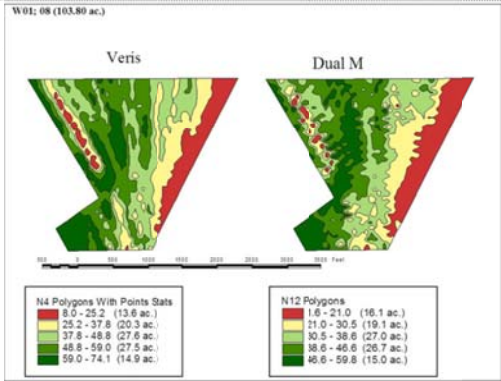


Site Specific Determination of In-Season Corn Nutrients and PH Variability Under Arkansas Conditions

Dharmendra Saraswat

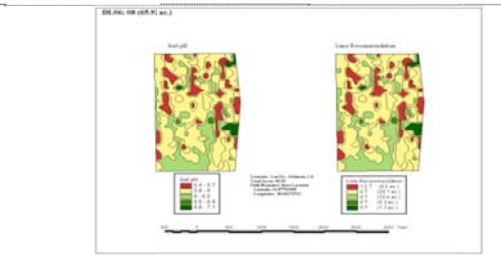
Comparative Performance Evaluation of EC Sensors

- Comparative performance evaluation of apparent Electrical Conductivity (EC_a) sensors showed similar trends in variability
- EC_a was found correlated with yield and soil moisture but not on a consistent basis
- It is one of the sensors that producers can rely on for site specifically determining causes of yield variability



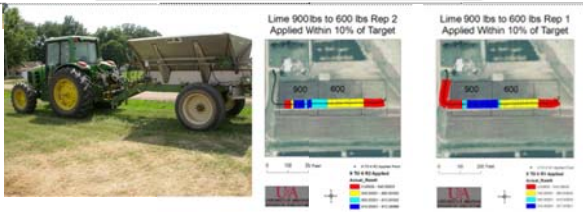
Soil pH and EC Sensor

- Field evaluation conducted in Lee, Jefferson, and Mississippi counties.
- Preliminary data suggest significant savings can be realized using the soil pH sensor technology



Variable Rate Fertilizer Spreader

- Variable Rate Spreader Test A high clearance spreader has been instrumented for applying dry fertilizer on variable rate basis.
- Optimum application of fertilizer is likely to help alleviate Gulf of Hypoxia issue
- Lab evaluation is undergoing
- The spreader will be field evaluated in 2012 season



Optical Sensing

- Three years of multi-location plot studies data being used to develop Arkansas N-algorithm
- Field testing of Arkansas N-algorithm to begin in 2012
- Producer's may be required to establish a N-rich strip for in-season N- management
- Field tests in grain Sorghum indicated approx. \$50/acre savings to producers on N-use compared to traditional approach.



Aerial Sensing

- Autonomous platform for Precision Agriculture (APPA) has been engineered to remotely obtain color and near infra-red images
- Comparative studies with Greenseeker to begin in 2012

