Cotton Variety Tests in Oklahoma

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Each year new and leading varieties of cotton are tested at several locations throughout Oklahoma. Continuous variety testing is needed for two reasons: (1) cotton breeders are continually making improvements in commercial varieties and strains, which need to be evaluated, and (2) varieties respond differently to different environmental conditions.

In addition to total yields, one of the most important concerns of the cotton breeder at the present time is the improvement of the quality of fiber. One obvious possibility for improvement is development of varieties which have improved fiber properties. For this reason tests were initiated several years ago to compare the quality of different varieties under Oklahoma conditions.

Since environmental conditions are different from one year to the next and from location to location, several years' testing at several locations is necessary to be able to recommend a variety to Oklahoma growers. Information on cotton varieties reported in this bulletin includes data on dryland tests in five locations over a five-year period and on irrigated tests at Chickasha and Altus for six and seven years, respectively.

Procedures

Each test received the fertilizer and cultivation treatments recommended for the area. The cotton was sprayed for boll weevils and boll worms as these insects reached sufficient numbers to justify the treatment economically. In addition, the irrigated tests received supplemental water as needed during the growing seasons.

The test locations were selected to represent the typical soil and climate of Oklahoma. Irrigated tests were conducted at Altus and Chick-

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asha. Dryland tests were conducted at Perkins, Bennington, Chickasha, Mangum, and Elk City. All tests were hand harvested except the dryland tests at Elk City and Chickasha which were harvested mechanically by a stripper.

In the tests harvested by hand snapping, the yield of lint was based on the average weights of snaps harvested from the two center rows of four-row plots fifty feet long. In the case of the stripper-harvested tests, the yield was based on the mean weight of snaps harvested from two-row plots one hundred feet long. The hand harvested tests consisted of six replications and the stripper-harvested tests had three replications. The yields of snaps were converted to lint yields by the use of lint percentages obtained from ginning a composite sample of snaps taken from all replications.

The fiber for the fiber analyses was taken from the sample ginned to obtain the lint percentage. After ginning, the lint was taken to a conditioning room with a constant temperature of 70 degrees F. and a relative humidity of 65 per cent. The cotton was stored under these conditions for at least 24 hours prior to the beginning of the fiber analysis. The lengths were measured on a model 163 fibrograph until 1960. After 1960, the lengths were measured on a model 193 digital fibrograph. Strength and coarseness measurements were made on the standard stelometer and micronaire instruments.

It was not possible to test each variety every year. Therefore, several varieties were tested fewer than five years in the dryland tests and fewer than six or seven years in the irrigated tests at Chickasha and Altus, respectively. The means of varieties tested fewer than five years were adjusted by a method proposed by Patterson[1] in order to compare them to the varieties tested for the full period. Although these estimated yields and fiber properties are useful for comparative purposes, they are not entirely accurate because the method assumes that the variety performed similarly to the other varieties if tested the full period. This assumption is not entirely valid.

In making variety recommendations, it is important to know the extent of lint losses during mechanical harvesting operations. In the stripper-harvested tests lint losses before and after harvest were determined by gleaning the cotton on the ground by hand before and after the plots were machine harvested. The combined losses, before and during harvest, are shown in Table 61 and 62. These losses are expressed as a percentage of the total yield of each variety.

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[1]R. E. Patterson, "A Method of Adjusting for Calculating Comparable Yields in Variety Tests," *Agronomy Journal*, Vol. 42, pp. 509-511 (1950).

Results

YIELD OF LINT

Irrigated Tests

The yield results for the irrigated tests conducted at Chickasha and Altus are presented in Tables 1 to 4. These data show that significant differences exist most years in the performance of the different varieties. When several years' results are averaged, however, the differences in yield are not significant. Although the differences over a period of time are not statistically significant, there appear to be some real differences. For instance, the Acala varieties were rather consistently lower yielders and the earlier Western types were better yielders, particularly at Altus.

Hand-Harvested Dryland Tests

The data from the hand-harvested dryland tests conducted at Mangum, Perkins, and Bennington are presented in Tables 5 to 10. Significant differences were found in the individual years and in the average performances of the varieties tested over the five-year period at Mangum and Perkins. At Bennington, there were no significant differences between the varieties tested for five years, but Western Stormproof and Acala 44 appeared to be inferior in yield to the other varieties tested. Some varieties behaved differently at Perkins and Mangum, but some performed well at both places.

Stripper-Harvested Dryland Tests

The yield data from the stripper-harvested dryland tests conducted at Elk City and Chickasha are summarized in Tables 11 and 12. These data show that significant differences were found between the varieties in some individual years, but that over the five-year period no significant differences appeared. The lack of significant differences between the varieties in the stripper tests is not surprising since only the adapted plains types were included.

LENGTH OF LINT

Data presented in Tables 13 to 24 show that the varieties were much more consistent in their relative rankings for staple length than for yield of lint. Also, significant differences in length of lint occurred at all locations except Elk City, where the staple lengths were short. Regardless of whether the varieties were grown on irrigated or dry land,

the open-boll varieties (Acala 44, Acala 4-42, Deltapine 15, Fox 4, Coker 100 A, Delfos, 9169, Stardel, Empire, and Stoneville 7) consistently had longer staples. On the other hand, the varieties Western Stormproof, Stoneville 62, Parrott, Northern Star No. 5, Paymaster 101, Paymaster 54B, and Gregg consistently produced short staples. Lankart 57 and Lankart 611 generally ranked between the two groups. These data show rather clearly that variety differences strongly influence the staple length.

MICRONAIRE READINGS

Micronaire tests measure fineness and maturity of the lint. The micronaire test results are presented in Tables 25 to 36. These data show that varieties are not as consistent in their rankings for micronaire as they are for length, which indicates that variety has less effect on micronaire than it does on length. However, despite the differences between varieties, some generalizations can be made. The varieties Lankart 57, Parrott, Lockett 88, and Fox 4 generally produced fiber with high micronaire readings and the varieties Austin and Acala 44 were rather consistently low.

STELOMETER STRENGTH

The stelometer measures the tensile strength of the lint. The 0″ gage strength is closely related to the Pressley index, but the 1/8″ gage strength is more closely correlated with the actual strength of the yarn spun from the various cottons. Hence, both the 0″ and the 1/8″ gage strengths are presented.

0″ gage strength—Data presented in Tables 37 to 48 show that the varieties are rather consistent in their relative rankings for 0″ gage stelometer strengths, which indicates that the Pressley index of the cotton crop in Oklahoma can be greatly improved by proper choice of variety. The varieties Acala 44, Acala 4-42, Fox 4, Deltapine 15, Stardel, Gregg, and Dixie King generally had good strength. On the other hand, the varieties Western Stormproof, Lankart 57, Lankart 611, Stoneville 62, Northern Star No. 5, and Northern Star 4-11 produced lint with a low strength.

1/8″ gage strengths—Data presented in Tables 49 to 60 show that the relative rankings of the various varieties for 1/8″ gage stelometer strength were similar to those for 0″ gage stelometer strength, which indicates that this characteristic can also be greatly influenced by choice

of variety. The varieties Acala 4-42, Acala 44, Deltapine 15, Fox 4, Gregg, and Stardel were generally the stronger varieties; and the varieties Stoneville 62, Lankart 57, Western Stormproof, Paymaster 54B, Northern Star No. 5, Lockett 88, and Parrott generally produced the weaker fibers.

STORM LOSSES

Stripper-harvested tests were conducted at Chickasha and Elk City under dryland conditions to compare the ability of the stormproof varieties to hold their lint before and during harvest. The percentages of lint lost before and during harvest are presented in Tables 61 and 62. These data show that the stormproof varieties differ considerably in their ability to hold the lint. Western Stormproof, Lankart 57 and Lankart 611 consistently had the lowest losses, while Parrott and Paymaster 101 sustained the highest losses.

