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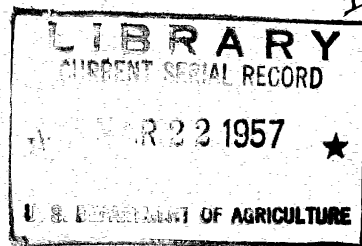
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Summary of Fiber and Processing Test Results on Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1956

1956



Washington, D. C. March 1957

UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

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SUMMARY OF FIBER AND PROCESSING TEST RESULTS FOR SOME VARIETIES
OF COTTON GROWN BY SELECTED COTTON IMPROVEMENT GROUPS
CROP OF 1956

PURPOSE OF STUDY

Results of tests on fiber properties and performance in processing of the principal varieties of cotton produced commercially by cotton improvement groups for the 1956 crop are summarized in this report. Test data are included that were published in monthly reports from August 1956 through January 1957. 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 1956 crop are reported for the same areas that were included in studies on the crops of 1946 through 1955. This affords comparisons of test results over a 11-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 11 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, 11). ^{1/} However, the comparability of spinning test results for the first 4 years is affected by the carding rates employed in tests for the last 7 crops, as explained in a later paragraph.

Season averages for selected fiber properties and processing results from 1946 to 1956 are shown in table 1. The averages apply only to upland cotton. Data with respect to acreages planted to the respective upland varieties (13) 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 was ginning the selected variety exclusively. Some areas that met conditions with respect to standardized production of a single variety, on a gin community

^{1/} Underscored numbers in parentheses refer to Literature Cited, page 81.

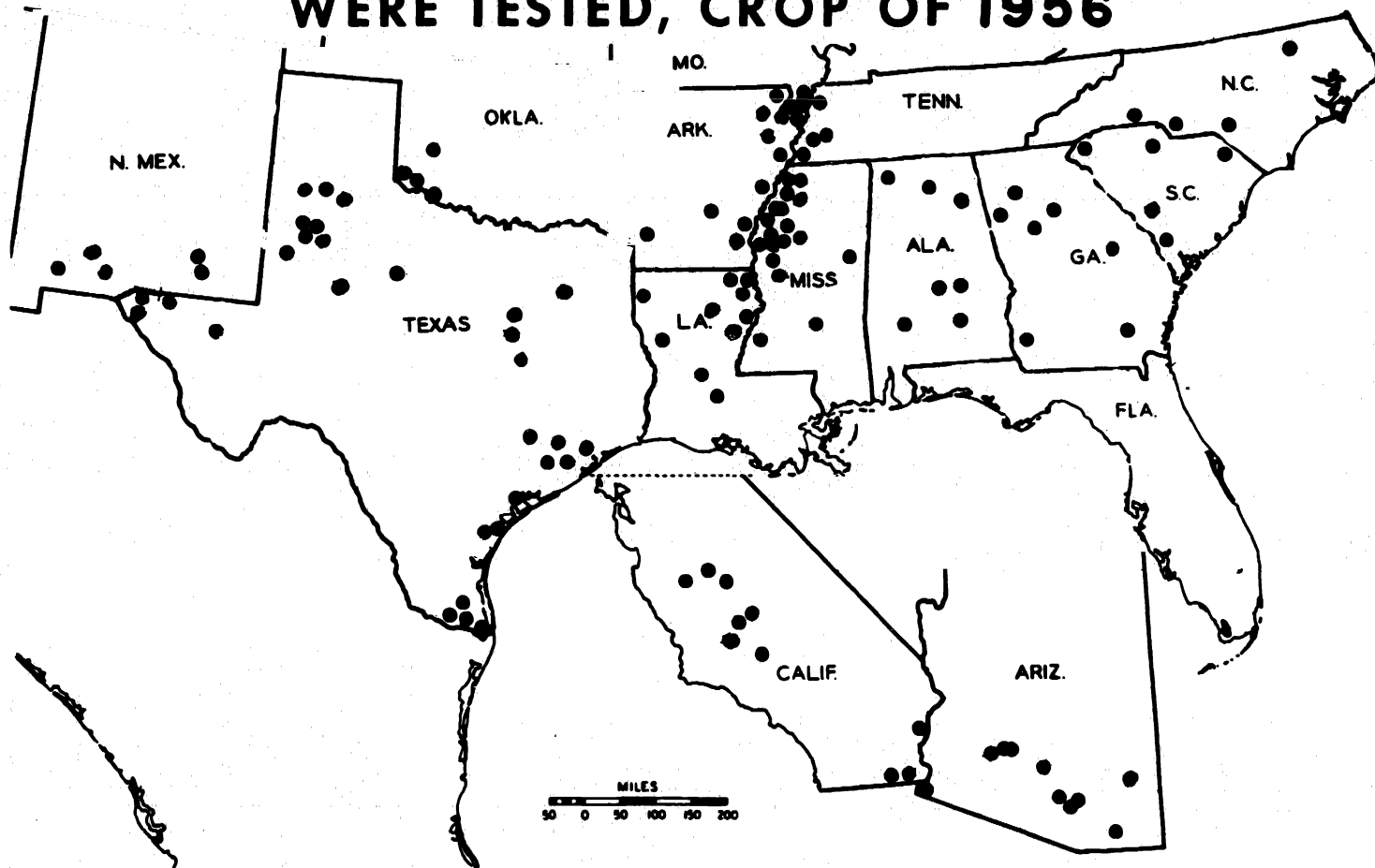
Table 1.--Average test results for specified fiber properties and factors of processing performance for upland cotton in the United States, crops of 1946 through 1956

Test item	Crop year										
	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
FIBER TEST:											
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	1.02
Uniformity-----	80	78	79	79	79	79	80	80	80	80	79
Fineness-----ug/inch <u>1</u> :	4.7	4.7	4.4	4.6	4.5	4.1	4.2	4.2	4.1	4.2	4.3
Maturity-----index <u>1</u> :	81	80	79	85	81	79	79	79	79	77	78
Tensile strength-----index <u>2</u> :	92	95	96	92	89	100	101	98	100	100	104
PROCESSING:											
Neps--per 100 sq.in. of card web:	18	16	27	29	25	26	16	16	14	13	16
22s yarn skein strength---pounds:	107	107	107	105	102	110	111	116	113	115	118
22s yarn appearance grade--index:	109	110	104	107	106	109	109	108	106	107	103

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 1956



U. S. DEPARTMENT OF AGRICULTURE

Fig. 3833-57(1)

AGRICULTURAL MARKETING SERVICE

Figure 1.

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 as well as areas producing some of the newer varieties or strains of cotton.

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 1956-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 + 2 relative humidity and 70° F. + 2. The tests included determination of length, length uniformity, tensile strength, fineness and maturity in combination as measured by the Micronaire on untested samples, fineness in terms of weight per inch of fiber, and maturity as determined by the Causticaire method (14).

The classers' samples 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 79.

A revised procedure for carding the test lots was adopted in 1950. Formerly, all cotton except that of extra-long staple was 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 1956 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 1956 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 those varieties were also processed in accordance with the organization for Group 3. These include the following varieties: Arizona 44; Acala 4-42; Coker 100 W; and Deltapine 15. 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 manner as those reported for previous crops except as follows:

1. Values for fiber fineness and maturity in combination, as measured on untreated samples in terms of Micronaire readings, are reported in addition to values for fiber fineness and maturity as determined separately by means of the Causticaire technique.
2. Fiber strength values are reported in grams per tex at zero gauge spacing in addition to 1,000 p.s.i. at 0 gauge spacing and strength index at 1/8-inch spacing.
3. Results of color measurements are reported for raw cotton rather than for lint cleaned by means of the Shirley Analyzer as in previous years.
4. Acid-alkaline values in terms of pH units are reported for the first time on the 1956 crop. These values are of interest to some groups in the cotton industry from the standpoint of indicating possible fiber degradation resulting from the action of micro-organisms.
5. Moisture regain at 92 percent relative humidity is reported for the first time for the 1956 crop.
6. Strength of 22s mercerized carded yarns for Groups 2 and 3 are reported on the 1956 crop in addition to 50s combed yarns for Groups 3 and 4.
7. Bleaching, dyeing and mercerizing performance as reflected by color and luster measurements of cotton yarn samples, are reported in tables 1 through 9 on the 1956 crop. Similar results were reported on the 1955 crop in Agriculture Information Bulletin No. 167.

A comparison of the average quality of the 1956 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 11 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 fact 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, 8, and 9 show average test results for specified varieties. Results of standard small scale bleaching, dyeing, and mercerizing tests on yarns processed from cottons from the 1956 crops are reported in essentially the same manner as those for the 1955 crops which were reported in Agriculture Information Bulletin No. 167, published in October 1956 (12). These results as reflected by color and luster measurements are reported in tables 2 through 5 by market areas and season. Averages by specified varieties are shown in tables 6 through 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 98 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 7.9 percent for the early-season samples to 8.5 and 8.9 percent for the midseason and late-season samples, respectively. The reduction in grade as the harvesting season progressed was also reflected in the color values as obtained on raw cotton samples and as measured by the Nickerson-Hunter Cotton Colorimeter. The average reflectance (R_d) ranged from 73.1 for the early-harvested samples down to 72.5 and 70.7 for the midseason and late-season cottons. The degree of yellowness (+b) averaged 8.6, 8.3, and 8.0 for the early season, midseason, and late-season samples, respectively. Furthermore, the average reflectance (R_d) of early season grey yarn samples averaged 69.9 as compared with 69.8 for the midseason samples and 68.5 for the late-season samples and the degree of yellowness (+b) decreased from an average of 11.1 for the early-harvested samples to 10.8 and 10.5 for the midseason and late-harvested samples, respectively. The decline in grade is also reflected in the bleached and dyed yarns which indicates that the late-harvested cottons have poorer dyeing properties.

A decrease in yarn skein strength of 22s carded yarns from 119 pounds for the early-season cottons to 114 and 112 for the midseason and late-season

cottons was associated with a slight reduction in the average staple length of the late-season cottons of approximately $1/64$ -inch, and a small reduction of fiber tensile strength from an index of 103 for the early harvested cottons down to 100 for the late-season cottons. Moisture regain of raw cotton samples decreased from 17.4 percent for the early season samples to 16.7 and 16.2 percent for the midseason and late-harvested cottons.

Fiber fineness and maturity as determined both in combination by the Micronaire method (readings) and separately by the Causticaire method show very slight decreases as the harvesting season progressed. This same trend was reflected in the number of neps observed in the card web, which increased slightly from 15 per 100 square inches of card web for the early season samples to 16 for the late-harvested cottons. The reduced grades and slight increase in neps of the late-harvested cottons were reflected by yarn appearance, which declined from an index of 103 for the early season samples to 100 for the late-harvested cottons.

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 for this group of cottons averaged slightly over 11 percent greater than that of the carded yarns. The strength of 22s carded mercerized yarns and 50s combed mercerized yarns averaged approximately 5 percent greater strength than that of 22s carded grey yarns and 50s combed grey yarns processed from cottons in this group. The yarn appearance grade for the combed yarns averaged almost 10 index points or approximately $1/2$ grade higher than that of the carded yarns. The average luster of this group of cottons was increased by mercerizing from 33 to 39 percent for the 22s carded yarns and from 34 to 42 percent for the 50s combed 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 and spun into 50s and 80s combed yarns. Twelve lots of Pima S-1 were processed in connection with this staple length group for the 1956 crop. The test results on these cottons compare favorably with comparable cottons that were processed from the 1955 crop, except for the increase in strength of the 50s mercerized combed yarns over the 50s grey combed yarns. Yarns from the 1955 crop showed an averaged increase in strength of 8.6 percent after being mercerized as compared with only 3.8 percent increase for the 1956 crop. There was a very slight increase in staple length, yarn strength, and yarn appearance for the 1956 crop as compared with the 1955 crop. Measurements of color and luster on yarns processed from the 1956 cottons compare favorably with those obtained on yarns processed from the 1955 crop. The results show a slight increase in reflectance (R_d) values obtained from grey and bleached yarns processed from the 1956 cottons as compared with the cottons from the 1955 crop. The luster measurements were identical for the two crop years, with the grey yarns averaging 40 percent luster as compared with 50 percent for the mercerized yarns.

Table 2.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956

Variety	Lockett 88			Lockett SP-1			Paymaster 54 B		
State	Texas								
Market Area	Vernon			Lubbock			Lockney		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	M	SM	M	M	SMltsp	SMltsp	IM
Staple length-----inches	29/32	29/32	7/8	15/16	7/8	29/32	15/16	15/16	29/32
Fiber length (Fibrograph):									
Upper half mean-----inches	.80	.84	.80	.91	.84	.80	.90	.88	.84
Uniformity ratio-----	80	82	82	81	81	80	81	82	81
Fiber fineness and maturity:									
Micronaire-----reading 1/	3.7	4.4	4.8	3.8	4.0	4.3	3.9	3.8	3.6
Fineness (Causticaire)-----ug/inch 2/	4.1	4.8	5.0	4.1	4.2	4.4	3.9	3.9	3.9
Maturity "-----index 2/	72	77	80	74	76	78	76	75	72
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	93	100	104	93	87	88	102	95	99
Zero "-----1,000 p.s.i.	89	86	87	74	75	75	74	78	73
" "-----grams per tex 4/	44.1	42.6	43.1	36.6	37.1	37.1	36.6	38.6	36.1
Nonlint content(Shirley Analyzer)percent	1.5	1.9	2.1	2.6	2.9	3.2	2.5	1.9	3.6
Color of raw cotton 5/:									
Reflectance-----Rd	74.6	76.9	72.8	77.0	76.6	72.4	77.9	75.0	70.3
Yellowness-----+b	9.3	9.2	9.2	8.6	8.4	7.6	8.9	8.9	8.3
Sugar content-----percent	0.3	0.2	0.0	0.4	0.2	0.3	0.3	0.3	0.4
Acid-alkaline value-----pH units 6/	7.0	7.7	6.6	6.6	6.3	6.2	7.7	6.5	6.3
Moisture regain (at 92% R.H.)----percent	17.8	17.3	16.0	18.3	17.8	16.2	18.4	18.1	17.4
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.7	8.5	8.0	8.8	8.9	9.0	7.8	7.8	9.4
Neps-----per 100 sq. in. of card web	16	17	16	22	22	17	27	42	38
Yarn quality:									
Yarn skein strength:									
Grey:									
8s-----pounds	329	324	317	308	291	282	350	329	313
22s-----"	101	99	100	95	91	87	108	101	97
Average break factor-----8/	2427	2385	2368	2277	2165	2085	2588	2427	2319
Yarn appearance (grey):									
8s-----grade	B	B+	B	B	B+	B+	B	C+	C+
22s-----"	C+	B	B	C+	C+	C+	C+	C+	C
Average yarn appearance---index 9/	105	115	110	105	110	110	105	100	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	71.0	71.2	68.5	73.1	69.2	68.8	72.4	72.8	67.9
Yellowness-----+b	12.1	11.7	11.9	10.6	10.8	10.6	11.9	11.0	10.5
Bleached:									
Reflectance-----Rd	83.0	82.4	81.4	82.6	81.4	78.9	84.4	83.6	79.2
Yellowness-----+b	3.5	3.3	4.0	2.9	4.1	3.8	3.5	3.4	3.6
Dyed in grey:									
Reflectance-----Rd	21.9	22.5	25.0	20.9	24.4	24.3	21.1	23.9	24.9
Blueness-----+b	21.4	21.4	18.6	23.4	19.4	20.4	23.0	20.6	20.0
Dyed after bleaching:									
Reflectance-----Rd	25.5	28.0	28.2	27.2	28.0	27.6	25.9	27.8	27.7
Blueness-----+b	26.0	26.0	25.6	26.2	25.4	25.3	26.8	26.6	25.0
Luster of 22s carded yarn 11/:									
Grey-----percent	31	30	30	29	30	28	31	29	29

For footnotes see page 63

Continued on page 10

Table 2.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Paymaster 101			Parrott		
State	Texas			Oklahoma		
Market Area	Plainview			Mangum		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	SMltsp	SMltsp	Mltsp	SM	SM	Mltsp
Staple length-----inches:	31/32	15/16	15/16	29/32	29/32	29/32
Fiber length (Fibrograph):						
Upper half mean-----inches:	.93	.92	.86	.89	.89	.90
Uniformity ratio-----	81	80	79	81	82	80
Fiber fineness and maturity:						
Micronaire-----reading 1/:	3.8	3.8	3.6	4.4	4.6	4.9
Fineness (Causticaire)-----ug/inch 2/:	3.8	3.9	4.2	4.5	4.8	4.8
Maturity "-----index 2/:	76	75	71	79	78	81
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/:	101	96	102	104	105	101
Zero "-----1,000 p.s.i.:	79	78	84	88	90	81
" "-----grams per tex 4/:	39.1	38.6	41.6	43.6	44.6	40.1
Nonlint content(Shirley Analyzer)-----percent:	2.4	3.2	3.8	3.0	3.2	2.9
Color of raw cotton 5/:						
Reflectance-----Rd:	75.8	76.5	71.5	76.6	74.3	70.5
Yellowness-----+b:	9.3	9.0	8.6	9.4	9.0	8.5
Sugar content-----percent:	0.3	0.3	0.4	0.2	0.3	0.3
Acid-alkaline value-----pH units 6/:	6.5	6.4	6.3	6.8	6.3	6.6
Moisture regain (at 92% R.H.)-----percent:	19.2	18.6	19.3	19.0	18.4	16.2
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	8.9	8.8	9.6	8.5	9.6	8.2
Neps-----per 100 sq. in. of card web:	25	27	17	14	8	11
Yarn quality:						
Yarn skein strength:						
Grey:						
8s-----pounds:	344	328	320	347	343	317
22s-----"	108	105	100	109	107	99
Average break factor-----8/:	2564	2467	2380	2587	2549	2357
Yarn appearance (grey):						
8s-----grade:	C+	B	B	B+	B+	B
22s-----"	C	C+	C+	B	C+	C+
Average yarn appearance-----index 2/:	95	105	105	115	110	105
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----Rd:	71.0	72.6	69.7	70.9	70.7	68.1
Yellowness-----+b:	11.8	11.2	11.5	11.6	11.4	11.0
Bleached:						
Reflectance-----Rd:	83.2	83.0	81.4	83.9	82.7	80.6
Yellowness-----+b:	3.4	3.6	3.6	3.5	3.1	4.4
Dyed in grey:						
Reflectance-----Rd:	21.0	23.7	23.4	21.7	22.2	24.2
Blueness-----b:	22.5	20.8	20.4	21.4	22.0	18.8
Dyed after bleaching:						
Reflectance-----Rd:	26.2	28.6	27.2	26.8	25.6	27.4
Blueness-----b:	26.3	25.1	25.4	26.2	27.1	25.7
Luster of 22s carded yarn 11/:						
Grey-----percent:	30	30	30	31	30	32

For footnotes see page 63

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956

Variety	Acala 4-42								
State	California								
Market Area	Bakersfield			Blythe			Corcoran		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SIM	M+	SM	SM	SM	SIM	SIM	SIM+
Staple length-----inches	1-1/16	1-1/16	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	1.06	1.08	1.09	1.11	1.08	1.08	1.05	1.08	1.09
Uniformity ratio-----	81	80	81	81	81	81	81	81	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	5.0	4.4	4.4	4.6	4.6	4.4	4.4	4.8	4.4
Fineness (Causticaire)-----ug/inch 2/	4.8	4.6	4.5	4.5	4.4	4.5	4.3	4.8	4.5
Maturity "-----index 2/	82	77	78	81	81	78	79	80	79
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	120	117	112	121	127	120	113	115	111
Zero "-----1,000 p.s.i.	92	88	88	94	95	97	88	90	88
" "-----grams per tex 4/	45.5	43.6	43.6	46.5	47.0	48.0	43.6	44.6	43.6
Nonlint content(Shirley Analyzer)percent:	1.4	3.0	2.4	2.4	2.1	2.8	3.6	3.6	3.9
Color of raw cotton 5/:									
Reflectance-----Rd	77.9	72.5	76.3	76.5	74.5	77.6	72.0	72.5	73.5
Yellowness-----+b	8.5	7.6	7.7	8.5	8.6	7.9	7.3	6.9	7.7
Sugar content-----percent:	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.4
Acid-alkaline value-----pH units 6/	7.1	7.3	7.3	7.4	7.1	6.7	7.1	7.2	7.0
Moisture regain (at 92% R.H.)---percent:	18.0	18.5	16.7	16.7	16.2	17.4	16.7	16.4	17.5
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.6	8.8	7.4	8.6	7.8	8.1	10.2	9.6	9.9
Neps-----per 100 sq. in. of card web:	13	15	18	14	22	21	22	7	12
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	135	125	124	128	131	125	122	124	124
22s Mercerized-----"	137	134	124	138	140	134	128	131	129
50s Grey-----"	48	44	44	45	46	44	42	43	44
Average break factor-----8/	2685	2475	2464	2533	2591	2475	2392	2439	2464
Yarn appearance (grey):									
22s-----grade:	C+	C+	C+	C	C+	C	C+	C+	C+
50s-----"	C	C	C	D+	C	D+	D+	C	C
Average yarn appearance-----index 9/	95	95	95	85	95	85	90	95	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	75.1	72.0	73.9	73.0	74.6	76.1	71.0	72.8	72.9
Yellowness-----+b	10.1	10.4	10.0	10.8	10.6	10.0	10.4	10.4	10.2
Bleached:									
Reflectance-----Rd	83.6	83.0	82.6	84.2	84.8	84.2	83.4	83.3	83.5
Yellowness-----+b	3.1	3.0	3.1	3.0	3.4	2.9	3.4	2.8	3.0
Dyed in grey:									
Reflectance-----Rd	22.8	25.6	26.4	23.6	24.6	23.8	23.9	25.0	23.9
Blueness-----+b	22.3	20.5	21.0	21.8	21.0	22.6	20.4	21.4	21.9
Dyed after bleaching:									
Reflectance-----Rd	27.8	29.0	28.8	27.7	28.5	28.0	28.2	28.6	28.0
Blueness-----+b	26.2	24.9	25.5	26.1	25.8	26.2	25.7	25.9	25.8
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	32	31	32	31	31	31	32	30
Mercerized-----"	38	38	38	41	39	38	37	38	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety			Acala 4-42								
State			California								
Market Area			El Centro			Firebaugh			Fresno		
Period of Harvest			Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY											
Classification (official standards)											
Grade-----	SM	SMItsp:	SMItsp:	SM	M+	DM+	SM	M	SIM		
Staple length-----inches:	1-1/16:	1-1/32:	1-1/16:	1-1/16:	1-3/32:	1-3/32:	1-3/32:	1-3/32:	1-1/16:	1-1/16	
Fiber length (Fibrograph):											
Upper half mean-----inches:	1.05	1.05	1.06	1.07	1.06	1.10	1.09	1.08	1.06		
Uniformity ratio-----	81	80	82	81	80	81	81	81	77		
Fiber fineness and maturity:											
Micronaire-----reading 1/:	4.7	4.4	4.2	4.2	4.2	4.0	4.4	4.7	4.6		
Fineness (Causticaire)-----ug/inch 2/:	4.6	4.4	4.4	4.2	4.3	4.0	4.2	4.5	4.5		
Maturity "-----index 2/:	81	78	77	78	78	78	81	82	80		
Fiber tensile strength (Pressley):											
1/8" gauge-----index 3/:	134	125	120	117	120	116	115	114	114		
Zero "-----1,000 p.s.i.	98	98	99	85	86	86	85	82	86		
" "-----grams per tex 4/:	48.5	48.5	49.0	42.1	42.6	42.6	42.1	40.6	42.6		
Nonlint content (Shirley Analyzer) percent:	2.2	2.7	2.7	2.4	3.0	5.7	2.7	3.6	4.1		
Color of raw cotton 5/:											
Reflectance-----Ra	77.5	76.5	76.3	77.3	77.5	74.5	79.3	75.5	71.5		
Yellowness-----+b:	8.4	8.6	8.6	8.4	8.0	7.3	8.0	7.6	6.9		
Sugar content-----percent:	0.2	0.5	0.4	0.2	0.2	0.3	0.2	0.2	0.3		
Acid-alkaline value-----pH units 6/:	7.0	6.4	6.4	6.4	6.5	6.4	6.7	6.6	6.4		
Moisture regain (at 92% R.H.)-----percent:	18.6	18.7	17.6	19.5	19.2	18.4	17.9	17.5	17.9		
PROCESSING RESULTS											
Manufacturing waste:											
Picker and card-----percent:	7.8	8.0	7.6	8.6	8.4	9.8	8.5	8.5	9.6		
Neps-----per 100 sq. in. of card web:	27	17	16	17	13	13	11	10	24		
Yarn quality:											
Yarn skein strength:											
22s Grey-----pounds:	141	130	135	131	126	130	136	125	127		
22s Mercerized-----"	151	141	136	136	129	127	137	128	136		
50s Grey-----"	50	46	48	47	45	47	48	45	46		
Average break factor-----8/:	2801	2580	2685	2616	2511	2605	2696	2500	2547		
Yarn appearance (grey):											
22s-----grade:	C+	C+	C+	C+	C+	C+	C+	C+	C		
50s-----"	C	C	D+	C	C	C+	C	C	D+		
Average yarn appearance-----index 2/:	95	95	90	95	95	100	95	95	85		
Color of 22s carded yarn 10/:											
Grey:											
Reflectance-----Ra	74.0	73.0	73.6	75.0	74.6	72.4	75.2	72.8	72.0		
Yellowness-----+b:	10.5	11.4	10.8	10.5	10.4	10.4	10.6	10.0	10.1		
Bleached:											
Reflectance-----Ra	84.9	83.2	84.6	84.2	82.6	84.3	84.5	84.0	83.0		
Yellowness-----+b:	3.3	3.1	3.4	3.4	3.0	3.2	3.2	3.0	3.0		
Dyed in grey:											
Reflectance-----Ra	23.1	23.6	23.4	23.4	23.8	23.6	23.8	23.6	24.1		
Blueness-----+b:	22.1	21.6	21.4	21.6	22.4	21.6	21.9	22.3	22.4		
Dyed after bleaching:											
Reflectance-----Ra	27.1	26.8	26.7	28.2	27.2	27.5	27.4	27.4	27.8		
Blueness-----+b:	26.8	26.6	26.6	25.8	26.8	26.0	26.3	26.0	25.8		
Luster of 22s carded yarn 11/:											
Grey-----percent:	32	31	32	31	31	31	33	32	33		
Mercerized-----"	39	40	39	38	38	37	39	38	39		

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Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Acala 4-42								
State	California								
Market Area	Madera			Shafter			Tulare		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	SIM	SIM+	SIM	M+	SIM	SIM	M
Staple length-----inches	1-1/16:	1-3/32:	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	1.06	1.04	1.02	1.08	1.07	1.08	1.06	1.04	1.06
Uniformity ratio-----	82	81	79	81	81	81	82	81	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.6	4.6	4.4	4.2	4.4	4.4	4.4	4.5	4.4
Fineness (Causticaire)-----ug/inch 2/	4.4	4.8	4.3	4.3	4.4	4.6	4.2	4.7	4.5
Maturity "-----index 2/	81	79	80	78	78	78	81	78	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	116	118	113	117	112	112	111	117	113
Zero "-----1,000 p.s.i.	93	90	91	85	87	87	88	88	88
" "-----grams per tex 4/	46.0	44.6	45.0	42.1	43.1	43.1	43.6	43.6	43.6
Nonlint content (Shirley Analyzer) percent:	2.4	1.9	3.9	2.8	3.2	3.6	3.4	3.4	3.6
Color of raw cotton 5/:									
Reflectance-----Rd	76.3	78.5	72.4	72.8	74.6	75.3	71.3	71.7	71.0
Yellowness-----+b	8.2	7.5	7.0	8.1	7.5	7.8	7.9	8.0	8.1
Sugar content-----percent:	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2
Acid-alkaline value-----pH units 6/	6.7	6.7	6.6	6.9	7.1	7.1	7.5	7.3	7.3
Moisture regain (at 92% R.H.)-----percent:	18.1	17.6	16.5	19.4	18.3	16.9	19.1	18.1	17.0
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.8	6.6	8.0	8.4	8.4	7.2	10.0	9.1	9.3
Neps-----per 100 sq. in. of card web:	12	9	9	10	11	11	23	14	15
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	136	130	127	132	124	124	122	125	118
22s Mercerized-----"	144	139	135	137	129	132	130	132	124
50s Grey-----"	49	46	45	47	44	43	42	44	41
Average break factor-----8/2721	2580	2522	2627	2464	2439	2392	2475	2323	
Yarn appearance (grey):									
22s-----grade:	B	B	B	C+	C+	B	C	C+	C
50s-----"	C+	C+	C+	C	C	C	D+	C	D+
Average yarn appearance-----index 9/	105	105	105	95	95	100	85	95	85
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	74.8	75.8	71.2	71.6	70.9	74.2	69.4	71.6	73.0
Yellowness-----+b	10.4	10.4	10.0	10.8	10.4	10.2	10.8	10.8	10.2
Bleached:									
Reflectance-----Rd	84.2	83.2	81.4	83.5	84.0	83.6	83.0	82.0	82.8
Yellowness-----+b	3.5	2.8	3.2	3.3	3.2	3.0	3.8	3.1	3.2
Dyed in grey:									
Reflectance-----Rd	24.8	24.4	24.6	23.6	25.2	25.4	25.7	25.1	25.9
Blueness-----+b	21.2	22.4	20.5	20.7	20.8	21.6	18.6	20.0	20.8
Dyed after bleaching:									
Reflectance-----Rd	29.1	28.4	27.5	28.7	29.0	28.1	30.0	28.7	29.8
Blueness-----+b	25.4	26.3	26.3	25.2	25.2	25.8	24.7	25.2	24.9
Luster of 22s carded yarn 11/									
Grey-----percent:	32	30	31	32	32	30	33	32	31
Mercerized-----"	38	39	38	38	37	38	38	39	38

