

**THE EFFECTS OF NITROGEN AND PHOSPHORUS FERTILIZER
ON A YOUNG LOBLOLLY PINE PLANTATION
ON LIGNITE MINE SPOIL IN EAST TEXAS**

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Five levels of nitrogen fertilizer combined with three levels of phosphorus fertilizer were tested in a two year-old loblolly pine plantation on a lignite mine spoil in East Texas. Growth parameters, foliar and spoil nitrogen and phosphorus concentrations were measured after two growing seasons.

Nitrogen increased diameter growth during the first year, and foliar nitrogen increased with increasing fertilizer rates for both years. Phosphorus increased height during the first year and over both years combined and also increased diameter during the second year and over both years combined. Foliar phosphorus was increased by nitrogen in the first year. Spoil phosphorus was increased by phosphorus fertilization in both years. Spoil nitrogen was not increased by the fertilizer in either year. Attempts to correlate Munsell colors to foliar contents failed.

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