OKLAHOMA COTTON VARIETIES;

Varietal Descriptions,

and

Performance Test

Results, 1945-1951

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Oklahoma A. & M. College, Stillwater

in cooperation with
UNITED STATES DEPARTMENT OF AGRICULTURE

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Oklahoma A. & M. College, Stillwater

W. L. Blizzard, Director **Louis E. Hawkins, Vice Director**

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UNITED STATES DEPARTMENT OF AGRICULTURE

Bureau of Plant Industry, Soils, and Agricultural Engineering
Agricultural Research Administration

RECOMMENDED VARIETIES

Western Oklahoma	Central Oklahoma	Eastern Oklahoma
Lankart 57	Stoneville 62	Stoneville 62
Stormproof No. 1	Deltapine 15	Deltapine 15
Northern Star	Empire	Empire
Mebane 6801	D & PL Fox	D & PL Fox
Lockett 140	Mebane 6801	
	Lockett 140	
	Lankart 57	

Varieties recommended for Eastern Oklahoma can be expected to perform well in Western Oklahoma when grown under supplemental irrigation.

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Oklahoma Cotton Varieties;

Varietal Descriptions,

and

Performance Test Results, 1945-1951

By JOHN M. GREEN, M. G. KEATHLEY, E. S. OSWALT, And N. M. GOBER, Jr.*

A major factor in the yield and quality of the harvested cotton crop is the variety of cotton planted. Therefore the Oklahoma Agricultural Experiment Station each year tests promising varieties in different parts of the state. These tests provide a guide for farmers interested in the best possible yields and quality. They also give the Station's cotton breeders an opportunity to check the performance of promising new strains they have developed.

Results of tests made at Tipton, Lawton, Chickasha, and Perkins for the seven-year period 1945 to 1951 are summarized in this bulletin.** Lawton and Tipton are representative of different soil types of Western Oklahoma. Chickasha is somewhat intermediate between Eastern and Western Oklahoma, and Perkins is the eastern-most location from which data are available. Average data on varieties tested at these locations are given in Tables 1 to 4, inclusive.

Average Results of Variety Tests

Tests are conducted under standard farming practices for the area, therefore they should be the best available guide on performance of cotton varieties. Average results for four or more years on the varieties reported are available from Tipton, Lawton, Chickasha, and Perkins.

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* Respectively: Agronomist, Cotton; Research Assistant, Agronomy; Superintendent, Oklahoma Cotton Research Station, Chickasha; and Field Technician, Cotton. Green and Gober are employed cooperatively by the Oklahoma Agricultural Experiment Station and the United States Department of Agriculture.

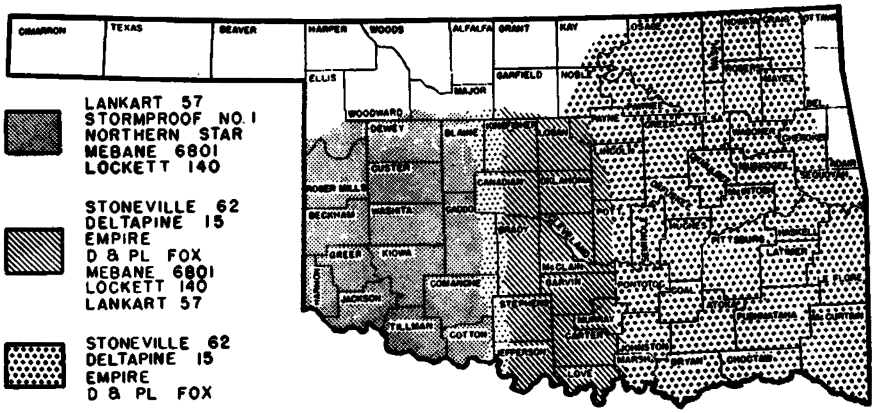
** Results of the 1951 tests are reported in more detail in Okla. Agri. Exp. Sta. Mimeographed Circular No. M-252.