For footnotes see page 63

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Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Arizona 44								
State	Arizona								
Market Area	Buckeye			Chandler			Eloy		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	M	SIM	SM	M	SIM	M	SIM+	SIM
Staple length-----inches	1-1/16	1-1/16	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	1.08	1.05	1.07	1.12	1.07	1.07	1.06	1.06	1.08
Uniformity ratio-----	81	80	80	82	80	80	81	79	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.7	4.5	4.2	4.6	4.6	4.2	4.2	4.3	4.0
Fineness (Causticaire)-----ug/inch 2/	4.4	4.4	4.2	4.4	4.5	4.3	4.1	4.2	4.0
Maturity "-----index 2/	82	80	78	80	80	77	79	80	77
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	118	111	113	110	108	109	115	110	109
Zero "-----1,000 p.s.i.	96	85	95	90	88	94	87	87	91
" "-----grams per tex 4/	47.5	42.1	47.0	44.6	43.6	46.5	43.1	43.1	45.0
Nonlint content (Shirley Analyzer) percent	2.5	3.4	3.5	2.5	3.4	5.0	3.9	3.8	5.1
Color of raw cotton 5/:									
Reflectance-----Rd	77.6	72.0	72.8	73.5	73.5	71.0	73.0	72.6	73.4
Yellowness-----+b	8.6	9.1	7.6	9.5	8.2	8.6	8.5	8.3	8.4
Sugar content-----percent	0.3	0.2	0.4	0.2	0.2	0.5	0.3	0.3	0.4
Acid-alkaline value-----pH units 6/	7.7	6.7	6.6	8.0	6.6	6.6	6.5	6.7	6.5
Moisture regain (at 92% R.H.)-----percent	18.0	18.2	17.8	18.0	19.2	18.1	19.8	18.5	17.5
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.6	8.7	8.9	7.4	9.2	9.9	9.5	9.8	10.3
Neps-----per 100 sq. in. of card web	12	14	16	19	18	15	17	17	22
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	127	118	115	127	120	119	122	118	120
22s Mercerized-----"	141	124	118	136	126	118	131	122	120
50s Grey-----"	45	41	40	45	43	43	43	42	44
Average break factor-----8/2522	2323	2265	2522	2395	2384	2417	2348	2420	
Yarn appearance (grey):									
22s-----grade	C+	C+	C	C+	C+	C	C+	C+	C
50s-----"	C	C	D+	D+	D+	D+	C	D	D+
Average yarn appearance-----index 9/	95	95	85	90	90	85	95	85	85
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	71.3	72.0	70.1	72.7	72.2	70.8	72.8	72.6	72.1
Yellowness-----+b	11.4	11.0	10.6	11.6	10.8	10.5	11.4	10.8	10.6
Bleached:									
Reflectance-----Rd	83.8	82.1	81.8	84.5	84.0	82.1	84.0	83.4	83.1
Yellowness-----+b	3.1	3.4	3.4	3.4	3.2	3.6	3.0	3.5	3.6
Dyed in grey:									
Reflectance-----Rd	21.9	23.6	23.4	22.3	23.6	23.0	24.0	24.0	24.0
Blueness-----+b	22.7	21.0	20.4	22.4	21.2	20.8	21.2	20.8	20.8
Dyed after bleaching:									
Reflectance-----Rd	26.7	27.8	26.8	27.8	28.5	25.8	28.0	28.5	27.6
Blueness-----+b	26.4	25.9	26.0	26.0	25.6	26.5	26.4	25.1	25.8
Luster of 22s carded yarn 11/:									
Grey-----percent	32	32	32	32	32	32	32	31	32
Mercerized-----"	38	37	38	37	38	39	38	38	36

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Arizona 44								
State	Arizona								
Market Area	Marana			Phoenix			Yuma		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	M	SIM	M	M	SIM	SM	M	Mtsp
Staple length-----inches	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.08	1.07	1.06	1.10	1.02	1.08	1.11	1.06	1.04
Uniformity ratio-----	82	77	79	81	79	81	81	79	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	3.9	4.1	4.0	4.6	4.5	4.0	4.4	4.4	3.7
Fineness (Causticaire)-----ug/inch 2/	3.9	4.1	4.0	4.4	4.3	3.9	4.2	4.5	3.8
Maturity "-----index 2/	77	78	78	81	81	78	80	79	74
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	106	106	104	116	110	111	113	106	106
Zero "-----1,000 p.s.i.	82	82	85	92	92	95	92	91	90
" "-----grams per tex 4/	40.6	40.6	42.1	45.5	45.5	47.0	45.5	45.0	44.6
Nonlint content (Shirley Analyzer) percent	3.0	3.8	6.0	2.6	3.4	3.6	2.6	2.8	4.5
Color of raw cotton 5/:									
Reflectance-----Rd	77.6	74.5	71.0	75.6	73.7	72.0	73.9	73.5	72.6
Yellowness-----Yb	8.8	8.7	9.0	8.7	8.6	8.3	9.4	8.5	9.0
Sugar content-----percent	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.2	0.3
Acid-alkaline value-----pH units 6/	6.6	6.8	6.4	8.0	6.8	6.6	8.2	7.1	6.6
Moisture regain (at 92% R.H.)-----percent	18.4	19.3	19.6	17.7	18.4	17.3	17.3	17.1	18.3
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.8	9.2	12.3	8.6	9.7	10.1	7.6	9.2	11.9
Neps-----per 100 sq. in. of card web	16	24	28	14	20	17	14	18	34
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	129	121	123	121	117	117	127	109	113
22s Mercerized-----"	136	129	129	129	125	121	135	120	122
50s Grey-----"	47	43	44	43	41	41	45	36	38
Average break factor-----8/2549	2406	2406	2453	2406	2312	2312	2522	2099	2193
Yarn appearance (grey):									
22s-----grade	C	D+	C	C+	D+	C	C+	C+	D+
50s-----"	C	D+	C	D+	D	D	C	D	D
Average yarn appearance-----index 9/	90	80	90	90	75	80	95	85	75
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	73.6	72.6	70.1	72.2	71.6	70.6	73.0	72.6	69.3
Yellowness-----Yb	11.4	11.0	10.5	11.0	11.0	10.7	11.3	11.0	12.2
Bleached:									
Reflectance-----Rd	85.4	83.3	81.4	84.8	83.2	82.7	83.6	84.6	82.8
Yellowness-----Yb	3.0	3.4	3.6	3.2	3.5	3.4	3.1	3.5	3.8
Dyed in grey:									
Reflectance-----Rd	22.6	24.0	23.0	23.0	24.6	23.6	22.5	24.6	23.0
Blueness-----b	22.0	20.9	21.1	21.6	20.3	20.3	21.6	21.2	18.9
Dyed after bleaching:									
Reflectance-----Rd	27.0	26.4	27.6	27.8	29.4	27.6	27.0	28.2	28.5
Blueness-----b	26.3	26.8	25.6	26.4	25.1	25.7	26.4	25.8	25.0
Luster of 22s carded yarn 11/:									
Grey-----percent	32	31	32	32	31	32	33	31	31
Mercerized-----"	37	39	38	39	38	38	39	38	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W								
State	Alabama								
Market Area	Huntsville			Thomasville			Troy		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	M	M	M	M	Mitap	M	SIM
Staple length-----inches:	1-1/16	1-1/32	1-1/16	1-1/16	1-1/32	1-1/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches:	1.00	1.02	1.09	1.04	1.02	1.01	1.06	.99	.98
Uniformity ratio-----	78	80	81	77	78	80	77	77	78
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.0	4.6	4.5	4.0	3.8	3.8	3.7	3.7	3.8
Fineness (Causticaire)-----ug/inch 2/:	4.1	4.8	4.3	4.0	3.9	3.9	3.8	3.9	4.0
Maturity "-----index 2/:	76	79	81	77	75	75	74	74	74
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	100	98	102	99	100	96	100	92	94
Zero "-----1,000 p.s.i.:	84	84	80	83	84	83	76	79	81
" "-----grams per tex 4/:	41.6	41.6	39.6	41.1	41.6	41.1	37.6	39.1	40.1
Nonlint content (Shirley Analyzer) percent:	2.1	1.9	2.1	2.2	2.7	2.8	2.8	2.6	3.9
Color of raw cotton 5/:									
Reflectance-----Rd:	77.8	77.6	72.7	76.5	76.5	73.5	76.4	72.7	71.6
Yellowness-----+b:	8.4	8.5	7.8	9.0	8.5	8.8	9.1	8.9	8.4
Sugar content-----percent:	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1
Acid-alkaline value-----pH units 6/:	7.0	6.8	7.6	7.6	7.2	7.4	7.5	7.5	7.7
Moisture regain (at 92% R.H.)-----percent:	17.0	16.5	16.9	17.2	16.9	15.7	17.5	16.7	15.1
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.5	7.6	6.8	6.9	7.8	8.8	7.7	6.9	9.5
Neps-----per 100 sq. in. of card web:	19	11	14	16	20	26	16	20	17
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	125	119	120	122	127	119	120	119	115
22s Mercerized-----"	128	123	126	129	132	126	125	126	120
50s Grey-----"	43	41	43	42	43	41	42	42	39
Average break factor-----8/2450:	2334	2334	2395	2392	2472	2334	2370	2359	2240
Yarn appearance (grey):									
22s-----grade:	B	B	C+	C+	C+	C+	C+	C+	C+
50s-----"	C+	C+	C+	C	C+	C	C	C	C
Average yarn appearance-----index 9/:	105	105	100	95	100	95	95	95	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	71.2	73.2	71.4	70.3	71.2	70.8	69.0	70.5	69.2
Yellowness-----+b:	10.9	11.0	10.1	11.5	11.3	11.2	12.0	11.3	11.0
Bleached:									
Reflectance-----Rd:	82.0	83.8	83.3	82.4	84.0	84.6	83.6	83.8	83.6
Yellowness-----+b:	3.5	3.6	3.0	3.3	3.6	3.2	3.8	3.4	4.1
Dyed in grey:									
Reflectance-----Rd:	24.5	24.4	26.2	23.8	24.4	26.5	24.0	25.4	27.8
Blueness-----+b:	20.6	20.8	20.8	20.6	20.4	19.6	19.6	19.2	16.8
Dyed after bleaching:									
Reflectance-----Rd:	27.6	29.0	29.0	27.9	28.4	30.4	27.9	28.2	29.6
Blueness-----+b:	25.0	25.6	25.2	25.1	24.3	24.6	24.7	24.7	24.2
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	32	32	33	33	32	34	33	33
Mercerized-----"	38	38	40	39	38	39	39	37	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W								
State	Alabama			Georgia					
Market Area	Wetumpka			Arlington			Atlanta		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	M	SIM	M	M	SIM	SMltap	SM	M
Staple length-----inches	1-1/32	1-1/32	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	1.06	1.00	.97	1.04	1.04	1.02	1.03	1.03	1.01
Uniformity ratio-----	77	76	75	78	80	77	83	83	81
Fiber fineness and maturity:									
Micronaire-----reading 1/	3.3	3.4	3.5	4.0	3.8	3.9	4.7	4.8	4.9
Fineness (Causticaire)-----ug/inch 2/	3.7	3.5	3.6	4.1	3.9	4.1	4.6	4.7	5.0
Maturity "-----index 2/	69	73	72	77	74	75	81	82	81
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	101	96	92	95	88	90	103	105	97
" "-----1,000 p.s.i.	78	80	80	75	72	77	85	83	80
" "-----grams per tex 4/	38.6	39.6	39.6	37.1	35.6	38.1	42.1	41.1	39.6
Nonlint content (Shirley Analyzer) percent	2.7	3.3	3.6	3.5	3.2	4.8	2.4	2.5	2.7
Color of raw cotton 5/:									
Reflectance-----Ra	74.9	73.3	71.6	75.6	71.6	69.9	75.8	78.5	73.0
Yellowness-----+b	8.9	8.3	7.8	8.5	8.7	8.0	8.6	8.5	8.6
Sugar content-----percent	0.2	0.2	0.0	0.2	0.3	0.0	0.2	0.2	0.2
Acid-alkaline value-----pH units 6/	7.5	7.4	7.9	7.5	7.2	8.4	7.2	7.9	7.3
Moisture regain (at 92% R.H.)-----percent	17.6	16.4	15.3	17.5	17.4	15.4	17.7	16.9	16.4
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.5	8.7	10.2	8.9	8.4	10.0	7.2	8.0	8.0
Neps-----per 100 sq. in. of card web	15	20	29	19	13	13	12	12	9
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	126	120	119	118	119	114	121	121	120
22s Mercerized-----"	132	126	126	120	125	121	128	130	128
50s Grey-----"	44	42	41	41	42	38	41	42	41
Average break factor-----8/24	36	2370	2334	2323	2359	2204	2356	2381	2345
Yarn appearance (grey):									
22s-----grade	C+	C+	C+	C+	B	B	B	B	B
50s-----"	C	C	C	C+	C+	C+	C+	C+	C+
Average yarn appearance-----index 9/	95	95	95	100	105	105	105	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Ra	70.2	70.8	69.4	70.6	69.2	68.5	71.6	71.6	71.3
Yellowness-----+b	11.4	11.3	10.8	11.6	11.4	11.1	11.4	10.8	11.0
Bleached:									
Reflectance-----Ra	84.4	84.2	82.2	84.2	83.8	84.6	83.1	82.6	83.0
Yellowness-----+b	3.2	3.4	4.6	3.2	3.6	3.6	3.4	3.0	3.6
Dyed in grey:									
Reflectance-----Ra	25.2	26.3	28.2	24.4	24.9	26.5	23.0	23.4	24.4
Blueness-----b	20.3	19.4	16.2	20.6	19.8	19.2	22.4	21.6	19.4
Dyed after bleaching:									
Reflectance-----Ra	28.2	29.4	31.2	27.1	28.3	30.0	27.6	26.6	27.1
Blueness-----b	24.8	24.0	23.4	25.4	25.0	24.1	25.3	25.5	25.8
Luster of 22s carded yarn 11/:									
Grey-----percent	33	32	33	32	33	33	33	32	33
Mercerized-----"	39	37	37	37	37	38	40	39	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W								
State	Georgia								
Market Area	Baxley			Cartersville			Madison		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	M	SIM	M	M+	M+	M	Mtsp	Msp
Staple length-----inches	1-1/16	1-1/32	1-1/32	1-1/32	1-1/16	1-1/32	1-1/16	1	1
Fiber length (Fibrograph):									
Upper half mean-----inches	1.03	1.00	.96	1.05	1.04	1.01	1.02	1.00	.97
Uniformity ratio-----	79	81	73	81	81	79	80	78	75
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.3	4.3	3.9	4.2	4.5	4.6	4.0	3.8	4.2
Fineness (Causticaire)-----ug/inch 2/	4.2	4.3	4.1	4.2	4.6	4.6	4.0	3.8	4.4
Maturity "-----index 2/	79	78	75	78	79	80	78	75	76
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	102	94	93	104	102	97	105	99	103
Zero "-----1,000 p.s.i.	78	79	77	85	84	76	78	84	83
" "-----grams per tex 4/	38.6	39.1	38.1	42.1	41.6	37.6	38.6	41.6	41.1
Nonlint content (Shirley Analyzer) percent	2.2	2.5	3.8	2.0	2.4	2.0	3.2	4.2	4.4
Color of raw cotton 5/:									
Reflectance-----Rd	76.5	71.0	71.0	75.7	76.5	72.5	71.2	69.8	60.8
Yellowness-----+b	8.6	9.4	8.4	8.7	9.3	9.2	9.3	10.3	9.3
Sugar content-----percent	0.3	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Acid-alkaline value-----pH units 6/	7.8	8.5	8.2	7.1	6.9	7.1	7.0	7.6	7.8
Moisture regain (at 92% R.H.)-----percent	18.1	16.7	15.5	18.6	16.5	16.6	18.4	17.0	15.0
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	8.3	7.4	9.1	7.1	8.3	8.7	9.1	9.8	10.9
Neps-----per 100 sq. in. of card web	23	17	19	20	10	14	24	17	21
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	126	115	109	124	126	117	119	116	111
22s Mercerized-----"	129	121	116	131	129	121	126	124	114
50s Grey-----"	43	39	38	43	44	40	42	40	38
Average break factor-----8/2461	2240	2240	2149	2439	2486	2287	2359	2276	2171
Yarn appearance (grey):									
22s-----grade	C+	C+	C+	C+	B	C+	C+	C+	C+
50s-----"	C	C	C	C+	C+	C+	C	C	C
Average yarn appearance-----index 9/	95	100	95	100	105	100	95	95	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	71.2	68.7	67.1	72.0	72.2	73.4	68.6	69.2	65.8
Yellowness-----+b	11.5	11.2	11.0	11.0	11.2	10.3	11.6	11.8	12.0
Bleached:									
Reflectance-----Rd	83.8	83.3	84.0	82.8	83.0	82.0	81.5	80.8	78.1
Yellowness-----+b	3.1	4.2	3.2	3.4	3.8	3.6	4.0	5.6	8.5
Dyed in grey:									
Reflectance-----Rd	23.4	25.4	29.0	23.4	25.1	24.8	23.0	25.6	26.8
Blueness-----+b	21.0	20.0	17.1	21.2	20.2	20.8	20.7	18.2	15.2
Dyed after bleaching:									
Reflectance-----Rd	26.2	28.6	30.5	27.7	29.0	29.4	26.4	28.4	30.3
Blueness-----+b	26.1	24.4	24.3	25.1	25.2	25.0	25.5	23.4	21.4
Luster of 22s carded yarn 11/:									
Grey-----percent	33	33	33	33	32	32	34	33	34
Mercerized-----"	38	39	36	38	39	37	38	38	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Coker 100 W							
State		Georgia			Mississippi		North Carolina		
Market Area		Sandersville			Greenwood		Scotland Neck		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----		M	SLM	SLM	SLM	SLM	SM	SLM	Mltgr
Staple length-----inches:		1-1/32	1-1/32	1	1-1/16	1-1/32	1-1/16	1-1/16	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches:		1.02	.98	.93	1.08	1.02	1.11	1.06	.97
Uniformity ratio-----		80	78	75	81	77	83	77	70
Fiber fineness and maturity:									
Micronaire-----reading 1/:		3.8	4.1	4.2	3.8	3.6	4.2	4.0	4.2
Fineness (Causticaire)-----ug/inch 2/:		3.9	4.1	4.2	4.0	3.6	4.3	4.1	4.4
Maturity "-----index 2/:		75	78	78	74	74	77	77	76
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:		105	97	94	104	98	92	92	90
Zero "-----1,000 p.s.i.:		82	85	82	83	81	68	70	66
" "-----grams per tex 4/:		40.6	42.1	40.6	41.1	40.1	33.7	34.6	32.7
Nonlint content (Shirley Analyzer) percent:		2.2	3.4	3.5	3.5	2.8	2.1	2.8	4.3
Color of raw cotton 5/:									
Reflectance-----R _d :		74.3	71.6	69.5	74.9	68.0	75.5	69.4	61.5
Yellowness-----+b:		9.0	8.7	8.0	8.4	7.7	8.4	7.7	7.3
Sugar content-----percent:		0.1	0.0	0.0	0.2	0.1	0.2	0.0	0.5
Acid-alkaline value-----pH units 6/:		7.6	8.9	8.2	7.3	8.1	7.6	9.3	8.5
Moisture regain (at 92% R.H.)-----percent:		19.0	16.5	15.2	16.9	16.2	17.2	15.6	15.2
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:		7.9	8.6	8.4	8.2	8.5	7.6	9.0	9.8
Neps-----per 100 sq. in. of card web:		25	14	12	15	18	15	22	16
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:		132	116	107	134	118	117	102	95
22s Mercerized-----"		139	125	119	141	125	119	106	97
50s Grey-----"		46	39	37	48	42	42	37	33
Average break factor-----8/:		2602	2251	2102	2674	2348	2337	2047	1870
Yarn appearance (grey):									
22s-----grade:		C+	C+	C+	B	C+	C+	C	C
50s-----"		C	C+	C+	C+	C	C	C	C
Average yarn appearance-----index 9/:		95	100	100	105	95	95	90	90
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----R _d :		68.7	69.3	66.2	69.6	67.6	71.8	66.2	59.8
Yellowness-----+b:		11.8	11.6	10.6	11.4	9.7	10.7	10.4	9.0
Bleached:									
Reflectance-----R _d :		82.2	82.3	81.3	84.4	82.8	84.1	83.9	81.2
Yellowness-----+b:		3.2	3.9	3.9	3.2	3.4	2.8	3.5	3.4
Dyed in grey:									
Reflectance-----R _d :		23.1	27.4	30.2	24.6	28.2	22.9	25.3	27.2
Blueness-----+b:		20.3	17.8	16.4	20.4	17.8	22.6	19.2	16.6
Dyed after bleaching:									
Reflectance-----R _d :		27.7	31.0	32.3	28.2	31.9	27.0	29.0	30.4
Blueness-----+b:		24.4	23.4	23.2	25.3	24.0	25.4	25.2	24.0
Luster of 22s carded yarn 11/:									
Grey-----percent:		34	33	33	33	34	33	34	33
Mercerized-----"		40	38	38	40	39	38	38	36

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W								
State	North Carolina								
Market Area	Monroe			Raeford			Shelby		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SIM	IM+	M	SIM	Mtgr	SM	Msp	Msp
Staple length-----inches:	1-1/16	1-1/32	1-1/32	1-1/16	1-1/32	1-1/32	1	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches:	1.08	1.04	1.02	1.07	1.03	.98	.96	.95	.94
Uniformity ratio-----	81	80	75	79	76	70	81	80	81
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.3	4.2	4.0	4.3	4.4	4.0	4.6	4.9	4.7
Fineness (Causticaire)-----ug/inch 2/:	4.3	4.3	4.1	4.4	4.5	4.1	4.6	4.7	4.7
Maturity "-----index 2/:	79	78	77	78	78	76	80	82	80
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	102	103	97	92	91	91	99	99	93
Zero "-----1,000 p.s.i. 1/:	78	74	77	71	71	66	85	81	80
" "-----grams per tex 4/:	38.6	36.6	38.1	35.1	35.1	32.7	42.1	40.1	39.6
Nonlint content (Shirley Analyzer) percent:	3.9	4.6	4.4	2.3	3.1	4.6	2.4	3.8	4.1
Color of raw cotton 5/:									
Reflectance-----Rd:	75.0	66.5	71.0	73.6	68.9	62.0	72.5	69.5	65.3
Yellowness-----+b:	8.3	8.8	8.4	8.7	7.1	7.0	8.9	10.4	9.3
Sugar content-----percent:	0.3	0.2	0.0	0.1	0.0	0.2	0.3	0.1	0.0
Acid-alkaline value-----pH units 6/:	7.5	8.6	8.5	8.2	9.2	8.3	7.0	8.0	8.3
Moisture regain (at 92% R.H.)-----percent:	17.6	16.9	16.6	16.4	15.5	15.6	17.4	15.9	15.6
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	9.4	10.6	9.6	7.2	8.8	9.6	7.8	9.4	9.4
Neps-----per 100 sq. in. of card web:	15	11	15	19	18	15	14	14	12
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	121	115	110	112	103	95	113	109	110
22s Mercerized-----"	125	120	115	118	107	100	120	117	115
50s Grey-----"	43	41	38	40	35	34	38	37	37
Average break factor-----8/:	2406	2290	2160	2232	2008	1895	2193	2124	2135
Yarn appearance (grey):									
22s-----grade:	C+	C+	C+	C+	B	C+	C+	B	B
50s-----"	C+	C	C+	C+	C	C	C+	C+	C+
Average yarn appearance-----index 9/:	100	95	100	100	100	95	100	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	71.0	68.6	67.8	70.7	64.8	60.0	71.2	65.4	63.2
Yellowness-----+b:	11.0	11.6	10.9	10.9	10.5	8.9	11.2	13.2	12.6
Bleached:									
Reflectance-----Rd:	83.2	83.9	82.1	82.9	81.3	81.9	82.4	76.9	77.0
Yellowness-----+b:	3.1	3.6	3.7	2.9	3.0	3.3	3.8	9.4	8.8
Dyed in grey:									
Reflectance-----Rd:	22.8	23.9	25.5	25.1	27.0	27.6	24.0	25.5	27.0
Blueness-----+b:	22.0	20.4	19.5	21.0	18.4	16.3	21.0	15.9	15.2
Dyed after bleaching:									
Reflectance-----Rd:	26.3	28.0	28.2	27.6	29.4	30.2	28.0	29.6	30.4
Blueness-----+b:	25.8	25.6	25.3	25.3	24.6	24.4	25.2	21.1	21.0
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	33	33	33	33	33	32	34	34
Mercerized-----"	38	38	38	37	37	38	37	38	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W								
State	South Carolina								
Market Area	Allendale			Aiken			Chester		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SIM	IM	SIM	M	SIM	M	SIM	IM
Staple length-----inches	1-1/16	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.08	1.05	1.01	1.06	1.01	1.02	1.08	1.01	.98
Uniformity ratio-----	80	78	78	80	79	77	81	78	79
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.2	3.7	3.6	3.8	4.0	4.0	3.8	3.8	4.4
Fineness (Causticaire)-----ug/inch 2/	4.3	3.8	3.9	4.1	4.3	4.2	4.1	4.1	4.5
Maturity "-----index 2/	78	75	72	74	76	76	74	74	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	103	97	94	97	93	96	98	98	94
Zero "-----1,000 p.s.i.	79	79	78	75	80	76	77	80	75
" "-----grams per tex 4/	39.1	39.1	38.6	37.1	39.6	37.6	38.1	39.6	37.1
Nonlint content (Shirley Analyzer) percent:	2.1	3.8	5.7	3.2	2.7	3.2	2.2	2.3	3.6
Color of raw cotton 5/:									
Reflectance-----Rd	72.6	69.5	68.6	71.6	73.5	72.6	74.8	73.6	69.4
Yellowness-----+b	9.2	8.9	7.9	8.6	8.1	7.9	8.9	8.3	7.8
Sugar content-----percent:	0.3	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.0
Acid-alkaline value-----pH units 6/	7.1	8.8	7.4	8.3	7.8	8.6	7.5	7.4	8.7
Moisture regain (at 92% R.H.)-----percent:	18.3	16.7	15.4	16.7	16.1	15.2	17.9	17.3	14.9
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	6.2	8.8	11.0	8.9	8.2	8.1	6.4	7.9	9.1
Neps-----per 100 sq. in. of card web:	8	25	16	18	16	14	7	12	14
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	128	121	115	122	118	116	128	118	109
22s Mercerized-----"	130	128	123	125	123	121	132	124	116
50s Grey-----"	48	42	41	43	41	40	44	41	37
Average break factor-----8/	2608	2381	2290	2417	2323	2276	2508	2323	2124
Yarn appearance (grey):									
22s-----grade	B	C+	C+	C+	C+	C+	B+	B	B
50s-----"	C+	C	C	C+	C+	C	C+	C+	C+
Average yarn appearance-----index 9/	105	95	95	100	100	95	110	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	70.7	67.6	66.9	70.2	71.4	70.2	71.0	71.9	67.8
Yellowness-----+b	11.2	11.2	10.8	11.6	11.0	10.8	11.2	11.0	10.2
Bleached:									
Reflectance-----Rd	81.8	82.8	83.6	83.0	83.8	83.1	82.1	84.4	81.8
Yellowness-----+b	2.8	3.6	3.8	3.4	3.4	3.8	3.1	3.6	3.8
Dyed in grey:									
Reflectance-----Rd	23.2	26.3	27.7	24.5	25.4	27.3	22.9	24.7	27.9
Blueness-----+b	20.9	18.5	17.9	20.2	20.5	18.6	21.4	20.5	17.2
Dyed after bleaching:									
Reflectance-----Rd	27.5	28.6	31.0	27.1	28.6	30.2	26.6	28.5	30.0
Blueness-----+b	25.0	24.4	23.8	24.8	24.9	24.5	25.8	25.2	24.7
Luster of 22s carded yarn 11/:									
Grey-----percent:	33	33	34	33	32	33	33	32	34
Mercerized-----"	40	40	37	38	36	37	38	37	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Coker 100 W						Deltapine 15		
State	South Carolina						Alabama		
Market Area	Dillon			Westminster			Florence		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SIM	SIM	IM	M	SIM	Mtsp	SIM	SIM+	SIM
Staple length-----inches:	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):									
Upper half mean-----inches:	1.05	1.02	1.02	1.04	.96	1.01	1.05	1.02	1.03
Uniformity ratio-----	78	78	75	81	78	81	82	78	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.2	4.0	4.2	4.2	4.4	4.6	3.7	3.7	4.1
Fineness (Causticaire)-----ug/inch 2/	4.3	4.1	4.2	4.2	4.3	4.5	4.0	3.8	4.2
Maturity "-----index 2/	77	76	78	78	80	80	73	75	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	103	95	89	100	99	102	97	97	98
Zero "-----1,000 p.s.i.	78	78	73	80	82	82	79	80	77
" "-----grams per tex 4/	38.6	38.6	36.1	39.6	40.6	40.6	39.1	39.6	38.1
Nonlint content (Shirley Analyzer) percent:	3.0	3.2	4.3	2.7	4.2	4.1	4.1	4.8	4.6
Color of raw cotton 5/:									
Reflectance-----Rd	74.6	71.4	68.5	75.5	73.5	75.0	72.0	72.1	70.5
Yellowness-----+b	9.2	8.0	7.6	9.2	8.6	8.8	8.0	8.4	8.4
Sugar content-----percent:	0.1	0.1	0.0	0.3	0.1	0.2	0.2	0.3	0.1
Acid-alkaline value-----pH units 6/	7.4	8.9	8.9	6.7	7.4	7.4	7.0	6.7	8.4
Moisture regain (at 92% R.H.)-----percent:	17.0	16.3	15.1	17.9	16.9	17.0	16.9	16.4	16.1
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	8.3	8.3	10.6	7.7	9.9	9.0	8.4	10.0	9.2
Neps-----per 100 sq. in. of card web:	22	18	17	13	16	12	13	14	11
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	118	112	105	124	119	117	127	123	115
22s Mercerized-----"	126	114	111	131	121	125	131	126	120
50s Grey-----"	40	39	36	42	41	42	45	42	41
Average break factor-----8/	2298	2207	2055	2414	2334	2337	2522	2403	2290
Yarn appearance (grey):									
22s-----grade:	C+	B	C+	B	B	B	C+	C+	C+
50s-----"	C+	C	C	C+	C+	C+	C+	C+	C
Average yarn appearance-----index 9/	100	100	95	105	105	105	100	100	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	67.7	70.8	65.6	71.6	70.4	70.2	68.4	73.6	70.2
Yellowness-----+b	10.8	11.2	10.4	11.2	11.3	11.8	10.3	10.8	10.3
Bleached:									
Reflectance-----Rd	80.6	84.0	82.8	82.1	82.1	81.8	80.5	83.9	83.2
Yellowness-----+b	3.2	3.4	3.4	3.4	4.2	5.0	3.4	3.4	3.2
Dyed in grey:									
Reflectance-----Rd	24.6	27.2	28.0	23.6	24.6	25.6	24.2	24.2	27.6
Blueness-----+b	20.4	19.6	18.2	21.4	20.3	19.3	20.6	20.3	19.0
Dyed after bleaching:									
Reflectance-----Rd	27.8	30.0	30.5	26.4	29.2	28.8	28.0	28.7	29.6
Blueness-----+b	24.4	24.4	24.4	25.4	24.6	24.9	24.4	25.0	25.0
Luster of 22s carded yarn 11/:									
Grey-----percent:	33	32	33	34	33	34	34	32	32
Mercerized-----"	38	36	38	40	40	39	40	37	39

