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Summary of
Cotton Fiber and Processing Test Results

CROP of 1968

Washington, D.C.
U.S. DEPARTMENT OF AGRICULTURE
Consumer and Marketing Service Cotton Division
APRIL 1969

ACKNOWLEDGEMENTS

This is a summary of fiber and processing test results performed on samples from the 1968 crop, and is a compilation of data presented in periodic reports during the harvesting season. The periodic reports were published at approximately two week intervals presenting timely information on the quality of the new crop. This series presents data on the same subject as AIB 331, "Summary of Cotton Fiber and Processing Test Results, Crop of 1967, April, 1968. The cooperation of the Area and classing offices in furnishing materials and the work of the field laboratories in performing the tests are appreciated.

These reports are prepared and published by the Standardization Section, Standards and Testing Branch, Cotton Division, C&MS, U. S. Department of Agriculture, Memphis, Tennessee, 38117.

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SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS
CROP OF 1968

INTRODUCTION

This is one of a series of annual reports containing information on fiber properties and spinning performance of cotton from all major commercial production areas of the United States. It consolidates and gives supplemental information on data published in biweekly reports from August 1968 through January 1969. These reports are entitled "Cotton Fiber and Processing Test Results, Crop of 1968" and are numbered 1 through 12.

The results of fiber and spinning tests made in connection with these annual surveys are used to check on the effectiveness of the standards to be sure they continue to reflect differences in spinning utility. Data derived from these surveys provide the basis for studies of relationships between various fiber properties and processing performance. Timely publication of the results of these surveys enables farmers and breeders to use the data as a source of quality information regarding cottons produced under commercial conditions. Merchants and manufacturers also use these results to locate sources of cotton having properties and spinning performance desirable for specific uses.

Some of the production areas represented in the 1968 survey have been included in the studies each year since 1946. This affords, in some instances, comparisons of test results over a 23-year period. Thus an indication of the variation in fiber and spinning qualities of cotton grown in the same areas for 23 successive years may be observed by making comparisons of the results presented in previous reports. However, direct comparisons should be made only for those lots tested under the same procedures and processing organization.

SAMPLING PROCEDURES

The procedures for selecting samples for the 1968 survey were designed to represent all major varieties in each classing office area and to provide additional selections in proportion to production. In most cases, each survey point or gin community selected for collection of samples represents approximately 10,000 to 100,000 bales of the specified variety in the general production area. Pure variety gins, however, were selected when available regardless of production.

Variety selections were based on the predominant varieties grown in each area, as reported by the Cotton Division in "Cotton Varieties Planted, 1964-1968." Survey points with at least 70 percent of ginnings of one variety were designated as that variety. No attempt was made to maintain the purity of the variety except by selection of representative gin points. This method is similar to the conditions faced by the cotton

trade in merchandising cotton. The locations of the market areas selected for the 1968 survey are shown in the figure on page 6.

Test lots were collected from each production area or survey point at intervals of once in three weeks during the harvesting season to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce specified varieties in quantities large enough to enable buyers to obtain lots of even-running grade and staple. Obviously, other qualities are available in each area as a result of normal seasonal, soil, harvesting and other variations. Many production areas also produce cotton of varieties other than those included in the survey.

Each spinning test lot used in this study was made up of 20 to 30 samples from individual bales of the same grade and staple length which were classed for producers under the Smith-Doxey Act. Samples representing the predominant grade and staple length being classed from each area at the time of collection were grouped to provide enough lint for a spinning test lot. These even-running lots of samples were then tested at Cotton Division fiber and spinning laboratories. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply.

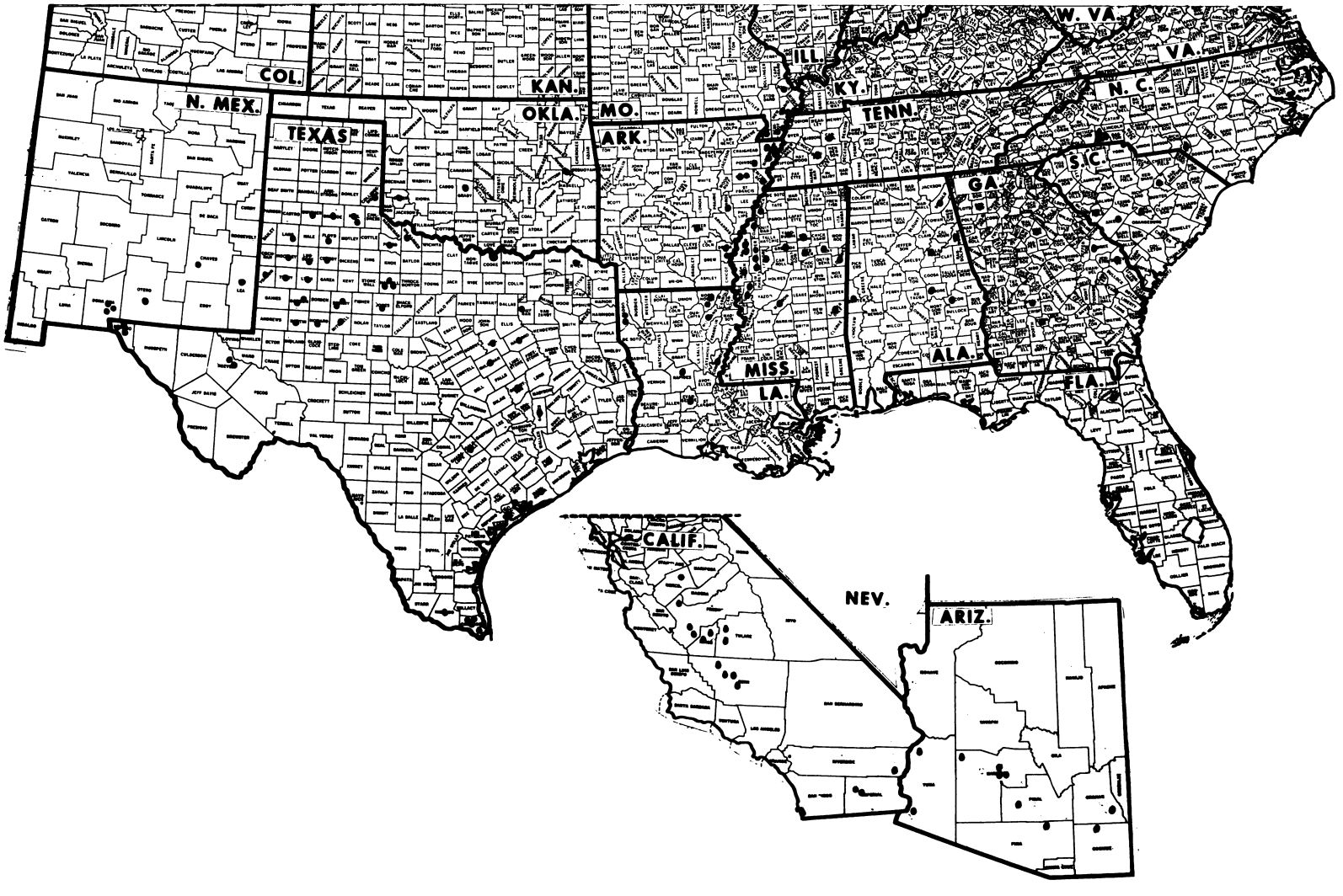
LABORATORY PROCEDURES

Fiber, yarn processing and chemical finishing tests were performed by standardized laboratory procedures for each triweekly sampling from each production area. Most of the fiber tests were performed in the standard atmospheric conditions of 65 percent relative humidity at 70 degrees F., employing the standard test procedures outlined by the American Society for Testing and Materials. Other tests not covered by ASTM were performed by commonly accepted procedures as outlined by instrument manufacturers' instructions. Subsamples were taken from each spinning lot to provide representative specimens for the various fiber tests.

Yarn processing or spinning tests were performed by a technique developed in the Cotton Division laboratories for processing small lots of cotton on standard-type textile machines. The bale samples for each lot were thoroughly composited by hand-mixing before being fed to the first process picker. This hand-mixing is similar to the machine mixing normally obtained in cotton textile opening equipment which is not used in the small scale test procedure. Observations were made at each process to measure processing behavior, and the yarns produced were tested to measure product quality.

As in previous years, the tests in this study were performed in the Cotton Division laboratories at Clemson, South Carolina and College Station, Texas. Fiber and spinning tests on all long and extra long staple lots and on medium staple lots from east of the Mississippi River were performed at the Clemson laboratory. Fiber and spinning tests on all short staple

DISTRIBUTION OF PRODUCTION AREAS FROM WHICH COTTON SAMPLES WERE TESTED, CROP OF 1968



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lots and on medium staple lots from west of the Mississippi River were performed at the College Station laboratory. Chemical finishing tests on all lots were performed at the Clemson laboratory.

On the basis of past performance, the cottons 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 1968 crop are as follows:

Group 1.--Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths shorter than 1 inch.

Group 2.--Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarns with a twist multiplier of 4.00 plus a carded yarn spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch to 1-3/32 inches in staple length.

Group 3.--Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches to 1-1/4 inches in staple length.

Group 4.--Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Egyptian and American upland extra long staple varieties, which are usually 1-5/16 inches or longer in staple length.

Skeins of yarn from each spinning test lot were bleached and dyed after bleaching by a technique developed in the Cotton Division laboratories for small scale finishing tests. Color tests were made on skeins of gray and chemically finished skeins as measures of the bleaching and dyeing behavior.

TEST RESULTS

Average properties for cottons tested in the 1968 survey show longer, more uniform length, coarser and stronger fibers than last year. The Shirley Analyzer nonlint content is less than last year, while picker and card waste is higher for the 1968 samples. Yarns from these samples are stronger than last year, and show improved appearance grades, imperfection counts and higher spinning potential yarn number.

The Southeastern Area includes the states of Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama. Average results from cottons from this Area show about the same length, and length uniformity as last year. They are coarser and appreciably stronger. Both the Shirley Analyzer nonlint content and picker and card waste are lower for the 1968 cottons. Yarns from these samples are stronger and show improved appearance grades and imperfection counts. The spinning potential yarn number is about the same as last year.

The South Central Area consists of the states of Tennessee, Missouri, Mississippi, Arkansas and Louisiana. Tests on cottons from this Area show fibers with about the same length and length uniformity, but are coarser and stronger than last year. The Shirley Analyzer nonlint content and picker and card waste are lower than last year. Yarns from these samples show about the same strength as last season, but have improved appearance grades and imperfection counts. The spinning potential yarn number is lower than a year ago.

The Southwestern Area includes the states of Oklahoma and Texas, except District 6 (west of the Pecos River). Samples from this Area are longer and stronger than a year ago. They show about the same length uniformity and fineness as last year. Shirley Analyzer nonlint content and picker and card waste are higher this year. Yarns from these samples are stronger and show about the same average appearance grades and imperfection counts as last year. The spinning potential yarn number is higher for this years cottons.

The Western Area includes the states of California, Arizona, New Mexico and District 6 of Texas. Samples tested this season from this Area are longer and more uniform in length than last year. They are slightly finer and weaker this year. The Shirley Analyzer nonlint content is lower than a year ago, but the picker and card waste is higher this season. Yarns from these samples are stronger, and show about the same appearance grades as a year ago. The spinning potential yarn number is about the same as last year.

Table 1.--Cotton: Average results of classification, fiber and processing tests for American upland samples from selected gin points, crops of 1967 and 1968 1/

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results						Processing test results				
				Fibrograph		Mike	Strength		Total non-lint	Picker & card waste	Skein strength 22 s	Appearance 22 s	Yarn imperf. 22 s	Spin. potent.
				2.5 % span	50/2.5 unif.		Zero gage	1/8" gage						
	No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.
Southeast:														
1967	69	92.0	34.0	1.08	44	4.0	79	21.6	3.3	6.3	107	100	27	68
1968	64	93.2	34.1	1.07	45	4.2	90	23.8	2.7	5.8	113	113	17	67
South Central:														
1967	160	92.3	34.7	1.09	44	3.9	79	22.0	3.5	6.1	111	108	29	70
1968	146	93.0	34.6	1.09	45	4.5	84	22.9	3.0	5.9	110	116	19	67
Southwest:														
1967	129	94.3	31.8	.99	45	4.2	82	21.2	3.3	5.6	97	117	23	51
1968	144	93.2	32.4	1.02	45	4.3	84	21.8	3.5	6.4	104	116	24	58
West:														
1967	63	95.2	35.1	1.11	44	4.2	93	26.1	3.1	6.0	123	113	24	73
1968	82	96.1	35.9	1.13	45	4.1	91	25.7	2.8	6.6	127	113	21	74
U. S. Average:														
1967	421	93.3	33.7	1.06	44	4.1	82	22.3	3.3	6.0	108	110	26	65
1968	436	93.7	34.1	1.07	45	4.3	86	23.2	3.1	6.2	111	115	21	67

1/ Based on a limited number of samples of modal quality.

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1967 and 1968

Area, state and crop year	Spinning lots tested	Classification		Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer	Color of raw stock			Picker & card waste	SPY Number
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflect-ance	Yellow-ness	Com-posite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Rd	+b	Index	Pct.	No.
SOUTHEAST AREA															
Alabama															
1967	28	90	33.5	1.06	43	4.0	77	20.6	6.4	3.2	70.6	9.3	92	6.4	63
1968	19	94	33.9	1.07	46	4.4	87	22.7	5.4	2.4	73.8	8.7	97	5.4	65
Georgia															
1967	23	92	34.0	1.08	45	4.1	80	22.1	6.3	3.5	73.1	8.6	96	6.5	71
1968	17	93	33.8	1.06	45	4.2	92	24.2	5.0	2.5	72.9	9.0	95	5.7	66
North Carolina															
1967	6	94	34.8	1.08	45	3.7	80	22.8	6.8	3.4	74.7	8.5	98	6.4	76
1968	15	91	33.9	1.05	46	4.3	91	24.8	5.6	3.2	72.1	8.5	93	6.5	66
South Carolina															
1967	12	96	34.8	1.10	45	4.1	79	21.9	6.4	2.7	76.0	8.3	100	5.4	73
1968	13	95	35.0	1.12	45	3.9	90	23.9	5.3	3.0	74.2	8.5	97	5.9	72
SOUTH CENTRAL AREA															
Arkansas															
1967	47	91	34.9	1.09	45	3.8	82	22.6	7.0	3.8	72.6	8.6	95	6.2	70
1968	34	93	34.8	1.08	46	4.8	87	23.1	6.3	3.3	72.8	8.2	95	6.0	65
Louisiana															
1967	24	94	34.0	1.08	44	4.2	79	21.6	7.2	3.3	74.6	8.2	98	5.4	64
1968	24	95	34.4	1.10	45	4.4	80	22.5	7.6	2.5	74.5	8.2	98	5.5	68
Mississippi															
1967	68	92	34.8	1.10	43	3.9	78	21.9	7.0	3.6	74.5	8.4	97	6.5	72
1968	68	92	34.7	1.10	45	4.4	83	23.0	6.2	3.1	74.6	8.0	98	6.1	68
Missouri															
1967	12	92	34.8	1.08	44	3.8	79	22.0	7.4	2.9	73.6	8.6	96	5.2	69
1968	12	94	34.7	1.08	46	4.4	83	23.1	6.9	2.5	72.9	8.2	96	5.6	66
Tennessee															
1967	10	95	34.8	1.06	44	4.0	78	21.8	6.8	2.6	74.9	8.5	98	5.4	70
1968	8	93	33.8	1.02	45	4.3	87	21.3	5.5	2.1	73.9	8.6	97	5.1	63
SOUTHWEST AREA															
South Texas															
Short staple:															
1967	5	97	29.8	0.90	45	4.0	82	19.4	6.2	2.6	74.1	9.5	98	5.0	41
1968	3	92	31.3	0.97	46	4.5	75	19.7	7.6	3.4	71.5	9.6	94	6.6	49
Medium staple:															
1967	18	95	33.2	1.03	46	4.4	86	21.4	5.2	2.6	73.6	8.9	96	4.9	59
1968	27	94	34.1	1.09	45	4.3	85	22.6	6.1	3.2	74.6	8.7	98	6.2	69

Table 2.--Continued

Area, state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SOUTHEAST AREA															
Alabama			50s		50s		50s		50s						
1967	28	98	33	6.5	4.9	94	84	33	24	84.0	3.4	101	27.5	26.0	103
1968	19	108	37	5.9	4.5	115	91	14	11	83.8	3.0	102	28.9	26.5	102
Georgia															
1967	23	112	40	6.8	5.3	105	90	22	16	84.2	3.2	102	27.7	26.1	103
1968	17	111	38	5.7	4.4	112	93	17	13	83.6	3.3	101	30.4	25.6	96
North Carolina															
1967	6	119	43	7.6	6.2	102	92	26	19	84.1	3.2	102	26.8	26.7	107
1968	15	115	39	6.0	4.6	112	93	19	15	83.2	3.6	99	28.9	26.3	101
South Carolina															
1967	12	114	41	7.2	5.7	102	92	20	14	84.1	3.0	103	26.8	26.7	107
1968	13	120	43	6.2	4.9	113	92	18	14	84.1	3.0	103	28.6	26.6	103
SOUTH CENTRAL AREA															
Arkansas															
1967	47	113	41	6.7	5.3	115	90	34	25	84.1	3.1	102	26.9	26.2	105
1968	34	111	39	5.7	4.4	122	96	18	13	83.8	2.9	103	28.2	26.9	105
Louisiana															
1967	24	105	37	6.4	5.0	119	93	23	18	84.5	2.9	104	27.2	26.7	106
1968	24	109	39	6.4	5.0	117	90	20	15	84.6	2.7	105	27.9	27.0	107
Mississippi															
1967	68	111	39	7.4	5.7	98	88	29	21	84.0	3.0	103	27.0	26.6	106
1968	68	110	39	6.4	5.1	112	90	19	14	84.3	2.8	105	28.1	27.1	106
Missouri															
1967	12	110	40	6.9	5.5	119	93	23	17	84.1	3.2	102	26.6	26.2	106
1968	12	108	38	6.0	4.6	119	95	19	14	84.0	3.0	103	28.4	26.8	105
Tennessee															
1967	10	108	38	7.3	5.7	102	91	26	18	84.0	3.1	102	26.8	27.0	108
1968	8	102	34	6.0	4.6	119	91	15	12	84.2	3.1	103	28.4	26.8	104
SOUTHWEST AREA															
South Texas															
Short staple:			8s		8s		8s		8s						
1967	5	89	297	6.1	6.8	116	119	16	26	84.3	3.4	102	26.9	26.9	107
1968	3	88	294	6.5	7.7	113	123	29	46	84.8	3.1	104	27.2	27.5	110
Medium staple:			50s		50s		50s		50s						
1967	18	101	34	5.4	4.0	123	98	12	10	84.1	3.3	102	27.6	26.5	105
1968	27	111	40	5.9	4.6	119	94	22	17	84.8	2.9	105	27.4	27.3	108

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1967 and 1968--Continued

Area, state and crop year	Spinning lots tested	Classification		Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer	Color of raw stock			Picker & card waste	SPY Number
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflect-ance	Yellow-ness	Com-posite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Rd	+b	Index	Pct.	No.
SOUTHWEST AREA (Continued)															
Central Texas															
Short staple:															
1967	18	89	29.2	0.90	45	4.5	81	19.7	6.4	3.6	69.8	9.9	91	6.2	33
1968	9	95	30.0	0.93	45	4.8	79	20.3	7.5	3.2	73.5	9.3	97	6.2	40
Medium staple:															
1967	12	96	34.0	1.07	44	4.6	83	22.5	6.6	2.5	74.9	8.7	98	4.8	62
1968	18	91	33.7	1.07	45	4.4	85	21.9	6.4	3.8	72.1	8.5	94	6.6	61
Northwest Texas															
Short staple:															
1967	41	95	30.6	0.95	44	3.7	77	20.5	7.8	3.7	73.8	9.3	97	5.9	46
1968	33	95	30.7	0.95	45	4.1	82	21.2	7.2	3.4	73.8	9.4	98	6.3	47
Medium staple:															
1967	19	96	32.4	1.00	44	4.2	83	22.1	6.6	3.4	74.2	8.8	97	5.5	55
1968	45	93	32.6	1.03	45	4.1	86	23.0	6.8	3.7	73.4	8.9	97	6.5	61
Long staple:															
1967	6	98	37.3	1.17	45	3.8	94	26.8	5.8	2.4	76.6	8.4	100	6.7	90
1968	6	98	37.2	1.17	46	3.7	94	28.2	5.6	2.1	76.7	8.8	102	8.5	87
Oklahoma															
Short staple:															
1967	5	91	30.2	0.91	45	5.0	78	19.7	7.5	3.9	70.4	9.7	92	5.9	38
1968	6	92	31.5	0.98	46	4.6	77	19.8	8.3	3.1	72.0	9.2	94	5.7	51
Medium staple:															
1967	3	92	34.0	1.09	44	4.0	82	23.0	8.1	3.3	76.3	7.8	100	5.6	70
1968	3	91	35.3	1.15	45	4.4	86	23.6	7.3	3.6	72.9	7.7	95	6.7	79
WESTERN AREA															
Arizona															
Medium staple:															
1967	12	97	34.2	1.08	43	4.5	88	24.3	6.5	3.2	74.8	8.4	98	5.3	63
1968	16	98	35.0	1.12	45	4.4	87	24.3	7.0	2.9	76.7	8.2	101	5.6	72
Long staple:															
1967	3	99	36.3	1.14	43	3.6	94	25.7	6.4	2.8	76.8	8.8	101	7.3	83
1968	3	100	37.7	1.18	46	3.8	91	26.8	6.0	2.3	80.0	7.9	104	7.7	94
California															
Medium staple:															
1967	33	93	35.0	1.11	44	4.4	98	27.4	5.7	3.3	73.2	8.4	96	5.6	73
1968	42	94	35.6	1.12	46	4.4	93	25.6	5.9	3.0	73.9	8.0	96	5.8	75
New Mexico															
Long staple:															
1967	7	99	37.0	1.18	44	3.6	91	25.8	6.5	2.4	77.9	8.4	102	6.8	89
1968	11	99	36.8	1.16	44	3.4	90	26.7	5.6	2.3	78.4	8.2	103	8.2	85
West Texas															
Long staple:															
1967	6	96	36.8	1.18	44	3.6	90	25.1	6.6	2.9	75.2	8.7	99	7.6	88
1968	6	98	36.7	1.15	44	3.4	88	25.8	6.0	2.7	77.8	8.2	102	9.3	79

