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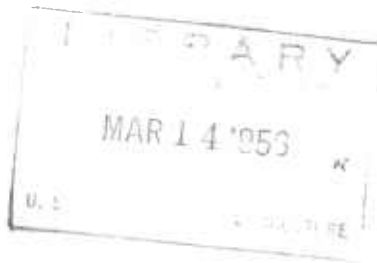
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# Summary of Fiber and Spinning Test Results for Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955



Washington, D. C. February 1956

UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

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FIBER AND SPINNING TEST RESULTS FOR SOME VARIETIES OF COTTON  
GROWN BY SELECTED COTTON IMPROVEMENT GROUPS  
CROP OF 1955

PURPOSE OF STUDY

Results of tests on fiber and manufacturing properties of the principal varieties of cotton produced commercially by cotton improvement groups for the 1955 crop are summarized in this report. Test data are included that were published in monthly reports from August 1955 through January 1956. The cottons for which test results are reported are grouped according to processing procedures employed in making the spinning tests. This facilitates comparisons of the performance in processing of the principal varieties of cotton as produced in the various areas throughout the Cotton Belt.

Some of the varieties represented in the 1955 crop are reported for the same areas that were included in studies on the crops of 1946 through 1954. This affords comparisons of test results over a 10-year period in some instances. Thus, an indication of the variation in fiber and spinning qualities of specific varieties grown in the same areas for 10 successive years may be observed by making comparison of results presented in reports for previous years (2, 3, 4, 5, 6, 7, 8, 9, 10). <sup>1/</sup> However, the comparability of spinning test results for the first 4 years is affected by the carding rates employed in tests for the last 6 crops, as explained in a later paragraph.

Season averages for selected fiber properties and processing results from 1946 to 1955 are shown in table 1. The averages apply only to upland cotton. Data with respect to acreages planted to the respective upland varieties (11) were used for the purpose of weighting in computing the season averages.

SELECTION OF AREA AND SAMPLES

The locations of the areas from which samples were tested in this study are shown in figure 1. An effort was made to include only those areas that were expected in each instance, to produce a minimum of 10,000 bales of a specific variety. Likewise, an effort was made to obtain within each market area the samples for testing from a gin that ginned the specified variety exclusively.

As a practical matter, it was sometimes difficult to find areas that met both of these conditions. In many of the areas that met the conditions desired with respect to volume of production, none of the gins were ginning the selected variety exclusively. Some areas that met conditions with respect to standardized production of a single variety, on

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<sup>1/</sup> Underscored numbers in parentheses refer to Literature Cited, page 51.

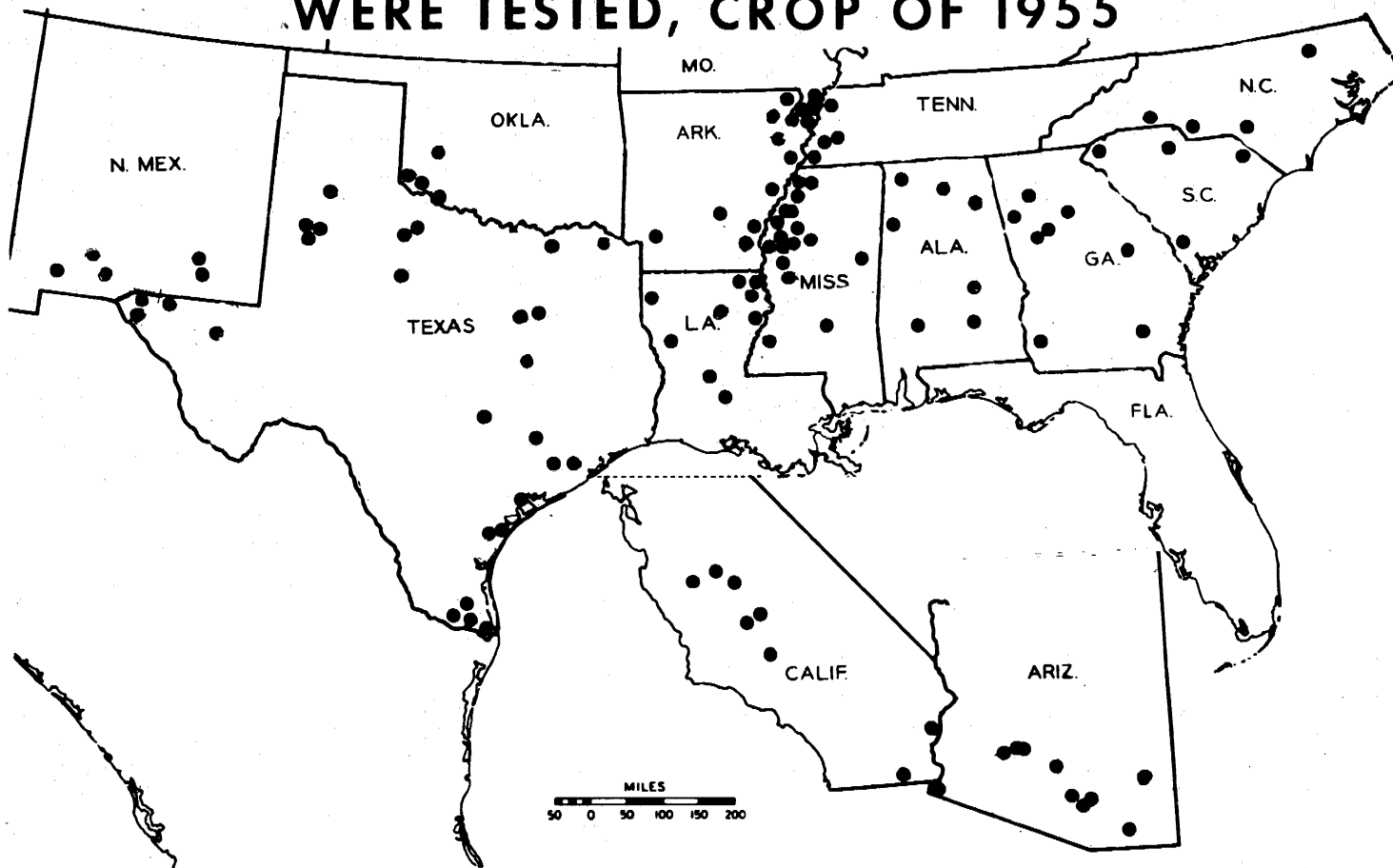
Table 1.--Average test results for specified fiber properties and factors of processing performance for upland cotton in the United States, crops of 1946 through 1955

Test item	Crop year									
	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
<b>FIBER TEST:</b>										
Length (Fibrograph)										
Upper half mean.....inches:	1.01	0.99	1.01	1.03	1.05	1.02	1.04	1.06	1.04	1.03
Uniformity ratio.....	80	78	79	79	79	79	80	80	80	80
Fineness.....ug./in. 1/:	4.7	4.7	4.4	4.6	4.5	4.1	4.2	4.2	4.1	4.2
Maturity.....index 1/:	81	80	79	85	81	79	79	79	79	77
Tensile strength.....index 2/:	92	95	96	92	89	100	101	98	100	100
<b>PROCESSING:</b>										
Neps..per 100 sq.in. of card web:	18	16	27	29	25	26	16	16	14	13
22s yarn skein strength...pounds:	107	107	107	105	102	110	111	116	113	115
22s yarn appearance grade..index:	109	110	104	107	106	109	109	108	106	107

1/ Maturity values were determined by the Microprojector method for 1946-50; by the Causticaire method subsequent to 1950.

2/ An index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

# LOCATIONS OF COTTON IMPROVEMENT GROUPS FROM WHICH SELECTED VARIETIES WERE TESTED, CROP OF 1955



U. S. DEPARTMENT OF AGRICULTURE

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Figure 1.

a gin community basis, fell somewhat short of the minimum volume of production specified. This being the case, it was necessary in some instances to obtain test samples from gins that ginned some cotton of other varieties. In a few instances, market areas were included which, although meeting requirements with respect to standardization of production of a single variety, fell short of the volume of production required for most effective merchandising of cotton. This was particularly true with respect to some areas producing longer staples for use in specialized products.

The selection of areas was made in all instances after consultation with Extension Service workers, breeders, cotton research agencies, and others who were familiar with the conditions in the respective areas with regard to source and purity of seed planted, degree of standardization of production, and other factors affecting suitability of the respective areas for the purposes of this study. Spot checks were made in each area suggested, in order to ascertain firsthand the actual conditions prevailing during the 1955-crop year as a basis for final selection of areas and samples. To assure the selection of samples that were truly representative of the respective varieties, all samples for testing were obtained from bales produced by growers who were known to have planted pure seed of the specified variety. No samples were included in the test lots that were produced from seed more than 3 years removed from the breeder.

For the most part, the areas included in the study produce sufficiently large quantities of cotton of the specified varieties to permit merchants or manufacturers to obtain lots of even-running grade and staple. The test lots were selected to represent the grade and staple of the crop predominating at the time of selection of the samples. Obviously, other qualities are available in each area as a result of normal seasonal and soil variations. Furthermore, many of the market areas also produce some cotton of other varieties.

The spinning test lots represent composite samples from a considerable number of individual bales of the same grade and staple length, which had been submitted for classification by producers organized for cotton improvement. After classification had been made, samples representing the most common grade and staple length for each area at that time were reserved and grouped. The groups of samples sufficiently large to provide about 10 pounds of lint, were then given a review classification in order to assure a spinning sample composited from cotton of even-running grade and staple length. These even-running lots of bale samples were then shipped from the various classing offices to the spinning laboratories operated by the Cotton Division. The method of collecting samples for this study provided a uniform sample of cotton representative of the variety and quality prevailing in the immediate producing area of each gin at the time the samples were obtained.

#### TEST PROCEDURES

Small pinches of cotton were taken from each bale sample included in a spinning test lot and blended into a sliver in accordance with the

standard laboratory procedure for fiber tests. The fiber tests were performed under controlled atmospheric conditions at 65 percent  $\pm$  2 relative humidity and  $70^{\circ}$  F  $\pm$  2. The tests included determination of length, length uniformity, tensile strength, fineness in terms of weight per inch of fiber and maturity.

The classers' samples finally selected from each area were thoroughly composited by hand mixing to provide the spinning test sample. This mixing was done preparatory to placing the lot on the feeding apron of the first process picker.

Spinning tests were performed by a technique developed in the laboratories of the Cotton Division for testing small samples. Each test lot was passed through standard-type textile machines. The mixing of the cotton in this procedure was comparable to the usual commercial manufacturing that employs a similar machine organization. The spinning test procedures used for processing the lots of cotton that comprise this study are given in table 11, page 49.

A revised procedure for carding the test lots was adopted in 1950. Formerly, all cotton except those of extra-long staple were carded at a rate of 9-1/2 pounds per hour. The processing procedure now conforms more nearly with commercial mill carding practices for the respective types of cotton. Test results for the 1955 crop cottons are based on four rates of carding; Results for the cottons now being processed at 9-1/2 pounds per hour, which include approximately three-fourths of all the test lots, can be compared directly with results reported for the same varieties carded at 9-1/2 pounds per hour in earlier studies. In evaluating the results of tests on the various lots, only those for which processing is comparable should be used for direct comparisons.

On the basis of past performance, the varieties were grouped according to the staple length expected in their specified areas of growth. These groups were carded at production rates and spun into numbers that reflect the manufacturing value of the varieties tested. In general, the rates of carding and yarn numbers spun from the 1955 crop are as follows:

Group 1.--15/16 inch and shorter staple, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns.

Group 2.--31/32 through 1-1/16 inches, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarns.

Group 3.--1-3/32 through 1-1/4 inches, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarn.

Group 4.--1-9/32 inches and longer, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns.



Some of the varieties scheduled for testing according to the organization for Group 2 are used to a considerable extent for knitting and better types of dress goods. Hence, test lots from one or more typical areas producing the varieties were processed in accordance with the organization for Group 3. These include the following varieties: A-44; Acala 4-42; Coker 100 W; Deltapine 15; Delfos 9169; and Stoneville 2 B. All other test lots for these varieties were processed at 9-1/2 pounds per hour.

Four market areas producing extra long staple varieties were sampled. As extra-long staple cottons are used exclusively in fine combed cotton goods, they were carded at the relatively slow carding rate of 4-1/2 pounds per hour and spun into combed 50s and 80s yarns only.

#### TEST RESULTS AND ANALYSES

Results for fiber and spinning tests are reported in essentially the same form as that used for previous crops except as follows:

1. Fiber strength results are reported for both 1/8-inch gauge testing and 0 gauge testing. The fiber test results at 1/8-inch gauge spacing are expressed in relative terms as an index.
2. The carding rate for the cottons included in Group 4 was changed from 3-1/2 to 4-1/2 pounds per hour for the 1955 crop. This change was made because a recent survey indicated that 4-1/2 pounds per hour conforms more nearly with present commercial practices in processing extra long staple cottons.
3. Strength of 50s mercerized combed yarns have been added for Groups 3 and 4.
4. Yarn uniformity index results have been omitted for the 1955 crop.
5. Comparison by states of the quality of the 1954 and 1955 crops.

A comparison of the quality of the 1955 crop with that of former years may be made by referring to table 1, page 2. The general trend indicates that there has been an improvement in cotton quality during the last 10 years. American farmers are growing cotton which is longer, stronger, and finer fibered than that produced a few years ago. The changes in fiber quality--which have been reflected by an increase in average yarn strength--are due to the work of cotton breeders, to improved production practices, and to increased use of one-variety programs by communities and states.

Detailed test results for each of the cottons, including grades and staple lengths selected as representative for each market area and harvest period, are shown in tables 2 through 5. Tests performed in the spinning laboratories support the generally accepted facts that decreasing

the card production rate results in fewer neps, better yarn appearance grades, and the removal of more card waste. Therefore, direct comparisons should be made of results for only those lots of cotton which were carded at the same rates of production. The results shown in tables 2 through 5 have been organized to facilitate such comparisons. Tables 6, 7, and 8 show average test results for specified varieties. Comparative fiber and spinning test results for the 1954 and 1955 crops are shown by states and period of harvest in table 9.

The average quality of all upland varieties included in the study declined as the harvesting season progressed. The grade index of upland ( Middling = 100 ) was reduced from 100 for the early-season samples to 96 and 93 for the midseason and late-season samples respectively. This decrease in grade was accompanied by an increase in picker and card waste of from 8.3 percent for the early season samples to 8.7 and 9.5 percent for midseason and late-season samples, respectively. The reduction in grade index as the harvesting season progressed was also apparent in the color value of cleaned lint from the Shirley Analyzer as measured by the Nickerson-Hunter Cotton Colorimeter. The average reflectance ( $R_d$ ) ranged from 76.7 for the early harvested samples down to 76.1 and 75.3 for the midseason and late-season cottons, and the degree of yellowness (+b) from 8.9 for the early season samples to 8.7 and 8.4 for the midseason and late-season samples, respectively.

A decrease in yarn skein strength of 22s yarn, from 118 pounds for the early season cottons to 117 and 113 for the midseason and late-season cottons, was associated with a slight reduction in the average staple length of approximately  $1/64$  inch and a small reduction of fiber tensile strength from an index of 102 for the early harvested cottons down to 100 for the late-season cottons.

Fiber fineness (weight per inch of fiber) decreased from 4.3 micrograms for the early season samples to 3.9 micrograms for the late harvested samples. This decrease in fiber fineness was automatically reflected in a slight decline in fiber maturity index value during this period from 78 for the early harvested cottons down to 76 for the late-season cottons. The average number of neps observed in the card web increased from 11 per 100 square inches of card web for the early season samples to 14 for the late-season samples. The reduced grades and increased neps of the late-harvested cottons were reflected by yarn appearance, which declined slightly less than  $1/2$  grade during the harvesting season.

Varieties of cotton with staple lengths ranging from  $1-3/32$  inches to  $1-1/4$  inches were carded at  $6-1/2$  pounds per hour, a rate that is customary in commercial practice, and were spun into both carded and combed 22s and 50s yarns. The strength of the combed yarns averaged slightly over 9 percent greater than that of the carded yarns and the strength of the 50s combed mercerized yarns averaged approximately 4 percent greater than that of the grey 50s combed yarns processed from cottons in this group. The yarn appearance grade for the combed yarns averaged 10 index points or  $1/2$  grade higher than that of the carded yarns.

Varieties of cotton with staple lengths ranging from 1-9/32 inches and longer, which include the American Egyptian cottons, were carded at 4-1/2 pounds per hour for the 1955 crop and spun into 50s and 80s combed yarns. Twelve lots of Pima S-1 were processed in connection with this staple length group. The test results on these cottons compared favorably with the Pima S-1 lots that were processed from the 1954 crop. The results showed a slight increase in grade and yarn skein strength over the samples processed the previous year with all other quality factors averaging about the same for the two years. The strength of the 50s mercerized combed yarns averaged 8.6 percent greater than that of the 50s grey combed yarns.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 12-1/2 pounds per hour, crop of 1955

Test item and period of harvest	Hibred	Lockett SP-1	Paymaster 54	Rowden
	Oklahoma	Texas		
	Davidson	Lubbock	Plainview	Corsicana
<b>RAW COTTON QUALITY</b>				
Grade				
Early.....	M+	SIM	SMLtp	M
Midseason.....	SIMltp	SIM	SMLtp	M
Late.....	SIMltp	No data	SIMltp	SIM
Staple length (inches)				
Early.....	7/8	29/32	29/32	31/32
Midseason.....	7/8	29/32	31/32	31/32
Late.....	13/16	-	29/32	31/32
Fiber length (Fibrograph)				
Upper half mean (inches)				
Early.....	.83	.88	.90	.91
Midseason.....	.84	.87	.97	.92
Late.....	.83	-	.89	.93
Uniformity ratio				
Early.....	80	80	80	80
Midseason.....	81	80	80	78
Late.....	82	-	80	80
Fiber fineness (wt. per inch, micrograms) <u>1</u> :				
Early.....	5.0	4.4	4.3	5.5
Midseason.....	4.9	4.0	3.8	5.3
Late.....	4.9	-	2.4	5.5
Fiber maturity index <u>1</u> :				
Early.....	81	73	79	83
Midseason.....	78	74	75	82
Late.....	78	-	44	83
Fiber tensile strength (Pressley)				
1/8" gauge (index) <u>2</u> :				
Early.....	97	83	92	89
Midseason.....	88	100	99	96
Late.....	89	-	96	97
Zero gauge (1,000 p.s.i.)				
Early.....	83	68	72	84
Midseason.....	77	75	71	81
Late.....	79	-	66	82
Nonlint content (percent)				
Early.....	2.8	3.0	2.1	2.5
Midseason.....	3.5	3.8	1.9	3.0
Late.....	3.0	-	7.6	3.4
Color of cleaned lint (R <sub>a</sub> /b) <u>3</u> :				
Early.....	75.2/9.5	72.0/9.4	76.5/9.4	76.5/9.1
Midseason.....	71.5/9.5	80.5/8.3	76.9/9.4	77.0/8.8
Late.....	71.3/9.5	-	74.0/10.4	73.2/9.0
Sugar content (percent)				
Early.....	0.3	0.2	0.1	0.1
Midseason.....	0.1	0.2	0.3	0.2
Late.....	0.1	-	0.2	0.1
<b>PROCESSING RESULTS</b>				
Picker and card waste (percent)				
Early.....	8.7	8.8	7.9	8.2
Midseason.....	9.3	8.8	7.5	9.4
Late.....	9.1	-	14.4	10.0
Neps per 100 sq. in. of card web				
Early.....	7	19	14	9
Midseason.....	7	17	14	10
Late.....	5	-	36	7
Yarn skein strength				
8s (pounds)				
Early.....	341	281	344	332
Midseason.....	293	322	351	326
Late.....	288	-	324	294
22s (pounds)				
Early.....	104	87	103	101
Midseason.....	89	96	106	99
Late.....	89	-	98	90
Average break factor <u>4</u> :				
Early.....	2508	2081	2509	2439
Midseason.....	2115	2344	2370	2393
Late.....	2131	-	2374	2166
Yarn appearance grade				
8s				
Early.....	B+	B+	B	B+
Midseason.....	B+	B	B	B+
Late.....	B	-	C	B+
22s				
Early.....	B	B	B	B
Midseason.....	B	C+	C+	B
Late.....	C+	-	D	B
Yarn appearance index <u>5</u> :				
Early.....	115	115	110	115
Midseason.....	115	105	105	115
Late.....	105	-	80	115

1/ Determined by the Causticaire method using the Micronaire instrument.

2/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

3/ Determined by the Nickerson-Runter Colorimeter on lint cleaned by Shirley Analyzer.

4/ Based on yarn skein strength of the two yarn numbers spun.

5/ Based on two numbers spun. Index of average quality equals 100.

