

**FM 5015, FM 5017 – NEW STRIPPER
FIBERMAX VARIETIES FROM AVENTIS**

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Abstract

Aventis Crop Science will release new stripper FiberMax cotton varieties in 2001, including FM 5015, tested as AVS9416 and FM 5017, tested as AVS9423. These varieties began initial development in the former SeedCo breeding program, and were selected as elite strains by Aventis Cottonseed Research, at the Lubbock, TX, breeding station. FM 5015 and FM 5017 will be among the first Aventis variety introductions in the stripper market and are targeted to early and mid- season production in the High Plains. These varieties provide adaptability to short season production management combined with excellent yield potential and good fiber quality.

Introduction

Aventis entered the stripper cottonseed market in 1999 with the acquisition of SeedCo Corporation's research and processing facilities. Germplasm from this pool includes the former High Plains breeding efforts of Coker, Deltapine, Southland, Summit, and Terra. Current varieties from this program were discontinued and breeding efforts focused on developing improved conventional genetics for the High Plains region. The breeding lines and germplasm (not finished varieties) of Ranger Seed Company were also acquired to enhance genetic diversity.

FM 5015, as 9416, and FM 5017, as 9423, was chosen for extensive testing in 1998 to evaluate a consistent and stable variety for the High Plains that offered a high fiber quality package in an early-maturing, storm-proof background.

Discussion

Variety Characteristics

FM 5015 characteristics, shown in Table 1, include normal, semi-smooth leaf, early maturity, and high fiber strength. FM 5015 is derived from a simple cross selected in the F2 generation as a single plant in 1994. FM 5017 characteristics, shown in Table 2, indicate a smooth leaf variety in the mid-maturity range. FM 5017 is derived from a backcross capturing the smoothleaf trait.

Yield and Quality

Table 3 includes a summary of FM 5015 variety characteristics, yield and quality over 23 locations compared to a High Plains standard variety. FM 5015 had 104.6% yield increase over the standard check with 23 locations combined. FM 5015 had 10% more bolls open when maturity differences were obvious in the test plots. All other characteristics are slightly better except storm resistance; and strength is 2 g/tex higher.

Table 4 includes a summary of FM 5017 variety characteristics, yield and quality over 23 locations compared to a High Plains standard variety. FM 5017 had 103.3% yield increase over the standard check with 23 locations combined. FM 5017 has better length, strength, turnout and lint percent than the standard check.

Summary

FiberMax 5015 is almost as early as FiberMax 5013, yields exceptionally well and has significantly stronger fiber (approximately 2g/tex) than most stripper varieties. Fiber length of this storm resistant variety is usually more than 34/32nds and the micronaire values are consistently in the premium range.

FiberMax 5017 is a storm resistant smoothleaf stripper variety that is mid season in maturity. In situations where leaf is present at harvest, the variety yields superior grades. Fiber properties are among the best of the stripper varieties with length, strength and micronaire all adequate to demand premium prices.

Table 1. Characteristics of FM 5015.

Leaf Shape/Smoothness	normal/ semi-smooth
Maturity	early
Storm Resistance	good
Gin Turnout	high
Plant Height, Inches*	24.8
Fiber Length, Inches*	1.09
Fiber Strength, g/tex*	32.5
Micronaire value*	4.5
Boll Size	large
Leaf Size	medium
Seed / Lb.	4575

*Average values obtained in multi year and location tests.

Table 2. Characteristics of FM 5017.

Leaf Shape/Smoothness	normal/smooth
Maturity	medium
Storm Resistance	good
Gin Turnout	high
Plant Height, Inches*	23.8
Fiber Length, Inches*	1.08
Fiber Strength, g/tex*	31.5
Micronaire value*	4.5
Boll Size	very large
Leaf Size	large
Seed / Lb.	4600

*Average values obtained in multi year and location tests.

Table 3. Comparison of FM 5015 to standard check.

		Variety FM 5015	Check HS 26
Yield	(lbs/acre)	799.4	764.5
Yield	% of check	104.6	
# Yield	comparisons	23	
Turnout	(%)	25.3	24.5
Lint %		38	37.4
Storm Resistance	(0-9)	5.5	6.4
Plant Height	(inches)	24.8	23.7
Maturity	(%open)	45.5	35.7
Length	(inches)	1.09	1.07
Strength	(g/tex)	32.5	30.3
Micronaire	(units)	4.5	4.4
Release	(year)	2002	

Table 4. Comparison of FM 5017 to standard check.

		Variety	Check
		FM 5017	HS26
Yield	(lbs/acre)	801.3	775.9
Yield	% of check	103.3	
# Yield	comparisons	23	
Turnout	(%)	25.6	24.4
Lint %		39.4	37.4
Storm Resistance	(0-9)	5.1	6.4
Plant Height	(inches)	23.8	23.7
Maturity	(%open)	33.4	34.7
Length	(inches)	1.08	1.07
Strength	(g/tex)	31.5	30
Micronaire	(units)	4.5	4.3
Release	(year)	2001	