Table 2.--Continued

Area, state, and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s bleached yarn			Color - 22s dyed yarn		
		22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SOUTHWEST AREA (Cont'd)															
Central Texas															
Short staple:			8s		8s		8s		8s						
1967	18	81	274	5.5	6.5	118	119	20	30	84.1	3.4	101	27.9	26.3	103
1968	9	87	294	6.0	7.1	119	123	26	41	84.4	2.9	104	27.9	27.4	108
Medium staple:			50s		50s		50s		50s						
1967	12	107	36	5.9	4.5	122	98	13	10	84.2	3.1	103	27.0	26.6	106
1968	18	105	35	5.8	4.3	119	91	25	19	84.3	2.9	104	28.6	26.9	104
Northwest Texas															
Short staple:			8s		8s		8s		8s						
1967	41	93	309	7.0	8.0	112	120	33	50	83.8	3.3	101	26.9	26.5	106
1968	33	95	316	6.2	7.3	112	120	25	44	84.1	3.3	102	27.6	27.0	107
Medium staple:			50s		50s		50s		50s						
1967	19	102	34	6.0	4.5	119	93	19	15	83.0	3.2	100	27.8	26.2	103
1968	45	110	38	5.9	4.5	116	91	23	18	83.8	3.4	98	28.3	26.4	103
Long staple:															
1967	6	143	54	7.0	5.7	105	97	16	12	82.4	3.1	99	26.8	26.2	105
1968	6	143	54	6.4	5.3	108	88	18	12	83.7	3.1	102	27.6	26.7	106
Oklahoma															
Short staple:			8s		8s		8s		8s						
1967	5	84	282	6.2	7.1	124	122	21	33	83.2	3.7	99	27.7	25.9	103
1968	6	92	308	6.7	7.8	120	127	18	32	83.6	3.8	99	27.7	26.8	106
Medium staple:			50s		50s		50s		50s						
1967	3	116	41	7.1	5.6	123	100	17	14	84.5	2.7	105	26.7	27.0	109
1968	3	121	44	6.8	5.4	120	97	17	13	84.2	2.8	104	27.1	27.1	108
WESTERN AREA															
Arizona															
Medium staple:															
1967	12	109	38	5.7	4.3	117	90	25	19	84.1	2.8	104	27.1	26.8	107
1968	16	117	42	6.1	4.7	118	92	21	15	84.7	2.6	106	27.5	27.2	108
Long staple:															
1967	3	132	48	6.9	5.4	103	87	29	21	84.1	2.9	103	26.7	26.5	107
1968	3	142	54	7.2	5.8	107	83	16	13	84.7	2.5	106	26.8	27.7	111
California															
1967	33	125	46	5.6	4.5	117	94	22	17	83.2	3.0	101	26.9	26.7	107
1968	42	126	46	5.7	4.5	121	96	17	12	83.8	2.9	103	28.3	26.5	104
New Mexico															
Long staple:															
1967	7	137	51	7.1	5.9	96	87	29	22	83.8	2.9	103	26.7	26.4	107
1968	11	137	52	6.6	5.5	94	75	28	23	84.4	2.8	104	27.7	26.9	106
West Texas															
Long staple:															
1967	6	132	49	7.0	5.6	100	92	23	17	83.6	3.1	102	26.1	26.7	108
1968	6	130	48	6.8	5.4	87	77	38	29	84.4	2.9	104	27.7	26.9	106

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1968

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer	Color of raw stock			Picker & card waste	SPY Number
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflectance	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Rd	+b	Index	Pct.	No.
SHORT STAPLE GROUP															
Southwest Area															
Mid	31	30	5	.92	46	4.8	81	20.6	7.6	2.5	75.4	9.1	100	5.4	42
M Lt Sp	32	30	16	.93	46	4.5	82	20.8	7.1	3.0	74.5	9.4	99	6.0	42
		31	3	.95	44	3.9	80	20.0	7.3	3.0	74.1	9.6	98	5.6	47
		32	3	.98	46	4.4	76	20.0	7.4	2.9	74.1	9.5	98	5.5	51
SLM	41	30	4	.93	45	4.8	79	20.2	8.0	3.4	73.8	9.0	98	6.2	40
		32	3	.99	46	4.4	86	22.6	6.7	4.1	74.8	8.6	99	6.0	54
SLM Lt Sp	42	31	5	.99	45	4.2	77	20.3	8.2	3.3	71.2	9.3	93	6.5	52
		32	4	.99	46	4.4	79	20.9	8.1	3.8	71.0	9.2	92	6.2	53
LM	51	32	3	.99	46	4.2	88	23.0	6.2	5.3	72.6	8.6	96	8.2	56
MEDIUM STAPLE GROUP															
Southeast Area															
Mid	31	34	4	1.05	45	4.2	90	23.0	5.2	2.0	76.0	8.9	100	4.5	63
		35	5	1.08	47	4.4	95	25.5	5.0	2.0	76.9	8.8	101	4.9	71
SLM	41	33	7	1.03	45	4.3	90	23.0	5.1	2.8	72.1	8.8	94	6.2	62
		34	12	1.08	46	4.3	91	24.7	5.6	2.6	73.2	8.6	96	5.8	68
		35	9	1.12	45	4.0	90	24.3	5.3	2.5	74.4	8.5	98	5.2	74
		36	4	1.15	44	3.6	88	24.5	5.4	3.7	73.9	8.6	97	6.6	80
SLM Lt Sp	42	32	3	1.01	46	5.0	88	22.9	5.3	2.4	68.9	9.5	89	5.8	53
		33	4	1.05	46	4.7	86	22.8	5.8	2.2	70.9	9.0	92	5.5	59
LM	51	33	3	1.01	46	4.4	87	22.3	5.3	3.2	69.5	8.2	89	6.7	60
		34	4	1.04	46	4.2	89	23.9	5.5	3.6	70.5	8.0	90	7.4	66
South Central Area															
Mid	31	34	8	1.08	46	4.7	81	22.9	6.9	2.2	76.3	8.4	100	4.6	66
		35	4	1.12	46	4.6	81	22.5	7.1	2.0	76.6	8.4	101	5.0	70
SLM	41	34	43	1.06	45	4.5	83	22.2	6.5	2.6	73.7	8.3	97	5.4	64
		35	61	1.10	46	4.5	84	23.2	6.5	2.9	74.3	8.1	97	5.9	68
		36	5	1.15	45	4.2	89	24.5	6.1	3.3	74.8	8.0	98	6.4	74
SLM Lt Sp	42	34	3	1.07	45	4.1	82	22.8	7.2	3.1	72.6	8.6	95	6.3	67
LM Plus	50	35	2	1.12	45	4.2	82	23.4	6.2	3.0	74.6	8.1	98	6.6	72
LM	51	34	7	1.09	45	4.3	84	23.0	5.8	4.7	72.2	7.5	93	8.0	67
		35	4	1.11	45	4.0	84	22.4	6.0	4.2	71.0	7.7	91	7.2	66

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
Name	Code	32d. in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	-b	Index
SHORT STAPLE GROUP																	
Southwest Area					8s		8s		8s		8s						
Mid	31	30	5	91	304	6.1	7.3	118	126	16	26	83.9	2.9	103	27.5	27.7	110
M Lt Sp	32	30	16	90	302	6.0	7.1	116	124	21	36	84.7	3.1	104	27.5	27.3	108
		31	3	92	303	6.2	7.2	113	120	29	49	84.0	3.4	101	27.7	26.8	106
		32	3	92	300	6.4	7.8	120	123	19	34	84.3	3.5	102	27.4	27.2	108
SLM	41	30	4	87	292	6.1	7.2	120	122	26	40	84.4	2.8	104	27.8	27.5	108
		32	3	102	338	5.8	7.0	120	127	18	33	83.5	3.2	100	27.8	27.0	106
SLM Lt Sp	42	31	5	93	312	6.7	8.0	110	120	31	50	84.0	3.7	100	27.7	26.7	106
		32	4	97	320	6.4	7.3	120	128	22	35	82.7	3.8	96	27.8	26.2	103
LM	51	32	3	105	344	5.9	6.9	117	123	17	27	83.5	3.3	100	28.0	26.8	105
MEDIUM STAPLE GROUP																	
Southeast Area					50s		50s		50s		50s						
Mid	31	34	4	111	38	5.9	4.4	118	98	13	10	83.4	3.0	102	28.2	27.2	106
		35	5	123	44	6.0	4.8	114	96	16	12	84.4	3.1	103	27.4	27.4	109
SLM	41	33	7	102	33	5.4	4.1	113	90	17	14	84.1	3.2	103	31.0	25.5	94
		34	12	116	40	6.0	4.6	113	94	16	13	83.7	3.3	101	28.9	26.3	102
		35	9	121	44	6.1	5.0	117	94	15	11	83.7	3.1	102	29.4	26.1	100
		36	4	128	47	6.6	5.4	110	90	22	17	84.8	3.2	104	28.6	26.2	102
SLM Lt Sp	42	32	3	94	29	5.1	3.8	113	93	15	14	82.1	4.2	94	31.3	24.6	90
		33	4	98	32	5.6	4.3	108	90	18	15	82.4	3.7	96	29.8	25.8	98
LM	51	33	3	101	33	5.7	4.2	107	80	21	15	83.4	2.9	102	30.4	26.1	98
		34	4	111	38	5.9	4.4	115	90	22	16	83.1	3.3	100	30.0	25.9	98
South Central Area																	
Mid	31	34	8	107	37	6.3	4.9	119	96	13	10	84.4	2.7	105	27.7	27.3	108
		35	4	110	39	6.4	5.1	115	92	16	12	84.9	2.6	107	27.0	27.5	110
SLM	41	34	43	106	36	6.1	4.7	119	93	16	12	84.1	2.9	104	28.2	27.1	106
		35	61	112	40	6.2	4.9	118	94	18	13	84.2	2.8	104	28.1	27.0	106
		36	5	125	46	6.1	5.0	116	96	20	14	84.6	2.8	105	28.1	26.7	105
SLM Lt Sp	42	34	3	109	37	6.6	5.2	113	87	19	15	84.2	2.9	104	28.2	27.1	106
LM Plus	50	35	2	111	40	6.5	5.3	100	70	30	21	84.4	2.8	104	28.3	26.8	104
LM	51	34	7	108	38	6.1	4.8	107	83	28	21	83.6	2.8	103	28.8	26.7	103
		35	4	109	39	6.4	5.0	100	75	27	21	84.0	2.8	104	28.6	26.8	104

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1968--(Continued)

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer	Color or raw stock			Picker & card waste	SPY number
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflectance	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Rd	+b	Index	Pct.	No.
MEDIUM STAPLE GROUP (CONTINUED)															
Southwest Area															
Mid	31	32	2	1.00	45	4.6	82	22.2	6.2	2.4	76.1	8.8	100	5.2	61
		33	5	1.02	45	4.6	86	22.5	6.3	2.7	76.0	9.0	101	5.6	57
		34	4	1.07	46	4.8	81	22.6	7.1	2.0	76.3	8.6	100	4.9	68
M Lt Sp	32	32	3	.97	49	4.5	86	22.9	6.6	2.9	74.0	9.5	98	6.0	57
		34	2	1.10	43	4.1	82	21.4	7.0	2.6	73.6	8.8	97	5.5	64
SLM	41	31	4	.99	45	4.5	86	22.4	6.4	3.7	74.4	8.6	98	6.5	50
		32	3	1.02	46	4.3	84	22.5	7.1	3.2	75.0	8.7	100	6.0	57
		33	8	1.03	45	4.3	85	22.6	6.9	3.5	73.7	8.4	97	6.2	62
		34	16	1.09	45	4.2	88	23.9	6.3	3.5	74.2	8.6	98	6.3	69
		35	15	1.12	45	4.3	85	22.5	6.4	3.2	74.3	8.5	98	6.0	70
SLM Lt Sp	42	31	3	.97	45	3.6	85	21.7	6.8	4.1	70.6	9.6	92	7.7	55
		32	5	1.02	45	4.3	86	22.3	6.6	3.9	71.4	9.0	94	6.4	58
		33	3	1.03	45	3.4	83	22.3	7.4	3.9	71.1	8.8	93	7.1	67
		34	3	1.10	44	4.1	84	21.7	6.0	3.2	72.1	8.9	95	7.1	70
LM	51	35	3	1.11	45	3.9	84	22.2	7.0	4.1	72.2	8.3	94	7.1	70
SGO	61	33	3	1.05	44	4.2	90	21.2	4.9	6.6	65.8	8.6	83	9.4	55
Western Area															
Mid	31	34	3	1.09	43	4.6	86	23.0	6.5	2.2	77.9	8.3	103	4.8	67
		35	15	1.10	45	4.5	86	23.9	7.1	2.2	78.0	8.0	102	4.9	67
		36	5	1.13	46	4.5	92	27.0	5.7	2.5	76.5	8.4	101	5.3	80
SLM	41	35	4	1.10	44	4.2	88	24.8	6.8	2.9	74.6	8.0	98	5.4	73
		36	19	1.14	46	4.4	96	26.7	5.5	3.4	73.6	8.2	97	6.2	79
LM	51	36	4	1.14	46	4.2	95	25.6	5.8	3.4	69.7	7.6	89	6.2	78
LONG STAPLE GROUP															
Southwest Area															
Mid	31	37	2	1.18	45	3.4	92	27.6	5.4	2.0	78.4	8.5	103	8.2	86
Western Area															
Mid	31	37	10	1.16	44	3.4	89	26.2	5.8	2.2	79.1	8.1	103	7.7	84
		38	2	1.20	46	4.0	90	27.4	6.0	2.4	79.2	8.0	102	7.6	96
SLM	41	36	3	1.14	43	2.7	90	26.1	5.5	3.9	77.7	7.8	101	11.1	81
		37	2	1.16	45	4.0	88	26.6	6.0	2.4	77.6	8.6	102	9.8	82

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
Name	Code	32d in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE GROUP (CONTINUED)																	
Southwest Area					50s		50s		50s		50s						
Mid	31	32	2	102	36	6.2	4.5	125	95	14	12	84.3	2.8	104	27.9	27.1	106
		33	5	105	34	5.8	4.2	122	94	17	14	84.6	2.9	104	27.8	27.2	107
		34	4	106	38	6.2	5.0	122	102	17	13	85.0	2.7	107	26.4	28.0	114
M Lt Sp	32	32	3	105	35	5.7	4.1	120	100	15	12	82.8	3.2	99	27.8	27.2	107
		34	2	107	37	5.9	4.7	105	85	24	20	85.2	2.6	106	27.4	27.8	110
SLM	41	31	4	101	31	5.6	3.9	125	95	17	13	83.4	3.2	100	28.0	27.1	106
		32	3	105	36	5.9	4.6	117	93	19	14	83.7	3.1	102	27.6	27.1	107
		33	8	108	37	5.8	4.5	121	94	20	15	82.7	3.1	99	28.4	26.8	104
		34	16	117	42	6.0	4.8	120	94	21	16	84.0	3.1	103	27.9	26.8	105
		35	15	112	40	6.1	4.7	120	94	20	15	84.7	2.9	105	27.7	27.2	107
SLM Lt Sp	42	31	3	102	33	5.6	4.2	106	80	37	29	83.1	3.6	98	28.3	26.2	102
		32	5	104	35	5.7	4.2	116	94	26	18	81.4	3.6	94	29.3	25.5	97
		33	3	110	40	6.2	5.0	113	83	32	24	81.3	4.0	92	28.4	25.5	99
		34	3	107	38	5.6	4.4	103	80	43	35	84.3	3.1	103	28.0	26.6	104
LM	51	35	3	110	40	6.2	4.7	113	87	35	30	84.6	3.0	104	29.1	26.1	100
SGO	61	33	3	101	32	4.9	3.4	120	90	31	20	84.2	3.2	102	29.8	25.8	97
Western Area																	
Mid	31	34	3	109	37	5.7	4.4	123	90	18	13	84.3	2.8	104	27.7	27.4	108
		35	15	114	40	6.2	4.7	123	97	15	11	84.8	2.5	107	27.7	27.3	108
		36	5	133	49	5.7	4.6	120	98	18	14	83.9	3.0	103	27.4	27.0	108
SLM	41	35	4	118	43	5.9	4.6	122	92	14	10	84.5	2.8	105	29.0	26.6	103
		36	19	131	49	5.7	4.5	121	95	18	13	83.8	2.9	103	28.2	26.5	104
LM	51	36	4	129	48	5.6	4.4	122	98	16	12	83.8	3.0	103	28.7	26.3	102
LONG STAPLE GROUP																	
Southwest Area																	
Mid	31	37	2	144	54	6.6	5.4	105	85	14	11	83.8	3.1	102	28.0	26.4	104
Western Area																	
Mid	31	37	10	136	51	6.8	5.5	96	77	25	20	84.6	2.8	105	27.5	27.1	107
		38	2	142	54	6.9	5.7	110	85	14	12	84.4	2.4	106	26.4	27.9	113
SLM	41	36	3	129	48	6.6	5.4	60	60	69	51	84.5	3.0	104	28.7	26.3	102
		37	2	132	50	6.4	5.5	90	80	20	15	84.8	2.7	106	27.0	27.8	111

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1968

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer	Color or raw stock			Picker & card waste	SPY Number
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflectance	Yellowness	Composite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	R_d	+b	Index	Pct.	No.
SHORT STAPLE															
Lankart 57															
Central Texas	3	94	30.0	.93	45	4.9	78	20.4	8.1	3.4	73.7	8.9	97	6.3	40
Paymaster 202															
Northwest Texas	6	94	31.0	.94	46	3.8	84	22.3	6.9	4.2	72.9	9.4	96	6.7	50
Sweatt 75															
Northwest Texas	3	97	30.0	.94	46	4.8	83	20.3	7.0	2.7	73.8	9.7	98	5.5	43
MEDIUM STAPLE															
Lankart 3840															
Northwest Texas	4	100	33.0	1.02	46	5.0	87	22.7	6.1	2.6	75.7	9.2	101	5.5	55
Acala 4-42															
California	6	97	35.5	1.09	46	4.1	91	26.0	6.5	3.1	76.1	7.8	100	5.6	78
Acala SJ-1															
California	30	93	35.9	1.13	46	4.4	95	26.0	5.6	3.1	72.6	8.1	95	5.9	78
Atlas															
Georgia	6	94	33.5	1.02	45	4.5	96	25.5	4.9	2.3	72.8	9.3	95	5.5	59
Auburn M															
Missouri	3	94	34.7	1.08	47	4.0	84	23.1	6.9	2.3	72.4	8.5	95	5.8	67
Coker 201															
Alabama	3	91	33.3	1.07	46	4.6	82	22.1	6.1	2.0	73.5	8.3	96	5.5	63
North Carolina	4	92	33.2	1.04	46	4.7	88	23.8	5.9	2.8	71.2	9.0	93	6.1	61
Arkansas	3	94	35.0	1.09	46	4.8	90	23.7	5.3	3.3	72.7	8.3	95	5.7	66
Coker 413															
Alabama	7	94	34.9	1.13	45	4.1	90	24.2	5.3	2.4	73.8	8.7	97	5.4	74
Georgia	9	93	34.1	1.08	44	3.9	90	23.8	5.2	2.6	73.2	8.8	96	5.7	70
North Carolina	4	93	34.2	1.08	47	4.3	94	26.0	5.5	2.6	72.4	8.6	94	5.9	74
South Carolina	3	94	35.7	1.14	46	3.7	92	24.8	5.1	3.1	73.6	8.4	97	6.5	76
Arkansas	3	94	36.0	1.15	46	4.2	93	24.8	5.3	3.8	73.1	8.1	96	6.9	73
Mississippi	4	94	35.0	1.15	45	3.8	88	24.5	5.4	4.0	73.8	8.2	96	7.2	74
South Texas	3	94	34.3	1.13	44	4.2	88	22.9	5.6	3.1	74.1	9.1	98	6.4	76