Summary and Conclusions

The varieties tended to differ significantly in yield each year. However, the relative yields varied from year to year so that their mean yields for several years generally were not significantly different. Differences in varieties can be real and worthy of consideration, however. The grower should choose a variety which has a high mean yield at the test location with conditions nearest his and one which is rather consistent in its ranking among the varieties from year to year.

The data presented show that varieties play a very important part in determining the length and strength of the staple. The differences between the varieties for micronaire are smaller. In choosing a variety, care should be taken to choose one which produces the greatest length and highest strength possible without sacrificing significant amounts of yield and performance consistency.

Table 1. Yields of varieties tested 7 years at the Altus Irrigation Station.

Variety	Pounds of Lint Per Acre							
	1956	1957	1958	1959	1960	1961	1962	Average
Paymaster 54B	677	803	1250	991	992	977	134*	832
Stoneville 62	679	507	1290	1126	930	938	183	808
Deltapine 15	676	530	1392	1055	925	665	144	770
Fox 4	685	488	1358	1034	954	699	164	769
Lankart 57	625	551	1209	945	1254	575	115	753
Lankart 611	563	534	1235	868	989	775	189	736
Western Stormproof	746	445	1188	992	913	628	192	729
Lockett 88	731	251	1297	821	1001	607	161	695
Acala 44	729	538	1001	822	1059	527	91	681
Acala 4-42	559	591	925	615	865	568	151	610
Yearly Mean	667	523	1214	926	988	696	152	738
L.S.D. .05	111	119	100	78	110	154	N.S.	N.S.

*Low yields in 1962 were the result of hail in June, resulting in late replanting of the test.

Table 2. Yields of varieties tested 3 to 6 years at the Altus Irrigation Station.

Variety	Pounds of Lint Per Acre							
	1956	1957	1958	1959	1960	1961	1962	Estimated Average
Paymaster 101					1248	802	136	855
Rex			1395		1117	786	147	837
Stardel			1341		910	766	151	768
Austin		525	1409	1024	965	640	98	765
Gregg			1341	916	983	655	174	757
Northern Star No. 5					1105	689	116	763
Blightmaster		476	1259		946	765	206	753
Northern Star 4-11					1044	695	125	747
Stoneville 7		406	1423	905	876	719	154	735
Dixie King		429			975	711	160	717
Coker 100A (WR)					904	707	137	709
Acala 1517C		540	610	1124				698
Auburn 56				932	870	641	137	692
Empire	628	394	1309		952	667	128	680
Parrott	761	495	1031		837	617	136	677
Delfos					906	574	171	676

Table 3. Yields of varieties tested 6 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.[1]

Variety	Pounds of Line Per Acre						
	1956	1957	1958	1959	1961	1962	Average
Western Stormproof	628	500	919	939	672	1036	782
Fox 4	620	653	1027	799	571	1007	779
Stoneville 62	696	672	834	838	605	940	764
Lockett 88	611	496	868	828	691	1017	752
Paymaster 54B	772	672	740	735	665	870	742
Lankart 57	716	716	796	770	552	882	739
Deltapine 15	601	346	867	936	500	1075	721
Lankart 611	648	673	748	729	572	854	704
Acala 44	547	424	770	942	601	916	700
Acala 4-42	548	573	573	751	513	855	635
Yearly Mean	639	572	814	827	594	945	732
L.S.D. .05	88	91	160	75	94	107	N.S.

[1] Early summer storms destroyed the 1960 test.

Table 4. Yields of varieties tested 3 to 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	Pounds of Lint Per Acre						
	1956	1957	1958	1959	1961	1962	Estimated Average
Austin		577		834	801	970	793
Empire	620	526	704		617	969	792
Stoneville 7		556		881	633	1075	784
Auburn 56				844	579	968	740
Blightmaster		413			647	965	703
Gregg				719	666	838	684
Acala 1517C	476	511	821				655
Lockett No. 1	585	493	694				647
Parrott	620	390	635		500	974	643

Table 5. Yields of varieties tested 5 years at the Sandy Land Research Station, Mangum.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Average
Lankart 57	645	511	463	744	525	578
Lankart 611	614	458	524	775	489	572
Gregg	654	436	500	640	386	523
Lockett 88	621	372	448	679	471	518
Paymaster 101	494	407	468	679	378	485
Parrott	552	414	401	641	401	482
Western Stormproof	578	403	305	732	376	479
Northern Star 4-11	555	341	337	614	303	430
Yearly Mean	589	418	430	688	416	508
L.S.D. .05	N.S.	90	130	85	135	58

Table 6. Yields of varieties tested 3 and 4 years at the Sandy Land Research Station, Mangum.

Variety	Pounds of Lint Per Acre				
	1959	1960	1961	1962	Estimated Average
Coker 100A (WR)		616	817	480	634
Stoneville 62		558	670	584	601
Paymaster 54B		603	727	355	558
Fox 4		478	739	438	548
Stardel		461	793	378	541
Rex		480	738	411	539
Stoneville 7		408	747	469	538
Auburn 56		402	723	500	538
Deltapine 15		452	722	359	508
Austin		458	699	358	502
Delfos 9169		419	653	422	495
Acala 44		414	616	449	490
Dixie King		396	716	364	489
Northern Star No. 5		323	669	456	487
Empire		436	674	335	478
Acala 4-42		445	705	269	470
Blightmaster	411	333	590	424	460

Table 7. Yields of varieties tested 5 years at the Agronomy Farm at Perkins.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Average
Lankart 57	1018	498	652	716	545	686
Austin	1110	463	637	701	413	665
Deltapine 15	978	489	624	676	536	660
Fox 4	938	472	594	754	485	649
Stoneville 62	911	478	630	743	441	641
Parrott	885	474	636	688	463	629
Empire	915	423	589	631	421	596
Acala 44	864	393	507	574	508	569
Yearly Mean	952	461	608	686	476	637
L.S.D. .05	74	59	75	113	65	58

Table 8. Yields of varieties tested 3 and 4 years at the Agronomy Farm at Perkins.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Estimated Average
Western Stormproof	1027		653	748	533	697
Rex		509	633	792	524	694
Northern Star No. 5			651	709	524	675
Stoneville 7		434	630	751	549	670
Dixie King			610	756	495	667
Blightmaster			617	767	454	660
Lockett 88			644	700	489	658
Stardel		456	604	748	504	657
Lankart 611	964		622	656	464	633
Paymaster 101			613	728	397	626
Coker 100A (WR)			583	630	507	620
Auburn 56		430	538	696	460	610
Gregg			625	634	409	603
Delfos 9169			552	658	436	596
Paymaster 54B			635	604	403	594
Northern Star 4-11			618	613	410	594
Acala 4-42			528	607	407	561

Table 9. Yields of varieties tested 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Average
Rex	1122	519	875	898	965	876
Deltapine 15	1120	449	815	843	1058	857
Lankart 57	1076	580	809	843	940	850
Stoneville 62	973	521	797	953	959	841
Parrott	1057	498	750	862	1018	837
Austin	1135	441	789	792	978	827
Yearly Mean	1080	501	806	865	986	848
L.S.D. .05	110	54	37	35	54	N.S.

