

# Cotton FIELD DAY



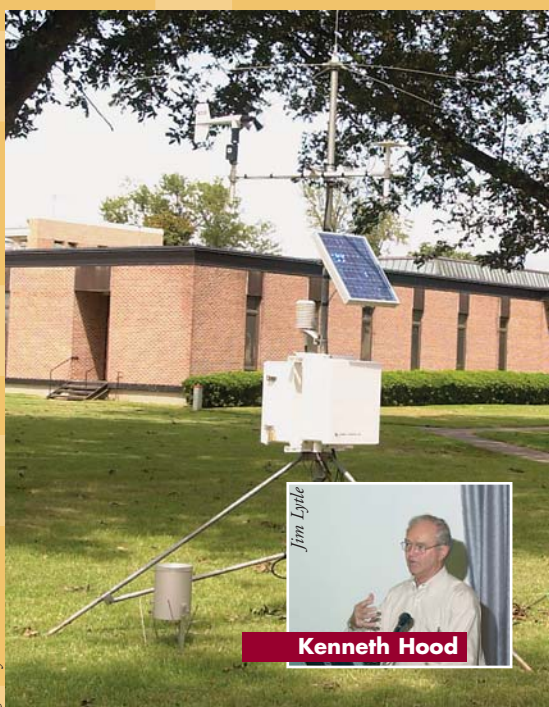
By Linda Breazeale

Overcast skies did not deter more than 200 visitors to the Delta Research and Extension Center in Stoneville during the Aug. 14 Cotton Field Day, the first of two information-packed days at the research station.

Growers, industry representatives, Extension agents and other agricultural experts toured nine stops on the station's cotton fields. Presenters included MAFES researchers, Extension specialists, and representatives of U.S. Department of Agriculture's Agricultural Research Service.

*Cotton Field Day presentations included:*

- **Management of nitrogen and potassium in cotton/corn rotations.** The presenter was Wayne Ebelhar, MAFES agronomist.
- **Irrigation timing.** The presenter was Lyle Pringle, MAFES associate agricultural engineer.
- **Cotton disease and nematode control.** Gabe Sciumbato, MAFES plant pathologist presented research findings, including the new challenges coming from reniform nematodes.
- **Variety trials and developments in DREC lines.** John Creech, MAFES assistant agronomist and plant breeder, presented.
- **Developing cotton lines with natural pest resistance.** Jodi Scheffler, a research geneticist with USDA/ARS, presented the information.
- **Variety improvement using naked (fuzzless) cotton.** Rick Turley, USDA/ARS plant physiologist, provided the details.
- **Evaluation of row patterns: Solid, skip row and wide.** Steve Nichols, a postdoctoral associate with MAFES, explained that stands in 7.5-inch rows were not uniform like the 10- to 15-inch rows. Researchers also reviewed variety performance on various row patterns.
- **Evaluation of defoliants and various weed control programs.** Charles Snipes, MAFES plant physiologist, addressed the decision-making process and the challenges of controlling micronaire with defoliant use.
- **Management of cotton insects; Precision insecticide applications.** Aubrey Harris, MAFES entomologist, presented research findings on pests such as the tarnished plant bugs, cotton aphids, tobacco budworm and bollworms.



## Weather forum assesses impact of **SCAN** systems

By Linda Breazeale

At the conclusion of the Cotton Field Day, Mississippi farmers, agricultural scientists and consultants learned about the latest in weather technology during an afternoon forum on the new weather station network spreading across the country.

The Soil Climate Analysis Network, or SCAN, weather stations produce useful information for thousands of people from farmers to the Secretary of Agriculture. The U.S. Department of Agriculture-Natural Resources Conservation Service, National Water and Climate Center operates the comprehensive, nationwide soil-climate monitoring network.