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955

Test item and period of harvest	Acala 4-42						
	California						
	Bakersfield	Blythe	Corcoran	El Centro	Firebaugh	Madera	Tulare
<b>RAW COTTON QUALITY</b>							
Grade							
Early	SM	SM	M+	SM	SM	SM	SM
Midseason	SM	SM	SM	SIM	SIM+	SM	SIM
Late	M	M	SIM	SIM	SIM	SMlt.G	SIM+
Staple length (inches)							
Early	1-3/32	1-1/16	1-1/8	1-3/32	1-1/8	1-3/32	1-3/32
Midseason	1-3/32	1-3/32	1-3/32	1-3/32	1-1/8	1-3/32	1-1/16
Late	1-3/32	1-1/16	1-1/16	1-1/16	1-1/16	1-3/32	1-1/16
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early	1.07	1.05	1.06	1.04	1.09	1.06	1.04
Midseason	1.08	1.07	1.06	1.09	1.08	1.02	1.06
Late	1.08	1.10	1.07	1.07	1.08	1.04	1.08
Uniformity ratio							
Early	79	79	80	79	80	80	79
Midseason	80	80	79	81	80	80	79
Late	80	79	81	81	81	80	80
Fiber fineness (wt. per inch, micrograms) 1/							
Early	4.6	4.4	4.4	4.3	4.2	4.3	4.4
Midseason	4.2	4.3	4.1	4.3	4.1	4.2	4.1
Late	4.1	3.9	3.9	4.2	3.8	3.9	3.9
Fiber maturity index 1/							
Early	79	79	78	79	81	78	78
Midseason	80	79	79	79	79	81	79
Late	79	78	78	81	79	77	78
Fiber tensile strength (Presslay)							
1/8" gauge (index) 2/							
Early	111	113	118	122	113	115	112
Midseason	111	117	107	119	114	115	109
Late	105	118	106	115	107	111	108
Zero gauge (1,000 p.s.i.)							
Early	91	88	91	94	91	93	93
Midseason	91	89	89	93	85	89	87
Late	86	87	85	93	81	88	83
Nonlint content (percent)							
Early	2.1	2.9	2.9	3.0	2.0	2.6	2.7
Midseason	2.2	2.4	2.7	3.7	4.4	2.6	3.4
Late	6.0	3.4	5.0	4.4	3.7	3.4	4.2
Color of cleaned lint (R <sub>4</sub> /b) 3/							
Early	79.5/8.7	79.5/8.7	80.0/8.1	79.5/8.3	83.0/8.0	80.4/8.0	78.5/8.3
Midseason	81.5/7.8	80.0/8.2	80.2/7.8	78.1/7.7	77.5/7.8	79.0/7.9	76.5/7.6
Late	78.5/7.8	79.8/8.4	76.5/7.8	77.0/8.2	76.5/7.0	75.7/7.5	77.0/7.9
Sugar content (percent)							
Early	0.3	0.2	0.2	0.1	0.3	0.3	0.1
Midseason	0.2	0.2	0.3	0.2	0.3	0.3	0.3
Late	0.0	0.4	0.3	0.2	0.3	0.2	0.4
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early	8.2	8.1	7.5	7.0	7.1	6.9	7.9
Midseason	7.8	7.3	8.5	8.5	9.6	7.3	10.5
Late	7.6	8.2	10.6	8.9	8.9	8.0	9.8
Neps per 100 sq. in. of card web							
Early	15	13	13	9	9	10	12
Midseason	15	14	10	9	8	6	14
Late	12	13	11	8	8	6	11
Yarn skein strength							
22s (pounds)							
Early	127	122	138	127	130	134	124
Midseason	130	125	129	134	130	130	118
Late	123	118	121	129	130	127	118
50s (pounds)							
Early	45	42	48	44	45	46	42
Midseason	45	43	45	46	45	46	41
Late	44	40	42	45	46	45	41
Average break factor 4/							
Early	2522	2392	2718	2497	2555	2624	2414
Midseason	2555	2450	2544	2624	2555	2580	2323
Late	2453	2298	2381	2544	2580	2522	2323
Yarn appearance grade							
22s							
Early	C+	B	B	B	C+	B	C+
Midseason	C+	B	B	B	B	B	C+
Late	C+	C	B	C+	C+	B	C+
50s							
Early	C	C	C+	C+	C+	C+	D+
Midseason	D+	C	C	C+	C+	C+	D
Late	C	D+	C+	C	C	C+	C
Yarn appearance index 5/							
Early	95	100	105	105	100	105	90
Midseason	90	100	100	105	105	105	85
Late	95	85	105	95	95	105	95

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, 'crop of 1955--Continued

Test item and period of harvest	A-44					Bobshaw 1-A	Coker 100 W
	Arizona					Mississippi	Alabama
	Buckeye	Chandler	Eloy	Phoenix	Yuma	Indianola	Monteville
<b>RAW COTTON QUALITY</b>							
Grade							
Early.....	M	M	M	M	M	M+	M+
Midseason.....	M	M	M	SM	M	SIM	M
Late.....	M	M	M	M	M	No data	M
Staple length (inches)							
Early.....	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/32	1-1/16
Midseason.....	1-1/16	1-1/16	1-1/16	1-1/16	1-3/32	1-1/16	1-1/16
Late.....	1-1/16	1-1/16	1-1/16	1-1/16	1-3/32	-	1-1/32
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early.....	1.04	1.06	1.05	1.07	1.07	1.02	1.05
Midseason.....	1.06	1.05	1.04	1.05	1.08	1.09	1.05
Late.....	1.08	1.08	1.04	1.07	1.06	-	1.01
Uniformity ratio							
Early.....	79	81	79	79	79	80	81
Midseason.....	81	80	81	80	81	79	82
Late.....	80	80	79	80	79	-	80
Fiber fineness (wt. per inch, micrograms) 1/							
Early.....	4.0	4.3	4.1	4.3	4.2	5.2	4.3
Midseason.....	4.0	4.0	3.6	3.7	4.2	4.4	4.4
Late.....	3.8	3.9	3.7	3.4	4.0	-	4.0
Fiber maturity index 1/							
Early.....	80	79	78	80	78	85	76
Midseason.....	80	79	77	77	78	78	78
Late.....	79	77	77	72	77	-	79
Fiber tensile strength (Pressley)							
1/8" gauge (index) 2/							
Early.....	111	112	109	105	105	106	99
Midseason.....	112	115	111	112	111	104	98
Late.....	111	113	111	113	113	-	106
Zero gauge (1,000 p.s.i.)							
Early.....	90	84	84	82	85	85	76
Midseason.....	85	88	86	87	90	82	74
Late.....	85	86	84	86	92	-	82
Nonlint content (percent)							
Early.....	4.6	2.9	3.5	3.9	3.1	3.6	2.2
Midseason.....	5.2	3.0	3.8	3.6	3.0	4.5	2.6
Late.....	3.8	3.0	4.2	4.0	3.5	-	2.5
Color of cleaned lint (R <sub>4</sub> /b) 3/							
Early.....	77.5/8.8	76.0/9.0	76.5/9.0	75.5/9.0	77.0/9.1	75.5/9.1	78.7/8.9
Midseason.....	76.0/8.3	78.0/8.4	79.0/8.4	79.1/8.6	76.0/8.5	77.2/8.6	77.5/8.9
Late.....	76.3/8.9	79.5/8.0	78.0/8.7	78.5/8.2	78.5/8.1	-	76.7/8.0
Sugar content (percent)							
Early.....	0.3	0.2	0.2	0.2	0.2	0.1	0.2
Midseason.....	0.1	0.3	0.3	0.2	0.3	0.2	0.3
Late.....	0.2	0.2	0.5	0.4	0.2	-	0.2
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early.....	10.7	8.2	8.3	10.6	9.7	9.3	7.3
Midseason.....	9.3	8.2	7.8	9.2	8.2	10.1	6.7
Late.....	9.3	8.7	8.5	8.2	8.1	-	6.2
Neps per 100 sq. in. of card web							
Early.....	14	11	15	13	13	7	9
Midseason.....	11	13	15	18	16	24	15
Late.....	13	9	10	21	14	-	8
Yarn skein strength							
22s (pounds)							
Early.....	124	113	118	103	105	116	125
Midseason.....	118	121	124	124	117	106	126
Late.....	117	125	125	123	124	-	124
50s (pounds)							
Early.....	42	40	40	35	36	39	44
Midseason.....	40	41	41	43	41	36	43
Late.....	41	44	41	42	41	-	44
Average break factor 4/							
Early.....	2414	2243	2298	2008	2055	2251	2475
Midseason.....	2298	2356	2389	2439	2312	2066	2461
Late.....	2312	2475	2400	2403	2389	-	2464
Yarn appearance grade							
22s							
Early.....	C+	B	C+	C+	C+	B	B
Midseason.....	C+	B	C	C+	C+	C+	C+
Late.....	C	B	B	C	C+	-	B
50s							
Early.....	D+	C	C	C	C	C+	C+
Midseason.....	C	C	C	D	D+	D+	C+
Late.....	D+	C	C	D	D+	-	B
Yarn appearance index 5/							
Early.....	90	100	95	95	95	105	105
Midseason.....	95	100	100	85	90	90	100
Late.....	85	100	100	80	90	-	110

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Coker 100 W						
	Alabama			Georgia			
	Thomasville	Troy	Wetumpka	Arlington	Baxley	Cartersville	Jonesboro
<b>RAW COTTON QUALITY</b>							
<b>Grade</b>							
Early.....	M	M	SM	M	M	M+	M
Midseason.....	M	M	M	SIM+	SIM	M	M
Late.....	IM+	SIM	M	SIM	SIM	IM+	SIM+
<b>Staple length (inches)</b>							
Early.....	1-1/16	1-1/16	1-1/16	1-1/32	1-1/16	1-1/16	1-1/16
Midseason.....	1-1/16	1-1/16	1-1/16	1-1/32	1-1/16	1-1/16	1-1/32
Late.....	1-1/16	1-1/16	1-1/16	1-1/32	1-1/16	1-1/32	1-1/32
<b>Fiber length (Fibrograph)</b>							
<b>Upper half mean (inches)</b>							
Early.....	1.07	1.06	1.09	1.05	1.06	1.07	1.02
Midseason.....	1.12	1.07	1.00	1.03	1.06	1.06	1.01
Late.....	1.09	1.05	1.07	1.03	1.03	1.06	1.03
<b>Uniformity ratio</b>							
Early.....	80	82	83	82	81	80	81
Midseason.....	81	79	78	80	80	80	81
Late.....	81	77	79	80	75	80	81
<b>Fiber fineness (wt. per inch, micrograms) 1/</b>							
Early.....	4.0	4.4	4.4	4.6	4.2	4.4	4.2
Midseason.....	4.4	4.2	4.0	4.3	4.3	4.2	4.1
Late.....	4.3	4.4	4.1	4.2	4.4	3.9	4.3
<b>Fiber maturity index 1/</b>							
Early.....	77	79	79	81	79	80	76
Midseason.....	79	77	75	80	78	77	76
Late.....	77	76	75	79	78	76	80
<b>Fiber tensile strength (Pressley)</b>							
<b>1/8" gauge (index) 2/</b>							
Early.....	102	93	99	102	97	104	103
Midseason.....	91	95	102	98	86	96	96
Late.....	100	93	100	94	85	99	92
<b>Zero gauge (1,000 p.s.i.)</b>							
Early.....	79	73	75	79	76	79	79
Midseason.....	74	73	78	79	73	70	78
Late.....	73	76	75	75	74	73	78
<b>Nonlint content (percent)</b>							
Early.....	2.6	2.5	2.0	3.7	2.8	1.7	2.1
Midseason.....	3.0	2.7	2.5	4.4	2.8	1.8	2.4
Late.....	4.5	2.9	2.7	5.9	3.0	4.5	2.8
<b>Color of cleaned lint (R<sub>d</sub>/b) 3/</b>							
Early.....	78.0/8.6	75.2/9.4	77.0/9.0	74.5/9.0	75.2/9.4	75.8/8.9	77.5/9.2
Midseason.....	76.5/8.8	76.5/8.8	78.0/8.6	74.5/8.8	73.5/8.6	76.5/8.6	77.0/9.1
Late.....	74.0/8.8	75.0/9.0	78.3/8.4	79.0/9.0	70.5/8.8	75.5/8.0	76.0/8.7
<b>Sugar content (percent)</b>							
Early.....	0.2	0.3	0.3	0.1	0.1	0.3	0.2
Midseason.....	0.1	0.2	0.2	0.2	0.0	0.2	0.2
Late.....	0.2	0.2	0.3	0.1	0.0	0.1	0.1
<b>PROCESSING RESULTS</b>							
<b>Picker and card waste (percent)</b>							
Early.....	7.0	6.8	6.2	8.3	6.9	6.2	6.9
Midseason.....	6.1	6.7	6.9	8.9	7.7	6.9	6.6
Late.....	9.4	8.0	7.7	8.7	7.1	9.0	7.6
<b>Neps per 100 sq. in. of card web</b>							
Early.....	21	10	12	19	12	9	10
Midseason.....	14	8	8	13	10	19	12
Late.....	15	16	21	16	18	17	8
<b>Yarn skein strength</b>							
<b>22s (pounds)</b>							
Early.....	123	112	116	111	115	122	124
Midseason.....	117	112	121	114	107	120	124
Late.....	115	108	119	112	105	117	116
<b>50s (pounds)</b>							
Early.....	44	40	42	39	41	44	43
Midseason.....	40	39	43	40	38	43	44
Late.....	41	38	43	40	37	42	40
<b>Average break factor 4/</b>							
Early.....	2444	2234	2324	2194	2286	2442	2439
Midseason.....	2287	2207	2406	2266	2127	2395	2464
Late.....	2290	2138	2384	2232	2080	2337	2276
<b>Yarn appearance grade</b>							
<b>22s</b>							
Early.....	C+	B	B	B	C+	B	C+
Midseason.....	B+	B	B	B+	B	B	B
Late.....	C+	B	C+	B	C+	C+	B+
<b>50s</b>							
Early.....	C+	C+	C+	C+	C+	C+	C+
Midseason.....	C+	C+	C+	C+	C+	C+	C+
Late.....	C+	C+	C+	C+	C+	C	C+
<b>Yarn appearance index 5/</b>							
Early.....	100	105	105	105	100	105	100
Midseason.....	110	105	105	110	105	100	105
Late.....	100	105	100	105	100	95	110

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Coker 100 W							South
	Georgia		Mississippi	North Carolina			Scotland	Carolina
	Madison	Sandersville	Heathman	Monroe	Rae ford	Neck	Allendale	
<b>RAW COTTON QUALITY</b>								
Grade								
Early.....	M	M	M+	M	SIM	SIM	M	
Midseason.....	Mltsp	SIM	SIM	M	SIM	SIM	IM	
Late.....	SIM	SIM	IM	IM+	IM	IM	IM	
Staple length (inches)								
Early.....	1-1/32	1-1/16	1-3/32	1-1/32	1	1-1/32	1-1/16	
Midseason.....	1-1/16	1-1/16	1-1/16	1-1/32	1-1/32	1-1/32	1-1/32	
Late.....	1-1/32	1-1/16	1-1/16	1-1/32	1	1-1/32	1	
Fiber length (Fibrograph)								
Upper half mean (inches)								
Early.....	1.02	1.05	1.06	1.05	1.01	1.00	1.07	
Midseason.....	1.04	1.09	1.06	1.05	.96	1.03	1.00	
Late.....	1.02	1.05	1.02	1.06	.98	.96	.96	
Uniformity ratio								
Early.....	83	82	79	82	77	78	80	
Midseason.....	81	81	79	80	75	78	79	
Late.....	81	77	78	79	76	77	78	
Fiber fineness (wt. per inch, micrograms) 1/								
Early.....	4.5	4.0	4.4	4.2	4.2	4.6	4.1	
Midseason.....	4.0	3.2	4.4	4.1	4.3	4.6	4.1	
Late.....	4.3	3.6	3.5	3.9	4.2	4.2	3.8	
Fiber maturity index 1/								
Early.....	80	76	81	80	78	77	77	
Midseason.....	78	68	78	77	76	78	72	
Late.....	80	72	72	78	77	76	74	
Fiber tensile strength (Pressley)								
1/8" gauge (index) 2/								
Early.....	102	100	105	101	87	92	99	
Midseason.....	101	89	106	97	85	94	90	
Late.....	99	96	100	98	82	87	91	
Zero gauge (1,000 p.s.i.)								
Early.....	79	74	81	79	74	72	82	
Midseason.....	76	75	78	71	72	72	76	
Late.....	79	72	81	69	68	71	75	
Nonlint content (percent)								
Early.....	2.8	2.6	2.4	2.3	2.6	3.2	2.8	
Midseason.....	2.9	3.5	4.8	3.9	3.7	4.0	5.7	
Late.....	3.5	3.2	4.7	4.7	4.2	4.2	6.1	
Color of cleaned lint (R <sub>d</sub> /t) 3/								
Early.....	76.0/9.2	76.0/9.4	78.0/9.1	75.0/9.0	71.0/8.2	69.5/8.6	75.5/9.0	
Midseason.....	73.0/10.4	75.2/8.8	73.0/8.7	73.5/8.8	71.4/7.8	68.8/8.6	74.0/8.3	
Late.....	74.8/8.8	76.0/8.6	71.5/8.1	74.0/8.6	68.3/7.9	69.5/8.4	69.6/8.5	
Sugar content (percent)								
Early.....	0.2	0.1	0.1	0.1	0.0	0.0	0.3	
Midseason.....	0.0	0.1	0.2	0.0	0.0	0.0	0.0	
Late.....	0.2	0.0	0.0	0.0	0.0	0.0	0.0	
<b>PROCESSING RESULTS</b>								
Fiber and card waste (percent)								
Early.....	7.9	8.0	8.0	6.4	7.4	7.9	8.0	
Midseason.....	8.3	8.3	9.0	7.5	8.4	9.2	9.8	
Late.....	7.1	8.6	11.1	8.8	10.8	9.6	11.0	
Neps per 100 sq. in. of card web								
Early.....	14	14	15	18	10	20	16	
Midseason.....	14	19	15	11	13	10	17	
Late.....	8	17	35	9	10	13	23	
Yarn skein strength								
22s (pounds)								
Early.....	118	123	118	115	100	100	119	
Midseason.....	122	118	110	121	98	96	110	
Late.....	119	112	104	115	85	90	97	
50s (pounds)								
Early.....	41	43	42	41	35	34	42	
Midseason.....	43	42	37	42	33	32	38	
Late.....	40	39	36	40	28	30	33	
Average break factor 1/								
Early.....	2328	2424	2348	2290	1975	1950	2364	
Midseason.....	2417	2348	2135	2381	1881	1856	2160	
Late.....	2309	2207	2044	2265	1635	1740	1892	
Yarn appearance grade								
22s								
Early.....	B	B	B	C+	B	C+	C+	
Midseason.....	B	B	B	B	B	C+	B	
Late.....	B	C+	C+	C+	C+	C+	C	
50s								
Early.....	C+	C+	C+	C+	C+	C+	C+	
Midseason.....	C+	C+	C	C+	C	C	C+	
Late.....	C+	C	D	C	C	C	C	
Yarn appearance index 2/								
Early.....	105	105	105	100	105	100	100	
Midseason.....	105	105	100	105	105	95	105	
Late.....	105	95	85	95	95	95	90	



Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Coker 100 W			Deltapine 15			
	South Carolina			Alabama	Arkansas		
	Chester	Dillon	Westminister	Florence	Sulligent	Blytheville	Bradley
<b>RAW COTTON QUALITY</b>							
Grade							
Early.....	M	IM	M	SIM+	M	SM	M
Midseason.....	M	IM	M	SIM	SIM+	SIM	SIM
Late.....	SIM	IM	SIM	SIM	SIM	IM	IM
Staple length (inches)							
Early.....	1-1/16	1-1/32	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Midseason.....	1-1/32	1	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Late.....	1-1/32	1	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early.....	1.04	.98	1.04	1.04	1.06	1.04	1.05
Midseason.....	1.02	.97	1.05	1.04	1.03	1.04	1.07
Late.....	1.06	.99	1.04	1.04	1.01	1.05	1.07
Uniformity ratio							
Early.....	83	80	82	80	82	79	80
Midseason.....	81	78	80	80	81	79	80
Late.....	78	77	81	81	81	79	80
Fiber fineness (wt. per inch, micrograms) 1/							
Early.....	4.3	4.6	4.4	4.2	4.2	4.4	4.7
Midseason.....	4.3	4.3	4.9	4.0	3.9	4.4	4.4
Late.....	3.6	4.3	4.3	3.8	3.8	4.1	4.3
Fiber maturity index 1/							
Early.....	77	76	80	75	76	82	82
Midseason.....	81	76	78	74	73	76	79
Late.....	78	77	80	77	78	77	79
Fiber tensile strength (Pressley)							
1/8" gauge (index) 2/							
Early.....	103	88	101	100	101	102	104
Midseason.....	98	90	102	95	99	100	100
Late.....	98	86	97	101	102	100	100
Zero gauge (1,000 p.s.i.)							
Early.....	81	70	76	78	76	84	79
Midseason.....	76	73	77	75	76	78	79
Late.....	71	71	72	80	78	85	77
Nonlint content (percent)							
Early.....	3.5	5.2	3.0	3.6	3.0	2.8	2.6
Midseason.....	3.3	5.1	3.0	4.4	4.0	4.2	3.4
Late.....	4.1	4.7	4.5	4.4	3.7	7.2	5.4
Color of cleaned lint (R <sub>4</sub> /b) 3/							
Early.....	77.0/9.0	69.0/8.1	75.5/9.2	75.5/8.8	79.0/8.8	79.0/8.4	75.7/9.0
Midseason.....	79.3/9.0	67.0/8.5	78.5/9.0	77.2/8.5	77.8/8.6	75.5/8.0	74.0/8.4
Late.....	79.5/8.1	69.3/7.6	78.0/8.5	78.3/7.9	78.5/8.0	71.3/7.3	73.5/8.2
Sugar content (percent)							
Early.....	0.2	0.0	0.1	0.4	0.2	0.3	0.3
Midseason.....	0.2	0.0	0.2	0.3	0.3	0.0	0.0
Late.....	0.2	0.0	0.2	0.3	0.2	0.2	0.0
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early.....	8.3	9.7	7.1	8.7	6.5	8.6	7.5
Midseason.....	7.3	9.4	8.2	9.2	7.9	9.6	8.3
Late.....	7.9	10.0	8.7	8.4	7.8	9.5	11.1
Neps per 100 sq. in. of card web							
Early.....	11	12	9	6	6	11	10
Midseason.....	7	16	4	11	13	18	12
Late.....	12	12	9	4	8	12	11
Yarn skein strength							
22s (pounds)							
Early.....	123	95	126	128	128	122	124
Midseason.....	116	100	124	128	129	113	114
Late.....	111	87	118	123	124	120	107
50s (pounds)							
Early.....	44	33	44	46	46	42	42
Midseason.....	41	35	43	44	45	39	38
Late.....	39	28	41	42	42	39	36
Average break factor 4/							
Early.....	2446	1870	2486	2558	2558	2392	2414
Midseason.....	2301	1975	2439	2508	2544	2218	2204
Late.....	2196	1657	2323	2403	2414	2295	2077
Yarn appearance grade							
22s							
Early.....	C+	C+	B+	B	B	B	B+
Midseason.....	B	C+	B+	B	B	B	B
Late.....	C+	C+	C+	B	B	B	B
50s							
Early.....	C+	C+	C+	C+	B	C	B
Midseason.....	C+	C+	B	C+	C+	C	C+
Late.....	C+	C	C+	C+	B	C+	C
Yarn appearance index 5/							
Early.....	100	100	110	105	110	100	115
Midseason.....	105	100	115	105	105	100	105
Late.....	100	95	100	105	110	105	100

