

*Measured crop performance*

**COTTON**  
**1958**

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## 1958 COTTON VARIETY TESTS

Cotton variety trials are conducted annually on farmers' fields by the North Carolina Agricultural Experiment Station. This report presents the records of performance of cotton varieties in general use, as well as those that may be released by the breeder.

Test Locations. The tests were conducted at four locations in 1958, two in the Coastal Plain Area and two in the Piedmont.

The testing agency recognizes the cooperative spirit and civic minded service rendered by the farmers who furnished the land, prepared the soil, cultivated the crop, and aided in harvesting. The agency also recognizes the fine cooperation of the County Agents who assisted in locating test sites.

The trials were conducted at the following locations:

Union County - farm of R. W. Howey, Waxhaw, Route 1.  
County Agent Jim Marsh and assistants cooperating.

Hoke County - farm of Bobby Gibson, Red Springs.  
County Agent W. C. Williford and assistant cooperating.

Upper Coastal Plain Research Station, Rocky Mount.  
Warren Bailey, Superintendent, cooperating.

Piedmont Research Station, Salisbury, Route 6.  
J. W. Hendricks, Superintendent, cooperating.

### Agencies Sponsoring Entries.

Coker Pedigreed Seed Company, Hartsville, S. C.

Bobshaw Pedigreed Seed Company, Indianola, Mississippi

Southern Fiber Service, Mt. Gilead, N. C.

N. C. Agricultural Experiment Station

Management of Test Fields. Cultural practices, such as seedbed preparation, date of planting, fertilization, cultivation, and boll weevil control measures were in accord with good farming practices and were the same for all entries in a given test. Planting, thinning, picking and yield measurements were directly supervised by personnel of the North Carolina Agricultural Experiment Station.

Samples for number of bolls per pound, lint percentage, and staple length were obtained about two weeks prior to picking. Samples for these determinations were processed in the research laboratories of the North Carolina Agricultural Experiment Station.

Criteria Used for Evaluating Cotton Varieties. Yield of seed cotton per acre was obtained by picking six replicates of each variety. The size of plots were Hoke County, 309 square feet; Union County, 300 square feet; Rowan County, 150 square feet; and Edgecombe County, 150 square feet.

Lint percentage was determined from three samples of 75 bolls each for each variety.

Pounds of lint per acre were calculated by using the mean lint percentage of each entry and converting the pounds of seed cotton per plot to pounds of lint per plot.

Number of bolls required to make one pound of seed cotton was determined by weighing three samples each of which consisted of 75 bolls.

Staple length was determined on ginned samples by licensed cotton classers of the Cotton Division, Agricultural Marketing Service, U.S.D.A.

Growing Conditions. The growing conditions for the state as a whole this year were very good. Yields over the state were generally excellent with the state average highest on record. Due to a wet spring, the performance tests included in this bulletin were planted from one to three weeks later than usual. Lack of any large amount of boll weevil damage this year was attributed to temperatures of the past winter which were lower than usual.

Performance Records. Records of the 1958 cotton trials are given for four locations, two in the Piedmont and two in the Coastal Plain.

One year's record at a single location may not portray the true performance of a variety over a wide range of seasonal conditions. Records of longer duration are more dependable. Therefore, records on the varieties that have been evaluated for three years are also reported.

Differences in Yields. Small differences in yields should be considered cautiously since it is not possible to determine absolute performing ability.

The size of difference that may have been due to chance has been computed and listed at the end of each table of 1958 yield data as "L.S.D." meaning "least significant difference". A similar value is not listed for records of longer duration, but the level for significance will be somewhat smaller.

The measures of chance difference should remind the reader not to over emphasize small differences.

Selection of a Variety. Cotton producers should be constantly on the alert for varieties that excell in yield and other characteristics that influence more profitable production. However, individuals and communities should consider carefully the performance records before changing or bringing in new and untried varieties.

In choosing a cotton variety that is most likely to produce superior yields and qualities, a number of characteristics must be considered. For example, varieties that possess little or no wilt resistance may be very undesirable if the soil is infested with wilt organisms.

Wilt Resistance. Fifty plants in each of two replications grown in the Fusarium wilt nursery at Clayton, N. C., were scored for Fusarium wilt severity. A calculated wilt index is given in the table containing the summary of four locations. Although the level of wilt was generally low, these values are probably indicative of the varietal responses. This data is furnished by Dr. W. E. Cooper, Assistant Professor, Plant Pathology Department, and Dr. P. A. Miller, Associate Professor, Field Crops Department, N. C. State College, Raleigh, N. C.

SUMMARY OF COTTON DATA

Mean of 10 Tests

1956-1957-1958

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton
Coker 100 A Wilt BRS	575	1527	37.8	34	77
Plains	552	1462	37.7	33	70
Coker 124, 1958	550	1445	37.9	34	75
Empire	529	1365	38.1	34	64

