THE USE OF PLANT MAPPING FOR EVALUATING STRUCTURE AND YIELD OF SOYBEAN PLANTS

Terry Keisling¹ and Paul Counce²

AUTHORS: ¹ Northeast Research and Extension Center, University of Arkansas, P.O. Box 48, Keiser, AR 72351; ²Rice Research and Extension Center, University of Arkansas, P.O. Box 351, Stuttgart, AR 72160. Corresponding author Terry Keisling, Email: tkeislin@comp.uark.edu. *REFERENCE:* J.E. Hook (ed.) *Proceedings of the 22nd Annual Southern Conservation Tillage Conference for Sustainable Agriculture*. Tifton, GA. 6-8 July 1999. Georgia Agriculture Experiment Station Special Publication 95. Athens, GA.

INTERPRETIVE SUMMARY

Many crop growth responses have been observed over the years. "Experience" is the knowledge obtained in working and observing the crop for years. Recently, the use of plant mapping in cotton has provided a means to document cotton growth responses. This has led to crop monitoring to follow the progress of the crop and identifying when unwanted growth patterns occur. This knowledge is subsequently used to manage the crop. In cotton, this technique has been so successful that it has essentially been adapted world wide. Few new cotton publications can be found where the technique is not used for some sort of crop development documentation.

Research Question

Would a general scheme for plant mapping be used with soybeans to aid in the interpretation and understanding of plant growth characteristics?

Several agronomic situations were mapped. They included planting in wheat stubble, growing the crop on shallow soil, lodging, cultivar growth habits, spacial population dynamics, row-spacing, and drought. The use of plant mapping techniques showed dramatic differences in plant growth responses. It appears that plant mapping will be a powerful analytical tool as well as a management tool for the soybean crop.

See this full paper and its tables and figures in the Reviewed Papers Section of this Proceedings.