Table 10. Yields of varieties tested 3 to 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Estimated Average
Fox 4	1160	428	776	953	960	855
Northern Star 4-11			870	869	886	837
Western Stormproof	1150		581	736		753
Acala 44	1078	425	546	801		747

Table 11. Yields of varieties tested 5 years in stripper-harvested tests at Chickasha.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962[1]	Average
Gregg	829	327	391	659	183	478
Blightmaster	862	288	324	637	148	452
Paymaster 101	798	348	342	602	153	449
Western Stormproof	779	337	355	590	163	445
Parrott	760	365	362	572	166	445
Lankart 57	761	315	399	558	185	444
Lockett 88	760	285	362	663	142	442
Lankart 611	672	300	408	534	166	416
Yearly Mean	778	321	368	602	163	446
L.S.D. .05	173	N.S.	61	114	N.S.	N.S.

[1] Low yields in 1962 were the result of drouth.

Table 12. Yields of varieties tested 5 years in stripper-harvested tests on the Dale McClain Farm, Elk City.

Variety	Pounds of Lint Per Acre					
	1958	1959	1960	1961	1962	Average
Lankart 611	408	576	512	303	380	436
Lankart 57	387	583	470	315	363	424
Gregg	352	486	483	302	390	402
Lockett 88	449	567	497	265	210	397
Parrott	419	589	389	256	331	397
Western Stormproof	396	626	472	184	289	393
Paymaster 101	353	458	430	292	382	383
Yearly Mean	394	555	465	274	335	404
L.S.D. .05	54	107	N.S.	N.S.	73	N.S.

Table 13. Upper-half mean length data on varieties tested 6 years under irrigation at the Altus Irrigation Station.[1]

Variety	Length (inches)						
	1956	1957	1958	1959	1960	1961	Average
Acala 4-42	1.09	1.15	1.00	1.00	1.10	1.12	1.08
Acala 44	1.08	1.08	1.02	1.05	1.09	1.13	1.08
Fox 4	1.05	1.12	1.03	1.01	1.05	1.10	1.06
Deltapine 15	1.04	1.08	1.00	.98	1.05	1.11	1.04
Lankart 57	.98	1.04	.90	.98	1.02	1.08	1.00
Lankart 611	.96	1.03	.90	.92	.98	1.06	.98
Stoneville 62	.95	1.03	.91	.90	.96	1.02	.96
Western Stormproof	.90	.97	.92	.89	.95	1.04	.94
Lockett 88	.92	.99	.88	.91	.94	.95	.93
Paymaster 54B	.89	1.00	.88	.88	.91	.99	.92
Yearly Mean	.99	1.05	.94	.95	1.01	1.06	1.00
L.S.D. .05							.05

[1] Fiber from 1962 test was lost before tests were completed.

Table 14. Upper-half mean length data on varieties tested 2 to 5 years under irrigation at the Altus Irrigation Station.

Variety	Length (inches)						
	1956	1957	1958	1959	1960	1961	Estimated Average
Acala 1517C	1.13	1.15	1.11	1.08			1.14
Coker 100A (WR)					1.07	1.11	1.06
Delfos 9169					1.04	1.11	1.04
Stardel		1.10	.97		1.05	1.12	1.04
Empire	1.02	1.04	1.01		1.01	1.12	1.03
Auburn 56				.98	1.03	1.09	1.03
Stoneville 7		1.09	.97	.96	.99	1.08	1.02
Dixie King		1.07			1.01	1.10	1.02
Rex			.90		1.01	1.13	1.01
Austin		1.08	.96	.92	.98	1.12	1.01
Northern Star 4-11					.97	1.08	.99
Blightmaster		1.03	.96		.94	1.02	.97
Northern Star No. 5					.97	1.03	.96
Gregg			.88	.89	.97	1.04	.96
Parrott	.92	1.01	.90		.97	1.06	.96
Paymaster 101					.96	.99	.94

Table 15. Upper-half mean length data on varieties tested 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	Length (inches)					
	1957	1958	1959	1961	1962	Average
Acala 44	1.11	1.04	.99	1.17	1.14	1.09
Fox 4	1.07	1.06	.96	1.20	1.12	1.08
Deltapine 15	1.06	1.02	.99	1.16	1.12	1.07
Acala 4-42	1.10	1.06	1.00	1.11	1.10	1.07
Lankart 57	1.00	.95	.88	1.11	1.06	1.00
Lankart 611	.98	.97	.87	1.10	1.03	.99
Stoneville 62	1.00	.95	.88	1.05	1.04	.98
Western Stormproof	.94	.92	.79	1.05	1.12	.96
Paymaster 54-B	.93	.90	.84	1.02	.99	.94
Lockett 88	.93	.89	.83	1.04	.98	.93
Yearly Mean	1.01	.98	.90	1.10	1.07	1.01
L.S.D. .05						.03

Table 16. Upper-half mean length data on varieties tested 3 to 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	Length (inches)					
	1957	1958	1959	1961	1962	Estimated Average
Acala 1517 C	1.18	1.12	1.02			1.16
Auburn 56			.99	1.14	1.10	1.07
Austin	1.01	1.00	.92	1.21	1.10	1.05
Empire (WR)	1.03	1.01		1.15	1.12	1.05
Stoneville 7	1.04	1.01	.88	1.18	1.11	1.05
Blightmaster	.99	1.04		1.09	1.04	1.02
Gregg			.82	1.07	1.04	.97
Parrott	.91	.99		1.01	.95	.94

Table 17. Upper-half mean length data on varieties tested 5 years at the Sandy Land Station, Mangum.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Average
Northern Star 4-11	.93	.87	.99	1.09	1.03	.98
Lankart 57	.93	.79	1.01	1.09	1.02	.97
Lankart 611	.91	.93	1.01	1.08	.97	.96
Gregg	.94	.86	.96	1.02	.96	.95
Parrott	.91	.89	.99	1.00	.94	.95
Western Stormproof	.87	.80	.97	1.01	1.00	.93
Lockett 88	.83	.83	.94	.99	.96	.91
Paymaster 101	.89	.80	.94	.99	.95	.91
Yearly Mean	.90	.85	.98	1.03	.98	.95
L.S.D. .05						.02

Table 18. Upper-half mean length data on varieties tested 3 and 4 years at the Sandy Land Research Station, Mangum.

Variety	Length (inches)				
	1959	1960	1961	1962	Estimated Average
Delfos 9169		1.08	1.15	1.15	1.08
Acala 44		1.09	1.14	1.12	1.07
Coker 100A (WR)		1.07	1.13	1.11	1.06
Deltapine 15		1.09	1.11	1.08	1.05
Acala 4-42		1.06	1.11	1.08	1.04
Fox 4		1.07	1.12	1.04	1.03
Stardel		1.04	1.12	1.07	1.03
Auburn 56		1.05	1.09	1.06	1.02
Stoneville 7		1.00	1.10	1.07	1.01
Dixie King		1.01	1.11	1.05	1.01
Empire		1.04	1.10	1.04	1.01
Austin		1.01	1.12	1.05	1.01
Rex		1.01	1.08	1.07	1.00
Blightmaster	.86	.95	1.08	1.01	.96
Northern Star No. 5		.95	1.03	1.02	.95
Stoneville 62		.98	.99	.98	.94
Paymaster 54B		.94	1.00	.99	.93

Table 19. Upper-half mean length data on varieties tested 5 years on the Agronomy Farm at Perkins.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Average
Acala 44	1.03	1.03	1.05	1.14	1.11	1.07
Fox 4	1.02	1.01	1.02	1.11	1.03	1.04
Deltapine 15	.99	.99	1.06	1.10	1.02	1.03
Empire	1.00	.96	1.02	1.10	1.01	1.02
Austin	.99	.94	.97	1.11	1.01	1.00
Lankart 57	.93	.86	1.05	1.04	.99	.97
Stoneville 62	.91	.94	.95	1.00	.94	.95
Parrott	.94	.88	.96	.99	.92	.94
Yearly Mean	.98	.95	1.01	1.07	1.00	1.00
L.S.D. .05						.03

