

PAYMASTER COTTONSEED VARIETY
PM 2145 RR
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Abstract

Paymaster Cottonseed announces the release of a new Roundup Ready Cotton variety for the stripper cotton production areas of the southwest. Paymaster PM 2145 RR is an early maturing variety similar to its recurrent parent Paymaster 145. PM 2145 has shown a significant increase in yield, earliness, lint turnout and fiber elongation with respect to Paymaster 145. It has also shown a decrease in fiber length of approximately 0.03 inches.

Paymaster Cottonseed is pleased to announce the addition of a new transgenic variety, PM 2145 RR, to its already well known line-up of products for the stripper cotton variety market. The performance of some of our transgenic products during the 1997 crop year, specially those introduced last year, will be discussed in other sessions of this conference.

Paymaster PM 2145 RR

PM 2145 is an early season variety derived by a backcross program involving a Coker 312 Roundup tolerant strain carrying RR construct 1445 and Paymaster 145 as the recurrent parent. In the BC4F3 generation, pure breeding lines were identified and an increase program was initiated including a fairly large winter increase in South Africa during the 1996-97 season.

During 1996 and 1997 we conducted multiple location testing within the Research Department and during 1997 Paymaster's Agronomy Service Department also conducted a series of multiple location, on-farm strip tests. All these numerous tests were conducted primarily with the objective of establishing a comparison for performance and fiber qualities of the Roundup tolerant strain with respect to the recurrent parent Paymaster 145.

PM 2145 is recommended for normal planting dates in the Northern High Plains of Texas and in the Northern Rolling Plains of Oklahoma. In the Southern High Plains and the remainder of the Rolling Plains it is recommended preferably for late plantings or for replantings due to weather losses in late spring.

The two year (1996 and 1997) multiple location data summary of agronomic traits (Table 1) shows that PM 2145 RR significantly outyielded its recurrent parent Paymaster

145 by 82 Lbs. of lint per acre. This represents an approximate 9% increase. PM 2145 RR also shows a significant increase in lint turnout (on a stripped cotton basis) and in earliness. Stormproofness, plant height and verticillium wilt tolerance have remained unchanged in PM 2145 RR with respect to its recurrent parent.

Fiber properties (Table 2) for PM 2145 RR are very similar to those of Paymaster 145 with the exception of Length, which is significantly shorter for PM 2145 RR, and Elongation which is significantly higher.

In summary, Paymaster PM 2145 RR is an early stripper cotton variety adopted to the High Plains and the Rolling Plains of Texas and to Oklahoma. The lint yield of PM2145 RR is similar to or somewhat higher than that of its recurrent parent Paymaster 145. PM2145 RR is slightly earlier than Paymaster 145 and has significantly higher gin turnout. Fiber traits for PM 2145 are very similar to those of Paymaster 145 with the exception of fiber Length, which tends to be shorter and fiber Elongation which is significantly higher:

Table 1. PM 2145 Agronomic Performance in Paymaster Research trials during the 2 year period 1996-1997.

Variety	Yld (Lbs/Ac)	Lint% m- Proof	Stor Pl. Ht. (Inches)	Earliness	Vert-tol.	
PM2145 RR	990	32.0	3.48	29.1	35.1	27.3
PM145.	908	31.0	3.46	28.9	31.0	26.2
Difference	82**		0.02	0.2	4.1	1.1
		1.0**				
L.S.D. (.01)	46		0.24	1.9	3.5	5.6
		0.004				
TESTS in Mean	12	12	13	13	10	7

Stormproofness: Scale 0-5; 5 most stormproof
Earliness: Scale 0-99; 99 earliest
Verticillium wilt tolerance: Scale 0-99; 99 Most Susceptible

Table 2. PM 2145 RR fiber properties in Paymaster Research Trials during the 2 year period 1996-1997.

Variety	Elongation	Length (Inches)	Strength (G/Tex)	Micronaire	
PM2145 RR		1.01	27.8	4.25	8.5
PM 145		1.04	27.4	4.24	7.9
Difference		-0.03**	0.4	0.01	0.6**
L.S.D. (01)		0.02	1.6	0.25	0.3
Test in Mean		14	14	14	14

** : Indicates statistical significance at the 1% level of probability