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Deltapine 15							
	Arkansas				Louisiana			
	Marianna	Marion	Marked Tree	Pine Bluff	Bossier City	Chensyville	Provence	Lake
<b>RAW COTTON QUALITY</b>								
Grade								
Early.....	M	SM	SM	M	M	LM		SM
Midseason.....	SIM	LM	SIM	SIM	M	LM		M
Late.....	LM	LM	LM	SIM	SIM	LM		SIM
Staple length (inches)								
Early.....	1-1/16	1-1/16	1-1/16	1-3/32	1-1/16	1-1/16		1-3/32
Midseason.....	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16		1-3/32
Late.....	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16		1-1/16
Fiber length (Fibrograph)								
Upper half mean (inches)								
Early.....	1.06	1.04	1.04	1.05	1.04	1.02		1.08
Midseason.....	1.08	1.10	1.06	1.10	1.02	1.03		1.04
Late.....	1.05	1.05	1.06	1.05	1.05	1.05		1.06
Uniformity ratio								
Early.....	79	80	80	79	80	78		81
Midseason.....	80	79	79	80	78	80		78
Late.....	80	80	79	81	78	79		79
Fiber fineness (wt. per inch, micrograms) 1/								
Early.....	4.3	4.5	4.5	4.4	4.4	4.3		4.1
Midseason.....	4.4	4.3	4.6	4.3	4.8	4.3		4.4
Late.....	4.2	3.8	4.0	4.2	4.1	3.9		3.8
Fiber maturity index 1/								
Early.....	76	79	82	80	80	80		78
Midseason.....	76	76	80	80	81	79		76
Late.....	78	74	78	78	80	79		76
Fiber tensile strength (Pressley)								
1/8" gauge (index) 2/								
Early.....	102	100	109	106	106	92		102
Midseason.....	103	104	108	111	96	92		101
Late.....	100	95	102	106	99	95		94
Zero gauge (1,000 p.s.i.)								
Early.....	85	80	86	80	78	70		76
Midseason.....	79	79	82	79	72	72		78
Late.....	80	78	82	80	76	74		78
Nonlint content (percent)								
Early.....	3.3	2.1	3.0	2.8	2.6	3.6		1.8
Midseason.....	3.9	7.2	3.4	3.0	2.6	5.6		3.5
Late.....	5.9	5.8	6.9	3.1	3.6	4.3		3.1
Color of cleaned lint (R <sub>d</sub> /b) 3/								
Early.....	77.0/8.8	78.0/8.6	77.8/8.8	77.0/9.2	77.2/9.2	71.2/8.7		78.5/8.8
Midseason.....	75.5/8.6	72.0/9.2	76.8/7.9	72.0/8.5	76.8/9.2	74.5/9.5		76.5/9.0
Late.....	74.2/7.8	71.5/7.7	72.3/7.8	74.0/8.3	75.5/8.1	75.3/8.2		75.0/8.7
Sugar content (percent)								
Early.....	0.1	0.2	0.2	0.2	0.3	0.2		0.2
Midseason.....	0.1	0.2	0.2	0.1	0.1	0.0		0.1
Late.....	0.0	0.2	0.2	0.3	0.0	0.1		0.1
<b>PROCESSING RESULTS</b>								
Picker and card waste (percent)								
Early.....	8.5	7.2	7.9	7.8	8.3	11.5		7.4
Midseason.....	8.6	12.1	8.9	8.2	8.9	11.1		7.5
Late.....	12.1	11.4	11.3	7.9	9.0	10.2		8.8
Neps per 100 sq. in. of card web								
Early.....	9	13	8	11	13	18		15
Midseason.....	13	14	8	18	12	14		11
Late.....	9	22	9	10	12	28		13
Yarn skein strength								
22s (pounds)								
Early.....	122	118	127	130	119	92		119
Midseason.....	114	115	119	118	107	99		113
Late.....	111	108	115	116	110	102		109
50s (pounds)								
Early.....	41	40	44	44	42	31		40
Midseason.....	40	40	41	42	37	32		38
Late.....	38	37	39	39	37	34		36
Average break factor 4/								
Early.....	2367	2298	2497	2530	2359	1787		2309
Midseason.....	2254	2265	2334	2348	2102	1889		2193
Late.....	2171	2113	2240	2251	2135	1972		2099
Yarn appearance grade								
22s								
Early.....	B	B+	B	B	B	B		B
Midseason.....	B	B	B	B+	B+	B		B
Late.....	B	C+	B	B	C+	C+		C+
50s								
Early.....	C+	C+	C+	C+	C+	C		C
Midseason.....	C	C	C+	C+	C+	C+		C+
Late.....	C	D+	C	C	C	C		D+
Yarn appearance index 5/								
Early.....	105	110	105	105	105	100		100
Midseason.....	100	100	105	110	110	105		105
Late.....	100	90	100	100	95	95		90

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, 'crop of 1955--Continued

Test item and period of harvest	Deltapine 15							
	Louisiana					Missouri	Mississippi	
	Mer Rouge	Natchitoches	Tallulah	Ville Platte	Winnsboro	Cruthers-Ville	Aberdeen	
<b>RAW COTTON QUALITY</b>								
Grade								
Early.....	M	M	IM	SIM	M	SM	M	
Midseason.....	M	SIM	IM	M	M	M	SIM	
Late.....	SIM	IM	IM	SIM	SIM	SIM	SIM	
Staple length (inches)								
Early.....	1-1/16	1-1/32	1-3/32	1-1/16	1-1/16	1-1/16	1-1/16	
Midseason.....	1-1/16	1-1/32	1-3/32	1-1/16	1-1/16	1-3/32	1-1/16	
Late.....	1-1/16	1-1/32	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	
Fiber length (fibrograph)								
Upper half mean (inches)								
Early.....	1.03	1.00	1.07	1.04	1.06	1.06	1.00	
Midseason.....	1.04	1.06	1.05	1.06	1.03	1.09	1.02	
Late.....	1.02	1.00	1.05	1.03	1.04	1.08	1.02	
Uniformity ratio								
Early.....	80	79	80	79	79	79	78	
Midseason.....	79	80	78	81	80	79	79	
Late.....	80	79	80	80	80	80	79	
Fiber fineness (wt. per inch, micrograms) 1/								
Early.....	4.4	4.5	3.7	4.6	4.6	4.1	3.9	
Midseason.....	4.3	4.6	3.6	4.5	4.7	4.3	4.3	
Late.....	4.2	4.3	3.7	4.3	4.4	3.8	4.0	
Fiber maturity index 1/								
Early.....	80	80	72	81	81	79	79	
Midseason.....	77	80	71	79	79	76	76	
Late.....	77	80	74	80	80	79	79	
Fiber tensile strength (Pressley)								
1/8" gauge (index) 2/								
Early.....	98	93	105	85	96	105	97	
Midseason.....	102	95	105	94	98	107	100	
Late.....	101	89	99	91	96	102	97	
Zero gauge (1,000 p.s.i.)								
Early.....	75	74	79	69	75	80	78	
Midseason.....	75	74	77	75	76	78	79	
Late.....	75	71	73	76	75	77	75	
Nonlint content (percent)								
Early.....	3.1	2.9	7.9	4.6	3.8	1.9	2.9	
Midseason.....	3.0	2.6	7.5	3.6	4.9	2.8	4.8	
Late.....	4.7	3.7	6.3	4.2	7.3	2.6	4.6	
Color of cleaned lint (R <sub>3</sub> /b) 3/								
Early.....	76.5/9.0	76.0/8.9	74.5/8.7	75.5/9.2	75.0/9.2	78.8/8.8	78.5/9.1	
Midseason.....	75.5/8.9	73.0/8.9	72.5/8.5	77.5/9.4	73.5/9.3	76.5/8.5	76.5/8.6	
Late.....	76.6/8.1	70.4/9.1	77.0/7.8	76.0/8.8	73.5/9.0	78.5/8.0	76.9/8.1	
Sugar content (percent)								
Early.....	0.3	0.3	0.1	0.1	0.3	0.1	0.3	
Midseason.....	0.0	0.0	0.2	0.2	0.0	0.1	0.3	
Late.....	0.2	0.1	0.1	0.1	0.0	0.1	0.2	
<b>PROCESSING RESULTS</b>								
Picker and card waste (percent)								
Early.....	8.4	9.1	16.9	9.6	8.9	7.9	8.2	
Midseason.....	6.7	9.6	13.5	9.0	9.5	7.8	10.6	
Late.....	9.5	11.1	10.3	9.0	12.0	8.7	9.7	
Neps per 100 sq. in. of card web								
Early.....	8	15	26	6	12	13	9	
Midseason.....	15	14	33	6	8	12	17	
Late.....	7	21	21	8	9	13	8	
Yarn skein strength								
22s (pounds)								
Early.....	113	101	121	108	109	125	120	
Midseason.....	112	94	112	114	108	118	109	
Late.....	106	87	104	109	100	118	108	
50s (pounds)								
Early.....	38	34	42	36	37	44	43	
Midseason.....	39	31	38	38	37	39	37	
Late.....	35	28	35	37	34	41	36	
Average break factor 4/								
Early.....	2193	1961	2381	2088	2124	2475	2395	
Midseason.....	2207	1809	2182	2204	2113	2273	2124	
Late.....	2041	1697	2019	2124	1990	2323	2088	
Yarn appearance grade								
22s								
Early.....	B	B	C+	B+	B+	B	C+	
Midseason.....	B	B	C+	B	B	B	B	
Late.....	B+	C+	B	B+	B	B	C+	
50s								
Early.....	C+	C	D+	C+	C+	C	D+	
Midseason.....	C+	C	D+	C+	C+	C	D+	
Late.....	C+	D+	C	B	C	C	C	
Yarn appearance index 5/								
Early.....	105	100	90	110	110	100	90	
Midseason.....	105	100	90	105	110	100	95	
Late.....	110	90	100	115	100	100	95	

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Deltapine 15							
	Mississippi							
	Belzoni	Clarksdale	Doddsville	Fayette	Greenville	Macon	Osage	
<b>RAW COTTON QUALITY</b>								
Grade								
Early	M+	M	SLM+	M	M+	SLM+	M	
Midseason	SLM+	SLM	SLM	M	LM	M	M	
Late	SLM+	LM	SLM	SIMitap	LM	SGO+	SLM	
Staple length (inches)								
Early	1-3/32	1-1/16	1-1/16	1-1/32	1-1/16	1-1/16	1-1/32	
Midseason	1-3/32	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	
Late	1-1/16	1-1/32	1-1/16	1-1/16	1-1/32	1-1/16	1-1/16	
Fiber length (Fibrograph)								
Upper half mean (inches)								
Early	1.09	1.06	1.05	1.02	1.07	1.10	1.05	
Midseason	1.09	1.06	1.01	1.03	1.06	1.05	1.04	
Late	1.04	1.05	1.01	1.01	1.08	1.04	1.05	
Uniformity ratio								
Early	79	78	80	80	79	80	80	
Midseason	80	80	79	79	79	80	79	
Late	80	78	79	79	80	80	81	
Fiber fineness (wt. per inch, micrograms) 1/								
Early	4.4	4.3	4.5	4.6	4.2	4.2	4.6	
Midseason	4.5	4.4	4.4	4.4	4.3	4.2	4.3	
Late	4.1	3.9	4.2	4.4	3.6	3.9	4.3	
Fiber maturity index 1/								
Early	79	79	82	80	80	78	80	
Midseason	78	78	80	78	77	77	76	
Late	80	76	82	78	74	73	77	
Fiber tensile strength (Pressley)								
1/8" gauge (index) 2/								
Early	109	99	100	93	102	90	93	
Midseason	105	104	108	94	100	102	100	
Late	98	100	102	95	106	105	95	
Zero gauge (1,000 p.s.i.)								
Early	80	79	80	73	76	73	75	
Midseason	78	77	78	76	75	74	75	
Late	78	81	82	74	77	78	74	
Nonlint content (percent)								
Early	3.1	2.5	3.2	2.3	2.8	3.6	3.2	
Midseason	3.1	3.6	3.9	2.2	6.4	3.3	3.7	
Late	2.9	5.5	3.9	2.0	7.2	8.0	4.1	
Color of cleaned lint (Ra/b) 3/								
Early	78.0/9.0	75.5/9.4	72.5/9.1	75.0/9.8	77.5/9.0	77.7/9.2	77.5/8.9	
Midseason	78.0/8.1	74.3/8.7	75.8/8.3	77.7/9.3	71.0/8.4	79.0/9.2	78.5/9.0	
Late	80.1/7.9	74.3/8.0	74.9/7.9	75.0/9.4	69.5/8.5	75.0/8.3	75.0/9.2	
Sugar content (percent)								
Early	0.3	0.1	0.1	0.2	0.1	0.1	0.3	
Midseason	0.0	0.0	0.3	0.1	0.1	0.3	0.3	
Late	0.1	0.0	0.0	0.1	0.1	0.2	0.1	
<b>PROCESSING RESULTS</b>								
Picker and card waste (percent)								
Early	8.0	8.0	8.1	8.4	8.3	9.4	8.2	
Midseason	7.6	8.9	8.6	8.4	12.4	8.7	9.1	
Late	8.1	10.7	8.9	7.9	12.8	13.3	10.3	
Neps per 100 sq. in. of card web								
Early	9	14	9	11	14	9	8	
Midseason	11	10	12	12	20	8	11	
Late	14	16	12	9	24	16	9	
Yarn skein strength								
22s (pounds)								
Early	123	124	126	106	118	125	115	
Midseason	121	116	117	104	112	117	111	
Late	113	113	113	101	109	116	111	
50s (pounds)								
Early	43	43	43	35	41	43	39	
Midseason	42	39	39	35	38	40	38	
Late	38	39	38	34	37	40	38	
Average break factor 4/								
Early	2428	2439	2461	2041	2323	2450	2240	
Midseason	2381	2251	2262	2019	2182	2287	2171	
Late	2193	2218	2193	1961	2124	2276	2171	
Yarn appearance grade								
22s								
Early	B	B	B+	B	B	B+	B+	
Midseason	B+	B+	B+	B	B	B	B	
Late	B+	B	B	B	C+	B	B	
50s								
Early	C+	C	C+	C+	D+	C+	C+	
Midseason	C+	C	C+	C+	C	C+	C+	
Late	C+	C+	C+	C+	C	C	C+	
Yarn appearance index 5/								
Early	105	100	110	105	95	110	110	
Midseason	110	105	110	105	100	105	105	
Late	110	105	105	105	95	100	110	

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Deltapine 15						
	Mississippi		Tennessee			Texas	
	Senatobia	Brownsville	Covington	Millington	Wynburg	Brownsville	Galvert
<b>RAW COTTON QUALITY</b>							
Grade							
Early.....	M	SM	SM	M	SM	M	Mltap
Midseason.....	SIM	M	M	SIM	M	SIM+	SIM
Late.....	SIM	SIM	SIM	SIM	SIM	IM	IM
Staple length (inches)							
Early.....	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/32	31/32
Midseason.....	1-1/16	1-1/16	1-1/16	1-1/16	1-3/32	1-1/32	31/32
Late.....	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	15/16
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early.....	1.00	1.03	1.02	1.02	1.06	1.04	.97
Midseason.....	1.07	1.04	1.00	1.05	1.10	1.04	1.00
Late.....	1.01	1.04	1.01	1.07	1.06	1.03	1.02
Uniformity ratio							
Early.....	78	80	80	79	79	81	81
Midseason.....	80	80	79	80	81	81	79
Late.....	78	79	80	80	80	81	79
Fiber fineness (wt. per inch, micrograms) 1/							
Early.....	4.8	4.5	4.7	4.3	4.5	4.7	3.6
Midseason.....	4.3	4.3	4.1	4.2	4.3	4.0	4.4
Late.....	4.2	4.1	4.1	4.0	4.1	3.9	3.5
Fiber maturity index 1/							
Early.....	83	79	79	79	80	79	76
Midseason.....	79	77	75	75	78	78	81
Late.....	78	79	75	75	78	79	71
Fiber tensile strength (Presaley)							
1/8" gauge (index) 2/							
Early.....	94	98	107	100	101	98	101
Midseason.....	99	100	106	106	107	98	102
Late.....	94	98	102	98	103	98	95
Zero gauge (1,000 p.s.i.)							
Early.....	76	78	81	82	82	76	87
Midseason.....	76	79	82	83	82	81	78
Late.....	76	80	80	81	80	79	79
Nonlint content (percent)							
Early.....	2.7	2.8	2.9	3.8	2.1	2.4	3.4
Midseason.....	2.8	3.4	2.2	4.6	2.9	3.0	4.5
Late.....	4.1	3.9	3.0	4.6	3.3	3.6	5.4
Color of cleaned lint (R <sub>a</sub> /b) 3/							
Early.....	76.0/9.0	78.0/8.7	78.0/8.6	78.0/8.8	77.5/9.0	79.1/8.1	73.5/10.2
Midseason.....	75.0/8.8	77.5/8.7	77.8/8.5	77.2/8.6	76.0/9.0	76.5/8.3	74.0/9.8
Late.....	76.1/8.7	77.0/8.1	77.4/8.1	77.5/7.8	77.5/7.9	76.0/8.3	75.8/9.0
Sugar content (percent)							
Early.....	0.3	0.4	0.3	0.1	0.3	0.2	0.2
Midseason.....	0.1	0.2	0.1	0.2	0.2	0.0	0.1
Late.....	0.1	0.2	0.2	0.2	0.2	0.0	0.0
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early.....	8.4	8.2	8.4	8.6	7.2	8.6	9.8
Midseason.....	9.0	7.8	7.7	9.3	8.1	8.5	9.2
Late.....	9.6	9.5	8.0	8.7	8.6	10.2	11.1
Neps per 100 sq. in. of card web							
Early.....	5	14	8	8	9	7	12
Midseason.....	11	14	11	10	14	10	11
Late.....	10	9	28	9	16	12	30
Yarn skein strength							
22s (pounds)							
Early.....	116	120	128	128	124	111	106
Midseason.....	113	116	117	121	124	114	109
Late.....	105	114	116	122	116	115	102
50s (pounds)							
Early.....	39	41	42	43	43	39	35
Midseason.....	37	39	41	40	45	40	38
Late.....	37	39	40	42	40	38	35
Average break factor 4/							
Early.....	2251	2345	2458	2483	2439	2203	2041
Midseason.....	2168	2251	2312	2331	2489	2254	2149
Late.....	2080	2229	2276	2392	2276	2215	1997
Yarn appearance grade							
22s							
Early.....	B	B+	B+	B+	B+	B	B
Midseason.....	B+	B	B+	B	B+	B+	B
Late.....	B	C+	C+	B	B	B	C
50s							
Early.....	B	C+	C+	C+	B	C+	C
Midseason.....	C+	C+	C+	C+	C	B	C+
Late.....	C+	C	C	C	C	C	D+
Yarn appearance index 5/							
Early.....	110	110	110	110	115	105	100
Midseason.....	110	105	110	105	105	115	105
Late.....	105	95	95	100	100	100	85

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Deltapine 15						Deltapine
	Texas						Fox
	De Kalb	Iyford	Munday	Navasota	Port Lavaca	Sugarland	Mississippi
<b>RAW COTTON QUALITY</b>							
Grade							
Early.....	M	M	SIM	M	SM	M+	M
Midseason.....	M	SIM	SIM+	SIM	M	M	SIM
Late.....	SIM	EM	SIM+	LM+	SIM+	SIM	SIM
Staple length (inches)							
Early.....	1-1/32	1-1/32	1-1/32	1	1-1/16	1-1/16	1-1/16
Midseason.....	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32
Late.....	1-1/32	1-1/32	1-1/32	1-1/32	1	1-1/32	1-1/32
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early.....	1.05	1.02	1.04	.97	1.06	1.01	1.09
Midseason.....	.98	1.00	1.06	.99	.99	1.00	1.07
Late.....	.99	1.03	1.05	1.00	.95	1.00	1.04
Uniformity ratio							
Early.....	80	82	80	79	80	81	81
Midseason.....	78	80	80	79	81	80	80
Late.....	79	80	82	78	81	81	80
Fiber fineness (wt. per inch, micrograms) 1/:							
Early.....	4.9	4.7	4.4	4.2	3.9	4.6	4.8
Midseason.....	4.5	4.4	4.5	4.5	3.7	5.0	4.6
Late.....	4.2	4.1	3.8	3.8	4.0	4.6	4.4
Fiber maturity index 1/							
Early.....	81	78	80	80	78	84	81
Midseason.....	81	77	79	81	81	84	79
Late.....	77	79	78	78	77	83	79
Fiber tensile strength (Pressley)							
1/8" gauge (index) 2/							
Early.....	103	101	104	104	109	102	95
Midseason.....	100	98	97	93	103	103	102
Late.....	105	96	107	104	96	92	97
Zero gauge (1,000 p.s.i.)							
Early.....	82	79	83	86	83	81	76
Midseason.....	78	79	78	77	80	78	76
Late.....	79	79	78	75	78	77	78
Nonlint content (percent)							
Early.....	1.8	3.2	3.4	2.4	2.1	2.2	2.8
Midseason.....	2.2	3.6	2.9	3.4	3.0	2.5	2.3
Late.....	3.0	5.6	2.6	5.1	4.1	4.0	3.4
Color of cleaned lint (Rd/b) 3/							
Early.....	77.0/9.0	78.5/9.1	73.5/9.7	76.0/9.6	77.0/9.0	77.5/9.0	75.2/8.8
Midseason.....	76.2/9.1	73.0/8.8	75.6/9.2	75.5/9.3	78.0/8.8	78.0/8.8	72.5/8.8
Late.....	74.0/9.1	72.5/8.7	78.0/8.5	76.0/8.6	76.0/9.0	74.5/8.6	73.5/7.8
Sugar content (percent)							
Early.....	0.0	0.2	0.1	0.1	0.1	0.0	0.1
Midseason.....	0.2	0.1	0.1	0.1	0.2	0.1	0.3
Late.....	0.0	0.0	0.2	0.1	0.1	0.0	0.0
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early.....	7.2	8.8	9.1	8.4	8.0	7.2	9.3
Midseason.....	7.3	9.3	7.4	8.3	9.4	6.8	9.2
Late.....	8.9	11.8	7.8	10.9	10.7	8.4	9.2
Neps per 100 sq. in. of card web							
Early.....	7	4	10	6	8	4	8
Midseason.....	8	10	13	13	12	6	11
Late.....	14	14	14	21	17	12	12
Yarn skein strength							
22s (pounds)							
Early.....	120	112	116	118	122	119	114
Midseason.....	115	107	116	117	114	116	109
Late.....	107	104	119	116	106	107	103
50s (pounds)							
Early.....	42	39	39	40	43	40	39
Midseason.....	39	36	39	40	38	39	36
Late.....	36	34	39	39	35	37	34
Average break factor 4/							
Early.....	2370	2208	2251	2298	2417	2309	2229
Midseason.....	2240	2077	2251	2287	2204	2251	2099
Late.....	2077	1994	2284	2251	2041	2102	1983
Yarn appearance grade							
22s							
Early.....	B	B	B+	B+	B	B+	B
Midseason.....	B+	B	B	B	B	B+	B+
Late.....	B	B	B	C+	B	B+	B
50s							
Early.....	C	B	C+	C+	C+	B	C
Midseason.....	C+	C+	C+	C+	C+	B	C+
Late.....	C	C	C	D+	C	B	C
Yarn appearance index 5/							
Early.....	100	110	110	110	105	115	100
Midseason.....	110	105	105	105	105	115	110
Late.....	100	100	100	90	100	115	100