Table 20. Upper-half mean length data on varieties tested 3 and 4 years on the Agronomy Farm at Perkins.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Estimated Average
Delfos 9169			1.05	1.18	1.12	1.09
Coker 100A (WR)			1.03	1.12	1.10	1.06
Acala 4-42			1.05	1.12	1.06	1.05
Stoneville 7		.98	1.00	1.15	1.05	1.04
Rex		.96	1.00	1.10	1.02	1.01
Stardel		.93	1.00	1.12	1.04	1.01
Dixie King			.97	1.10	1.02	1.00
Northern Star 4-11			.96	1.10	1.00	.99
Auburn 56		.96	1.00	1.10	1.03	.98
Blightmaster			.94	1.02	.99	.96
Lankart 6-11	.93		.99	1.07	.91	.96
Northern Star No. 5			.93	1.02	.96	.94
Western Stormproof	.88		.95	1.00	.96	.93
Lockett 88			.92	1.04	.89	.92
Paymaster 101			.91	.99	.93	.92
Paymaster 54B			.94	.99	.92	.92
Gregg			.93	.99	.89	.91

Table 21. Upper-half mean length data on varieties tested 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Average
Deltapine 15	1.01	.89	1.05	1.15	1.17	1.05
Rex	1.01	.87	.88	1.15	1.15	1.01
Lankart 57	.97	.90	.98	1.07	1.07	1.00
Austin	.94	.79	.97	1.11	1.13	.99
Stoneville 62	.96	.80	.89	1.00	1.04	.94
Parrott	.97	.85	.84	.96	.96	.91
Yearly Mean	.98	.85	.94	1.07	1.09	.98
L.S.D. .05						.06

Table 22. Upper-half mean length data on varieties tested 3 to 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Estimated Average
Fox 4	1.01	.92	1.01	1.11	1.13	1.04
Acala 44	1.05	.98	1.00	1.04		1.04
Northern Star 4-11			.94	1.08	1.13	1.00
Western Stormproof	.90		1.00	.97		.94

Table 23. Upper-half mean length data on varieties tested on dryland 4 years in stripper-harvested tests at Chickasha.

Variety	Length (inches)				
	1958	1959	1961	1962	Average
Lankart 57	.93	.88	1.02	.96	.95
Lankart 611	.96	.86	1.00	.89	.93
Gregg	.91	.79	.96	.91	.89
Parrott	.90	.89	.93	.85	.89
Blightmaster	.95	.85	1.02	.83	.91
Western Stormproof	.90	.81	.92	.88	.88
Paymaster 101	.88	.81	.94	.91	.88
Lockett 88	.82	.86	.95	.77	.85
Yearly Mean	.91	.84	.97	.87	.90
L.S.D. .05					.06

Table 24. Upper-half mean length data on varieties tested on dryland 5 years in stripped-harvested tests at Elk City.

Variety	Length (inches)					
	1958	1959	1960	1961	1962	Average
Lankart 57	.87	.88	.96	.97	.97	.93
Lankart 611	.86	.86	.98	.97	.93	.92
Western Stormproof	.80	.84	.90	.95	.96	.89
Parrott	.83	.84	.92	.90	.94	.89
Paymaster 101	.81	.82	.90	.91	.94	.88
Gregg	.84	.81	.86	.89	.94	.87
Lockett 88	.80	.88	.86	.89	.94	.87
Yearly Mean	.83	.85	.91	.93	.95	.89
L.S.D. .05						N.S.

Table 25. Micronaire readings on varieties tested 6 years under irrigation at the Altus Irrigation Station.

Variety	Micronaire (ug/in)						
	1956	1957	1958	1959	1960	1961	Average
Fox 4	4.8	3.3	4.3	3.5	4.3	3.0	3.9
Lankart 57	4.4	3.3	4.1	3.7	4.3	2.6	3.7
Paymaster 54B	4.6	3.4	3.8	3.2	3.7	3.3	3.7
Stoneville 62	4.4	3.7	4.0	3.5	3.4	2.9	3.6
Deltapine 15	4.4	2.9	3.9	3.5	4.2	2.9	3.6
Lockett 88	4.1	2.8	3.4	3.6	4.4	2.8	3.5
Lankart 611	4.1	2.8	3.9	3.2	3.4	3.0	3.4
Western Stormproof	4.5	2.8	3.6	3.5	3.6	2.2	3.4
Acala 4-42	4.2	2.8	3.6	3.3	3.6	3.2	3.4
Acala 44	4.0	2.7	3.3	3.3	3.5	2.7	3.2
Yearly Mean	4.4	3.0	3.8	3.4	3.8	2.9	3.6
L.S.D. .05							.3

Table 26. Micronaire readings on varieties tested 2 to 6 years under irrigation at the Altus Irrigation Station.

Variety	Micronaire (ug/in)						
	1956	1957	1958	1959	1960	1961	Estimated Average
Parrott	4.8	3.4			4.5	3.1	3.9
Paymaster 101					4.0	3.2	3.8
Gregg			4.6	4.0	3.7	2.8	3.8
Coker 100A (WR)					4.3	3.0	3.8
Dixie King		3.1			4.0	3.1	3.7
Austin		3.3	3.9	3.3	3.6	3.1	3.6
Rex			3.9		3.5	3.1	3.5
Stardel		2.9	3.7		3.7	3.2	3.5
Northern Star No. 5					4.1	2.5	3.4
Blightmaster		3.0	3.5		3.6	3.0	3.4
Northern Star 4-11					3.7	2.9	3.4
Auburn 56				3.5	3.6	2.7	3.4
Empire	4.2	2.8	4.0	3.0	3.5	3.0	3.3
Stoneville 7		2.7	3.9				
Delfos 9169					3.4	2.6	3.2
Acala 1517C	3.7	2.6	3.4	3.2			3.1

Table 27. Micronaire readings of varieties tested 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	Micronaire (ug/in)					
	1957	1958	1959	1961	1962	Average
Lockett 88	4.2	4.5	4.5	3.7	4.5	4.3
Lankart 57	4.5	4.4	4.5	3.3	4.6	4.3
Fox 4	4.2	4.6	4.6	3.5	4.4	4.3
Paymaster 54-B	4.6	4.2	4.1	3.5	4.2	4.1
Acala 4-42	4.3	4.0	3.9	3.7	4.2	4.0
Stoneville 62	4.5	4.2	4.0	3.2	4.1	4.0
Western Stormproof	4.3	4.1	3.9	3.2	4.5	4.0
Deltapine 15	4.2	3.9	4.2	2.9	4.0	3.8
Lankart 611	3.8	3.7	3.9	3.3	4.1	3.8
Acala 44	4.0	3.6	3.7	3.3	4.1	3.7
Yearly Mean	4.1	4.3	4.1	3.4	4.3	4.0
L.S.D. .05						.2

Table 28. Micronaire readings of varieties tested 3 to 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	Micronaire (ug/in)					
	1957	1958	1959	1961	1962	Estimated Average
Parrott	5.1		4.8	3.3	3.9	4.6
Auburn 56			4.1	3.3	4.3	4.0
Empire	4.2	3.9		3.6	4.1	4.0
Gregg			4.2	3.2	4.1	3.9
Blightmaster	3.9	3.8		3.4	4.5	3.9
Austin	4.1	4.0	4.1	3.5	4.0	3.9
Stoneville 7	3.6	4.0	4.0	3.4	4.4	3.9
Acala 1517C	3.8	4.1	3.6			3.7

Table 29. Micronaire data on varieties tested 5 years at the Sandy Land Station, Mangum.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Average
Lankart 57	4.8	4.1	4.3	4.4	5.0	4.5
Parrott	4.7	4.3	4.5	4.4	4.7	4.5
Lockett 88	4.9	4.0	4.4	4.5	4.4	4.4
Paymaster 101	4.4	3.7	4.3	4.7	4.5	4.3
Western Stormproof	4.2	3.8	4.1	4.1	4.9	4.2
Lankart 611	4.5	3.8	4.1	4.0	4.3	4.1
Northern Star 4-11	4.4	3.4	4.1	4.1	4.5	4.1
Gregg	4.4	3.9	3.9	3.7	4.2	4.0
Yearly Mean	4.5	3.9	4.2	4.2	4.6	4.3
L.S.D. .05						.27

Table 30. Micronaire data on varieties tested 3 and 4 years at the Sandy Land Station, Mangum.