For footnotes see page 63

Continued on page 23

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine 15								
State	Arkansas								
Market Area	Bradley			Leachville			Marianna		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SIM	SIM	M	M	M	Mltsp	M	M
Staple length-----inches	1-1/32	1	1	1-3/32	1-1/16	1-1/16	1-1/32	1-1/32	1-1/16
Fiber length (Fibrograph):									
Upper half mean-----inches	1.00	.98	.95	1.10	1.04	1.08	1.03	1.00	1.02
Uniformity ratio-----	80	80	79	80	83	81	82	79	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.1	4.5	4.4	4.4	4.9	4.4	4.1	4.8	5.0
Fineness (Causticaire)-----ug/inch 2/	4.3	4.3	4.6	4.3	4.9	4.3	4.0	4.6	5.0
Maturity "-----index 2/	77	81	78	80	81	80	79	83	81
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	102	110	97	109	107	107	103	109	101
Zero "-----1,000 p.s.i.	88	87	86	85	86	80	85	86	84
" "-----grams per tex 4/	43.6	43.1	42.6	42.1	42.6	39.6	42.1	42.6	41.6
Nonlint content (Shirley Analyzer) percent:	2.4	4.0	4.1	2.1	2.5	2.8	2.6	2.4	2.4
Color of raw cotton 5/:									
Reflectance-----Rd	75.5	68.5	70.3	74.4	76.4	72.3	72.5	77.6	72.3
Yellowness-----+b	9.3	8.6	8.5	8.7	8.1	7.5	8.8	8.3	8.4
Sugar content-----percent:	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.2	0.1
Acid-alkaline value-----pH units 6/	7.2	7.2	7.4	7.7	7.3	6.5	7.5	7.0	7.4
Moisture regain (at 92% R.H.)-----percent:	17.8	16.1	15.2	17.2	17.1	16.6	16.3	17.0	16.2
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	6.9	10.5	10.4	7.6	7.4	8.0	8.0	7.8	7.9
Neps-----per 100 sq. in. of card web:	10	16	11	15	12	11	12	14	13
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	126	108	105	133	127	128	118	116	113
22s Mercerized-----"	135	113	115	137	133	133	128	121	121
50s Grey-----"	44	37	35	45	44	46	42	40	39
Average break factor-----8/	2486	2113	2030	2588	2497	2558	2348	2276	2218
Yarn appearance (grey):									
22s-----grade:	B	B	B	B	B	B	B	B	B
50s-----"	C+	C	C	C+	C+	C+	C	C+	C+
Average yarn appearance-----index 9/	105	100	100	105	105	105	100	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	71.4	68.2	68.4	71.1	73.0	73.6	70.4	74.3	73.1
Yellowness-----+b	12.4	11.0	10.9	11.3	11.1	10.2	11.4	10.5	10.3
Bleached:									
Reflectance-----Rd	84.4	81.6	81.4	83.3	83.9	84.5	82.3	83.4	83.1
Yellowness-----+b	3.2	4.6	3.6	3.2	3.1	3.0	3.4	3.5	3.0
Dyed in grey:									
Reflectance-----Rd	24.8	25.9	28.2	24.0	23.9	24.9	23.4	25.0	26.2
Blueness-----+b	20.3	17.8	17.7	20.1	21.0	21.0	20.0	20.5	20.5
Dyed after bleaching:									
Reflectance-----Rd	26.1	29.6	31.4	26.4	28.2	28.7	28.0	28.0	29.4
Blueness-----+b	27.0	24.8	24.0	25.3	25.8	25.5	25.3	25.8	25.5
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	32	32	34	32	32	32	31	31
Mercerized-----"	38	38	38	38	39	39	38	38	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15								
State		Arkansas								
Market Area		Marked Tree			Osceola			Pine Bluff		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----		Midsp	M	SLM	M	SLM	M	M	M	SLM
Staple length-----inches:		1-1/16	1-1/16	1-1/32	1-1/16	1-1/16	1-1/16	1-3/32	1-1/32	1-1/16
Fiber length (Fibrograph):										
Upper half mean-----inches:		1.04	1.04	1.05	1.05	1.02	1.02	1.07	1.01	1.06
Uniformity ratio-----		80	81	80	80	79	80	82	79	79
Fiber fineness and maturity:										
Micronaire-----reading 1/:		4.2	5.0	4.6	4.0	4.2	4.5	4.1	4.4	4.6
Fineness (Causticaire)-----ug/inch 2/:		4.2	4.9	4.7	4.1	4.3	4.6	4.3	4.2	4.6
Maturity-----index 2/:		78	82	80	76	77	79	77	80	79
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/:		110	107	106	108	106	105	111	114	108
Zero "-----1,000 p.s.i.:		86	86	84	85	86	84	83	88	81
"-----grams per tex 4/:		42.6	42.6	41.6	42.1	42.6	41.6	41.1	43.6	40.1
Nonlint content (Shirley Analyzer) percent:		2.7	2.8	4.3	2.6	2.7	2.3	2.4	2.1	3.8
Color of raw cotton 5/:										
Reflectance-----Rd:		73.3	74.5	71.5	71.4	72.9	75.4	76.1	74.5	71.5
Yellowness-----+b:		9.1	8.3	7.4	8.8	8.6	7.5	8.7	8.5	8.0
Sugar content-----percent:		0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2
Acid-alkaline value-----pH units 6/:		8.3	7.5	7.3	8.1	7.4	7.3	7.3	6.8	7.1
Moisture regain (at 92% R.H.)-----percent:		17.3	16.5	16.9	16.7	16.2	15.8	18.4	17.2	16.5
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent:		8.6	8.5	9.0	8.6	8.5	8.1	6.5	8.0	8.9
Neps-----per 100 sq. in. of card web:		10	11	23	12	17	15	9	21	13
Yarn quality:										
Yarn skein strength:										
22s Grey-----pounds:		125	122	112	121	117	115	133	119	121
22s Mercerized-----"		132	129	120	129	125	120	137	125	126
50s Grey-----"		43	42	38	41	40	39	47	41	41
Average break factor-----8/:		2450	2392	2182	2356	2287	2240	2638	2334	2356
Yarn appearance (grey):										
22s-----grade:		B+	B+	B	B	B	B	B	C+	B
50s-----"		C+	C	C+	C	C	C	C+	C	C+
Average yarn appearance-----index 9/:		110	105	105	100	100	100	105	95	105
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----Rd:		69.6	72.4	69.6	69.4	69.6	73.8	71.4	71.6	70.5
Yellowness-----+b:		12.0	10.4	10.4	11.6	10.8	10.2	11.2	11.0	10.8
Bleached:										
Reflectance-----Rd:		83.0	83.1	81.8	84.1	82.4	83.2	83.4	84.0	83.6
Yellowness-----+b:		3.4	3.2	3.1	3.4	3.5	3.1	3.2	3.6	3.0
Dyed in grey:										
Reflectance-----Rd:		24.2	25.4	25.8	24.8	25.4	26.4	23.4	24.2	25.2
Blueness-----+b:		19.6	20.2	20.1	19.9	18.8	20.1	21.0	19.6	20.5
Dyed after bleaching:										
Reflectance-----Rd:		27.6	28.7	29.2	27.9	30.2	29.5	26.6	29.0	28.5
Blueness-----+b:		25.8	25.8	25.4	25.7	24.6	25.4	25.4	25.2	25.3
Luster of 22s carded yarn 11/:										
Grey-----percent:		32	32	32	32	32	31	32	31	31
Mercerized-----"		40	38	38	38	38	38	38	39	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine 15								
State	California			Louisiana					
Market Area	El Centro			Boasier City			Cheneyville		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	SLM+	SM	M	SLM	SLM	SLM	LM
Staple length-----inches:	1-1/16	1-1/32	1-1/16	1-1/32	1-1/32	1	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):									
Upper half mean-----inches:	1.09	1.04	1.06	1.03	1.01	.98	1.06	1.05	1.04
Uniformity ratio-----	81	79	81	81	79	80	82	80	80
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.8	5.0	4.8	4.4	4.4	4.0	4.6	4.5	4.3
Fineness (Causticair)-----ug/inch 2/:	4.7	5.0	4.9	4.3	4.3	4.1	4.5	4.5	4.2
Maturity "-----index 2/:	82	81	80	80	79	77	81	80	79
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	107	114	106	108	106	102	103	103	104
Zero "-----1,000 p.s.i.:	85	87	85	87	84	86	80	82	79
" "-----grams per tex 4/:	42.1	43.1	42.1	43.1	41.6	42.6	39.6	40.6	39.1
Nonlint content (Shirley Analyzer) percent:	2.1	2.7	4.8	2.0	2.4	3.7	2.7	3.7	3.9
Color of raw cotton 5/:									
Reflectance-----Rd:	77.8	77.5	74.5	76.1	74.3	72.3	71.3	72.5	66.5
Yellowness-----+b:	8.8	8.8	7.9	9.4	8.6	8.5	8.9	8.0	8.1
Sugar content-----percent:	0.2	0.1	0.2	0.3	0.2	0.1	0.1	0.0	0.0
Acid-alkaline value-----pH units 6/:	7.0	6.8	6.7	7.3	7.9	7.3	7.6	7.4	8.1
Moisture regain (at 92% R.H.)-----percent:	16.9	17.4	16.4	17.9	16.8	15.8	16.9	16.5	15.6
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.1	7.0	8.4	6.9	7.6	9.6	7.5	9.0	10.2
Neps-----per 100 sq. in. of card web:	16	7	15	11	13	17	12	15	22
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	123	118	109	125	115	108	118	115	110
22s Mercerized-----"	126	125	114	132	125	119	121	122	117
50s Grey-----"	43	39	36	42	39	38	41	40	38
Average break factor-----8/:	2428	2273	2099	2425	2240	2138	2323	2265	2160
Yarn appearance (grey):									
22s-----grade:	B	B+	C+	B	C+	C+	B	B	C+
50s-----"	C+	C+	C	C+	C	C	C+	C+	C
Average yarn appearance-----index 9/:	105	110	95	105	95	95	105	105	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	75.2	75.9	72.7	71.0	70.4	70.5	68.0	69.3	65.6
Yellowness-----+b:	10.2	10.7	10.0	11.8	11.2	10.7	11.4	10.8	10.7
Bleached:									
Reflectance-----Rd:	83.8	83.4	81.8	83.0	82.6	83.6	83.8	82.4	81.6
Yellowness-----+b:	3.0	3.0	3.5	3.4	3.4	3.4	3.4	3.1	3.4
Dyed in grey:									
Reflectance-----Rd:	22.0	23.6	25.0	24.4	24.4	28.2	25.2	25.4	26.0
Blueness-----+b:	23.6	22.8	21.7	19.5	19.6	18.5	19.8	20.4	17.7
Dyed after bleaching:									
Reflectance-----Rd:	26.6	27.0	29.4	27.2	28.3	31.0	28.4	27.4	29.8
Blueness-----+b:	26.6	27.2	25.2	26.4	25.2	24.2	25.9	25.4	24.6
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	30	30	33	31	31	32	32	33
Mercerized-----"	38	37	38	40	38	36	40	39	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine 15								
State	Louisiana								
Market Area	Lake Providence			Mer Rouge			Natchitoches		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SM	SLM	M	M	SLM	M	SLM	LM
Staple length-----inches	1-3/32	1-3/32	1-1/16	1-1/16	1-1/16	1-1/32	1-1/32	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.08	1.06	1.08	.97	1.06	1.00	1.02	1.01	1.04
Uniformity ratio-----	80	79	81	79	80	80	78	80	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.0	4.5	4.3	4.6	4.6	4.5	4.1	4.5	4.3
Fineness (Cauticaire)-----ug/inch 2/	4.1	4.6	4.7	4.7	4.8	4.7	4.0	4.2	4.3
Maturity "-----index 2/	76	79	83	80	79	81	78	82	79
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	108	108	105	105	103	98	105	104	102
Zero "-----1,000 p.s.i.	81	85	80	85	89	83	82	84	84
" "-----grams per tex 4/	40.1	42.1	39.6	42.1	44.1	41.1	40.6	41.6	41.6
Nonlint content (Shirley Analyzer) percent:	1.8	1.7	3.4	3.1	3.0	2.9	2.7	3.7	5.0
Color of raw cotton 5/:									
Reflectance-----Rd	72.5	76.5	72.3	71.4	73.4	70.0	74.5	71.3	68.4
Yellowness-----+b	9.4	8.5	7.9	9.3	8.5	7.5	9.1	8.5	8.5
Sugar content-----percent:	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1
Acid-alkaline value-----pH units 6/	7.1	7.3	7.7	7.6	7.9	7.9	7.3	8.0	7.4
Moisture regain (at 92% R.H.)-----percent:	16.2	16.3	15.3	17.7	15.7	15.0	18.3	16.9	16.5
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.0	7.5	8.2	7.9	8.2	8.5	7.8	9.9	11.1
Neps-----per 100 sq. in. of card web:	14	16	15	8	12	12	21	20	12
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	125	120	115	122	116	111	118	107	109
22s Mercerized-----"	128	126	122	124	124	120	128	114	118
50s Grey-----"	44	40	40	41	39	37	40	37	38
Average break factor-----8/	2475	2320	2265	2367	2251	2146	2298	2102	2149
Yarn appearance (grey):									
22s-----grade:	C+	B	B	B+	B	B	C+	C+	B
50s-----"	C	C	C+	C+	C+	C+	D+	D+	C
Average yarn appearance-----index 9/	95	100	105	110	105	105	90	90	100
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	72.8	74.2	69.8	70.9	72.0	69.6	69.1	68.0	66.0
Yellowness-----+b	11.2	10.8	10.0	11.7	11.0	10.4	12.4	11.4	10.8
Bleached:									
Reflectance-----Rd	84.6	83.3	82.8	84.6	82.7	83.2	84.2	81.8	83.6
Yellowness-----+b	2.9	3.4	3.4	3.1	3.1	3.4	3.5	4.2	3.5
Dyed in grey:									
Reflectance-----Rd	24.0	23.8	26.2	24.0	25.0	28.3	24.4	24.9	27.4
Blueness-----+b	21.4	21.7	19.6	20.4	20.3	18.1	19.0	19.4	17.5
Dyed after bleaching:									
Reflectance-----Rd	26.8	28.1	29.4	26.9	28.9	31.6	28.3	28.1	29.9
Blueness-----+b	26.6	26.2	25.0	26.5	25.7	23.9	25.7	25.2	24.3
Luster of 22s carded yarn 11/:									
Grey-----percent:	32	32	32	32	32	31	32	32	33
Mercerized-----"	39	38	37	38	39	36	38	38	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine 15								
State	Louisiana								
Market Area	Shreveport			Tallulah			Villa Platte		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	M	SIM	SIM	SIM	IM	M	SIM	SIM
Staple length-----inches	1-1/32	1-1/32	1	1-3/32	1-3/32	1-1/16	1-1/32	1-1/16	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	.98	1.06	.98	1.08	1.07	1.06	1.02	1.00	.96
Uniformity ratio-----	80	80	79	81	80	81	79	82	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.1	4.6	4.4	4.6	4.6	4.6	4.7	4.6	4.6
Fineness (Causticaire)-----ug/inch 2/	4.2	4.7	4.4	4.6	4.4	4.4	4.8	4.6	4.6
Maturity "-----index 2/	77	80	79	80	80	82	80	79	80
Fiber tensile strength (Pressley:									
1/8" gauge-----index 3/	113	105	101	105	102	103	105	100	96
Zero "-----1,000 p.s.i.	89	86	87	85	83	78	84	84	82
" "-----grams per tex 4/	44.1	42.6	43.1	42.1	41.1	38.6	41.6	41.6	40.6
Nonlint content (Shirley Analyzer) percent	1.8	3.0	2.4	3.2	3.8	7.8	3.3	4.3	4.2
Color of raw cotton 5/:									
Reflectance-----Rd	72.4	73.3	71.5	73.5	75.4	70.4	75.5	70.0	71.5
Yellowness-----Yb	9.7	8.8	7.6	8.1	9.0	6.7	9.6	8.3	8.5
Sugar content-----percent	0.1	0.2	0.0	0.1	0.2	0.2	0.3	0.1	0.0
Acid-alkaline value-----pH units 6/	7.7	6.8	7.6	8.6	7.1	7.6	7.8	8.7	7.9
Moisture regain (at 92% R.H.)-----percent	17.3	15.4	15.3	17.9	16.1	15.9	17.9	17.4	15.8
PROCESSING RESULTS									
Manufacturing waste									
Picker and card-----percent	7.7	8.6	8.5	8.1	9.0	11.4	8.6	9.1	10.3
Neps-----per 100 sq. in. of card web	16	14	12	6	12	11	14	4	9
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	124	116	110	127	118	115	118	113	109
22s Mercerized-----"	133	124	120	130	122	121	127	121	116
50s Grey-----"	43	38	38	44	41	40	39	40	36
Average break factor-----8/2439	2226	2160	2497	2323	2265	2273	2243	2099	
Yarn appearance (grey):									
22s-----grade	B	B	B	B+	B	B	B+	B	B
50s-----"	C+	C+	C+	C+	C	C	C+	C+	C+
Average yarn appearance-----index 9/	105	105	105	110	100	100	110	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	70.3	71.4	70.0	71.3	72.8	70.4	70.6	68.9	69.8
Yellowness-----Yb	12.2	11.2	11.1	11.2	10.7	10.2	11.8	11.5	11.2
Bleached:									
Reflectance-----Rd	83.6	82.6	81.0	83.8	82.5	83.2	83.2	83.0	81.6
Yellowness-----Yb	3.5	3.4	3.6	3.0	3.2	3.5	3.1	3.1	4.0
Dyed in grey:									
Reflectance-----Rd	25.6	24.0	28.6	23.7	23.5	25.8	23.4	24.5	27.2
Blueness-----b	18.8	20.4	17.4	21.5	21.1	19.2	21.0	19.4	18.0
Dyed after bleaching:									
Reflectance-----Rd	28.2	28.2	31.5	26.8	28.4	29.1	26.8	27.7	29.3
Blueness-----b	25.7	25.6	23.7	26.6	25.3	25.6	27.1	24.9	24.8
Luster of 22s carded yarn 11/:									
Grey-----percent	32	33	32	32	32	33	33	33	32
Mercerized-----"	38	39	39	39	39	37	40	38	39

