2px;">High: >60 lbs/acre</td> </tr> <tr> <td style="padding: 2px;">Piedmont</td> <td style="padding: 2px;">Low: 0 - 60 lbs/acre</td> <td style="padding: 2px;">Medium: 61 - 120 lbs/acre</td> <td style="padding: 2px;">High: >120 lbs/acre</td> </tr> </table> | 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 |
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| Piedmont | Low: 0 - 60 lbs/acre | Medium: 61 - 120 lbs/acre | High: >120 lbs/acre | | | | | | |
| Sulfur: | Apply 10 pounds of sulfur (S) per acre. | | | | | | | | |
| Boron: | See boron (B) recommendations on Fact Sheet. | | | | | | | | |

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.

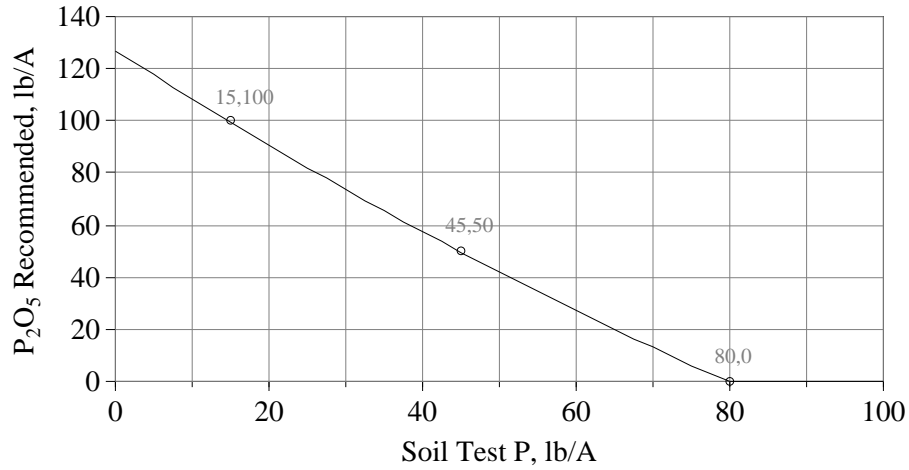
Petiole and Leaf Blade Analysis: Petiole analysis can be used to monitor nitrogen, phosphorus and potassium during the season for making in-season adjustments of these elements. Leaf blade analysis can also be used to determine the nutrient status of cotton prior to bloom or for troubleshooting anytime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

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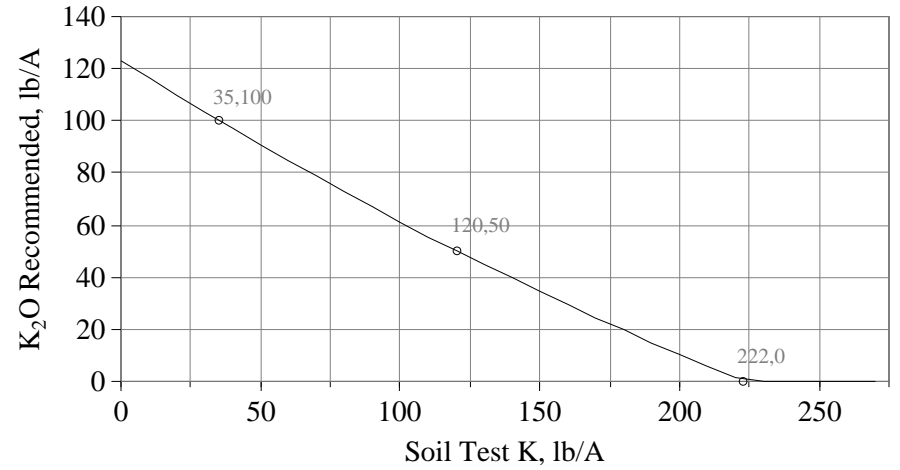
P Recommendations, Coastal Plain

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



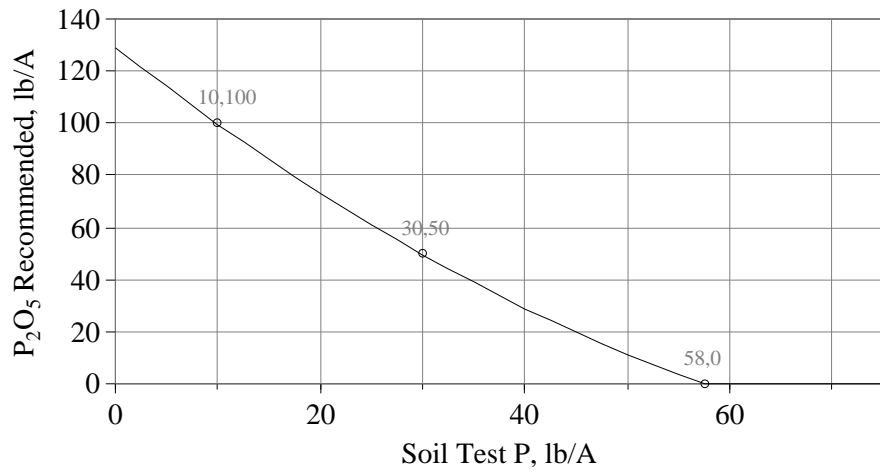
K Recommendations, Coastal Plain

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



P Recommendations, Piedmont

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



K Recommendations, Piedmont

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