Table 4.--Continued

Processing group variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflect-ance	Yellow ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SHORT STAPLE							Carded Yarns								
Lankart 57			8s		8s		8s		8s						
Central Texas	3	88	292	6.3	7.3	120	123	25	38	84.5	2.9	104	27.6	27.7	110
Paymaster 202															
Northwest Texas	6	100	338	6.1	7.1	110	122	30	50	83.4	3.6	99	28.2	26.3	103
Sweatt 75															
Northwest Texas	3	90	299	5.8	6.9	120	130	13	27	84.9	3.1	105	27.2	27.3	109
MEDIUM STAPLE															
Lankart 3840			50s		50s		50s		50s						
Northwest Texas	4	104	32	5.4	3.9	125	98	16	13	84.3	2.8	104	27.8	27.3	107
Acala 4-42															
California	6	129	48	6.2	4.9	125	98	15	10	84.4	3.0	104	28.0	26.9	106
Acala SJ-1															
California	30	128	48	5.6	4.5	120	96	18	13	83.6	3.0	102	28.4	26.4	103
Atlas															
Georgia	6	109	36	5.3	4.1	113	96	21	16	83.1	3.3	100	30.4	25.6	96
Auburn M															
Missouri	3	108	39	6.1	4.6	120	97	23	16	84.8	3.0	105	28.1	26.8	105
Coker 201															
Alabama	3	103	34	6.1	4.6	110	83	16	14	83.2	3.0	101	28.4	26.8	104
North Carolina	4	104	34	5.8	4.5	107	92	19	16	82.4	4.5	93	29.0	26.0	100
Arkansas	3	114	40	5.2	4.1	123	93	17	12	84.0	2.9	103	28.5	26.6	103
Coker 413															
Alabama	7	122	45	6.2	4.9	114	91	15	12	84.1	3.2	103	28.7	26.2	101
Georgia	9	114	40	6.0	4.6	111	91	15	12	83.8	3.3	101	30.2	25.8	97
North Carolina	4	125	44	6.3	4.8	118	95	14	10	83.4	3.6	99	29.0	26.2	101
South Carolina	3	126	46	6.1	5.1	117	97	20	16	84.1	3.1	103	29.6	25.9	98
Arkansas	3	129	48	5.7	4.6	117	97	19	14	84.0	3.0	103	28.6	26.3	102
Mississippi	4	126	47	6.4	5.2	108	92	25	19	83.8	2.9	103	28.7	26.4	102
South Texas	3	118	43	5.8	4.5	117	90	21	17	84.7	3.0	105	27.3	27.3	108

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1968--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer	Color of raw stock			Picker & card waste	SPY Number
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflectance	Yellowness	Composite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	R_d	+b	Index	Pct.	No.
MEDIUM STAPLE (Continued)															
DPL 16															
Arkansas	3	94	34.7	1.08	47	5.1	85	23.7	7.7	3.3	73.6	8.2	96	5.8	69
Louisiana	3	98	35.0	1.14	45	4.4	79	22.8	8.0	2.0	76.7	8.0	101	5.3	73
Mississippi	3	94	35.3	1.13	43	4.3	82	24.3	7.2	2.6	76.7	7.6	100	5.7	75
Arizona	9	100	34.8	1.11	44	4.5	83	22.9	7.4	2.1	78.0	8.3	103	4.7	68
California	3	100	35.0	1.08	43	4.6	87	23.3	7.0	1.9	78.7	7.7	103	5.0	57
DPL 45A															
Mississippi	4	93	35.5	1.13	45	4.2	83	23.7	6.8	2.6	76.4	7.9	100	5.5	74
Missouri	3	94	34.7	1.08	47	4.4	82	23.9	7.7	2.5	72.8	8.3	95	5.5	68
Dixie King															
Georgia	2	90	33.0	1.04	46	4.4	86	22.2	5.0	2.6	71.4	8.8	93	6.4	62
Dixie King II															
Alabama	3	88	33.3	1.03	45	4.4	83	21.3	5.6	3.3	72.8	7.9	95	6.9	61
Mississippi	3	94	35.0	1.07	45	4.5	85	21.7	5.2	2.9	74.8	8.1	98	6.4	66
Dunn 56C															
Northwest Texas	4	87	34.0	1.06	47	4.5	96	26.2	5.9	6.6	73.7	8.6	97	8.0	69
Hopicala															
Arizona	3	90	35.7	1.13	47	4.1	102	28.7	5.4	5.2	72.3	7.8	94	8.3	86
Lambright X15-3															
Northwest Texas	3	95	34.0	1.11	42	3.5	85	22.6	8.0	3.4	73.6	8.7	97	6.2	70
Lockett 4789															
Central Texas	3	92	30.7	.97	45	4.2	91	21.8	5.6	5.2	71.8	8.7	94	8.2	50
Northwest Texas	10	93	32.1	1.00	47	5.0	88	22.9	6.2	3.8	73.4	8.9	97	6.5	52
Lockett 4789A															
Northwest Texas	3	94	32.7	1.03	44	3.3	83	21.9	7.3	3.0	75.3	8.0	99	5.8	66
McNair 1032B															
North Carolina	4	88	34.0	1.03	45	3.8	87	23.2	5.6	4.6	71.6	7.9	92	7.6	63
Paymaster 111															
Northwest Texas	6	89	32.5	1.03	45	3.5	82	21.9	7.4	4.1	71.4	8.7	93	7.0	65

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s - bleached yarn			Color 22s - dyed yarn		
		22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	-b	Index
MEDIUM STAPLE (Cont'd)															
DPL 16															
Arkansas	3	116	40	6.4	5.1	123	100	17	11	83.6	2.7	103	28.0	27.0	106
Louisiana	3	113	40	6.6	5.3	117	90	21	15	84.5	2.6	106	27.3	27.3	109
Mississippi	3	117	42	6.8	5.5	107	93	18	14	84.7	2.5	107	27.9	27.1	107
Arizona	9	109	38	6.2	4.8	121	93	17	12	84.8	2.6	106	27.3	27.5	110
California	3	107	35	5.7	4.2	120	93	14	12	84.6	2.5	107	28.3	27.1	106
DPL 45A															
Mississippi	4	117	43	7.0	5.6	110	85	24	15	84.8	2.6	106	28.0	27.1	107
Missouri	3	110	40	6.2	4.9	113	93	23	17	83.9	3.2	102	28.0	26.9	106
Dixie King															
Georgia	2	102	34	5.6	4.2	110	90	16	11	84.0	3.4	102	31.5	24.9	90
Dixie King II															
Alabama	3	98	32	5.8	4.3	110	87	19	14	83.3	3.0	101	30.0	26.2	99
Mississippi	3	103	36	5.9	4.5	113	97	13	12	84.6	2.9	105	28.6	26.6	103
Dunn 56C															
Northwest Texas	4	125	45	5.8	4.4	122	98	19	13	83.8	3.0	102	28.0	26.6	105
Hopicala															
Arizona	3	144	55	5.7	4.4	103	87	38	27	84.1	3.1	103	27.4	26.4	105
Lambright X15-3															
Northwest Texas	3	115	41	6.6	5.1	103	83	27	23	82.0	3.2	97	28.8	25.7	99
Lockett 4789															
Central Texas	3	97	28	5.2	3.3	120	90	25	20	83.7	2.9	103	28.9	27.0	104
Northwest Texas	10	104	32	5.4	3.9	124	100	17	12	83.3	3.2	100	28.3	26.9	105
Lockett 4789A															
Northwest Texas	3	110	40	6.7	5.2	110	83	26	21	82.6	3.2	99	28.7	26.0	101
McNair 1032B															
North Carolina	4	112	39	6.1	4.8	110	95	20	16	83.8	3.0	102	29.0	26.3	102
Paymaster 111															
Northwest Texas	6	107	39	6.1	4.8	112	83	30	22	81.6	3.9	93	28.8	25.6	99

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points crop of 1968--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer	Color of raw stock			Picker & card waste	SPY Number
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Total	Reflect-ance	Yellow-ness	Com-posite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Rd	+b	Index	Pct.	No.
MEDIUM STAPLE (Continued)															
Stoneville 7A															
Arkansas	3	94	35.0	1.13	45	4.7	89	22.6	5.6	3.5	73.2	8.2	96	6.1	67
Mississippi	4	78	34.0	1.10	46	4.7	90	22.2	5.0	6.1	70.7	7.8	90	9.0	64
South Texas	6	93	34.3	1.10	45	4.2	86	22.2	5.8	3.5	74.6	8.3	98	6.6	67
Stoneville 213															
Arkansas	6	91	34.7	1.08	46	4.6	86	22.9	6.1	3.7	71.5	8.2	93	6.8	64
Mississippi	7	88	35.0	1.11	45	4.5	82	22.7	6.0	3.5	72.9	8.0	95	6.7	66
Stoneville 508															
Mississippi	4	90	36.2	1.16	43	3.7	85	25.2	6.5	4.2	74.3	8.0	97	7.6	76
South Texas	3	91	34.7	1.12	44	3.6	84	23.5	6.8	3.6	75.3	8.6	99	6.3	73
TH 149															
North Carolina	3	93	34.3	1.05	48	4.6	95	26.5	5.1	2.9	73.3	8.3	95	6.1	67
TPSA 110															
South Texas	3	92	34.7	1.13	44	4.4	88	22.6	5.1	2.8	74.3	9.1	99	5.8	73
Central Texas	3	76	33.0	1.05	44	4.2	90	21.2	4.9	6.6	65.8	8.6	83	9.4	55
LONG STAPLE															
Acala 1517C															
New Mexico	3	96	37.0	1.16	45	3.8	88	26.6	5.9	2.5	78.0	8.4	103	9.6	82
West Texas	3	98	36.7	1.14	43	3.5	87	25.9	6.3	2.3	77.9	8.3	102	9.4	76
Acala 1517V															
New Mexico	2	102	37.5	1.20	45	3.5	90	27.4	5.8	1.5	80.6	8.2	106	7.6	86
EXTRA LONG STAPLE															
Del Cerro				Array											
All locations	6	97	41.0	1.45	28	3.5	106	31.8	5.2	2.9	78.2	7.6	102	9.8	--
		American Egyptian													
Pima S-2															
All locations	3	3	44.0	1.42	31	3.7	98	33.7	7.1	2.9	67.4	10.9	87	9.8	--
Pima S-3															
All locations	3	3	46.0	1.42	34	3.3	97	31.0	6.8	3.4	69.6	11.4	85	10.7	--
Pima S-4															
All locations	9	4	44.4	1.48	30	3.8	101	34.4	6.7	2.5	68.7	10.6	89	9.2	--

Table 4.--Continued

Processing group, variety, and state,	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s - bleached yarn			Color 22s - dyed yarn		
		22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	22s or 26.8 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE (Continued)															
Stoneville 7A															
Arkansas	3	108	38	5.4	4.1	120	90	23	17	84.0	2.9	103	28.2	26.7	104
Mississippi	4	103	34	5.6	4.4	118	85	21	15	83.9	2.7	104	29.2	26.6	102
South Texas	6	111	39	5.8	4.5	117	90	26	21	84.8	2.8	106	27.8	27.2	107
Stoneville 213															
Arkansas	6	109	38	5.8	4.4	118	93	23	17	83.6	2.9	102	28.3	26.8	104
Mississippi	7	106	37	6.3	4.9	109	84	22	16	84.1	2.8	104	28.4	27.0	105
Stoneville 508															
Mississippi	4	122	46	6.8	5.4	98	78	33	22	84.4	3.0	104	27.8	27.0	106
South Texas	3	115	43	6.3	5.1	113	83	26	24	85.1	3.1	105	27.6	27.1	107
TH 149															
North Carolina	3	118	40	5.7	4.2	113	87	24	18	83.4	3.1	101	28.6	26.8	104
TPSA 110															
South Texas	3	113	41	5.4	4.2	120	97	20	16	84.3	3.0	103	27.7	26.9	106
Central Texas	3	101	32	4.9	3.4	120	90	31	20	84.2	3.2	102	29.8	25.8	97
LONG STAPLE															
Acala 1517C															
New Mexico	3	133	50	6.5	5.4	97	80	21	17	84.8	2.7	106	27.0	27.7	111
West Texas	3	131	49	7.0	5.5	97	87	24	20	84.1	2.9	103	28.0	26.9	106
Acala 1517V															
New Mexico	2	148	58	7.0	5.8	110	80	22	17	85.4	2.8	107	27.8	26.8	106
EXTRA LONG STAPLE							Combed Yarns								
Del Cerro		50s	80s	50s	80s	50s	80s	50s	80s						
All locations	6	74	41	5.4	4.6	110	105	2	1	84.4	2.3	106	27.0	28.5	114
Pima S-2															
All locations	3	67	37	5.8	5.0	117	117	1	1	83.5	3.8	98	27.6	27.5	109
Pima S-3															
All locations	3	69	39	5.9	5.0	110	110	1	1	83.0	4.4	95	28.3	26.8	104
Pima S-4															
All locations	9	70	39	5.7	4.8	117	111	1	0	83.6	3.8	99	28.5	26.9	105

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
SOUTH TEXAS															
TAFT			LANKART 611				70 PERCENT								
M LT SP	32	32	0.98	46	4.5	78	19.8	6.9	1.9	2.8	73.5	9.6	97	353	6.0
SLM LT SP	42	31	0.97	46	4.5	74	20.3	7.7	2.4	3.6	71.1	9.8	94	403	6.9
SLM LT SP	42	31	0.97	46	4.5	72	19.1	8.2	2.5	3.8	69.9	9.3	91	453	7.0
CENTRAL TEXAS															
FORNEY			LANKART 57				95 PERCENT								
M LT SP	32	30	0.90	45	4.7	81	19.8	7.0	2.0	3.4	74.0	9.7	98	303	6.5
SLM	41	30	0.93	44	4.7	81	19.7	7.5	1.9	3.1	73.9	9.4	98	353	6.1
M LT SP	32	30	0.92	46	5.0	79	20.5	7.3	1.4	2.6	74.2	9.6	99	303	5.8
ITASCA			LANKART 57				100 PERCENT								
SLM	41	30	0.93	46	5.0	80	20.3	7.9	2.9	4.2	73.8	9.1	98	353	6.6
SLM	41	30	0.93	44	4.8	77	20.3	8.4	1.9	3.2	73.9	8.7	97	402	6.2
SLM	41	30	0.93	46	4.8	77	20.5	8.1	1.8	2.9	73.5	8.9	97	402	6.1
WACO			LANKART 57				98 PERCENT								
M LT SP	32	30	0.91	44	4.6	82	20.3	6.9	1.8	2.5	73.1	9.8	97	353	6.4
M LT SP	32	30	0.93	47	5.1	78	20.9	7.1	1.9	2.6	74.7	9.1	99	352	5.6
SLM LT SP	42	30	0.97	46	4.6	79	20.8	7.2	2.7	3.9	70.4	9.0	92	453	6.7
NORTHWEST TEXAS															
COLORADO CITY			LANKART 611				85 PERCENT								
M LT SP	32	30	0.92	45	4.6	83	20.5	7.0	1.7	2.9	74.9	9.2	99	353	6.2
M LT SP	32	30	0.97	44	4.8	83	21.6	6.4	2.4	3.5	75.2	9.1	100	302	6.1
M LT SP	32	30	0.93	46	4.4	89	20.4	5.8	2.0	3.2	75.1	9.4	100	303	5.6
INADALE			WESTERN STORMPROOF				75 PERCENT								
M	31	30	0.90	46	4.7	90	21.8	6.6	1.4	2.2	76.5	8.8	101	302	5.6
M LT SP	32	30	0.92	47	4.7	87	21.1	6.1	1.7	2.6	75.2	9.2	100	302	5.8
M	31	30	0.92	47	4.5	79	20.1	7.1	1.3	2.5	75.2	9.1	100	352	5.4
KRESS			PAYMASTER 101 A				70 PERCENT								
SLM LT SP	42	31	1.03	43	3.0	78	22.0	8.9	2.0	2.8	72.9	9.3	96	353	6.6
M SP	33	31	1.03	42	2.7	81	22.8	7.5	2.0	3.1	71.2	10.9	95	304	6.8
M TG	34	29	0.89	46	2.4	80	20.8	9.7	1.9	3.4	64.9	13.4	83	357	9.0

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968

State, Production Area Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
SOUTH TEXAS																				
TAFT				LANKART 611						70 PERCENT										
M	LT SP	32	32	296	91	7.8	6.8	130	120	37	22	51	68.0	11.4	93	85.3	3.1	106	26.9	27.7	111
SLM	LT SP	42	31	300	88	7.9	6.6	120	110	46	36	50	65.2	11.6	88	84.7	3.4	103	27.0	27.4	110
SLM	LT SP	42	31	287	84	7.3	6.2	120	110	54	30	47	65.1	10.8	85	84.4	2.9	104	27.6	27.3	108
CENTRAL TEXAS																				
FORNEY				LANKART 57						95 PERCENT										
M	LT SP	32	30	291	87	7.0	5.9	120	120	61	39	38	65.7	12.3	91	84.4	3.1	103	27.7	27.6	109
SLM		41	30	291	85	6.9	5.7	120	120	45	27	41	68.9	11.4	95	83.9	2.5	105	28.4	26.9	105
M	LT SP	32	30	288	84	6.9	6.0	120	120	30	19	36	69.7	11.2	96	84.3	2.6	105	28.5	27.1	105
ITASCA				LANKART 57						100 PERCENT										
SLM		41	30	297	90	6.9	6.1	120	120	48	29	42	67.9	12.1	96	84.4	3.1	103	27.3	27.6	110
SLM		41	30	293	87	7.6	6.6	130	120	34	24	38	69.9	10.9	96	84.5	2.9	104	27.5	27.4	109
SLM		41	30	287	86	7.5	6.1	120	120	34	23	41	70.0	11.0	96	84.6	2.7	105	27.9	28.0	110
WACO				LANKART 57						98 PERCENT										
M	LT SP	32	30	291	88	6.6	5.8	120	110	46	27	37	68.1	11.4	94	84.9	3.0	105	28.2	27.2	106
M	LT SP	32	30	305	89	6.8	5.8	130	120	40	26	43	68.1	11.4	94	84.2	3.1	103	27.8	27.1	107
SLM	LT SP	42	30	305	89	7.4	6.3	130	120	35	20	46	67.2	11.6	92	84.5	3.1	104	28.0	27.5	108
NORTHWEST TEXAS																				
COLORADO CITY				LANKART 611						85 PERCENT										
M	LT SP	32	30	293	89	6.1	5.7	130	120	27	16	39	70.7	12.0	101	85.5	3.1	106	27.0	27.4	110
M	LT SP	32	30	314	93	7.8	6.3	130	120	27	13	41	71.1	11.7	100	84.5	3.0	104	27.5	27.4	109
M	LT SP	32	30	297	90	7.0	6.0	120	120	26	13	42	69.3	11.8	97	84.2	2.9	104	27.3	28.0	111
INADALE				WESTERN STORMPROOF						75 PERCENT										
M		31	30	321	97	6.5	5.7	130	130	30	18	44	71.5	11.7	101	84.9	2.9	105	27.6	27.4	108
M	LT SP	32	30	300	90	6.9	5.8	130	120	29	16	43	71.1	11.9	101	85.0	3.1	105	27.4	27.6	110
M		31	30	305	95	7.4	6.0	130	120	17	13	43	69.5	11.2	96	83.8	2.7	104	27.0	27.8	111
KRESS				PAYMASTER 101 A						70 PERCENT										
SLM	LT SP	42	31	345	104	8.7	7.4	110	100	73	42	60	64.8	12.3	89	83.9	4.0	99	27.5	27.0	107
M	SP	33	31	332	98	7.9	7.0	90	80	89	50	54	61.7	12.8	84	84.8	4.5	99	26.8	26.7	107
M	TG	34	29	315	90	8.1	7.2	70	60	207	114	40	55.1	13.7	74	84.2	4.8	96	27.7	25.6	101