Table --Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Deltapine		Deltapine TP5A		Delfos 9169		Empire	
	Fox							
	Missouri		Texas		Texas		Georgia	
	Hayti	Danevang	Edcouch	Weslaco	Corpus Christi	Buchanan	Fayetteville	
<b>RAW COTTON QUALITY</b>								
Grade								
Early.....	SM	M	M	M	SM	SLM+	M	
Midseason.....	M	SLM	SLM+	M	M	M	SLM+	
Late.....	SLM	LM	M	M	SM	SLM	SLM+	
Staple length (inches)								
Early.....	1-1/16	1-1/16	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16	1-1/16
Midseason.....	1-1/16	1	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16	1-1/16
Late.....	1-1/16	31/32	1-1/32	1-1/32	1	1-1/16	1-1/32	
Fiber length (Fibrograph)								
Upper half mean (inches)								
Early.....	1.03	1.04	1.00	1.03	1.06	1.07	1.03	
Midseason.....	1.05	.97	1.01	1.02	1.01	1.06	1.02	
Late.....	1.05	.96	1.02	1.03	.93	1.06	1.00	
Uniformity ratio								
Early.....	79	80	81	80	81	80	81	
Midseason.....	80	80	80	80	80	81	81	
Late.....	80	81	80	80	81	80	82	
Fiber fineness (wt. per inch, micrograms) 1/								
Early.....	4.9	4.2	4.7	4.5	4.2	4.2	4.2	
Midseason.....	4.4	4.7	4.3	4.2	4.0	4.3	4.2	
Late.....	4.2	4.2	4.4	4.2	4.0	4.1	4.1	
Fiber maturity index 1/								
Early.....	83	82	79	75	75	78	74	
Midseason.....	77	82	79	79	75	77	75	
Late.....	79	79	83	81	75	78	78	
Fiber tensile strength (Pressley)								
1/8" gauge (index) 2/								
Early.....	101	101	95	107	94	102	98	
Midseason.....	103	103	100	98	93	95	102	
Late.....	100	92	99	97	95	93	97	
Zero gauge (1,000 p.s.i.)								
Early.....	78	80	78	80	80	80	80	
Midseason.....	79	79	79	77	82	81	86	
Late.....	77	79	77	78	81	81	81	
Nonlint content (percent)								
Early.....	3.0	2.4	2.8	2.3	2.6	3.6	3.2	
Midseason.....	3.0	3.3	3.3	2.5	2.3	3.2	3.4	
Late.....	3.7	5.4	2.4	2.9	2.3	3.2	3.5	
Color of cleaned lint (R <sub>4</sub> /b) 3/								
Early.....	78.0/8.8	77.5/8.8	78.0/8.7	79.0/8.8	78.8/8.6	77.7/8.8	78.0/8.8	
Midseason.....	75.0/8.6	75.5/9.0	76.0/8.6	77.5/8.8	75.5/8.8	79.5/8.7	77.2/8.8	
Late.....	76.5/7.8	73.0/8.7	76.6/8.7	78.8/8.5	78.0/8.6	77.4/8.5	77.8/8.7	
Sugar content (percent)								
Early.....	0.2	0.1	0.1	0.1	0.2	0.3	0.2	
Midseason.....	0.0	0.1	0.1	0.3	0.1	0.1	0.3	
Late.....	0.1	0.1	0.1	0.1	0.0	0.2	0.1	
<b>PROCESSING RESULTS</b>								
Picker and card waste (percent)								
Early.....	10.2	8.0	8.8	9.0	8.6	8.7	8.4	
Midseason.....	9.0	8.7	8.6	8.2	9.5	7.2	7.6	
Late.....	9.8	10.6	8.4	8.2	8.7	7.9	8.2	
Neps per 100 sq. in. of card web								
Early.....	6	6	9	5	7	13	11	
Midseason.....	12	6	9	8	7	12	12	
Late.....	14	19	7	6	13	14	7	
Yarn skein strength								
22s (pounds)								
Early.....	115	117	111	111	105	126	125	
Midseason.....	115	114	112	112	107	123	124	
Late.....	109	102	112	112	100	125	116	
50s (pounds)								
Early.....	39	41	39	38	35	46	43	
Midseason.....	39	38	40	39	37	43	43	
Late.....	37	35	38	38	34	44	40	
Average break factor 4/								
Early.....	2240	2312	2204	2178	2028	2536	2450	
Midseason.....	2240	2204	2232	2207	2102	2428	2439	
Late.....	2124	1997	2182	2182	1950	2474	2276	
Yarn appearance grade								
22s								
Early.....	B+	B+	B	B	B	B	B	
Midseason.....	B	B+	B+	B+	B+	B	B	
Late.....	C+	B	B+	B	B	C+	C+	
50s								
Early.....	C+	B	C+	C+	C+	C+	C+	
Midseason.....	C	B	B	C+	C+	C+	C+	
Late.....	C	C+	C+	C	C+	C+	C+	
Yarn appearance index 5/								
Early.....	110	115	105	105	105	105	105	
Midseason.....	100	115	115	110	110	105	100	
Late.....	95	105	110	100	105	100	105	

Table 3.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Lankart 57						
	Oklahoma			Texas			
	Altus	Clinton	Mangum	Cooper	Hillsboro	Lubbock	Stamford
<b>RAW COTTON QUALITY</b>							
Grade							
Early.....	SIM	IM	M+	SM	Mltsp	IM	M
Midseason.....	SIMtsp	Mltsp	SIM	M	Mltsp	Mltsp	M
Late.....	SIMsp	Mltsp	SIMtsp	IM	IM	Mltsp	SIM+
Staple length (inches)							
Early.....	15/16	1	1	29/32	29/32	1	15/16
Midseason.....	15/16	15/16	31/32	15/16	29/32	1	15/16
Late.....	29/32	15/16	15/16	1	15/16	15/16	29/32
Fiber length (Fibrograph)							
Upper half mean (inches)							
Early.....	1.00	1.00	.94	.87	.92	.99	.90
Midseason.....	.95	.90	.94	.99	.88	.98	.91
Late.....	1.00	.96	.91	.95	.91	.96	.86
Uniformity ratio							
Early.....	80	80	79	79	78	80	80
Midseason.....	80	78	80	79	78	80	80
Late.....	78	81	79	80	79	79	78
Fiber fineness (wt. per inch, micrograms) 1/							
Early.....	4.3	4.1	4.2	5.3	4.5	5.0	4.3
Midseason.....	4.3	4.4	4.5	4.9	4.4	4.3	4.6
Late.....	3.3	4.4	4.3	5.1	4.8	3.2	4.5
Fiber maturity index 1/							
Early.....	79	72	74	83	78	79	73
Midseason.....	77	80	78	83	80	79	81
Late.....	63	76	78	83	80	63	81
Fiber tensile strength (Pressley)							
1/8" gauge (index) 2/							
Early.....	96	100	99	85	89	84	100
Midseason.....	91	95	97	95	95	92	100
Late.....	92	94	98	98	94	91	93
Zero gauge (1,000 p.s.i.)							
Early.....	72	80	81	79	77	63	80
Midseason.....	71	76	76	74	78	67	77
Late.....	69	75	79	78	74	66	77
Nonlint content (percent)							
Early.....	3.4	5.5	3.0	2.6	4.6	3.8	2.6
Midseason.....	3.5	2.6	3.5	3.5	5.8	2.8	2.4
Late.....	5.9	3.2	6.1	5.8	7.3	4.0	3.2
Color of cleaned lint (R <sub>d</sub> /b) 3/							
Early.....	73.8/9.0	74.0/9.7	76.5/9.6	75.0/9.4	73.2/9.8	69.0/9.6	74.0/9.7
Midseason.....	70.0/10.0	72.0/9.9	73.4/9.3	75.2/9.2	73.7/9.8	75.3/9.0	75.6/9.1
Late.....	71.5/11.2	71.2/10.4	70.7/9.8	72.6/9.4	70.5/9.7	73.5/9.0	75.5/9.2
Sugar content (percent)							
Early.....	0.1	0.2	0.2	0.2	0.1	0.0	0.2
Midseason.....	0.3	0.1	0.1	0.3	0.3	0.3	0.2
Late.....	0.5	0.3	0.1	0.0	0.2	0.4	0.2
<b>PROCESSING RESULTS</b>							
Picker and card waste (percent)							
Early.....	10.0	11.9	9.9	8.2	10.9	9.7	8.1
Midseason.....	9.4	9.4	8.4	9.7	13.1	8.2	8.8
Late.....	11.0	8.9	10.4	10.8	12.8	10.8	10.2
Neps per 100 sq. in. of card web							
Early.....	14	28	16	4	12	13	11
Midseason.....	16	13	6	9	20	9	9
Late.....	29	11	8	9	10	16	9
Yarn skein strength							
22s (pounds)							
Early.....	97	109	115	99	97	87	107
Midseason.....	99	96	100	101	99	93	100
Late.....	95	100	101	98	92	95	96
50s (pounds)							
Early.....	32	37	39	31	31	29	35
Midseason.....	32	31	33	32	32	31	33
Late.....	32	34	33	32	30	31	31
Average break factor 4/							
Early.....	1867	2124	2240	1864	1842	1682	2052
Midseason.....	1889	1831	1925	1911	1889	1798	1925
Late.....	1845	1950	1936	1878	1762	1820	1831
Yarn appearance grade							
22s							
Early.....	C+	C+	C+	B+	B	B	B
Midseason.....	B	B	B+	B	B	B	B
Late.....	D	C+	B	B	B	C	B
50s							
Early.....	C+	C	C+	C+	C	C	C
Midseason.....	C	C	C+	C+	C	C+	C
Late.....	BG	D+	C+	C	C+	D+	C
Yarn appearance index 5/							
Early.....	100	95	100	110	100	100	100
Midseason.....	100	100	110	105	100	105	100
Late.....	65	90	105	100	105	85	100



Table 3 --Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 9-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Lankart 57		Lankart 611		Northern Star		Plains		Stoneville 2 B			
	Texas		Texas		Texas		Alabama		Arkansas		Missouri	
	Taft	Waco	Idaiau	O'Brien	Centre	McGehee	Hornersville					
<b>RAW COTTON QUALITY</b>												
Grade												
Early.....	M	M	SIM	M	M	M	M	M	M	M	SM	
Midseason.....	M	M	M	M	M	M	M	M	SIM	M	M	
Late.....	M	SIM	SIM/step	M/step	SIM	SIM	SIM	LM	SIM	SIM	SIM	
Staple length (inches)												
Early.....	1	15/16	1	1	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16
Midseason.....	1	15/16	1	1	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16
Late.....	15/16	15/16	15/16	29/32	1	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16
Fiber length (Fibrograph)												
Upper half mean (inches)												
Early.....	.98	.94	.97	.96	.99	1.01	.99	1.01	1.05	1.05	1.08	1.03
Midseason.....	.94	.93	.98	1.01	.99	1.01	.99	1.05	1.05	1.05	1.08	1.08
Late.....	.92	.94	.94	.97	1.00	1.00	1.00	1.02	1.02	1.02	1.02	1.02
Uniformity ratio												
Early.....	82	79	78	79	80	78	79	78	79	79	79	79
Midseason.....	81	78	78	79	81	79	81	79	79	79	80	80
Late.....	80	80	81	79	81	79	81	79	79	79	79	79
Fiber fineness (wt. per inch, micrograms) 1/												
Early.....	4.5	4.5	4.4	4.2	4.1	4.0	4.1	4.0	3.9	3.9	3.7	3.7
Midseason.....	4.0	4.8	4.2	4.4	4.1	3.9	4.1	3.9	3.9	3.9	4.0	4.0
Late.....	4.2	4.8	3.7	4.0	3.8	3.9	3.8	3.9	3.9	3.9	3.4	3.4
Fiber maturity index 1/												
Early.....	76	79	76	74	72	76	76	76	73	73	73	73
Midseason.....	76	80	76	76	76	76	76	73	73	73	73	73
Late.....	80	76	66	74	78	73	73	73	73	73	71	71
Fiber tensile strength (Pressley)												
1/8" gauge (index) 2/												
Early.....	92	84	91	98	99	97	97	97	95	95	96	96
Midseason.....	95	93	99	94	103	95	103	95	95	95	104	104
Late.....	95	90	94	98	102	95	102	95	95	95	95	95
Zero gauge (1,000 p.s.i.)												
Early.....	74	73	70	90	79	79	79	79	81	81	84	84
Midseason.....	77	79	71	76	79	81	79	81	81	81	83	83
Late.....	76	77	69	76	80	80	80	80	80	80	81	81
Nonlint content (percent)												
Early.....	3.4	2.4	3.2	3.2	2.5	3.9	2.5	3.9	4.0	4.0	2.2	2.2
Midseason.....	3.1	2.8	1.8	4.4	2.8	4.0	2.8	4.0	4.0	4.0	3.3	3.3
Late.....	3.9	2.2	3.0	3.4	3.2	6.3	3.2	6.3	6.3	6.3	4.7	4.7
Color of cleaned lint (R <sub>4</sub> /b) 3/												
Early.....	78.0/9.2	74.5/9.6	70.0/9.8	76.5/9.4	77.5/8.7	78.0/8.6	78.0/8.6	78.0/8.6	74.0/8.5	74.0/8.5	78.5/9.0	78.5/9.0
Midseason.....	75.5/9.1	76.0/9.4	74.5/8.9	74.5/9.1	78.0/8.8	74.0/8.5	74.0/8.5	74.0/8.5	74.0/8.5	74.0/8.5	76.5/8.4	76.5/8.4
Late.....	76.5/9.0	72.0/9.8	70.7/10.1	71.2/10.8	76.7/8.1	75.0/7.9	75.0/7.9	75.0/7.9	75.0/7.9	75.0/7.9	76.8/7.9	76.8/7.9
Sugar content (percent)												
Early.....	0.2	0.1	0.0	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3
Midseason.....	0.2	0.3	0.3	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Late.....	0.2	0.0	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>PROCESSING RESULTS</b>												
Picker and card waste (percent)												
Early.....	8.3	8.4	9.9	9.7	8.0	8.9	8.0	8.9	9.3	9.3	8.4	8.4
Midseason.....	9.7	9.3	7.8	9.2	8.7	9.3	8.7	9.3	9.3	9.3	8.8	8.8
Late.....	9.3	10.4	10.0	9.1	7.8	11.4	7.8	11.4	11.4	11.4	9.6	9.6
Neps per 100 sq. in. of card web												
Early.....	7	10	10	16	9	10	9	10	14	14	15	15
Midseason.....	10	11	14	12	12	14	12	14	14	14	16	16
Late.....	9	8	12	12	5	8	5	8	8	8	22	22
Yarn skein strength												
22s (pounds)												
Early.....	102	98	93	120	123	118	123	118	103	103	120	120
Midseason.....	109	99	99	105	126	103	126	103	103	103	114	114
Late.....	105	90	96	99	120	103	120	103	103	103	107	107
50s (pounds)												
Early.....	34	32	31	39	44	40	44	40	35	35	43	43
Midseason.....	37	31	33	35	44	35	44	35	35	35	40	40
Late.....	35	28	32	32	43	35	43	35	35	35	35	35
Average break factor 4/												
Early.....	1985	1878	1798	2295	2453	2298	2453	2298	2298	2298	2395	2395
Midseason.....	2124	1864	1914	2030	2486	2008	2486	2008	2008	2008	2254	2254
Late.....	2030	1690	1856	1889	2395	2008	2395	2008	2008	2008	2052	2052
Yarn appearance grade												
22s												
Early.....	B	B	B	C+	B	B	B	B	C+	C+	B	B
Midseason.....	B+	B	C+	B	B	C+	B	C+	C+	C+	B	B
Late.....	B	B+	C	C+	B	B	B	B	C+	C+	C+	C+
50s												
Early.....	C+	C+	C	C	C+	C	C+	C	C+	C+	C	C
Midseason.....	C+	C+	C	C	C+	C+	C+	C+	C+	C+	C	C
Late.....	C	C+	D	D+	C+	C+	C+	C+	C+	C+	C+	D+
Yarn appearance index 5/												
Early.....	105	105	100	95	105	100	105	100	100	100	100	100
Midseason.....	110	105	95	100	105	90	105	90	90	90	100	100
Late.....	100	110	80	90	105	105	105	105	105	105	90	90

1/ Determined by the Causticair method using the Micronaire instrument.  
 2/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.  
 3/ Determined by the Nickerson-Hunter Colorimeter on lint classed by Shirley Analyzer.  
 4/ Based on yarn skein strength of the 2 yarn numbers spun.  
 5/ Based on two numbers spun. Index for average quality equals 100.

Table 4.--Results of classification, fiber tests, and carded and combed yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1955

Test item and period of harvest	Acala 1517 C					
	Arizona		New Mexico			
	Willcox	Artesia	Carlsbad	Deming	Hatch	Las Cruces
<b>RAW COTTON QUALITY</b>						
Grade						
Early.....	SM	SM	M	SM	SM	SM
Midseason.....	SM	SM	SM	M	SM	SM
Late.....	SM	SIM	SIM	M	M	M
Staple length (inches)						
Early.....	1-1/8	1-5/32	1-5/32	1-5/32	1-5/32	1-5/32
Midseason.....	1-3/32	1-5/32	1-5/32	1-5/32	1-1/8	1-1/8
Late.....	1-3/32	1-3/32	1-3/32	1-1/8	1-1/8	1-1/8
Fiber length (Fibrograph)						
Upper half mean (inches)						
Early.....	1.14	1.13	1.14	1.17	1.14	1.18
Midseason.....	1.10	1.14	1.14	1.18	1.12	1.14
Late.....	1.04	1.14	1.12	1.12	1.09	1.12
Uniformity ratio						
Early.....	81	80	78	83	81	80
Midseason.....	78	81	79	82	80	77
Late.....	77	81	82	81	77	79
Fiber fineness (wt. per inch, micrograms) 1/:						
Early.....	3.5	4.0	3.9	3.6	3.9	3.9
Midseason.....	2.9	3.6	3.5	3.0	3.5	3.6
Late.....	3.1	3.0	3.2	3.0	3.1	3.2
Fiber maturity index 1/						
Early.....	73	77	80	73	77	76
Midseason.....	69	76	76	70	70	74
Late.....	68	66	70	69	68	71
Fiber tensile strength (Pressley)						
1/8" gauge (index) 2/						
Early.....	108	112	118	110	112	113
Midseason.....	112	115	114	117	114	112
Late.....	106	115	108	112	111	118
Zero gauge (1,000 p.s.i.)						
Early.....	83	82	84	85	83	83
Midseason.....	89	90	89	86	90	89
Late.....	86	88	84	87	88	91
Nonlint content (percent)						
Early.....	2.2	2.0	3.2	2.3	1.8	1.6
Midseason.....	3.0	2.3	2.7	4.4	2.8	2.7
Late.....	3.2	4.4	4.8	4.6	3.7	3.5
Color of cleaned lint (Rd/b) 3/						
Early.....	82.5/8.5	76.5/8.6	75.5/8.7	82.0/8.1	80.3/8.7	79.5/8.6
Midseason.....	81.7/8.1	81.4/8.0	80.5/8.1	81.3/8.0	82.0/7.9	82.0/8.1
Late.....	81.0/7.9	76.3/7.9	77.3/8.0	80.5/7.4	80.0/7.4	78.5/7.8
Sugar content (percent)						
Early.....	0.3	0.2	0.0	0.3	0.3	0.2
Midseason.....	0.5	0.3	0.0	0.5	0.5	0.0
Late.....	0.5	0.4	0.5	0.5	0.3	0.5
<b>PROCESSING RESULTS</b>						
Picker and card waste (percent)						
Early.....	7.0	7.3	7.3	7.7	7.6	7.0
Midseason.....	7.6	7.0	6.8	10.2	7.9	7.5
Late.....	7.4	9.6	10.2	9.5	9.3	8.6
Comber waste (percent)						
Early.....	15.3	15.1	14.0	14.7	15.8	14.0
Midseason.....	15.4	15.1	14.1	13.7	15.6	15.8
Late.....	16.8	16.2	15.9	15.0	16.5	15.9
Neps per 100 sq. in. of card web						
Early.....	11	9	13	16	11	15
Midseason.....	17	17	15	12	11	11
Late.....	8	20	12	14	15	12
Yarn skein strength 4/						
22s Grey (pounds)						
Early.....	141 (154)	132 (146)	138 (150)	143 (153)	136 (151)	143 (155)
Midseason.....	142 (155)	144 (158)	140 (152)	147 (160)	145 (160)	142 (158)
Late.....	138 (148)	138 (151)	135 (148)	141 (151)	142 (155)	144 (155)
50s Grey (pounds)						
Early.....	50 (56)	47 (50)	50 (55)	51 (54)	48 (54)	51 (56)
Midseason.....	51 (55)	50 (56)	49 (54)	54 (57)	52 (56)	52 (56)
Late.....	51 (54)	51 (54)	50 (53)	52 (56)	52 (56)	54 (58)
50s Mercerized (pounds)						
Early.....	(58)	(54)	(58)	(57)	(57)	(56)
Midseason.....	(57)	(58)	(57)	(60)	(58)	(59)
Late.....	(56)	(56)	(57)	(59)	(58)	(61)
Average break factor 5/						
Early.....	2801 (3094)	2627 (2856)	2768 (3025)	2848 (3033)	2696 (3011)	2848 (3105)
Midseason.....	2837 (3080)	2834 (3138)	2765 (3022)	2967 (3185)	2895 (3160)	2862 (3138)
Late.....	2793 (2978)	2793 (3011)	2735 (2953)	2851 (3061)	2856 (3096)	2934 (3155)
Yarn appearance grade 4/						
22s						
Early.....	C (B)	C+ (B+)	B (B+)	C+ (B)	C (B)	B (B+)
Midseason.....	C+ (B)	C+ (C+)	C+ (C+)	C+ (C+)	C+ (C+)	C+ (B)
Late.....	C+ (B)	D+ (C+)	C (C+)	C (C+)	C (C+)	C (C+)
50s						
Early.....	C (C+)	C (B)	C (B)	C (C+)	C (C+)	C+ (B)
Midseason.....	C+ (C+)	C (C+)	C (C+)	D+ (C+)	C (C+)	C+ (C+)
Late.....	C (C+)	D+ (C)	D+ (C)	D+ (C)	D+ (C)	C (C+)
Yarn appearance index 4/ 6/						
Early.....	90 (105)	95 (115)	100 (115)	95 (105)	90 (105)	105 (115)
Midseason.....	100 (105)	95 (100)	95 (100)	90 (100)	95 (100)	100 (105)
Late.....	95 (105)	80 (95)	85 (95)	85 (95)	85 (95)	90 (100)