Tipton (Test reported in Table 1, page 13): There are only slight differences in yield among the top varieties at Tipton. Differences in staple length, fiber quality, and storm resistance must be taken into account. Under rough harvesting conditions, Mebane 6801, Hi-Bred, and Lockett 140 are most likely to give good grades at the gin. The most storm-resistant varieties are inferior in yield to other recommended varieties.

Lawton (Test reported in Table 2, page 13): Lankart 57 appears to be the best choice for the tight clay soils represented by the Lawton test. With its 1-inch staple and high degree of storm resistance, Lankart 57 would be more desirable than Mebane 6801 or Deltapine 15, both of which outyielded Lankart slightly.

Chickasha (Test reported in Table 3, page 14): Although Hi-Bred has the highest average yield, its short staple would make it a poorer choice than Stoneville 62, Empire, Deltapine 15, or D & PL Fox. Additional information is needed on the way Empire and Fox will clean up under rough harvesting conditions. Stormproof No. 1 compares favorably with the high varieties at Chickasha. Under the conditions of high fertility as represented by the Chickasha test, cotton plants are often too large to be stripped efficiently; however, persons interested in attempting once-over stripper harvest would find Stormproof No. 1 a better choice than the less storm-resistant varieties.

Perkins (Test reported in Table 4, page 14): Stoneville 62, D & PL Fox,



Varieties recommended for cotton-producing areas in Oklahoma. Transition area between Western and Central Oklahoma is shown. Test locations: Tipton (Tillman county); Lawton (Comanche county); Chickasha (Grady county); and Perkins (Payne county).

Empire, and Deltapine 15 are all well adapted to conditions represented by the Perkins test. For areas from Perkins eastward, these varieties should yield the greatest returns, on the average. Where cotton is picked, Empire would probably have a slight advantage because of its larger boll size. It might be at a disadvantage when snapped because of its fine fiber.

Description of Varieties

Recommended Varieties

On the basis of variety trials to date, nine cotton varieties are recommended for planting in Oklahoma. The important characteristics and particular areas of adaptation are included in the descriptions of these varieties. *The descriptions appear under pictures of the nine recommended varieties.* *(See pages 8 to 12.)*

Other Varieties

Hi-Bred and Half and Half are moderately close-fruiting varieties characterized by short wiry lint, 13/16" to 7/8", and exceptionally high gin turnout. These varieties yield high grades at the gin but generally produce untenderable lint because of short staple length. They are well adapted to hand pulling but are not sufficiently storm resistant for mechanical stripping.

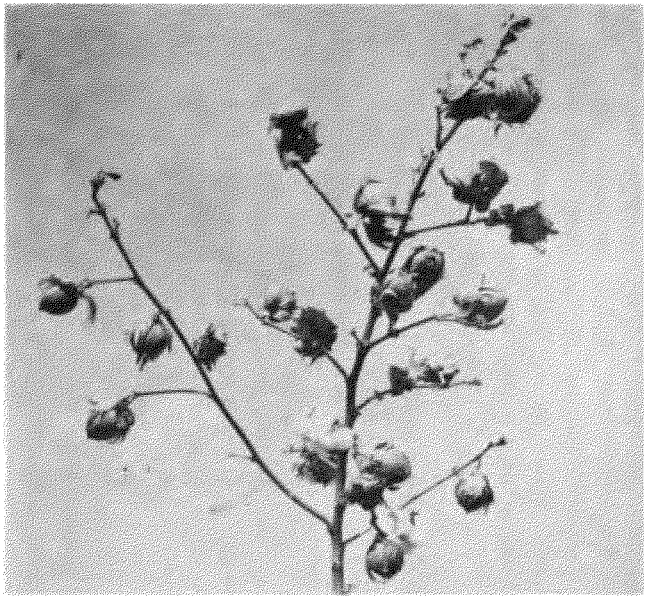
Macha has a high degree of storm resistance and is well adapted to stripper harvest in Western Oklahoma. Previous yield records showed it to be lower in yield than Stormproof No. 1. It usually staples 29/32.

