Effect of Supplemental N and Planting Date on Soybean Growth and Yield. (S04-taylor164047-Oral)

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Abstract:

Optimum planting dates can often not be adhered to, or producers may choose to plant soybean (Glycine max L.) in a double crop system at a date later than recommended. Such planting dates usually reduce soybean yield, but yield losses may be mitigated with starter nitrogen (N). Field experiments were conducted in six Alabama environments to determine the effect of planting date and starter N rate on growth and yield of late-planted soybean. Two soybean cultivars (Kuell and Prichard) were planted at three week intervals from June to July in 2000 and 2001 in combination with N rates of 0, 25, 50, 75, and 100 kg/ha. Dry matter accumulation at the first reproductive stage(R1) increased as starter N rates increased. Total plant N concentrations at R1 also increased with increasing starter N suggesting there was uptake of starter N by the plants. Nodule weight and nodule count were adversely affected by addition of starter N as was expected. Addition of starter N also increased the incidence of lodging. Yield, plant height at R1 and other variables were analyzed but showed no statistically significant differences owing to addition of starter N, which is in contrast to previous studies where increases in these variables were observed.

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