SUMMARY OF COTTON DATA 1958

Edgecombe, Hoke, Rowan and Union Counties

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton	Fusarium Wilt Index %
*Coker 100 Wilt 55-33	578	1480	39.1	34	80	1.50
*Coker 100 Wilt 54-33	600	1473	40.4	34	79	5.50
Coker 100A (W.R.)1958	567	1470	38.8	34	75	3.25
*Coker 100 Wilt 55-46	554	1462	37.9	33	78	2.50
*Coker L. H. 54-101	567	1458	38.9	34	79	9.75
*T 317	559	1415	38.9	34	66	.50
*Coker L. H. 59-M	535	1392	38.1	34	76	.50
*Coker 100 Wilt 55-59	534	1367	39.0	34	78	.50
Moore's Special	492	1361	35.9	33	83	4.25
Plains	524	1361	38.3	33	72	2.25
*Coker 100 Wilt 60-M	534	1357	39.2	34	78	4.25
Coker 124, 1958	503	1327	37.8	34	72	7.25
*Coker 100 Wilt 55-57	516	1317	39.0	34	78	2.50
*Dixie King	508	1299	39.1	34	65	.50
Empire	492	1259	38.9	34	63	8.25
Moore's 33	421	1129	37.0	34	72	12.75
*Experimental entry						

PERFORMANCE OF COTTON ENTRIES - 1958

Edgecombe County

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton
*Coker 100 Wilt 55-33	825	2038	40.5	34	79
Plains	793	2011	39.4	34	69
*Coker 100 Wilt 60-M	815	2011	40.5	34	74
*Coker 100 Wilt 54-33	860	1963	43.9	35	76
Coker 100 A (W.R.) 1958	777	1949	39.9	34	71
*Coker L. H. 54-101	745	1877	39.7	34	77
Moore's Special	678	1874	36.2	34	83
*Coker L. H. 59-M	729	1842	39.6	35	79
*Coker 100 Wilt 55-46	718	1828	39.3	34	79
Coker 124, 1958	704	1820	38.8	35	69
Moore's 133	694	1815	38.2	34	65
*T 317	713	1803	39.5	34	63
*Coker 100 Wilt 55-59	715	1769	40.5	34	78
*Coker 100 Wilt 55-57	696	1729	40.3	34	79
Empire	683	1673	40.9	34	61
*Dixie King	672	1648	40.7	34	65
L.S.D. (.05)	92	230			

Hoke County\*\*

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton
Coker 100 A (W.R.) 1958	360	956	39.0	33	80
*Coker L. H. 54-101	364	921	39.5	34	81
*Coker 100 Wilt 55-46	343	884	38.8	33	84
*Coker 100 Wilt 54-33	334	844	39.6	33	84
*Dixie King	333	815	40.8	34	67
*Coker 100 Wilt 55-57	309	794	38.9	33	77
*Coker 100 Wilt 55-33	313	791	39.6	34	83
*Coker L. H. 59-M	308	788	39.1	34	79
*Coker 100 Wilt 55-59	298	761	39.2	34	82
*T 317	280	738	37.9	34	67
Empire	277	720	38.4	34	65
Coker 124, 1958	284	747	38.0	34	76
*Coker 100 Wilt 60-M	283	720	39.4	34	85
Plains	259	680	38.1	33	76
Moore's Special	232	658	35.3	33	87
Moore's 33	166	457	36.3	34	85
L.S.D. (.05)	86	220			

\* Experimental entry

\*\* Harvested with mechanical picker

PERFORMANCE OF COTTON ENTRIES - 1958

Rowan County

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton
*T 317	495	1339	37.0	34	67
*Coker 100 Wilt 55-46	460	1285	35.8	33	72
Moore's Special	424	1221	34.7	33	80
*Coker 100 Wilt 54-33	450	1172	38.3	34	78
*Coker L. H. 54-101	433	1145	37.8	33	78
*Coker 100 Wilt 60-M	423	1135	37.3	33	77
Coker 100 A (W.R.) 1958	405	1102	38.6	33	74
*Coker 100 Wilt 55-57	414	1102	37.6	34	76
*Coker L. H. 59-M	375	1097	34.2	34	71
Plains	395	1081	36.7	33	71
*Coker 100 Wilt 55-59	385	1033	37.3	34	77
*Coker 100 Wilt 55-33	376	979	38.5	33	79
Coker 124, 1958	357	968	36.9	34	68
Empire	357	941	38.0	33	63
*Dixie King	339	909	37.7	33	67
Moore's 33	308	850	36.2	32	62
<u>L.S.D. (.05)</u>	<u>N.S.</u>	<u>N.S.</u>			

Union County\*\*

Entries	Lint Lbs/A	Seed Cotton Lbs/A	Lint %	Staple Length 32nd In.	Bolls/Lb of Seed Cotton
*Coker 100 Wilt 55-33	796	2111	37.7	34	78
*Coker 100 Wilt 54-33	754	1911	39.8	34	77
*Coker 100 Wilt 55-59	739	1904	38.8	34	76
*Coker L. H. 54-101	727	1889	38.5	34	78
Coker 100 A (W.R.) 1958	726	1876	39.5	34	76
*Coker 100 Wilt 55-46	693	1849	37.5	33	78
*Coker L. H. 59-M	727	1841	39.5	34	74
*Dixie King	687	1825	37.6	34	60
*T 317	749	1781	41.1	34	67
Coker 124, 1958	666	1774	37.5	34	75
Empire	650	1700	38.2	34	62
Moore's Special	634	1691	37.5	33	83
Plains	650	1672	38.8	33	71
*Coker 100 Wilt 55-57	644	1641	39.3	34	79
*Coker 100 Wilt 60-M	616	1560	39.5	33	76
Moore's 33	517	1395	37.1	34	76
<u>L.S.D. (.05)</u>	<u>111</u>	<u>287</u>			

\* Experimental entry

\*\* Harvested with mechanical picker