Paymaster 54 has shown up well in Western Oklahoma in two years of testing. It is not sufficiently storm resistant for once-over stripper harvest but is well adapted to hand pulling.

Other varieties included in the yield tests are either in preliminary stages of testing or are carried as checks. None of these merits individual mention in this report.

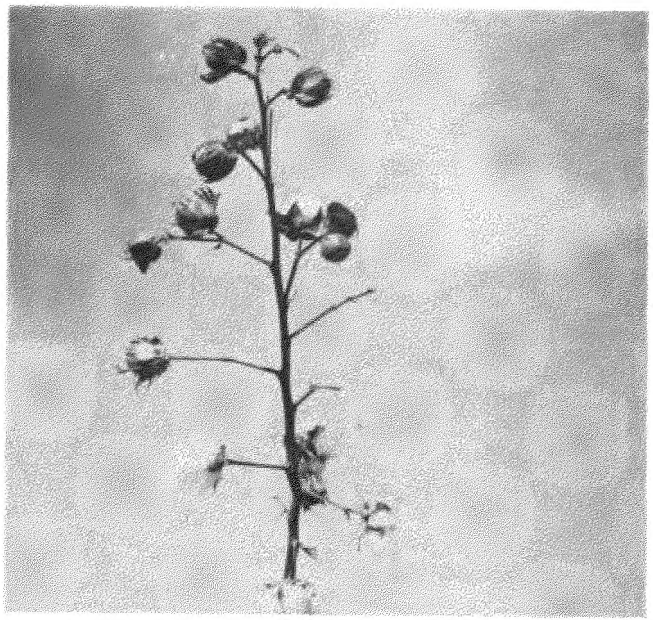
About the pictures: Individual plants were taken from variety test borders at Tipton for photographing on September 24, 1951. Plants were spaced about 14 inches apart. The only restriction on the plant selected was that it be a normally-developed plant without adjacent skips in the row. Differences in plant type and maturity are evident in the pictures; for comparative yields see the yield test tables on pages 13 to 14.

For Central and Western Oklahoma—



Lankart 57 is a large-bolled, slow-maturing variety well adapted to tight upland soils of Central and Western Oklahoma. It has excellent storm resistance and is well adapted to both hand pulling and machine stripping. For stripping, Lankart 57 should be planted thick, to prevent excessive branching. Lankart 57 usually staples 31/32 and cleans well at the gin.

For Central and Western Oklahoma—



Mebane 6801 is a close-fruiting variety with medium-size bolls. It turns out well at the gin and usually staples 29/32. Good cleaning qualities make it well adapted to hand pulling, but it is not sufficiently storm-resistant for once-over stripper harvest.

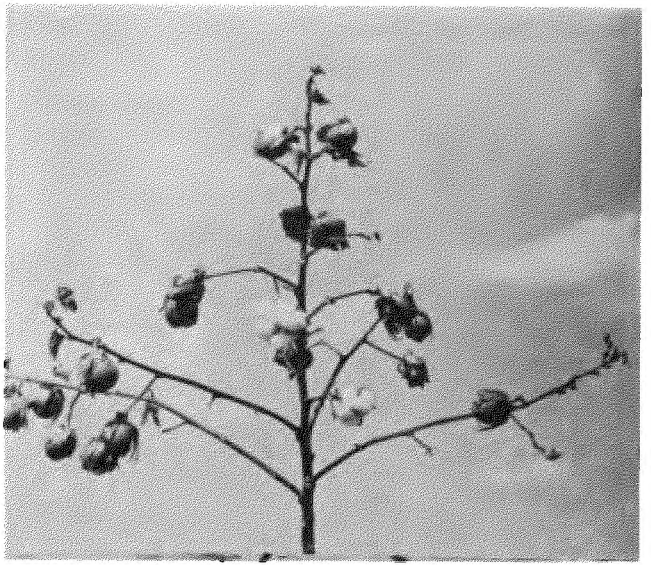
For Central and Western Oklahoma—

Lockett 140 is similar to Mebane 6801 in plant type, gin turnout, staple length, and storm resistance. Lockett 140 has a somewhat smaller boll than Mebane 6801. Both varieties are well adapted to Western Oklahoma.

