

**AUSTRALIAN VARIETIES IN THE USA
BENEFITS AND RESULTS TO DATE**

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FiberMax™ Varieties to Be Marketed By AgrEvo®

Abstract

AgrEvo Cotton Seed International™ (ACSI) announces the releases of five new picker type cottons under the Brand name FiberMax™. These five varieties are selections from the CSIRO (Commonwealth Scientific and Industrial Research Organisation) breeding program. Over the past two seasons these varieties have been selected from twenty-eight introductions as having superior yield and fiber quality. Performance tests in 1996 (fifteen) and 1997 (more than seventy) have highlighted the yield and fiber quality of these varieties. Two of the varieties have okra leaf and three have normal leaf shape. All are smooth leaf varieties.

These FiberMax™ varieties are being offered for sale through AgrEvo®.

Introduction

FiberMax™ cotton varieties are high yielding, high quality lines bred in Australia by the CSIRO (Australian Government) program. In 1997 cotton varieties from this breeding program occupy 92% of the Australian Market, which has a reputation for high yield and high quality worldwide. The CSIRO breeding program in Australia has successfully bred commercial varieties with novel traits such as okra leaf shape, frego bract, glabrous etc. These novel traits have proven to be of enormous benefit to commercial growers when in high yielding, high quality varieties.

Sister lines of the current commercial Australian varieties have been trialed in the USA for a number of years but quite intensely for the past two seasons with excellent results in both yield and quality.

Material and Methods

In the 1996 season, FiberMax™ varieties were tested at fifteen sites and in the second season (1997); they were tested at more than seventy sites. All sites were with the Co-operative Extension or University system within each testing State to ensure reliability of the data. The main

focus of this testing was the Mid South and the Southeast, however, tests have also included sites in Texas, Arizona and California.

All trials were conducted by the University system or by Co-operative Extension. Researchers in the USDA have conducted additional evaluations. Yield and fiber quality was determined in all the trials.

FiberMax™ 989

FiberMax™ 989 is a mid season variety that has been tested in the USA as IF1003. It is a smooth leaf variety with a normal leaf shape. The variety has shown that it offers high yield and excellent fiber quality under a range of conditions. The variety has high tolerance to Verticillium Wilt and preliminary studies indicate some tolerance to Fusarium Wilt. It has a distinctive appearance due to its compact growth, dark green colour and large bolls set in a semi-cluster configuration on short fruiting branches. The variety has about 4300 seeds per pound with excellent seedling vigour.

FiberMax™ 832

FiberMax™ 832 is a mid season variety that has been tested in the USA as IF1006. It is a smooth leaf variety with an okra leaf shape. This variety combines the benefits of the okra leaf with good tolerance to Verticillium Wilt and some tolerance to Fusarium Wilt. The variety has proven to be very adaptable and has given good performance even under dryland conditions. The okra leaf offers a high degree of drought tolerance as well as allowing better insecticide penetration and better air circulation resulting in less boll rot. This variety has excellent fiber properties with length, strength, and fineness of Acala quality. FiberMax™ 832 has excellent seedling vigour.

FiberMax™ 975

FiberMax™ 975 is a mid season variety that has been tested in the USA as IF1004. It is a smooth leaf variety with a normal leaf shape. The variety is widely adaptable with a determinate growth habit setting many bolls rapidly. Because of its smaller seed size, (approximately 5200 seed per pound), care should be taken with planting rates to avoid excessive populations. The variety has a high gin turnout and a very high yield potential.

FiberMax™ 963

FiberMax™ 963 is an early to mid season variety that has been tested in the USA as IF1001. It is a smooth leaf variety with a normal leaf shape. It is a broadly adapted variety suited to short and mid season growing areas. Producers can benefit from using growth regulators in

managing its vigorous growth. The variety has good Verticillium Wilt tolerance. Seedling vigour is excellent.

FiberMax™ 819

FiberMax™ 819 is an early maturing variety that has been tested in the USA as IF1009. The ability of FiberMax™ 819 to set a crop quickly, combined with its early maturity gives it widespread adaptation. This okra leaf cotton is a high yielding, high fiber quality variety with excellent tolerance to Verticillium Wilt.

Results and Discussion

All the trials conducted have been in the public domain and are available through the University systems or Co-operative Extension. The trial co-operators are listed below.