Table 4.--Results of classification, fiber tests, and carded and combed yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Acala 1517 C			Acala 4-42	A-44
	Texas			California	Arizona
	Dell City	El Paso	Pecos	Fresno	Marana
<b>RAW COTTON QUALITY</b>					
Grade					
Early.....	SM	M	M	M	SM
Midseason.....	M	M	SM	SIM+	M
Late.....	M	M	M	SIM	M
Staple length (inches)					
Early.....	1-5/32	1-5/32	1-5/32	1-1/8	1-1/16
Midseason.....	1-3/8	1-1/8	1-5/32	1-1/8	1-1/16
Late.....	1-3/8	1-1/8	1-5/32	1-3/32	1-1/16
Fiber length (Fibrograph)					
Upper half mean (inches)					
Early.....	1.15	1.15	1.14	1.14	1.05
Midseason.....	1.09	1.12	1.14	1.09	1.07
Late.....	1.06	1.10	1.13	1.09	1.05
Uniformity ratio					
Early.....	80	83	79	81	82
Midseason.....	80	76	82	80	80
Late.....	77	78	76	82	80
Fiber fineness (wt. per inch, micrograms) <u>1/</u> :					
Early.....	3.5	3.8	3.9	4.2	3.9
Midseason.....	2.9	3.4	4.0	3.9	3.7
Late.....	2.7	3.7	2.2	3.9	3.6
Fiber maturity index <u>1/</u>					
Early.....	76	77	77	80	78
Midseason.....	71	76	76	80	79
Late.....	65	75	58	77	76
Fiber tensile strength (Pressley)					
1/8" gauge (index) <u>2/</u>					
Early.....	117	114	107	122	108
Midseason.....	117	117	108	115	109
Late.....	113	109	120	106	109
Zero gauge (1,000 p.s.i.)					
Early.....	85	87	82	90	86
Midseason.....	90	91	83	88	81
Late.....	86	88	82	80	83
Nonlint content (percent)					
Early.....	1.9	3.0	2.2	2.8	2.3
Midseason.....	2.8	3.8	2.0	4.4	3.4
Late.....	3.2	3.8	3.8	4.1	2.7
Color of cleaned lint (Ra/b) <u>3/</u>					
Early.....	79.3/8.4	80.5/8.1	75.5/8.8	81.3/7.8	79.4/9.0
Midseason.....	81.0/8.2	81.0/8.1	80.3/8.3	78.0/7.8	76.5/8.2
Late.....	80.6/7.6	79.0/7.4	81.0/8.4	76.4/7.3	75.8/8.1
Sugar content (percent)					
Early.....	0.2	0.2	0.0	0.3	0.2
Midseason.....	0.3	0.3	0.1	0.2	0.1
Late.....	0.5	0.5	0.3	0.3	0.3
<b>PROCESSING RESULTS</b>					
Picker and card waste (percent)					
Early.....	7.0	7.8	7.2	7.2	8.1
Midseason.....	7.7	8.8	7.0	9.0	8.2
Late.....	8.6	8.5	7.2	10.0	8.1
Comber waste (percent)					
Early.....	15.6	14.6	15.0	14.0	16.0
Midseason.....	15.8	14.7	15.0	14.5	16.6
Late.....	17.8	15.9	17.5	15.0	17.5
Neps per 100 sq. in. of card web					
Early.....	14	15	21	9	13
Midseason.....	16	16	22	12	14
Late.....	18	10	52	11	16
Yarn skein strength <u>4/</u>					
22s Grey (pounds)					
Early.....	139 (153)	142 (154)	130 (144)	144 (159)	128 (141)
Midseason.....	147 (159)	146 (158)	137 (150)	141 (152)	130 (144)
Late.....	134 (148)	135 (150)	140 (154)	131 (141)	130 (141)
50s Grey (pounds)					
Early.....	49 (54)	52 (56)	46 (51)	52 (56)	44 (49)
Midseason.....	52 (56)	53 (57)	49 (53)	51 (53)	46 (51)
Late.....	50 (54)	51 (54)	51 (54)	49 (51)	46 (51)
50s Mercerized (pounds)					
Early.....	(56)	(57)	(53)	(58)	(53)
Midseason.....	(56)	(56)	(56)	(56)	(53)
Late.....	(58)	(57)	(56)	(53)	(52)
Average break factor <u>5/</u>					
Early.....	2754 (3033)	2862 (3094)	2580 (2859)	2884 (3149)	2508 (2776)
Midseason.....	2917 (3149)	2931 (3163)	2732 (2975)	2826 (2997)	2580 (2859)
Late.....	2724 (2978)	2760 (3000)	2815 (3044)	2662 (2835)	2580 (2826)
Yarn appearance grade <u>4/</u>					
22s					
Early.....	C+ (B)	C+ (B)	C+ (B)	C+ (B)	C+ (B)
Midseason.....	C+ (C+)	C+ (B)	C+ (C+)	C+ (B)	C+ (B)
Late.....	C (C)	C (C+)	D (C)	C+ (B)	C+ (C+)
50s					
Early.....	C+ (C+)	C+ (C+)	C (C+)	C+ (B)	C (C+)
Midseason.....	C (C+)	C (C+)	C (C+)	C (C+)	C (C+)
Late.....	D+ (C+)	C (C+)	BG (D+)	C (C+)	C (C+)
Yarn appearance index <u>4/ 5/</u>					
Early.....	100 (105)	100 (105)	95 (105)	100 (110)	95 (105)
Midseason.....	95 (100)	95 (105)	90 (100)	95 (105)	95 (105)
Late.....	85 (95)	90 (100)	65 (85)	95 (105)	95 (100)

Table 4.--Results of classification, fiber tests, and carded and combed yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Coker 100 W		Deltapine 15		Delfos 9169
	Mississippi	North Carolina	Arkansas	Mississippi	Arkansas
	Greenwood	Shelby	Leachville	Tunica	Blytheville
<b>RAW COTTON QUALITY</b>					
Grade					
Early.....	M+	SIM	SIM	M+	M
Midseason.....	SIM	SIM	SIM	M	SIM
Late.....	SMLt.G	SIM	IM	SIM	IM
Staple length (inches)					
Early.....	1-3/32	1-1/32	1-1/16	1-3/32	1-1/8
Midseason.....	1-3/32	1-1/32	1-1/16	1-3/32	1-1/8
Late.....	1-1/32	1-1/32	1-1/16	1-3/32	1-1/16
Fiber length (Fibrograph)					
Upper half mean (inches)					
Early.....	1.11	1.04	1.06	1.08	1.16
Midseason.....	1.10	1.01	1.07	1.09	1.12
Late.....	1.04	.98	1.02	1.06	1.07
Uniformity ratio					
Early.....	82	80	79	80	78
Midseason.....	81	78	77	77	78
Late.....	77	77	79	79	77
Fiber fineness (wt. per inch, micrograms) 1/					
Early.....	4.3	4.2	4.4	4.4	4.0
Midseason.....	4.3	4.2	4.1	4.2	3.6
Late.....	4.0	3.7	3.7	3.6	3.3
Fiber maturity index 1/					
Early.....	79	77	76	79	74
Midseason.....	78	75	77	77	72
Late.....	79	77	75	76	71
Fiber tensile strength (Pressley)					
1/8" gauge (index) 2/					
Early.....	102	104	97	101	106
Midseason.....	107	106	100	106	103
Late.....	98	95	103	111	98
Zero gauge (1,000 p.s.i.)					
Early.....	80	81	78	79	76
Midseason.....	81	78	78	81	79
Late.....	79	76	81	81	76
Nonlint content (percent)					
Early.....	2.7	3.4	4.8	1.6	3.1
Midseason.....	3.0	3.9	3.4	3.1	4.4
Late.....	3.8	3.9	5.8	4.2	7.3
Color of cleaned lint (Rd/b) 3/					
Early.....	78.0/8.5	72.0/9.8	74.5/8.8	78.0/8.8	79.0/8.4
Midseason.....	74.5/7.9	73.0/9.4	73.5/8.4	76.8/8.4	76.8/7.8
Late.....	72.0/7.1	73.6/8.7	71.7/8.1	75.2/7.3	73.0/7.5
Sugar content (percent)					
Early.....	0.2	0.0	0.2	0.1	0.2
Midseason.....	0.3	0.2	0.2	0.0	0.2
Late.....	0.2	0.1	0.1	0.1	0.1
<b>PROCESSING RESULTS</b>					
Picker and card waste (percent)					
Early.....	6.9	7.7	9.8	7.1	7.6
Midseason.....	7.2	8.1	8.8	8.5	9.8
Late.....	8.8	8.9	10.4	8.1	12.6
Comber waste (percent)					
Early.....	13.5	14.2	15.5	13.6	16.0
Midseason.....	14.5	16.8	15.5	15.9	17.7
Late.....	19.6	20.0	19.0	15.7	20.1
Neps per 100 sq. in. of card web					
Early.....	9	12	13	10	8
Midseason.....	9	12	11	12	17
Late.....	10	17	23	8	19
Yarn skein strength 4/					
22s Grey (pounds)					
Early.....	126 (138)	125 (136)	116 (128)	128 (136)	126 (140)
Midseason.....	128 (140)	122 (134)	128 (137)	123 (137)	128 (140)
Late.....	117 (133)	110 (126)	124 (137)	130 (140)	118 (132)
50s Grey (pounds)					
Early.....	46 (49)	43 (46)	40 (45)	44 (49)	46 (51)
Midseason.....	46 (50)	42 (47)	44 (48)	42 (46)	45 (50)
Late.....	41 (46)	37 (42)	43 (47)	46 (50)	43 (49)
50s Mercerized (pounds)					
Early.....	(52)	(49)	(47)	(51)	(51)
Midseason.....	(50)	(48)	(52)	(50)	(52)
Late.....	(48)	(44)	(51)	(52)	(48)
Average break factor 5/					
Early.....	2536 (2743)	2450 (2646)	2276 (2533)	2508 (2721)	2536 (2815)
Midseason.....	2558 (2790)	2392 (2649)	2508 (2707)	2403 (2657)	2533 (2790)
Late.....	2312 (2613)	2135 (2436)	2439 (2682)	2580 (2790)	2373 (2677)
Yarn appearance grade 4/					
22s					
Early.....	B (B+)	C+ (B+)	B (B+)	B (B+)	B (B+)
Midseason.....	B (B+)	C+ (B)	B (B+)	C+ (B)	C+ (B)
Late.....	C (B)	C+ (C+)	C+ (B)	B (B+)	C+ (B)
50s					
Early.....	C+ (B)	C+ (C+)	C (C+)	C+ (C+)	C+ (B)
Midseason.....	C+ (B)	C+ (C+)	C+ (C+)	C (C+)	C (C+)
Late.....	C (B)	C (C+)	C (C+)	C (B)	C (C+)
Yarn appearance index 4/ 6/					
Early.....	105 (115)	100 (110)	100 (110)	105 (110)	105 (115)
Midseason.....	105 (115)	100 (105)	105 (110)	95 (105)	95 (105)
Late.....	90 (110)	95 (100)	95 (105)	105 (115)	95 (105)

Table 4.--Results of classification, fiber tests, and carded and combed yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1955--Continued

Test item and period of harvest	Delfos 9169				Stoneville 2 B
	Arkansas	Mississippi		Missouri	Mississippi
	Pine Bluff	Belzoni	Stoneville	Hayti	Leland
<b>RAW COTTON QUALITY</b>					
Grade					
Early.....	M	SM	M+	SM	M
Midseason.....	LM	M	LM	M	LM+
Late.....	LM	M	LM	SIM	SIM
Staple length (inches)					
Early.....	1-3/32	1-1/8	1-5/32	1-3/32	1-3/32
Midseason.....	1-1/16	1-3/32	1-1/8	1-1/8	1-1/32
Late.....	1-1/16	1-1/16	1-3/32	1-3/32	1-1/16
Fiber length (Fibrograph)					
Upper half mean (inches)					
Early.....	1.14	1.10	1.18	1.07	1.07
Midseason.....	1.12	1.05	1.13	1.12	.99
Late.....	1.10	1.04	1.08	1.10	1.00
Uniformity ratio					
Early.....	79	75	78	80	79
Midseason.....	78	78	76	77	77
Late.....	79	76	76	75	74
Fiber fineness (wt. per inch, micrograms) <sup>1/</sup>					
Early.....	4.3	4.2	4.0	4.7	3.7
Midseason.....	4.1	4.1	3.9	4.3	3.9
Late.....	3.9	4.0	3.7	4.0	3.6
Fiber maturity index <sup>1/</sup>					
Early.....	79	78	78	77	73
Midseason.....	77	76	77	77	72
Late.....	78	70	75	77	72
Fiber tensile strength (Pressley)					
1/8" gauge (index) <sup>2/</sup>					
Early.....	98	93	99	101	92
Midseason.....	97	95	95	97	90
Late.....	98	95	100	101	95
Zero gauge (1,000 p.s.i.)					
Early.....	81	79	70	78	80
Midseason.....	76	78	68	74	80
Late.....	75	75	74	80	76
Nonlint content (percent)					
Early.....	3.8	2.3	2.8	1.9	3.0
Midseason.....	6.1	3.1	5.7	2.1	5.1
Late.....	6.8	3.3	5.4	4.2	5.2
Color of cleaned lint (Rd/b) <sup>3/</sup>					
Early.....	76.5/8.7	78.0/8.6	78.2/9.0	77.5/8.6	77.5/9.2
Midseason.....	76.0/7.6	75.8/8.2	72.5/8.7	76.5/8.6	71.0/9.2
Late.....	74.8/7.8	77.5/7.4	71.0/8.1	76.9/8.0	72.0/8.3
Sugar content (percent)					
Early.....	0.2	0.3	0.2	0.2	0.2
Midseason.....	0.1	0.1	0.2	0.2	0.2
Late.....	0.1	0.2	0.2	0.1	0.2
<b>PROCESSING RESULTS</b>					
Picker and card waste (percent)					
Early.....	9.1	7.0	8.6	7.4	7.4
Midseason.....	11.3	7.8	11.1	7.4	10.3
Late.....	10.8	8.5	11.9	9.6	10.7
Comber waste (percent)					
Early.....	13.7	16.2	14.3	15.6	15.6
Midseason.....	15.3	17.2	17.3	16.1	19.6
Late.....	16.4	19.6	20.9	17.8	21.4
Neps per 100 sq. in. of card web					
Early.....	4	10	14	14	13
Midseason.....	6	18	21	15	22
Late.....	6	9	20	7	17
Yarn skein strength <sup>4/</sup>					
22s Grey (pounds)					
Early.....	120 (130)	119 (132)	124 (135)	119 (132)	121 (134)
Midseason.....	122 (132)	117 (132)	118 (133)	120 (134)	108 (124)
Late.....	117 (132)	112 (127)	112 (129)	121 (134)	107 (123)
50s Grey (pounds)					
Early.....	43 (47)	42 (47)	44 (49)	42 (47)	43 (47)
Midseason.....	43 (47)	41 (46)	43 (48)	43 (47)	37 (43)
Late.....	44 (46)	38 (44)	41 (46)	43 (47)	36 (42)
50s Mercerized (pounds)					
Early.....	(50)	(50)	(50)	(49)	(48)
Midseason.....	(51)	(49)	(50)	(49)	(46)
Late.....	(48)	(46)	(47)	(48)	(44)
Average break factor <sup>5/</sup>					
Early.....	2395 (2605)	2359 (2627)	2464 (2710)	2359 (2627)	2406 (2649)
Midseason.....	2417 (2627)	2312 (2602)	2373 (2663)	2395 (2649)	2113 (2439)
Late.....	2387 (2602)	2182 (2497)	2257 (2569)	2406 (2649)	2077 (2403)
Yarn appearance grade <sup>4/</sup>					
22s					
Early.....	B (B+)	B (B)	C+ (B)	C+ (B)	B (B+)
Midseason.....	B+ (B+)	C+ (B)	C (B)	C+ (B+)	C+ (B)
Late.....	B (B+)	C+ (B)	D+ (C+)	B (B+)	C+ (B)
50s					
Early.....	C+ (B)	C+ (B)	C (C+)	C+ (C+)	C+ (B)
Midseason.....	B (B+)	C (B)	C (C+)	C (C+)	C (C+)
Late.....	C+ (B)	C+ (C+)	D (C)	C+ (B)	C (C+)
Yarn appearance index <sup>4/ 6/</sup>					
Early.....	105 (115)	105 (110)	95 (105)	100 (105)	105 (115)
Midseason.....	115 (120)	95 (110)	90 (105)	95 (110)	95 (105)
Late.....	105 (115)	100 (105)	75 (95)	105 (115)	95 (105)

<sup>1/</sup> Determined by the Causticaine method using the Micronaire instrument.  
<sup>2/</sup> Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.  
<sup>3/</sup> Determined by Rickerson-Rurter Colorimeter on lint cleaned by Shirley Analyzer.  
<sup>4/</sup> Data in parentheses are for combed yarn process.  
<sup>5/</sup> Based on yarn skein strength of the 2 grey numbers spun.  
<sup>6/</sup> Based on 2 grey numbers spun. Index of average quality equals 100.

Table 5.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 4-1/2 pounds per hour, crop of 1955

Test item and period of harvest	Pima 8-1			
	Arizona			Texas
	Marana	Peoria	Safford	El Paso
<b>RAW COTTON QUALITY</b>				
Grade				
Early.....	3	2	2	2
Midseason.....	2	2	2	2
Late.....	2	3	4	3
Staple length (inches)				
Early.....	1-3/8	1-7/16	1-7/16	1-7/16
Midseason.....	1-3/8	1-7/16	1-7/16	1-7/16
Late.....	1-3/8	1-7/16	1-3/8	1-7/16
Fiber length (array)				
Upper quartile (inches)				
Early.....	1.35	1.37	1.42	1.45
Midseason.....	1.39	1.41	1.47	1.44
Late.....	1.41	1.42	1.42	1.44
Coefficient of variation (percent)				
Early.....	31	30	29	30
Midseason.....	27	28	29	30
Late.....	26	29	27	27
Fiber fineness (wt. per inch, micrograms) 1/				
Early.....	3.4	3.4	3.3	3.5
Midseason.....	3.2	3.4	3.1	3.3
Late.....	3.2	3.1	3.3	3.1
Fiber maturity index 1/				
Early.....	80	78	82	80
Midseason.....	80	82	76	75
Late.....	79	76	78	78
Fiber tensile strength (Pressley)				
1/8" gauge (index) 2/				
Early.....	152	152	145	154
Midseason.....	151	153	154	153
Late.....	154	162	157	159
Zero gauge (1,000 p.s.i.)				
Early.....	98	100	92	99
Midseason.....	99	96	102	100
Late.....	99	101	98	104
Nonlint content (percent)				
Early.....	2.5	2.4	2.1	2.5
Midseason.....	2.7	2.4	3.6	3.8
Late.....	2.8	2.0	3.8	3.3
Color of cleaned lint (R <sub>4</sub> /b) 3/				
Early.....	69.9/11.0	70.5/11.1	69.6/10.8	71.0/10.6
Midseason.....	71.1/10.7	70.4/10.5	71.5/11.0	70.7/10.9
Late.....	69.7/10.9	70.5/10.7	69.0/10.4	69.2/10.6
Sugar content (percent)				
Early.....	0.2	0.1	0.1	0.1
Midseason.....	0.2	0.1	0.1	0.1
Late.....	0.4	0.2	0.5	0.3
<b>PROCESSING RESULTS</b>				
Picker and card waste (percent)				
Early.....	9.7	8.9	8.7	8.8
Midseason.....	9.2	8.8	9.4	9.2
Late.....	9.9	9.4	12.3	10.8
Comber waste (percent)				
Early.....	18.1	16.1	14.3	14.1
Midseason.....	16.6	15.2	13.8	15.1
Late.....	16.6	15.5	15.7	17.4
Neps per 100 sq. in. of card web				
Early.....	4	5	3	3
Midseason.....	7	5	7	9
Late.....	6	5	4	3
Yarn skein strength				
50s Grey (pounds)				
Early.....	68	70	72	72
Midseason.....	71	72	74	71
Late.....	74	74	74	72
50s Mercerized (pounds)				
Early.....	72	73	73	76
Midseason.....	74	76	78	75
Late.....	78	78	77	76
80s Grey (pounds)				
Early.....	38	37	39	38
Midseason.....	40	40	40	40
Late.....	41	40	40	40
Average break factor 4/				
Early.....	3220	3230	3360	3320
Midseason.....	3375	3400	3450	3375
Late.....	3490	3450	3450	3400
Yarn appearance grade				
50s Grey				
Early.....	A	A	A	A
Midseason.....	B+	B+	B+	B
Late.....	B+	B+	B+	B+
80s Grey				
Early.....	B+	B+	B+	B
Midseason.....	B+	B+	B	B
Late.....	B	B+	B	B
Yarn appearance index 5/				
Early.....	125	125	125	120
Midseason.....	120	120	115	110
Late.....	115	120	115	115

1/ Determined by the Causticacire method using the Micronaire instrument.

2/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

3/ Determined by Nicholson-Hunter Colorimeter on lint cleaned by Shirley Analyzer.

4/ Based on grey yarn skein strength of the 2 yarn numbers spun.

5/ Based on 2 grey numbers. Index for average quality equals 100.

Table 6.--Averages of selected fiber properties, carded yarn processing, results for specified varieties of upland cotton processed at a card production rate of 12-1/2 pounds per hour, crop of 1955

Variety	Hibred	Lockett SP-1	Paymaster 54B	Rowden
Number of lots tested	3	2	3	3
<b>Raw Cotton Quality</b>				
Grade.....index:	92.3	94.0	96.0	98.0
Staple length.....32ds inch:	27.3	29.0	29.7	31.0
Fiber length (Fibrograph):				
Upper half mean.....inches:	.83	.88	.92	.92
Uniformity ratio.....	81	80	80	79
Fiber fineness.....ug./in. 1/:	4.9	4.2	3.5	5.4
Fiber maturity.....index 1/:	79	74	66	83
Fiber tensile strength 2/				
1/8" gauge.....index 3/:	91	92	96	94
Zero gauge.....1,000 p.s.i.:	80	72	70	82
Nonlint content.....percent 4/:	3.1	3.4	3.9	3.0
Color of cleaned lint....(R <sub>d</sub> /b) 5/:	72.7/9.5	76.2/8.8	75.8/9.7	75.6/9.0
<b>Processing Results</b>				
Picker and card waste.....percent:	9.0	8.8	9.9	9.2
Neps...per 100 sq. in. of card web:	6	18	21	9
Yarn skein strength:				
8s.....pounds:	307	302	340	317
22s.....pounds:	94	92	102	97
Average break factor.....6/:	2262	2220	2488	2335
Yarn appearance:				
8s.....index:	117	115	103	120
22s.....index:	107	105	93	110
Average yarn appearance-index 7/:	112	110	98	115

- 1/ Determined by the Causticaire method using the Micronaire instrument.  
 2/ Determined by Pressley instrument.  
 3/ An index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.  
 4/ Determined by Shirley Analyzer.  
 5/ Determined by Nickerson-Hunter Colorimeter on lint cleaned by Shirley Analyzer.  
 6/ Based on yarn skein strength of the 2 yarn numbers spun.  
 7/ Based on 2 yarn numbers spun. Index for average quality equals 100.