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
NORTHWEST TEXAS															
LAKEVIEW			PAYMASTER 202				100 PERCENT								
SLM	41	32	0.97	47	4.6	87	23.1	7.0	3.3	4.6	74.3	8.6	98	402	6.3
SLM	41	32	0.97	46	4.5	86	22.6	6.6	2.2	3.6	73.0	8.9	96	403	5.8
SLM LT SP	42	32	0.99	47	4.7	87	22.9	6.3	2.7	4.3	72.6	8.5	95	402	6.6
LITTLEFIELD			PAYMASTER 202				100 PERCENT								
M LT SP	32	30	0.93	44	3.4	80	22.1	6.9	2.6	4.2	74.9	9.2	99	303	6.9
M LT SP	32	30	0.90	45	2.9	81	22.8	7.5	1.9	3.2	72.5	10.0	96	353	6.3
M SP	33	30	0.90	45	2.8	82	20.2	7.3	3.0	5.1	70.0	11.2	93	355	8.3
MEMPHIS			LANKART 57				75 PERCENT								
M LT SP	32	31	0.95	45	4.0	77	19.9	8.7	2.1	3.5	74.3	9.5	99	303	5.7
M LT SP	32	31	0.96	43	4.0	81	19.4	6.7	1.4	2.6	73.3	9.8	97	353	5.7
M LT SP	32	31	0.95	45	3.6	83	20.8	6.6	1.2	2.8	74.7	9.5	99	303	5.4
RULE			LANKART 57				95 PERCENT								
M	31	30	0.90	47	5.2	84	21.3	7.7	1.3	2.0	74.8	9.5	99	303	5.2
M	31	30	0.92	44	5.1	77	20.3	7.7	2.1	3.2	74.8	9.2	99	353	5.7
M	31	30	0.95	45	4.5	73	19.4	8.7	1.6	2.7	75.9	8.8	100	302	5.2
RULE			WATSON GL 16				75 PERCENT								
LM	51	32	0.98	46	4.6	88	21.3	5.8	4.6	5.8	74.1	8.5	98	402	9.0
LM	51	32	1.02	45	4.5	89	22.4	5.7	4.5	5.7	71.7	8.8	94	403	8.7
SLM	41	32	1.03	45	4.1	85	22.1	6.6	3.0	4.2	77.1	8.3	102	302	5.8
SNYDER			SWEATT 75				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
M LT SP	32	30	0.95	45	4.9	83	20.8	6.8	1.4	2.5	74.4	9.5	99	303	5.1
M LT SP	32	30	0.96	47	4.8	85	20.8	7.3	1.7	2.6	73.2	10.1	98	303	5.4
M LT SP	32	30	0.92	45	4.7	82	19.4	6.9	1.6	2.9	73.9	9.6	98	303	6.1
WELLINGTON			LANKART 57				80 PERCENT								
LM	51	32	0.97	47	3.6	88	25.2	7.2	3.4	4.3	72.1	8.6	95	402	7.0
M LT SP	32	32	0.99	44	3.9	78	20.7	6.9	1.6	2.9	74.8	9.3	99	303	5.5
SLM LT SP	42	32	1.01	46	3.5	78	21.1	9.0	2.2	3.8	71.2	9.2	93	403	5.7

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d in.	lbs.	lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
NORTHWEST TEXAS																				
LAKEVIEW			PAYMASTER 202						100 PERCENT											
SLM		41 32	351	104	7.1	5.8	130	120	30	20	54	68.6	11.5	95	83.1	3.1	100	28.2	27.4	107
SLM		41 32	342	103	6.9	5.6	130	120	43	18	52	67.8	11.1	92	82.6	3.6	97	28.1	26.4	103
SLM LT SP		42 32	357	107	6.7	5.6	130	120	39	28	54	66.7	10.8	88	81.2	3.7	93	28.1	25.3	99
LITTLEFIELD			PAYMASTER 202						100 PERCENT											
M LT SP		32 30	326	96	7.2	6.1	120	110	42	28	45	69.3	11.8	97	84.6	3.5	102	28.3	26.3	103
M LT SP		32 30	334	99	7.3	6.7	110	100	55	34	50	66.7	12.0	93	84.0	3.7	100	28.1	26.7	105
M SP		33 30	318	94	7.4	6.7	110	90	91	52	46	61.8	12.6	84	84.6	3.8	101	28.3	25.7	100
MEMPHIS			LANKART 57						75 PERCENT											
M LT SP		32 31	299	90	7.7	6.6	120	110	57	28	46	67.5	12.2	95	83.8	3.1	102	27.2	27.6	110
M LT SP		32 31	306	93	7.1	6.1	120	120	32	22	48	66.4	11.5	90	84.1	3.6	101	27.8	27.1	107
M LT SP		32 31	304	94	6.7	5.9	120	110	59	36	46	66.7	11.8	92	84.1	3.6	101	28.0	25.7	101
RULE			LANKART 57						95 PERCENT											
M		31 30	300	89	7.2	6.0	130	120	28	15	41	69.0	12.0	97	83.5	3.3	100	27.9	27.4	108
M		31 30	292	87	7.4	6.1	120	110	25	16	39	69.7	11.4	97	83.4	2.7	103	28.0	27.7	109
M		31 30	301	89	8.0	6.5	120	110	30	18	43	69.1	10.9	94	83.8	3.0	102	27.1	28.0	112
RULE			WATSON GL 16						75 PERCENT											
LM		51 32	330	101	6.3	5.6	130	120	18	11	53	69.1	11.4	96	83.6	3.2	101	27.6	26.9	106
LM		51 32	331	102	7.0	5.8	120	120	20	15	56	70.7	11.4	99	83.1	3.1	100	27.6	27.2	108
SLM		41 32	322	100	6.9	5.9	120	120	26	16	57	70.3	10.9	96	84.7	3.0	104	27.1	27.2	109
SNYDER			SWEATT 75						100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)									
M LT SP		32 30	301	90	6.6	5.8	130	120	28	14	43	69.0	12.0	97	85.0	2.9	106	27.6	27.2	108
M LT SP		32 30	306	91	7.2	5.8	130	120	27	13	43	68.0	12.0	96	85.3	3.5	104	27.0	27.2	109
M LT SP		32 30	291	89	7.0	5.9	130	120	26	13	42	70.0	11.8	99	84.3	2.8	104	27.0	27.4	110
WELLINGTON			LANKART 57						80 PERCENT											
LM		51 32	370	112	7.4	6.2	120	110	44	25	58	68.5	11.3	94	83.7	3.6	100	28.7	26.3	102
M LT SP		32 32	310	95	7.7	6.1	120	120	38	18	53	67.9	11.5	93	84.0	3.3	102	27.8	26.7	105
SLM LT SP		42 32	321	99	7.8	6.8	120	110	45	24	58	65.3	11.2	87	82.7	3.6	97	27.8	25.5	100

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
NORTHWEST TEXAS															
WINTERS			LANKART 57				80 PERCENT								
M LT SP	32	30	0.95	46	4.5	78	19.6	8.4	1.6	3.0	75.0	9.3	100	303	6.1
M LT SP	32	30	0.97	46	4.2	79	21.1	7.9	2.4	3.6	75.4	9.1	100	302	5.9
M LT SP	32	30	0.94	46	4.5	77	20.5	7.9	1.7	3.2	75.8	9.1	100	302	6.6
OKLAHOMA															
MANGUM			LANKART 57				90 PERCENT								
M	31	31	0.97	46	4.4	79	19.9	8.2	0.9	2.3	75.6	8.9	100	352	5.1
M LT SP	32	32	0.97	48	4.9	72	19.6	8.3	1.4	3.0	73.9	9.5	98	353	5.1
SLM LT SP	42	31	0.99	45	4.3	79	20.0	8.0	1.3	2.6	70.8	9.3	92	403	5.6
TUTTLE			LANKART 57				95 PERCENT								
SLM LT SP	42	32	0.98	45	4.9	76	19.4	8.6	2.4	3.4	69.3	9.5	89	453	6.3
SLM LT SP	42	32	0.99	46	4.4	76	20.2	8.4	2.2	3.6	70.8	9.4	93	403	6.0
SLM LT SP	42	31	0.99	46	4.5	80	19.9	8.4	2.3	3.6	71.3	8.9	93	403	6.2

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
NORTHWEST TEXAS																				
WINTERS				LANKART 57					80 PERCENT											
M LT SP	32	30	297	89	7.3	6.0	120	110	47	33	43	70.2	11.7	99	85.9	3.0	107	26.3	27.2	110
M LT SP	32	30	309	92	8.0	6.6	120	110	38	20	46	70.1	12.1	100	85.1	2.9	106	27.6	27.0	107
M LT SP	32	30	302	90	7.5	6.2	120	120	26	16	45	69.8	11.7	98	84.2	3.0	103	27.3	27.7	110
OKLAHOMA																				
MANGUM				LANKART 57					90 PERCENT											
M		31	31	326	95	8.4	7.1	130	120	29	14	51	70.0	11.5	98	84.2	3.0	103	26.9	27.3	109
M LT SP	32	32	294	89	7.8	6.2	120	120	27	16	48	66.7	11.3	90	83.6	4.0	98	27.5	27.2	108
SLM LT SP	42	31	316	94	7.8	6.5	120	110	38	20	53	65.6	11.3	88	83.4	4.1	97	28.3	26.1	102
TUTTLE				LANKART 57					95 PERCENT											
SLM LT SP	42	32	298	90	7.1	6.7	130	120	27	18	49	65.9	11.6	89	83.2	3.9	97	28.0	27.2	107
SLM LT SP	42	32	303	91	7.6	6.5	130	130	29	16	51	65.6	11.5	88	83.7	3.8	99	27.5	26.8	106
SLM LT SP	42	31	313	94	8.3	7.0	130	120	41	25	52	63.6	11.7	85	83.6	4.1	98	27.9	25.9	102

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH EASTERN AREA															
ALABAMA															
GERALDINE			COKER 201				100 PERCENT								
SLM	41	34	1.06	46	4.5	82	22.5	6.5	1.1	1.8	74.5	8.4	98	402	5.3
SLM LT SP	42	33	1.08	46	4.6	82	21.3	5.8	1.6	2.3	73.5	8.2	96	402	5.4
SLM LT SP	42	33	1.08	46	4.8	81	22.5	5.9	1.2	1.9	72.5	8.3	95	402	5.7
LIVINGSTON			CAROLINA QUEEN				80 PERCENT								
M	31	35	1.08	47	4.6	88	22.5	4.7	1.5	2.3	76.0	9.1	100	302	4.2
M	31	33	1.01	46	4.5	85	21.0	5.3	1.3	1.7	75.8	9.2	100	302	5.1
PIEDMONT			DIXIE KING II				100 PERCENT								
LM	51	34	1.05	46	4.3	81	21.0	5.8	2.7	3.5	71.9	8.4	93	452	7.7
SLM	41	33	1.01	45	4.3	84	22.0	5.7	1.7	2.9	74.5	7.8	98	402	6.3
LM	51	33	1.02	45	4.5	85	20.9	5.2	2.1	3.5	72.0	7.4	93	451	6.6
PRATTVILLE			COKER 413				100 PERCENT								
M	31	36	1.13	44	4.2	94	23.7	5.0	1.7	2.3	74.5	8.8	98	352	4.8
SLM	41	35	1.13	46	4.3	93	24.4	5.4	1.3	1.8	76.0	8.9	100	302	5.0
SLM	41	35	1.13	44	4.2	87	24.2	5.4	1.4	2.4	75.5	7.8	98	401	5.2
SLM	41	34	1.14	42	3.6	88	24.8	5.1	1.7	3.3	71.0	8.7	92	453	6.0
SYLACAUGA			COKER 413				100 PERCENT								
M	31	35	1.11	46	4.3	95	23.7	5.2	1.3	2.0	75.3	8.6	99	352	4.5
SLM	41	35	1.13	47	4.4	89	24.2	5.4	2.0	2.6	72.7	8.9	96	403	6.0
SLM SP	43	34	1.12	46	4.0	85	24.2	5.6	1.9	2.9	71.5	9.0	93	403	6.4
TUSKEGEE			MCNAIR 1032				83 PERCENT								
SM	21	33	1.00	45	4.7	95	22.0	4.9	0.8	1.5	76.7	9.4	102	252	5.0
M	31	34	1.03	46	4.2	91	22.3	5.1	0.9	1.8	76.5	9.2	101	302	3.9
SLM	41	33	1.04	46	4.6	87	21.8	5.4	1.8	2.4	71.7	9.0	94	403	5.2
SLM LT SP	42	32	0.99	46	5.2	86	22.0	5.5	1.7	2.0	69.3	9.5	89	453	4.7
GEORGIA															
BOSTWICK			DIXIE KING				100 PERCENT								
SLM	41	33	1.05	44	4.4	83	21.9	5.1	1.9	2.5	71.8	8.6	94	403	6.2
LM	51	33	1.02	47	4.4	90	22.6	5.0	1.4	2.7	71.0	9.1	92	403	6.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1969

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EASTERN AREA																				
ALABAMA																				
GERALDINE				COKER 201						100 PERCENT										
SLM		41 34	106	36	6.2	4.8	110	80	15	11	63	69.4	10.3	93	83.9	2.9	103	28.1	27.1	106
SLM LT SP		42 33	103	34	6.0	4.3	110	90	15	16	63	66.4	10.6	87	82.9	3.2	99	28.3	26.1	102
SLM LT SP		42 33	101	33	6.2	4.6	110	80	18	15	62	65.7	10.2	85	82.8	2.9	100	28.9	27.2	105
LIVINGSTON				CAROLINA QUEEN						80 PERCENT										
M		31 35	108	37	5.8	4.6	120	100	12	9	64	68.5	12.0	97	84.4	2.6	105	27.1	27.8	111
M		31 33	99	31	5.4	4.0	120	90	13	9	61	71.3	11.1	99	83.5	2.8	102	28.6	27.2	106
PIEDMONT				DIXIE KING II						100 PERCENT										
LM		51 34	102	35	5.8	4.4	110	100	18	13	64	66.3	10.7	87	84.0	3.4	101	29.9	25.6	97
SLM		41 33	93	30	5.6	4.1	110	100	15	11	58	70.0	10.2	93	83.2	2.8	102	29.9	26.5	100
LM		51 33	98	32	5.9	4.3	110	60	25	18	60	68.8	9.5	89	82.7	2.7	101	30.3	26.6	100
PRATTVILLE				COKER 413						100 PERCENT										
M		31 36	123	46	6.2	4.9	110	90	13	11	75	67.8	11.9	95	83.5	3.4	100	28.3	26.9	105
SLM		41 35	121	46	6.0	5.2	120	100	13	11	76	71.1	10.9	98	83.2	3.1	101	28.7	26.6	103
SLM		41 35	118	44	5.8	4.8	110	90	19	14	76	70.1	10.3	94	84.8	3.0	105	30.2	25.4	95
SLM		41 34	115	42	6.1	4.7	110	90	22	18	74	73.2	10.6	100	85.9	2.7	109	26.9	26.5	106
SYLACAUGA				COKER 413						100 PERCENT										
M		31 35	124	46	6.4	5.0	120	100	11	9	72	69.0	10.9	94	83.8	3.2	102	28.6	26.7	104
SLM		41 35	125	46	6.0	4.9	120	100	15	9	75	67.4	10.8	90	84.4	3.3	103	29.0	25.7	99
SLM SP		43 34	128	46	6.7	5.0	110	70	15	13	73	66.1	11.4	89	83.4	3.9	98	29.2	25.5	98
TUSKEGEE				MCNAIR 1032						83 PERCENT										
SM		21 33	99	31	5.3	3.8	120	100	5	4	50	72.7	10.9	100	84.1	3.0	103	27.6	27.3	108
M		31 34	106	36	5.8	4.3	120	100	8	5	55	69.4	11.3	96	83.2	2.9	101	28.6	27.1	105
SLM		41 33	93	28	5.3	3.8	120	90	9	7	53	68.0	11.1	92	83.8	2.8	103	31.0	26.0	96
SLM LT SP		42 32	99	32	5.4	4.0	120	100	9	9	59	66.6	11.1	89	84.2	3.2	103	29.9	25.7	97
GEORGIA																				
BOSTWICK				DIXIE KING						100 PERCENT										
SLM		41 33	104	36	5.5	4.4	120	100	15	11	65	67.0	11.0	89	84.0	3.8	100	32.6	23.9	84
LM		51 33	101	32	5.6	4.0	100	80	18	12	60	65.4	11.1	87	84.1	3.0	103	30.5	26.0	97

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH EASTERN AREA															
GEORGIA															
GOUGH			ATLAS				100 PERCENT								
M	31	35	1.06	45	4.5	99	27.4	4.6	1.1	1.7	77.0	9.3	102	252	5.2
M	31	34	1.03	46	4.5	96	25.9	5.0	0.9	1.6	77.3	8.8	102	302	3.6
SLM	41	34	1.05	46	4.5	102	26.5	5.1	1.1	2.4	73.2	8.7	96	402	6.1
PINEHURST			COKER 413				100 PERCENT								
SLM	41	35	1.13	43	3.8	86	24.4	5.2	1.3	2.1	74.3	8.8	98	352	5.2
SLM	41	35	1.12	45	3.9	88	24.2	5.4	1.2	2.1	73.8	8.6	97	402	3.9
SLM	41	35	1.12	45	3.9	89	23.8	5.4	1.3	2.2	74.5	8.3	98	402	4.8
SHELLMAN			COKER 413				100 PERCENT								
SLM	41	34	1.10	45	3.6	91	24.5	5.3	1.9	3.1	74.3	9.3	98	353	5.7
SLM	41	33	0.98	45	4.4	88	21.2	5.2	1.7	2.4	71.5	9.2	94	403	6.2
SLM	41	34	1.09	44	3.9	91	25.0	5.3	1.0	1.8	74.0	8.5	97	402	5.5
SYCAMORE			ATLAS				100 PERCENT								
SLM	41	33	1.00	45	4.2	93	25.7	4.6	2.0	3.0	70.5	9.6	92	403	6.3
SLM LT SP	42	33	1.01	45	4.6	95	23.8	4.9	1.9	2.6	69.3	9.8	89	453	5.5
SLM LT SP	42	32	1.00	47	4.8	92	23.9	5.0	1.7	2.5	69.5	9.8	90	404	6.5
SYLVANIA			COKER 413				100 PERCENT								
SLM LT SP	42	35	1.11	41	3.4	87	22.8	5.0	2.0	3.0	72.0	9.4	94	403	6.9
SLM	41	33	1.04	44	4.0	95	24.5	4.6	2.0	2.7	72.5	8.8	95	403	5.8
SLM	41	33	1.06	45	3.9	97	24.1	5.0	2.4	3.7	72.2	8.4	94	402	7.1
NORTH CAROLINA															
BELWOOD			TH 149				100 PERCENT								
M	31	35	1.06	48	4.5	96	26.4	4.9	1.2	2.2	78.0	8.4	102	301	5.1
SLM	41	34	1.04	48	4.6	94	25.9	5.4	1.2	2.6	73.0	8.5	96	402	5.6
LM	51	34	1.04	47	4.8	95	27.1	5.0	2.5	3.9	69.0	8.1	88	502	7.7
LAURINBURG			MCNAIR 1032 B				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
LM+	50	35	1.07	44	3.4	88	23.5	5.8	5.1	6.2	73.0	8.2	95	402	8.8
LM+	50	34	1.05	45	3.7	88	24.3	5.4	3.7	4.7	75.2	8.0	98	402	7.0
LM	51	34	1.01	44	3.5	87	21.8	5.7	2.7	3.9	72.8	7.4	94	451	7.8
LM	51	33	1.00	46	4.4	86	23.4	5.7	2.5	3.4	65.5	8.1	82	553	6.9

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EASTERN AREA																				
GEORGIA																				
GOUGH				ATLAS					100 PERCENT											
M		31 35	123	44	5.7	4.6	110	100	19	14	67	68.7	11.8	96	83.5	3.0	102	27.4	27.4	109
M		31 34	121	41	5.7	4.4	120	100	15	9	69	69.9	11.0	96	83.6	3.1	102	28.3	27.0	105
SLM		41 34	121	41	5.7	4.2	120	100	18	13	66	67.2	10.8	89	83.6	3.3	101	30.1	25.6	96
PINEHURST				COKER 413					100 PERCENT											
SLM		41 35	127	47	6.5	5.2	110	100	7	5	75	69.2	10.4	93	83.7	3.1	101	27.8	27.1	107
SLM		41 35	123	45	6.5	5.2	120	90	12	7	78	68.1	10.4	90	83.0	3.2	100	29.3	26.3	101
SLM		41 35	120	43	6.2	5.1	120	100	12	8	74	68.7	10.8	93	83.9	2.9	103	31.2	25.2	92
SHELLMAN				COKER 413					100 PERCENT											
SLM		41 34	120	43	6.2	5.0	110	90	16	11	74	67.9	11.7	94	82.4	4.1	95	29.5	25.7	98
SLM		41 33	98	30	5.4	4.0	110	90	11	10	73	67.0	11.7	92	85.0	3.4	104	29.5	26.2	100
SLM		41 34	119	43	6.0	4.6	100	100	16	11	72	66.8	10.6	88	83.4	3.5	99	31.7	24.9	90
SYCAMORE				ATLAS					100 PERCENT											
SLM		41 33	113	38	5.6	4.4	110	90	32	27	60	64.3	12.3	88	84.0	3.3	102	30.7	25.4	94
SLM LT SP		42 33	90	28	4.7	3.7	110	100	22	13	49	63.8	11.1	84	82.1	3.5	96	32.5	24.7	88
SLM LT SP		42 32	87	25	4.5	3.5	110	90	21	18	45	62.9	11.8	84	82.3	3.6	96	33.2	23.8	83
SYLVANIA				COKER 413					100 PERCENT											
SLM LT SP		42 35	111	39	6.3	4.7	110	90	21	19	62	64.4	12.0	87	84.0	3.5	101	29.2	25.9	99
SLM		41 33	107	36	5.4	4.2	110	70	22	16	62	68.2	10.8	92	84.4	3.0	104	32.1	24.9	89
SLM		41 33	103	35	5.2	3.8	110	90	18	19	64	67.2	10.7	89	84.4	3.2	103	31.1	25.6	94
NORTH CAROLINA																				
BELWOOD				TH 149					100 PERCENT											
M		31 35	125	46	5.7	4.5	110	90	23	15	71	71.3	10.4	97	84.4	3.1	103	26.6	27.8	112
SLM		41 34	118	40	5.6	4.3	110	100	19	15	67	66.7	10.9	89	83.0	3.1	100	28.9	26.3	101
LM		51 34	112	35	5.8	3.8	120	70	29	23	64	64.2	10.2	83	82.7	3.0	100	30.2	26.2	98
LAURINBURG				MCNAIR 1032 B					100 PERCENT (LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)											
LM+		50 35	122	43	6.6	5.3	120	100	16	14	63	68.0	11.2	93	84.4	2.9	104	27.6	27.0	107
LM+		50 34	115	40	6.2	4.7	100	90	19	16	65	69.6	10.4	93	83.6	2.9	102	28.3	26.8	105
LM		51 34	108	38	5.9	4.7	110	90	25	18	65	66.0	10.1	85	84.0	3.2	102	29.8	25.8	98
LM		51 33	105	36	5.6	4.3	110	100	21	15	60	61.5	10.1	78	83.3	3.1	101	30.4	25.6	96

