PAYMASTER COTTONSEED COTTON VARIETIES
PM 2200 RR AND PM 2326 RR

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Abstract

Paymaster Cottonseed announces the release of two new Roundup Ready cotton varieties for the stripper cotton production areas of the Southwest. Paymaster PM 2200 RR is an early maturing, high fiber quality variety recommended for the Northern High Plains under normal planting conditions and as a variety for replanting after spring weather losses for the Southern High Plains.

Paymaster PM 2326 RR, also tolerant to Roundup herbicide, is a medium maturity stripper variety adapted to all stripper cotton production areas of Texas, Oklahoma and New Mexico.

Paymaster Cottonseed is pleased to announce the addition of two transgenic varieties, PM 2200 RR and PM 2326 RR, to the already well known line-up of products for the stripper cotton variety market. Later on in this same session several new transgenic products for the picker variety market will also be introduced.

Paymaster PM 2200 RR

PM 2200 RR is an early season variety derived by a backcrossing program involving a Coker 312 Roundup tolerant strain carrying RR construct 1445 and Paymaster HS 200 as the recurrent parent. In the BC3F3 generation, pure breeding lines were identified and an increase program involving two sizable winter increases (in Puerto Rico and in South Africa) were initiated.

During 1995 and 1996 we conducted multiple location testing within the Research Department. During 1996, Paymaster's Agronomy Services Department also conducted a series of multiple location, on-farm strip tests. These tests were conducted primarily with the objective of establishing a comparison for performance and quality of the Roundup tolerant strain with respect to the recurrent parent Paymaster HS 200.

PM 2200 RR is recommended for normal planting dates in the Northern High Plains and in the Coastal Regions of Texas. In the Southern High Plains it is recommended primarily for late plantings or for replantings due to weather losses in May. In the Rolling Plains regions of Texas and Oklahoma, PM 2200 RR is recommended for irrigated areas.

The two year (1995 and 1996) multiple location data summary of agronomic traits (Table 1) shows that PM 2200 RR significantly outyielded its recurrent parent PM HS200 by 79 Lbs. of lint per acre. This represents an approximate 8 % increase. PM 2200 RR also shows a significant increase in lint turnout (on a stripped cotton basis) and in stormproofness, which is a definite improvement with respect to Paymaster HS 200. PM 2200 RR also shows a slight decrease in earliness, meaning that it may tend to be a bit later than HS 200.

Fiber properties (Table 2) for PM 2200 RR are very similar to those of Paymaster HS 200 with the exception of Micronaire and Elongation which are slightly higher. In the case of Micronaire, this increase is a welcome improvement since Paymaster HS 200 tends at times to produce a few somewhat low micronaire bales.

Paymaster PM 2326 RR

Paymaster PM 2326 RR is a medium maturity stripper variety developed by a very similar backcrossing and testing procedure as that described earlier for PM 2200 RR. In this case, however, the recurrent parent was Paymaster HS 26. PM 2326 RR is recommended, as is Paymaster HS 26, for all the stripper cotton production areas of Texas (High Plains, Rolling Plains, Blacklands and Coastal Bend), Oklahoma and New Mexico.

The two year (1995-1996) multiple location averages of agronomic traits (Table 3), show that PM 2326 RR, on the average, yielded 72 Lbs. of lint per acre above Paymaster HS 26. This represents roughly a 7 % increase. PM 2326 RR also showed a significant increase in lint turnout (with a 2 % increase from 26 % to 28 %) and in earliness. This was, as in the case with the Micronaire increase in PM 2200 RR, a welcome improvement over Paymaster HS 26.

Fiber quality properties for PM 2326 RR (Table 4) were not significantly different than those of Paymaster HS 26 except in fiber Fineness where PM 2326 RR tended to have a slightly coarser fiber.

Table 1. PM 2200 RR Agronomic Performance in Paymaster Research trials during the 2 year period 1995-1996.

Cultivar	Yield [Lbs/Ac]	Lint %	Storm-Proof	Pl.Ht. [Inches]	Earliness
PM 2200 RR	1059	26.0	3.1	30.1	27.2
PM HS 200	980	25.0	2.8	29.8	30.8
Difference	79*	1.0*	0.3*	0.3	-3.6*
L.S.D.(.05)	38	0.004	0.15	0.62	2.6
Tests in Mean	12	12	14	14	11

Stormproofness: Scale 0-5; 5 most stormproof
Earliness: Scale 0-99; 99 earliest

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Table 2. PM 2200 RR fiber properties in Paymaster Research trials during the 2 year period 1995-1996.

Cultivar	Len. [In.]	Str. [g/tex]	Mic	Matur. %	Fine	Elong.
PM 2200 RR	1.090	29.09	4.25	76.7	184	8.73
PM HS 200	1.100	29.62	4.05	77.0	177	8.49
Difference	-0.010	-0.53	0.20*	-0.3	7	0.24*
L.S.D.(.05)	0.015	1.08	0.13	3.1	7.4	0.24
Tests in Mean	13	13	13	13	13	13

Table 3. PM 2326 RR Agronomic Performance in Paymaster Research trials during the 2 year period 1995-1996.

Cultivar	Yield [Lbs/Ac]	Lint %	Storm-Proof	Pl.Ht. [Inches]	Earliness
PM 2326 RR	1060	28.0	3.26	30.0	25.3
PM HS 26	988	26.0	3.26	29.9	21.6
Difference	72*	2.0*	0	0.1	3.7
L.S.D.(.05)	39	0.003	0.15	0.8	2.1
Tests in Mean	12	12	14	14	11

Stormproofness: Scale 0-5; 5 most stormproof
Earliness: Scale 0-99; 99 earliest

Table 4. PM 2326 RR fiber properties in Paymaster Research trials during the 2 year period 1995-1996.

Cultivar	Len. [In.]	Str. [g/tex]	Mic	Matur. %	Fine	Elong.
PM 2326 RR	1.050	30.15	4.70	75.9	201	9.5
PM HS 26	1.060	30.69	4.65	73.6	193	9.5
Difference	-0.010	-0.54	0.05	2.3	8*	0
L.S.D.(.05)	0.014	1.08	0.14	2.7	7	0.3
Tests in Mean	13	13	13	13	13	13