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety				Deltapine 15						
State		Louisiana			Mississippi					
Market Area		Winnsboro			Aberdeen			Belzoni		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----		M	SLM+	SLM	SM	SLM	SLM	M+	M	SLM+
Staple length-----inches:		1-1/16	1-1/16	1-1/16	1-1/16	1	1	1-3/32	1-1/16	1-1/16
Fiber length (Fibrograph):										
Upper half mean-----inches:		.96	1.05	1.04	1.03	.94	.96	1.02	1.07	1.06
Uniformity ratio-----		80	79	80	81	79	81	80	80	81
Fiber fineness and maturity:										
Micronaire-----reading 1/:		4.6	4.5	4.6	4.2	4.4	4.6	4.4	4.8	4.6
Fineness (Causticaire)-----ug/inch 2/:		4.6	4.5	4.6	4.3	4.3	4.5	4.4	4.6	4.5
Maturity "-----index 2/:		80	80	80	78	79	80	80	83	81
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/:		102	103	100	103	94	92	107	102	105
Zero "-----1,000 p.s.i. 4/:		84	80	82	87	83	85	85	80	82
"-----grams per tex 4/:		41.6	39.6	40.6	43.1	41.1	42.1	42.1	39.6	40.6
Nonlint content (Shirley Analyzer) percent:		2.7	3.9	5.3	2.2	3.3	3.8	2.5	2.1	3.9
Color of raw cotton 5/:										
Reflectance-----R _d :		72.9	75.0	73.0	73.5	69.6	69.0	75.5	74.4	75.0
Yellowness-----+b:		9.0	8.5	7.9	8.9	8.1	8.8	8.4	7.3	7.6
Sugar content-----percent:		0.2	0.2	0.0	0.2	0.1	0.1	0.2	0.2	0.0
Acid-alkaline value-----pH units 6/:		7.9	8.5	8.7	6.6	8.2	8.0	7.4	7.7	8.4
Moisture regain (at 92% R.H.)-----percent:		15.3	15.4	14.8	17.0	17.0	15.1	16.4	15.9	15.3
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent:		8.5	9.3	9.4	6.6	9.5	10.3	7.4	8.3	9.0
Neps-----per 100 sq. in. of card web:		6	11	11	10	8	10	10	13	16
Yarn quality:										
Yarn skein strength:										
22s Grey-----pounds:		115	115	110	116	104	102	122	117	118
22s Mercerized-----"		119	121	120	121	110	113	128	122	126
50s Grey-----"		39	39	37	39	34	34	44	40	40
Average break factor-----8/:		2240	2240	2135	2251	1994	1972	2442	2287	2298
Yarn appearance (grey):										
22s-----grade:		B	B	B	B	B	B	B	C+	B
50s-----"		C+	C+	C+	C	C+	B	C	C+	C+
Average yarn appearance-----index 9/:		105	105	105	100	105	110	100	100	105
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----R _d :		71.4	72.4	71.1	73.3	69.1	67.6	70.7	73.6	72.2
Yellowness-----+b:		11.4	10.8	10.8	11.0	11.0	10.6	11.1	10.6	10.4
Bleached:										
Reflectance-----R _d :		83.6	82.0	82.5	84.1	82.8	82.2	84.2	84.2	82.4
Yellowness-----+b:		3.1	3.4	3.4	3.3	3.4	3.3	3.3	3.2	3.4
Dyed in grey:										
Reflectance-----R _d :		25.3	25.5	27.6	23.8	28.2	28.0	23.4	25.5	27.0
Blueness-----+b:		19.8	20.4	19.0	21.0	18.0	17.7	20.8	20.0	19.0
Dyed after bleaching:										
Reflectance-----R _d :		27.6	29.4	31.1	28.5	30.9	31.8	26.0	29.5	30.1
Blueness-----+b:		26.4	25.2	24.2	25.4	24.3	24.0	25.7	25.3	24.6
Luster of 22s carded yarn 11/:										
Grey-----percent:		31	31	31	32	31	32	33	31	33
Mercerized-----"		37	38	38	37	37	36	38	37	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15							
State		Mississippi							
Market Area		Clarksdale			Doddsville		Fayette		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----		M	M+	SIM+	M	SIM	M	M	M
Staple length-----inches		1-1/32	1-1/32	1-1/16	1-1/32	1-1/32	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):									
Upper half mean-----inches		1.04	1.01	1.07	1.06	1.04	.96	1.04	1.03
Uniformity ratio-----		81	78	79	81	81	82	81	80
Fiber fineness and maturity:									
Micronaire-----reading 1/		4.2	4.8	4.8	5.2	4.4	4.9	4.7	5.0
Fineness (Causticaire)-----ug/inch 2/		4.5	4.8	4.8	4.9	4.4	4.8	4.6	4.8
Maturity "-----index 2/		76	81	81	84	80	81	81	82
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/		110	113	105	114	106	100	102	103
Zero "-----1,000 p.s.i.		84	88	80	84	82	78	84	82
" "-----grams per tex 4/		41.6	43.6	39.6	41.6	40.6	38.6	41.6	40.6
Nonlint content (Shirley Analyzer) percent		2.9	2.5	2.9	3.0	3.4	2.3	2.2	2.1
Color of raw cotton 5/:									
Reflectance-----Rd		71.5	74.5	72.3	71.7	70.2	72.6	73.5	74.3
Yellowness-----+b		8.6	8.5	7.7	8.9	7.7	9.5	9.2	9.2
Sugar content-----percent		0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2
Acid-alkaline value-----pH units 6/		7.8	7.1	7.4	7.5	8.2	7.6	7.3	7.7
Moisture regain (at 92% R.H.)-----percent		18.1	16.6	16.7	17.4	16.1	16.7	16.4	16.0
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent		8.0	8.6	8.4	8.5	9.0	6.0	7.1	7.4
Neps-----per 100 sq. in. of card web		15	16	8	20	18	10	11	13
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds		125	112	122	121	116	118	114	114
22s Mercerized-----"		128	121	124	126	123	124	120	119
50s Grey-----"		43	39	41	41	40	39	39	39
Average break factor-----8/		2450	2207	2367	2356	2276	2273	2229	2229
Yarn appearance (grey):									
22s-----grade		B	B	B+	B	C+	B+	B	B
50s-----"		C+	C+	C+	C	C	C+	C+	C
Average yarn appearance-----index 9/		105	105	110	100	95	110	105	100
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd		71.0	73.2	72.6	68.8	70.8	70.6	71.8	71.8
Yellowness-----+b		11.3	10.8	10.2	11.8	10.6	12.1	11.4	11.0
Bleached:									
Reflectance-----Rd		83.2	82.4	83.2	83.8	83.1	84.4	83.4	83.2
Yellowness-----+b		3.2	3.2	2.8	3.5	3.4	3.3	3.0	3.2
Dyed in grey:									
Reflectance-----Rd		22.7	25.7	26.2	23.7	26.5	23.8	24.7	25.2
Blueness-----+b		21.8	19.6	20.6	19.6	19.2	20.2	20.4	19.8
Dyed after bleaching:									
Reflectance-----Rd		26.8	29.6	28.8	26.1	29.9	27.0	27.2	27.6
Blueness-----+b		26.4	24.5	25.4	27.2	25.4	26.5	25.6	25.9
Luster of 22s carded yarn 11/:									
Grey-----percent		33	31	32	32	32	32	32	33
Mercerized-----"		39	36	40	40	37	38	38	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15							
State		Mississippi							
Market Area		Greenville		Macon			Magee		
Period of Harvest		Early	Midseason	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----		SLM	LM	SLM	M	SLM	M	M	SLM
Staple length-----inches:		1-1/32	1-1/32	1-1/32	1-1/16	1-1/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches:		1.03	1.02	1.00	1.05	1.01	1.00	1.02	1.01
Uniformity ratio-----		81	79	80	80	80	80	79	78
Fiber fineness and maturity:									
Micronaire-----reading 1/:		4.4	4.1	3.8	4.1	4.2	4.4	4.2	4.2
Fineness (Causticaire)-----ug/inch 2/:		4.5	4.2	4.0	4.1	4.4	4.6	4.3	4.4
Maturity "-----index 2/:		78	77	74	77	77	79	78	76
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:		108	99	103	106	101	98	102	97
Zero "-----1,000 p.s.i.:		84	77	83	88	84	80	82	82
" "-----grams per tex 4/:		41.6	38.1	41.1	43.6	41.6	39.6	40.6	40.6
Nonlint content (Shirley Analyzer) percent:		3.8	4.8	3.8	4.2	5.1	2.8	3.1	3.2
Color of raw cotton 5/:									
Reflectance-----R _d :		70.0	66.4	74.0	72.9	69.3	74.5	73.5	69.4
Yellowness-----+b:		8.7	7.7	8.9	8.7	7.9	8.9	8.8	8.7
Sugar content-----percent:		0.2	0.0	0.3	0.2	0.0	0.2	0.2	0.0
Acid-alkaline value-----pH units 6/:		8.2	7.8	7.4	6.9	8.5	7.9	7.5	8.8
Moisture regain (at 92% R.H.)-----percent:		17.6	16.6	17.5	17.1	15.9	17.1	16.8	15.0
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:		10.2	11.3	9.1	9.2	10.4	7.5	8.9	9.7
Neps-----per 100 sq. in. of card web:		11	35	10	13	10	10	13	8
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:		117	107	125	115	112	113	106	105
22s Mercerized-----"		121	115	129	122	118	117	111	111
50s Grey-----"		39	37	43	40	39	37	36	35
Average break factor-----8/:		2262	2102	2450	2265	2207	2168	2266	2030
Yarn appearance (grey):									
22s-----grade:		B	C	B	B	B	B+	B	B
50s-----"		C+	D+	C	C+	C+	C+	C	C
Average yarn appearance-----index 9/:		105	85	100	105	105	110	100	100
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----R _d :		67.4	66.0	71.0	71.3	69.0	70.8	71.0	68.6
Yellowness-----+b:		11.8	10.6	11.8	11.2	11.4	12.1	11.4	11.0
Bleached:									
Reflectance-----R _d :		82.6	83.4	84.6	83.4	82.8	83.3	83.6	82.2
Yellowness-----+b:		3.4	3.6	3.2	3.2	3.4	3.2	3.4	3.5
Dyed in grey:									
Reflectance-----R _d :		25.0	26.4	24.5	24.6	26.7	24.4	25.5	28.0
Blueness-----+b:		18.8	17.7	19.9	20.0	18.2	20.0	19.4	18.2
Dyed after bleaching:									
Reflectance-----R _d :		28.1	29.4	27.4	27.0	30.0	27.2	27.8	30.8
Blueness-----+b:		25.6	25.0	26.2	24.9	24.8	26.5	24.0	24.4
Luster of 22s carded yarn 11/:									
Grey-----percent:		32	33	32	32	32	32	30	32
Mercerized-----"		37	38	37	37	33	36	37	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine 15								
State	Mississippi						Missouri		
Market Area	Senatobia			Tunica			Caruthersville		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	M	SLM	M	SLM	LM	M	SLM	SLM
Staple length-----inches	1-1/16	1-1/32	1-1/32	1-3/32	1-1/16	1-1/16	1-1/16	1-1/16	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.00	.98	.98	1.02	1.06	1.04	1.04	1.03	1.02
Uniformity ratio-----	81	80	80	80	75	79	81	82	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.2	4.6	4.0	4.0	4.6	4.1	4.3	4.6	4.7
Fineness (Causticaire)-----ug/inch 2/	4.5	4.4	4.0	4.0	4.7	4.1	4.2	4.6	4.6
Maturity "-----index 2/	77	81	77	77	80	77	79	79	81
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	100	95	98	105	98	103	107	103	106
Zero "-----1,000 p.s.i.	85	80	82	83	83	79	85	85	81
" "-----grams per tex 4/	42.1	39.6	40.6	41.1	41.1	39.1	42.1	42.1	40.1
Nonlint content (Shirley Analyzer) percent:	2.3	2.6	3.4	2.2	3.5	4.4	2.0	2.6	3.5
Color of raw cotton 5/:									
Reflectance-----Rd	75.3	72.0	71.3	72.5	72.1	69.8	78.0	73.4	73.0
Yellowness-----+b	8.2	8.9	7.5	8.7	7.9	7.5	8.6	8.0	8.1
Sugar content-----percent:	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2
Acid-alkaline value-----pH units 6/	6.7	7.4	7.4	7.3	7.6	7.0	6.8	7.0	7.2
Moisture regain (at 92% R.H.)-----percent:	17.7	16.9	15.4	16.8	15.8	15.8	16.6	16.3	16.1
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	8.3	8.9	7.8	7.9	9.2	9.7	7.2	7.8	8.9
Neps-----per 100 sq. in. of card web:	13	11	15	24	14	21	14	16	16
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	114	109	108	129	110	117	120	116	112
22s Mercerized-----"	122	115	115	136	119	123	126	120	117
50s Grey-----"	39	37	37	45	39	41	41	40	39
Average break factor-----8/	2229	2124	2113	2544	2185	2312	2345	2276	2207
Yarn appearance (grey):									
22s-----grade	B	B	B	C+	C+	C+	B	B	B
50s-----"	C+	C	C	C	C	C	C	C+	C+
Average yarn appearance-----index 9/	105	100	100	95	95	95	100	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	73.2	71.2	70.8	69.8	70.4	66.3	71.7	71.6	71.5
Yellowness-----+b	10.7	10.6	10.1	11.6	10.8	9.7	10.6	10.6	10.2
Bleached:									
Reflectance-----Rd	84.2	84.0	83.6	82.9	81.2	81.8	82.6	81.9	81.2
Yellowness-----+b	3.2	3.5	3.9	3.4	3.2	3.0	3.2	3.2	3.3
Dyed in grey:									
Reflectance-----Rd	23.7	25.4	26.8	24.0	25.4	26.1	23.0	23.2	25.1
Blueness-----+b	21.3	19.2	19.3	19.5	19.5	18.6	22.3	21.2	19.8
Dyed after bleaching:									
Reflectance-----Rd	28.3	27.6	29.6	27.4	29.1	28.6	26.7	28.1	28.8
Blueness-----+b	25.9	25.6	24.9	24.4	25.0	25.1	25.8	26.1	25.4
Luster of 22s carded yarn 11/:									
Grey-----percent:	30	32	31	33	32	33	31	32	31
Mercerized-----"	37	37	37	40	42	39	37	38	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine								
	Missouri			Tennessee					
	Kennett			Brownsville			Covington		
	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SLM	SLM	SM	SM	M	SM	M	SM
Staple length-----inches	1-1/16	1-1/16	1-1/32	1-1/16	1-1/32	1-1/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.07	1.04	.98	.99	.99	.97	1.01	1.00	.98
Uniformity ratio-----	79	79	80	81	82	79	81	80	82
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.0	4.0	4.6	4.4	4.4	4.4	4.4	4.6	4.6
Fineness (Causticaire)-----ug/inch 2/	4.1	4.2	4.6	4.5	4.5	4.6	4.6	4.6	4.8
Maturity "-----index 2/	76	75	80	78	79	78	77	80	79
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	105	102	104	102	98	93	101	96	100
Zero "-----1,000 p.s.i.	82	86	82	84	81	82	88	80	83
"-----grams per tex 4/	40.6	42.6	40.6	41.6	41.1	40.6	43.6	39.6	41.1
Nonlint content (Shirley Analyzer) percent	2.7	3.3	2.9	1.9	1.9	2.8	2.8	2.5	2.4
Color of raw cotton 5/:									
Reflectance-----R _d	73.0	71.5	72.5	73.8	68.2	72.6	75.2	74.6	68.3
Yellowness-----b	8.5	7.1	8.4	9.1	8.9	7.7	8.6	8.1	8.3
Sugar content-----percent	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2
Acid-alkaline value-----pH units 6/	6.9	6.8	7.2	7.7	6.4	6.8	7.6	7.2	6.9
Moisture regain (at 92% R.H.)-----percent	16.1	16.5	15.6	17.1	17.3	15.7	17.8	17.3	16.0
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.6	8.8	8.8	7.4	7.6	8.8	7.2	8.4	7.9
Neps-----per 100 sq. in. of card web	12	17	25	9	13	16	13	16	9
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	116	107	110	116	112	107	120	111	114
22s Mercerized-----"	121	110	112	120	115	115	127	109	117
50s Grey-----"	40	36	36	39	38	36	40	39	38
Average break factor-----8/	2276	2077	2110	2251	2182	2077	2320	2196	2204
Yarn appearance (grey):									
22s-----grade	B	C+	B	B	B	B	C+	C+	B
50s-----"	C+	C+	D+	C+	C+	C+	C+	C	C+
Average yarn appearance-----index 9/	105	100	95	105	105	105	100	95	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----R _d	72.5	70.0	68.8	73.2	73.2	71.4	73.4	72.3	73.0
Yellowness-----b	10.8	10.2	10.3	11.2	11.0	10.2	11.1	10.6	10.8
Bleached:									
Reflectance-----R _d	83.1	81.6	81.6	83.4	84.3	83.3	83.3	84.0	83.6
Yellowness-----b	3.1	3.2	4.0	3.3	3.4	3.2	3.1	3.6	2.9
Dyed in grey:									
Reflectance-----R _d	23.7	24.6	25.4	22.9	23.9	26.8	22.9	25.6	25.4
Blueness-----b	21.5	19.8	18.8	21.6	20.6	19.2	21.4	19.3	20.9
Dyed after bleaching:									
Reflectance-----R _d	28.1	29.4	29.4	27.7	29.0	28.4	27.0	29.0	28.7
Blueness-----b	25.4	25.0	24.8	26.1	25.2	25.4	26.4	25.6	25.6
Luster of 22s carded yarn 11/									
Grey-----percent	32	32	32	30	30	31	32	31	31
Mercerized-----"	38	36	38	37	37	35	38	38	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15								
State	Tennessee						Texas			
Market Area	Humboldt			Wynnborg			Bryan			
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late	
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----	SM	SIM	IM+	SM	SIM+	SIM+	M	M	M	
Staple length-----inches	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	31/32	1	1-1/16	
Fiber length (Fibrograph):										
Upper half mean-----inches	1.00	.96	1.01	1.04	1.04	1.02	1.00	1.05	1.00	
Uniformity ratio-----	82	81	80	81	80	79	81	82	82	
Fiber fineness and maturity:										
Micronaire-----reading 1/	4.3	4.2	2.9	4.4	4.3	4.2	4.5	5.0	4.7	
Fineness (Causticaire)-----ug/inch 2/	4.4	4.2	3.2	4.8	4.5	4.4	4.5	4.8	4.5	
Maturity "-----index 2/	78	76	63	77	77	77	80	82	82	
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/	99	94	107	102	100	100	108	108	102	
Zero "-----1,000 p.s.i.	85	81	81	86	79	77	83	84	79	
" "-----grams per tex 4/	42.1	40.1	40.1	42.6	39.1	38.1	41.1	41.6	39.1	
Nonlint content (Shirley Analyzer) percent	1.8	3.1	4.7	1.9	2.8	3.6	2.4	2.8	2.7	
Color of raw cotton 5/:										
Reflectance-----Rd	75.4	72.3	70.4	75.5	73.5	72.3	72.5	77.6	78.1	
Yellowness-----+b	8.2	8.1	7.9	8.7	7.8	7.0	9.0	8.3	8.9	
Sugar content-----percent	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	
Acid-alkaline value-----pH units 6/	6.7	7.1	6.2	6.7	6.7	6.9	7.0	7.6	7.5	
Moisture regain (at 92% R.H.)-----percent	17.9	18.8	16.6	17.8	16.7	16.1	19.3	16.2	16.4	
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent	8.9	10.2	11.0	9.4	7.4	7.8	7.0	7.8	7.2	
Neps-----per 100 sq. in. of card web	9	10	48	13	11	18	15	12	11	
Yarn quality:										
Yarn skein strength:										
22s Grey-----pounds	121	106	118	118	115	117	119	119	120	
22s Mercerized-----"	125	112	121	122	121	121	123	125	126	
50s Grey-----"	42	36	41	40	40	40	40	40	41	
Average break factor-----8/	2381	2066	2323	2298	2265	2287	2309	2309	2345	
Yarn appearance (grey):										
22s-----grade	B	B	C	B	B	C+	B	B	B+	
50s-----"	C+	C+	D	C	C+	C	C+	C	B	
Average yarn appearance-----index 9/	105	105	80	100	105	95	105	100	115	
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----Rd	73.7	69.3	66.5	72.9	74.0	73.2	73.0	73.1	73.4	
Yellowness-----+b	10.6	11.0	9.9	10.7	10.0	10.2	11.5	11.0	10.9	
Bleached:										
Reflectance-----Rd	82.8	81.1	80.1	81.2	83.8	83.2	84.1	83.9	84.4	
Yellowness-----+b	3.3	3.8	4.2	3.5	2.8	2.9	2.9	2.9	2.8	
Dyed in grey:										
Reflectance-----Rd	23.2	26.2	25.7	23.0	25.5	25.7	23.0	23.6	24.0	
Blueness-----+b	21.8	19.2	17.0	21.7	21.4	21.0	21.8	22.0	21.7	
Dyed after bleaching:										
Reflectance-----Rd	27.2	29.9	28.4	27.2	28.8	28.6	25.8	26.1	27.4	
Blueness-----+b	26.4	24.9	24.0	26.3	25.6	25.9	27.4	27.4	26.6	
Luster of 22s carded yarn 11/:										
Grey-----percent	31	31	32	31	31	31	32	31	30	
Mercerized-----"	37	37	38	38	38	37	38	39	36	

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15						
State		Texas						
Market Area		El Campo	Lyford			Navasota		
Period of Harvest		Early	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY								
Classification (official standards)								
Grade-----		M	M	M	M	M	M	STM
Staple length-----inches		31/32	1-1/32	1-1/32	1-1/32	31/32	1	1
Fiber length (Fibrograph):								
Upper half mean-----inches		1.01	1.00	1.00	1.01	.99	1.05	1.02
Uniformity ratio-----		81	80	81	82	81	80	80
Fiber fineness and maturity:								
Micronaire-----reading 1/		3.8	4.5	4.4	4.0	3.6	4.5	4.2
Fineness (Causticaire)-----ug/inch 2/		3.9	4.5	4.4	4.0	3.6	4.5	4.3
Maturity "-----index 2/		77	79	79	77	73	80	78
Fiber tensile strength (Pressley):								
1/8" gauge-----index 3/		96	109	104	97	104	113	108
Zero "-----1,000 p.s.i.		85	86	79	80	93	86	80
" "-----grams per tex 4/		42.1	42.6	39.1	39.6	46.0	42.6	39.6
Nonlint content (Shirley Analyzer) percent		3.1	2.1	2.0	2.5	3.2	3.3	3.3
Color of raw cotton 5/:								
Reflectance-----Rd		73.0	77.1	76.4	77.9	74.2	76.0	71.4
Yellowness-----b		9.1	9.5	9.2	9.0	9.7	8.9	9.2
Sugar content-----percent		0.3	0.2	0.3	0.2	0.2	0.3	0.3
Acid-alkaline value-----pH units 6/		7.1	7.4	6.9	6.9	6.6	7.7	7.2
Moisture regain (at 92% R.H.)-----percent		16.5	18.3	17.5	17.0	17.9	16.7	16.4
PROCESSING RESULTS								
Manufacturing waste:								
Picker and card-----percent		8.8	7.7	7.3	7.7	8.8	8.6	8.7
Neps-----per 100 sq. in. of card web		14	11	11	13	19	21	11
Yarn quality:								
Yarn skein strength:								
22s Grey-----pounds		108	121	119	113	120	120	118
22s Mercerized-----"		116	125	124	115	129	127	127
50s Grey-----"		38	41	41	38	41	41	41
Average break factor-----8/		2138	2356	2334	2193	2345	2345	2323
Yarn appearance (grey):								
22s-----grade		B	B	B+	B	C+	C+	B
50s-----"		C	C+	B	C+	C	C	C+
Average yarn appearance-----index 9/		100	105	115	105	95	95	105
Color of 22s carded yarn 10/:								
Grey:								
Reflectance-----Rd		71.6	71.9	73.0	72.5	71.6	72.7	71.4
Yellowness-----b		12.2	12.0	12.2	11.4	12.7	11.8	11.9
Bleached:								
Reflectance-----Rd		83.2	83.0	82.8	84.4	84.0	84.0	84.8
Yellowness-----b		3.4	3.1	3.0	3.0	3.4	3.1	3.2
Dyed in grey:								
Reflectance-----Rd		23.9	23.3	24.4	25.0	24.0	23.3	25.0
Blueness-----b		20.6	20.8	22.0	21.2	19.8	21.5	20.2
Dyed after bleaching:								
Reflectance-----Rd		27.4	27.2	26.2	27.8	27.4	26.2	28.1
Blueness-----b		26.4	26.7	27.2	26.1	26.3	27.2	25.6
Luster of 22s carded yarn 11/:								
Grey-----percent		31	32	31	30	32	32	32
Mercerized-----"		38	38	38	36	38	38	38

Table 3--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Deltapine 15								
State		Texas								
Market Area		Port Lavaca			Sugarland			Texarkana		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----	SM	SM	SM	M	M	M	Mltap	M	SIM	
Staple length-----inches	31/32	31/32	31/32	1-1/32	1	1	1-1/32	1	1-1/32	
Fiber length (Fibrograph):										
Upper half mean-----inches	.98	.90	.94	1.04	.98	.98	1.00	1.00	1.02	
Uniformity ratio-----	82	81	82	81	82	81	82	80	80	
Fiber fineness and maturity:										
Micronaire-----reading 1/	4.1	4.1	4.2	4.2	4.5	3.6	3.6	4.0	4.3	
Fineness (Causticaire)-----ug/inch 2/	4.1	4.1	4.2	4.1	4.2	3.6	3.8	4.2	4.2	
Maturity "-----index 2/	79	77	78	81	82	75	74	77	79	
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/	104	100	97	100	104	104	108	107	110	
"-----1.000 p.s.f.	83	83	83	89	89	88	82	84	81	
"-----grams per tex 4/	41.1	41.1	41.1	44.1	44.1	43.6	40.6	41.6	40.1	
Nonlint content (Shirley Analyzer) percent	1.6	2.7	3.6	2.8	2.4	3.8	2.6	2.4	3.8	
Color of raw cotton 5/:										
Reflectance-----Rd	74.1	75.5	74.5	73.6	75.5	77.5	72.0	75.5	74.6	
Yellowness-----+b	9.3	9.5	8.3	8.8	9.1	8.7	10.1	9.0	8.7	
Sugar content-----percent	0.3	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	
Acid-alkaline value-----pH units 6/	6.6	6.8	7.6	7.0	7.8	7.9	7.4	7.3	7.1	
Moisture regain (at 92% R.H.)-----percent	17.0	16.8	16.7	16.8	16.8	16.6	17.1	16.4	16.5	
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent	7.3	9.0	9.3	8.1	7.9	9.7	8.4	8.0	9.2	
Neps-----per 100 sq. in. of card web	11	11	17	11	13	12	25	15	33	
Yarn quality:										
Yarn skein strength:										
22s Grey-----pounds	117	104	105	122	120	118	119	119	114	
22s Mercerized-----"	121	107	113	129	127	126	129	127	120	
50s Grey-----"	41	34	35	41	41	40	41	41	39	
Average break factor-----8/	2312	1994	2030	2367	2345	2298	2334	2334	2229	
Yarn appearance (grey):										
22s-----grade	B	B	B	B	B	C+	C+	C+	C+	
50s-----"	C+	C+	C+	C+	C+	C	C	C	C	
Average yarn appearance-----index 9/	105	105	105	105	105	100	95	95	95	
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----Rd	71.4	71.5	71.2	71.5	71.5	72.6	68.2	70.8	70.6	
Yellowness-----+b	11.9	11.5	12.0	11.9	12.1	11.7	12.4	12.4	11.2	
Bleached:										
Reflectance-----Rd	83.2	82.3	83.2	84.9	83.6	84.4	84.2	82.8	82.3	
Yellowness-----+b	3.1	3.0	3.1	3.3	3.2	3.0	3.6	3.4	3.8	
Dyed in grey:										
Reflectance-----Rd	23.0	24.4	24.4	23.8	24.3	25.4	24.2	23.8	26.0	
Blueness-----+b	21.2	20.7	20.3	20.8	20.3	19.8	19.0	19.9	18.8	
Dyed after bleaching:										
Reflectance-----Rd	27.1	27.3	27.4	26.8	27.0	28.0	28.0	27.2	29.1	
Blueness-----+b	26.5	26.5	26.2	27.1	27.0	26.3	24.9	25.4	25.4	
Luster of 22s carded yarn 11/:										
Grey-----percent	31	32	31	32	32	31	33	32	32	
Mercerized-----"	38	38	38	38	39	38	38	39	37	

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine Fox						Deltapine (TPSA)		
State	Mississippi			Missouri			Texas		
Market Area	Gunnison			Hayti			Danevang		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	SIM	SIM	M	M	SIM	M	SIM	SIM
Staple length-----inches	1-1/16	1-1/32	1-1/32	1-1/16	1-1/16	1-1/32	1-1/32	1	1-1/32
Fiber length (Fibrograph):									
Upper half mean-----inches	1.06	1.07	1.00	1.07	1.04	1.02	.98	.95	.97
Uniformity ratio-----	81	78	79	80	80	80	81	82	82
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.3	4.5	4.6	4.2	4.6	4.6	4.2	4.0	3.9
Fineness (Causticaire)-----ug/inch 2/	4.4	4.6	4.7	4.1	4.6	4.7	4.2	4.1	4.0
Maturity "-----index 2/	78	79	79	79	79	80	78	76	76
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	109	104	95	110	99	102	101	100	103
Zero "-----1,000 p.s.i.	82	80	79	85	83	80	87	81	80
" "-----grams per tex 4/	40.6	39.6	39.1	42.1	41.1	39.6	43.1	40.1	39.6
Nonlint content (Shirely Analyzer) percent	2.0	3.2	2.6	2.2	2.8	3.6	2.6	3.4	3.0
Color of raw cotton 5/:									
Reflectance-----Rd	75.0	67.6	69.0	75.5	77.5	70.7	74.0	77.5	70.5
Yellowness-----+b	8.8	8.8	7.8	8.6	8.1	8.0	8.7	8.6	8.9
Sugar content-----percent	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.3	0.2
Acid-alkaline value-----pH units 6/	7.5	8.5	8.0	6.6	6.9	7.2	7.1	7.7	7.5
Moisture regain (at 92% R.H.)-----percent	18.2	16.1	16.6	16.7	17.1	16.6	16.8	17.0	16.5
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	7.3	9.0	8.4	7.8	7.4	10.2	7.7	8.6	7.8
Neps-----per 100 sq. in. of card web	11	19	11	15	14	12	13	17	13
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	123	107	104	116	116	109	113	109	118
22s Mercerized-----"	129	115	110	123	121	116	118	117	122
50s Grey-----"	42	37	35	41	40	37	38	37	40
Average break factor-----8/	2403	2102	2019	2301	2276	2124	2193	2124	2298
Yarn appearance (grey):									
22s-----grade	B+	C+	B	C+	B	B	B+	C+	B+
50s-----"	B	C	C+	C	C	C	C+	C	C+
Average yarn appearance-----index 9/	115	95	105	95	100	100	110	95	110
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	70.8	68.8	66.6	72.0	73.9	69.2	71.5	72.5	68.6
Yellowness-----+b	11.8	10.8	10.0	10.6	10.6	10.8	11.7	11.5	11.8
Bleached:									
Reflectance-----Rd	83.8	82.8	81.6	83.4	84.1	82.4	83.7	83.0	84.0
Yellowness-----+b	3.4	3.4	3.6	3.1	3.3	3.6	3.2	3.2	3.2
Dyed in grey:									
Reflectance-----Rd	23.1	27.6	28.5	23.6	23.6	25.4	24.4	24.2	24.6
Blueness-----+b	21.2	17.4	17.8	21.7	21.6	19.8	21.2	20.9	20.0
Dyed after bleaching:									
Reflectance-----Rd	26.8	30.2	31.7	28.0	28.6	29.4	27.2	28.0	27.6
Blueness-----+b	26.6	24.6	24.0	25.6	25.9	24.3	26.4	26.5	25.3
Luster of 22s carded yarn 11/:									
Grey-----percent	32	32	32	32	31	32	31	32	33
Mercerized-----"	38	37	35	38	37	37	36	37	38