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
			2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Grade		Staple													
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH EASTERN AREA															
NORTH CAROLINA															
SHELBY			COKER 413				100 PERCENT								
M	31	35	1.10	47	4.2	97	27.6	5.5	1.0	1.6	78.2	8.8	103	251	5.7
SLM	41	34	1.06	48	4.3	93	26.1	5.9	1.6	2.6	71.0	8.6	91	453	5.4
SLM	41	34	1.09	46	4.3	92	24.7	5.2	1.7	2.9	72.2	8.6	94	452	6.0
LM	51	34	1.08	47	4.4	92	25.7	5.4	2.0	3.3	68.3	8.2	87	503	6.6
SHELBY			COKER 201				100 PERCENT								
SLM	41	34	1.05	47	4.5	90	24.0	5.8	2.6	3.3	74.0	8.8	98	352	6.0
SLM	41	34	1.06	47	4.6	90	24.8	6.0	2.0	3.0	75.0	8.3	99	352	7.1
SLM LT SP	42	33	1.02	45	4.9	87	23.5	6.6	1.3	2.2	68.2	9.8	88	454	5.3
SLM LT SP	42	32	1.03	45	4.9	86	22.7	5.3	1.5	2.6	67.8	9.3	87	453	6.1
SOUTH CAROLINA															
BISHOPVILLE			COKER 413				90 PERCENT								
SLM	41	36	1.17	44	3.6	87	25.3	5.7	4.2	5.2	74.0	9.0	98	353	6.9
SLM	41	36	1.17	44	3.5	83	24.0	5.7	2.3	2.9	73.5	8.5	96	402	6.1
SLM	41	35	1.13	46	3.8	92	23.4	5.4	2.6	3.5	75.3	8.0	99	402	5.9
LM	51	35	1.14	47	3.8	92	25.9	5.2	3.3	3.6	71.0	8.3	92	452	6.4
CAMERON			COKER 201				98 PERCENT								
SM	21	35	1.09	43	3.5	89	22.0	5.2	0.9	1.8	78.5	9.0	104	252	5.3
SLM	41	35	1.08	45	4.0	89	24.2	4.8	2.2	2.9	74.5	8.7	98	352	4.6
SLM	41	34	1.08	46	4.9	90	23.3	5.4	1.6	2.3	74.7	8.2	98	402	5.6
EDGEFIELD			CAROLINA QUEEN				70 PERCENT								
M	31	34	1.08	44	4.0	89	22.5	5.3	1.4	2.2	75.7	8.8	100	352	5.4
M	31	34	1.05	45	4.2	86	21.5	5.3	1.7	2.6	74.7	8.8	98	352	5.0
SLM	41	34	1.10	47	4.5	90	24.5	5.6	1.4	2.0	71.5	8.6	93	453	5.6
SWEDEN			COKER 413				100 PERCENT								
SLM	41	36	1.15	44	3.4	92	23.4	5.2	2.5	3.4	74.3	8.4	98	402	6.8
SLM	41	36	1.12	46	3.7	92	25.4	4.8	2.4	3.2	73.8	8.4	97	402	6.7
SLM	41	35	1.14	47	4.0	93	25.6	5.2	2.5	2.7	72.7	8.4	95	402	6.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EASTERN AREA																				
NORTH CAROLINA																				
SHELBY				COKER 413						100 PERCENT										
M		31 35	133	49	6.6	5.2	110	90	17	11	81	71.4	11.3	99	85.7	3.5	105	27.3	27.3	109
SLM		41 34	121	42	6.0	4.6	120	100	14	11	72	64.4	11.0	85	83.1	3.8	98	29.3	25.9	99
SLM		41 34	125	43	6.3	4.5	120	90	6	9	72	64.9	10.7	85	83.0	3.6	98	29.3	25.8	99
LM		51 34	122	42	6.2	4.7	120	100	17	11	73	62.5	10.6	80	81.8	3.7	95	30.2	25.9	97
SHELBY				COKER 201						100 PERCENT										
SLM		41 34	109	37	6.2	4.7	110	90	23	18	62	68.2	11.2	93	83.3	3.3	100	27.9	27.0	106
SLM		41 34	110	37	6.0	4.7	110	100	21	18	65	68.6	11.1	94	84.6	4.0	100	27.5	27.6	109
SLM LT SP		42 33	100	33	5.5	4.5	100	90	17	15	61	61.7	11.9	82	81.6	5.1	89	29.7	25.1	95
SLM LT SP		42 32	96	29	5.5	4.0	110	90	16	14	55	62.6	11.0	81	79.9	5.7	82	30.8	24.4	90
SOUTH CAROLINA																				
BISHOPVILLE				COKER 413						90 PERCENT										
SLM		41 36	134	50	7.0	5.8	100	80	32	19	83	67.5	11.2	91	85.1	3.2	105	27.0	26.9	108
SLM		41 36	124	46	6.7	5.3	110	90	17	17	81	67.3	11.3	91	85.2	3.2	105	28.4	26.6	104
SLM		41 35	126	46	6.3	5.0	110	80	24	19	73	67.8	10.9	91	83.6	3.0	102	28.6	26.7	104
LM		51 35	127	47	6.3	5.3	100	100	27	20	74	65.9	10.6	86	83.6	3.0	102	29.3	25.8	99
CAMERON				COKER 201						98 PERCENT										
SM		21 35	113	39	5.9	4.6	110	90	9	8	68	71.1	11.2	99	85.2	2.8	106	27.4	27.7	110
SLM		41 35	107	37	5.7	4.6	120	90	15	10	63	66.9	11.2	90	83.1	3.1	100	29.5	26.0	99
SLM		41 34	110	38	5.8	4.4	120	90	14	12	63	69.3	10.6	93	84.0	2.6	104	29.5	26.5	101
EDGEFIELD				CAROLINA QUEEN						70 PERCENT										
M		31 34	110	37	6.0	4.4	110	100	12	11	62	68.4	11.3	94	84.2	3.0	103	27.4	27.6	110
M		31 34	108	37	6.0	4.4	120	90	17	13	67	69.1	10.9	94	82.7	3.0	100	28.5	26.9	105
SLM		41 34	119	43	6.2	5.0	120	100	13	11	72	67.2	10.8	89	83.7	3.2	101	27.8	27.2	107
SWEDEN				COKER 413						100 PERCENT										
SLM		41 36	126	47	6.4	5.4	110	90	21	18	78	68.3	11.0	93	85.1	3.1	105	28.9	25.8	99
SLM		41 36	127	46	6.1	4.9	120	100	17	14	76	66.4	10.4	87	83.9	3.2	102	30.1	25.7	97
SLM		41 35	126	46	5.9	4.9	120	100	21	15	73	67.5	10.7	90	83.3	3.0	101	29.9	26.1	99

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
ARKANSAS															
CLARENDON			DPL SMOOTH LEAF				90 PERCENT								
SLM	41	35	1.07	46	5.0	90	23.6	6.7	1.7	2.8	71.7	8.6	94	403	5.6
SLM	41	35	1.08	48	4.9	85	23.4	7.4	1.7	2.8	75.2	7.7	99	401	5.1
SLM	41	35	1.04	45	4.5	84	23.1	7.6	1.7	2.6	73.9	8.3	97	402	5.5
DUMAS			STONEVILLE 213				100 PERCENT								
SLM	41	35	1.07	47	5.0	88	23.2	6.1	2.1	3.0	73.5	8.4	96	402	5.9
SLM	41	35	1.10	46	4.7	87	23.9	6.4	2.4	2.9	72.3	8.1	95	452	5.7
LM	51	35	1.07	44	3.4	87	21.6	6.6	3.3	4.5	68.5	8.3	87	503	8.3
KEISER			COKER 413				100 PERCENT								
SLM	41	36	1.15	46	4.0	90	24.4	5.4	3.1	4.4	72.9	8.4	96	402	7.5
SLM	41	36	1.16	45	4.1	95	25.1	5.2	2.4	3.3	73.6	7.8	96	402	6.2
SLM	41	36	1.14	47	4.5	95	25.0	5.4	2.5	3.7	72.9	8.1	95	402	7.1
LEACHVILLE			STONEVILLE 7A				100 PERCENT								
SLM	41	35	1.11	45	5.0	88	22.5	5.6	2.6	4.0	71.8	8.5	94	402	6.0
SLM	41	35	1.13	45	4.7	91	22.7	5.4	2.7	3.7	72.9	8.1	96	402	6.1
SLM	41	35	1.14	45	4.5	87	22.7	5.7	2.1	2.9	74.8	8.0	98	402	6.3
MCGEHEE			STONEVILLE 213				90 PERCENT								
SLM	41	34	1.06	46	5.0	86	22.9	6.3	1.1	2.3	72.2	8.2	95	452	5.9
SLM	41	35	1.09	47	4.7	85	22.2	7.3	1.5	2.6	72.4	8.1	95	452	5.5
SLM	41	35	1.08	47	4.4	82	22.0	6.8	1.7	2.8	73.1	8.1	96	402	6.2
PARKIN			REX SMOOTH LEAF				80 PERCENT								
SLM	41	34	1.01	45	4.9	90	20.8	5.3	2.5	3.5	71.8	8.5	94	402	5.9
SLM	41	35	1.07	46	4.7	91	21.7	5.4	2.0	2.9	73.0	8.1	95	402	5.8
SLM	41	34	1.03	46	5.1	88	21.3	6.3	2.0	3.0	74.1	7.6	97	401	5.9
PINE BLUFF			DPL 45A				70 PERCENT								
SLM	41	35	1.07	49	5.1	79	23.3	7.2	2.1	3.5	73.2	8.2	96	402	5.7
SLM	41	35	1.08	47	4.5	85	24.5	7.0	1.4	2.1	74.2	7.7	97	401	5.5
SLM	41	35	1.07	46	4.2	85	24.0	7.4	2.2	3.2	74.2	7.7	97	401	5.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
ARKANSAS																				
CLARENDON				DPL SMOOTH LEAF						90 PERCENT										
SLM	41	35	111	39	5.8	4.4	120	100	16	10	68	66.0	10.9	87	83.8	3.1	102	28.0	27.3	107
SLM	41	35	113	40	6.1	4.8	130	100	11	8	67	69.7	10.3	93	84.5	2.9	104	27.6	27.1	107
SLM	41	35	111	39	6.5	4.9	130	100	12	6	65	68.8	10.0	90	83.4	2.7	103	27.9	27.3	107
DUMAS				STONEVILLE 213						100 PERCENT										
SLM	41	35	110	39	5.7	4.3	130	100	14	8	68	68.6	11.1	94	84.0	2.9	103	27.6	27.2	108
SLM	41	35	114	40	6.1	4.6	120	100	16	8	69	68.8	10.4	92	83.3	3.0	101	28.5	26.7	104
LM	51	35	109	39	6.0	4.8	90	70	42	34	62	65.5	10.1	84	84.2	3.2	103	29.1	26.0	100
KEISER				COKER 413						100 PERCENT										
SLM	41	36	132	49	5.8	4.7	110	90	29	22	68	66.7	10.9	89	84.7	3.2	104	27.9	26.5	104
SLM	41	36	130	47	5.6	4.5	120	100	16	12	75	67.7	9.4	86	83.3	3.1	101	29.2	26.0	100
SLM	41	36	126	48	5.6	4.7	120	100	13	9	77	67.8	10.0	88	84.0	2.8	104	28.8	26.5	102
LEACHVILLE				STONEVILLE 7A						100 PERCENT										
SLM	41	35	108	39	5.2	4.1	120	90	30	22	67	67.5	10.7	90	84.0	3.0	103	28.3	26.9	105
SLM	41	35	107	37	5.4	3.9	120	90	19	14	64	67.7	9.8	88	83.6	2.9	102	28.0	26.8	105
SLM	41	35	108	39	5.7	4.4	120	90	20	14	69	69.8	9.7	91	84.3	2.9	104	28.3	26.5	103
MCGEHEE				STONEVILLE 213						90 PERCENT										
SLM	41	34	101	34	5.4	4.0	120	90	17	14	60	66.8	10.8	88	83.4	2.9	102	26.9	27.6	111
SLM	41	35	106	38	5.8	4.4	120	90	26	18	67	67.9	10.1	89	84.2	3.1	103	27.6	27.0	107
SLM	41	35	107	38	6.2	4.7	120	100	15	11	65	69.2	10.2	92	83.8	2.7	104	28.2	26.9	105
PARKIN				REX SMOOTH LEAF						80 PERCENT										
SLM	41	34	98	30	4.8	3.3	130	100	17	12	52	66.5	11.1	89	83.3	3.1	101	29.8	26.3	100
SLM	41	35	104	35	5.7	4.2	120	100	12	9	58	69.4	10.3	93	83.4	3.2	101	29.0	26.6	102
SLM	41	34	101	31	5.1	3.7	130	100	10	7	55	70.6	9.7	93	83.1	2.6	102	28.6	27.7	108
PINE BLUFF				DPL 45A						70 PERCENT										
SLM	41	35	113	40	6.0	4.8	130	100	18	14	67	68.3	10.3	90	83.6	2.7	103	26.7	27.7	111
SLM	41	35	118	42	6.5	5.1	130	100	13	10	68	70.8	9.9	94	84.7	2.7	106	27.9	26.7	105
SLM	41	35	118	43	6.4	5.1	120	90	13	12	73	69.7	9.6	91	84.5	2.7	105	28.4	26.5	103

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
ARKANSAS															
TURRELL			STONEVILLE 213				80 PERCENT								
SLM	41	34	1.03	47	5.4	87	22.2	5.8	2.0	2.7	71.1	9.3	94	403	5.4
SLM	41	34	1.07	46	5.1	80	21.8	6.1	2.6	4.3	73.0	8.6	96	402	5.8
SLM	41	34	1.09	46	4.6	88	23.4	6.2	1.5	2.2	72.3	8.4	95	402	5.8
SLM	41	34	1.07	46	5.1	84	21.8	6.3	2.7	3.9	72.3	8.1	95	452	5.7
TYRONZA			STONEVILLE 213				100 PERCENT								
SLM	41	34	1.10	46	4.4	82	23.2	6.1	2.5	3.4	73.1	8.2	96	402	6.1
SLM	41	35	1.08	47	5.4	88	23.4	5.6	2.3	3.2	73.6	8.1	97	402	5.9
LM	51	34	1.07	45	5.0	84	22.2	5.9	3.7	5.3	67.9	8.0	85	502	9.0
WILSON			COKER 201				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SLM	41	35	1.09	46	4.8	90	23.2	5.0	2.9	4.0	71.8	8.7	94	403	5.6
SLM	41	35	1.10	47	4.6	88	24.2	5.5	1.8	2.8	73.4	8.2	96	402	5.2
SLM	41	35	1.09	46	4.9	91	23.7	5.3	2.2	3.0	72.9	8.0	95	402	6.2
WYNNE			DPL 16				100 PERCENT								
SLM	41	34	1.04	48	5.4	88	24.5	7.7	2.3	3.6	72.3	8.8	95	403	6.0
SLM	41	35	1.09	46	4.8	86	23.3	7.4	2.5	3.2	74.2	7.9	97	402	5.9
SLM	41	35	1.12	47	5.1	82	23.2	8.1	2.1	3.2	74.2	7.8	97	402	5.4
LOUISIANA															
ALEXANDRIA			DPL 45				70 PERCENT								
SLM	41	34	1.08	46	4.9	78	22.4	6.2	0.9	1.5	72.1	8.9	95	403	4.4
M	31	34	1.07	47	4.9	77	21.1	7.2	0.6	1.6	75.2	8.7	100	352	4.5
SLM	41	34	1.08	45	3.9	80	22.6	7.2	1.5	2.3	73.9	7.8	97	402	5.5
FROGMORE			STONEVILLE 213				75 PERCENT								
SLM	41	35	1.09	46	4.9	82	22.5	6.4	1.4	2.6	74.9	8.2	98	402	5.6
SLM	41	35	1.08	46	4.4	83	21.5	7.1	1.6	2.4	75.1	7.5	98	401	5.7
SLM	41	34	1.10	44	3.5	79	22.5	7.9	1.5	2.8	74.2	7.6	97	401	6.5
MER ROUGE			STONEVILLE 213				75 PERCENT								
SLM	41	35	1.06	47	4.7	81	23.2	6.6	1.3	2.2	71.9	8.6	94	402	5.4
SLM	41	35	1.07	46	4.8	82	21.5	6.7	1.6	2.4	75.0	7.8	98	402	5.5
SLM	41	34	1.10	43	3.6	81	23.2	7.7	1.6	2.7	73.4	8.1	96	402	6.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Grade		Staple																		
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
ARKANSAS																				
TURRELL				STONEVILLE 213					80 PERCENT											
SLM		41 34	104	35	5.3	4.1	130	100	18	11	57	68.6	11.1	94	84.2	3.0	103	27.1	27.7	111
SLM		41 34	108	37	5.5	4.4	120	100	18	12	63	68.8	10.6	92	83.3	2.7	102	27.2	27.6	110
SLM		41 34	109	39	5.8	4.5	120	100	13	10	64	69.1	10.2	91	83.5	3.1	101	29.0	26.5	102
SLM		41 34	109	39	5.8	4.3	130	100	11	8	67	71.0	10.0	95	84.4	2.7	105	27.8	27.7	109
TYRONZA				STONEVILLE 213					100 PERCENT											
SLM		41 34	109	38	5.8	4.3	130	100	22	18	64	68.7	10.7	92	83.8	2.7	104	27.9	27.2	107
SLM		41 35	110	38	5.4	4.2	130	100	16	10	62	68.8	9.7	89	83.6	2.9	102	28.6	26.6	103
LM		51 34	103	36	5.6	4.1	110	90	30	23	61	64.6	10.1	83	82.8	2.9	100	28.1	26.8	105
WILSON				COKER 201					100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)									
SLM		41 35	112	39	5.0	4.0	120	100	21	15	64	66.7	11.5	91	84.3	2.8	104	28.4	26.8	104
SLM		41 35	116	42	5.5	4.3	120	90	16	12	69	67.8	10.3	89	84.0	2.9	103	27.7	26.8	106
SLM		41 35	113	39	5.0	3.9	130	90	13	9	64	68.1	10.0	89	83.8	3.0	102	29.4	26.3	100
WYNNE				DPL 16					100 PERCENT											
SLM		41 34	112	38	5.9	4.6	120	100	22	16	62	67.5	11.2	91	83.2	2.7	102	28.1	27.1	106
SLM		41 35	118	42	6.7	5.5	120	100	14	8	73	70.6	9.8	93	83.7	2.8	103	28.5	26.6	103
SLM		41 35	117	41	6.6	5.1	130	100	14	9	71	70.9	10.0	95	83.9	2.6	104	27.4	27.2	108
LOUISIANA																				
ALEXANDRIA				DPL 45					70 PERCENT											
SLM		41 34	102	35	5.7	4.3	130	100	13	8	62	66.8	11.2	90	84.7	2.6	106	28.2	27.1	106
M		31 34	103	35	5.9	4.4	120	90	14	9	63	69.5	10.4	93	84.4	2.6	105	28.4	26.6	104
SLM		41 34	109	39	6.5	5.3	120	90	15	10	62	69.7	9.9	92	84.9	2.6	107	29.0	26.1	100
FROGMORE				STONEVILLE 213					75 PERCENT											
SLM		41 35	108	38	6.0	4.6	130	100	18	12	66	70.2	10.9	96	84.8	2.6	106	27.6	27.6	109
SLM		41 35	110	39	6.5	5.0	120	90	19	13	66	72.2	10.1	97	84.1	2.9	103	28.0	27.1	106
SLM		41 34	107	38	6.7	5.0	100	70	27	24	69	69.2	9.7	90	84.7	2.8	105	28.8	26.6	103
MER ROUGE				STONEVILLE 213					75 PERCENT											
SLM		41 35	104	37	5.8	4.5	120	100	16	12	66	67.5	11.3	92	84.7	2.9	105	26.8	27.8	112
SLM		41 35	106	38	6.4	5.0	120	90	14	12	66	70.1	10.3	94	84.8	2.9	105	28.4	26.6	104
SLM		41 34	111	40	6.8	5.4	110	90	25	19	72	70.2	10.1	93	85.0	2.7	106	28.5	26.6	103

