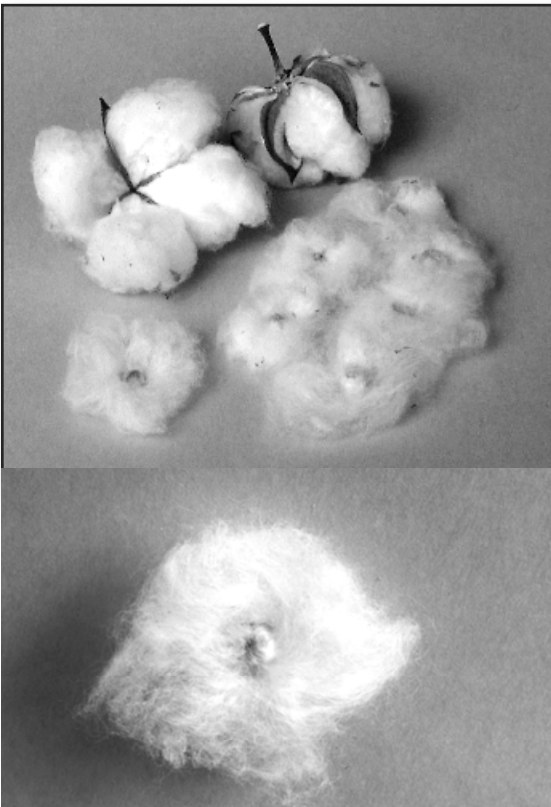
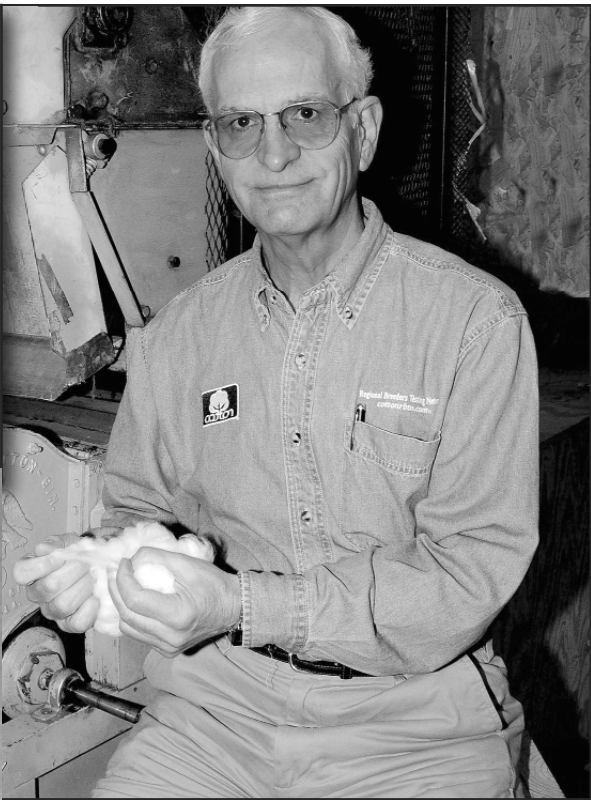


New Arkansas Division Of Agriculture Cotton Variety Exceeds Fiber Quality Expectations



A cotton boll has four or five locks, each containing a number of seeds. Fibers attached to each seed are pulled from the seed during ginning. The length of fibers from the new UA222 cotton variety is exceeded only by UA48 among upland cotton varieties grown in the Mid-South.



Cotton breeder Fred Bourland is pictured with an antique Eagle Cotton Gin still used on occasion to gin small samples of cotton from his research plots at the University of Arkansas System Division of Agriculture's Northeast Research and Extension Center at Keiser.

FAYETTEVILLE, ARK.

The University of Arkansas System Division of Agriculture has released a new cotton variety that exceeds current quality expectations for upland cotton. It is the second variety in the last three years from the Arkansas breeding program that raises the bar for cotton fiber quality.

The Division of Agriculture has licensed Seed Sources Genetics in Bishop, Texas, to produce and market non-transgenic seed of the variety, which was released as UA222. The company will plant seed in 2012 to increase the supply for possible limited availability to farmers in 2013.

UA222 is exceeded in upland cotton fiber quality only by the UA48 variety released by the Division of Agriculture in 2010, said Fred Bourland, cotton breeder and director of the Division's Northeast Research and Extension Center at Keiser.

UA48 was licensed to the Texas based Americot seed company, and seed is available as the non-transgenic variety, AM UA48, for planting in 2012.

"We are working to improve the fiber quality of the cotton grown in Arkansas and the Mid-South," Bourland said. A combination of genetic traits such as high yield, exceptional quality, disease resistance and early maturity in one variety is not easily achieved, he said.

"Design and use of innovative testing and selection methods in our breeding program has enhanced our ability to screen germplasm for combinations of traits, including high yields and excellent quality," Bourland said.

Both UA222 and AM UA48 varieties have yield potential, disease resistance and early maturity that are competitive with other commercial varieties, based on performance test data, Bourland said. He added that UA222 stands out as "broadly adapted to contrasting growing conditions," based on test results.

Performance data on UA222 are from field tests at Division locations at Keiser, Judd Hill, Marianna and Rohwer in eastern Arkansas and at 14 locations in the Regional Breeder Testing Network from Virginia to Arizona.

"The test results give me a lot of confidence that this variety is well adapted across growing environments in Arkansas and other Cotton Belt states," Bourland said.

The high yield potential of UA222 is associated with a high "lint index," or the amount of lint

(fibers) per seed, rather than the number of seeds per area, Bourland said. A high lint index is a significant genetic trait that he believes is associated with increased yield stability over a range of environments.

The Division of Agriculture sold a limited quantity of UA48 seed for planting in 2011 before it was licensed to Americot. Farmers and buyers reported that staple length – a measure of fiber quality – of the UA48 cotton they harvested in 2011 was "off the charts." Staple lengths of 40 and 41 were reported for UA48. The highest staple length on the chart used by the largest broker for Mid-South cotton was 37, and a staple length of 36 was considered exceptional.

A staple length of 39 has been documented for UA222 cotton grown in field tests, Bourland said.

Longer staple length is associated with a smoother, more comfortable feel of cotton fiber. Staple length is the average length of single fibers expressed in 32nds of an inch. Bourland said UA48 fibers are consistently about 1.28 inches, or 41 thirty-seconds.

The standard for "extra-long-staple" upland cotton is a staple length of 40, as set by Cotton Incorporated, the promotional organization for upland cotton.

Cotton with the longest fiber is Pima cotton grown in western states and other semi-arid or arid regions, where conditions are ideal for cotton production. Pima is a different species than upland cotton and does not yield well in the Mid-South, Bourland said. Supima, the promotional organization for Pima cotton, has a standard of a 44 staple length for extra-long-staple Pima cotton.

In addition to exceptional staple length, UA222 also scored well in other quality measurements of micronaire, length uniformity and elongation. It has a low micronaire, which relates to weight and fineness of the fiber. A low micronaire is highly desirable since Delta cottons are vulnerable to price discounts due to high micronaire, Bourland said.

Bourland said producer and industry support for his breeding program through Cotton Incorporated has been instrumental in development of his breeding program. The organization supports plant breeding and crop management practices to increase the overall quality of upland cotton and returns to producers.



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