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Deltapine (TPSA)								
	Texas								
State	Texas								
Market Area	Edcouch			Harlingen			Weslaco		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	M+	M	SM	M	M	SM	M
Staple length-----inches	1-1/16	1-1/32	1-1/32	1-1/16	1	1-1/32	1-1/16	1	1
Fiber length (Fibrograph):									
Upper half mean-----inches	1.00	.99	1.01	1.00	1.01	1.00	1.03	.98	1.02
Uniformity ratio-----	80	81	80	80	80	80	81	83	83
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.4	4.4	4.3	4.6	4.0	4.0	4.4	4.3	4.3
Fineness (Cauticaire)-----ug/inch 2/	4.5	4.2	4.1	4.5	4.0	3.9	4.5	4.3	4.3
Maturity "-----index 2/	80	81	80	79	78	77	80	81	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	105	98	100	102	100	100	102	103	97
Zero "-----1,000 p.s.i.	80	80	77	78	78	80	80	81	77
" "-----grams per tex 4/	39.6	39.6	38.1	38.6	38.6	39.6	39.6	40.1	38.1
Nonlint content (Shirley Analyzer) percent:	2.0	2.0	2.4	2.5	2.3	2.6	2.2	1.6	2.2
Color of raw cotton 5/:									
Reflectance-----Rd	77.5	78.9	77.0	77.4	76.9	75.4	76.5	77.5	77.5
Yellowness-----+b	8.9	8.9	8.6	8.9	8.6	8.3	8.7	8.9	8.8
Sugar content-----percent:	0.2	0.3	0.3	0.2	0.3	0.3	0.1	0.2	0.2
Acid-alkaline value-----pH units 6/	7.1	6.7	7.0	7.2	6.7	7.0	7.3	7.0	7.1
Moisture regain (at 92% R.H.)-----percent:	16.7	17.6	17.0	18.0	18.1	17.5	18.8	17.2	16.9
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.4	7.1	7.0	7.7	7.1	7.5	7.4	7.3	7.4
Neps-----per 100 sq. in. of card web:	12	11	17	11	16	17	15	14	14
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	119	115	115	116	118	114	115	115	111
22s Mercerized-----"	122	121	120	119	122	121	117	122	116
50s Grey-----"	40	40	40	40	41	38	40	40	38
Average break factor-----8/	2309	2265	2265	2276	2323	2204	2265	2265	2171
Yarn appearance (grey):									
22s-----grade:	B	B+	B	B	B	B	B	B	B
50s-----"	C+	B	C+	C+	C+	C+	C+	C+	C
Average yarn appearance-----index 9/	105	115	105	105	105	105	105	105	100
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	73.6	74.0	73.6	73.2	73.7	73.0	72.8	74.6	72.8
Yellowness-----+b	11.4	11.6	11.6	11.4	11.6	11.4	11.9	11.8	11.0
Bleached:									
Reflectance-----Rd	83.4	83.3	84.0	84.4	83.8	83.9	83.6	84.0	83.0
Yellowness-----+b	3.0	3.6	2.9	3.2	3.2	2.8	3.2	3.1	3.0
Dyed in grey:									
Reflectance-----Rd	23.1	23.6	24.0	23.0	23.6	24.4	23.0	23.6	24.9
Blueness-----+b	22.4	22.1	21.9	22.6	22.2	21.8	22.2	22.4	21.7
Dyed after bleaching:									
Reflectance-----Rd	26.6	26.7	27.0	26.0	26.8	27.2	26.4	26.6	27.4
Blueness-----+b	27.0	27.0	26.7	27.2	27.1	26.3	26.9	27.1	26.2
Luster of 22s carded yarn 11/:									
Grey-----percent:	31	30	31	30	30	30	31	30	31
Mercerized-----"	36	36	36	36	36	37	37	36	35

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

	Variety	Delfos 9169			Dixie King			Empire		
		Texas			Mississippi			Georgia		
		Corpus Christi			Indianola			Atlanta		
	Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----	M	SM	SM	SM	SIM	SIM	LM	M	SIM	SIM+
Staple length-----inches	1	31/32	31/32	31/32	1-1/16	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32
Fiber length (Fibrograph):										
Upper half mean-----inches	.98	1.00	1.00	1.03	1.00	1.05	1.02	.99	1.00	
Uniformity ratio-----	82	80	80	81	78	80	81	82	78	
Fiber fineness and maturity:										
Micronaire-----reading 1/	4.0	3.8	3.6	4.5	4.3	4.4	4.4	4.7	4.5	
Fineness (Causticaire)-----ug/inch 2/	4.0	3.8	3.7	4.5	4.4	4.5	4.5	4.8	4.5	
Maturity "-----index 2/	77	75	74	79	78	79	78	80	80	
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/	100	97	96	104	102	101	101	96	96	
Zero "-----1,000 p.s.i.	82	86	84	94	89	92	83	84	81	
" "-----grams per tex 4/	40.6	42.6	41.6	46.5	44.1	45.5	41.1	41.6	40.1	
Nonlint content (Shirley Analyzer) percent	2.7	2.1	2.4	3.6	4.1	4.1	3.6	3.9	3.4	
Color of raw cotton 5/:										
Reflectance-----Rd	71.5	77.4	78.5	76.0	69.0	68.5	72.5	71.9	72.8	
Yellowness-----+b	9.3	9.1	9.2	8.8	7.5	8.4	9.1	8.6	8.6	
Sugar content-----percent	0.2	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.1	
Acid-alkaline value-----pH units 6/	6.7	7.1	7.0	7.7	8.2	7.5	7.9	7.6	7.4	
Moisture regain (at 92% R.H.)-----percent	18.6	17.6	16.9	17.8	16.7	15.9	17.8	16.6	15.8	
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent	8.9	8.0	7.8	7.8	9.9	9.7	8.9	8.7	9.2	
Neps-----per 100 sq. in. of card web	24	19	19	17	22	25	11	8	9	
Yarn quality:										
Yarn skein strength:										
22s Grey-----pounds	105	103	105	118	106	100	119	115	116	
22s Mercerized-----"	111	111	109	129	117	110	128	123	122	
50s Grey-----"	36	35	35	41	37	35	41	39	41	
Average break factor-----8/2055	2008	2030	2323	2091	1975	2334	2240	2301		
Yarn appearance (grey):										
22s-----grade	B	C+	B	B	B	C+	B	B	B+	
50s-----"	C+	C	C	C	C+	C	C+	C	B	
Average yarn appearance-----index 9/	105	100	100	100	105	95	105	105	115	
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----Rd	71.1	71.6	73.0	71.0	68.1	64.2	70.2	71.2	72.4	
Yellowness-----+b	12.0	11.4	11.8	11.2	10.6	10.8	11.4	11.6	10.8	
Bleached:										
Reflectance-----Rd	83.9	84.2	84.4	83.9	81.8	80.8	82.0	83.2	84.0	
Yellowness-----+b	3.6	3.2	3.1	3.2	3.7	3.5	3.4	4.2	3.8	
Dyed in grey:										
Reflectance-----Rd	23.2	24.8	25.2	24.1	27.9	27.8	23.8	25.0	25.0	
Blueness-----+b	21.0	20.5	21.0	20.9	17.4	17.8	20.6	19.4	19.4	
Dyed after bleaching:										
Reflectance-----Rd	26.8	28.5	28.0	28.2	31.1	30.0	27.5	28.7	27.9	
Blueness-----+b	27.0	25.8	26.5	26.0	23.9	25.0	25.6	25.6	25.6	
Luster of 22s carded yarn 11/:										
Grey-----percent	32	30	29	32	33	33	33	33	33	
Mercerized-----"	37	37	36	39	38	38	38	39	38	

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Empire			Lankart 57					
State	Texas			Oklahoma					
Market Area	Brownfield			Altus			Clinton		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	IM	IM	M	SM	Mltsp	SMltsp	SMltsp	Mltsp
Staple length-----inches	1-1/16:	1	1-1/32:	1-1/32:	1-1/32:	1	29/32:	29/32:	15/16
Fiber length (Fibrograph):									
Upper half mean-----inches	1.03	1.04	1.04	1.02	1.01	1.02	.89	.91	.94
Uniformity ratio-----	80	80	81	82	79	80	81	81	80
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.1	3.8	3.8	4.8	4.6	4.0	4.5	4.6	4.4
Fineness (Causticaire)-----ug/inch 2/	4.3	4.1	3.9	4.5	5.0	4.3	4.8	4.6	4.6
Maturity "-----index 2/	76	73	75	80	78	75	78	80	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	103	97	101	101	99	101	105	100	99
Zero "-----1,000 p.s.i.	80	73	77	81	72	74	85	83	80
" "-----grams per tex 4/	39.6	36.1	38.1	40.1	35.6	36.6	42.1	41.1	39.6
Nonlint content (Shirley Analyzer) percent:	2.2	4.4	4.3	2.2	2.0	3.8	1.9	3.8	5.0
Color of raw cotton 5/:									
Reflectance-----Rd	73.6	71.4	69.5	72.5	75.0	72.4	71.6	72.3	68.7
Yellowness-----+b	9.4	8.1	8.6	9.2	9.2	9.1	9.2	9.3	10.0
Sugar content-----percent:	0.3	0.3	0.3	0.3	0.3	0.0	0.4	0.4	0.3
Acid-alkaline value-----pH units 6/	7.6	6.7	6.3	7.9	6.6	6.2	7.5	6.4	6.3
Moisture regain (at 92% R.H.)-----percent:	18.3	18.1	16.2	18.8	17.7	18.4	18.8	18.5	16.5
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.4	9.6	11.1	7.0	7.6	8.3	9.0	10.4	7.9
Neps-----per 100 sq. in. of card web:	20	22	31	14	10	24	15	22	27
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	110	110	111	112	114	111	110	104	103
22s Mercerized-----"	114	115	114	113	116	112	113	108	101
50s Grey-----"	37	40	40	38	38	37	35	34	34
Average break factor-----8/	2135	2210	2221	2182	2204	2146	2085	1994	1983
Yarn appearance (grey):									
22s-----grade:	C+	C+	C	C+	B	C+	B	C+	C+
50s-----"	C	C	C	C+	C+	D+	C+	C	C
Average yarn appearance-----index 9/	95	95	90	100	105	90	105	95	95
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	71.3	69.4	68.7	70.7	71.1	68.9	68.4	69.6	66.4
Yellowness-----+b	11.3	10.8	10.8	11.4	11.1	11.7	12.0	11.8	11.8
Bleached:									
Reflectance-----Rd	83.1	81.1	79.4	83.0	83.7	83.1	82.6	82.2	79.3
Yellowness-----+b	3.4	3.5	3.6	3.1	2.8	3.4	3.4	3.6	4.7
Dyed in grey:									
Reflectance-----Rd	21.8	25.6	25.0	20.8	22.6	22.4	20.3	21.6	23.5
Blueness-----+b	22.2	19.9	20.2	23.0	21.8	18.4	21.3	19.8	18.0
Dyed after bleaching:									
Reflectance-----Rd	27.0	28.8	28.3	26.0	26.0	25.4	26.0	24.6	28.1
Blueness-----+b	26.0	25.1	25.1	26.8	27.0	27.0	26.5	27.2	24.9
Luster of 22s carded yarn 11/:									
Grey-----percent:	31	31	31	32	30	31	31	31	32
Mercerized-----"	37	37	37	39	37	37	37	37	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Lankart 57								
State	Texas								
Market Area	Cooper			Hillsboro			Lubbock		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SMltsp	SMltsp	M	SMltsp	Mltsp	M	M	Mltsp
Staple length-----inches:	7/8	7/8	7/8	7/8	7/8	7/8	1-1/32	31/32	31/32
Fiber length (Fibrograph):									
Upper half mean-----inches:	.88	.85	.89	.86	.83	.86	1.06	1.00	.94
Uniformity ratio-----	81	79	78	83	80	80	81	82	79
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.1	3.8	3.7	3.8	3.7	3.8	4.6	4.2	3.9
Fineness (Causticaire)-----ug/inch 2/:	4.2	4.1	3.9	4.1	3.9	4.1	4.6	4.2	4.3
Maturity "-----index 2/:	76	74	74	73	74	74	79	78	74
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	99	93	92	101	92	91	95	97	97
Zero "-----1,000 p.s.i.:	88	86	83	83	86	83	72	71	74
" "-----grams per tex 4/:	43.6	42.6	41.1	41.1	42.6	41.1	35.6	35.1	36.6
Nonlint content (Shirley Analyzer) percent:	4.0	3.4	2.9	5.0	4.8	5.3	3.0	2.9	3.1
Color of raw cotton 5/:									
Reflectance-----R _d :	75.8	72.5	74.5	69.6	74.5	69.0	75.4	75.5	70.5
Yellowness-----+b:	9.3	10.6	9.6	9.7	9.6	9.7	9.1	8.6	9.4
Sugar content-----percent:	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.2
Acid-alkaline value-----pH units 6/:	6.5	6.7	7.0	6.4	7.3	7.1	6.8	6.5	6.4
Moisture regain (at 92% R.H.)-----percent:	20.3	19.1	17.6	19.5	16.9	16.2	18.4	17.7	18.8
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	10.0	10.2	11.1	10.3	11.2	11.6	8.2	8.1	8.8
Neps-----per 100 sq. in. of card web:	21	12	15	21	16	16	14	15	21
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	100	100	95	103	98	97	107	103	101
22s Mercerized-----"	106	103	101	108	103	99	111	105	102
50s Grey-----"	32	32	30	34	32	31	36	35	34
Average break factor-----8/:	1900	1900	1795	1983	1878	1842	2077	2008	1961
Yarn appearance (grey):									
22s-----grade:	B	B	C+	C+	C+	C+	C+	B	C+
50s-----"	C+	C	C	C	D+	C	C+	C	D+
Average yarn appearance-----index 9/:	105	100	95	95	95	95	100	100	90
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----R _d :	69.3	68.0	68.0	68.6	67.4	65.6	71.1	70.8	69.0
Yellowness-----+b:	12.2	12.9	12.8	12.1	12.2	12.4	11.4	11.0	10.8
Bleached:									
Reflectance-----R _d :	84.3	82.8	81.6	85.2	82.1	81.6	83.6	81.7	80.8
Yellowness-----+b:	3.3	3.4	3.4	3.2	3.2	4.4	3.4	3.4	3.7
Dyed in grey:									
Reflectance-----R _d :	22.1	23.2	23.3	22.4	22.3	23.4	21.2	23.0	23.8
Blueness-----+b:	20.4	18.8	18.6	20.5	20.0	17.9	23.1	20.8	19.7
Dyed after bleaching									
Reflectance-----R _d :	25.6	27.5	27.2	26.0	26.6	26.8	26.6	27.0	26.2
Blueness-----+b:	27.5	25.9	25.0	27.1	25.2	25.2	26.6	26.0	26.2
Luster of 22s carded yarn 11/:									
Grey-----percent:	31	31	31	31	31	31	32	30	30
Mercerized-----"	37	37	37	38	36	37	36	37	35

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Lankart 57								
State	Texas								
Market Area	Odem			Waxahachie			Waco		
Period of Harvest:	Early	Midseason:	Late	Early	Midseason:	Late	Early	Midseason:	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	M	SM	M	Mltsp	SMltsp	Mltsp	Mltsp	SMltsp
Staple length-----inches:	31/32	31/32	31/32	7/8	29/32	7/8	13/16	7/8	7/8
Fiber length (Fibrograph):									
Upper half mean-----inches:	.95	.96	.94	.89	.90	.88	.85	.83	.89
Uniformity ratio-----	82	81	81	80	81	80	82	80	80
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.0	4.2	4.2	3.7	4.0	4.0	3.7	3.8	4.4
Fineness (Causticaire)-----ug/inch 2/:	4.1	4.3	4.4	4.0	4.2	4.4	4.2	4.3	4.5
Maturity "-----index 2/:	76	77	77	72	76	75	72	73	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	105	101	105	104	97	98	101	97	97
Zero "-----l,000 p.s.i.:	79	82	83	87	84	87	82	82	83
" "-----grams per tex 4/:	39.1	40.6	41.1	43.1	41.6	43.1	40.6	40.6	41.1
Nonlint content (Shirley Analyzer) percent:	3.1	2.2	3.2	4.8	5.3	7.5	3.0	3.2	2.7
Color of raw cotton 5/:									
Reflectance-----Rd:	71.4	73.4	75.4	73.4	71.3	69.2	72.5	73.5	71.8
Yellowness-----+b:	9.3	8.9	8.6	9.3	9.9	8.5	9.9	10.0	10.1
Sugar content-----percent:	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.3	0.2
Acid-alkaline value-----pH units 6/:	6.9	6.7	7.7	6.4	6.9	8.5	7.4	6.8	6.6
Moisture regain (at 92% R.H.)-----percent:	18.6	16.8	16.4	17.6	15.7	16.2	19.6	16.5	15.9
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	8.6	8.4	8.8	10.0	11.0	13.5	9.5	9.3	8.8
Neps-----per 100 sq. in. of card web:	18	11	18	13	9	11	19	12	6
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds:	114	114	110	106	107	106	97	99	103
22s Mercerized-----"	119	117	113	112	107	109	99	103	106
50s Grey-----"	38	38	36	35	35	35	28	31	33
Average break factor-----8/:	2204	2204	2110	2041	2052	2041	1767	1864	1958
Yarn appearance (grey):									
22s-----grade:	B	B	B	C+	B	C+	C+	B	B
50s-----"	C+	C+	C	C	C	D+	C+	C+	C+
Average yarn appearance-----index 2/:	105	105	100	95	100	90	100	105	105
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	69.2	70.4	69.8	69.9	64.6	63.8	68.0	67.4	67.4
Yellowness-----+b:	12.2	11.7	11.7	12.4	12.4	12.2	13.0	12.6	12.5
Bleached:									
Reflectance-----Rd:	83.0	84.9	84.2	84.2	80.8	82.0	83.6	83.5	82.7
Yellowness-----+b:	3.2	3.2	3.1	3.0	3.6	4.0	3.3	3.4	3.2
Dyed in grey:									
Reflectance-----Rd:	22.9	23.6	23.0	22.4	24.0	24.0	23.2	23.4	22.8
Blueness-----b:	20.8	20.4	20.6	20.6	16.4	17.0	19.0	18.4	19.2
Dyed after bleaching:									
Reflectance-----Rd:	26.2	26.6	26.4	26.1	27.9	28.3	27.0	27.0	26.9
Blueness-----b:	27.0	26.8	26.4	27.0	24.9	25.3	26.6	26.4	25.8
Luster of 22s carded yarn 11/:									
Grey-----percent:	31	31	31	31	33	32	30	31	32
Mercerized-----"	38	37	36	37	39	37	36	36	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Lankart 57			Lankart 611			Northern Star		
State	Texas								
Market Area	Wilson			Idalou			Lubbock		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	M	M	SLMitsp	SMitsp	M	M	SMitsp	SLM	SLM
Staple length-----inches	1	31/32	15/16	1	31/32	31/32	1	31/32	31/32
Fiber length (Fibrograph):									
Upper half mean-----inches	.96	.96	.93	.99	.98	.93	.99	.94	.92
Uniformity ratio-----	79	81	80	80	81	80	81	79	78
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.4	4.2	3.6	3.8	3.6	3.8	4.0	3.6	3.6
Fineness (Causticaire)-----ug/inch 2/	4.3	4.2	3.9	4.0	3.8	4.2	4.4	4.0	4.0
Maturity "-----index 2/	79	78	72	75	73	72	74	73	71
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	100	91	91	106	97	101	100	93	99
Zero "-----1,000 p.s.i.	72	73	70	81	74	78	77	79	79
" "-----grams per tex 4/	35.6	36.1	34.6	40.1	36.6	38.6	38.1	39.1	39.1
Nonlint content (Shirley Analyzer) percent	2.4	2.6	5.0	2.0	3.3	2.9	2.8	3.2	5.1
Color of raw cotton 5/:									
Reflectance-----R _d	72.0	75.5	68.5	75.5	75.5	70.0	73.6	72.6	72.3
Yellowness-----b	9.6	8.6	8.4	8.9	8.6	8.1	9.1	9.1	8.1
Sugar content-----percent	0.4	0.3	0.6	0.4	0.4	0.3	0.3	0.3	0.3
Acid-alkaline value-----pH units 6/	7.8	6.4	6.1	7.6	6.5	6.4	7.7	6.6	6.4
Moisture regain (at 92% R.H.)-----percent	18.7	18.3	19.0	19.1	18.4	18.0	19.1	17.5	19.2
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	9.0	8.5	10.7	8.1	9.1	9.2	8.5	9.0	10.5
Neps-----per 100 sq. in. of card web	21	21	62	18	30	14	15	27	28
Yarn quality:									
Yarn skein strength:									
22s Grey-----pounds	100	98	93	108	103	101	109	103	99
22s Mercerized-----"	104	102	97	111	105	106	108	107	101
50s Grey-----"	34	32	31	37	35	35	36	34	32
Average break factor-----8/1950	1878	1798	1798	2113	2008	1986	2099	1983	1889
Yarn appearance (grey):									
22s-----grade	C+	C+	D+	C+	C	B	C+	C+	C+
50s-----"	C	C	BG	D+	D+	C	D+	D	D
Average yarn appearance-----index 2/	95	95	70	90	85	100	90	85	85
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----R _d	70.0	69.2	65.9	71.9	70.4	69.2	70.8	70.4	69.0
Yellowness-----b	11.4	11.1	11.1	11.1	11.0	10.4	11.6	10.8	10.4
Bleached:									
Reflectance-----R _d	82.4	82.2	80.2	83.1	81.7	79.9	83.4	82.6	80.6
Yellowness-----b	3.4	4.0	4.2	3.1	3.4	3.4	3.6	3.6	3.3
Dyed in grey:									
Reflectance-----R _d	20.9	23.2	22.4	21.0	23.6	23.1	21.3	24.4	24.3
Blueness-----b	22.3	20.2	18.3	22.8	19.8	21.2	22.1	19.8	19.3
Dyed after bleaching:									
Reflectance-----R _d	26.5	27.9	26.5	25.8	27.2	27.4	25.9	28.4	27.5
Blueness-----b	26.6	25.9	25.4	26.8	25.6	25.5	26.6	25.4	25.4
Luster of 22s carded yarn 11/:									
Grey-----percent	30	31	30	30	30	30	30	30	29
Mercerized-----"	35	36	37	37	34	36	36	35	35

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Northern Star			Plains		
State	Texas			Alabama		
Market Area	O'Brien			Centre		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late
	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	M	M	SIM+	SM	M+	SIM
Staple length-----inches	1-1/32	1	1-1/32	1	1-1/32	1
Fiber length (Fibrograph):						
Upper half mean-----inches	1.00	1.04	1.03	.94	.97	.94
Uniformity ratio-----	81	81	80	78	79	81
Fiber fineness and maturity:						
Micronaire-----reading 1/	4.2	4.2	4.2	4.5	4.4	4.6
Fineness (Causticaire)-----ug/inch 2/	4.4	4.4	4.2	4.5	4.4	4.6
Maturity "-----index 2/	77	77	78	79	78	80
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/	102	104	101	97	95	96
Zero "-----1,000 p.s.i.	81	77	79	83	83	81
" "-----grams per tex 4/	40.1	38.1	39.1	41.1	41.1	40.1
Nonlint content (Shirley Analyzer) percent	3.5	3.2	3.6	2.0	2.8	2.8
Color of raw cotton 5/:						
Reflectance-----Rd	75.4	75.5	76.4	77.5	77.6	75.4
Yellowness-----Yb	8.9	8.5	8.4	8.9	8.5	8.1
Sugar content-----percent	0.3	0.4	0.3	0.1	0.3	0.1
Acid-alkaline value-----pH units 6/	7.2	7.8	6.6	7.0	6.7	8.1
Moisture regain (at 92% R.H.)-----percent	18.2	17.9	17.6	16.4	16.4	16.4
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent	7.7	8.2	8.7	7.6	8.2	8.5
Neps-----per 100 sq. in. of card web	14	19	19	13	12	11
Yarn quality:						
Yarn skein strength:						
22s Grey-----pounds	118	115	113	115	118	111
22s Mercerized-----"	120	116	116	115	126	117
50s Grey-----"	40	39	38	37	41	38
Average break factor-----8/	2298	2240	2193	2190	2323	2171
Yarn appearance (grey):						
22s-----grade	B	C+	C+	B	C+	B
50s-----"	C+	C	C	C+	C	B
Average yarn appearance-----index 9/	105	95	95	105	95	110
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----Rd	72.3	72.9	71.5	72.4	73.0	70.1
Yellowness-----Yb	11.4	10.9	10.8	10.8	11.0	10.4
Bleached:						
Reflectance-----Rd	84.0	83.9	84.4	82.8	84.3	82.8
Yellowness-----Yb	3.1	3.4	3.5	3.4	3.5	3.3
Dyed in grey:						
Reflectance-----Rd	22.4	21.0	23.3	24.0	24.2	26.9
Blueness-----b	22.3	22.7	20.8	20.6	20.8	19.6
Dyed after bleaching:						
Reflectance-----Rd	25.7	25.9	27.6	27.6	28.4	30.0
Blueness-----b	26.8	26.9	26.2	25.4	25.6	24.7
Luster of 22s carded yarn 11/:						
Grey-----percent	31	30	31	33	32	32
Mercerized-----"	36	36	37	36	37	37

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Stoneville 2 B			Stoneville 7		
State	Arkansas					
Market Area	McGee			Leachville		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	Mltsp	M	M	SM	M	M
Staple length-----inches	1-1/32	1-1/32	1-1/32	1-3/32	1-1/16	1-1/16
Fiber length (Fibrograph):						
Upper half mean-----inches	1.03	1.00	1.00	1.02	.99	1.04
Uniformity ratio-----	82	79	80	80	80	79
Fiber fineness and maturity:						
Micronaire-----reading 1/	3.9	4.2	4.2	4.2	4.4	4.4
Fineness (Causticaire)-----ug/inch 2/	4.2	4.3	4.6	4.5	4.6	4.8
Maturity "-----index 2/	74	78	75	76	79	77
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/	96	100	103	102	98	95
Zero "-----1,000 p.s.i.	81	86	84	79	80	78
"-----grams per tex 4/	40.1	42.6	41.6	39.1	39.6	38.6
Nonlint content (Shirley Analyzer) percent	3.2	2.1	4.3	1.6	2.0	2.5
Color of raw cotton 5/:						
Reflectance-----Rd	71.4	77.5	75.8	76.1	77.5	77.1
Yellowness-----+b	8.3	8.5	7.6	8.2	8.0	7.5
Sugar content-----percent	0.2	0.2	0.2	0.1	0.2	0.2
Acid-alkaline value-----pH units 6/	7.7	7.3	6.8	7.8	7.3	7.1
Moisture regain (at 92% R.H.)-----percent	17.6	17.2	16.8	17.6	16.3	17.4
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent	8.2	8.2	8.8	7.8	8.0	7.8
Neps-----per 100 sq. in. of card web	12	20	10	14	14	10
Yarn quality:						
Yarn skein strength:						
22s Grey-----pounds	114	109	111	112	109	109
22s Mercerized-----"	124	114	117	117	114	112
50s Grey-----"	39	37	38	38	37	36
Average break factor-----8/	2229	2124	2171	2182	2124	2099
Yarn appearance (grey):						
22s-----grade	B	C+	B	B	B	B
50s-----"	C	C+	C	C+	C+	B
Average yarn appearance-----index 9/	100	100	100	105	105	110
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----Rd	68.4	73.3	73.3	72.2	74.2	74.6
Yellowness-----+b	11.4	10.6	10.5	11.2	10.4	9.8
Bleached:						
Reflectance-----Rd	82.1	84.9	83.5	83.7	84.0	82.1
Yellowness-----+b	3.4	3.4	3.0	3.1	3.3	2.6
Dyed in grey:						
Reflectance-----Rd	24.2	25.0	25.6	24.7	25.6	24.6
Blueness-----+b	19.8	20.2	20.8	20.7	20.4	22.2
Dyed after bleaching:						
Reflectance-----Rd	27.4	28.6	29.3	26.9	29.0	28.4
Blueness-----+b	24.4	25.6	25.2	26.7	25.6	26.1
Luster of 22s carded yarn 11/:						
Grey-----percent	32	30	29	30	30	30
Mercerized-----"	38	37	36	38	37	36

For footnotes see page 63

Continued on page 45

Table 3.--Results of classification, fiber tests, carded yarn processing tests and chemical finishing 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 1956--
Continued