For Western Oklahoma—

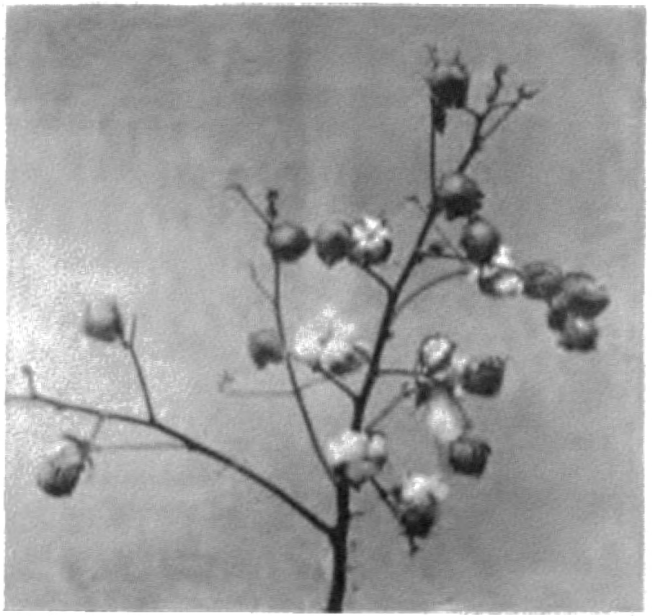
Stormproof No. 1 is a storm-resistant variety particularly well adapted to stripper harvest in Western Oklahoma. Boll size is medium. Plant type is suitable for stripping except on highly fertile soils or with thin spacing. Stormproof No. 1 usually staples 7/8 to 15/16 and cleans well at the gin.

For Western Oklahoma—



Northern Star is third choice for stripping among the recommended varieties. It has good storm resistance, but under some conditions its plant type is undesirable for stripping. This variety has a medium-size boll and usually staples 31/32.

For Central and Eastern Oklahoma—

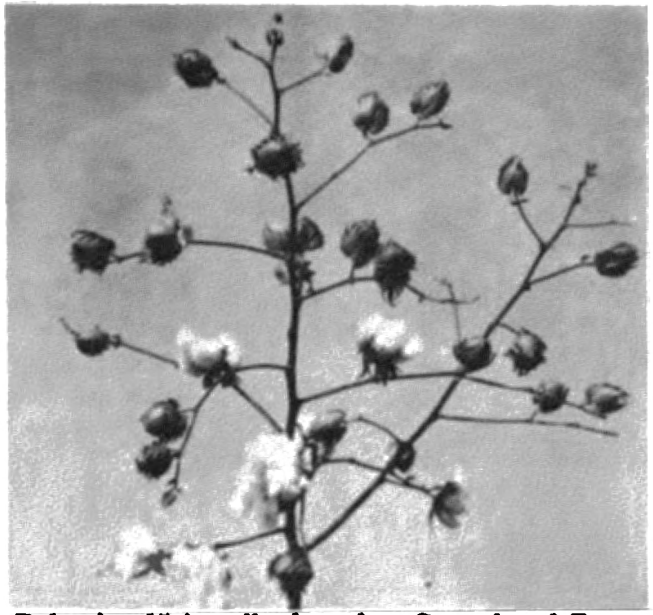


Stoneville 62 is well adapted to Central and Eastern Oklahoma because of its earliness and consistently high yields. It usually staples 1 inch and has medium-size bolls. It is well adapted to hand pulling or picking.