Variety	Micronaire (ug/in)				
	1959	1960	1961	1962	Estimated Average
Fox 4		4.3	4.7	5.5	4.8
Stardel		4.3	4.7	4.9	4.6
Stoneville 7		4.0	4.9	5.0	4.6
Coker 100A (WR)		4.3	4.6	4.6	4.5
Dixie King		4.4	4.4	4.9	4.5
Stoneville 62		4.2	4.5	4.5	4.4
Paymaster 54B		4.3	4.5	4.4	4.4
Deltapine 15		4.2	4.5	4.6	4.4
Auburn 56		4.1	4.3	4.5	4.3
Acala 4-42		4.2	4.4	4.3	4.3
Northern Star No. 5		4.1	4.2	4.6	4.3
Delfos 9169		3.9	4.1	4.6	4.2
Blightmaster	3.9	3.9	4.5	4.4	4.2
Empire		4.0	3.9	4.5	4.1
Austin		4.1	4.0	4.4	4.1
Rex		3.9	3.9	4.5	4.1
Acala 44		3.9	4.2	4.1	4.0

Table 31. Micronaire data on varieties tested 5 years on the Agronomy Farm at Perkins.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Average
Fox 4	4.7	4.4	4.7	4.5	5.0	4.7
Parrott	4.8	4.8	4.5	4.6	4.8	4.7
Lankart 57	4.6	4.6	4.7	4.1	5.0	4.6
Deltapine	4.3	4.1	4.7	4.1	4.9	4.4
Austin	4.3	4.4	4.3	4.1	4.5	4.3
Stoneville 62	4.6	4.0	3.7	4.4	4.8	4.3
Empire	4.2	4.2	4.2	4.2	4.2	4.2
Acala 44	3.9	4.0	4.0	4.2	4.0	4.0
Yearly Mean	4.4	4.3	4.4	4.3	4.6	4.4
L.S.D. .05						0.2

Table 32. Micronaire data on varieties tested 3 and 4 years on the Agronomy Farm at Perkins.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Estimated Average
Dixie King			4.5	4.4	4.7	4.5
Stoneville 7		4.2	4.3	4.5	4.9	4.5
Northern Star No. 5			4.4	4.2	4.9	4.5
Coker 100A (WR)			4.5	4.4	4.4	4.4
Lankart 611	4.2		4.5	4.3	4.7	4.4
Stardel		4.2	4.3	4.4	4.8	4.4
Blightmaster			4.2	4.5	4.4	4.3
Lockett 88			4.6	4.0	4.5	4.3
Auburn 56		4.3	4.4	4.3	4.3	4.3
Northern Star 4-11			4.3	4.2	4.4	4.3
Acala 4-42			4.2	4.5	4.1	4.2
Paymaster 54B			4.2	4.0	4.3	4.2
Rex		4.2	4.1	4.1	4.6	4.2
Western Stormproof	4.3		4.1	3.9	4.3	4.1
Delfos 9169			4.2	4.1	4.2	4.1
Gregg			4.0	3.8	4.2	4.0

Table 33. Micronaire data on varieties tested 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Average
Parrott	4.9	4.9	3.8	4.5	4.7	4.6
Lankart 57	4.8	4.9	4.2	3.9	4.5	4.5
Deltapine 15	4.9	4.6	4.2	3.5	4.2	4.3
Stoneville 62	4.9	4.4	3.8	4.0	4.2	4.3
Austin	4.5	4.3	3.6	3.5	4.4	4.1
Yearly Mean	4.8	4.5	3.9	3.9	4.3	4.3
L.S.D. .05						.26

Table 34. Micronaire data on varieties tested 3 to 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Estimated Average
Fox 4	5.0	4.8	4.3	4.3	4.4	4.6
Western Stormproof	4.6		3.7	4.2		4.3
Northern Star 4-11			4.0	3.6	4.2	4.2
Acala 44	4.4	4.0	3.6	3.9		4.0

Table 35. Micronaire data on varieties tested 4 years in stripper-harvested tests at Chickasha.

Variety	Micronaire (ug/in)				
	1958	1959	1961	1962	Average
Parrott	4.8	5.3	4.4	3.6	4.5
Paymaster 101	4.5	4.9	4.6	2.6	4.2
Lockett 88	4.3	4.8	4.4	3.2	4.2
Western Stormproof	4.2	4.7	4.3	3.2	4.1
Lankart 57	4.5	5.3	3.5	2.7	4.0
Blightmaster	4.0	4.5	4.3	3.1	4.0
Gregg	4.1	4.9	4.1	2.6	3.9
Lankart 611	4.1	4.5	3.7	2.9	3 8
Yearly Mean	4.3	4.9	4.16	2.99	4.0
L.S.D. .05					.2

Table 36. Micronaire data on varieties tested 5 years in stripper-harvested tests at Elk City.

Variety	Micronaire (ug/in)					
	1958	1959	1960	1961	1962	Average
Parrott	4.7	4.7	4.5	2.9	3.1	4.0
Gregg	4.0	4.0	4.7	3.3	3.0	3.8
Lankart 57	4.2	3.8	4.7	3.1	3.0	3.8
Paymaster 101	4.2	4.0	4.2	2.8	3.0	3.6
Western Stormproof	4.3	4.2	4.3	2.4	2.6	3.6
Lockett 88	4.4	3.9	4.3	2.7	2.8	3.6
Lankart 611	3.9	3.5	3.8	2.6	3.2	3 4
Yearly Mean	4.2	4.0	4.4	2.8	3.0	3.7
L.S.D. .05						.23

Table 37. O″ gage stelometer strengths of varieties tested 6 years under irrigation at the Altus Irrigation Station.

Variety	O″ Strength (g/grex)						
	1956	1957	1958	1959	1960	1961	Average
Acala 4-42	4.60	3.73	4.00	3 98	3.59	3.09	3.83
Acala 44	4.51	3.43	3.80	3.89	3.40	2.97	3.67
Fox 4	4.19	3.30	3.79	3.77	3.23	2.95	3.54
Deltapine 15	4.05	3.44	3.70	3.76	3.23	2.91	3.52
Lankart 611	4.14	3.41	3.21	3.64	3.16	2.67	3.37
Paymaster 54B	3.83	3.13	3.13	4.22	2.87	2.72	3.32
Western Stormproof	4.10	3.09	3.38	3.71	2.93	2.59	3.30
Lockett 88	3.88	3.09	3.48	3.72	2.94	2.69	3.30
Stoneville 62	4.05	3.21	3.38	3.57	2.90	2.61	3.29
Lankart 57	3.86	3.06	3.19	3.26	2.74	2.53	3.11
Yearly Mean	4.12	3.29	3.51	3.75	3.10	2.77	3.42
L.S.D. .05							.35

Table 38. O" gage stelometer strengths of varieties tested 2 to 5 years under irrigation at the Altus Irrigation Station.