Table 7.--Averages of selected fiber properties and processing results for specified varieties of upland cotton processed at specified card production rates (combed yarn data in parentheses), crop of 1955

Variety	Acala 1517 C	Acala 4-42	A-44	Bobshaw 1-A
Number of lots tested	(27)	21 (3)	15 (3)	2
<u>Raw Cotton Quality</u>				
Grade.....index:	101.5	99.3	100.4	97.5
Staple length.....32ds inch:	36.3	34.9	34.1	33.5
Fiber length (Fibrograph):				
Upper half mean.....inches:	1.13	1.07	1.06	1.06
Uniformity ratio.....	80	80	80	80
Fiber fineness.....ug./in. <u>1/</u> :	3.4	4.2	3.9	4.8
Fiber maturity.....index <u>1/</u> :	72	79	78	82
Fiber tensile strength <u>2/</u>				
1/8" gauge.....index <u>3/</u> :	113	113	111	105
Zero gauge.....1,000 p.s.i.:	86	88	86	84
Nonlint content.....percent <u>4/</u> :	3.0	3.4	3.5	4.0
Color of cleaned lint (R <sub>d</sub> /b) <u>5/</u> :	79.9/8.1	78.8/7.9	77.4/8.6	74.0/8.8
<u>Processing Results</u>				
Card production rate (lbs.per hr.):	- (6½)	9½ (6½)	9½ (6½)	9½
Picker and card waste.....percent:	- (8.0)	8.3(8.7)	8.7(8.1)	9.7
Comber waste.....percent:	- (15.4)	- (14.5)	- (16.7)	-
Neps...per 100 sq. in. of card web:	- (16)	11 (11)	14 (14)	16
Yarn skein strength:				
22s.....pounds:	140( 152)	128( 151)	120( 142)	111
50s.....pounds:	51( 55)	45( 53)	41( 50)	38
Average break factor..... <u>6/</u> :	2815(3047)	2533(2986)	2345(2812)	2171
Yarn appearance:				
22s.....index:	96 (105)	104 (110)	102 (107)	105
50s.....index:	88 ( 99)	92 (103)	86 (100)	90
Average yarn appearance index <u>7/</u> :	92 (102)	98 (106)	93 (104)	98

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Table 7.--Averages of selected fiber properties and processing results for specified varieties of upland cotton processed at specified card production rates (combed yarn data in parentheses), crop of 1955--Continued

Variety	Coker 100 W	Deltapine 15	Deltapine Fox	Deltapine TPSA
Number of lots tested	54 (6)	114 (6)	6	9
<u>Raw Cotton Quality</u>				
Grade.....index:	95.4	95.2	98.1	97.2
Staple length.....32ds inch:	33.5	33.8	33.7	32.8
Fiber length (Fibrograph):				
Upper half mean.....inches:	1.04	1.04	1.05	1.01
Uniformity ratio.....:	80	80	80	80
Fiber fineness.....ug./in. <u>1</u> /:	4.2	4.2	4.6	4.4
Fiber maturity.....index <u>1</u> /:	77	78	80	80
Fiber tensile strength <u>2</u> /				
1/8" gauge.....index <u>3</u> /:	97	100	100	99
Zero gauge.....1,000 p.s.i.:	76	78	77	79
Nonlint content.....percent <u>4</u> /:	3.4	3.8	3.0	3.0
Color of cleaned lint....(R <sub>d</sub> /b) <u>5</u> /:	74.5/8.7	75.8/8.7	75.1/8.4	76.9/8.7
<u>Processing Results</u>				
Card production rate (lbs. per hr.):	9½ (6½)	9½ (6½)	9½	9½
Picker and card waste.....percent:	8.0(7.9)	9.1(8.8)	9.4	8.7
Comber waste.....percent:	- (16.4)	- (15.9)	-	-
Neps...per 100 sq. in. of card web:	13 (12)	12 (13)	10	8
Yarn skein strength:				
22s.....pounds:	114( 134)	115( 136)	111	111
50s.....pounds:	40( 47)	39( 38)	37	39
Average break factor..... <u>6</u> /:	2254(2649)	2240(2696)	2146	2196
Yarn appearance:				
22s.....index:	106 (113)	111 (117)	111	116
50s.....index:	98 (105)	96 (102)	93	102
Average yarn appearance index <u>7</u> /:	102 (109)	104 (110)	102	109

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Table 7.--Averages of selected fiber properties and processing results for specified varieties of upland cotton processed at specified card production rates (combed yarn data in parentheses), crop of 1955--Continued

Variety	Delfos 9169	Empire	Lankart 57	Lankart 611
Number of lots tested	3 (15)	6	27	3
<b>Raw Cotton Quality</b>				
Grade.....index:	96.1	97.0	94.7	94.0
Staple length.....32ds inch:	34.8	33.8	30.4	31.3
Fiber length (Fibrograph):				
Upper half mean.....inches:	1.09	1.04	.94	.96
Uniformity ratio.....:	79	81	79	79
Fiber fineness.....ug./in. $\frac{1}{16}$ :	4.0	4.2	4.4	4.1
Fiber maturity.....index $\frac{1}{16}$ :	76	77	77	73
Fiber tensile strength $\frac{2}{16}$ :				
1/8" gauge.....index $\frac{3}{16}$ :	98	98	94	95
Zero gauge.....1,000 p.s.i.:	77	82	75	70
Nonlint content.....percent $\frac{4}{16}$ :	3.9	3.4	3.8	2.7
Color of cleaned lint....(R <sub>d</sub> /b) $\frac{5}{16}$ :	76.2/8.3	77.9/8.3	73.7/9.6	71.7/9.6
<b>Processing Results</b>				
Card production rate (lbs.per hr.):	9 $\frac{1}{2}$ (6 $\frac{1}{2}$ )	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$
Picker and card waste.....percent:	9.3(9.4)	8.0	9.8	9.2
Comber waste.....percent:	- (16.9)	-	-	-
Neps...per 100 sq. in. of card web:	12 (12)	12	12	12
Yarn skein strength:				
22s.....pounds:	117( 134)	123	99	96
50s.....pounds:	42( 47)	43	32	32
Average break factor..... $\frac{6}{16}$ :	2337(2638)	2428	1889	1856
Yarn appearance:				
22s.....index:	104 (113)	107	108	100
50s.....index:	96 (105)	100	93	83
Average yarn appearance index $\frac{7}{16}$ :	100 (109)	104	100	92

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Table 7.--Averages of selected fiber properties and processing results for specified varieties of upland cotton processed at specified card production rates (combed yarn data in parentheses), crop of 1955--Continued

Variety	Northern Star	Plains	Stoneville 2 B
Number of lots tested	3	3	3 (3)
<u>Raw Cotton Quality</u>			
Grade.....index:	96.7	98.0	96.7
Staple length.....32ds inch:	31.0	32.7	34.0
Fiber length (Fibrograph):			
Upper half mean.....inches:	.98	.99	1.03
Uniformity ratio.....:	79	81	78
Fiber fineness.....ug./in. <u>1</u> :	4.2	4.0	3.7
Fiber maturity.....index <u>1</u> :	75	75	72
Fiber tensile strength <u>2</u> :			
1/8" gauge.....index <u>3</u> :	97	101	95
Zero gauge.....1,000 p.s.i.:	81	79	81
Nonlint content.....percent <u>4</u> :	3.7	2.8	3.9
Color of cleaned lint....(R <sub>d</sub> /b) <u>5</u> :	74.1/9.8	77.4/8.5	75.4/8.7
<u>Processing Results</u>			
Card production rate (lbs. per hr.):	9½	9½	9½ (6½)
Picker and card waste.....percent:	9.3	8.2	9.2(9.5)
Comber waste.....percent:	-	-	- (18.9)
Neps---per 100 sq. in. of card web:	13	9	18 (17)
Yarn skein strength:			
22s.....pounds:	108	123	113( 127)
50s.....pounds:	35	44	39( 44)
Average break factor..... <u>6</u> :	2063	2453	2218(2497)
Yarn appearance:			
22s.....index:	103	110	105 (113)
50s.....index:	87	100	90 (103)
Average yarn appearance index <u>7</u> :	95	105	98 (108)

1/ Determined by the Causticaire method using the Micronaire instrument.  
 2/ Determined by Pressley instrument.  
 3/ An index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.  
 4/ Determined by Shirley Analyzer.  
 5/ Determined by Nickerson-Hunter Colorimeter on lint cleaned by Shirley Analyzer.  
 6/ Based on yarn skein strength of the 2 yarn numbers spun.  
 7/ Based on 2 yarn numbers spun. Index for average quality equals 100.

Table 8.--Averages of selected fiber properties and combed yarn processing results for American Egyptian cotton processed at a card production rate of 4-1/2 pounds per hour, crop of 1955

Variety	Pima S-1
Number of lots tested	12
<u>Raw Cotton Quality</u>	
Grade.....	2.4
Staple length.....32ds inch:	45.3
Fiber length (array)	
Upper quartile.....inches:	1.42
Coefficient of variation.....percent:	29
Fiber fineness.....ug./in. <u>1/</u> :	3.3
Fiber maturity.....index <u>1/</u> :	79
Fiber tensile strength <u>2/</u>	
1/8" gauge.....index <u>3/</u> :	154
Zero gauge.....1,000 p.s.i.:	99
Nonlint content.....percent <u>4/</u> :	2.8
Color of cleaned lint.....(R <sub>d</sub> /b) <u>5/</u> :	70.3/10.8
<u>Processing Results</u>	
Picker and card waste.....percent:	9.6
Comber waste.....percent:	15.7
Neps.....per 100 sq. in. of card web:	5
Yarn skein strength:	
50s.....pounds:	72
80s.....pounds:	39
Average break factor..... <u>6/</u> :	3376
Yarn appearance:	
50s.....index:	122
80s.....index:	115
Average yarn appearance.....index <u>7/</u> :	118

1/ Determined by the Causticaire method using the Micronaire instrument.  
2/ Determined by Pressley instrument.  
3/ An index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.  
4/ Determined by Shirley Analyzer.  
5/ Determined by Nickerson-Hunter Colorimeter on lint cleaned by Shirley Analyzer.  
6/ Based on yarn skein strength of the 2 yarn numbers spun.  
7/ Based on 2 yarn numbers spun. Index for average quality equals 100.

Table 9.—Comparative averages of selected fiber properties and carded yarn processing results for all lots of upland cotton tested for each period of harvest and State of growth, crops of 1954 and 1955

Test item and period of harvest	SOUTHEAST REGION							
	ALABAMA		GEORGIA		NORTH CAROLINA		SOUTH CAROLINA	
	1954	1955	1954	1955	1954	1955	1954	1955
<b>NUMBER OF LOTS TESTED</b>								
Early.....	6	7	8	8	4	4	4	4
Midseason.....	6	7	8	8	4	4	4	4
Late.....	6	7	8	8	4	4	4	4
Total season.....	18	21	24	24	12	12	12	12
<b>RAW COTTON QUALITY</b>								
<b>Grade (index)</b>								
Early.....	101.7	100.1	101.2	99.6	102.2	95.5	100.0	96.2
Midseason.....	100.0	98.6	100.0	96.6	98.5	95.5	99.0	92.5
Late.....	98.0	94.9	98.2	93.8	97.5	88.0	96.5	89.5
Total season.....	99.9	97.9	99.8	96.7	99.4	93.0	98.5	92.7
<b>Staple length (32ds inch)</b>								
Early.....	33.3	33.9	32.6	33.8	33.5	32.8	32.5	33.8
Midseason.....	33.7	33.9	32.6	33.8	32.8	33.0	32.5	33.0
Late.....	33.3	33.3	32.4	33.4	32.8	32.8	32.5	32.5
Total season.....	33.4	33.7	32.5	33.7	33.0	32.9	32.5	33.1
<b>Fiber length (Fibrograph):</b>								
<b>Upper half mean (inches)</b>								
Early.....	1.05	1.05	1.02	1.05	1.04	1.03	1.01	1.03
Midseason.....	1.04	1.04	1.00	1.05	1.03	1.01	1.01	1.01
Late.....	1.03	1.04	1.01	1.04	1.00	1.00	1.01	1.01
Total season.....	1.04	1.04	1.01	1.04	1.02	1.01	1.01	1.02
<b>Uniformity ratio</b>								
Early.....	80.0	81.1	80.0	81.2	80.0	79.2	79.2	81.2
Midseason.....	80.3	80.3	80.5	80.6	81.0	77.8	81.2	80.5
Late.....	78.7	80.0	79.8	79.5	80.0	77.2	79.2	78.5
Total season.....	79.7	80.5	80.1	80.4	80.3	78.1	79.9	80.1
<b>Fiber fineness (weight per inch, (micrograms) <math>\frac{1}{L}</math>):</b>								
Early.....	4.17	4.23	4.38	4.29	4.05	4.30	4.15	4.35
Midseason.....	3.94	4.14	4.50	4.09	4.10	4.30	3.95	4.40
Late.....	3.70	4.03	4.35	4.11	3.68	4.00	3.92	4.00
Total season.....	3.94	4.13	4.41	4.16	3.94	4.20	4.01	4.25
<b>Fiber maturity index <math>\frac{1}{L}</math>:</b>								
Early.....	78.0	76.3	79.9	78.0	78.0	78.0	77.2	77.5
Midseason.....	76.7	76.0	78.0	76.1	75.8	76.5	77.0	77.5
Late.....	77.0	77.1	81.5	77.6	80.0	77.0	77.8	77.2
Total season.....	77.2	76.5	79.8	77.2	77.9	77.2	77.3	77.4
<b>Fiber tensile strength (Pressley)</b>								
<b>1/8-inch gauge (index) <math>\frac{2}{L}</math>:</b>								
Early.....	101.7	99.0	100.8	101.0	103.8	96.0	101.2	97.8
Midseason.....	102.3	97.6	97.2	95.4	102.2	95.5	101.2	95.0
Late.....	97.0	100.6	94.8	94.4	99.5	90.5	99.0	93.0
Total season.....	100.3	99.1	97.6	96.9	101.8	94.0	101.5	95.3
<b>Zero gauge (1,000 p.s.i.)</b>								
Early.....	84.5	76.6	84.1	79.5	82.5	76.9	84.8	77.2
Midseason.....	83.5	75.6	84.4	77.2	83.8	73.2	83.2	75.5
Late.....	79.5	77.7	82.8	76.9	83.2	71.0	85.8	72.2
Total season.....	82.5	76.6	83.8	77.9	83.2	73.7	84.6	75.0
<b>Nonlint content (percent)</b>								
Early.....	2.82	2.63	2.69	2.83	2.20	2.88	2.50	3.64
Midseason.....	3.17	3.14	3.30	3.06	2.58	3.86	3.40	4.28
Late.....	3.85	3.40	4.09	3.68	2.95	4.23	3.60	4.84
Total season.....	3.28	3.06	3.36	3.19	2.58	3.66	3.17	4.25
<b>PROCESSING RESULTS</b>								
<b>Picker and card waste (percent)</b>								
Early.....	6.60	7.22	6.70	7.65	7.65	7.34	7.52	8.27
Midseason.....	7.32	7.45	7.09	7.68	7.80	8.29	8.30	8.68
Late.....	7.97	7.89	7.74	8.00	8.32	9.50	9.35	9.40
Total season.....	7.30	7.52	7.18	7.78	7.92	8.38	8.39	8.78
<b>Neps per 100 sq. in. of card web</b>								
Early.....	7.8	10.4	9.8	12.8	18.2	15.0	24.8	12.0
Midseason.....	12.8	11.6	11.0	13.9	21.2	11.5	22.5	11.0
Late.....	12.2	11.0	8.6	13.1	23.0	12.2	29.8	14.0
Total season.....	10.9	11.0	9.8	13.3	20.8	12.9	25.7	12.3
<b>Yarn skein strength (break factor) <math>\frac{3}{L}</math>:</b>								
Early.....	2308	2435	2227	2387	2444	2166	2404	2292
Midseason.....	2312	2414	2168	2360	2390	2172	2344	2219
Late.....	2138	2355	2084	2274	2285	1944	2270	2017
Total season.....	2252	2402	2160	2341	2372	2094	2339	2176
<b>Yarn appearance (index) <math>\frac{4}{L}</math>:</b>								
Early.....	105.0	105.0	101.9	103.8	101.2	101.2	97.5	102.5
Midseason.....	99.2	105.0	103.8	104.4	98.8	101.2	96.2	106.2
Late.....	92.5	105.0	98.8	101.9	88.8	95.0	91.2	96.2
Total season.....	98.9	105.0	101.5	103.4	96.3	99.1	95.0	101.6

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Table 9.—Comparative averages of selected fiber properties and carded yarn processing results for all lots of upland cotton tested for each period of harvest and State of growth, crops of 1954 and 1955 - continued

Test item and period of harvest	SOUTH CENTRAL REGION									
	ARKANSAS		LOUISIANA		MISSISSIPPI		MISSOURI		TENNESSEE	
	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955
<b>NUMBER OF LOTS TESTED</b>										
Early.....	9	10	7	8	15	17	3	4	4	4
Midseason.....	9	10	7	8	15	17	3	4	4	4
Late.....	9	10	7	8	14	17	3	4	4	4
Total season.....	27	30	21	24	44	51	9	12	12	12
<b>RAW COTTON QUALITY</b>										
<b>Grade (index)</b>										
Early.....	100.0	100.6	103.0	96.0	102.1	100.2	104.0	104.0	99.5	103.0
Midseason.....	100.4	92.2	98.3	95.5	99.2	94.5	100.0	100.0	100.0	98.5
Late.....	93.9	85.5	94.4	90.6	93.1	91.4	94.0	94.0	85.0	94.0
Total season.....	98.1	92.8	98.6	94.0	98.1	95.4	99.3	99.3	94.8	98.5
<b>Staple length (32ds inch)</b>										
Early.....	33.9	34.4	33.6	34.1	34.1	34.4	34.0	34.2	33.2	34.0
Midseason.....	33.3	34.1	33.7	34.1	33.9	34.2	34.0	34.7	34.8	34.2
Late.....	32.9	33.9	33.1	33.9	33.2	33.6	34.0	34.2	32.0	34.0
Total season.....	33.4	34.1	33.5	34.0	33.7	34.1	34.0	34.4	33.3	34.1
<b>Fiber length (Fibrograph):</b>										
Upper half mean (inches)										
Early.....	1.04	1.07	1.03	1.04	1.04	1.07	1.10	1.05	1.03	1.03
Midseason.....	1.03	1.08	1.05	1.04	1.05	1.06	1.08	1.09	1.04	1.05
Late.....	1.05	1.05	1.05	1.04	1.04	1.03	1.10	1.06	1.04	1.05
Total season.....	1.04	1.07	1.04	1.04	1.04	1.05	1.10	1.07	1.04	1.04
<b>Uniformity ratio</b>										
Early.....	80.1	79.1	80.1	79.5	79.8	79.2	80.0	79.2	79.5	79.5
Midseason.....	80.2	78.9	79.7	79.2	79.9	78.9	80.0	79.0	80.5	80.0
Late.....	79.6	79.3	79.7	79.4	79.9	78.4	79.3	78.5	79.5	79.8
Total season.....	80.0	79.1	79.8	79.4	79.9	78.8	79.8	78.9	79.8	79.8
<b>Fiber fineness (weight per inch, (micrograms) 1/</b>										
Early.....	4.24	4.35	4.54	4.32	4.31	4.38	4.20	4.35	4.30	4.50
Midseason.....	4.32	4.21	4.34	4.40	4.19	4.29	4.40	4.25	4.32	4.22
Late.....	4.06	3.94	4.43	4.09	4.16	4.01	4.17	3.85	4.15	4.08
Total season.....	4.21	4.17	4.44	4.27	4.22	4.23	4.26	4.15	4.26	4.27
<b>Fiber maturity index 1/</b>										
Early.....	78.1	78.6	80.1	79.0	78.3	79.6	79.0	78.0	80.2	79.2
Midseason.....	77.4	76.6	82.0	77.8	79.0	77.3	76.0	75.8	78.8	76.2
Late.....	78.9	76.1	80.4	78.2	79.6	76.6	81.3	76.5	78.2	76.8
Total season.....	78.1	77.1	80.8	78.3	79.0	77.8	78.8	76.8	79.1	77.4
<b>Fiber tensile strength (Pressley)</b>										
1/8-inch gauge (index) 2/										
Early.....	102.1	102.1	104.6	97.1	104.1	98.2	102.7	100.8	98.5	101.5
Midseason.....	98.7	102.1	98.1	97.9	99.8	101.0	100.3	102.8	94.8	101.8
Late.....	95.7	99.7	96.6	95.5	94.4	98.5	95.0	99.5	94.2	100.2
Total season.....	98.8	101.3	99.8	96.8	99.4	99.2	99.3	101.0	95.8	102.2
<b>Zero gauge (1,000 p.s.i.)</b>										
Early.....	87.2	80.8	86.9	74.5	87.9	77.6	83.3	80.0	82.8	80.8
Midseason.....	85.8	79.0	83.0	74.9	86.2	77.2	82.7	78.5	85.2	81.5
Late.....	84.9	79.4	83.6	74.8	84.1	77.4	81.7	78.8	82.5	80.2
Total season.....	86.0	79.7	84.5	74.7	86.1	77.4	82.6	79.1	83.5	80.8
<b>Nonlint content (percent)</b>										
Early.....	2.99	3.21	2.59	3.77	2.99	2.79	1.87	2.25	2.65	2.88
Midseason.....	3.34	4.29	2.90	4.15	3.66	3.90	2.90	2.81	2.78	3.27
Late.....	3.84	6.04	2.71	4.66	4.61	4.49	2.93	3.78	5.42	3.69
Total season.....	3.39	4.51	2.73	4.19	3.75	3.73	2.57	2.95	3.62	3.28
<b>PROCESSING RESULTS</b>										
<b>Picker and card waste (percent)</b>										
Early.....	6.68	8.30	6.54	10.01	7.56	8.16	5.60	8.47	6.55	8.10
Midseason.....	7.59	8.50	7.17	9.49	8.12	9.21	6.80	8.26	7.40	8.22
Late.....	8.11	10.86	7.96	10.00	9.05	9.97	7.40	9.47	9.78	8.70
Total season.....	7.46	9.22	7.22	9.83	8.24	9.11	6.60	8.72	7.91	8.34
<b>Neps per 100 sq. in. of card web</b>										
Early.....	11.4	9.7	11.3	14.1	13.9	10.2	11.3	12.0	13.3	9.8
Midseason.....	13.4	13.1	9.4	13.9	13.3	14.4	16.3	13.8	8.0	12.2
Late.....	14.1	12.9	7.3	14.9	10.9	14.2	12.7	14.0	20.5	15.5
Total season.....	13.1	11.9	9.3	14.3	12.7	12.9	13.4	13.3	13.9	12.5
<b>Yarn skein strength (break factor) 3/</b>										
Early.....	2309	2400	2316	2275	2417	2360	2404	2367	2171	2422
Midseason.....	2252	2309	2159	2087	2241	2228	2294	2290	2105	2348
Late.....	2072	2235	2092	2000	2109	2153	2193	2226	1934	2293
Total season.....	2211	2315	2189	2121	2256	2247	2297	2294	2070	2354
<b>Yarn appearance (index) 4/</b>										
Early.....	97.8	105.0	102.9	102.5	99.0	103.5	100.0	102.5	107.5	111.2
Midseason.....	99.4	102.5	104.3	103.8	99.6	101.5	101.7	98.8	103.8	106.2
Late.....	98.9	99.5	101.4	99.4	98.9	99.1	96.7	97.5	93.8	97.5
Total season.....	98.7	102.3	102.9	101.9	99.2	101.4	99.5	99.6	101.7	105.0