For Central and Eastern Oklahoma—

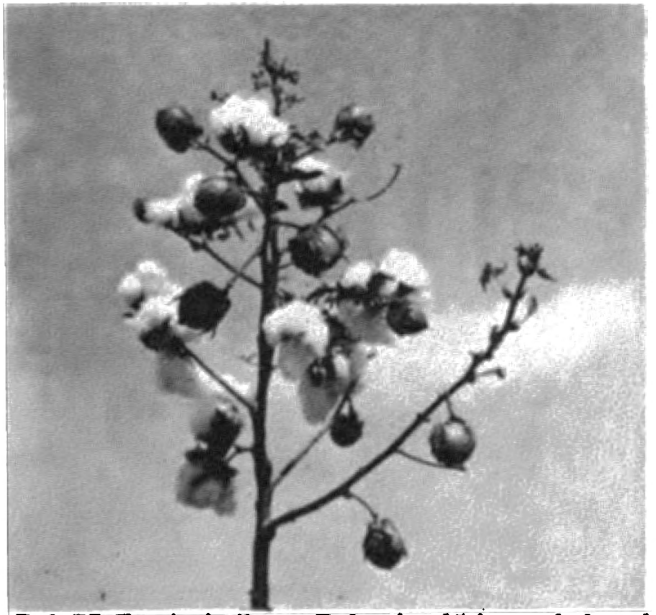
Empire is similar to Stoneville 62 in maturity and adaptation. It has a large boll, usually staples 1-1/16, and is particularly well adapted to hand picking.

For Central and Eastern Oklahoma—



Deltapine 15 is well adapted to Central and Eastern Oklahoma, particularly on highly productive soils. It has a larger plant, with more branches than Stoneville 62. It has small bolls, high gin turnout, usually staples 1-1/16, and cleans up well at the gin.

For Central and Eastern Oklahoma—



D & PL Fox is similar to Deltapine 15 in staple length and boll size, but is somewhat lower in gin turnout. Like Stoneville 62, D & PL Fox matures rapidly under Oklahoma conditions.

TIPTON

Table 1.—Average Data Obtained on 13 Varieties of Cotton Tested at Tipton, Oklahoma, During the Period 1945 Through 1951.

Variety	No. of years tested	Yield: pounds of lint per acre	Staple in 32's	Lint percent		Grams per boll	Percent picked
				Picked	Pulled		1st picking
Stoneville 62	5	383	31	37.8	28.6	5.3	76.6
Empire	4	377	33	36.8	27.8	6.4	53.6
Mebane 6801	6	375	29	40.2	31.3	6.5	48.1
Hi-Bred	7	372	27	42.0	33.4	6.0	64.2
Lockett 140	7	369	29	39.6	30.8	5.8	51.5
Deltapine 15	7	367	33	40.7	30.3	5.2	53.4
CR-2	5	343	30	42.0	32.0	5.9	60.6
CR-1	6	331	31	39.1	29.3	6.2	59.7
Lankart 57	7	322	32	38.7	29.2	7.3	50.9
Stormproof No. 1	5	321	30	37.6	29.0	5.5	47.7
Stoneville 2B	7	321	33	35.8	27.5	6.0	56.3
Northern Star	7	314	32	37.6	28.7	6.2	59.7
Dortch 1	5	303	32	35.6	26.6	7.0	53.3

LAWTON

Table 2.—Average Data Obtained on 8 Varieties of Cotton Tested at Lawton, Oklahoma, During the Period 1945 Through 1950.*

Variety	No. of years tested	Yield: pounds of lint per acre	Staple in 32's	Lint percent	Percent picked
				Picked	1st picking
Mebane 6801	5	304	29	40.8	74.4
Deltapine 15	6	298	32	41.2	78.4
Lankart 57	6	293	32	39.8	67.9
Hi-Bred	6	293	27	42.7	84.7
CR-1	5	272	30	40.5	85.2
Northern Star	6	267	32	38.7	78.9
Stoneville 2B	6	252	33	37.1	75.5
Lockett 140	5	251	29	40.1	82.3

* Stands were not obtained in 1951.

