Fiber Quality Of New Upland Cotton Variety
'Off The Charts'

FAYETTEVILLE, ARK.

The new UA48 cotton variety developed by the University of Arkansas System Division of Agriculture has set a new standard for fiber quality of upland cotton, the type grown in the Midsouth and South, according to reports from farmers and the StaplCotn marketing cooperative.

Jody Nail, a Prairie County farmer, said the UA48 cotton he delivered to the StaplCotn cooperative had a staple of 41. "The chart only goes to 37. They thought it was a mistake and retested it. It was literally off the charts."

A staple length of 41 means lint fibers were 1.28 inches long. Normally, a rating of 36 (1.125 inches) is considered excellent for the upland cotton grown in the Midsouth, said Frederick Barrier, vice president for domestic sales with the StaplCotn cooperative in Greenwood, Miss., which markets most of the cotton grown in

seed in recent decades. They normally contract with private seed companies that purchase rights to a breeding line. However, at the urging of several growers, the Division sold about 1,150 fifty-pound bags of UA48 seed for planting in 2011 while pursuing a licensure agreement. Texas based Americot, Inc., bought the rights and is marketing seed as "AM UA48," a non-transgenic conventional variety, for planting in 2012.

Tom Barber, the Division's extension cotton specialist, said UA48 yield reports from Arkansas growers varied, but many reported excellent yields. The seed sold in 2011 was from cotton grown in a single field in Texas, and it had a relatively low germination rate, which required a higher seeding rate, but the problem was not variety related, he said.

Americot general manager Terry Campbell said the seed company will assure a high ger-

Cotton breeder Fred Bourland checks a "cross" made to combine desired genetic traits in a research plot at the Northeast Research and Extension Center at Keiser. His UA48 variety released in 2011 is widely considered the new standard for fiber quality in upland cotton.

Arkansas.

Nail and other growers are hoping to receive a premium over the commodity market price to reward them for the superior fiber quality of their UA48 cotton. Barrier said StaplCotn is working on it.

"It is a very exciting product. You've got a bale (of cotton) here that exceeds anything we have had in the past," Barrier said. UA48 cotton delivered to StaplCotn also posted very high scores for strength and uniformity of fiber length, Barrier said.

Barrier said he is optimistic about obtaining a price premium for growers, but he could not predict how much the premium will be until he identifies buyers for what he considers a unique product that exceeds current quality standards for upland cotton but is not Pima, the generic name for extra-long-staple cotton grown in California and Arizona.

"I think we can compete with California cotton," Barrier said. "I will market the heck out of this, but we don't have enough (from the 2011 crop)," he added. "You have got to find your customers for this product and develop the market."

Joe Townsend, a crop consultant in Lula, Miss., said one of his clients picked a very high yield of UA48 cotton on 540 acres, and it had a staple length of 40. The grower does his own marketing and is pursuing a lead on a California buyer who is said to be in the market for superior quality upland cotton, Townsend said.

Fred Bourland, the Division's cotton breeder who is also director of the Northeast Research and Extension Center at Keiser, developed the UA48 variety, and he has other breeding lines with similar genetics for exceptional fiber quality, high yield and early maturity.

In addition to a staple length of 41, UA48 fiber from Bourland's test plots over several years had a "very high" strength rating of over 35 g/tex; a "base range" micronaire of 4.8, which relates to weight and fineness of the fiber; and a "very high" length uniformity of 87, which relates to the ratio of long to short fibers.

The Division of Agriculture and other public breeding programs have not marketed cotton

mination rate for the AM UA48 seed it markets for planting in 2012. "We will have a limited supply, and our priority is to service our Arkansas customers with top quality planting seed," he said.

Pima cotton grown in western states and other semi-arid or arid regions, where conditions are ideal for cotton production, is a different species than upland cotton and does not yield well in the Midsouth, Bourland said. Pima cotton must have a staple length of 1.375 inches or longer to meet the standards of Supima, the promotional organization for Pima cotton growers.

Although UA 48 cotton does not meet the length standard of Supima, it produces a noticeably superior yarn and fabric compared to some other upland cottons, said David Clapp, director of fiber processing for Cotton Incorporated, a cotton research and promotion organization based in Cary, N.C.

Bourland said UA48 typically does meet the length standard of 1.26 inches (40 staple) for extra-long-staple upland cotton set by Cotton Incorporated.

Clapp said Cotton Incorporated is acquiring several bales of UA 48 cotton to spin into yarn and make fabric for further research and development.

Fabric made from the breeding line later named UA48, which was grown in a performance test in Texas, exhibited "an excellent hand," which is a term that relates to the smoothness and softness of fabric, Clapp said, as well as an excellent appearance.

Cotton Incorporated wants to develop a thorough understanding of UA48 properties at the fiber, yarn and fabric levels, Clapp said. A major priority of the organization is to encourage plant breeding and crop management practices to increase the overall quality of upland cotton and returns to the producer, he said.

Cotton Incorporated provides funding to support breeding programs and other research across the Cotton Belt. Bourland said the organization has provided extensive resources for performance and fiber quality testing of his cotton breeding lines. Δ