Variety	O" Strength (g/grex)						
	1956	1957	1958	1959	1960	1961	Estimated Average
Acala 1517C	4.75	3.90	4.10	4.23			4.00
Stardel		3.56	3.90		3.36	3.16	3.75
Gregg			3.79	3.88	3.39	3.23	3.71
Dixie King		3.43			3.37	2.86	3.59
Empire	4.41	3.13	3.78		3.27	2.84	3.55
Austin		3.27	3.64	3.74	3.16	2.78	3.45
Coker 100A (WR)					3.12	2.81	3.45
Auburn 56				3.70	2.97	2.93	3.41
Rex			3.58		3 03	2.70	3.40
Paymaster 101					2.97	2.87	3.40
Delfos 9169					2.99	2.79	3.38
Blightmaster		3.37	3.39		2.90	2.71	3.34
Parrott	3.95	3.19	3.30		3.02	2.84	3.32
Stoneville 7		3.10	3.44	3.55	3.01	2.79	3.31
Northern Star 4-11					2.95	2.61	3.26
Northern Star No. 5					2.86	2.58	3.20

Table 39. O" gage stelometer strengths of varieties tested 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	O" Gage Strength (g/grex)					
	1957	1958	1959	1961	1962	Average
Acala 4-42	4.14	4.03	4.12	3.33	4.11	3.94
Acala 44	3.96	3.77	4.11	3.14	3.95	3.79
Fox 4	3.67	3.77	4.01	3.07	3.70	3.64
Deltapine 15	3.97	3.51	3.68	3.09	3.71	3.59
Stoneville 62	3.66	3.46	3.68	2.80	3.56	3.43
Lankart 611	3.54	3.54	3.86	2.75	3.36	3.41
Western Stormproof	3.54	3.58	3.80	2.78	3.32	3.40
Lockett 88	3.42	3.50	3.64	2.78	3.43	3.35
Paymaster 54B	3.63	3.32	3.49	2.86	3.37	3.33
Lankart 57	4.06	3.30	3.34	2.56	3.28	3.31
Yearly Mean	3.58	3.76	3.77	2.92	3.58	3.52
L.S.D. .05						.17

Table 40. O" gage stelometer strengths of varieties tested 3 to 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	O" Gage Strength (g/grex)					
	1957	1958	1959	1961	1962	Estimated Average
Acala 1517C	4.28	4.30	4.45			4.16
Gregg			4.01	3.16	4.13	3.86
Empire	3.80	3.72		2.83	3.93	3.63
Blightmaster	3.75	3.64		2.90	3.58	3.53
Austin	3.70	3.58	3.89	2.92	3.50	3.52
Auburn 56			3.73	2.94	3.55	3.51
Stoneville 7	3.28	3.30	3.60	3.14	4.09	3.48
Parrott	3.31	3.43		2.71	3.45	3.22

Table 41. O" gage stelometer strengths of varieties tested 5 years at the Sandy Land Station, Mangum.

Variety	O" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Gregg	3.66	4.76	3.57	3.45	3.67	3.82
Paymaster 101	4.42	4.72	3.30	2.97	3.40	3.76
Northern Star 4-11	4.02	4.49	3.23	2.95	3.15	3.57
Lockett 88	4.06	4.34	3.22	2.92	3.20	3.55
Parrott	4.23	4.16	3.11	3.06	3.15	3.54
Western Stormproof	4.06	4.25	3.12	2.96	3.16	3.51
Lankart 611	3.84	4.43	2.85	2.84	3.08	3.41
Lankart 57	3.72	3.97	3.33	2.79	2.90	3.34
Yearly Mean	4.00	4.39	3.22	2.99	3.21	3.57
L. S. D. .05						.25

Table 42. O" gage stelometer strengths of varieties tested 3 and 4 years at the Sandy Land Research Station, Mangum.

Variety	O" Gage Strength (g/grex)				
	1959	1960	1961	1962	Estimated Average
Acala 4-42		3.60	3.55	3.86	4.09
Stardel		3.52	3.24	3.84	3.95
Acala 44		3.44	3.22	3.47	3.80
Dixie King		3.36	3.17	3.38	3.72
Empire		3.23	3.17	3.38	3.68
Deltapine 15		3.29	3.08	3.35	3.66
Austin		3.27	3.05	3.34	3.64
Fox 4		3.21	3.17	3.28	3.64
Delfos 9169		3.34	2.92	3.38	3.63
Coker 100A (WR)		3.35	3.07	3.15	3.61
Blightmaster	4.59	3.15	2.98	3.31	3.61
Auburn 56		3.10	3.10	3.33	3.60
Stoneville 7		3.13	2.93	3.17	3.50
Rex		3.19	2.81	3.23	3.49
Stoneville 62		3.06	2.91	3.21	3.48
Paymaster 54B		2.78	2.74	3.52	3.43
Northern Star No. 5		2.96	2.86	2.99	3.35

Table 43. O" gage stelometer strengths of varieties tested 5 years on the Agronomy Farm at Perkins.

Variety	O" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Acala 44	4.41	3.96	3.72	3.35	3.65	3.81
Empire	4.19	4.04	3.65	3.15	3.48	3.70
Fox 4	4.09	3.91	3.41	3.32	3.64	3.67
Austin	4.11	3.78	3.34	3.21	3.56	3.60
Deltapine 15	3.87	3.68	3.26	3.12	3.30	3.45
Parrott	4.05	3.56	3.30	2.92	3.20	3.40
Stoneville 62	3.80	3.66	3.19	2.98	3.19	3.36
Lankart 57	3.64	3.36	3.01	2.75	2.95	3.14
Yearly Mean	4.02	3.74	3.36	3.10	3.37	3.52
L.S.D. .05						.14

Table 44. O″ gage stelometer strengths of varieties tested 3 and 4 years on the Agronomy Farm at Perkins.

Variety	O″ Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Estimated Average
Gregg			3.83	3.47	3.71	3.91
Stardel		4.22	3.64	3.40	3.75	3.88
Acala 4-42			3.13	3.70	3.83	3.80
Paymaster 101			3.63	3.25	3.43	3.68
Dixie King			3.46	3.05	3.55	3.60
Auburn 56		3.83	3.43	3.16	3.40	3.58
Coker 100A (WR)			3.44	3.12	3.26	3.52
Blightmaster			3.48	3.03	3.29	3.51
Northern Star 4-11			3.49	2.87	3.34	3.48
Stoneville 7		3.72	3.22	3.10	3.39	3.48
Western Stormproof	4.01		3.46	2.95	3.20	3.46
Lockett 88			3.41	2.96	3.20	3.43
Delfos 9169			3.25	2.98	3.34	3.43
Rex		3.62	3.33	3.04	3.20	3.42
Northern Star No. 5			3.48	2.87	3.16	3.41
Paymaster 54B			3.10	2.88	3.22	3.31
Lankart 611	3.56		3.22	3.00	3.03	3.26

Table 45. O″ gage stelometer strengths of varieties tested 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	O″ Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Austin	4.01	3.50	3.15	2.91	3.15	3.34
Deltapine 15	3.69	3.58	3.06	2.96	3.12	3.28
Parrott	3.80	3.55	3.00	2.88	3.02	3.25
Stoneville 62	3.73	3.43	3.00	2.73	2.99	3.18
Rex	3.66	3.55	3.01	2.58	2.90	3.14
Lankart 57	3.46	3.02	2.69	2.43	2.64	2.85
Yearly Mean	3.72	3.44	2.98	2.75	2.97	3.17
L.S.D. .05						.09

Table 46. O″ stelometer strengths of varieties tested 3 to 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	O″ Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Estimated Average
Acala 44	4.04	3.76	3.34	3.19		3.53
Fox 4	3.95	3.58	3.29	2.91	3.08	3.36
Western Stormproof	4.01		3.01	2.91		3.33
Northern Star 4-11			3.07	2.67	3.16	3.24

Table 47. O″ gage stelometer strengths of varieties tested 4 years in stripper-harvested tests at Chickasha.