Variety	Stoneville 3202			Stardel		
State	Mississippi			Louisiana		
Market Area	Leland			Gilliam		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	M	SLM	LM	M	SLM	SLM
Staple length-----inches:	1-1/32	1-1/32	1-3/32	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):						
Upper half mean-----inches:	1.05	1.00	1.06	1.06	1.02	1.03
Uniformity ratio-----	81	81	79	79	80	80
Fiber fineness and maturity:						
Micronaire-----reading 1/:	4.1	4.2	4.1	4.1	4.4	4.5
Fineness (Causticaire)-----ug/inch 2/:	4.4	4.5	4.1	4.1	4.4	4.6
Maturity "-----index 2/:	76	77	77	77	80	79
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/:	100	94	98	122	101	118
Zero "-----1,000 p.s.i.:	84	84	82	91	89	99
" "-----grams per tex 4/:	41.6	41.6	40.6	45.0	44.1	49.0
Nonlint content (Shirley Analyzer) percent:	3.6	4.6	4.1	2.3	4.0	3.0
Color of raw cotton 5/:						
Reflectance-----R _d :	72.9	71.5	65.3	75.5	72.0	72.0
Yellowness-----+b:	8.3	7.2	8.0	8.5	8.5	7.6
Sugar content-----percent:	0.2	0.2	0.1	0.2	0.1	0.1
Acid-alkaline value-----pH units 6/:	7.6	7.5	8.3	7.6	7.3	7.5
Moisture regain (at 92% R.H.)-----percent:	17.4	16.7	16.1	16.3	15.9	16.0
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	8.4	10.3	10.3	7.0	9.0	7.7
Neps-----per 100 sq. in. of card web:	10	15	21	17	22	10
Yarn quality:						
Yarn skein strength:						
22s Grey-----pounds:	108	97	104	127	118	123
22s Mercerized-----"	118	108	109	139	126	136
50s Grey-----"	38	33	36	43	41	42
Average break factor-----8/:	2138	1892	2044	2474	2323	2403
Yarn appearance (grey):						
22s-----grade:	B+	C+	C+	B	C+	B
50s-----"	C+	C	C	C	C	C+
Average yarn appearance-----index 9/:	110	95	95	100	95	105
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----R _d :	70.8	70.2	65.8	71.7	69.6	70.6
Yellowness-----+b:	10.8	10.2	10.2	11.2	11.0	10.6
Bleached:						
Reflectance-----R _d :	82.4	82.3	83.0	84.0	81.0	83.1
Yellowness-----+b:	3.1	3.5	3.4	3.1	3.8	3.4
Dyed in grey:						
Reflectance-----R _d :	24.4	27.4	27.4	24.0	24.8	26.6
Blueness-----+b:	20.2	18.6	17.7	20.6	19.4	19.4
Dyed after bleaching:						
Reflectance-----R _d :	27.6	30.8	30.0	27.1	29.0	29.4
Blueness-----+b:	24.6	24.8	24.9	25.2	25.0	25.5
Luster of 22s carded yarn 11/:						
Grey-----percent:	32	30	32	32	32	32
Mercerized-----"	38	37	36	38	39	40

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956

Variety		Acala 1517 C								
State		Arizona			New Mexico					
Market Area		Willcox			Artesia			Carlsbad		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY										
Classification (official standards)										
Grade-----		SM	GM	M	SM	GM	SM	SM	GM	SM
Staple length-----inches		1-1/8	1-1/8	1-1/8	1-5/32	1-5/32	1-3/32	1-5/32	1-5/32	1-1/8
Fiber length (Fibrograph):										
Upper half mean-----inches		1.20	1.15	1.13	1.06	1.12	1.14	1.16	1.14	1.12
Uniformity ratio-----		81	79	76	82	79	77	82	77	77
Fiber fineness and maturity:										
Micronaire-----reading 1/		4.0	3.8	3.4	4.0	3.7	3.5	4.1	3.9	3.6
Fineness (Causticaire)-----ug/inch 2/		4.1	4.0	3.4	4.0	3.7	3.6	4.0	4.0	3.7
Maturity "-----index 2/		77	75	72	77	75	73	79	77	74
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/		115	118	112	113	109	114	119	110	115
Zero "-----1,000 p.s.i.		83	86	86	86	84	86	87	85	86
"-----grams per tex 4/		41.1	42.6	42.6	42.6	41.6	42.6	43.1	42.1	42.6
Nonlint content (Shirley Analyzer) percent:		1.8	2.2	4.0	2.0	2.3	2.7	2.3	1.8	2.7
Color of raw cotton 5/:										
Reflectance-----Rd		80.2	78.5	77.6	79.4	77.5	78.3	77.4	80.3	78.5
Yellowness-----+b		8.0	7.7	7.6	8.7	8.1	8.2	8.3	8.1	8.1
Sugar content-----percent:		0.3	0.4	0.6	0.3	0.2	0.3	0.3	0.3	0.0
Acid-alkaline value-----pH units 6/		6.5	6.9	6.1	6.8	6.5	6.2	6.8	6.6	6.3
Moisture regain (at 92% R.H.)-----percent:		19.9	18.8	19.1	19.0	17.6	18.8	18.9	17.3	18.6
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent:		8.0	7.6	8.8	7.9	7.7	8.1	8.3	7.5	7.2
Comber-----"		13.0	12.8	16.7	15.6	15.0	14.8	14.1	15.5	15.8
Neps-----per 100 sq. in. of card web:		10	12	19	15	18	19	17	19	25
Yarn quality:										
Yarn skein strength 7/:										
Grey:										
22s-----pounds:		140(152)	141(155)	136(150)	137(149)	140(152)	143(155)	141(155)	137(154)	143(156)
50s-----"		50(54)	51(56)	49(54)	48(54)	50(55)	51(57)	52(56)	49(54)	52(57)
Average break factor-----8/		2790(3022)	2826(3105)	2721(3000)	2707(2989)	2790(3047)	2848(3130)	2851(3105)	2732(3044)	2873(3141)
Mercerized:										
22s Carded-----pounds:		148	138	144	142	145	150	150	145	149
50s Combed-----"		(58)	(58)	(57)	(57)	(57)	(58)	(59)	(57)	(58)
Yarn appearance (grey) 7/:										
22s-----grade:		C+(B+)	C+(B+)	C (B)	C+(B+)	C+(B)	C (C+)	B (B)	C (B)	C (C+)
50s-----"		C (C+)	C+(C+)	C (C+)	C+(C+)	C+(C+)	D+(C+)	C (C+)	C (C)	D+(C+)
Average yarn appearance-----index 9/		95(110)	100(110)	90(95)	100(110)	100(105)	85(100)	100(105)	90(100)	85(100)
Color of 22s carded yarn 10/										
Grey:										
Reflectance-----Rd		76.2	77.8	74.6	73.9	74.4	73.8	74.4	75.5	74.1
Yellowness-----+b		10.6	10.0	10.8	11.4	10.4	10.8	10.8	10.7	10.7
Bleached:										
Reflectance-----Rd		85.7	85.2	83.9	85.6	84.7	84.2	84.4	84.9	84.0
Yellowness-----+b		2.8	2.8	3.0	3.0	3.0	2.8	2.7	3.2	3.0
Dyed in grey:										
Reflectance-----Rd		21.4	22.5	23.7	22.1	23.6	23.2	22.0	23.6	23.2
Blueness-----+b		23.8	22.8	21.4	22.4	21.0	21.5	23.2	21.1	21.6
Dyed after bleaching:										
Reflectance-----Rd		26.9	27.0	27.6	27.3	26.2	27.7	26.6	27.0	27.4
Blueness-----+b		26.0	25.7	25.5	26.0	26.0	25.4	26.6	26.0	25.4
Luster of carded and combed yarn 11/:										
22s Carded:										
Grey-----percent:		33	32	33	31	33	33	33	32	32
Mercerized-----"		39	39	41	38	39	40	39	38	40
50s Combed:										
Grey-----percent:		33	33	34	33	34	34	34	34	34
Mercerized-----"		41	44	42	43	42	45	43	43	42

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Acala 1517 C								
State	New Mexico								
Market Area	Deming			Hatch			Las Cruces		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	SM	M	GM	SM	M	SM	SM	M
Staple length-----inches	1-5/32	1-5/32	1-1/8	1-5/32	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8
Fiber length (Fibrograph):									
Upper half mean-----inches	1.22	1.16	1.14	1.21	1.17	1.10	1.20	1.16	1.12
Uniformity ratio-----	82	79	75	81	79	74	82	79	73
Fiber fineness and maturity:									
Micronaire-----reading 1/	3.6	3.5	3.4	4.0	3.7	3.4	3.8	3.6	3.5
Fineness (Causticaire)-----ug/inch 2/	3.5	3.6	3.5	3.9	3.6	3.5	3.8	3.6	3.8
Maturity "-----index 2/	76	74	73	77	76	72	77	75	72
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	118	116	113	113	117	112	120	117	113
Zero "-----1,000 p.s.i.	81	79	86	85	84	84	85	84	88
" "-----grams per tex 4/	40.1	39.1	42.5	42.0	41.6	41.6	42.1	41.6	43.6
Nonlint content (Shirley Analyzer) percent	2.5	2.6	3.0	1.9	2.0	3.2	2.2	2.0	2.8
Color of raw cotton 5/:									
Reflectance-----Rd	78.5	79.5	79.4	79.5	79.6	77.5	80.8	80.0	74.6
Yellowness-----+b	8.4	7.8	7.5	8.1	7.9	8.1	7.9	8.4	7.9
Sugar content-----percent	0.3	0.3	0.6	0.4	0.4	0.5	0.2	0.4	0.5
Acid-alkaline value-----pH units 6/	6.6	6.4	6.1	6.6	6.6	6.4	7.9	6.7	6.3
Moisture regain (at 92% R.H.)-----percent	19.6	19.7	18.5	18.1	17.8	18.9	18.2	18.3	19.2
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent	9.1	8.9	8.4	7.6	8.2	7.5	7.8	7.8	7.9
Comber-----"	13.1	13.7	15.3	14.2	13.6	16.6	14.0	14.5	16.9
Neps-----per 100 sq. in. of card web	16	15	22	14	15	20	19	19	18
Yarn quality:									
Yarn skein strength 1/:									
Grey:									
22s-----pounds	144(159)	141(152)	139(153)	142(155)	143(156)	140(152)	150(161)	143(155)	140(157)
50s-----"	52(57)	50(55)	50(55)	51(56)	51(55)	50(55)	53(57)	51(55)	50(55)
Average break factor-----8/	2884(3174)	2801(3047)	2779(3058)	2837(3105)	2848(3091)	2790(3047)	2975(3196)	2848(3080)	2790(3102)
Mercerized:									
22s Carded-----pounds	151	148	144	141	148	145	152	146	150
50s Combed-----"	(58)	(57)	(58)	(59)	(57)	(58)	(59)	(57)	(60)
Yarn appearance (grey) 1/:									
22s-----grade	C+(B)	C (C+)	C (C+)	C+(C+)	C (C+)	C (C+)	C+(B)	C+(B)	C+(B)
50s-----"	C (C+)	C (C+)	C (C+)	C (C+)	C (C)	C (C+)	C (C+)	D+(C+)	C (C+)
Average yarn appearance-----index 9/	95(105)	90(100)	90(100)	95(100)	90(95)	90(100)	95(105)	90(105)	95(105)
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	76.0	76.8	74.6	75.8	76.2	75.8	73.6	75.8	73.9
Yellowness-----+b	10.8	10.2	10.6	11.0	10.4	10.6	11.0	10.4	10.2
Bleached:									
Reflectance-----Rd	85.2	84.8	84.8	85.4	84.3	83.0	84.4	86.0	84.0
Yellowness-----+b	2.6	3.2	2.9	2.8	3.0	3.0	2.6	3.0	3.4
Dyed in grey:									
Reflectance-----Rd	23.0	22.6	23.5	22.2	22.9	24.0	22.7	23.1	23.4
Blueness-----+b	23.3	22.6	22.0	23.2	22.4	21.2	22.6	22.3	22.0
Dyed after bleaching:									
Reflectance-----Rd	27.0	27.1	27.6	26.6	26.0	27.8	26.2	27.8	27.9
Blueness-----+b	26.1	26.2	25.4	26.7	26.6	25.4	25.6	25.6	25.0
Luster of carded and combed yarn 11/:									
22s Carded:									
Grey-----percent	32	32	32	33	33	31	32	32	33
Mercerized-----"	39	38	39	40	38	39	39	40	39
50s Combed:									
Grey-----percent	34	32	34	34	33	34	34	34	34
Mercerized-----"	42	42	44	44	42	41	43	42	42

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Acala 1517 C								
State	Texas								
Market Area	Dell City			El Paso			Pecos		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	GM	SM	M	SM	SM	M	SM	SM	SM
Staple length-----inches:	1-5/32	1-5/32	1-1/8	1-1/8	1-1/8	1-3/32	1-5/32	1-5/32	1-1/8
Fiber length (Fibrogaph),									
Upper half mean-----inches:	1.23	1.19	1.12	1.17	1.12	1.09	1.19	1.15	1.17
Uniformity ratio-----	85	79	76	80	78	74	82	77	79
Fiber fineness and maturity:									
Micronaire-----reading 1/	4.2	3.9	3.4	3.8	3.6	3.5	4.1	4.0	3.9
Fineness (Causticaire)-----ug/inch 2/	4.1	3.8	3.4	3.7	3.6	3.4	3.9	4.1	3.5
Maturity "-----index 2/	79	78	73	78	75	74	79	77	80
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	119	109	109	114	114	112	121	118	121
Zero "-----1,000 p.s.i.	84	80	84	86	84	82	92	87	91
" "-----grams per tex 4/	41.5	39.6	41.5	42.6	41.5	40.6	45.5	43.0	45.0
Nonlint content (Shirley Analyzer) percent:	1.5	1.8	2.4	2.5	2.8	3.6	2.2	2.0	2.0
Color of raw cotton 5/:									
Reflectance-----Rd	78.5	80.4	79.8	77.4	78.8	78.0	77.5	80.4	79.5
Yellowness-----b	8.3	8.0	8.1	8.2	8.5	7.7	8.4	8.6	8.3
Sugar content-----percent:	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.3
Acid-alkaline value-----pH units 6/	8.0	6.7	6.4	6.8	6.3	6.2	6.9	6.8	6.6
Moisture regain (at 92% R.H.)-----percent:	18.7	19.0	19.4	18.5	19.1	18.6	17.9	17.9	21.1
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	7.6	8.7	7.8	8.8	8.4	8.6	8.8	7.6	7.0
Comber-----"	12.3	13.7	16.3	15.6	16.6	18.1	14.0	14.8	15.3
Neps-----per 100 sq. in. of card web:	13	16	21	23	19	25	21	13	13
Yarn quality:									
Yarn skein strength 7/:									
Grey:									
22s-----pounds:	145(158)	140(154)	140(154)	142(159)	137(157)	136(152)	148(160)	147(160)	140(159)
50s-----"	52(56)	50(54)	50(55)	50(56)	50(56)	49(55)	53(57)	53(58)	51(57)
Average break factor-----8/:	2895(3138)	2790(3044)	2790(3069)	2812(3149)	2757(3127)	2721(3047)	2953(3185)	2942(3210)	2815(3174)
Mercurized:									
22s carded-----pounds:	152	146	148	150	145	143	153	153	152
50s combed-----"	(59)	(57)	(58)	(59)	(59)	(59)	(62)	(60)	(60)
Yarn appearance (grey) 7/:									
22s-----grade:	C+ (B+)	C (B)	C (C+)	C (C+)	C (C+)	C (C+)	C+ (C+)	C+ (B)	C+ (B)
50s-----"	C (C+)	D+ (C+)	C (C+)	D+ (C)	D+ (C+)	D+ (C)	C (C+)	C (C+)	C (C+)
Average yarn appearance-----index 9/:	95 (110)	85 (105)	90 (100)	85 (95)	85 (100)	85 (95)	95 (100)	95 (105)	95 (105)
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	74.4	76.0	74.1	75.0	75.4	73.8	75.1	74.3	75.4
Yellowness-----b	10.8	10.6	11.0	11.0	10.7	10.8	11.2	10.8	10.4
Bleached:									
Reflectance-----Rd	82.9	84.1	84.7	85.8	85.5	83.6	84.3	84.1	85.7
Yellowness-----b	2.8	3.4	3.0	2.9	3.2	3.0	3.1	3.1	2.6
Dyed in grey:									
Reflectance-----Rd	21.8	21.4	24.0	22.5	23.0	23.4	21.6	22.6	23.9
Blueness-----b	23.2	23.2	21.4	22.8	21.4	21.3	22.9	22.2	22.6
Dyed after bleaching:									
Reflectance-----Rd	25.4	26.4	28.0	28.4	26.2	28.0	27.3	25.8	27.2
Blueness-----b	26.0	26.4	25.4	25.2	26.6	24.8	26.2	26.4	26.0
Luster of carded and combed yarn 11/:									
22s carded:									
Grey-----percent:	33	33	32	33	31	32	33	33	31
Mercurized-----"	41	40	39	40	39	39	41	40	41
50s combed:									
Grey-----percent:	35	34	34	33	33	34	35	34	34
Mercurized-----"	43	43	42	43	43	43	42	43	44

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Acala 1517 BR			Acala 4-42			Arizona 44		
State	Texas			California			Arizona		
Market Area	Stanton			Fresno			Marana		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SM	GM	M+	SM	M	SLM	SM	M	SLM
Staple length-----inches:	1-3/32	1-1/8	1-3/32	1-3/32	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph)									
Upper half mean-----inches:	1.10	1.11	1.12	1.09	1.08	1.06	1.08	1.07	1.06
Uniformity ratio-----	82	79	77	81	81	77	82	77	79
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.4	4.4	4.0	4.4	4.7	4.6	3.9	4.1	4.0
Fineness (Caustic)-----ug/inch 2/:	4.2	4.2	3.9	4.2	4.5	4.5	3.9	4.1	4.0
Maturity "-----index 2/:	81	80	78	81	82	80	77	78	78
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	110	117	113	115	114	114	104	106	104
Zero "-----1 000 p.s.i.:	90	87	87	85	82	86	82	82	85
"-----grams per tex 4/:	39.6	43.1	43.1	42.1	40.5	42.6	40.6	40.6	42.1
Nonlint content (Shirley Analyzer) percent:	1.1	1.8	2.4	2.7	3.6	4.1	3.0	3.8	6.0
Color of raw cotton 5/:									
Reflectance-----Rd:	78.6	79.5	78.0	79.3	75.5	71.5	77.6	74.5	71.0
Yellowness-----+b:	8.4	8.3	8.3	8.0	7.6	6.9	8.8	8.7	9.0
Sugar content-----percent:	0.2	0.3	0.4	0.2	0.2	0.3	0.4	0.5	0.4
Acid-alkaline value-----pH units 6/:	7.2	6.8	6.6	6.7	6.6	6.4	6.6	6.8	6.4
Moisture regain (at 92% R.H.)-----percent:	17.5	18.3	17.6	17.9	17.5	17.9	18.4	19.3	19.6
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	6.9	8.2	7.7	8.6	9.4	9.7	9.4	9.9	11.0
Comber-----"	14.2	14.2	15.4	14.4	15.6	16.4	15.8	17.4	18.3
Neps-----per 100 sq. in. of card web:	14	12	16	14	14	16	13	20	21
Yarn quality:									
Yarn skein strength 7/:									
Grey:									
22s-----pounds:	144(157)	143(156)	139(154)	140(153)	125(141)	131(148)	136(149)	124(140)	122(135)
50s-----"	52(56)	50(55)	49(55)	50(55)	45(51)	46(51)	48(52)	44(49)	43(49)
Average break factor-----8/:	2884(3127)	2823(3091)	2754(3069)	2790(3058)	2500(2826)	2591(2903)	2696(2939)	2464(2765)	2417(2710)
Mercerized:									
22s carded-----pounds:	154	150	146	141	130	138	142	130	124
50s combed-----"	(58)	(58)	(57)	(56)	(53)	(53)	(55)	(50)	(52)
Yarn appearance (grey) 7/:									
22s-----grade:	B (B+)	B (B+)	B (B+)	C+ (B)	C+ (B)	C+ (C+)	C+ (C+)	C (C+)	C (C+)
50s-----"	C+ (B)	C+ (B)	C+ (B)	C (C+)	C (C+)	C (C+)	C (C+)	C (C+)	C (C+)
Average yarn appearance-----index 9/:	105(115)	105(115)	105(115)	95(105)	95(105)	95(100)	95(100)	90(100)	90(100)
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	72.6	74.1	73.8	75.0	72.6	72.1	73.6	72.0	70.2
Yellowness-----+b:	10.6	10.6	10.4	10.4	10.0	10.1	11.4	10.8	10.4
Bleached:									
Reflectance-----Rd:	82.0	83.6	84.8	84.6	83.4	81.5	84.7	82.8	81.6
Yellowness-----+b:	2.9	3.2	3.0	3.0	2.8	3.1	3.0	3.0	3.6
Dyed in grey:									
Reflectance-----Rd:	22.9	21.8	23.6	21.7	23.8	23.8	22.2	23.8	23.0
Blueness-----+b:	22.3	23.0	20.6	23.7	22.2	22.3	22.9	21.2	20.8
Dyed after bleaching:									
Reflectance-----Rd:	25.8	26.8	27.4	26.2	27.0	27.8	26.9	26.4	27.8
Blueness-----+b:	25.8	26.6	25.8	26.7	26.8	26.0	26.0	26.6	25.8
Luster of carded and combed yarn 11/:									
22s carded:									
Grey-----percent:	34	33	34	32	32	32	33	32	32
Mercerized-----"	40	39	39	39	38	38	39	38	38
50s combed:									
Grey-----percent:	34	34	35	33	33	34	33	34	34
Mercerized-----"	43	43	45	42	43	43	41	42	43

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Coker 100 W						Coker 124		
State	Mississippi			North Carolina			Mississippi		
Market Area	Greenwood			Shelby			Heathman		
Period of Harvest	Early	Midseason	Early	Midseason	Late	Early	Midseason	Late	
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SIM	SIM	SM	Map	Map	M	IM+	IM	
Staple length-----inches	1-1/16	1-1/32	1	1-1/32	1-1/32	1-3/32	1-1/16	1-1/16	
Fiber length (Fibrogaph):									
Upper half mean-----inches	1.08	1.02	.96	.95	.94	1.07	1.04	1.10	
Uniformity ratio-----	81	77	81	80	81	82	81	79	
Fiber fineness and maturity:									
Micronaire-----reading 1/	3.8	3.6	4.6	4.9	4.7	4.0	3.8	4.1	
Fineness (Causticaire)-----ug/inch 2/	4.0	3.6	4.6	4.7	4.7	4.1	3.8	3.9	
Maturity "-----index 2/	74	74	80	82	80	77	76	79	
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/	104	98	99	99	93	110	104	110	
Zero "-----1,000 p.s.i.	83	81	85	81	80	85	85	81	
" "-----grams per tex 4/	41.1	40.1	42.1	40.1	39.6	42.1	42.1	40.1	
Nonlint content (Shirley Analyzer) percent:	3.5	2.8	2.4	3.8	4.1	2.8	4.7	4.8	
Color of raw cotton 5/:									
Reflectance-----Rd	74.9	68.0	72.5	69.5	65.3	72.5	71.1	69.6	
Yellowness-----+b	8.4	7.7	8.9	10.4	9.3	8.4	7.4	7.2	
Sugar content-----percent:	0.2	0.1	0.3	0.1	0.0	0.1	0.2	0.0	
Acid-alkaline value-----pH units 6/	7.3	8.1	7.0	8.0	8.3	7.5	7.4	8.2	
Moisture regain (at 92% R.H.)-----percent:	16.9	16.2	17.4	15.8	15.6	17.5	16.2	15.4	
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	8.1	8.8	7.9	9.3	10.0	8.0	10.7	10.7	
Comber-----"	15.1	18.7	17.9	17.5	18.2	16.7	17.4	17.6	
Neps-----per 100 sq. in. of card web:	10	16	9	10	13	21	23	21	
Yarn quality:									
Yarn skein strength 7/:									
Grey:									
22s-----pounds:	134(148)	120(135)	114(130)	111(126)	114(126)	136(139)	131(143)	122(138)	
50s-----"	47(53)	42(48)	37(44)	36(42)	37(43)	48(53)	45(51)	43(49)	
Average break factor-----8/	2649(2953)	2370(2685)	2179(2530)	2121(2436)	2179(2461)	2692(2964)	2566(2848)	2417(2743)	
Mercerized:									
22s Carded-----pounds:	139	131	122	119	120	140	135	130	
50s Combed-----"	(54)	(50)	(47)	(46)	(45)	(55)	(53)	(52)	
Yarn appearance (grey) 7/:									
22s-----grade:	B (B+)	C+(B+)	B+(B+)	B (B+)	C+(B+)	C+(B)	C+(C+)	C+(B)	
50s-----"	C+(B)	C (C+)	C+(B)	C+(B)	C+(C+)	C (C+)	C (C+)	C (C+)	
Average yarn appearance-----index 9/	105(115)	95(110)	110(115)	105(115)	100(110)	95(105)	95(100)	95(105)	
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd	70.8	66.4	71.4	65.8	63.5	70.6	69.0	68.5	
Yellowness-----+b	11.2	10.0	11.2	13.2	12.6	11.4	10.8	10.0	
Bleached:									
Reflectance-----Rd	82.9	83.2	82.6	77.8	78.0	84.0	82.6	83.5	
Yellowness-----+b	2.9	3.0	3.8	9.0	9.0	3.2	3.4	3.2	
Dyed in grey:									
Reflectance-----Rd	24.6	28.8	23.2	26.2	26.0	24.2	26.2	27.3	
Blueness-----+b	20.2	18.0	21.1	15.3	15.4	20.9	19.1	18.9	
Dyed after bleaching:									
Reflectance-----Rd	27.4	30.8	28.0	29.8	30.1	27.1	29.7	29.8	
Blueness-----+b	24.9	24.8	24.8	20.7	21.2	25.0	24.9	24.9	
Luster of carded and combed yarn 11/:									
22s Carded:									
Grey-----percent:	34	34	32	35	35	33	33	34	
Mercerized-----"	40	39	37	39	40	38	38	38	
50s Combed:									
Grey-----percent:	34	34	34	35	36	35	34	34	
Mercerized-----"	42	42	43	43	43	40	44	42	

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Coker 124			Deltapine 15					
State	Mississippi			Arkansas			Mississippi		
Market Area	Lake Cormorant			Leachville			Tunica		
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY									
Classification (official standards)									
Grade-----	SLM	SLM	LM+	M	M	M	M	SLM	LM
Staple length-----inches:	1-1/32	1-1/32	1-1/32	1-3/32	1-1/16	1-1/16	1-3/32	1-1/16	1-1/16
Fiber length (Fibrograph):									
Upper half mean-----inches:	1.06	1.06	1.06	1.10	1.04	1.08	1.02	1.06	1.04
Uniformity ratio-----	79	77	78	80	83	81	80	75	79
Fiber fineness and maturity:									
Micronaire-----reading 1/:	4.0	4.1	4.1	4.4	4.9	4.4	4.0	4.6	4.1
Fineness (Causticaire)-----ug/inch 2/:	4.1	3.9	3.9	4.3	4.9	4.3	4.0	4.7	4.1
Maturity "-----index 3/:	77	79	79	80	81	80	77	81	77
Fiber tensile strength (Pressley):									
1/8" gauge-----index 3/:	106	109	107	109	107	107	105	98	103
Zero "-----1,000 p.s.i.:	85	85	83	85	86	80	83	83	79
" "-----grams per tex 4/:	42.1	42.1	41.1	42.1	42.6	39.6	41.1	41.1	39.1
Nonlint content (Shirley Analyzer) percent:	3.6	4.2	4.2	2.1	2.5	2.8	2.2	3.5	4.4
Color of raw cotton 5/:									
Reflectance-----Rd:	76.6	72.5	72.4	74.4	76.4	72.3	72.5	72.1	69.8
Yellowness-----Yb:	7.9	7.5	6.6	8.7	8.1	7.5	8.7	7.9	7.5
Sugar content-----percent:	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Acid-alkaline value-----pH units 6/:	8.1	7.2	7.0	7.7	7.3	6.5	7.3	7.6	7.0
Moisture regain (at 92% R.H.)-----percent:	16.4	16.1	15.5	17.2	17.1	16.6	16.8	15.7	15.8
PROCESSING RESULTS									
Manufacturing waste:									
Picker and card-----percent:	9.6	9.4	9.6	7.8	7.7	8.2	7.6	9.9	10.9
Comber-----"	17.1	18.0	17.3	14.9	15.2	15.2	18.5	18.5	17.9
Neps-----per 100 sq. in. of card web:	10	19	16	12	9	10	21	12	19
Yarn quality:									
Yarn skein strength 7/:									
Grey:									
22s-----pounds:	132(147)	124(140)	125(140)	130(146)	124(138)	130(142)	128(144)	110(129)	117(130)
50s-----"	47(51)	43(50)	45(51)	46(51)	43(48)	46(51)	44(50)	39(45)	41(46)
Average break factor-----8/:	2627(2892)	2439(2790)	2500(2815)	2580(2881)	2439(2718)	2580(2837)	2508(2834)	2185(2544)	2312(2580)
Mercedized:									
22s carded-----pounds:	140	132	134	144	128	132	134	123	123
50s combed-----"	(54)	(52)	(54)	(53)	(50)	(52)	(52)	(49)	(48)
Yarn appearance (grey) 11/:									
22s-----grade:	C+ (B)	C+ (B)	C+ (B)	B (B+)	B (B+)	B (B+)	B (B+)	C+ (B+)	C+ (B)
50s-----"	C+ (C+)	C (C+)	C (C+)	C+ (B)	C+ (B)	C+ (B)	C+ (C+)	C (C+)	C (C+)
Average yarn appearance-----index 9/:	100 (105)	95 (105)	95 (105)	105 (115)	105 (115)	105 (115)	105 (110)	95 (110)	95 (105)
Color of 22s carded yarn 10/:									
Grey:									
Reflectance-----Rd:	70.4	70.6	69.6	70.8	71.9	73.0	70.4	69.9	67.4
Yellowness-----Yb:	10.4	10.3	9.4	10.7	10.4	10.4	11.3	10.8	9.9
Bleached:									
Reflectance-----Rd:	82.6	82.4	79.4	82.8	82.9	84.7	83.7	83.2	81.6
Yellowness-----Yb:	3.0	3.2	3.8	2.8	3.6	2.7	3.2	3.3	3.2
Dyed in grey:									
Reflectance-----Rd:	23.2	24.4	25.8	23.2	24.1	24.8	24.2	25.6	26.5
Blueness-----b:	21.0	21.0	18.8	20.8	20.8	21.4	20.0	19.2	18.6
Dyed after bleaching:									
Reflectance-----Rd:	27.0	29.6	29.0	26.8	27.8	27.6	26.7	29.8	29.8
Blueness-----b:	25.2	25.0	24.2	25.8	25.8	26.0	25.3	25.2	24.6
Luster of carded and combed yarn 11/:									
22s carded:									
Grey-----percent:	33	33	33	34	33	32	32	33	33
Mercedized-----"	40	39	38	40	41	39	39	40	40
50s combed:									
Grey-----percent:	35	33	34	35	34	33	34	34	35
Mercedized-----"	41	43	43	44	43	42	44	43	45

