

**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 than 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/>.