Variety	O″ Gage Strength (g/grex)				
	1958	1959	1961	1962	Average
Gregg	4.01	4.48	3.15	3.62	3.82
Paymaster 101	4.04	4.37	2.96	3.49	3.71
Blightmaster	3.93	4.50	2.78	3.40	3.65
Lankart 611	3.99	4.22	2.94	3.33	3.62
Western Stormproof	3.98	4.14	2.81	3.34	3.57
Parrott	3.80	4.17	2.94	3.27	3.55
Lockett 88	3.73	4.14	2.95	3.14	3.49
Lankart 57	3.59	3.62	2.55	3.21	3.24
Yearly Mean	3.96	4.20	2.88	3.35	3.58
L.S.D. .05					.19

Table 48. O″ gage stelometer strengths of varieties tested 5 years in stripper-harvested tests at Elk City.

Variety	O″ Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Gregg	3.98	4.12	3.79	3.14	3.40	3.69
Paymaster 101	4.12	3.93	3.65	2.94	3.25	3.57
Western Stormproof	3.92	4.05	3.40	2.67	3.00	3.41
Lankart 57	3.99	3.78	3.21	2.75	3.01	3.34
Parrott	3.67	3.71	3.55	2.58	3.09	3.32
Lockett 88	3.58	3.72	3.20	2.60	3.01	3.22
Lankart 57	3.61	3.62	2.99	2.47	2.56	3.05
Yearly Mean	3.84	3.85	3.40	2.74	3.04	3.69
L.S.D. .05						.15

Table 49. 1/8″ gage stelometer strengths of varieties tested 6 years under irrigation at the Altus Irrigation Station.

Variety	1/8″ Gage Strength (g/grex)						
	1956	1957	1958	1959	1960	1961	Average
Acala 4-42	2.70	2.79	2.01	2.16	2.28	2.30	2.37
Acala 44	2.52	2.52	1.96	2.08	2.06	2.21	2 22
Deltapine 15	2.26	2.49	1.90	1.98	2.10	2.22	2.16
Fox 4	2.21	2.42	1.89	1.99	1.86	2.14	2.08
Lankart 611	2.14	2.34	1.76	1.96	1.89	1.91	2.00
Lockett 88	2.17	2.21	1.82	1.83	1.73	1.89	1.94
Paymaster 54B	2.03	2.16	1.73	1.87	1.67	1.99	1.91
Stoneville 62	2.12	2.18	1.61	1.78	1.76	1.91	1.89
Lankart 57	2.11	2.11	1.70	1.70	1.79	1.81	1.87
Western Stormproof	2.02	2.20	1.71	1.73	1.64	1.87	1.86
Yearly Mean	2.23	2.34	1.81	1.91	1.88	2.02	2.03
L.S.D. .05							.18

Table 50. 1/8" gage stelometer strengths of varieties tested 2 to 5 years under irrigation at the Altus Irrigation Station.

Variety	1/8" Gage Strength (g/grex)						
	1956	1957	1958	1959	1960	1961	Estimated Average
Acala 1517C	2.77	2.76	2.21	2.24			2.45
Gregg			1.75	1.99	2.12	2.35	2.17
Stardel		2.49	1.87		1.92	2.23	2.14
Auburn 56				1.96	1.98	2.05	2.08
Delfos 9169					1.90	2.13	2.08
Coker 100A (WR)					2.00	2.00	2.07
Empire	2.14	2.29	1.82		1.80	2.06	1.99
Dixie King		2.35			1.82	1.94	1.98
Stoneville 7		2.33	1.68	1.89	1.82	1.97	1.94
Parrott	2.10	2.24	1.69		1.73	2.03	1.93
Rex			1.89		1.73	1.79	1.92
Austin		2.17	1.67	1.89	1.66	1.93	1.90
Blightmaster		2.21	1.79		1.69	1.87	1.90
Northern Star 4-11					1.78	1.89	1.90
Paymaster 101					1.68	1.88	1.85
Northern Star No. 5					1.55	1.81	1.75

Table 51. 1/8" gage stelometer strengths of varieties tested 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	1/8" Gage Strength (g/grex)					
	1957	1958	1959	1961	1962	Average
Acala 4-42	2.45	2.22	2.28	2.36	2.45	2.35
Acala 44	2.49	2.02	2.13	2.12	2.32	2.22
Slettapine 15	2.34	1.99	2.06	2.13	2.20	2.14
Fox 4	2.27	1.97	2.06	2.20	2.20	2.14
Paymaster 54B	2.32	1.81	1.84	2.10	1.94	2.00
Lankart 611	2.17	1.77	1.71	1.84	1.81	1.84
Stoneville 62	2.14	1.69	1.85	1.88	1.91	1.89
Lockett 88	2.06	1.74	1.84	1.78	1.89	1.86
Lankart 57	2.07	1.77	1.71	1.84	1.81	1.84
Western Stormproof	1.95	1.73	1.71	1.80	1.80	1.80
Yearly Mean	2.23	1.89	1.95	2.02	2.04	2.02
L.S.D. .05						0.25

Table 52. 1/8" gage stelometer strengths of varieties tested 3 to 5 years under irrigation at the Oklahoma Cotton Research Station, Chickasha.

Variety	1/8" Gage Strength (g/grex)					
	1957	1958	1959	1961	1962	Estimated Average
Acala 1517C	2.65	2.28	2.45			2.46
Gregg			1.95	2.23	2.34	2.14
Auburn 56			1.99	1.95	2.07	2.03
Empire	2.21	1.96		1.90	2.02	1.99
Stoneville	2.02	1.78	1.90	1.93	2.06	1.94
Blightmaster	2.16	1.85		1.75	1.95	1.91
Austin	2.09	1.77	1.71	2.00	1.97	1.91
Parrott	2.05	1.78		1.70	1.83	1.82

Table 53. 1/8" gage stelometer strengths of varieties tested 5 years at the Sandy Land Station, Mangum.

Variety	1/8" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Gregg	2.12	2.12	2.17	2.44	2.30	2.23
Lankart 611	2.01	2.04	1.96	2.04	1.94	1.99
Paymaster 101	2.12	2.00	1.78	2.04	1.95	1.98
Northern Star 4-11	2.11	1.85	1.91	1.99	2.02	1.98
Parrott	2.18	1.94	1.91	1.95	1.92	1.98
Lockett 88	1.89	1.96	1.81	1.97	1.91	1.91
Lankart 57	1.97	1.80	1.72	1.92	1.82	1.84
Western Stormproof	1.79	1.71	1.75	1.90	1.90	1.81
Yearly Mean	2.02	1.93	1.88	2.03	1.97	1.97
L.S.D. .05						.11

Table 54. 1/8" gage stelometer strengths of varieties tested 3 to 4 years at the Sandy Land Research Station, Mangum.

Variety	1/8" Gage Strength (g/grex)				
	1959	1960	1961	1962	Estimated Average
Acala 4-42		2.33	2.57	2.35	2.42
Acala 44		2.12	2.33	2.31	2.26
Stardel		2.08	2.25	2.28	2.21
Fox 4		1.98	2.25	2.20	2.15
Deltapine 15		2.07	2.10	2.26	2.15
Coker 100A (WR)		2.03	2.18	2.12	2.12
Auburn 56		1.97	2.14	2.09	2.08
Delfos 9169		1.85	2.16	2.10	2.04
Dixie King		1.88	2.12	2.11	2.04
Empire		1.87	2.10	2.12	2.04
Stoneville 7		1.80	2.07	2.07	1.99
Paymaster 54B		1.80	2.05	2.09	1.98
Austin		1.73	2.01	2.14	1.97
Blightmaster	1.96	1.93	1.97	1.90	1.96
Northern Star No. 5		1.86	1.87	1.95	1.91
Rex		1.68	1.96	1.94	1.87
Stoneville 62		1.73	1.94	1.77	1.82

Table 55. 1/8" gage stelometer strengths of varieties tested 5 years on the Agronomy Farm at Perkins.