Table 4. --Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	Delfos 9169									
State	Arkansas						Missouri			
Market Area	Black Oak			Pine Bluff			Hayti			
Period of Harvest	Early	Midseason	Late	Early	Midseason	Late	Early	Midseason	Late	
RAW COTTON QUALITY										
Classification (official standards)										
Grade	M	M	SLM	M	M	M	SM	SM	M	
Staple length-----inches	1-1/16	1-3/32	1-1/16	1-1/32	1-1/32	1-1/32	1-3/32	1-1/16	1-1/32	
Fiber length (Fibrograph):										
Upper half mean-----inches	1.10	1.04	1.08	1.08	1.05	1.07	1.04	.99	1.02	
Uniformity ratio-----	78	78	76	79	74	75	79	77	77	
Fiber fineness and maturity:										
Micronaire-----reading 1/	4.0	4.3	4.2	4.0	4.0	4.1	3.9	4.4	4.4	
Fineness (Causticaire)-----ug/inch 2/	4.1	4.4	4.2	3.9	4.1	4.1	3.9	4.5	4.4	
Maturity "-----index 2/	76	78	79	78	76	78	76	78	79	
Fiber tensile strength (Pressley):										
1/8" gauge-----index 3/	105	100	102	95	98	101	99	90	94	
Zero "-----1,000 p.s.i.	83	85	81	80	82	78	80	80	79	
" "-----grams per tex 4/	41.1	42.1	40.1	39.6	40.6	38.6	39.6	39.6	39.1	
Nonlint content (Shirley Analyzer) percent:	2.6	2.8	3.6	2.0	2.6	2.5	2.1	2.3	2.7	
Color of raw cotton 5/:										
Reflectance-----Rd	73.0	77.4	75.4	77.1	74.5	72.0	74.6	78.5	77.5	
Yellowness-----Yb	9.0	8.1	6.8	8.6	7.7	8.6	8.6	7.9	7.7	
Sugar content-----percent:	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	
Acid-alkaline value-----pH units 6/	7.7	6.8	6.8	7.6	7.0	7.5	7.0	6.7	7.2	
Moisture regain (at 92% R.R.)-----percent:	16.8	17.4	15.6	16.5	16.5	15.7	17.0	16.2	16.1	
PROCESSING RESULTS										
Manufacturing waste:										
Picker and card-----percent:	8.9	7.7	8.5	7.3	8.5	7.6	8.0	8.4	8.0	
Comber-----"	14.3	16.3	16.6	17.3	19.1	17.8	18.3	17.3	19.4	
Neps-----per 100 sq. in. of card web:	15	15	15	13	16	14	18	8	12	
Yarn quality:										
Yarn skin strength 7/:										
Grey:										
22s-----pounds	130(143)	125(139)	122(135)	126(139)	123(135)	118(132)	121(135)	110(126)	109(126)	
50s-----"	46(50)	43(48)	42(48)	44(49)	42(48)	43(49)	41(46)	37(43)	37(43)	
Average break factor-----8/	2580(2823)	2450(2729)	2392(2685)	2486(2754)	2403(2685)	2373(2677)	2356(2635)	2135(2461)	2124(2461)	
Mercerized:										
22s carded-----pounds	138	128	124	133	126	128	127	118	112	
50s combed-----"	(54)	(50)	(49)	(50)	(50)	(51)	(49)	(46)	(45)	
Yarn appearance (grey) 7/:										
22s-----grade	B (B+)	B (B+)	B (B+)	B (B+)	C+ (B)	B (B)	B (B+)	B (B+)	B (B+)	
50s-----"	C+ (C+)	C+ (B)	C+ (B)	C+ (C+)	C (C+)	C+ (B)	C+ (B)	C+ (B)	C+ (B)	
Average yarn appearance-----index 9/	105 (110)	105 (115)	105 (110)	105 (110)	95 (105)	105 (110)	105 (115)	105 (115)	105 (115)	
Color of 22s carded yarn 10/:										
Grey:										
Reflectance-----Rd	71.0	73.5	72.0	69.8	72.1	70.9	71.5	74.2	72.7	
Yellowness-----Yb	11.3	10.6	10.0	11.5	10.8	10.6	11.0	10.4	10.2	
Bleached:										
Reflectance-----Rd	83.2	83.6	83.8	83.0	82.6	84.7	83.2	81.6	84.1	
Yellowness-----Yb	3.0	3.1	2.9	3.3	3.0	3.2	3.2	3.4	3.0	
Dyed in grey:										
Reflectance-----Rd	24.7	24.0	25.5	24.8	25.4	27.8	24.0	24.9	25.7	
Blueness-----B	20.0	21.5	21.1	20.2	19.9	19.2	20.6	21.6	20.6	
Dyed after bleaching:										
Reflectance-----Rd	27.2	28.0	29.2	27.8	30.0	30.0	26.9	28.2	29.1	
Blueness-----B	25.2	26.0	25.4	24.8	24.8	24.8	25.8	25.6	25.4	
Luster of carded and combed yarn 11/:										
22s carded:										
Grey-----percent	33	32	32	33	32	33	31	31	32	
Mercerized-----"	39	38	38	39	38	38	39	36	38	
50s combed:										
Grey-----percent	34	33	33	34	33	34	33	32	32	
Mercerized-----"	43	42	42	44	43	42	40	41	42	

Table 4.--Results of classification, fiber tests, carded and combed (in parentheses) yarn processing tests and chemical finishing 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 1956--Continued

Variety	State	Market Area	Delfos 9169			
			Mississippi		Leland	
Period of Harvest	Early	Midseason	Late	Early	Midseason	
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	SM	M	SIM	SIM+	SIM+	
Staple length-----inches	1-3/32	1-3/32	1-1/16	1-1/16	1-1/16	
Fiber length (Fibrograph):						
Upper half mean-----inches	1.06	1.08	1.02	1.11	1.09	
Uniformity ratio-----	78	75	74	74	75	
Fiber fineness and maturity:						
Micronaire-----reading 1/	4.1	4.0	4.1	4.2	4.3	
Fineness (Causticaire)-----ug/inch 2/	4.0	4.0	4.3	4.3	4.0	
Maturity "-----index 2/	78	77	77	77	81	
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/	95	94	88	97	106	
Zero "-----1,000 p.s.i.	78	78	80	77	79	
" "-----grams per tex 4/	38.6	38.6	39.6	38.1	39.1	
Nonlint content (Shirley Analyzer) percent:	2.8	3.2	4.0	3.5	3.8	
Color of raw cotton 5/						
Reflectance-----Rd	77.0	75.5	73.5	74.4	74.6	
Yellowness-----+b	8.2	8.2	7.2	8.6	8.6	
Sugar content-----percent:	0.2	0.2	0.1	0.3	0.2	
Acid-alkaline value-----pH units 6/	7.4	7.3	8.1	7.2	6.7	
Moisture regain (at 92% R.H.)-----percent:	17.1	16.3	15.7	16.6	17.2	
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	7.8	9.3	10.0	8.7	9.6	
Comber-----"	17.8	18.9	20.9	17.3	17.8	
Neps-----per 100 sq. in. of card web:	14	14	13	17	18	
Yarn quality:						
Yarn skein strength 7/:						
Grey:						
22s-----pounds:	119(133)	116(132)	107(127)	121(136)	120(134)	
50s-----"	41(47)	39(46)	36(44)	42(47)	43(48)	
Average break factor-----8/	2334(2638)	2251(2602)	2077(2497)	2381(2671)	2395(2674)	
Mercerized:						
22s Carded-----pounds:	126	123	116	125	124	
50s Combed-----"	(50)	(48)	(46)	(49)	(50)	
Yarn appearance (grey) 7/:						
22s-----grade:	B (B+)	B (B)	B (B+)	C+(B)	C+(B)	
50s-----"	C+(C+)	C (C+)	C+(C+)	C (C+)	C (C+)	
Average yarn appearance-----index 9/	105(110)	100(105)	105(110)	95(105)	95(105)	
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----Rd	71.6	72.2	70.7	69.8	70.4	
Yellowness-----+b	10.8	10.8	10.0	10.9	10.8	
Bleached:						
Reflectance-----Rd	83.5	83.9	83.8	82.6	84.1	
Yellowness-----+b	3.0	2.9	3.2	3.1	3.2	
Dyed in grey:						
Reflectance-----Rd	24.6	26.0	28.2	24.5	25.8	
Blueness-----+b	20.5	20.4	17.9	20.4	20.0	
Dyed after bleaching:						
Reflectance-----Rd	26.7	29.4	31.9	28.1	29.2	
Blueness-----+b	25.6	25.6	24.0	25.4	25.2	
Luster of carded and combed yarn 11/:						
22s Carded:						
Grey-----percent:	32	32	32	33	32	
Mercerized-----"	38	38	37	39	40	
50s Combed:						
Grey-----percent:	34	33	33	34	33	
Mercerized-----"	41	40	41	42	41	

Table 5.--Results of classification, fiber tests, combed yarn processing tests and chemical finishing 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 1956

Variety	Pima S-1					
	Arizona			New Mexico		
	Safford			Las Cruces		
	Early	Midseason	Late	Early	Midseason	Late
State						
Market Area						
Period of Harvest						
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----	2	3	3	3	2	3
Staple length-----inches:	1-7/16	1-7/16	1-7/16	1-7/16	1-7/16	1-7/16
Fiber length (array):						
Upper quartile-----inches:	1.43	1.44	1.45	1.46	1.44	1.40
Coefficient of variation-----percent:	27	30	30	24	30	31
Fiber fineness and maturity:						
Micronaire-----reading 1/:	3.0	3.2	3.1	2.9	2.8	2.8
Fineness (Causticaire)-----ug/inch 2/:	3.4	3.6	3.5	3.4	3.4	3.3
Maturity "-----index 2/:	80	81	79	77	76	77
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/:	156	158	161	152	147	145
Zero "-----1,000 p.s.i.:	95	100	98	95	102	97
"-----grams per tex 4/:	47.0	49.5	48.5	47.0	50.5	48.0
Nonlint content (Shirley Analyzer)-----percent:	2.2	3.1	3.6	2.7	3.0	3.4
Color of raw cotton 5/:						
Reflectance-----R _d :	69.5	65.6	65.5	67.5	69.5	67.5
Yellowness-----+b:	10.3	10.9	10.3	10.2	10.8	10.3
Sugar content-----percent:	0.2	0.3	0.4	0.1	0.3	0.3
Acid-alkaline value-----pH units 6/:	6.4	6.4	6.2	6.5	6.5	6.4
Moisture regain (at 92% R.H.)-----percent:	17.0	18.5	18.8	18.6	18.6	18.2
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	9.1	9.2	9.3	9.5	8.5	9.8
Comber-----"	14.1	15.2	15.5	12.5	16.5	16.6
Neps-----per 100 sq. in. of card web:	4	6	10	8	12	12
Yarn quality:						
Yarn skein strength:						
Grey:						
50s-----pounds:	74	73	73	74	73	71
80s-----"	40	40	40	39	39	39
Average break factor-----8/:	3450	3425	3425	3410	3385	3335
Mercerized:						
50s-----pounds:	75	77	76	77	76	73
Yarn appearance (grey):						
50s-----grade:	A	A	B+	A	B	B+
80s-----"	B+	B	B	B+	B	B
Average yarn appearance-----index 9/:	125	120	115	125	110	115
Color of 50s combed yarn 10/:						
Grey:						
Reflectance-----R _d :	65.2	66.4	66.4	65.6	66.4	65.6
Yellowness-----+b:	13.1	13.2	13.2	13.1	13.2	13.2
Bleached:						
Reflectance-----R _d :	83.6	84.1	83.4	84.2	84.3	83.4
Yellowness-----+b:	4.2	4.0	4.1	4.3	4.2	4.3
Dyed in grey:						
Reflectance-----R _d :	23.2	24.4	23.8	23.6	22.8	22.4
Blueness-----+b:	15.0	14.0	14.8	14.8	15.0	14.8
Dyed after bleaching:						
Reflectance-----R _d :	28.8	28.7	27.7	29.1	28.8	27.1
Blueness-----+b:	25.2	25.6	26.0	25.2	25.7	26.2
Luster of 50s combed yarn 11/:						
Grey-----percent:	41	41	40	42	40	41
Mercerized-----"	53	48	50	53	49	51

Table 5.--Results of classification, fiber tests, combed yarn processing tests and chemical finishing 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 1956--
Continued

Variety		Pima S-1					
State		Arizona					
Market Area		Marana			Phoenix		
Period of Harvest		Early	Midseason	Late	Early	Midseason	Late
RAW COTTON QUALITY							
Classification (official standards)							
Grade-----		2	3	3	2	2	3
Staple length-----inches:		1-3/8	1-3/8	1-3/8	1-7/16	1-7/16	1-7/16
Fiber length (array):							
Upper quartile-----inches:		1.43	1.44	1.38	1.45	1.45	1.43
Coefficient of variation-----percent:		29	30	29	28	27	28
Fiber fineness and maturity:							
Micronaire-----reading 1/:		2.9	3.2	2.8	3.1	3.1	3.1
Fineness (Causticaire)-----uh/inch 2/:		3.4	3.4	3.3	3.4	3.4	3.5
Maturity "-----index 2/:		77	82	76	80	81	80
Fiber tensile strength (Pressley):							
1/8" gauge-----index 3/:		151	154	154	155	158	157
Zero "-----1,000 p.s.i.:		94	98	101	96	98	101
"-----grams per tex 4/:		46.5	48.5	50.0	47.5	48.5	50.0
Nonlint content (Shirley Analyzer) percent:		2.2	3.7	3.1	2.0	2.4	2.9
Color of raw cotton 5/:							
Reflectance-----Rd:		69.8	70.5	67.0	70.4	70.5	67.8
Yellowness-----+b:		10.7	10.4	11.2	10.9	10.0	10.2
Sugar content-----percent:		0.2	0.3	0.3	0.0	0.1	0.1
Acid-alkaline value-----pH units 6/:		6.4	6.4	6.6	6.8	6.5	6.6
Moisture regain (at 92% R.H.)-----percent:		16.9	17.5	18.4	17.0	17.3	16.9
PROCESSING RESULTS							
Manufacturing waste:							
Picker and card-----percent:		8.8	10.0	9.2	9.6	8.4	8.6
Comber waste-----"		15.9	16.1	17.2	15.8	15.4	15.8
Neps-----per 100 sq. in. of card web:		6	6	13	10	7	9
Yarn quality:							
Yarn skein strength:							
Grey:							
50s-----pounds:		72	72	73	72	73	73
80s-----"		39	39	40	40	41	40
Average break factor-----8/:		3360	3360	3425	3400	3465	3425
Mercerized:							
50s-----pounds:		75	75	76	74	76	76
Yarn appearance (grey):							
50s-----grade:		A	A	B+	B+	B+	B+
80s-----"		B+	B+	B	B	B+	B
Average yarn appearance-----index 9/:		125	125	115	115	120	115
Color of 50s combed yarn 10/:							
Grey:							
Reflectance-----Rd:		66.7	68.0	66.7	69.0	68.9	68.8
Yellowness-----+b:		13.2	13.1	13.2	13.3	13.0	12.7
Bleached:							
Reflectance-----Rd:		84.3	84.4	84.0	85.8	84.2	83.6
Yellowness-----+b:		4.0	4.0	4.2	4.1	4.1	4.2
Dyed in grey:							
Reflectance-----Rd:		22.6	24.6	23.7	25.2	25.9	26.2
Blueness----- -b:		16.2	14.6	15.0	15.6	14.9	15.2
Dyed after bleaching:							
Reflectance-----Rd:		28.1	29.2	28.8	29.5	30.7	30.4
Blueness----- -b:		25.8	25.5	25.5	25.2	25.0	24.7
Luster of 50s combed yarn 11/:							
Grey-----percent:		40	40	40	39	39	39
Mercerized-----"		48	49	49	49	49	49

Table 6.--Averages of selected fiber properties, carded yarn processing tests, and chemical finishing tests for specified varieties of upland cotton processed at a card production rate of 12-1/2 pounds per hour, crop of 1956

Variety	Lockett 88	Lockett SP-1	Paymaster 54B	Paymaster 101	Parrott
Number of lots tested	3	3	3	3	3
RAW COTTON QUALITY					
Classification (official standards)					
Grade-----index:	102.7	101.3	95.7	99.3	101.3
Staple length-----32ds inch:	28.7	29.0	29.7	30.3	29.0
Fiber length (Fibrograph):					
Upper half mean-----inches:	.81	.85	.87	.90	.89
Uniformity ratio-----	81	81	81	80	81
Fiber fineness and maturity:					
Micronaire-----reading 1/:	4.3	4.0	3.8	3.7	4.6
Fineness (Caustic)-----ug/inch 2/:	4.6	4.2	3.9	4.0	4.7
Maturity "-----index 2/:	76	76	74	74	79
Fiber tensile strength (Pressley):					
1/8" gauge-----index 3/:	99	89	99	100	103
Zero "-----1,000 p.s.i.:	85	75	75	80	86
" "-----grams per tex 4/:	42.1	37.1	37.1	39.6	42.6
Nonlint content (Shirley Analyzer) percent:	1.8	2.9	2.7	3.1	3.0
Color of raw cotton 5/:					
Reflectance-----Rd:	74.8	75.3	74.4	74.6	73.8
Yellowness-----+b:	9.2	8.2	8.7	9.0	9.0
Sugar content-----percent:	0.2	0.3	0.3	0.3	0.3
Acid-alkaline value-----pH units 6/:	7.1	6.4	6.8	6.4	6.6
Moisture regain (at 92% R.H.)-----percent:	17.0	17.4	18.0	19.0	17.9
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	8.1	8.9	8.3	9.1	8.8
Neps-----per 100 sq. in. of card web:	16	20	36	23	11
Yarn quality:					
Yarn skein strength:					
Grey:					
8s-----pounds:	323	294	331	331	336
22s-----pounds:	100	91	102	104	105
Average break factor-----8/:	2392	2176	2446	2470	2499
Yarn appearance (grey):					
8s-----index:	113	117	103	107	117
22s-----index:	107	100	97	97	103
Average yarn appearance-----index 9/:	110	108	100	102	110
Color of 22s carded yarn 10/:					
Grey:					
Reflectance-----Rd:	70.2	70.4	71.0	71.1	69.9
Yellowness-----+b:	11.9	10.7	11.1	11.5	11.3
Bleached:					
Reflectance-----Rd:	82.3	81.0	82.4	82.5	82.4
Yellowness-----+b:	3.6	3.6	3.5	3.5	3.7
Dyed in grey:					
Reflectance-----Rd:	23.1	23.1	23.3	22.7	22.7
Blueness-----+b:	20.5	21.1	21.2	21.3	20.7
Dyed after bleaching:					
Reflectance-----Rd:	27.2	27.6	27.1	27.3	26.6
Blueness-----+b:	25.9	25.6	26.1	25.6	26.3
Luster of 22s carded yarn 11/:					
Grey-----percent:	30	29	29	30	31

For footnotes see page 63

Table 7.--Averages of selected fiber properties, carded yarn processing tests, and chemical finishing tests for specified varieties of upland cotton processed at a card production rate of 9-1/2 pounds per hour, crop of 1956

Variety	Acala 4-42	Arizona 44	Coker 100W	Deltapine 15	Deltapine Fox	Deltapine (TPSA)
Number of lots tested	27	18	59	116	6	12
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----index:	99.0	98.8	96.6	97.6	97.0	100.4
Staple length-----32ds inch:	34.1	33.9	33.2	33.3	33.5	32.9
Fiber length (Fibrograph):						
Upper half mean-----inches:	1.07	1.07	1.02	1.02	1.04	1.00
Uniformity ratio-----	81	80	78	80	80	81
Fiber fineness and maturity:						
Micronaire-----reading 1/:	4.5	4.3	4.1	4.4	4.5	4.2
Fineness (Causticaire)-----ug/inch 2/:	4.5	4.2	4.2	4.4	4.5	4.2
Maturity "-----index 2/:	79	79	77	79	79	79
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/:	117	110	97	104	103	101
Zero "-----1,000 p.s.i.:	90	90	79	83	82	80
" "-----grams per tex 4/:	44.6	44.6	39.1	41.1	40.6	39.6
Nonlint content (Shirley Analyzer)-----percent:	3.1	3.6	3.3	3.1	2.7	2.4
Color of raw cotton 5/:						
Reflectance-----Rd:	74.9	73.5	70.5	73.1	72.6	76.4
Yellowness-----+b:	7.9	8.7	8.6	8.5	8.4	8.7
Sugar content-----percent:	0.3	0.3	0.1	0.2	0.2	0.2
Acid-alkaline value-----pH units 6/:	6.9	6.9	7.8	7.4	7.4	7.1
Moisture regain (at 92% R.H.)-----percent:	17.8	18.2	16.6	16.3	16.7	17.4
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	8.5	9.3	8.5	8.5	8.4	7.5
Neps-----per 100 sq. in. of card web:	15	19	16	14	14	14
Yarn quality:						
Yarn skein strength:						
22s Grey-----pounds:	128	120	117	116	112	115
22s Mercerized-----"	134	127	123	122	119	120
50s Grey-----"	45	42	41	40	39	39
Average break factor-----8/:	2533	2370	2312	2276	2207	2240
Yarn appearance (grey):						
22s-----index:	100	93	103	108	108	112
50s-----"	89	81	96	96	95	99
Average yarn appearance-----index 9/:	94	87	100	102	102	106
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----Rd:	73.2	71.8	69.2	71.1	70.2	72.8
Yellowness-----+b:	10.4	11.0	11.1	11.1	10.8	11.6
Bleached:						
Reflectance-----Rd:	83.5	83.4	82.6	83.1	83.0	83.7
Yellowness-----+b:	3.2	3.4	3.8	3.3	3.4	3.1
Dyed in grey:						
Reflectance-----Rd:	24.3	23.4	25.4	25.0	25.3	23.9
Blueness-----+b:	21.6	21.1	19.4	20.0	19.9	21.8
Dyed after bleaching:						
Reflectance-----Rd:	28.1	27.6	28.7	28.3	29.1	27.0
Blueness-----+b:	25.8	25.9	24.6	25.6	25.2	26.6
Luster of 22s carded yarn 11/:						
Grey-----percent:	32	32	33	32	32	31
Mercerized-----"	38	38	38	38	37	36

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Table 7.--Averages of selected fiber properties, carded yarn processing tests, and chemical finishing tests for specified varieties of upland cotton processed at a card production rate of 9-1/2 pounds per hour, crop of 1945--Continued

Variety	Delfos 9169	Dixie King	Empire	Lankart 57	Lankart 611	Northern Star
Number of lots tested	3	3	6	27	3	6
RAW COTTON QUALITY						
Classification (official standards)						
Grade-----index:	102.7	94.3	94.0	98.7	100.3	97.5
Staple length-----32ds inch:	31.3	33.3	33.0	29.7	31.3	32.0
Fiber length (Fibrograph):						
Upper half mean-----inches:	.99	1.03	1.02	.92	.97	.99
Uniformity ratio-----	81	80	80	80	80	80
Fiber fineness and maturity:						
Micronaire-----reading 1/:	3.8	4.4	4.2	4.1	3.7	4.0
Fineness (Causticaire)-----ug/inch 2/:	3.8	4.5	4.4	4.3	4.0	4.2
Maturity "-----index 2/:	75	79	77	76	73	75
Fiber tensile strength (Pressley):						
1/8" gauge-----index 3/:	98	102	99	98	101	100
Zero "-----1,000 p.s.i.:	84	92	80	80	78	79
" "-----grams per tex 4/:	41.6	45.4	39.6	39.6	38.6	39.1
Nonlint content (Shirley Analyzer)-----percent:	2.4	3.9	3.6	3.6	2.7	3.6
Color of raw cotton 5/:						
Reflectance-----R _d :	75.8	71.2	72.0	72.5	73.7	74.3
Yellowness-----+b:	9.2	8.2	8.7	9.4	8.5	8.7
Sugar content-----percent:	0.3	0.2	0.2	0.3	0.4	0.3
Acid-alkaline value-----pH units 6/:	6.9	7.8	7.2	6.9	6.8	7.0
Moisture regain (at 92% R.H.)-----percent:	17.7	16.8	17.1	17.9	18.5	18.2
PROCESSING RESULTS						
Manufacturing waste:						
Picker and card-----percent:	8.2	9.1	9.2	9.5	8.8	8.8
Neps-----per 100 sq. in. of card web:	21	21	17	16	21	20
Yarn quality:						
Yarn skein strength:						
22s Grey-----pounds:	104	108	114	104	104	110
22s Mercerized-----"	110	119	119	107	107	111
50s Grey-----"	35	38	40	34	36	36
Average break factor-----8/:	2019	2138	2254	1994	2044	2110
Yarn appearance (grey):						
22s-----index:	107	107	105	103	100	102
50s-----"	97	93	97	91	83	83
Average yarn appearance-----index 9/:	102	100	101	97	92	92
Color of 22s carded yarn 10/:						
Grey:						
Reflectance-----R _d :	71.9	67.8	70.5	68.5	70.5	71.2
Yellowness-----+b:	11.7	10.9	11.1	11.9	10.9	11.0
Bleached:						
Reflectance-----R _d :	84.2	82.2	82.1	82.6	81.6	83.2
Yellowness-----+b:	3.3	3.5	3.6	3.5	3.3	3.4
Dyed in grey:						
Reflectance-----R _d :	24.4	26.6	24.4	22.7	22.6	22.8
Blueness-----+b:	20.8	18.7	20.3	19.8	21.3	21.2
Dyed after bleaching:						
Reflectance-----R _d :	27.8	29.8	28.0	26.6	26.8	26.8
Blueness-----+b:	26.4	25.0	25.5	26.2	26.0	26.2
Luster of 22s carded yarn 11/:						
Grey-----percent:	30	33	32	31	30	30
Mercerized-----"	36	38	38	37	36	36