Cotton Seed International 1996 Trials

Georgia	University of Georgia	(Shelby Baker)
Mississippi	Mississippi State University	(Steve Calhoun)
Mississippi	USDA Stoneville	(Bill Meredith)
Mississippi	USDA Stoneville	(Jim Heitholt)
Louisiana	Louisiana State University	(Dave Caldwell)
Arkansas	University of Arkansas	(Fred Bourland)
Arizona	University of Arizona	(Lee Clark)

Cotton Seed International 1997 Trials

Florida	University of Florida	(Barry Brecke)
Georgia	University of Georgia	(Shelby Baker)
South Carolina	Clemson University	(Dewey Baresfield)
South Carolina	USDA Florence	(Lloyd May)
North Carolina	North Carolina State University	(Daryl Bowman)
Alabama	Auburn University	(Kathy Glass)
Tennessee	University of Tennessee	(Owen Gwathmey)
Missouri	University of Missouri	(Bobby Phipps)
Arkansas	University of Arkansas	(Fred Bourland)
Mississippi	USDA Stoneville	(Bill Meredith)
Mississippi	USDA Stoneville	(Jim Heitholt)
Mississippi	USDA Starkville	(Johnnie Jenkins)
Mississippi	USDA Starkville	(Jack McCarty)
Mississippi	Mississippi State University	(Steve Calhoun)
Louisiana	Louisiana State University	(Dave Caldwell)
Texas	Texas A & M	(Harvey Buehring)
Arizona	University of Arizona	(Steve Husman)
California	University of California	(Dick Bassett) (Doug Munier)

Cotton Seed International would like to acknowledge the help and assistance it received from all the trial co-operators.

Tables 1 to 5 that follow are a sample of the 1996 and 1997 results.

Table 1
1996 MAFES – Mid Season Strains
(Stoneville, MS)

Rank	Variety	Lint lb/acre	% Site Mean	Length (HVI)	Strength	Mike
1	FiberMax™ 989	1454	125%	1.12	30.1	4.73
2	ST 474	1436	123%	1.10	27.0	4.99
3	FiberMax™ 832	1373	118%	1.21	30.2	4.49
4	SG 125	1372	118%	1.12	27.0	4.74
5	ST LA887	1331	114%	1.12	30.4	4.54
7	DP 50	1297	111%	1.11	28.2	4.89
8	DP 5415	1244	107%	1.08	28.6	5.13
	Site Mean	1164	100%	1.10	28.3	4.72

Table 2
1996 ARKANSAS – Average of two Sites
(Marianna & Clarkedale, AK)

Rank	Variety	Lint lb/acre	% Site Mean	Length (HVI)	Strength	Mike
1	FiberMax™ 989	1414	120%	1.18	32.2	4.55
2	ST 474	1390	118%	1.12	29.4	4.83
3	FiberMax™ 832	1351	115%	1.23	32.7	4.53
4	FiberMax™ 975	1339	114%	1.15	30.1	5.00
6	SG 125	1320	112%	1.17	28.9	4.55
	Mean	1177	100%	1.16	31.0	4.59

Table 3
NORTH CAROLINA MEDIUM MATURITY TRIALS
Average Across Locations 1997

Rank	Variety	Yield (lbs/acre)	Length (inches)	Strength (g/tex)	Mike
1	Paymaster 1560 BG	1245	1.13	29.4	5.1
2	FiberMax™ 989	1237	1.18	32.0	4.6
14	Deltapine 5415	1123	1.16	32.1	4.9
15	FiberMax™ 975	1122	1.17	29.9	4.6
19	Deltapine 51	1099	1.17	28.7	4.7
20	FiberMax™ 832	1044	1.18	31.5	4.3
	Mean	1152	1.15	31.0	4.8
	CV%	5.2			

Table 4
EARLY MATURING COTTON STRAINS TRIAL
Plains, Georgia 1997

Rank	Variety	Yield (lbs/acre)	Length (inches)	Strength (g/tex)	Mike
4	Suregrow 105	1091	1.21	31.6	3.8
7	FiberMax™ 819	1017	1.23*	35.9*	3.9
11	Suregrow 404	954	1.16	33.7	4.2
12	Stoneville 474	952	1.15	30.5	4.0
	Mean	967			
	CV%	9.3			

Table 5
MID-FULL SEASON STRAIN TRIAL
 Plains, Georgia 1997

Rank	Variety	Yield (lbs/acre)	Length (inches)	Strength (g/tex)	Mike
1	PayMaster X0199	943	1.12	32.1	3.8
2	FiberMax™ 832	927	1.22*	34.6*	4.0
3	IG 1010Bt	900	1.20	32.3	3.8
22	DP 5415	719	1.15	32.6	3.9
	CV%	9.2			

* Indicates longest length or highest strength in the trial.