Variety	1/8" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Acala 44	2.17	2.30	2.13	2.38	2.35	2.27
Fox 4	2.02	2.32	1.87	2.22	2.17	2.12
Deltapine 15	2.11	2.17	1.91	2.31	2.12	2.12
Empire	1.95	1.93	1.80	2.16	1.95	1.96
Austin	1.87	2.00	1.67	1.99	1.78	1.86
Parrott	1.87	1.83	1.68	1.94	1.86	1.84
Lankart 57	1.82	1.78	1.81	1.92	1.80	1.83
Stoneville 62	1.83	1.92	1.74	1.93	1.67	1.82
Yearly Mean	1.96	2.03	1.83	2.11	1.96	1 98
L.S.D. .05						.13

Table 56. 1/8" gage stelometer strengths of varieties tested 5 years on the Agronomy Farm at Perkins.

Variety	1/8" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Estimated Average
Acala 4-42			2.30	2.60	2.50	2.48
Stardel		2.10	1.86	2.36	2.11	2.10
Coker 100A (WR)			1.84	2.20	2.14	2.07
Gregg			1.98	2.37	1.83	2.07
Delfos 9169			1.86	2.18	1.97	2.01
Paymaster 101			1.71	2.23	2.00	1.99
Auburn 56		2.16	1.71	2.24	1.84	1.98
Stoneville 7		2.04	1.66	2.22	1.95	1.96
Dixie King			1.74	2.08	1.98	1.95
Northern Star 4-11			1.84	1.97	1.94	1.93
Rex		2.07	1.84	1.96	1.80	1.92
Lankart 611	1.92		1.86	2.11	1.64	1.90
Lockett 88			1.75	2.03	1.89	1.90
Blightmaster			1.79	1.91	1.91	1.88
Northern Star No. 5			1.67	1.82	1.98	1.83
Paymaster 54B			1.83	2.13	2.03	1.83
Western Stormproof	1.82		1.71	1.86	1.65	1.77

Table 57. 1/8" gage steloemter strengths of varieties tested 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	1/8" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Deltapine 15	2.03	2.00	1.98	2.04	1.94	2.00
Rex	2.16	1.65	1.62	1.89	1.88	1.84
Austin	1.89	1.67	1.64	1.98	1.86	1.81
Parrott	2.12	1.67	1.62	1.85	1.77	1.81
Stoneville 62	1.94	1.67	1.64	1.77	1.86	1.78
Lankart 57	1.94	1.61	1.67	1.82	1.67	1.74
Yearly Mean	2.01	1.71	1.70	1.89	1.83	1.83
L.S.D. .05						.10

Table 58. 1/8" gage stelometer strengths of varieties tested 3 to 5 years on the Smith-Lee-Thomas Seed Farm, Bennington.

Variety	1/8" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Estimated Average
Acala 44	2.39	2.03	1.92	2.18		2.13
Fox 4	2.22	2.01	1.97	2.07	2.03	2.06
Western Stormproof	1.95		1.76	1.85		1.93
Northern Star 4-11			1.74	1.89	1.85	1.85

Table 59. 1/8" gage stelometer strengths of varieties tested 4 years in stripper-harvested tests at Chickasha.

Variety	1/8" Gage Strength (g/grex)				
	1958	1959	1961	1962	Average
Gregg	2.04	1.85	2.22	1.86	1.99
Lankart 611	1.85	1.86	1.98	1.94	1.90
Paymaster 101	1.68	1.88	1.98	2.03	1.89
Lankart 57	1.65	1.82	1.92	1.71	1.77
Parrott	1.58	1.86	1.89	1.73	1.76
Lockett 88	1.47	1.95	1.95	1.65	1.76
Blightmaster	1.86	1.77	1.88	1.49	1.75
Western Stormproof	1.32	1.62	1.76	1.70	1.60
Yearly Mean	1.68	1.83	1.95	1.76	1.80
L.S.D. .05					.19

Table 60. 1/8" gage stelometer strengths of varieties tested 5 years in stripper-harvested tests at Elk City.

Variety	O" Gage Strength (g/grex)					
	1958	1959	1960	1961	1962	Average
Gregg	1.71	2.16	1.91	2.15	2.39	2.06
Paymaster 101	1.67	2.01	2.04	1.97	2.19	1.97
Lankart 611	1.79	1.95	1.92	1.91	2.09	1.93
Parrott	1.65	1.94	1.88	1.80	2.04	1.86
Lankart 57	1.63	1.97	1.73	1.83	1.92	1.82
Western Stormproof	1.59	1.86	1.74	1.79	2.10	1.82
Lockett 88	1.49	1.91	1.70	1.82	2.09	1.80
Yearly Mean	1.65	1.97	1.85	1.89	2.12	1.89
L.S.D. .05						.08

Table 61. Percent of lint lost before and during machine harvest in tests on the Dale McClain Farm, Elk City.

Variety	Percent Loss					
	1958	1959	1960	1961	1962	Average
Paymaster 101	14.3	8.8	8.2	4.6	7.5	8.7
Gregg	12.8	14.6	6.1	3.6	4.5	8.3
Parrott	16.3	10.3	8.9	1.5	4.5	8.3
Lankart 57	4.6	4.0	8.6	2.9	4.4	4.9
Lankart 611	6.0	3.1	5.9	2.1	7.3	4.9
Lockett 88	4.7	5.6	5.4	1.7	2.5	4.0
Western Stormproof	3.0	4.1	6.2	1.9	2.8	3.6
Yearly Mean	8.8	7.2	7.0	2.6	4.8	6.1
L.S.D. .05						3.6

Table 62. Percent of lint lost before and during machine harvest in tests at the Oklahoma Cotton Research Station, Chickasha.

Variety	Percent Loss					
	1958	1959	1960	1961	1962	Average
Parrott	7.1	8.3	12.1	6.8	17.6	10.4
Lockett 88	4.3	4.7	5.0	5.1	24.5	8.7
Paymaster 101	7.1	7.0	7.0	5.5	17.3	8.8
Blightmaster	4.7	5.4	5.5	4.4	22.8	8.6
Gregg	7.2	11.9	4.4	6.6	11.0	8.2
Western Stormproof	5.5	3.6	9.1	4.0	13.3	7.1
Lankart 611	3.1	4.3	4.2	5.6	4.5	4.3
Lankart 57	3.2	3.4	2.8	4.7	4.8	3.8
Yearly Mean	5.3	6.1	6.3	5.3	14.4	7.5
L.S.D. .05						4.0

Oklahoma's Wealth in Agriculture

Agriculture is Oklahoma's number one industry. It has more capital invested and employs more people than any other industry in the state. Farms and ranches alone represent a capital investment of four billion dollars—three billion in land and buildings, one-half billion in machinery and one-half billion in livestock.

Farm income currently amounts to more than $700,000,000 annually. The value added by manufacture of farm products adds another $130,000,000 annually.

Some 175,000 Oklahomans manage and operate its nearly 100,000 farms and ranches. Another 14,000 workers are required to keep farmers supplied with production items. Approximately 300,000 full-time employees are engaged by the firms that market and process Oklahoma farm products.

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