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflectance	Yellowness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
LOUISIANA															
MONROE			DPL 16				100 PERCENT								
M	31	35	1.14	46	4.8	79	23.1	7.8	0.7	1.5	76.9	8.1	101	351	4.4
M	31	35	1.13	45	4.7	79	22.5	7.8	1.0	1.9	77.1	8.2	102	351	5.4
SLM	41	35	1.14	43	3.8	80	22.7	8.5	1.5	2.5	76.0	7.6	100	401	6.0
RAYVILLE			DPL SMOOTH LEAF				90 PERCENT								
M	31	34	1.08	45	4.8	81	23.5	7.4	1.2	2.5	77.1	8.3	102	302	5.2
SLM	41	34	1.09	46	4.8	83	21.0	7.0	2.3	3.5	74.8	8.3	99	402	5.5
SLM LT SP	42	34	1.07	43	3.7	82	22.6	8.6	2.6	3.7	72.6	8.5	95	402	6.9
SHREVEPORT			DPL 16				75 PERCENT								
SLM	41	35	1.13	43	4.1	80	23.5	8.3	2.3	3.7	73.9	7.7	96	402	7.2
SLM	41	35	1.12	42	3.8	81	22.8	9.0	2.5	3.7	75.8	7.4	99	401	6.6
SLM LT SP	42	35	1.13	42	3.5	80	23.2	8.7	2.0	2.8	71.2	9.4	94	403	7.3
SHREVEPORT			DPL SMOOTH LEAF				80 PERCENT								
M	31	34	1.14	45	4.4	82	23.0	8.0	1.0	2.3	77.1	8.2	102	351	4.8
SLM	41	34	1.10	44	4.2	81	22.4	7.7	1.1	2.2	74.5	8.2	98	402	4.8
SLM	41	34	1.11	43	3.9	82	23.5	8.0	1.0	2.2	73.6	8.1	96	402	5.9
VILLE PLATTE			DPL SMOOTH LEAF				90 PERCENT								
SLM	41	34	1.09	46	4.9	81	22.5	7.1	1.3	2.0	73.6	8.8	97	402	4.5
SLM	41	34	1.07	46	4.8	78	21.7	7.0	1.1	2.4	73.1	8.4	96	402	4.7
SLM	41	34	1.05	45	4.7	78	21.7	7.6	1.0	1.8	74.1	8.2	97	402	4.6
MISSISSIPPI															
CALHOUN CITY			STONEVILLE 213				90 PERCENT								
SLM	41	34	1.05	47	4.7	82	21.6	5.9	1.5	2.2	73.2	9.0	96	403	4.3
SLM	41	35	1.08	48	4.5	81	22.2	5.9	1.3	1.9	75.8	8.6	100	352	5.3
SLM	41	34	1.09	45	4.3	84	21.1	6.0	1.4	2.2	75.8	7.7	99	401	4.9
SLM	41	34	1.06	46	4.4	84	21.8	5.8	1.3	2.7	76.5	7.8	100	351	5.1
CANTON			COKER 413				75 PERCENT								
SLM	41	34	1.03	47	5.3	83	23.1	6.1	2.2	2.9	70.7	8.8	91	453	5.1
SLM	41	34	1.04	47	5.3	85	21.8	6.1	1.8	2.6	73.0	8.8	96	402	5.5
SLM	41	34	1.06	46	4.8	80	22.5	6.7	2.0	2.9	74.5	8.4	98	402	5.5

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
LOUISIANA																				
MONROE				DPL 16						100 PERCENT										
M		31 35	111	40	6.1	5.1	120	100	18	13	73	70.6	10.0	94	84.5	2.6	106	26.5	27.5	111
M		31 35	114	40	6.7	5.4	120	90	18	12	72	73.0	10.2	99	84.7	2.5	106	27.4	27.5	109
SLM		41 35	113	41	7.0	5.4	110	80	26	19	74	70.8	9.8	94	84.3	2.6	105	28.0	26.9	106
RAYVILLE				DPL SMOOTH LEAF						90 PERCENT										
M		31 34	116	40	6.3	4.8	120	100	15	10	69	72.5	10.6	99	84.8	2.4	107	27.1	27.5	110
SLM		41 34	106	38	6.3	4.9	120	100	22	13	68	70.0	10.5	94	84.4	3.0	104	27.9	26.6	105
SLM LT SP		42 34	112	40	7.0	5.5	110	70	28	23	66	68.3	11.1	93	85.0	2.9	106	27.0	27.3	109
SHREVEPORT				DPL 16						75 PERCENT										
SLM		41 35	112	40	6.9	5.6	110	80	26	23	71	69.6	10.4	93	85.2	2.8	106	27.8	26.6	105
SLM		41 35	116	42	6.9	5.4	120	90	22	15	74	71.7	10.1	96	84.6	2.5	106	28.6	27.3	106
SLM LT SP		42 35	110	39	6.8	5.1	90	70	42	35	72	66.3	11.4	89	84.8	2.8	106	28.3	27.2	106
SHREVEPORT				DPL SMOOTH LEAF						80 PERCENT										
M		31 34	113	41	6.5	5.4	120	90	18	15	72	71.3	10.2	96	84.1	2.8	104	27.4	27.4	109
SLM		41 34	108	39	6.6	5.0	120	90	21	15	71	70.6	10.4	95	84.3	3.0	104	27.4	27.1	108
SLM		41 34	116	42	6.9	5.6	100	70	24	19	72	69.9	10.2	93	84.2	3.0	103	28.2	26.5	104
VILLE PLATTE				DPL SMOOTH LEAF						90 PERCENT										
SLM		41 34	106	37	5.6	4.5	130	100	12	10	67	68.5	11.4	94	84.4	2.6	105	27.9	27.2	107
SLM		41 34	105	35	5.9	4.4	130	100	14	10	63	67.2	10.6	89	84.1	2.8	104	27.2	27.5	110
SLM		41 34	103	36	6.3	4.9	120	100	9	8	63	70.2	10.1	93	84.2	2.7	105	28.7	27.1	105
MISSISSIPPI																				
CALHOUN CITY				STONEVILLE 213						90 PERCENT										
SLM		41 34	106	36	6.2	4.9	120	100	16	12	68	68.4	11.0	93	84.2	2.8	104	27.4	27.4	109
SLM		41 35	109	38	6.1	5.0	120	100	16	8	72	70.1	10.5	95	84.0	2.7	104	28.1	27.5	108
SLM		41 34	110	39	6.3	5.2	120	90	14	10	69	67.2	10.3	88	84.7	3.2	104	27.8	27.3	108
SLM		41 34	110	38	6.3	4.9	110	90	13	11	69	73.2	9.9	98	84.3	2.7	105	27.7	27.0	107
CANTON				COKER 413						75 PERCENT										
SLM		41 34	104	34	6.2	4.8	120	100	8	5	54	67.9	10.7	90	83.7	2.8	103	27.7	27.6	109
SLM		41 34	105	36	5.6	4.6	120	100	6	8	60	68.4	10.8	92	84.3	3.1	103	27.8	27.6	109
SLM		41 34	107	37	6.3	4.9	120	100	10	7	64	70.5	10.7	96	84.4	3.0	104	27.9	27.3	107

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
MISSISSIPPI															
CARY			DPL SMOOTH LEAF				90 PERCENT								
SLM	41	35	1.11	46	4.6	83	23.5	6.4	2.4	3.2	77.7	7.9	102	351	6.5
SLM	41	35	1.12	45	4.6	80	22.5	6.6	1.4	2.4	72.5	8.2	99	401	5.2
SLM	41	35	1.07	44	4.2	81	22.4	6.3	1.6	2.6	74.5	7.7	97	401	6.1
SLM	41	35	1.12	43	3.6	79	24.4	6.3	1.3	2.5	76.7	7.2	100	401	6.2
COLUMBUS			DPL SMOOTH LEAF				98 PERCENT								
M	31	35	1.07	47	4.9	84	22.3	5.6	1.4	2.0	77.0	9.0	102	302	4.3
SLM	41	35	1.10	45	4.6	84	23.3	6.6	1.4	2.3	76.2	8.2	99	352	5.1
M	31	34	1.06	45	4.8	80	22.3	7.0	0.9	1.8	77.3	8.2	101	351	4.9
DELTA CITY			STONEVILLE 213				90 PERCENT								
SLM	41	35	1.10	44	4.6	82	22.8	6.0	2.5	2.6	75.8	8.2	100	352	6.4
SLM	41	35	1.08	43	4.3	81	22.1	6.5	2.3	3.3	74.2	8.1	98	402	5.3
LM	51	34	1.08	45	4.5	76	22.9	6.3	3.3	4.4	72.8	7.9	94	452	8.2
LM	51	34	1.13	44	3.6	82	23.4	5.9	2.0	4.2	72.0	6.8	93	501	6.8
DREW			DPL 15A				75 PERCENT								
SLM	41	35	1.10	47	4.8	86	24.7	7.2	2.5	3.5	74.8	8.2	98	402	4.3
M	31	34	1.10	46	4.9	81	23.2	6.2	1.8	3.0	73.0	7.9	95	452	5.3
SLM	41	34	1.06	45	4.3	83	22.8	6.3	1.6	2.9	76.3	7.9	100	351	5.8
LM	51	34	1.09	44	3.4	83	26.1	6.3	2.0	3.8	74.0	7.4	96	451	7.3
EUPORA			STONEVILLE 213				95 PERCENT								
SLM	41	35	1.07	48	4.6	81	21.9	6.1	2.3	2.8	76.3	8.3	100	352	8.2
SLM	41	35	1.06	47	4.7	81	22.9	6.8	1.9	2.8	76.3	8.0	100	351	5.5
LM	51	34	1.08	46	4.0	81	21.7	6.0	2.6	3.6	75.0	7.6	98	401	6.8
GREENWOOD			STONEVILLE 213				100 PERCENT								
SLM	41	35	1.10	46	5.0	82	21.9	6.1	2.2	3.0	74.5	8.0	98	402	7.0
SLM	41	34	1.06	45	4.9	77	22.8	6.3	1.6	2.7	73.7	9.1	97	353	5.1
LM+	50	35	1.13	45	4.1	82	23.5	6.1	1.9	2.7	74.8	7.8	98	402	7.1
HOLCOMB			DPL SMOOTH LEAF				90 PERCENT								
SLM	41	35	1.11	46	4.1	84	23.3	7.4	1.1	1.7	75.5	8.2	99	352	4.7
M	31	34	1.08	44	4.3	79	22.5	7.5	1.1	2.2	79.2	7.8	103	301	4.3
SLM	41	35	1.09	45	4.2	80	22.5	6.6	1.6	2.6	77.0	7.4	100	401	6.1
SLM	41	34	1.09	45	4.4	78	22.8	6.6	0.7	2.0	77.2	7.3	101	351	4.9

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
MISSISSIPPI																				
CARY				DPL SMOOTH LEAF						90 PERCENT										
SLM		41 35	110	40	6.4	5.2	110	90	18	13	66	71.4	9.5	94	84.3	2.2	107	27.7	27.6	109
SLM		41 35	112	41	6.6	5.4	110	100	18	16	75	71.5	10.1	96	85.0	2.7	106	26.8	27.8	112
SLM		41 35	106	37	6.5	5.0	110	90	18	13	69	70.3	10.3	94	84.6	2.9	105	28.7	26.4	102
SLM		41 35	114	41	7.2	5.5	100	70	29	24	70	70.7	9.4	92	84.6	2.5	106	29.0	27.0	104
COLUMBUS				DPL SMOOTH LEAF						98 PERCENT										
M		31 35	104	37	6.3	4.7	110	90	9	7	66	71.4	10.4	97	84.4	2.5	106	27.3	27.4	109
SLM		41 35	109	40	6.5	5.3	120	100	9	10	73	71.2	10.1	96	84.7	2.7	106	26.8	27.5	110
M		31 34	104	36	6.2	4.9	120	100	11	8	63	71.8	10.3	97	84.7	2.8	105	27.9	27.4	108
DELTA CITY				STONEVILLE 213						90 PERCENT										
SLM		41 35	108	37	6.6	5.2	120	90	25	19	63	70.8	10.6	96	83.6	2.8	103	27.9	27.5	108
SLM		41 35	101	35	6.0	4.8	110	90	22	15	62	70.9	10.1	95	85.4	2.7	107	28.5	26.7	104
LM		51 34	102	36	5.9	4.7	110	100	24	18	68	71.0	10.2	95	83.6	2.9	102	29.1	26.4	101
LM		51 34	115	41	6.8	5.2	90	60	38	30	70	68.4	8.9	86	83.3	2.5	103	30.2	26.2	98
DREW				DPL 15A						75 PERCENT										
SLM		41 35	114	40	6.6	5.5	120	100	15	13	71	70.4	10.2	94	83.6	2.6	104	27.1	27.9	111
M		31 34	109	39	6.6	5.2	110	100	15	12	69	70.8	10.3	95	84.0	2.9	103	27.0	27.7	111
SLM		41 34	103	36	6.3	5.0	110	100	16	11	66	70.7	10.4	96	84.2	2.8	104	28.4	27.3	106
LM		51 34	111	40	6.6	5.2	90	60	41	31	68	67.1	9.2	85	83.0	2.8	101	28.5	26.9	105
EUPORA				STONEVILLE 213						95 PERCENT										
SLM		41 35	105	37	6.3	5.1	120	100	10	7	65	71.3	10.5	97	84.1	2.6	105	28.5	27.2	106
SLM		41 35	111	40	6.7	5.5	120	100	11	8	64	71.2	10.8	98	83.9	2.7	104	27.7	27.4	108
LM		51 34	118	43	7.0	5.6	110	90	26	17	71	70.6	10.6	96	84.8	2.8	106	27.7	27.0	107
GREENWOOD				STONEVILLE 213						100 PERCENT										
SLM		41 35	102	36	6.0	4.7	120	100	19	16	64	70.2	10.3	94	84.9	2.8	106	27.8	27.2	107
SLM		41 34	101	34	6.0	4.7	110	90	20	12	65	71.5	10.6	98	84.2	3.0	103	28.1	27.1	106
LM+		50 35	110	38	6.6	5.2	100	70	32	24	70	70.4	9.9	93	84.6	2.8	105	28.3	26.5	103
HOLCOMB				DPL SMOOTH LEAF						90 PERCENT										
SLM		41 35	116	41	7.0	5.4	120	100	18	11	74	69.8	10.4	94	84.9	2.6	107	27.6	27.1	107
M		31 34	107	37	6.9	5.5	120	90	13	10	68	72.7	10.0	98	84.8	2.6	106	27.2	27.8	111
SLM		41 35	107	39	6.6	5.4	110	90	18	11	69	73.0	10.0	98	84.0	2.6	104	27.7	27.2	107
SLM		41 34	107	38	6.8	5.3	110	80	13	11	71	69.8	9.3	90	84.1	2.4	105	29.0	27.3	105

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
MISSISSIPPI															
INDIANOLA			DIXIE KING II				100 PERCENT								
SLM	41	35	1.07	45	4.5	86	22.2	5.0	1.7	2.7	75.1	8.5	98	352	6.9
SLM	41	35	1.06	45	4.4	83	21.7	5.4	1.8	2.9	74.3	7.8	98	402	5.5
SLM	41	35	1.07	45	4.5	86	21.3	5.2	1.9	3.0	75.0	8.0	98	402	6.8
MERIDIAN			CAROLINA QUEEN				85 PERCENT								
M	31	34	1.04	46	4.8	87	22.9	5.3	1.2	1.9	75.2	9.6	100	303	3.7
SLM	41	34	1.07	46	4.6	80	21.3	5.7	2.4	2.6	73.2	8.5	96	402	6.8
SLM LT SP	42	34	1.03	46	4.7	82	21.8	6.4	2.2	3.2	71.7	8.6	93	453	6.4
PARCHMAN			STONEVILLE 7A				100 PERCENT								
LM LT SP	52	34	1.07	47	4.7	89	21.2	5.2	6.4	6.9	69.5	8.8	90	453	8.8
LM	51	34	1.10	45	4.8	90	21.9	5.0	4.6	5.9	72.0	7.6	92	452	8.6
LM	51	34	1.08	45	4.7	91	22.5	5.0	3.8	5.4	71.7	7.5	92	452	9.2
BG*	82	34	1.13	46	4.7	91	23.0	4.9	5.0	6.4	69.5	7.3	88	502	9.5
SCOTT			DPL 16				100 PERCENT								
SLM	41	36	1.12	43	4.6	82	24.4	7.1	1.5	2.5	77.2	8.0	101	352	6.1
SLM	41	35	1.13	44	4.2	81	25.7	7.7	1.6	2.8	76.3	7.4	99	401	5.6
SLM	41	35	1.14	43	4.2	83	22.7	6.7	1.6	2.5	76.5	7.5	100	401	5.3
SCOTT			DPL 45A				100 PERCENT								
SLM	41	37	1.16	46	4.0	86	24.4	7.3	1.3	2.0	78.8	8.0	103	301	5.1
SLM	41	36	1.16	44	4.0	83	23.6	7.4	1.4	2.4	77.2	7.6	100	351	5.1
LM+	50	35	1.10	45	4.3	81	23.2	6.4	2.0	3.2	74.5	8.4	98	402	6.1
SLM	41	34	1.09	46	4.5	81	23.7	6.0	1.7	2.9	75.2	7.6	98	401	5.8
SHERARD			STONEVILLE 508				100 PERCENT								
LM	51	38	1.18	45	4.0	84	25.9	6.6	5.4	6.6	71.5	8.4	93	452	8.5
LM	51	37	1.17	44	4.0	87	24.5	6.7	3.1	4.1	73.5	8.0	96	401	7.9
SLM	41	35	1.14	43	3.6	85	24.8	6.7	2.1	3.3	75.8	7.8	99	401	6.8
SLM	41	35	1.15	41	3.3	85	25.7	6.2	1.7	2.9	76.5	7.6	100	401	7.1
STONEVILLE			STONEVILLE 213				100 PERCENT								
LM	51	36	1.11	46	5.0	86	22.5	5.8	3.0	3.7	72.0	8.6	94	402	7.2
LM	51	35	1.12	46	4.4	86	22.7	5.8	2.8	4.7	70.0	7.7	90	502	6.4
LM	51	35	1.12	44	4.0	81	22.7	5.9	2.0	3.7	73.5	7.4	95	451	7.4
LM	51	35	1.12	45	4.3	80	22.5	5.9	2.5	3.8	72.0	7.3	92	451	6.7

* Below Grade, below Low Middling Light Spotted

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
MISSISSIPPI																				
INDIANOLA				DIXIE KING II					100 PERCENT											
SLM		41 35	108	38	6.1	4.8	110	100	13	11	70	70.5	10.7	96	84.5	2.9	104	27.7	26.5	105
SLM		41 35	101	35	5.8	4.3	120	90	13	11	64	71.1	10.0	95	85.7	2.9	107	29.0	26.7	103
SLM		41 35	99	35	5.8	4.4	110	100	14	13	63	69.7	10.5	94	83.7	2.8	103	29.2	26.6	102
MERIDIAN				CAROLINA QUEEN					85 PERCENT											
M		31 34	98	32	5.8	4.3	120	100	7	7	62	69.9	11.1	96	84.2	2.9	104	28.7	27.1	105
SLM		41 34	101	33	6.2	4.4	120	90	15	11	63	70.2	11.0	97	84.3	2.9	104	29.7	26.8	102
SLM LT SP		42 34	97	31	5.4	4.0	120	100	13	9	60	66.2	11.3	89	83.9	3.1	102	30.1	26.0	98
PARCHMAN				STONEVILLE 7A					100 PERCENT											
LM LT SP		52 34	101	32	5.4	4.3	120	100	26	18	61	67.5	11.0	91	84.0	2.8	104	29.1	26.2	101
LM		51 34	101	34	5.5	4.3	120	90	22	16	64	70.0	9.8	92	83.6	2.8	103	28.7	26.8	104
LM		51 34	104	33	5.5	4.2	120	90	18	12	64	70.4	10.0	93	84.3	2.8	104	29.0	26.8	103
BG*		82 34	107	39	5.8	4.7	110	60	19	13	65	69.1	10.3	92	83.8	2.5	104	30.0	26.5	100
SCOTT				DPL 16					100 PERCENT											
SLM		41 36	119	44	6.4	5.3	110	100	13	12	77	72.1	9.8	96	85.2	2.5	108	26.8	27.6	111
SLM		41 35	116	43	7.0	5.9	100	90	21	16	76	72.3	9.7	96	84.3	2.6	105	28.3	26.9	105
SLM		41 35	117	40	7.0	5.4	110	90	21	13	73	71.1	9.5	93	84.6	2.4	107	28.5	26.8	104
SCOTT				DPL 45A					100 PERCENT											
SLM		41 37	125	45	7.7	5.8	110	100	20	13	79	72.3	10.0	97	85.0	2.7	106	27.5	27.3	108
SLM		41 36	119	44	7.3	5.8	120	90	27	14	75	70.7	10.0	94	85.7	2.6	108	27.7	26.8	106
LM+		50 35	112	42	6.4	5.4	100	70	27	18	73	69.2	10.2	92	84.3	2.8	104	28.3	27.1	106
SLM		41 34	112	41	6.5	5.3	110	80	21	16	70	69.8	9.7	91	84.3	2.3	106	28.4	27.5	107
SHERARD				STONEVILLE 508					100 PERCENT											
LM		51 38	122	45	6.7	5.3	100	80	32	19	84	68.0	10.7	91	84.0	3.1	102	28.1	26.8	105
LM		51 37	120	45	6.5	5.4	100	80	40	25	73	67.8	10.9	91	85.0	3.1	105	27.1	27.1	108
SLM		41 35	119	44	6.7	5.3	100	90	26	20	73	71.1	10.1	95	84.5	3.1	104	28.3	26.9	105
SLM		41 35	129	48	7.2	5.8	90	60	33	25	73	70.0	10.1	93	84.3	2.7	105	27.8	27.2	107
STONEVILLE				STONEVILLE 213					100 PERCENT											
LM		51 36	105	35	6.0	4.4	120	100	16	14	61	69.0	10.7	93	83.1	3.0	101	29.3	26.8	103
LM		51 35	105	38	6.0	4.7	110	80	30	19	64	68.7	10.1	90	84.6	2.9	105	28.0	26.9	106
LM		51 35	112	40	6.8	5.1	90	70	4	6	72	69.9	9.9	92	84.2	2.6	105	28.2	26.9	105
LM		51 35	110	39	6.7	5.2	110	80	33	24	66	68.9	9.4	89	83.2	2.4	103	28.9	27.6	107

