Yield Response of Valencia Peanut with different row orientations, Nitrogen Rates and Rhizobium Inoculum. (S06-puppala112903-Poster)

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Abstract:

Peanut grown in the southeast with twin row orientation has shown an increase in yield and grade over conventional single row. Peanut farmers in New Mexico do not use rhizobium inoculum at the time of planting, but do apply high rates of nitrogen fertilizer (300 to 350 kg ha-1). A study was conducted at the South Research Facility in 2001 to determine the pod yield of Valencia-C peanuts when planted with twin row orientation and at four different nitrogen and rhizobium treatments. The experimental design was a split plot with three replications. The main plot consisted of row pattern (single and twin) while the subplots consisted of four treatments of: control (C), nitrogen (N) at 200 kg ha-1, rhizobium (R) at recommended rate, and nitrogen plus rhizobium (NR). Pod yield with Twin row orientation averaged 4058 kg ha-1 or a 9% increase over single row planting (3735 kg ha-1). Among the four treatments tested, the combination of NR resulted in 22% increase in pod yield compared to C (3482 kg ha-1). Pod yield with just R was 15% higher compared with C but was not different than NR treatment. Applications of just N resulted in 11% increase in pod yield compared with the C. Twin rows with R may be the best treatment for highest pod yields.

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