CHICKASHA

Table 3.—Average Data Obtained on 14 Varieties of Cotton Tested at Chickasha, Oklahoma, During the Period 1945 Through 1951.

Variety	No. of years tested	Yield: pounds of lint per acre	Staple in 32's	Lint percent		Grams per boll	Percent picked
				Picked	Pulled		1st picking
Hi-Bred	7	378	27	41.3	32.6	6.6	73.2
Stoneville 62	6	366	32	37.5	28.6	6.0	67.6
Empire	5	357	33	36.0	27.0	7.2	61.6
Deltapine 15	7	355	33	40.6	29.8	5.4	59.2
D & PL Fox	4	354	34	36.8	27.7	5.5	63.4
Stormproof No. 1	6	350	33	37.6	28.6	6.1	59.5
CR-1	7	338	31	38.3	28.5	7.0	64.1
CR-2	5	331	30	40.9	30.7	6.1	65.1
Lockett 140	7	326	29	38.8	29.9	6.2	68.7
Mebane 6801	7	325	29	38.7	29.4	6.8	60.6
Northern Star	7	313	32	37.1	28.0	6.6	61.4
Lankart 57	7	298	32	37.2	27.4	7.6	52.6
Dortch 1	4	302	32	35.7	26.4	7.5	57.5
Stoneville 2B	7	289	33	35.0	26.7	6.4	57.5

PERKINS

Table 4.—Average Data Obtained on 13 Varieties of Cotton Tested at Perkins, Oklahoma, During the Period 1945 Through 1951.

Variety	No. of years tested	Yield: pounds of lint per acre	Staple in 32's	Lint percent		Grams per boll	Percent picked
				Picked	Pulled		1st picking
Stoneville 62	6	343	30	36.9	28.0	5.8	60.0
D & PL Fox	5	328	32	36.2	27.5	5.2	62.9
Hi-Bred	7	318	28	40.8	32.4	6.5	66.7
Empire	5	317	32	35.5	26.6	6.8	59.7
Deltapine 15	7	308	32	38.9	28.9	5.2	56.1
CR-1	7	292	31	37.3	27.9	6.7	56.6
Mebane 6801	5	289	29	38.1	29.5	6.7	48.7
Stormproof No. 1	3	283	31	35.8	27.7	5.8	59.3
Lankart 57	6	276	31	36.7	27.8	7.8	49.6
Northern Star	6	273	33	35.7	27.0	6.7	56.3
Lockett 140	6	271	26	38.1	30.1	6.4	60.5
Dortch 1	4	270	31	35.4	26.5	7.2	46.3
Stoneville 2B	7	256	33	34.1	26.0	6.1	57.5

Table 5.—Sources of Seed of Tests Reported in this Bulletin.

Arkot 2-1	Ark. Agri. Exp. Sta.	Marianna, Ark.
CR strains	Okla. Cotton Research Sta.	Chickasha, Okla.
D & PL Fox	Delta and Pine Land Co.	Scott, Miss.
Deltapine 15	Delta and Pine Land Co.	Scott, Miss.
Dortch 1	Robert L. Dortch	Scott, Ark.
Empire	Empire Pedigreed Seed Co.	Haralson, Ga.
Hi-Bred	B. T. Summerour Seed Co.	Norcrosse, Ga.
Lankart 57	Lankart Seed Farms	Waco, Tex.
Lockett 140	Lockett Seed Co.	Vernon, Tex.
Mebane 6801	Okla. Cotton Research Sta.	Chickasha, Okla.
Northern Star	Northern Star Seed Farms	O'Brien, Tex.
Paymaster 54	Paymaster Farms	Plainview, Tex.
Stoneville 2B	Stoneville Pedigreed Seed Co.	Stoneville, Miss.
Stoneville 62	Okla. Cotton Research Sta.	Chickasha, Okla.
Stormproof No. 1	Lockett Seed Co.	Vernon, Tex.