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
MISSISSIPPI															
TUNICA			COKER 413				100 PERCENT								
SLM	41	35	1.13	46	3.9	93	25.0	5.6	3.2	3.7	72.8	8.4	95	402	9.3
SLM	41	35	1.14	45	4.2	86	24.8	5.5	3.8	5.0	73.8	8.1	96	402	6.4
SLM	41	35	1.18	45	3.9	84	24.2	5.2	2.8	3.8	73.7	8.2	97	402	6.9
SLM	41	35	1.15	43	3.3	88	23.9	5.4	2.7	3.5	74.7	8.3	98	402	6.4
WATER VALLEY			DPL SMOOTH LEAF				80 PERCENT								
M	31	34	1.06	46	4.9	83	24.9	6.8	1.6	2.1	76.2	8.5	100	352	4.5
SLM	41	34	1.05	45	4.6	84	22.0	6.8	1.0	2.6	76.5	8.3	100	351	5.1
SLM	41	34	1.06	46	4.5	81	22.0	7.0	1.3	2.4	75.3	7.8	99	401	4.5
SLM	41	34	1.09	44	3.7	84	22.0	6.1	0.8	2.2	76.0	7.5	100	401	5.5
WEST POINT			DPL SMOOTH LEAF				99 PERCENT								
M	31	35	1.12	44	4.2	83	22.2	7.1	1.5	2.5	75.3	8.3	99	352	6.1
SLM	41	35	1.09	46	4.1	79	23.6	6.9	1.2	2.3	76.5	8.1	100	352	5.6
SLM LT SP	42	34	1.12	45	4.0	81	23.9	6.6	1.2	2.3	73.5	8.6	96	402	5.6
MISSOURI															
CARUTHERSVILLE			STONEVILLE 213				95 PERCENT								
SLM	41	35	1.08	45	4.4	84	22.7	6.1	1.7	2.9	72.8	8.2	95	402	5.9
SLM	41	35	1.10	46	4.3	82	23.1	6.9	1.7	2.5	74.0	8.1	97	402	5.0
SLM	41	34	1.05	44	4.4	81	22.2	7.3	1.0	2.1	73.2	7.7	96	452	5.7
PORTAGEVILLE			STONEVILLE 7A				80 PERCENT								
SLM	41	35	1.12	47	4.8	82	24.4	6.7	2.0	3.1	73.0	8.6	96	402	5.8
SLM	41	35	1.13	46	4.7	89	23.0	5.7	1.7	2.3	72.9	7.9	95	452	5.3
SLM	41	34	1.05	44	4.3	83	21.3	6.9	1.6	3.0	73.3	7.9	96	402	5.9
SENATH			AUBURN M				100 PERCENT								
SLM	41	35	1.12	47	4.1	83	23.4	6.6	1.9	2.0	72.1	8.5	95	402	6.2
SLM	41	35	1.07	48	4.1	87	23.2	7.2	1.2	2.3	73.2	8.5	96	402	5.1
SLM	41	34	1.06	45	3.9	82	22.7	6.8	1.5	2.7	72.1	8.4	94	402	6.1
SIKESTON			DPL 45A				100 PERCENT								
SLM	41	35	1.07	48	4.7	83	24.5	7.7	1.4	3.0	73.3	8.3	96	402	5.1
SLM	41	35	1.09	47	4.6	82	23.7	7.0	1.4	2.2	72.9	8.4	96	402	5.4
SLM	41	34	1.08	45	3.9	82	23.5	8.4	1.4	2.4	72.2	8.1	94	452	6.0

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
MISSISSIPPI																				
TUNICA				COKER 413						100 PERCENT										
SLM	41	35	125	45	6.3	5.0	110	100	27	21	75	68.2	10.6	91	83.4	2.8	102	29.5	25.5	97
SLM	41	35	125	47	6.3	5.1	110	90	21	17	73	68.4	10.5	91	84.2	3.0	103	28.0	26.7	105
SLM	41	35	127	48	6.4	5.2	110	90	23	16	75	68.9	10.6	92	84.9	2.9	105	28.4	26.6	104
SLM	41	35	128	48	6.8	5.3	100	90	28	22	73	68.0	10.6	90	82.8	2.8	101	28.9	26.9	104
WATER VALLEY				DPL SMOOTH LEAF						80 PERCENT										
M	31	34	105	35	6.3	4.8	120	100	10	9	64	71.1	10.7	97	83.8	2.7	104	28.1	26.9	105
SLM	41	34	105	36	6.3	4.9	110	100	15	9	61	71.3	10.2	96	85.3	2.8	107	26.9	27.8	111
SLM	41	34	104	38	6.7	5.3	120	90	12	8	64	71.2	10.0	95	84.4	2.8	105	27.0	27.4	110
SLM	41	34	110	36	6.9	5.2	110	80	14	13	64	72.1	9.6	96	84.8	2.6	106	27.5	27.4	109
WEST POINT				DPL SMOOTH LEAF						99 PERCENT										
M	31	35	111	39	6.6	5.2	110	90	17	14	70	72.5	10.3	98	85.9	2.7	109	26.9	27.5	110
SLM	41	35	111	41	7.1	5.7	120	100	13	10	69	72.4	10.4	98	83.5	2.8	102	27.4	27.2	108
SLM LT SP	42	34	118	41	7.3	6.0	110	90	15	12	75	67.8	11.2	92	83.7	2.6	104	27.6	27.9	110
MISSOURI																				
CARUTHERSVILLE				STONEVILLE 213						95 PERCENT										
SLM	41	35	109	38	6.1	4.6	120	100	15	10	64	67.6	10.6	89	84.7	2.9	105	29.4	26.7	102
SLM	41	35	107	39	6.3	4.9	120	90	20	15	66	69.3	10.1	92	84.1	2.9	103	28.2	27.3	107
SLM	41	34	102	35	5.8	4.5	120	90	12	8	60	67.8	9.4	87	82.4	2.9	99	29.4	25.9	99
PORTAGEVILLE				STONEVILLE 7A						80 PERCENT										
SLM	41	35	114	40	5.9	4.5	120	100	20	15	71	68.5	10.6	92	84.2	2.8	104	27.6	26.8	106
SLM	41	35	108	38	5.4	4.2	130	100	12	8	66	66.9	9.9	86	83.1	2.9	101	28.7	27.1	105
SLM	41	34	103	36	5.8	4.4	120	90	12	10	63	69.2	9.6	90	83.2	2.9	101	28.7	26.8	104
SENATH				AUBURN M						100 PERCENT										
SLM	41	35	111	41	6.4	4.9	120	100	32	18	69	66.8	11.2	90	85.2	2.9	106	28.0	26.9	106
SLM	41	35	112	40	5.9	4.5	120	100	18	14	69	68.1	10.3	90	85.1	3.1	105	27.7	26.9	106
SLM	41	34	103	36	6.1	4.5	120	90	18	17	62	67.2	9.9	87	84.3	2.9	104	28.6	26.6	103
SIKESTON				DPL 45A						100 PERCENT										
SLM	41	35	112	40	6.1	4.8	120	100	27	16	67	66.9	10.8	89	84.4	3.2	103	26.9	27.1	109
SLM	41	35	108	39	6.1	4.9	120	100	16	13	69	66.9	10.7	88	83.9	3.0	103	28.7	26.3	102
SLM	41	34	109	40	6.5	5.1	100	80	26	22	68	68.3	10.3	90	83.5	3.3	100	28.5	27.3	106

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH CENTRAL AREA															
TENNESSEE															
HUNTINGDON			AUBURN M				75 PERCENT								
SLM	41	34	1.03	45	4.0	86	21.5	5.3	1.4	2.2	74.3	9.0	98	352	4.4
SLM	41	34	1.03	46	4.2	86	22.2	6.4	1.1	1.5	73.2	9.0	96	403	5.2
SLM	41	34	1.03	45	4.1	82	21.0	6.0	1.0	2.0	73.7	8.0	97	402	4.2
SLM	41	33	0.99	45	4.5	89	20.6	5.2	0.7	1.5	75.8	8.3	99	352	5.1
JACKSON			DIXIE KING II				95 PERCENT								
SLM	41	34	1.04	45	4.3	86	21.1	5.1	1.6	2.4	74.0	8.9	98	352	5.3
SLM	41	34	1.03	46	4.4	89	22.2	5.3	1.2	1.7	72.7	8.9	96	403	5.1
SLM	41	34	1.03	45	4.3	89	20.7	5.5	1.0	2.5	74.7	7.9	98	402	4.8
SLM LT SP	42	33	1.01	45	4.7	86	20.8	5.5	1.8	3.3	73.0	8.6	96	402	6.4
SOUTH WESTERN AREA															
SOUTH TEXAS															
BAY CITY			DPL SMOOTH LEAF				75 PERCENT								
M	31	34	1.08	46	4.6	81	22.8	6.8	1.5	2.3	77.0	8.4	101	302	6.5
M	31	34	1.06	46	4.6	78	22.6	8.2	1.4	2.2	77.1	8.3	102	302	4.5
SLM	41	33	1.06	45	4.6	83	21.8	7.0	1.6	2.4	74.2	8.5	98	402	5.4
COMBES			STONEVILLE 508				100 PERCENT								
LM	51	35	1.14	45	3.9	83	23.5	7.2	2.7	3.8	73.9	8.6	97	402	6.6
SLM	41	34	1.13	43	3.3	85	24.9	6.9	2.1	3.7	75.9	8.6	100	352	6.4
SLM	41	35	1.09	44	3.7	83	22.0	6.3	1.8	3.2	76.2	8.6	101	302	5.9
CORPUS CHRISTI			STONEVILLE 213				80 PERCENT								
M LT SP	32	33	1.04	45	4.7	78	22.1	7.0	1.6	2.6	74.7	9.7	99	303	5.5
M	31	32	1.00	45	5.0	82	21.9	5.8	1.3	2.1	76.8	8.9	101	302	5.0
M LT SP	32	32	1.01	46	4.3	85	22.8	6.2	1.6	2.6	73.9	9.3	98	353	5.9
CORPUS CHRISTI			STONEVILLE 7A				85 PERCENT								
SLM	41	35	1.13	48	4.6	84	22.8	5.6	2.8	3.7	74.0	9.5	98	353	7.1
SLM	41	35	1.09	46	4.7	84	22.6	6.1	2.1	3.0	72.9	8.8	96	402	5.9
SLM LT SP	42	34	1.10	45	4.4	82	21.5	5.9	1.9	3.2	69.9	9.1	90	453	6.3
HARLINGEN			STONEVILLE 213				96 PERCENT								
SLM	41	34	1.06	45	4.4	82	23.7	6.6	2.2	3.2	74.3	9.0	98	352	6.6
SLM	41	34	1.08	45	3.9	85	23.8	6.3	2.8	4.2	75.6	8.5	100	352	6.9
LM	51	35	1.09	46	4.2	82	21.9	6.6	3.8	5.4	73.9	8.4	97	402	7.6

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL AREA																				
TENNESSEE																				
HUNTINGDON				AUBURN M					75 PERCENT											
SLM		41 34	104	36	6.1	4.7	120	90	13	10	65	69.2	11.1	95	84.1	2.8	104	28.7	26.6	103
SLM		41 34	101	34	6.1	4.7	120	100	15	11	60	69.1	10.7	93	84.5	3.0	104	29.0	26.9	104
SLM		41 34	107	37	6.5	5.0	120	90	15	10	67	71.6	9.7	95	85.3	2.8	107	27.3	27.4	109
SLM		41 33	104	33	5.9	4.6	110	90	16	11	62	70.6	10.2	95	84.4	2.7	105	27.8	27.3	108
JACKSON				DIXIE KING II					95 PERCENT											
SLM		41 34	101	34	6.0	4.4	120	90	12	10	63	67.8	10.9	91	84.0	3.2	102	28.8	26.4	102
SLM		41 34	105	37	6.0	4.7	120	100	15	15	65	68.3	10.6	91	84.2	3.3	102	28.7	26.4	102
SLM		41 34	95	30	5.8	4.2	120	90	19	15	59	68.3	10.2	90	84.1	3.4	101	28.9	26.3	101
SLM LT SP		42 33	96	31	5.5	4.4	120	80	15	11	61	67.3	10.6	89	82.9	3.9	97	28.2	26.8	105
SOUTH WESTERN AREA																				
SOUTH TEXAS																				
BAY CITY				DPL SMOOTH LEAF					75 PERCENT											
M		31 34	107	39	6.3	5.2	120	100	18	15	68	70.0	10.8	96	84.9	2.6	107	26.9	27.2	109
M		31 34	107	38	6.4	5.1	120	100	23	15	68	71.3	10.4	97	85.8	2.5	109	26.4	28.2	114
SLM		41 33	105	37	5.6	4.4	120	100	18	13	64	68.4	10.1	90	84.5	2.6	106	27.6	27.3	108
COMBES				STONEVILLE 508					100 PERCENT											
LM		51 35	115	43	6.4	5.0	120	90	24	21	78	69.9	10.4	94	84.7	3.1	104	27.1	27.1	108
SLM		41 34	119	44	6.5	5.4	110	80	32	27	75	70.7	10.9	97	85.9	3.0	107	27.8	26.9	106
SLM		41 35	112	41	6.1	4.9	110	80	23	23	67	70.5	10.8	96	84.6	3.1	104	27.9	27.3	107
CORPUS CHRISTI				STONEVILLE 213					80 PERCENT											
M LT SP		32 33	99	35	6.1	4.7	120	100	16	9	59	69.2	11.3	96	84.4	3.1	103	26.6	28.0	113
M		31 32	97	33	5.7	4.4	130	100	10	8	58	69.2	11.1	95	84.6	2.7	105	27.6	27.6	109
M LT SP		32 32	104	37	5.7	4.2	120	100	17	12	59	66.2	11.1	88	83.7	3.0	102	27.5	27.6	109
CORPUS CHRISTI				STONEVILLE 7A					85 PERCENT											
SLM		41 35	111	41	6.2	4.9	120	100	21	19	73	67.7	11.9	94	85.4	3.0	106	26.0	28.2	115
SLM		41 35	108	39	5.6	4.3	120	100	18	11	69	68.3	11.3	94	85.2	2.8	106	26.8	28.0	112
SLM LT SP		42 34	108	39	5.8	4.5	120	90	30	21	72	62.9	11.8	84	84.2	3.2	103	27.7	26.8	106
HARLINGEN				STONEVILLE 213					96 PERCENT											
SLM		41 34	115	42	6.2	5.1	130	100	16	11	64	67.9	10.7	90	84.5	3.0	104	27.7	27.0	107
SLM		41 34	117	42	6.8	4.9	120	100	19	13	69	70.8	11.4	99	85.1	2.9	106	27.2	27.5	110
LM		51 35	110	40	6.0	4.6	120	100	24	19	69	68.5	10.7	92	84.7	2.9	105	28.4	26.8	104

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
SOUTH TEXAS															
HARLINGEN			STONEVILLE 7A				100 PERCENT								
SLM	41	35	1.14	47	4.6	84	22.1	5.8	2.8	3.7	74.1	8.1	97	402	6.4
SLM	41	34	1.10	46	4.3	86	22.8	5.4	1.9	3.4	76.1	8.0	100	352	6.0
SLM LT SP	42	34	1.07	44	3.5	81	21.7	7.0	2.2	3.4	72.2	8.4	95	402	8.3
HARLINGEN			COKER 413				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
SLM	41	34	1.15	46	4.4	90	23.8	5.7	1.3	2.5	71.4	9.3	94	403	5.9
SLM	41	34	1.11	43	3.7	87	22.8	5.6	1.9	3.3	75.8	8.6	100	352	7.0
SLM	41	35	1.13	44	4.4	87	22.2	5.6	2.4	3.6	75.0	9.3	100	303	6.4
SAN JUAN			TPSA 110				100 PERCENT								
SLM	41	35	1.15	44	4.5	91	23.3	4.9	1.7	2.7	74.2	9.0	98	352	5.8
SLM LT SP	42	34	1.12	44	4.4	88	21.9	5.0	1.9	3.1	74.1	9.3	99	353	6.6
SLM	41	35	1.13	43	4.4	86	22.6	5.3	1.9	2.6	74.5	8.9	99	352	5.0
SANTA ROSA			STONEVILLE 7A				100 PERCENT								
SLM	41	34	1.10	43	4.8	88	22.3	5.6	2.2	3.4	73.7	8.7	97	402	6.4
SLM	41	35	1.11	44	3.1	88	21.9	5.5	2.0	3.7	75.8	8.1	100	352	6.6
SLM	41	34	1.06	44	4.8	92	22.2	5.2	2.4	3.5	76.0	8.3	100	352	6.2
CENTRAL TEXAS															
BARRY			LOCKETT 4789				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
SLM LT SP	42	31	0.95	46	4.4	91	20.7	5.2	3.7	4.8	70.8	9.2	92	403	8.7
SLM	41	30	0.97	46	4.3	92	23.0	5.4	3.5	4.8	72.1	8.6	95	402	8.5
SLM	41	31	0.99	44	3.8	90	21.7	6.2	4.4	6.0	72.6	8.4	95	402	7.5
BATESVILLE			DPL SMOOTH LEAF				87 PERCENT								
M	31	35	1.12	44	4.0	82	23.0	8.3	1.1	2.0	78.0	8.4	103	302	4.2
SLM	41	35	1.13	45	4.0	83	22.6	7.3	1.9	2.7	74.8	9.1	99	353	5.9
LM	51	35	1.10	43	3.6	86	21.1	7.3	2.2	3.2	68.9	7.8	87	502	7.1
HEARNE			STONEVILLE 213				85 PERCENT								
SLM	41	34	1.09	47	5.0	80	23.0	6.3	1.8	2.3	71.3	8.8	94	403	4.7
SLM	41	35	1.13	45	5.1	82	21.9	6.5	2.1	3.3	73.7	8.6	97	402	5.6
SLM LT SP	42	35	1.13	44	4.2	80	22.8	6.5	2.8	3.8	71.9	8.3	94	452	6.8

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Grade		Staple																		
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
SOUTH TEXAS																				
HARLINGEN				STONEVILLE 7A					100 PERCENT											
SLM		41 35	119	41	5.9	4.6	130	100	14	12	74	71.1	10.1	95	85.9	2.7	109	27.4	27.6	110
SLM		41 34	112	41	5.7	4.6	130	100	18	13	69	71.0	10.6	97	84.7	2.9	105	26.6	27.8	112
SLM LT SP		42 34	105	36	5.7	4.5	70	60	72	62	63	66.8	10.4	87	85.1	2.8	106	28.7	26.4	102
HARLINGEN				COKER 413					100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)									
SLM		41 34	124	46	5.8	4.6	120	90	18	12	76	67.9	10.5	90	84.9	3.1	105	27.0	27.7	111
SLM		41 34	119	44	5.8	4.7	110	90	26	23	81	69.0	11.0	94	84.6	2.9	105	27.4	26.8	106
SLM		41 35	110	40	5.7	4.3	120	90	18	16	71	69.1	11.0	94	84.7	3.1	104	27.5	27.3	108
SAN JUAN				TPSA 110					100 PERCENT											
SLM		41 35	121	46	5.6	4.4	120	100	19	15	73	67.9	11.3	93	84.5	3.0	104	27.3	27.2	108
SLM LT SP		42 34	108	39	5.3	4.1	120	90	28	23	74	66.2	11.3	89	83.7	3.3	101	27.6	26.5	105
SLM		41 35	109	39	5.4	4.2	120	100	12	10	71	70.0	10.7	95	84.6	2.8	105	28.1	27.1	106
SANTA ROSA				STONEVILLE 7A					100 PERCENT											
SLM		41 34	113	41	5.9	4.7	130	100	15	12	68	71.4	10.3	97	84.6	2.9	105	27.5	27.3	108
SLM		41 35	112	41	6.1	4.7	120	90	25	19	69	70.9	10.6	97	84.5	2.9	104	28.3	26.6	104
SLM		41 34	106	36	5.3	4.0	120	90	14	9	60	70.6	10.3	95	84.3	2.7	105	28.2	27.3	107
CENTRAL TEXAS																				
BARRY				LOCKETT 4789					100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)									
SLM LT SP		42 31	95	27	4.7	3.1	120	90	30	21	50	67.4	11.9	94	84.9	2.8	106	29.0	26.4	102
SLM		41 30	95	27	5.2	3.3	120	90	22	19	47	69.4	11.3	96	83.3	2.9	102	29.2	27.1	104
SLM		41 31	101	31	5.7	3.6	120	90	24	21	54	69.8	11.5	97	82.9	3.0	100	28.4	27.5	107
BATESVILLE				DPL SMOOTH LEAF					87 PERCENT											
M		31 35	117	41	7.2	5.5	120	90	20	18	70	73.4	10.4	100	84.6	2.9	105	26.5	27.7	112
SLM		41 35	114	42	6.3	5.1	120	90	29	23	72	69.3	11.1	95	85.3	2.8	107	27.7	27.0	107
LM		51 35	104	36	6.3	4.6	100	70	57	49	62	64.3	9.9	82	84.3	3.1	103	31.9	24.5	88
HEARNE				STONEVILLE 213					85 PERCENT											
SLM		41 34	107	38	5.6	4.4	130	100	16	12	63	68.4	11.2	93	84.8	2.7	106	27.8	27.3	108
SLM		41 35	108	39	5.9	4.5	120	100	20	12	68	69.4	11.4	96	84.6	2.7	105	28.1	27.2	107
SLM LT SP		42 35	106	38	5.9	4.6	110	80	29	24	68	67.3	11.0	90	83.9	3.0	103	28.9	26.7	103