Table 9.—Comparative averages of selected fiber properties and carded yarn processing results for all lots of upland cotton tested for each period of harvest and State of growth, crops of 1954 and 1955 - continued

Test item and period of harvest	SOUTHWEST REGION							
	OKLAHOMA		CENTRAL TEXAS 5/		NORTHWEST TEXAS 6/		SOUTH TEXAS 7/	
	1954	1955	1954	1955	1954	1955	1954	1955
<b>NUMBER OF LOTS TESTED</b>								
Early.....	3	4	9	9	6	7	8	7
Midseason.....	3	4	9	9	6	7	8	7
Late.....	3	4	9	9	6	7	8	7
Total season.....	9	12	27	27	18	21	24	21
<b>RAW COTTON QUALITY</b>								
<b>Grade (index)</b>								
Early.....	101.3	95.2	101.2	99.0	98.8	95.1	101.5	101.1
Midseason.....	100.0	88.2	98.2	97.2	98.3	96.6	101.0	98.0
Late.....	100.0	85.5	96.3	89.3	97.1	90.7	99.0	95.7
Total season.....	100.4	89.6	98.6	95.2	98.1	94.1	100.5	98.3
<b>Staple length (32ds inch)</b>								
Early.....	29.0	30.5	31.7	31.4	31.0	31.0	32.2	33.0
Midseason.....	28.7	29.8	31.2	31.3	31.2	31.3	32.4	32.8
Late.....	28.7	28.8	31.0	31.4	29.4	30.0	32.0	32.4
Total season.....	28.8	29.7	31.3	31.4	30.5	30.8	32.2	32.7
<b>Fiber length (Fibrograph):</b>								
<b>Upper half mean (inches)</b>								
Early.....	.89	.94	.96	.96	.98	.95	1.02	1.03
Midseason.....	.92	.91	.96	.96	1.00	.97	1.02	1.00
Late.....	.92	.93	.96	.97	.97	.95	1.01	.99
Total season.....	.91	.93	.96	.96	.98	.95	1.01	1.01
<b>Uniformity ratio</b>								
Early.....	80.7	79.8	80.0	79.7	79.7	79.6	80.2	81.0
Midseason.....	80.0	79.8	80.1	78.8	79.7	79.6	79.9	80.4
Late.....	80.3	80.0	79.2	79.7	80.0	79.8	79.6	80.4
Total season.....	80.3	79.9	79.8	79.4	79.8	79.7	79.9	80.6
<b>Fiber fineness (weight per inch, (micrograms) 1/)</b>								
Early.....	4.93	4.40	4.67	4.58	4.20	4.43	4.36	4.46
Midseason.....	4.90	4.52	4.54	4.72	4.13	4.26	4.44	4.09
Late.....	4.83	4.22	4.69	4.50	3.66	3.60	4.31	4.11
Total season.....	4.89	4.38	4.63	4.60	4.00	4.10	4.37	4.22
<b>Fiber maturity index 1/</b>								
Early.....	78.0	76.5	78.8	80.7	79.5	76.3	81.5	77.1
Midseason.....	81.3	78.2	79.1	81.6	79.7	77.1	78.9	77.9
Late.....	80.7	73.8	79.1	78.9	72.9	67.7	78.1	79.1
Total season.....	80.0	76.2	79.0	80.4	77.4	73.7	79.5	78.0
<b>Fiber tensile strength (Pressley)</b>								
<b>1/8-inch gauge (index) 2/</b>								
Early.....	95.7	98.0	98.7	95.3	96.3	93.1	96.0	99.4
Midseason.....	88.7	92.8	94.7	97.8	91.0	97.3	94.6	97.9
Late.....	94.0	93.2	93.3	96.3	93.1	96.5	92.9	96.6
Total season.....	92.8	94.7	95.6	96.5	93.5	95.6	94.5	98.0
<b>Zero gauge (1,000 p.s.i.)</b>								
Early.....	84.3	79.0	86.9	81.0	79.8	75.1	79.1	78.6
Midseason.....	82.7	75.0	85.6	78.0	76.7	73.6	77.6	79.3
Late.....	83.7	75.5	84.1	77.8	75.6	72.0	77.4	78.6
Total season.....	83.6	76.5	85.5	78.9	77.4	73.6	78.0	78.8
<b>Nonlint content (percent)</b>								
Early.....	2.83	3.67	2.93	2.70	3.47	3.06	2.51	2.67
Midseason.....	3.13	3.28	3.86	3.47	3.22	2.87	2.76	2.97
Late.....	3.00	4.56	4.36	4.64	4.01	3.96	3.51	3.54
Total season.....	2.99	3.84	3.72	3.60	3.59	3.30	2.93	3.06
<b>PROCESSING RESULTS</b>								
<b>Picker and card waste (percent)</b>								
Early.....	7.90	10.12	7.37	8.48	7.38	9.04	7.18	8.60
Midseason.....	7.87	9.10	8.16	9.10	7.33	8.26	7.34	9.04
Late.....	7.63	9.85	8.47	10.44	8.63	10.38	7.82	9.61
Total season.....	7.80	9.69	8.00	9.34	7.78	9.23	7.45	9.08
<b>Neps per 100 sq. in. of card web</b>								
Early.....	8.0	16.2	10.2	7.8	12.7	13.3	14.0	6.7
Midseason.....	7.0	10.5	13.0	10.4	10.5	12.6	13.6	9.4
Late.....	8.7	13.2	11.8	14.4	36.1	16.5	13.5	11.1
Total season.....	7.9	13.3	11.7	10.9	19.8	14.1	13.7	9.1
<b>Yarn skein strength (break factor) 3/</b>								
Early.....	2093	2185	2261	2151	2247	2095	2071	2175
Midseason.....	1982	1949	2193	2132	2109	2119	2107	2171
Late.....	1993	1966	2126	1991	2066	2009	2087	2085
Total season.....	2023	2033	2193	2092	2144	2074	2088	2144
<b>Yarn appearance (index) 4/</b>								
Early.....	105.0	102.5	106.7	107.8	100.0	104.3	107.5	105.7
Midseason.....	100.0	106.2	101.1	108.3	103.3	102.1	106.2	110.0
Late.....	103.3	91.2	101.1	102.8	94.3	89.2	96.9	100.7
Total season.....	102.8	100.0	103.0	106.3	99.2	98.5	103.5	105.5

Table 9.---Comparative averages of selected fiber properties and carded yarn processing results for all lots of upland cotton tested for each period of harvest and State of growth, crops of 1954 and 1955 - continued

Test item and period of harvest	FAR WEST REGION							
	ARIZONA		CALIFORNIA		NEW MEXICO		WEST TEXAS 8/	
	1954	1955	1954	1955	1954	1955	1954	1955
<b>NUMBER OF LOTS TESTED</b>								
Early.....	7	7	8	8	5	5	4	3
Midseason.....	7	7	8	8	5	5	4	3
Late.....	7	7	8	8	5	5	4	3
<b>Total season.....</b>	<b>21</b>	<b>21</b>	<b>24</b>	<b>24</b>	<b>15</b>	<b>15</b>	<b>12</b>	<b>9</b>
<b>RAW COTTON QUALITY</b>								
<b>Grade (index)</b>								
Early.....	101.7	101.1	102.6	103.1	100.8	103.2	102.0	101.3
Midseason.....	100.6	101.1	98.2	99.5	100.8	103.2	101.0	101.3
Late.....	96.3	100.6	93.5	95.4	100.0	97.6	100.0	100.0
<b>Total season.....</b>	<b>99.5</b>	<b>100.9</b>	<b>98.1</b>	<b>99.3</b>	<b>100.5</b>	<b>101.3</b>	<b>101.0</b>	<b>100.9</b>
<b>Staple length (32ds inch)</b>								
Early.....	34.4	34.3	35.0	35.2	36.6	37.0	38.0	37.0
Midseason.....	34.3	34.3	34.9	35.1	36.6	36.6	37.8	36.3
Late.....	33.7	34.3	34.1	34.4	35.0	35.6	36.8	36.3
<b>Total season.....</b>	<b>34.1</b>	<b>34.3</b>	<b>34.7</b>	<b>34.9</b>	<b>36.1</b>	<b>36.4</b>	<b>37.5</b>	<b>36.5</b>
<b>Fiber length (Fibrogram):</b>								
<b>Upper half mean (inches)</b>								
Early.....	1.09	1.07	1.11	1.07	1.17	1.15	1.17	1.15
Midseason.....	1.09	1.06	1.10	1.07	1.18	1.14	1.19	1.12
Late.....	1.10	1.06	1.13	1.08	1.13	1.12	1.17	1.10
<b>Total season.....</b>	<b>1.10</b>	<b>1.06</b>	<b>1.11</b>	<b>1.07</b>	<b>1.16</b>	<b>1.14</b>	<b>1.18</b>	<b>1.12</b>
<b>Uniformity ratio</b>								
Early.....	79.7	80.0	80.0	79.6	80.8	80.4	81.5	80.7
Midseason.....	79.9	80.1	80.8	79.9	82.0	79.8	81.2	79.3
Late.....	79.9	79.3	79.1	80.5	80.2	80.8	77.0	77.0
<b>Total season.....</b>	<b>79.8</b>	<b>79.8</b>	<b>80.0</b>	<b>80.0</b>	<b>81.0</b>	<b>80.3</b>	<b>79.9</b>	<b>79.0</b>
<b>Fiber fineness (weight per inch/micrograms) 1/2</b>								
Early.....	4.01	4.04	4.06	4.35	3.66	3.86	3.95	3.73
Midseason.....	3.87	3.71	3.90	4.15	3.66	3.44	3.78	3.43
Late.....	3.89	3.64	3.74	3.92	3.46	3.10	3.25	2.87
<b>Total season.....</b>	<b>3.92</b>	<b>3.80</b>	<b>3.90</b>	<b>4.14</b>	<b>3.59</b>	<b>3.47</b>	<b>3.66</b>	<b>3.34</b>
<b>Fiber maturity index 1/</b>								
Early.....	80.6	78.0	81.2	79.0	80.8	76.6	80.0	76.7
Midseason.....	80.1	76.6	79.6	79.5	77.6	73.2	76.5	74.3
Late.....	78.7	75.1	77.0	78.1	76.2	68.8	73.2	66.0
<b>Total season.....</b>	<b>79.8</b>	<b>76.6</b>	<b>79.3</b>	<b>78.9</b>	<b>78.2</b>	<b>72.9</b>	<b>76.6</b>	<b>72.3</b>
<b>Fiber tensile strength (Pressley)</b>								
<b>1/8-inch gauge (index) 2/</b>								
Early.....	106.0	108.3	111.1	115.8	112.2	113.0	111.5	112.7
Midseason.....	105.3	111.7	108.2	113.4	113.8	114.4	112.5	114.0
Late.....	105.3	110.9	106.8	109.5	106.6	112.8	108.0	111.0
<b>Total season.....</b>	<b>105.5</b>	<b>110.3</b>	<b>108.7</b>	<b>112.9</b>	<b>110.9</b>	<b>113.4</b>	<b>110.7</b>	<b>113.6</b>
<b>Zero gauge (1,000 p.s.f.)</b>								
Early.....	84.4	84.9	87.0	91.4	87.2	83.4	85.5	84.7
Midseason.....	83.4	86.6	84.0	88.8	83.8	88.0	82.2	88.0
Late.....	83.3	86.0	83.8	85.4	87.0	87.6	87.2	85.3
<b>Total season.....</b>	<b>83.7</b>	<b>85.8</b>	<b>84.9</b>	<b>88.5</b>	<b>86.0</b>	<b>86.3</b>	<b>85.0</b>	<b>86.0</b>
<b>Nonlint content (percent)</b>								
Early.....	3.36	3.20	2.71	2.61	2.74	2.16	2.32	2.36
Midseason.....	3.79	3.55	3.74	3.22	2.94	2.98	2.60	2.90
Late.....	4.30	3.48	3.96	4.25	3.30	4.20	2.95	3.43
<b>Total season.....</b>	<b>3.82</b>	<b>3.41</b>	<b>3.47</b>	<b>3.36</b>	<b>2.99</b>	<b>3.11</b>	<b>2.62</b>	<b>2.90</b>
<b>PROCESSING RESULTS</b>								
<b>Picker and card waste (percent)</b>								
Early.....	7.74	8.96	7.00	7.50	6.68	7.41	6.88	7.33
Midseason.....	7.99	8.36	7.76	8.56	7.22	7.90	6.48	7.70
Late.....	9.10	8.33	8.68	9.00	7.58	9.46	7.58	8.10
<b>Total season.....</b>	<b>8.28</b>	<b>8.55</b>	<b>7.81</b>	<b>8.35</b>	<b>7.16</b>	<b>8.26</b>	<b>6.98</b>	<b>7.71</b>
<b>Neps per 100 sq. in. of card web</b>								
Early.....	14.6	12.9	11.8	11.2	15.2	12.8	21.0	16.7
Midseason.....	11.6	14.9	12.5	11.0	17.8	13.2	15.5	18.0
Late.....	18.9	13.0	22.6	10.0	13.0	14.6	19.5	26.7
<b>Total season.....</b>	<b>15.0</b>	<b>13.6</b>	<b>15.6</b>	<b>10.7</b>	<b>15.3</b>	<b>13.5</b>	<b>18.7</b>	<b>20.5</b>
<b>Yarn skein strength (break factor) 3/</b>								
Early.....	2332	2332	2546	2576	2754	2757	2790	2732
Midseason.....	2255	2459	2476	2557	2742	2865	2773	2860
Late.....	2271	2479	2437	2470	2805	2834	2800	2766
<b>Total season.....</b>	<b>2286</b>	<b>2423</b>	<b>2486</b>	<b>2534</b>	<b>2767</b>	<b>2819</b>	<b>2788</b>	<b>2786</b>
<b>Yarn appearance (index) 4/</b>								
Early.....	92.9	94.3	96.9	100.0	97.0	97.0	97.5	98.3
Midseason.....	92.1	95.0	96.9	98.1	94.0	98.0	95.0	93.3
Late.....	89.3	92.1	93.8	96.2	94.0	85.0	88.8	80.0
<b>Total season.....</b>	<b>91.4</b>	<b>93.8</b>	<b>95.9</b>	<b>98.1</b>	<b>95.0</b>	<b>93.3</b>	<b>93.8</b>	<b>90.5</b>

1/ Determined by the Causticaire method using the Micronaire instrument.  
 2/ An index of 100 equals a Pressley ratio of 3.19 which was the average strength of the 1954 commercial crop of upland cotton in the United States.  
 3/ Based on the yarn skein strength of the two yarn numbers spun.  
 4/ Based on the two yarn numbers spun. Index for average quality equals 100.  
 5/ Includes the areas of Texas served by the Austin and Dallas classing offices.  
 6/ Includes the areas of Texas served by the Abilene and Lubbock classing offices.  
 7/ Includes the areas of Texas served by the Corpus Christi and Harlingen classing offices.  
 8/ Includes the areas of Texas served by the El Paso classing office.



## BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data in tables 2 through 9 may be helpful in the interpretation of test results:

### Classification

Classification was made in accordance with the Official Cotton Standards for grade and staple length. These results are presented under the usual terms in table 2 through 5. Grade values have been converted to an index for averaging in tables 6 through 9.

Grade index, as shown in tables 6, 7, and 8, is based on the average of the official grades of upland cotton for the early, midseason, and late-harvested spinning lots. This index represents the average grade of the spinning lots as based on price data which reflect differences in market value. Middling grade is used as the basis (100) and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for the more common white grades of upland cotton are shown in the tabulation on page 43.

Grading of cotton, as the term is most widely understood is accomplished by weighing the three factors of grade -- color, leaf and preparation in the sample. Grade provides an indication of waste content of a sample of cotton. Although, for individual samples, the quantity of waste removed is not always larger for the lower grades, past experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown under manufacturing waste on page 46. In comparing these average grade figures with the picker and card waste data reported in tables 2 through 4, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

Staple length provides a measure of a typical portion of the fibers in a sample of cotton as determined by customary classing methods. Uniformity of fiber length, as well as other fiber properties, influenced to some extent the classer's selection of the typical portion of the fibers on which the staple-length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are influenced by other fiber properties, the measurements of which will be discussed in the paragraphs which follow.

### Laboratory Measures of Fiber Properties and Their Evaluation

Fiber length data reported in tables 2, 3, and 4 were determined by means of the Fibrograph instrument which is a photoelectric device for measuring the length and length distribution of the fibers in a sample of cotton.

The "upper half mean length" as determined by the Fibrograph provides a measure of the average length of fiber longer than the mean length expressed in terms of decimal fractions of an inch. Although the "upper half mean length" is closely related to the classer's designation of staple length, it may vary from that value because this method does not select and measure "a typical portion of fibers" as required in designating staple length nor does it adjust for character defects for which the classer may assign a shorter staple length designation. Fibrograph "mean length" is not reported in the tables, but this value may be obtained by multiplying the upper half mean length by the "Uniformity ratio," and dividing by 100.

The "Uniformity ratio" expresses the relationship between the mean length of the fibers and the upper half mean length, and provides a relative measure of the length uniformity of the fibers. The larger the figure reported, the more uniform the fiber length. Uniformity of the fiber length is a desirable characteristic from the standpoint of yarn strength, yarn appearance, manufacturing waste, and general processing performance. Attention is called to the fact, however, that this measure of fiber length uniformity is approximate only. For practical purposes, comparisons between samples may be made according to the following descriptive designations:

Uniformity ratio

Above 80.....Uniform in fiber length  
75 to 80.....Average uniformity  
74 and below.....Irregular in fiber length

Fiber length data reported in table 5 were determined by means of the Fiber length array as this method is usually more accurate than the Fibrograph, particularly for extra-long staple cottons. The arrays were made by means of a Suter-Webb fiber sorter. Briefly, a representative 75--milligram sample of cotton is parallelized through a series of combs; the fibers are then separated and arrayed according to length, and the different length groups, at 1/8-inch intervals, are measured and weighed. Values are reported for the "upper quartile length" and "coefficient of length variation."

The "upper quartile length" is the length which is exceeded by 25 percent of the fibers, by weight, in the sample. It is usually closely related to, but slightly longer than, the classer's staple length designation. Its relationship to that value may vary, however, because this method does not select and measure "a typical portion of fibers" as required in designating staple length, nor does it adjust for character defects for which the classer may reduce the staple length designation.

The "coefficient of length variation" is a measure of the variability of fiber length in the sample and represents the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. The smaller the value, the more uniform are the fiber lengths.

Excessive variation in fiber length tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. It is, therefore, considered desirable for a cotton to have a low coefficient of variation. Comparisons between samples may be made according to the following descriptive designations:

Coefficient of fiber length variation

Below 27.....	Low variability
27 to 34.....	Average variability
35 and above.....	High variability

Fiber fineness and maturity were determined by the Causticaire method (12). Micronaire readings, which measure the resistance to the passage of air through a 50-grain sample compressed to a given volume, are made on samples of untreated cotton and cotton treated with sodium hydroxide (40 TW). The caustic treatment swells the fibers, causing them to become cylindrical in shape thereby affecting air permeability. Fineness values for all botanical types of cotton can be read from a single Micronaire scale when the Causticaire method is used. "Maturity index," the ratio of the untreated to the treated reading, reflects the degree of cell-wall development throughout the entire length of the fibers. Statistical analyses of the results of empirical tests have shown that maturity values obtained by the Causticaire method have greater significance from the standpoint of relationship to spinning performance than maturity values obtained by other available methods.

As a rule, long staple cottons are fine-fibered and short-staple cottons are coarse-fibered. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun. Fine fibers, however, tend to increase neppiness and to require a reduced rate of processing, so that the desirability of fiber fineness depends on the specific end product or use. For American upland cottons the following adjective ratings may be applied:

Fiber fineness

(Micrograms per inch of fiber)

Below 3.0.....	Very fine
3.0 to 3.9.....	Fine
4.0 to 4.9.....	Average
5.0 to 5.9.....	Coarse
6.0 and above.....	Very coarse

Fiber maturity is an important factor affecting the appearance of yarns and fabrics. Immature fibers are susceptible to the formation of neps, and cottons differing in degree of maturity do not dye uniformly. Statistical analyses have indicated that fiber maturity is a desirable characteristic from the standpoint of low picker and card waste. The following descriptive terms may be applied to the index data shown in the tables:

### Fiber maturity index

82 and above.....	Mature
76 to 81.....	Average
70 to 75.....	Immature
Below 70.....	Very immature

In interpreting the Causticaire fineness results as reported, it should be realized that they are not the same as the Micronaire reading which is commonly used by the cotton industry. The Micronaire reading provides a measure of fineness and maturity in combination, whereas, the Causticaire method provides separate measurements for these two properties. The Micronaire and the Causticaire fineness values are essentially the same for most cottons, but they may differ appreciably for cottons having extreme maturity values.

