

**NITROGEN AND BORON RATES FOR
MAXIMUM EFFICIENCY IN COTTON
PRODUCTION.**

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Abstract

Multiple studies across the U.S. cotton (*Gossypium hirsutum*) belt have shown boron and nitrogen to be essential nutrients for profitable cotton production. Four levels of nitrogen (N) (0, 30, 60 and 90 lb/acre) and four levels of boron (B) (0, 0.5, 1.0, and 2.0 lb/acre) were used on DPL-50 in a split-plot design with B subplot treatments within N whole plot treatments. The experiment was replicated three times. Nitrogen as sodium nitrate was side-dressed and boron as solubor foliar applied. Yield and quality parameters were measured for each treatment. Lint yields were increased ($P < 0.01$) by increased nitrogen rates. The increase in lint yield was 86, 335 and 423 lb/ for 30, 60, and 90 lb/acre N over the untreated control, respectively. Adding foliar boron up to 2.0 lb/A, however did not increase lint yield over the untreated control. Additional research is needed in order to fully understand the benefit of boron in N utilization by cotton plants.