

Decision-Making Aid for Loblolly and Slash Pine Mid-Rotation Fertilization

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Stand Criteria:

- Loblolly/slash pine stocking - 400 to 900 TPA (young stand) or 60-90 sq ft BA/ac (< 120 BA/ac)
- Best trees/best genes present on site?
- Hardwood stocking < 10% of BA/ac
- Fusiform rust incidence < 30%
- Live crown ratio (goes with stocking) >35% to 40%

Soils criteria:

- Drainage class - very poorly drained to excessively well drained (for flatwoods use CRIFF soil groups for P fertilization at planting)
- Soil water holding capacity (poor internal drainage or deep sands can present problems)
- Depth to bedrock, fragipan, or pan (highly eroded or shallow soils to bedrock are problems)
- Soil texture (% sand, silt, clay)
- Soil series/group classification

Landowner objectives/ cutting regime:

- Years to next thinning or final cut (ideal is 6-10 years)
- Owner finances (how many acres can they afford to fertilize, may need to prioritize stands for fertilization) income from thinning can be used to pay for fertilization

Diagnostic Tool Information:

- Leaf Area Index (LAI) -done in July-August, if < 3.0 then stand could use N (or N+P)
- Foliar test - if N or N and P less than 1.2% (N) and 0.10% (P) for loblolly pine and 0.8-1.2% (N) and 0.08-0.09% (P) for slash pine, then stand could use N or N and P
- Soil test -P - if P (using double acid extract or Mehlich I procedure) < 8-12 lb/ac, then stand could use P for both loblolly and slash pine



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