Garry Schaefer, the leader of the Water and Climate Monitoring Branch in Portland, Ore., explained that SCAN sys-

# Rice/Soybean FIELD DAY



Jim Lytle

By Linda Breazeale

Goosebumps at a Rice and Soybean Field Day in August? Not quite, but more than 200 visitors to the Delta Research and Extension Center in Stoneville were treated to one of the coolest Cotton Field Days in recent history as temperatures did not rise above 87 degrees on Aug. 15.

Growers, industry representatives, Extension agents and other agricultural experts toured nine stops on the station's rice and soybean fields.

*Rice/Soybean Field Day presentations included:*

- **Evaluation of rice breeding lines.** Dwight Kanter, MAFES agronomist, provided highlights from investigations of 100 lines at seven different locations.
- **Evaluation of various maturity groups in soybean/wheat double crop systems.** Presented by Lingxiao Zhang, MAFES assistant agronomist.
- **Soybean genetics research focused on alleviation of heat-induced yield loss; isolation of the long-juvenile gene and variety development.** USDA/ARS geneticists presenting information included Jeff Ray, Rusty Smith and Bob Paris.
- **Fertility and production practices in problem areas in rice.** Joe Street, Extension rice specialist, and Tim Walker, postdoctoral associate with MAFES, explained that the primary questions for 2002 have been concerning fertility issues. They encourage growers to address fertility before a crisis occurs. As higher-yielding varieties become more prevalent, more nutrients will be leaving the soil with the grain harvested.
- **Rice weed control.** Mark Kurtz, MAFES plant physiologist, explained current challenges and the most effective control methods.
- **Ultra-early soybean varieties and weed control strategies for early-planted soybeans.** Dan Poston, Extension soybean specialist/MAFES assistant weed scientist, and Matt Griffin, MSU graduate research assistant, addressed strategies for planting dates, evaluation of seeding rates and concerns for Roundup-Ready resistance.
- **Rice fertility with emphasis on breeding lines.** Wayne Ebelhar, MAFES agronomist, described 2002 as the weediest year ever. The Rice Promotion Board and Rice Producers of Mississippi funded his research on rice fertility.
- **MGII, MGIV and MGVI soybeans in irrigated and nonirrigated environments; causes of soybean seed decay.** USDA/ARS researchers Larry Heatherly and Alemu Mengistu provided an overview of their variety research.
- **Management of rice and soybean diseases and insects.** Gabe Sciumbato, MAFES plant pathologist, and Jim Robbins, MAFES assistant entomologist, explained recent challenges and control methods.
- **Soybean variety trials.** Bernard White, MAFES variety evaluations manager, gave an overview of variety research.

tems measure rainfall, air temperature, relative humidity, wind speed and direction, solar radiation, five depths of soil moisture and soil temperature, barometric pressure, and snow depth and water content. SCAN uses meteor burst technology to get access to information from a location "near real time." In August, there were 69 SCAN stations in 33 states.

Grower Kenneth Hood of Gunnison used a SCAN station on his farm in 2002. The information helps farmers make wise planting and risk management decisions.

"I can go to my computer and download information from the SCAN on my farm or any of the others around the state," Hood said. "The information provided is much more complex than on the Gossym/Comax (cotton crop simulation) systems."

Developers hope SCAN stations eventually will improve the ability to forecast weather, the most influential environmental variable in agriculture.

Bart Freeland was serving as a MAFES research associate at the time of the forum. He explained that MSU is responsible for seven of the state's 10 sites, which entails maintenance and repair of the systems and general upkeep. SCAN systems cost between \$12,000 and \$15,000 per site to set up and will last more than a decade.

"Our goal is to have one SCAN in each Mississippi county to be used to gather agricultural data for management decisions and future research," Freeland said.

MSU's Delta Research and Extension Center in Stoneville serves as one of four "master receiving stations" in the country, which resembles a data gathering hub for the national network.

Freeland, who now works for USDA's World Agricultural Outlook Board, encouraged farmers to visit DREC's website to access the SCAN data at <http://www.deltaweather.msstate.edu>.