

Conference Focuses On Arkansas Soybean Research



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STUTT GART, ARK.

The Arkansas Soybean Promotion Board is funding more than 35 research projects aimed at increasing or protecting crop yields for Arkansas growers, said Lanny Ashlock, assistant vice president for special programs for the University of Arkansas System Division of Agriculture and the Arkansas & Mid-South Soybean Promotion Board Coordinator.

Arkansas soybean growers, agricultural consultants and others heard summaries of just a handful of those Division of Agriculture studies Dec. 13 during the 2011 Arkansas Soybean Research Conference held at the Grand Prairie Center at Stuttgart. The presented projects in crop management, pest control, soil fertility, soybean breeding and other fields are all aimed at maximizing yields, Ashlock said.

Larry Purcell, professor of crop, soil and environmental sciences and holder of the Alzheimer Chair for Soybean Research, described his work on soybean stress effects on yield. Heat and drought stress during certain stages of plant development, he said, reduce the amount of sugar produced by photosynthesis that the plants use to produce seed. These stresses increase the number of flowers and seed pods that abort before maturity, reducing yield.

Gus Lorenz, professor of entomology and integrated pest management coordinator, said pests, including corn earworm, tobacco budworm and yellow striped armyworms can be very destructive and very difficult to control, especially when weather causes delayed planting. He emphasized the need for consistent scouting of fields to detect the

(Top) Ray Dardenne, a farmer and agricultural consultant from Stuttgart, left, and Brad Koen, a consultant from DeWitt, discuss soil fertility issues with Nathan Slaton, Professor of Crop, Soil and Environmental Sciences and Director of Soil Testing during a break at the 2011 Arkansas Soybean Research Conference.

(Bottom) Extension Soybean Specialist Jeremy Ross welcomes participants to the 2011 Arkansas Soybean Research Conference at the Grand Prairie Center in Stuttgart.



pests and attention to the timing of insecticide applications.

Nathan Slaton, professor of crop, soil and environmental sciences and director of soil testing, described soil testing and fertilization practices for high yielding soybeans. He said phosphorus and potassium are both important fertilizers for soybeans and emphasized that the importance of potassium in particular is often underrated. He also said research has indicated that poultry litter is a viable alternative source of both phosphorus and potassium fertilizer. He recommended that growers choosing poultry litter make sure to have it analyzed in order to know precisely the nutrient content of the litter and to ensure uniform distribution throughout soybean fields.

Pengyin Chen, professor of crop, soil and environmental sciences and soybean breeder, gave an overview of the Division of Agriculture breeding program. He said the division has re-

leased six improved soybean varieties since 2003 and a seventh, UA5612, a high-yielding maturity group 5.6 soybean, is expected to be released in 2012. In addition, he said, eight improved soybean germplasm lines released since 2007 feature improvements in protein content, drought tolerance and genetic diversity. The soybean breeding program includes work on conventional, Roundup Ready and food grade/specialty soybeans and on germplasm enhancement. Improved yield is the top priority, Chen said, and other improvements sought include drought and flood tolerance, seed quality, disease resistance and other traits.

Kristofor Brye, professor of crop, soil and environmental sciences, described his research on the long-term effects of alternative management practices in a wheat-soybean double-crop production system. In a study that began in 2001, Brye focused on management of wheat residue, including burning stubble and both conventional tillage and no tillage systems, and water management for irrigated and dry-land soybeans. The study also takes into account environmental factors, including the emission of carbon dioxide from tilled soil, and economic impact.

The Arkansas Soybean Promotion Board invests in research and other programs aimed at improving profitability of soybean growers, said

chairman Todd Allen of West Memphis.

The board's "100 Bushel Challenge," with a \$50,000 prize, has yet to be met, Allen said, but for 2011, the board initiated its "Grow for the Green" contest. Farmers with the top four highest yields for soybeans in single-crop fields will win cash prizes of \$10,000, \$7,500, \$5,000 and \$2,500 and growers with the top three yields in double-cropped fields will win cash prizes of \$7,500, \$5,000 and \$2,500.

"The Soybean Promotion Board is making this investment to see what works and to share it with other growers," Allen said.

Participating growers have submitted their entries and the winners will be announced in the coming weeks.

The board also invests in educating future crop scientists, Allen said, offering fellowships for two Ph.D and two M.S. students in Dale Bumpers College of Agricultural, Food and Life Sciences at the University of Arkansas. Δ