

PERFORMANCE OF COTTON VARIETIES IN THE WICHITA VALLEY, 1954-58

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SUMMARY

Paymaster 54B and Lankart Sel. 57 were the highest yielding varieties in the cotton variety test at the Wichita Valley Experiment Station during 1954-58.

Western Stormproof was the leader among varieties and strains of the closed-boll or storm-resistant type.

Introduction

Cotton acreage in the Wichita Valley of Texas has declined in recent years in favor of irrigated pastures. This is due to an expanding livestock program in the Valley, to cotton acreage controls and to the general westward shift of cotton production.

Farmers who continue to grow cotton are doing a better job than formerly, and are more concerned about selecting varieties and using cultural practices best suited to local conditions. Results of cotton variety tests guide the farmers in selecting varieties that will give them maximum returns. They also help evaluate new varieties and strains.

Results

Table 1 records the yields and other pertinent data on varieties grown in 1958. Gregg, a new variety in the test the past 2 years, produced the highest yield in 1958, but its yield in 1957 was low and should have further study. Paymaster 54B, Lockett 88, Western Stormproof, Lankart Sel. 57 and Watson's Stormproof were other high yielding varieties in 1958.

All varieties showed a small percentage of mortality because of cotton root rot, but the disease apparently had no significant effect on yields.

Table 2, a 5-year summary, shows Paymaster 54B, Lankart Sel. 57, Western Stormproof and Deltapine TPSA, in the order named, had the highest yields among the varieties in the test for the full 5 years. This table shows the importance of period-of-years averages in overcoming seasonal differences in yields.

Table 1. Performance of cotton varieties, Iowa Park, 1958

Variety	Pounds of lint per acre	Lint %		Boll size ^{1/}	Staple length	Grade	Micro- naire	Earli- ness ^{2/}	Root rot mortality, % ^{3/}
		Picked	Pulled						
Gregg	918	41.8	27.7	89	30	SLM	4.7	76	4.17
Paymaster 54B	910	37.3	29.2	67	31	SLM ^{4/}	4.6	87	1.00
Lockett 88	895	37.3	29.4	74	28	SLM ^{4/}	4.6	63	1.88
Western Stormproof	892	38.3	32.2	63	31	M	4.6	59	2.78
Lankart Sel. 57	891	40.5	31.1	57	31	SLM	5.1	53	2.08
Watson's Stormproof	879	35.2	28.0	71	31	SLM ^{4/}	5.0	72	1.52
Empire WR	847	35.0	26.6	59	33	SLM	4.3	60	3.78
Northern Star 11	846	35.3	27.1	63	32	SLM	4.3	65	3.02
Paymaster 101	843	37.3	29.1	68	30	SLM ^{4/}	5.5	76	2.13
Dunn 7	835	37.5	30.1	64	32	SLM	4.6	51	1.63
Blightmaster	822	35.7	28.5	71	33	M	4.2	54	.38
Deltapine TPFA	819	37.1	28.0	77	32	SLM	4.6	58	1.15
Lockett Storm- proof No. 1	802	36.3	28.6	73	30	SLM	4.5	63	2.02
Acala 1517C	759	33.3	26.3	65	35	SLM	3.9	66	1.38
Anton Stormproof 99	742	36.9	26.1	58	32	SLM	4.5	50	1.27

L.S.D. (.05 level) 68 pounds per acre

1/ Number of bolls per pound of seed cotton.

2/ Percent first picking.

3/ Average six replications.

Acknowledgments

The assistance of G. A. Niles of the Department of Agronomy in assembling seed, ginning, grading and classing and analyzing results of these tests is gratefully acknowledged.

Table 2. Summary of cotton yields at Iowa Park, 1954-58

Variety	1954	1955	1956	1957	1958	Comparable average ^{1/}
Paymaster 54B	618	516	672	716	910	686
Lankart Sel. 57	451	640	697	704	891	677
Lockett 88					895	645
Watson's Stormproof					879	629
Kasch LL No. 7			601	642		626
Western Stormproof	536	423	482	788	892	624
Texacala 5455	448	514	581			615
Deltapine TPFA	496	468	519	716	819	604
Lockett 140	474	472	565	647		602
Northern Star 11	497	457	573	570	846	589
Dunn 7					835	585
Empire WR ^{2/}	447	448	491	663	847	579
Paymaster 101	430	502	554	562	843	578
Floyd 8G	552	436	475	561		568
Acala 1517C				677	759	568
C.A. 119	478	392	503			558
Gregg				485	918	551
Lockett Stormproof No. 1	474	400	487	586	802	550
Bagley's B17 Rowden	450	441	432			541
Blightmaster	490	377	414	575	822	536
Anton Stormproof 99					742	492
Malone's Rowden				540		489
L.S.D. (.05 level)	85	70	42	55	68	

^{1/} Comparable averages were calculated to eliminate seasonal differences in yields.

^{2/} Watson's Empire in 1954-56.

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LEFT—Cotton grown in fumigated soil. RIGHT—cotton grown in root-knot-infested soil. Courtesy, Dow Chemical Company.

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