## EFFECT OF NITROGEN APPLICATION RATE ON COTTON YIELD AND QUALITY Ruixiu Sui USDA-ARS Crop Production Systemes Research Unit Stoneville, MS Richard K. Byler USDA-ARS Cotton Ginning Research Unit Stoneville, MS Edward Barnes Cotton Incorporated Cary, NC

## Abstract

Integrated water and nutrient management practice for increasing cotton yield and fiber quality and minimizing environmental impact has been investigated. Cotton was planted in twenty experimental plots. Five nitrogen application rates were used as treatments and each treatment were replicated four times. Wireless sensor network was deployed for monitoring soil water content of the plots. Supplemental irrigation was made based on the measured soil water content. Cotton in each plot was harvested for yield, and the fiber quality was evaluated by AFIS and HVI tests. Effect of nitrogen application rate on cotton yield and fiber quality was analyzed. Detail procedures and results of this study will be presented.