PAYMASTER BRAND COTTON VARIETIES PM 183 AND PM 280

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Abstract

Paymaster Cottonseed announces the release of two new varieties for the stripper cotton production areas of the Southwest. Paymaster PM 183 is an extremely early maturing stormproof variety recommended primarily for the extreme Northern High Plains under normal planting conditions and for other areas as a replant variety following weather losses late in the spring. Yields and fiber qualities, particularly fiber length, will be somewhat below the levels of more full season varieties when grown under normal season conditions.

Paymaster PM 280 is a very early maturing, high fiber quality stripper 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. PM 280 has excellent fiber length (averaging 1.12 inches) and strength (averaging 28.5 g/tex). This combination of quality parameters will make PM 280 the new High Plains standard for fiber quality.

Paymaster Cottonseed is pleased to announce the addition of two new cotton varieties, PM 183 and PM 280, to its already well known line-up of products for the stripper cotton production areas of the Southwest.

Paymaster PM 183

PM 183 is an extremely short season variety derived from a cross of Paymaster 785 and breeding line 146055. Breeding line 146055 was in turn derived from a cross of P266-1 (a Paymaster 266 selection) and Northern Star R4.

Because of its extreme earliness, PM 183 is being recommended for normal planting dates in the extreme Northern High Plains and in Northern Oklahoma and Kansas. For the High Plains, Rolling Plains, and in Central-South Texas, it will be marketed only as a variety for late replantings. In these areas it is expected to give growers an extended opportunity to grow cotton in place of grain, sorghum, sunflowers or soybeans after a cotton crop loss in mid to late June.

The 7-year average performance data table (TABLE 1) shows that PM 183 yields somewhat less than the fuller season varieties such as Paymaster HS26 (a difference of 78 lbs.). PM 183 also has a significantly shorter and weaker fiber (0.98 inches and 24.8 g/tex,respectively). We believe, however, that growers will find these losses in yield and fiber quality very acceptable when compared to the potential income of alternative late planted crops such as sorghum or sunflowers.

A percent open boll comparison (TABLE 2) with other "replant" varieties emphasizes the unprecedentd earliness of PM 183. In a 3-year average across 17 replicated tests, PM 183 had a full 16 percent more open bolls at 130 days after planting than the leading "quick" variety Tamcot HQ 95.

A graphic representation of these values underscores the very significant difference in maturity range. At the lower end we have Paymaster HS26 with roughly 34% open bolls at 130 days. In the early range we have Quickie and Tamcot HQ 95 with 51% and 53% respectively; and PM 183 at 69%.

Paymaster PM 280

PM 280 is a very early high fiber quality variety developed primarily for the Northern High Plains. It was derived from a cross of Paymaster experimental line 123271-74 and 145521. Line 123271-74 was in turn derived from a cross of Tamcot 788 and New Mexico Acala line B4364 and line 145521 from a cross of New Mexico Acala B3080 and Texas A&M line B6-1380. Obviously, the rather unique fiber quality traits for High Plains cotton that we find in PM 280 can be traced to the contributions of the New Mexico Acala lines in this pedigree.

Because of its very early maturity, PM 280 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 for late plantings or replantings due to weather losses in late May. In the Rolling Plains regions of Texas and Oklahoma, PM 280 is recommended primarily for irrigated areas.

The 7-year performance averages (TABLE 3) show that PM 280 yields only slightly below Paymaster HS26, which is at present the standard for the High Plains. Fiber length for PM 280 averages 1.12 inches (staple of approximately 36), which is unusual for High Plains cotton. This exceptional fiber length coupled with fiber strength in the 28 to 29 g/tex range make of PM 280 another significant step forward in Paymaster's continuing efforts to increase High Plains cotton quality.

A graphic comparison of fiber lengths clearly shows the advance in fiber length from Paymaster HS 26, through Paymaster HS200 to PM 280. We obviously have a ways to go to reach Acala 1517 levels, but we are progressing in that direction.

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For fiber strength we can also see the trend. Although Paymaster HS200 represented a slight loss in strength with respect to HS26, it was a necessary tradeoff, at the time, to achieve the longer fiber. In PM 280 we have been able to regain that fiber strength and actually improve it beyond the HS26 levels.

We believe that PM 280, because of its early maturity and its excellent fiber traits, will be rapidly accepted by many High Plains growers, primarily those in the Northern areas.

TABLE 1. PM 183 performance in Paymaster High Plains trials during the 7-year period 1988-1994.

Cultivar	Yld. (lb/a)	Ht. (in.)	Str.Res.*	Len. (in)	Str. (g/tex)	Mic	Earliness**
PM HS26	985	25.1	3.4	1.06	28.3	4.3	21
PM 145	942	23.0	3.7	1.00	25.1	4.0	33
PM HS200	939	24.7	3.0	1.10	27.8	3.9	27
PM 183	907	21.0	4.1	0.98	24.8	4.6	50
Tests in Mean	27	28	29	31	31	31	27

* Storm Resistance: Scale 0-5 ; 5 Most Resistant
** Earliness : Scale 0-99 ; 99 Earliest

TABLE 2. PM 183 percent open boll comparisons with various cultivars And strains during the 3-year period 1993-1995.
(Means 17 Replicated Tests)

Yr	Avg.Days	PM HS26	PM HS200	TAMCOT HQ 95	ALLTEX QUICKIE	PM 183
1993	133	44.4	50.4	59.9	56.8	79.3
1994	119	31.0	31.1	48.9	48.2	68.4
1995	138	25.9	43.9	50.2	47.8	60.5
1993-95	130	33.8	45.0	53.0	51.0	69.4

TABLE 3.
PM 280 Performance in Paymaster High Plains trials during the 7-year period 1988-1994

Cultivar	Fiber Yld (lb/a)	Length (in)	Strength (g/tex)	Mic
PM HS26	985	1.06	28.3	4.3
PM 280	947	1.12	28.5	4.0
PM HS200	939	1.10	27.8	3.9
ACALA 1517E-2	808	1.15	30.8	3.7
Tests in Mean	27	31	31	31