Fiber strength is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in manufacturing processes than the weak-fibered cottons. Tests for fiber strength were made both without any space between the jaws (0 gauge) and with 1/8-inch space between the jaws (1/8-inch gauge) by using the Pressley flat bundle strength tester. Comparative tests have indicated that the results of 1/8-inch gauge tests are more highly correlated with yarn strength than the results of 0 gauge tests. Results for both methods are reported, however, because the 0 gauge tests are still being widely used by the cotton industry.

The results of the 1/8-inch gauge tests are reported in terms of an index. An index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States. Inasmuch as the 1/8-inch gauge fiber strength results are highly correlated with fiber length, there is a tendency for the index values of short staple cottons to average less than 100 and for the index values of long staple cottons to average higher than 100. Previous tests have shown the average relationship between staple length and fiber strength index to be approximately as follows:

#### Fiber Strength (1/8-inch gauge)

<u>Group numbers and staple length</u>	<u>Average index</u>
American upland:	
Group 1.--15/16 inch and shorter	90
Group 2.--31/32 through 1-1/16 inches	100
Group 3.--1-3/32 through 1-1/4 inches	110
American Egyptian:	
Group 4.--1-9/32 inches and longer	150

The fiber strength index as reported for 1/8-inch gauge tests may be converted to other methods of expressing fiber strength by applying the following formulas:

$$(1) S_2 = \frac{S_1 \times 3.19}{100}$$

$$(2) S_3 = S_2 \times 0.68$$

When:  $S_1$  = Fiber strength index (Pressley 1/8-inch gauge)  
 $S_2$  = Strength-weight ratio (Pressley 1/8-inch gauge)  
 $S_3$  = Grams per grex (Pressley 1/8-inch gauge)

The results for the 0 gauge tests are reported in the usual terms of thousand pounds per square inch. These values may be converted to strength-weight ratio or grams per grex, if desired, by applying the following formula:

$$(1) S_5 = \frac{S_4 + 0.12}{10.8116}$$

$$(2) S_6 = S_5 \times 0.54$$

When:  $S_4$  = Thousand pounds per square inch (Pressley 0 gauge)  
 $S_5$  = Strength-weight ratio (Pressley 0 gauge)  
 $S_6$  = Grams per grex (Pressley 0 gauge)

The following adjective ratings will assist in the interpretation of the 0 gauge fiber strength results reported and will facilitate comparisons between cottons:

Fiber strength (0 gauge)  
(Thousand pounds per square inch)

Above 95.....	Very strong
86 to 95.....	Strong
76 to 85.....	Average
66 to 75.....	Fair
65 or less.....	Weak

In comparing the results of 0 gauge and 1/8-inch gauge tests, it should be realized that the two tests are in effect measuring somewhat different properties. High strength by one method does not necessarily indicate high strength to the same extent by the other method and vice versa. Strength values by one method cannot, therefore, be converted to values for the other method on the basis of individual samples.

Nonlint Content

The nonlint content of the various lots, as shown in tables 2 through 9, gives the actual foreign material content of the sample. Nonlint removed

from a sample by the Shirley Analyzer is distinguished from total picker and card waste in that practically no fiber is included, as in the waste from mill cleaning machines. Based on tests made of bales of cotton used in the white grade standards for upland cotton, the following scale has been established to represent average percentages of nonlint for the various grades, as determined by the Shirley Analyzer.

Average grade index and nonlint content for grades of upland cotton

<u>Grade of cotton</u>	<u>Index</u>	<u>Nonlint content</u> <u>Percent</u>
Good Middling	105	2.4
Strict Middling	104	2.9
Middling	100	3.7
Strict Low Middling	94	5.1
Low Middling	85	7.6
Strict Good Ordinary	76	11.0
Good Ordinary	70	17.0

The following scale has been developed to represent the nonlint content for grades of American Egyptian cotton:

<u>Grade of cotton</u>	<u>Nonlint content</u> <u>Percent</u>
1	1.9
2	2.4
3	3.3
4	4.7
5	6.5
6	8.8
7	11.5
8	14.7
9	18.3

The foregoing tabulations of nonlint content are based on Shirley Analyzer tests of the official grade standards. Differences between results obtained for individual lots in these tests and the percentages shown for the standards may be caused by two things: (1) There are intentional allowances for variations in trash content among bales in each standard grade (to offset differences in color and provide a range for the grade) that may result in an overlap; (2) these data are based on weight and do not take into consideration the nature of trash, which may be as important as weight in determining the grade designation.

Color of Cleaned Lint

Color Measurements reported herein were made on the cleaned lint obtained from the Shirley Analyzer test. These color results may be of

interest to cotton manufacturers as they give an indication of color to be expected for cottons after having been subjected to the various cleaning processes at the mill.

Color measurements for cotton are determined by means of an automatic electronic instrument, the Nickerson-Hunter Color Colorimeter (1), and are expressed in terms of  $R_d$  and +b. The  $R_d$  scale measures percentage of reflectance from 0 to 100 and the b scale provides a measure of yellow-to-blue. The portion of the b scale used on the cotton colorimeter indicates an increasing degree of yellowness as the scale numbers increase. The color values reported may be plotted on a special color diagram (fig. 2) for comparison with the color of the cotton in the official grade standards.

### Sugar Content

Quantitative data with respect to honeydew contamination of the spinning test samples are reported here in terms of percentage of sugar content as determined by chemical analysis. High sugar content is associated with difficulty in textile processing and with lower yarn appearance grades. Since the sugar content of cotton decreases as the fibers mature, a relatively high sugar content for the cotton of normal maturity indicates contamination with honeydew. The presence of a relatively high concentration of sugar in immature cottons, however, may be attributable either to fiber immaturity, to honeydew, or both. Although the critical point in sugar content has not been established definitely from the standpoint of adverse effect on textile processing, this point is probably in the neighborhood of 0.3 percent reducing sugar. Cottons with sugar content in excess of that percentage may give trouble in processing.

### Yarn Processing Tests and Their Evaluation

The yarns spun from each cotton represent numbers that reflect the manufacturing value of the varieties tested, based on staple lengths expected in the specified areas of growth, as outlined in the four groupings for the different carding rates shown on page 5. Approximately three-fourths of the lots were processed into 22s and 50s yarns after carding at 9-1/2 pounds per hour.

The twist multiplier used in spinning was based on the upper half mean length of the fibers and was designed, on the basis of previous tests, to provide maximum yarn strength for cottons of the respective staple lengths. The same twist multiplier was used for both numbers spun from a given cotton. The standard multipliers for specific ranges in upper half mean length are as follows:

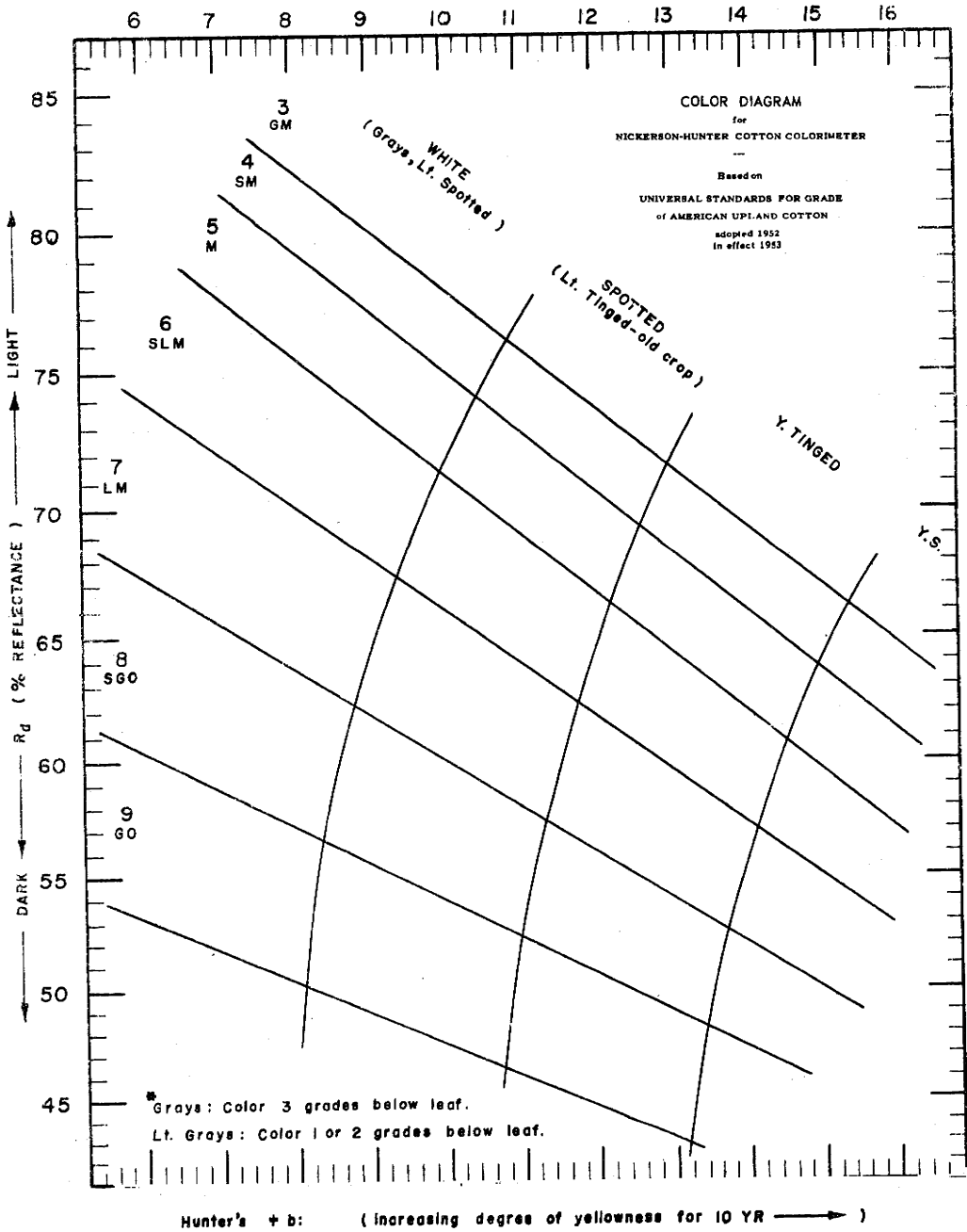


Figure 2.



<u>Fibrograph upper half</u> <u>mean length</u> (inches)	<u>Twist</u> <u>multiplier</u>	<u>Fibrograph upper half</u> <u>mean length</u> (inches)	<u>Twist</u> <u>multiplier</u>
0.62 and shorter.....	5.35	0.98 to 1.01.....	4.10
.63 to 0.66.....	5.55	1.02 to 1.05.....	4.05
.67 to .70.....	5.00	1.06 to 1.09.....	3.95
.71 to .74.....	4.85	1.10 to 1.13.....	3.90
.75 to .78.....	4.70	1.14 to 1.16.....	3.85
.79 to .82.....	4.60	1.17 to 1.20.....	3.80
.83 to .86.....	4.45	1.21 to 1.24.....	3.75
.87 to .89.....	4.35	1.25 to 1.28.....	3.70
.90 to .93.....	4.25	1.29 to 1.32.....	3.65
.94 to .97.....	4.20	1.33 to 1.36.....	3.60

Manufacturing waste for a sample of cotton as reported in tables 2 through 9 is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed on page 38. The rate at which the samples are carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Past experience has shown the average relationship between grade and manufacturing waste, as based on medium staple upland cottons when carded at 9-1/2 pounds per hour, to be approximately as follows:

<u>Grade</u>	<u>Average picker and card waste</u> <u>Percent</u>
Good Middling.....	6.3
Strict Middling.....	7.2
Middling.....	8.1
Strict Low Middling.....	9.3
Low Middling.....	12.5
Strict Good Ordinary.....	15.6
Good Ordinary.....	18.3

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than that for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

Neps in card web are reported for all cottons tested. A desirable feature of any cotton is its relative freedom from neps because they may be a source of trouble in manufacturing yarns and fabrics. The occurrence of neps in appreciable numbers detracts from the appearance of these products, especially when they are to be dyed or printed, as the neps absorb

dye unevenly and appear as spots on the material. When the nep count in the card web is high the cotton is likely to produce rough and neppy yarns, as there is a relationship between yarn appearance and nep count. Excessive neppiness, therefore, limits the uses for which the cotton is suitable. The following adjective descriptions will serve to classify cottons from the standpoint of neppiness, when carded at 9-1/2 pounds per hour. Readers are cautioned to make direct comparison only from table 3:

Number of neps per 100 square inches of card web  
(Based on card production rate of 9-1/2 pounds per hour)

Low.....15 and below  
Average.....16 to 30  
High.....31 to 45  
Very high.....46 and above

Yarn strength is perhaps the most important and reliable test of yarn quality. Yarn strength not only determined the range of usefulness of a given cotton, but is also an indication of spinning and weaving performance. Yarn strength is reported in terms of skein strength since studies have shown that such strength values are more closely related to fiber properties than single strand yarn strength. Skein strength data for each yarn number and the average "break factor" (number X strength) for the two yarn numbers spun are reported for each lot in tables 2 through 5 and variety averages are reported in tables 6 through 8. The relative yarn strength of specific cottons as compared with the average yarn strength for cottons of the same staple length may be obtained by comparing the break factor reported with the comparable average values listed in table 10.

Yarn appearance refers to the relative evenness, smoothness, and freedom from foreign material of the yarn as evaluated by a visual comparison of the yarn with the standards adopted by the American Society for Testing Materials. As appearance is very important in many types of cotton products, high yarn appearance grades are desirable. Index values shown in the tables represent the average of the appearance indexes for both yarn numbers spun. The following descriptive designations will aid in evaluating the results reported.

<u>Grade</u>	<u>Designation</u>	<u>Index</u>
A and above	Excellent	130
B+	Very good	120
B	Good	110
C+	Average	100
C	Fair	90
D+	Poor	80
D	Very poor	70
BG	Below grade	60

Table 10.--Average or standard break factors for skein strength of specified yarn number combinations, and classers' staple lengths

Type of cotton and classers' staple length (Inches)	Average break factors for -- 1/			
	Carded yarn numbers of --		Combed yarn numbers of --	
	8s and 22s	22s and 50s	22s and 50s	50s and 80s
	Lb. x No.	Lb. x No.	Lb. x No.	Lb. x No.
<u>American upland:</u>				
3/4	1575			
25/32	1675			
13/16	1779			
27/32	1886			
7/8	1998	1634		
29/32	2114	1749		
15/16	2233	1869		
31/32	2357	1992		
1	2484	2120	2332	
1-1/32	2616	2251	2477	
1-1/16	2751	2387	2626	
1-3/32	2891	2526	2779	
1-1/8		2670	2937	
1-5/32		2817	3099	
1-3/16		2968	3265	
1-7/32		3123	3436	
1-1/4		3282	3611	
1-9/32		3446	3791	
1-5/16		3613	3974	
1-11/32		3784	4163	
<u>American Egyptian:</u>				
1-3/8				2834
1-13/32				2986
1-7/16				3142
1-15/32				3302
1-1/2				3465
1-17/32				3631
1-9/16				3801

1/ Break factor values listed above are the average of the skein strengths in pounds times the yarn numbers for the 2 yarn numbers specified.

Table 11.--Spinning test procedures for specified staple length groupings

Process	Staple length groups (inches) 1/			
	15/16 and shorter	31/32 through 1-1/16	1-3/32 through 1-1/4	1-9/32 and longer
<b>1. PICKER</b>				
Each test lot is processed through a finisher type picker twice to produce the specified weight of lap (ounces per yd.).....	11	11	11	9
Type of beater .....	Kirschner	Kirschner	Kirschner	2-blade
Beater speed (r.p.m.).....	1,000	1,000	1,000	1,000
Settings:				
Feed roll to beater (inches).....	3/16	3/16	3/16	3/8
Grids to beater, top (inches).....	5/16	5/16	5/16	9/16
Grids to beater, bottom (inches).....	11/16	11/16	11/16	11/16
<b>2. CARD</b>				
Feed, picker lap (oz. per yd.).....	11	11	11	9
Delivered one sliver (grains per yd.).....	40	40	40	36
Production rate (pounds per hour).....	12-1/2	9-1/2	6-1/2	4-1/2
Doffer speed (r.p.m.).....	14	10	7	4
Cylinder speed (r.p.m.).....	165	165	165	165
Speed of flats (inches per minute).....	2-7/8	2-7/8	2-7/8	2-7/8
Licker-in speed (r.p.m.).....	435	435	435	435
Settings:				
Feed plate to licker-in (inches).....	0.010	0.010	0.010	0.017
Mote knife to licker-in, top (inches).....	.012	.012	.012	.012
Mote knife to licker-in, bottom (inches).....	.010	.010	.010	.010
Locker-in screen, front (inches).....	.029	.029	.029	.029
Licker-in screen, back (inches).....	.017	.017	.017	.017
Licker-in to cylinder (inches).....	.007	.007	.007	.007
Flats to cylinder, back, center, and front (inches).....	.009	.009	.009	.009
Back plate to cylinder, top (inches).....	.029	.029	.029	.029
Back plate to cylinder, bottom (inches).....	.034	.034	.034	.034
Front plate to cylinder, top (inches).....	.029	.029	.029	.029
Front plate to cylinder, bottom (inches).....	.034	.034	.034	.034
Doffer to cylinder (inches).....	.007	.007	.007	.007
Cylinder screen, back (inches).....	.029	.029	.029	.029
Cylinder screen, center (inches).....	.034	.034	.034	.034
Cylinder screen, front (inches).....	3/16	3/16	3/16	3/16
Doffer comb to doffer (inches).....	.022	.022	.022	.022
<b>3. SLIVER LAPPER (combed only)</b>				
Feed, 20 slivers (wt. per yd. each, grains).....	---	---	40	36
Delivered 1 lap (grains per yd.).....	---	---	525	525
Speed (yds. per minute).....	---	---	46	46
Roll settings (center to center):				
First to second (inches plus fiber length) 2/.....	---	---	5/16	5/16
Second to third (inches plus fiber length) 2/.....	---	---	9/16	9/16
<b>4. RIBBON LAPPER (Combed only)</b>				
Feed, four ribbon laps (grains per yd. each).....	---	---	525	485
Delivered one lap (grains per yd.).....	---	---	610	575
Speed (yards per minute).....	---	---	47	47
Roll settings (center to center):				
First to second (inches plus fiber length) 2/.....	---	---	4/16	4/16
Second to third (inches plus fiber length) 2/.....	---	---	7/16	7/16
Third to fourth (inches plus fiber length) 2/.....	---	---	10/16	10/16
<b>5. COMBER (Model D-4)</b>				
Feed, eight ribbon laps (grains per yd., each).....	---	---	610	575
Delivered, one sliver (grains per yd.).....	---	---	40	40
Production per hour (pounds).....	---	---	13	13
Cushion plate to detaching roll setting (inches).....	---	---	.48	.54
Nominal waste (percent).....	---	---	16-17	16-17

See footnotes at end of table.  
Continued on page 50

Table 11.--Spinning test procedures for specified staple length groupings - Continued

Process	Staple length groups (inches) <sup>1/</sup>			
	15/16 and shorter	31/32 through 1-1/16	1.3/32 through 1-1/4	1-9/32 and longer
6. DRAWING FRAME (leather top rolls)				
Carded stocks, first process:				
Fed, 6 card slivers (grains per yd. each).....	40	40	40	---
Delivered one sliver (grains per yd.).....	42	42	42	---
Carded stocks, second process:				
Fed, 6 slivers (grains per yd. each).....	42	42	42	---
Delivered one sliver (grains per yd.).....	44	44	44	---
Combed stocks (one process only):				
Fed, 6 comber slivers (grains per yd. each)....	---	---	40	40
Delivered, one sliver (grains per yd.).....	---	---	44	44
Speed (yards per minute).....	36	36	36	36
Roll settings (center to center):				
First to second (inches plus fiber length) <sup>2/</sup> ...	4/16	4/16	4/16	4/16
Second to third (inches plus fiber length) <sup>2/</sup> ...	7/16	7/16	7/16	7/16
Third to fourth (inches plus fiber length) <sup>2/</sup> ...	10/16	10/16	10/16	10/16
7. LONG DRAFT ROVING (8 x 4, 2 apron type)				
Fed, one sliver (grains per yd.).....	44	44	44	44
Delivered, 1.50 through 4.50 hanks <sup>3/</sup> .....				
Spindle speed (r.p.m.).....	1235	1235	1235	1235
Roll settings (center to center):				
First to second, standard (inches).....	2-1/4	2-1/4	2-1/4	2-1/4
Third to fourth (inches plus fiber length) <sup>2/</sup> ...	1/4	1/4	1/4	1/4
8. REGULAR DRAFT ROVING (6 x 3, for 80s combed yarn)				
Fed double (hanks each).....	---	---	---	3.25
Delivered (hanks).....	---	---	---	8.50
Spindle speed (r.p.m.).....	---	---	---	1200
Roll settings (center to center):				
First to second (inches plus fiber length) <sup>2/</sup> ...	---	---	---	2/16
Second to third (inches plus fiber length) <sup>2/</sup> ...	---	---	---	4/16
9. LONG DRAFT SPINNING (two apron type)				
Fed double for 8s (hanks each) <sup>4/</sup> .....	1.85	---	---	---
Fed double for 22s (hanks each).....	3.25	3.25	3.25	---
Fed double for 50s (hanks each).....	---	4.50	4.50	4.50
Fed double for 80s (hanks each).....	---	---	---	8.50
Spindle speed for 8s (r.p.m.) <sup>4/</sup> .....	5500	---	---	---
Spindle speed for 22s (r.p.m.).....	9500	9500	9500	---
Spindle speed for 50s and/or 80s (r.p.m.).....	---	8500	8500	8500
Roll settings (center to center):				
First to second, standard (inches).....	2-1/16	2-1/16	2-1/16	2-1/16
Second to third, standard (inches).....	1-3/4	1-3/4	1-3/4	1-3/4

<sup>1/</sup> Based on Official Standards for staple length.

<sup>2/</sup> Fiber lengths shown are in terms of "pulls" made on card sliver which are approximate equivalents of Fibrograph upper half mean lengths used in laboratory procedure.

<sup>3/</sup> See Item 9, long draft spinning, for hanks delivered.

<sup>4/</sup> Spun on wide gauge spinning frame.

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