

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

Soil Test Rating	Potassium			
	Low K	Medium K	High K	Very High K
	Coast: 0-60 lbs/A Pied: 0-100 lbs/A	Coast: 61-150 lbs/A Pied: 101-200 lbs/A	Coast: 151-250 lbs/A Pied: 201-350 lbs/A	Coast: 250+ lbs/A Pied: 350+ lbs/A
Phosphorus	<i>Recommended Pounds N-P₂O₅-K₂O per Acre</i>			
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.								
	<table border="1"> <tr> <td>Coastal Plain</td> <td>Low: 0 - 30 lbs/acre</td> <td>Medium: 31 - 60 lbs/acre</td> <td>High: >60 lbs/acre</td> </tr> <tr> <td>Piedmont</td> <td>Low: 0 - 60 lbs/acre</td> <td>Medium: 61 - 120 lbs/acre</td> <td>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						

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).

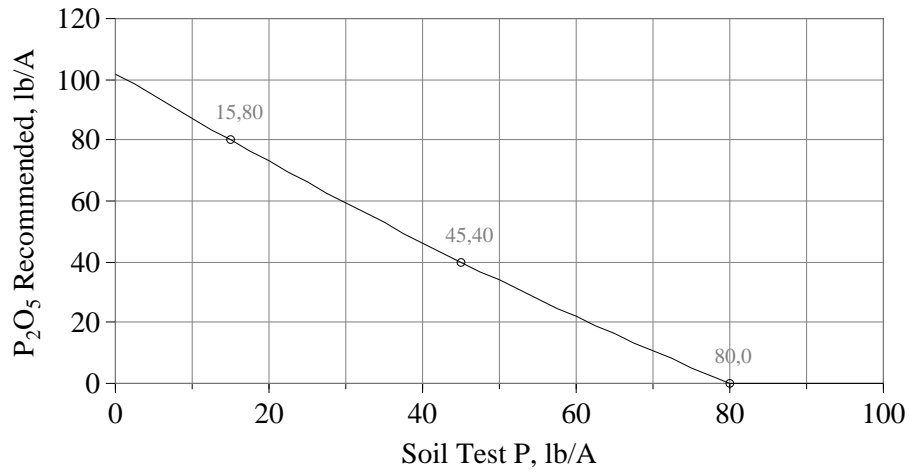
Switchgrass can be grazed if the manager carefully prevents grazing below heights of 8 inches. The N rate on grazed switchgrass pastures should be 30 - 40 lbs at green-up and after each subsequent grazing (if soil moisture is adequate).

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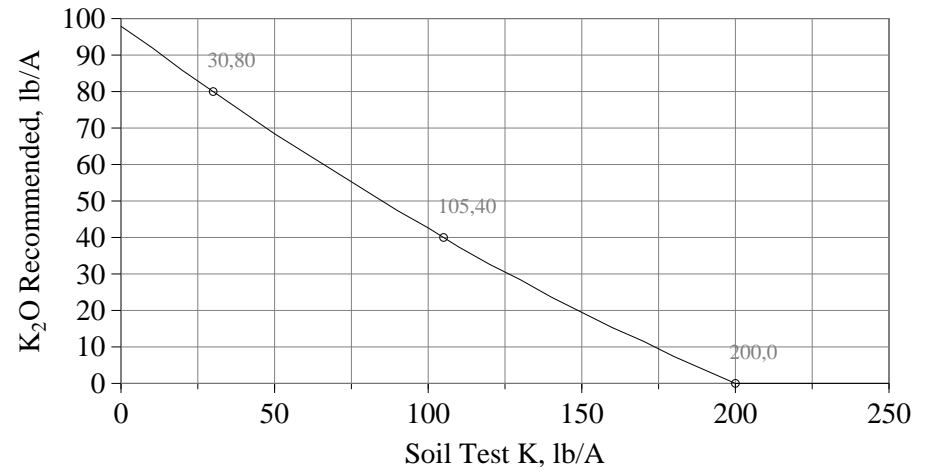
P Recommendations, Coastal Plain

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



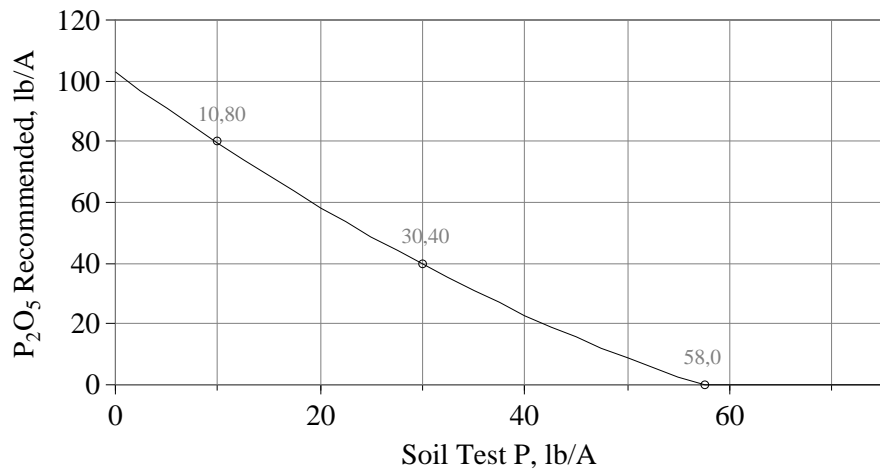
K Recommendations, Coastal Plain

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



P Recommendations, Piedmont

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



K Recommendations, Piedmont

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

