

Cotton Production . . .

Innovations Must Sustain Production



Story and Photos Robert H. Wells

Cotton producers need technological innovations to sustain profitable production in the United States, and a

recent study found Roundup Ready cotton, biotechnology and boll weevil eradication to be important contributors.

Mississippi State University collaborated with researchers from North Carolina State University in Raleigh on the report that has a survey of cotton growers from west Texas, Delta states and the Southeast. It also includes interviews with cotton experts at the Beltwide Cotton Conference in January 2007.

"Drought-resistant cotton, improved cotton varieties, and expanded weed and insect control in the form of biotech traits are the most important future innovations in the minds of the surveyed growers," the report states.

The report shows the most important innovations in the history of U.S. cotton and suggests innovations for the future.

Michele Marra, an NCSU professor and the report's lead author, said the information is relevant to the U.S. cotton industry's current state.

"Because the cotton innovations named by those surveyed are, for the most part, designed to reduce production costs, they are particularly important in times of low prices," Marra said. "Also, this information coming from an unbiased third party could help guide the direction of future funds for cotton research in many organizations and private firms."

Steve Martin, the report's second author and an agricultural economist with the MSU Extension Service at the Delta Research and Extension Center in Stoneville, said a point of interest is the high ranking respondents gave boll weevil eradication. Eradication is a U.S. Department of Agriculture program started in the 1970s that successfully eliminated the boll weevil insect as a threat to cotton production in many states.

"It's been a major event in the last two decades," Martin said. "Even though there were concerns initially about the cost, producers feel like boll weevil eradication has been a good investment and something that needs to be maintained."

Martin said respondents rarely cited global positioning system technology high on their lists of major cotton innovations.

"If we do this survey again in another 10 years, that response might change," Martin said. "The GPS technology is really just now beginning to be accepted in cotton."

Companies leading in cotton innovations are Monsanto, Bayer, Delta and Pine Land, and Stoneville Pedigreed Seed, according to the report's survey.

"A few of the experts interviewed at the 2007 Beltwide Cotton Conference mentioned specifically that they think a combination of Monsanto Company's newest biotech traits with the Delta and Pine Land Company's best varieties would enhance Southern cotton growers' yields substantially," the report states.

The U.S. Department of Justice approved a merger of the two companies on May 31, with the condition that divestitures take place. Monsanto owns the rights to the highly popular Roundup Ready and Bollgard biotechnology traits, while Delta and Pine Land offers popular seed varieties.

U.S. cotton yields increased at a faster rate once genetically modified, or transgenic, cotton arrived in the mid-1990s. Cotton growers planted transgenic cotton varieties on 83 percent of U.S. cotton acres in 2006.

Cotton producer Bernie Jordan, who farms in Yazoo and Humphreys counties, said he would like to have more innovations in variable-rate technology.

"I think we need to refine variable-rate fertilizer applications as much as they can be refined because all of our fertilizer products have escalated almost 100 percent in cost in the last year," Jordan said.

"There has been a lot of work done with variable-rate lime, potash and phosphate, but I think we need to concentrate on variable-rate nitrogen because that is getting to be one of our highest inputs right now," he said.

Jordan has farmed cotton for more than 27 years and provided his opinions separately from the researchers' report.

"Important Innovations in Cotton Production: An Assessment by U.S. Cotton Growers and Other Experts" is available online at www.cipm.info/cipmpubs/marra_cotton07.pdf.

