Influence of Environment on Soybean Growth, Yield Components, and Yield. (C03-modali111733-Poster)

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Abstract:

Maximizing yield of soybean results from having an optimal total dry matter (TDM) at certain developmental periods that create proper combinations of various yield components. At present these relationships are not defined clearly. The study was aimed at determining optimal TDM by a certain growth stage for optimizing yield and to determine the interactions between TDM levels and yield components in determining final yield. Data were collected on TDM, yield components and yield collected from experiments conducted across several years that dealt with planting dates, row spacing, and stress. The results clearly indicated that the yield of soybean was most strongly influenced by TDM at R5 vs. other growth stages. The fact that pod and seed production were the most important yield components determining the final yield of soybean, and because they are determined shortly after the R5 stage, supported the hypothesis that TDMR5 was the most important parameter affecting yield. The two most important yield components showed strong cubic relationships with TDMR5. In conclusion, the environmental changes affect yield through effects on TDMR5 and the associated affects on yield components.

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Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 4:00-6:00 pm
Poster Board Number: 1218

Keywords:
soybean, growth dynamics, yield components, phenology