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Continued on page 59

Table 7.--Averages of selected fiber properties, carded yarn processing tests, and chemical finishing tests for specified varieties of upland cotton processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Variety	Plains	Stoneville 2B	Stoneville 7	Stoneville 3202	Stardel
Number of lots tested	6	3	3	3	3
RAW COTTON QUALITY					
Classification (official standards)					
Grade-----index:	100.0	98.7	101.3	92.9	96.0
Staple length-----32ds inch:	32.7	33.0	34.3	33.6	34.0
Fiber length (Fibrograph):					
Upper half mean-----inches:	.96	1.01	1.02	1.04	1.04
Uniformity ratio-----	78	80	80	80	80
Fiber fineness and maturity:					
Micronaire-----reading 1/:	4.3	4.1	4.3	4.1	4.3
Fineness (Causticaire)-----ug/inch 2/:	4.3	4.4	4.6	4.3	4.4
Maturity "-----index 2/:	78	76	77	77	79
Fiber tensile strength (Pressley):					
1/8" gauge-----index 3/:	94	100	98	97	114
Zero "-----1,000 p.s.i.:	82	84	79	83	93
" "-----grams per tex 4/:	40.6	41.6	39.1	41.1	46.0
Nonlint content (Shirley Analyzer)-----percent:	2.5	3.2	2.0	4.1	3.1
Color of raw cotton 5/:					
Reflectance-----Rd:	76.1	74.9	76.9	69.8	73.2
Yellowness-----+b:	8.5	8.1	7.9	7.8	8.2
Sugar content-----percent:	0.1	0.2	0.2	0.2	0.1
Acid-alkaline value-----pH units 6/:	7.4	7.3	7.4	7.8	7.5
Moisture regain (at 92% R.H.)-----percent:	16.3	17.2	17.1	16.7	16.1
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	8.0	8.4	7.9	9.7	7.9
Neps-----per 100 sq. in. of card web:	14	14	13	15	16
Yarn quality:					
Yarn skein strength:					
22s Grey-----pounds:	117	111	110	103	123
22s Mercerized-----"	122	118	114	112	134
50s Grey-----"	40	38	37	36	42
Average break factor-----8/:	2287	2171	2135	2033	2403
Yarn appearance (grey):					
22s-----index:	107	107	110	107	107
50s-----"	102	93	103	93	93
Average yarn appearance-----index 9/:	104	100	106	100	100
Color of 22s carded yarn 10/					
Grey:					
Reflectance-----Rd:	71.8	71.7	73.7	68.9	70.6
Yellowness-----+b:	10.9	10.8	10.5	10.4	10.9
Bleached:					
Reflectance-----Rd:	83.0	83.5	83.3	82.5	82.7
Yellowness-----+b:	3.4	3.3	3.0	3.3	3.4
Dyed in grey:					
Reflectance-----Rd:	24.9	24.9	25.0	26.4	25.1
Blueness-----+b:	20.4	20.3	21.1	18.8	19.8
Dyed after bleaching:					
Reflectance-----Rd:	28.4	28.4	28.1	29.4	28.5
Blueness-----+b:	25.0	25.1	26.1	24.7	25.2
Luster of 22s carded yarn 11/:					
Grey-----percent:	32	30	30	31	32
Mercerized-----"	37	37	37	37	39

For footnotes see page 63

Table 8.--Averages of selected fiber properties, carded and combed (in parentheses) yarn processing tests and chemical finishing test results for specified varieties of upland cotton processed at a card production rate of 6-1/2 pounds per hour, crop of 1956

Variety	Acala 1517 C	Acala 1517 BR	Acala 4-42	Arizona 44
Number of lots tested	47	3	3	3
RAW COTTON QUALITY				
Classification (official standards)				
Grade-----index:	103.2	103.3	99.3	99.3
Staple length-----32ds inch:	36.3	35.3	34.3	34.0
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.15	1.11	1.08	1.07
Uniformity ratio-----	79	79	80	79
Fiber fineness and maturity:				
Micronaire-----reading 1/:	3.7	4.3	4.6	4.0
Fineness (Causticaire)-----ug/inch 2/:	3.7	4.1	4.4	4.0
Maturity "-----index 2/:	76	80	81	78
Fiber tensile strength (Pressley):				
1/8" gauge-----index 3/:	115	113	114	105
Zero "-----1,000 p.s.i.:	85	88	84	83
" "-----grams per tex 4/:	42.1	43.6	41.6	41.1
Nonlint content (Shirley Analyzer)-----percent:	2.4	1.8	3.5	4.3
Color of raw cotton 5/:				
Reflectance-----Rd:	78.7	79.7	75.4	74.4
Yellowness-----+b:	8.1	8.3	7.5	8.8
Sugar content-----percent:	0.4	0.3	0.2	0.4
Acid-alkaline value-----pH units 6/:	6.6	6.9	6.6	6.6
Moisture regain (at 92% R.H.)-----percent:	18.7	17.8	17.8	19.1
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	8.1	7.6	9.2	10.1
Comber-----"	14.7	14.6	15.5	17.2
Neps-----per 100 sq. in. of card web:	18	14	15	18
Yarn quality:				
Yarn skein strength 7/:				
Grey:				
22s-----pounds:	141(155)	142(156)	132(147)	127(141)
50s-----"	51(56)	50(55)	47(52)	45(50)
Average break factor-----8/:	2818(3094)	2820(3096)	2627(2929)	2526(2805)
Mercerized:				
22s carded-----pounds:	147	151	136	132
50s combed-----"	(58)	(58)	(54)	(52)
Yarn appearance (grey) 7/:				
22s-----index:	95(107)	110(120)	100(108)	93(100)
50s-----"	88(98)	100(110)	90(100)	90(100)
Average yarn appearance-----index 2/:	92(103)	105(115)	95(103)	92(100)
Color of 22s carded yarn 10/:				
Grey:				
Reflectance-----Rd:	75.0	73.5	73.2	71.9
Yellowness-----+b:	10.7	10.5	10.2	10.9
Bleached:				
Reflectance-----Rd:	84.6	83.5	83.2	83.0
Yellowness-----+b:	3.0	3.0	3.0	3.2
Dyed in grey:				
Reflectance-----Rd:	22.8	22.8	23.1	23.0
Blueness-----+b:	22.2	22.0	22.7	21.6
Dyed after bleaching:				
Reflectance-----Rd:	27.0	26.7	27.0	27.0
Blueness-----+b:	25.8	26.1	26.5	26.1
Luster of carded and combed yarn 11/:				
22s carded:				
Grey-----percent:	32	34	32	32
Mercerized-----"	39	39	38	36
50s combed:				
Grey-----percent:	34	34	34	34
Mercerized-----"	43	44	42	42

Table 8.--Averages of selected fiber properties, carded and combed (in parentheses) yarn processing tests and chemical finishing test results for specified varieties of upland cotton processed at a card production rate of 6-1/2 pounds per hour, crop of 1956--
Continued

Variety	Coker 100 W	Coker 124	Deltapine 15	Delfos 9169
Number of lots tested	5	6	6	14
RAW COTTON QUALITY				
Classification (official standards)				
Grade-----index:	95.6	91.5	96.5	99.4
Staple length-----32ds inch:	33.0	33.7	34.3	34.0
Fiber length (Fibrograph):				
Upper half mean-----inches:	.99	1.06	1.06	1.06
Uniformity ratio-----:	80	79	80	76
Fiber fineness and maturity:				
Micronaire-----reading 1/:	4.3	4.0	4.4	4.1
Fineness (Causticaire)-----ug/inch 2/:	4.3	4.0	4.4	4.2
Maturity "-----index 2/:	78	78	79	78
Fiber tensile strength (Pressley):				
1/8" gauge-----index 3/:	99	108	105	97
Zero "-----1,000 p.s.i.:	82	84	84	80
" "-----grams per tex 4/:	40.6	41.6	41.6	39.6
Nonlint content (Shirley Analyzer)-----percent:	3.3	4.0	2.9	2.9
Color of raw cotton 5/:				
Reflectance-----Rd:	70.0	72.4	72.9	75.4
Yellowness-----+b:	8.9	7.5	8.1	8.1
Sugar content-----percent:	0.1	0.2	0.2	0.2
Acid-alkaline value-----pH units 6/:	7.7	7.6	7.2	7.2
Moisture regain (at 92% R.H.)-----percent:	16.4	16.2	16.6	16.5
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	8.8	9.7	8.7	8.4
Comber-----"	17.4	17.4	16.7	17.8
Neps-----per 100 sq. in. of card web:	12	18	14	14
Yarn quality:				
Yarn skein strength 7/:				
Grey:				
22s-----pounds:	119(133)	128(143)	123(138)	119(134)
50s-----"	40(46)	45(51)	43(48)	41(47)
Average break factor-----8/:	2309(2613)	2533(2848)	2428(2718)	2334(2649)
Mergerized:				
22s carded-----pounds:	126	135	131	125
50s combed-----"	(48)	(53)	(51)	(49)
Yarn appearance (grey) 7/:				
22s-----index:	108(120)	100(108)	107(118)	108(116)
50s-----"	98(106)	92(100)	97(105)	97(104)
Average yarn appearance-----index 9/:	103(113)	96(104)	102(112)	102(110)
Color of 22s carded yarn 10/:				
Grey:				
Reflectance-----Rd:	67.6	69.8	70.6	71.6
Yellowness-----+b:	11.6	10.4	10.6	10.7
Bleached:				
Reflectance-----Rd:	80.9	82.4	83.2	83.4
Yellowness-----+b:	5.5	3.3	3.1	3.1
Dyed in grey:				
Reflectance-----Rd:	25.8	25.2	24.7	25.4
Blueness-----b:	18.0	20.0	20.1	20.3
Dyed after bleaching:				
Reflectance-----Rd:	29.2	28.7	28.1	28.7
Blueness-----b:	23.3	24.9	25.4	25.3
Luster of carded and combed yarn 11/:				
22s carded:				
Grey-----percent:	34	33	33	32
Mergerized-----"	39	39	40	38
50s combed:				
Grey-----percent:	35	34	34	33
Mergerized-----"	43	42	43	42

Table 9.--Averages of selected fiber properties, combed yarn processing tests and chemical finishing tests for American Egyptian cotton processed at a card production rate of 4-1/2 pounds per hour, crop of 1956

Variety	Pima S-1
Number of lots tested	12
RAW COTTON QUALITY	
Classification (official standards)	
Grade-----Index:	2.6
Staple length-----32ds inches:	45.5
Fiber length (array):	
Upper quartile-----inches:	1.43
Coefficient of variation-----percent:	29
Fiber fineness and maturity:	
Micronaire-----reading 1/:	3.0
Fineness (Causticaire)-----ug/inch 2/:	3.4
Maturity "-----index 2/:	79
Fiber tensile strength (Pressley):	
1/8" gauge-----index 3/:	154
Zero "-----1,000 p.s.i.:	98
" "-----grams per tex 4/:	48.5
Nonlint content (Shirley Analyzer)-----percent:	2.9
Color of raw cotton 5/:	
Reflectance-----Rd:	68.4
Yellowness-----+b:	10.5
Sugar content-----percent:	0.2
Acid-alkaline value-----pH units 6/:	6.5
Moisture regain (at 92% R.H.)-----percent:	17.8
PROCESSING RESULTS	
Manufacturing waste:	
Picker and card-----percent:	9.2
Comber-----"	15.6
Neps-----per 100 sq. in. of card web:	9
Yarn quality:	
Yarn skein strength:	
Grey:	
50s-----pounds:	73
80s-----"	40
Average break factor-----8/:	3425
Mercerized:	
50s-----pounds:	75
Yarn appearance:	
50s-----grade:	123
80s-----"	114
Average yarn appearance-----index 9/:	119
Color of 50s combed yarn 10/:	
Grey:	
Reflectance-----Rd:	67.0
Yellowness-----+b:	13.1
Bleached:	
Reflectance-----Rd:	84.1
Yellowness-----+b:	4.1
Dyed in grey:	
Reflectance-----Rd:	24.0
Blueness-----b:	15.0
Dyed after bleaching:	
Reflectance-----Rd:	28.9
Blueness-----b:	25.5
Luster of 50s combed yarn 11/:	
Grey-----percent:	40
Mercerized-----"	50

For footnotes see page 63

FOOTNOTES

- 1/ Fiber fineness and maturity in combination as measured on untreated samples using the curvilinear scale for upland cotton and the special scale for American-Egyptian cotton.
- 2/ Determined by the Causticaire method using the Micronaire instrument.
- 3/ 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/ Tex is the universal unit for designating linear density of textile materials as adopted by the International Organization for Standardization (ISO). A tex unit equals the weight in grams of 1,000 meters of the material.
- 5/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
- 6/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.
- 7/ Data in parentheses are for combed yarn.
- 8/ Based on yarn skein strength (number x strength) of the two yarn numbers spun.
- 9/ Based on two numbers spun. Index of average quality equals 100.
- 10/ Reported in terms of R_d and b scales of the Gardner Automatic Color Difference Meter. R_d values indicate percent reflectance from 0 to 100, +b values indicate degree of yellowness and -b values indicate the degree of blueness.
- 11/ Measured by means of the Hunterlab Cotton Lustermeter with 0 equaling no gloss and 100 percent maximum gloss.

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 tables 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, 8, and 9, is based on the average grade classification for the early, midseason, and late-harvested spinning lots. The index is designed to 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 70.

The grading of cotton, as the term is generally understood, is accomplished by evaluating in relation to the official standards, 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 73. 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 an estimate of the length 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, influence 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 fibers 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
Below 75.....	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, this method consists of parallelizing the fibers in a representative 75-milligram sample of cotton through a series of combs, separating and arraying the fibers according to length, into length groups at 1/8-inch intervals, and measuring and weighing the fibers in each length group. Values are calculated and 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
Above 34.....	High variability

Fiber fineness and maturity were determined both in combination by the Micronaire method and separately by the Causticaire method. Micronaire readings which indicate the resistance to the passage of air through a 50-grain specimen compressed to a given volume were made for each lot of cotton. A linear scale for the Micronaire was initially adopted to indicate a direct reading in micrograms-per-inch of fiber. Further studies, however, indicated a curvilinear relationship between Micronaire readings and actual weight-per-inch determinations on American upland cottons. As a result of these studies, a curvilinear scale for upland cotton was adopted in September 1950.

Studies of the adaptability of the Micronaire for measuring the fineness of American Egyptian and other extra long staple cottons indicated that neither the original linear scale or the revised curvilinear scale for upland cottons gave satisfactory results in relation to actual weight-per-inch for such cottons. A special scale developed specifically for these cottons was, therefore, adopted in January 1952.

Micronaire readings for both American upland and American Egyptian cottons may differ from the actual weight-per-inch for specific samples depending upon the fiber characteristics of specific samples. Because of these discrepancies, Micronaire results are reported in terms of "Micronaire reading" instead of micrograms-per-inch.

Fiber fineness and maturity were determined separately by the Causticaire method in addition to the Micronaire readings which provide a measurement of these properties in combination. A Micronaire test using the Causticaire scale is made on specimens of raw cotton after which the same specimens are treated with sodium hydroxide (40 tw) and retested on the Micronaire.

The caustic treatment swells the fibers causing them to become more cylindrical in shape thereby increasing air-permeability. Fiber maturity as well as fiber weight-per-inch are calculated from two readings on the Causticaire scale.

"Maturity index" is the ratio of the untreated to the treated Causticaire readings multiplied by 100. This value 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 the maturity results obtained by the Causticaire method have greater significance from the standpoint of relationship to spinning performance than maturity results obtained by other available methods.

As a rule, long staple cottons are fine fibered and short staple cottons are coarse fibered. The long staple American cottons have become somewhat coarser and the short staple cottons have become finer in recent years so that the former relationship between fiber length and fiber fineness has become less pronounced in American cotton than it was several years ago. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing. The desirability of fiber fineness, therefore, depends on the specific end product or use. The Micronaire and Causticaire fineness values are essentially the same for most cottons, but they may vary appreciably for cottons having extreme maturity values. For American upland cottons, the following adjective ratings may be applied to the fineness data shown in the tables:

Fiber Fineness

(Micronaire readings or Micrograms-per-inch)

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. On the other hand, fiber maturity is a desirable characteristic from the standpoint of low picker and card waste, as indicated by statistical analyses. The following descriptive terms may be applied to the maturity data shown in the tables:

Fiber Maturity

(index)

Above 81.....	Mature
76 to 81.....	Average
70 to 75.....	Immature
Below 70.....	Very immature

Fiber strength is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the 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 shown 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 used widely 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 strength-weight ratio of 3.19, which was the average strength of the 1954 commercial crop of upland cotton in the United States and provides the base for calculating the index. There is a tendency, however, for the index values of short staple cottons to average lower than 100 and for the index values of long staple cottons to average higher than 100 because the 1/8-inch gauge fiber strength results are highly correlated with fiber length. 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 formulae:

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

$$(2) S_3 = S_2 \times 6.80$$

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 tex (Pressley 1/8-inch gauge)

The results for the 0 gauge tests are reported in the usual terms of thousand pounds per square inch and also in terms of grams per tex. The

results reported may be converted to strength-weight ratio by applying either of the following formulae:

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

$$(2) S_5 = \frac{S_6}{5.36}$$

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

<u>Thousand psi</u>	<u>Designation</u>	<u>Grams per tex</u>
Above 95	Very strong	Above 47
86 to 95	Strong	42 to 47
76 to 85	Average	37 to 42
66 to 75	Fair	32 to 37
Below 66	Weak	Below 32

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 for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The non-lint values reported in tables 2 through 9 are distinguished from total picker and card waste in that practically no fiber is included; whereas textile mill wastes include appreciable amounts of fiber. Based on tests made of bales of cotton used in the official standards for grade of upland cotton, the following scale has been developed to represent average percentages of nonlint for the various white 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 average 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 made on cotton used in the official grade standards. Differences between results obtained for individual lots, as reported in tables 2 through 9, 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 to 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.

Measurements of color of raw cotton were made on samples from each lot by using the Nickerson-Hunter Colorimeter. During previous years, color measurements were made on samples of cleaned lint from the Shirley Analyzer tests. The color values reported in tables 2 through 9 are percentage reflectance in terms of R_d and yellowness in terms of $+b$. Increasing R_d values indicate increasing brightness of the cotton and increasing $+b$ values indicate increasing degrees of yellowness. The color values may be plotted on a special color diagram (figure 2) for comparison with the color of the cotton in the official grade standards.

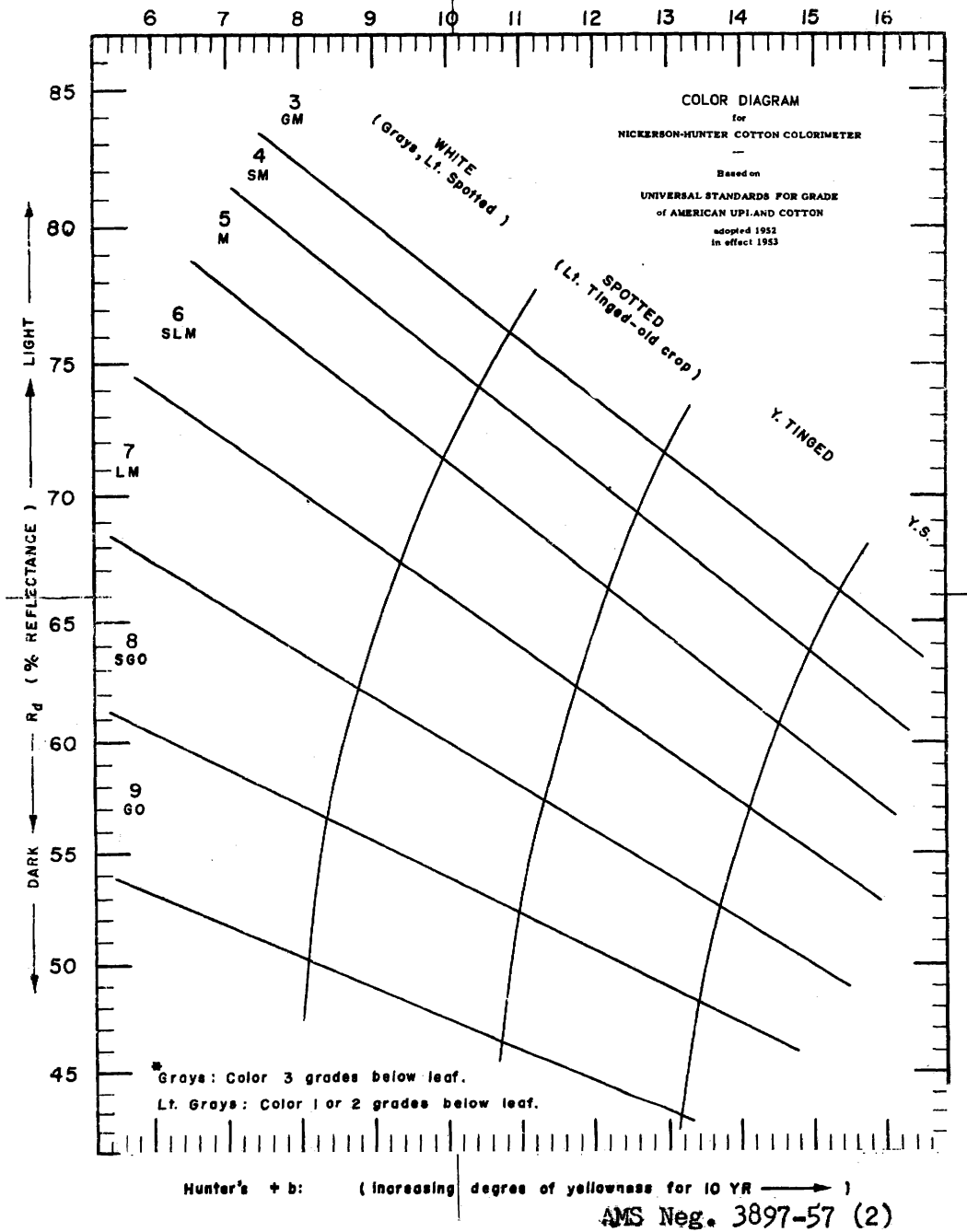


Figure 2.

Sugar content, as determined by quantitative chemical analysis, is reported for each spinning test lot in terms of percentage of soluble reducing sugar. 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.

Acid-alkaline values in terms of pH units are reported as determined on water extracts from samples of cotton for each spinning test lot. pH values below 7.0 indicate acidity and those above 7.0 indicate alkalinity. Values above 7.0 when associated with low sugar content may indicate fiber deterioration from the action of micro-organisms.

Moisture regain tests were made for each spinning test lot. The results reported in tables 2 through 9 are expressed as percentage of moisture in the sample after being conditioned at 92 percent relative humidity. The percentage data are based on the dry weight of the samples. High regain is generally considered desirable in the cotton textile industry. The following descriptive categories may aid in evaluating the results reported:

<u>Moisture regain</u> <u>Percent</u>	<u>Designation</u>
Above 18	High
16 to 18	Average
Below 16	Low

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:

<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 64. The rate at which the cotton is 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 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:

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

Since nep content of card web is affected appreciably by the rate of card production, direct comparisons between cottons in relation to the foregoing categories, should be limited to data in table 3. Data with respect to nep content reported in tables 2, 4, and 5 are comparable on a relative basis only for each of the respective rates of card production indicated.

Yarn strength is perhaps the most important and reliable test of yarn quality. Yarn strength not only determines 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 fabric strength as well as to fiber properties than single strand yarn strength. Skein strength data for each yarn number and the average "break factor" for grey or natural yarn (number x strength) for the two numbers spun, are reported for each lot in tables 2 through 5 and variety averages are reported in tables 6 through 9. 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.

Skein strength of mercerized 22s carded yarn, as shown in tables 3 and 4, and of 50s combed yarn, as shown in tables 4 and 5, when compared with strength of grey yarn, provide an indication of the relative response of different cottons from the standpoint of increase in yarn strength resulting from the mercerization process.

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:

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.

<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

Chemical Finishing Tests and Their Evaluation

Information with respect to the bleaching and dyeing properties of different varieties and growths of cotton is of particular significance to textile manufacturers from the standpoint of providing a basis for avoiding problems that may result from blending different varieties and growths having different dyeing properties. Data with respect to the chemical finishing properties of the principal varieties and growths of cotton as herein reported may thus be used as a basis for selecting cottons of similar finishing properties.

Standard small scale bleaching, dyeing and mercerizing tests on yarns processed from cottons from the 1956 crop were performed in essentially the same manner as those for the 1955 crop which were reported in Agriculture Information Bulletin No. 167, published October 1956 (12). In these tests, samples of yarn were bleached, dyed in the grey, bleached and dyed, and mercerized. Color, luster, and skein strength tests were made on the treated yarn as an indication of relative finishing performance. Color measurements were made on grey yarn, bleached yarn, dyed yarn and bleached and dyed yarn. Luster measurements were made on grey and mercerized yarn. Skein strength tests were made on the mercerized yarn for comparison with the strength of grey yarn.

Color measurements of cotton yarn samples reported in tables 1 through 9 were made on a Gardner Automatic Color Difference Meter (see Fig. 3 in Agriculture Information Bulletin No. 167) and are reported in terms of 2 of the 3 scales of this instrument, R_d and $+b$. The R_d scale measures percentage of diffuse reflectance from 0 to 100. The b scale provides a measure of yellowness in the direction of $+b$ and of blueness in the direction of $-b$; the degree of yellowness or blueness increasing as the scale numbers increase. To plot the R_d and b data, the R_d should be used as the vertical ordinate and b as the horizontal ordinate. This is similar to the manner in which color is measured and reported for raw cotton in relation to the official grade standards diagram (Fig. 2).

It should be pointed out, however, that because the color factors R_d and b are not independent of each other, they should be considered together in any overall interpretation. The following tentative adjective description of color values will serve as an aid in the interpretation of the color results reported in tables 2 through 9:

1. Relative diffuse reflectance (R_d) of grey and bleached yarn

<u>Grey yarn</u>	<u>Bleached yarn</u>	<u>Adjective description</u>
Below 67	Below 80	Low (poor)
67 - 72	80 - 84	Average
Above 72	Above 84	High (good)

2. Relative yellowness (+b) of grey and bleached yarn

<u>Grey yarn</u>	<u>Bleached yarn</u>	<u>Adjective description</u>
Below 10.5	Below 2.5	Low (good)
10.5 - 12.4	2.5 - 3.9	Average
Above 12.4	Above 3.9	High (poor)

3. Relative diffuse reflectance (R_d) of yarn dyed in grey and yarn dyed after bleaching *

<u>Dyed in Grey</u>	<u>Dyed after bleaching</u>	<u>Adjective description</u>
Below 23	Below 26	Low (good)
23 - 26	26 - 29	Average
Above 26	Above 29	High (poor)

4. Relative blueness (-b) of yarn dyed in grey and yarn dyed after bleaching

<u>Dyed in Grey</u>	<u>Dyed after bleaching</u>	<u>Adjective description</u>
Below 18.0	Below 25.0	Light (low dye uptake)
18.0 - 21.9	25.0 - 26.5	Average (average dye uptake)
Above 21.9	Above 26.5	Deep (high dye uptake)

* Note that reflectance is reversed between grey and dyed materials. Low reflectance indicates good, and high reflectance poor, dyeing properties.

Luster measurements of cotton yarn samples reported in tables 1 through 9 were made by means of a Hunterlab Cotton Lustermeter (Fig. 4, Agriculture Information Bulletin No. 167). Luster is measured as contrast gloss expressed as a ratio of the specular reflectance to the diffuse reflectance of a sample. The results are expressed on a percentage scale, with high luster at 100 percent and zero luster (matte surface) at 0 percent. The scale of this instrument reads directly in terms of $1-(D/S)$ which, when multiplied by 100, provides a scale in which 100 percent equals high gloss and 0 equals zero gloss. On this scale grey yarns measure approximately 30 to 40 percent and mercerized yarns generally range from 40 to 50 percent luster.

The following adjective descriptions of luster values will serve as an aid in the interpretation of the luster results reported in tables 2 through 9:

Relative percentage of luster

<u>Grey yarn</u>		<u>Mercerized yarn</u>	<u>Adjective description</u>
<u>22s carded</u>	<u>50s combed</u>	(50s combed)	
Below 30	Below 33	Below 40	Low
30 - 32	33 - 34	40 - 44	Average
Above 32	Above 34	Above 44	High

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
1. PICKER				
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
2. CARD				
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
Licker-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
3. SLIVER LAPPER (combed only)				
Fed, 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
4. RIBBON LAPPER (Combed only)				
Fed, 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
5. COMBER (Model D-4)				
Fed, 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

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

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
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) 2/..	4/16	4/16	4/16	4/16
Second to third (inches plus fiber length) 2/..	7/16	7/16	7/16	7/16
Third to fourth (inches plus fiber length) 2/..	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 3/.....				
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) 2/..	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) 2/..	---	---	---	2/16
Second to third (inches plus fiber length) 2/..	---	---	---	4/16
9. LONG DRAFT SPINNING (two apron type)				
Fed double for 8s (hanks each) 4/.....	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.) 4/.....	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

1/ Based on Official Standards for staple length.

2/ 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.

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

4/ Spun on wide gauge spinning frame.

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