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
CENTRAL TEXAS															
LOCKHART			TPSA 110				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
SGO	61	33	1.07	44	4.3	89	21.6	5.3	5.4	6.7	64.3	8.8	81	553	10.8
SGO	61	33	1.03	43	4.1	90	20.7	4.8	5.5	6.8	66.1	8.6	83	503	9.0
SGO	61	33	1.04	44	4.2	91	21.2	4.5	4.7	6.3	67.0	8.5	85	503	8.4
NAVASOTA			DPL SMOOTH LEAF				75 PERCENT								
SLM	41	35	1.06	45	4.2	90	22.2	7.0	2.8	3.8	73.2	8.2	96	402	6.0
SLM	41	35	1.09	44	4.4	82	21.8	7.2	1.8	3.0	73.1	7.8	96	452	5.9
SLM	41	35	1.14	43	4.6	81	21.9	8.8	1.8	2.9	76.1	7.4	100	401	5.2
ROSENBERG			DPL SMOOTH LEAF				80 PERCENT								
M	31	34	1.06	48	4.9	79	21.7	6.9	1.0	1.8	75.4	8.8	100	352	4.6
M	31	34	1.09	46	5.2	87	23.4	6.6	1.0	1.7	75.8	8.8	100	352	4.0
M LT SP	32	34	1.08	45	4.9	81	20.5	5.9	1.2	2.2	73.0	8.6	96	402	4.8
NORTHWEST TEXAS															
ACKERLY			LOCKETT 4789				80 PERCENT								
SLM	41	32	1.00	47	4.8	86	23.3	6.7	2.4	3.3	75.0	9.2	100	352	5.9
M LT SP	32	31	0.98	46	4.7	85	21.0	6.5	1.3	2.4	75.3	9.1	100	302	5.6
SLM	41	31	0.97	44	4.5	82	21.7	6.9	1.8	3.0	76.1	8.5	101	352	6.1
BIG SPRING			LOCKETT 4789				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
SLM	41	31	0.98	47	4.9	86	22.8	6.5	2.1	2.7	73.9	8.9	97	352	6.2
SLM	41	31	1.02	47	4.8	85	23.3	6.1	1.9	3.0	74.8	8.4	98	352	6.3
SLM	41	32	1.02	46	4.8	84	22.7	7.4	1.9	3.1	74.8	8.5	99	352	5.8
BROWNFIELD			PAYMASTER 111				100 PERCENT								
SLM	41	32	1.03	45	3.4	83	21.5	7.3	2.4	3.1	75.4	8.4	100	352	6.2
SLM	41	33	1.03	45	3.5	79	22.0	7.7	2.8	3.7	73.2	8.4	96	402	6.4
SLM LT SP	42	32	1.01	44	3.7	81	22.1	7.4	2.2	3.7	69.4	9.3	90	453	5.9
HASKELL			LANKART 3840				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
M	31	33	1.03	45	4.9	90	23.7	5.2	1.6	2.4	74.7	9.2	99	353	5.3
M	31	33	1.01	45	5.1	90	23.2	6.1	1.6	2.7	76.2	9.6	102	253	5.9
M	31	33	1.04	46	5.1	87	22.0	6.1	1.9	2.6	75.1	9.2	100	303	5.7
M	31	33	1.01	46	4.7	82	21.9	7.0	1.8	2.8	76.9	8.9	102	302	5.2

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
CENTRAL TEXAS																				
LOCKHART			TPSA 110						100 PERCENT (LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)											
SGO	61	33	109	36	5.3	3.7	120	100	34	20	59	64.5	11.9	87	84.4	3.2	103	28.7	26.4	102
SGO	61	33	100	31	4.8	3.2	120	90	32	18	56	66.2	11.7	90	84.1	3.3	102	29.8	25.6	97
SGO	61	33	95	30	4.5	3.2	120	80	28	22	51	65.3	11.3	87	84.0	3.2	102	31.0	25.3	93
NAVASOTA			DPL SMOOTH LEAF						75 PERCENT											
SLM	41	35	108	37	6.1	4.6	120	90	23	16	62	69.0	10.3	92	84.2	2.9	104	29.5	26.1	99
SLM	41	35	103	35	6.5	4.8	120	80	20	12	60	70.1	10.0	93	83.9	3.1	102	29.1	26.6	102
SLM	41	35	110	38	6.5	4.8	120	90	20	13	66	73.5	9.6	98	84.2	2.6	105	28.6	27.7	108
ROSENBERG			DPL SMOOTH LEAF						80 PERCENT											
M	31	34	106	38	6.3	5.0	120	110	15	11	67	69.6	10.6	94	84.9	2.8	106	26.0	28.4	116
M	31	34	106	38	6.0	4.5	130	100	12	10	70	70.7	10.8	97	84.5	2.8	105	26.4	28.4	115
M LT SP	32	34	100	34	5.1	4.2	120	90	22	16	59	63.0	11.6	84	84.6	2.7	105	27.6	27.6	109
NORTHWEST TEXAS																				
ACKERLY			LOCKETT 4789						80 PERCENT											
SLM	41	32	103	33	5.6	4.3	120	100	16	14	52	70.3	11.2	97	83.7	3.3	101	27.4	26.9	107
M LT SP	32	31	99	31	5.9	4.2	120	90	14	9	51	70.4	11.8	99	83.1	3.7	98	27.7	27.2	107
SLM	41	31	99	31	5.6	4.2	120	90	14	10	49	70.4	11.0	97	83.4	3.0	101	27.9	27.3	107
BIG SPRING			LOCKETT 4789						100 PERCENT (LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)											
SLM	41	31	100	29	5.4	3.8	130	100	16	12	48	69.5	11.3	96	83.6	3.6	100	27.8	26.4	104
SLM	41	31	104	33	5.8	4.1	130	100	15	8	48	70.4	11.5	98	83.7	3.3	101	27.8	27.2	107
SLM	41	32	106	35	5.8	4.4	120	100	14	8	56	70.0	10.7	95	83.5	2.8	102	27.0	28.2	113
BROWNFIELD			PAYMASTER 111						100 PERCENT											
SLM	41	32	107	39	6.4	5.0	110	80	28	19	64	69.7	10.9	95	84.0	3.3	102	28.3	26.1	102
SLM	41	33	108	39	6.1	4.8	120	90	26	18	67	67.2	10.6	89	82.8	3.2	99	28.3	27.2	106
SLM LT SP	42	32	101	36	6.2	4.7	120	90	25	17	60	63.0	10.6	81	77.8	4.3	83	29.0	24.7	95
HASKELL			LANKART 3840						100 PERCENT (LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)											
M	31	33	105	32	5.3	3.7	120	100	18	15	55	69.8	12.1	99	83.0	3.1	100	28.1	27.4	107
M	31	33	104	31	5.4	3.9	130	100	16	12	53	69.9	11.7	98	84.3	2.8	104	28.1	26.9	105
M	31	33	105	32	5.5	3.9	130	100	14	10	57	70.1	11.5	98	84.4	2.9	104	27.8	27.0	106
M	31	33	103	35	5.6	4.2	120	90	16	14	56	70.6	10.9	97	85.7	2.6	108	27.3	27.9	111

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
NORTHWEST TEXAS															
HURLWOOD			PAYMASTER 111				80 PERCENT								
M	31	32	1.01	45	4.2	82	22.4	6.6	1.4	2.6	75.4	8.8	100	352	5.5
SLM	41	33	1.03	45	3.5	84	22.3	7.5	1.6	3.0	73.5	8.1	96	402	5.9
SLM	41	33	1.05	45	3.7	83	22.4	7.3	1.8	2.9	72.3	8.2	95	452	6.1
LAMESA			DUNN 56C				90 PERCENT								
SLM	41	34	1.08	47	4.3	93	26.2	6.4	2.8	3.2	74.2	8.6	98	402	6.5
SLM	41	34	1.08	46	4.1	90	25.7	6.3	3.2	4.6	74.1	8.4	98	402	6.9
SLM	41	34	1.08	45	4.1	90	25.2	6.8	3.0	4.2	73.8	8.4	97	402	6.4
RALLS			PAYMASTER 111				100 PERCENT								
SLM LT SP	42	33	1.04	45	3.4	84	22.0	7.0	3.5	5.0	72.0	8.4	94	402	7.7
SLM LT SP	42	33	1.04	45	3.4	82	22.2	7.7	2.6	3.8	70.8	9.1	92	403	7.5
LM LT SP	52	32	1.03	44	3.5	84	21.5	7.4	3.4	5.4	67.3	8.6	85	503	8.0
RAYLAND			LOCKETT 4789				100 PERCENT								
M LT SP	32	32	0.92	54	5.3	90	22.4	5.9	2.6	3.8	74.9	9.3	99	303	6.3
SLM	41	33	1.00	47	5.2	89	23.2	6.0	3.9	5.2	73.3	8.7	97	402	7.9
SLM	41	33	1.02	46	5.2	88	23.3	6.3	2.6	4.0	74.6	8.6	98	352	6.4
SLM LT SP	42	32	1.03	46	4.7	88	22.1	6.1	3.1	4.6	71.7	8.8	94	403	6.7
ROPESVILLE			LOCKETT 4789A				100 PERCENT								
M	31	33	1.03	45	3.4	83	21.5	7.1	1.9	3.0	77.0	8.2	102	352	5.7
SLM	41	33	1.04	44	3.3	82	22.3	7.3	1.6	3.0	75.7	7.6	99	401	5.8
SLM LT SP	42	32	1.03	44	3.3	84	21.9	7.6	1.6	3.0	73.1	8.1	96	402	5.8
SILVERTON			PAYMASTER 111				85 PERCENT								
M LT SP	32	32	0.97	47	3.8	82	23.5	7.8	1.4	2.4	73.2	9.8	97	353	5.7
M SP	33	33	1.00	45	2.9	83	22.3	8.0	1.6	3.0	71.6	10.4	95	354	7.0
SLM LT SP	42	33	1.02	45	3.4	83	22.7	7.6	1.4	2.8	70.6	8.8	92	453	6.2
SOUTH PLAINS			PAYMASTER 111				90 PERCENT								
SLM LT SP	42	31	1.01	43	3.5	81	22.0	7.2	2.0	3.2	70.5	9.6	92	403	7.1
SLM LT SP	42	31	0.96	47	3.0	82	22.4	7.9	2.7	4.3	70.4	10.0	92	404	7.3
SLM SP	43	31	0.98	43	3.1	83	22.7	7.9	2.0	3.6	68.2	10.9	88	405	7.9

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
NORTHWEST TEXAS																				
HURLWOOD				PAYMASTER 111						80 PERCENT										
M		31 32	106	38	6.6	4.6	120	90	19	16	64	69.9	11.1	96	84.0	3.0	103	28.2	26.6	104
SLM		41 33	109	40	6.1	4.8	120	90	20	14	68	66.7	10.1	86	81.7	3.5	95	28.0	26.6	104
SLM		41 33	112	42	6.2	5.1	110	80	29	25	73	63.7	9.9	81	80.6	3.7	92	29.4	24.7	94
LAMESA				DUNN 56C						90 PERCENT										
SLM		41 34	121	43	5.8	4.6	120	90	31	23	67	69.2	11.1	95	83.9	3.9	99	27.3	26.4	105
SLM		41 34	123	45	6.3	5.0	120	100	19	13	70	70.3	11.3	98	83.5	3.1	101	29.0	25.9	100
SLM		41 34	124	46	6.2	5.0	110	100	23	18	68	68.0	10.6	90	81.7	3.6	95	28.9	26.2	101
RALLS				PAYMASTER 111						100 PERCENT										
SLM LT SP		42 33	111	41	6.1	5.2	110	80	32	23	65	68.5	11.4	94	83.4	3.5	99	27.3	26.4	105
SLM LT SP		42 33	107	39	5.9	4.6	110	80	28	23	67	65.1	11.3	87	81.2	4.4	91	29.6	25.3	96
LM LT SP		52 32	110	39	5.8	4.7	100	80	40	30	67	62.5	10.4	80	80.1	4.8	86	30.6	24.0	89
RAYLAND				LOCKETT 4789						100 PERCENT										
M LT SP		32 32	101	30	5.4	3.8	120	100	13	10	51	69.7	11.8	98	83.4	3.1	101	27.5	27.2	108
SLM		41 33	105	32	5.7	4.0	120	100	14	10	54	69.0	11.3	95	83.6	3.0	102	27.7	27.3	108
SLM		41 33	107	34	5.2	3.8	130	100	14	10	52	69.7	11.0	96	83.9	2.9	103	28.7	27.9	108
SLM LT SP		42 32	102	32	5.5	3.6	120	100	20	14	57	66.7	10.8	88	82.3	3.5	97	29.8	25.8	98
ROPESVILLE				LOCKETT 4789A						100 PERCENT										
M		31 33	109	39	7.0	5.2	110	80	22	21	66	71.2	11.0	98	85.7	3.1	106	27.5	26.7	106
SLM		41 33	110	40	6.5	5.2	120	90	20	16	67	68.2	10.1	89	82.1	2.9	99	28.6	26.5	103
SLM LT SP		42 32	110	40	6.7	5.2	100	80	35	27	66	65.6	9.8	84	80.1	3.7	91	29.9	24.9	94
SILVERTON				PAYMASTER 111						85 PERCENT										
M LT SP		32 32	111	38	5.9	4.4	120	100	16	13	60	65.2	11.5	87	81.4	3.5	95	28.3	26.8	105
M SP		33 33	115	42	6.9	5.3	100	80	35	28	59	61.8	12.9	85	85.1	3.7	103	26.8	26.6	107
SLM LT SP		42 33	112	41	6.7	5.2	120	90	35	26	68	62.2	10.4	79	79.3	4.1	87	28.4	24.9	97
SOUTH PLAINS				PAYMASTER 111						90 PERCENT										
SLM LT SP		42 31	105	35	5.9	4.6	110	80	43	36	56	63.0	11.5	83	81.7	4.3	92	27.7	26.3	104
SLM LT SP		42 31	106	37	6.1	4.8	90	70	37	30	60	64.3	11.7	86	82.6	3.8	96	28.1	25.9	101
SLM SP		43 31	107	38	6.1	4.8	90	70	59	50	56	59.5	12.4	79	82.7	4.1	95	28.4	25.8	100

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
NORTHWEST TEXAS															
STAMFORD			DUNN 56C				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SGO	61	34	1.05	47	4.3	100	27.1	5.8	9.9	11.3	72.0	8.4	94	402	10.5
LM	51	34	1.06	48	4.6	100	28.0	5.3	6.4	7.4	74.2	8.4	98	402	8.6
SLM	41	34	1.08	47	4.9	90	25.1	6.3	2.6	3.7	75.3	8.6	100	352	5.9
SLM	41	34	1.03	46	4.2	95	24.8	6.1	3.2	4.2	73.4	8.8	97	402	7.0
TAHOKA			LAMBRIGHT X-15-3				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SLM	41	34	1.10	44	3.9	86	23.2	7.7	2.4	4.0	73.6	8.7	97	402	6.2
M LT SP	32	34	1.12	41	3.3	83	22.4	8.1	2.0	3.0	74.1	8.9	98	352	6.2
SLM	41	34	1.10	41	3.2	86	22.3	8.1	1.6	3.1	73.2	8.6	96	402	6.3
VERNON			LOCKETT 4789				100 PERCENT								
SLM LT SP	42	32	1.02	47	5.0	88	22.4	5.6	2.3	3.4	71.8	9.6	95	403	6.6
SLM	41	33	1.02	44	5.1	91	23.7	5.9	2.6	3.7	73.5	9.1	97	353	6.0
SLM LT SP	42	32	1.02	46	4.8	88	22.9	6.5	3.0	4.6	71.1	9.2	93	403	6.8
OKLAHOMA															
WEBBERS FALLS			DLP SMOOTH LEAF				85 PERCENT								
SLM	41	35	1.14	45	4.3	92	25.1	5.6	1.8	2.3	72.7	8.1	95	452	6.2
SLM	41	35	1.15	44	4.5	85	23.0	8.2	2.6	3.8	74.1	7.4	97	451	6.3
LM	51	36	1.16	46	4.3	81	22.7	8.1	3.4	4.6	71.9	7.6	94	452	7.5
WESTERN AREA															
ARIZONA															
ELOY			DPL 16				100 PERCENT								
SM	21	35	1.12	45	4.5	80	21.8	7.7	0.7	1.6	80.1	8.3	105	251	4.2
M	31	35	1.14	44	4.4	82	23.1	8.6	1.0	2.3	78.2	8.3	103	301	5.0
M	31	35	1.12	45	4.4	81	24.2	8.0	1.3	2.0	77.2	8.4	102	302	4.8
PARKER			DPL 16				100 PERCENT								
M	31	34	1.10	42	4.2	84	22.9	6.3	1.3	2.5	77.8	8.5	103	302	4.9
M	31	34	1.09	44	4.8	87	22.7	7.1	1.1	2.0	78.0	8.6	103	302	4.6
M	31	35	1.08	43	4.6	85	21.9	7.3	0.9	2.1	78.2	8.2	103	301	4.4
PHOENIX			HOPICALA				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SLM	41	36	1.13	49	4.6	106	30.0	5.2	3.9	4.3	75.6	8.4	100	352	6.6
SLM	41	36	1.14	46	4.6	101	28.5	5.2	3.1	3.8	75.8	8.1	100	352	6.7
SGO+	60	35	1.11	45	3.2	99	27.6	5.8	6.0	7.5	65.6	7.0	82	552	11.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
NORTHWEST TEXAS																				
STAMFORD				DUNN 56C						100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)								
SGO		61	34	127	46	5.7	4.3	120	90	25	17	68	70.1	11.4	98	84.5	3.3	103	27.4	26.6	106
LM		51	34	127	46	5.9	4.3	120	100	24	15	74	70.7	11.7	100	83.7	3.0	102	28.1	26.8	105
SLM		41	34	126	44	5.9	4.6	130	100	12	9	68	70.2	11.6	98	83.0	2.9	101	27.9	26.1	103
SLM		41	34	121	43	5.6	4.3	120	100	15	11	66	69.7	11.1	96	84.0	2.9	103	28.4	27.0	105
TAHOKA				LAMBRIGHT X-15-3						100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)								
SLM		41	34	115	41	6.3	5.0	110	90	24	20	69	68.8	10.8	93	82.3	3.1	98	28.2	27.3	107
M LT SP		32	34	114	41	6.7	5.2	90	80	27	24	70	66.8	10.7	88	81.8	3.3	96	28.4	25.6	100
SLM		41	34	117	42	6.8	5.2	110	80	31	26	72	66.1	10.4	86	82.0	3.3	97	29.7	24.2	91
VERNON				LOCKETT 4789						100 PERCENT										
SLM LT SP		42	32	105	32	5.2	3.5	120	100	14	11	52	69.1	11.8	97	84.4	3.0	104	28.4	26.7	104
SLM		41	33	108	34	5.3	4.0	130	100	15	12	52	69.2	10.9	94	82.6	3.3	98	28.9	26.8	103
SLM LT SP		42	32	102	33	5.1	3.9	120	100	34	23	53	66.4	11.1	89	82.4	3.5	97	29.6	25.2	96
OKLAHOMA																				
WEBBERS FALLS				DLP SMOOTH LEAF						85 PERCENT										
SLM		41	35	121	44	6.8	5.4	120	100	18	12	75	70.2	10.2	94	84.2	3.1	103	26.7	27.2	109
SLM		41	35	119	43	7.1	5.6	120	100	13	12	78	71.2	10.1	96	84.1	2.6	105	27.0	27.3	109
LM		51	36	122	46	6.6	5.3	120	90	21	16	83	69.5	9.7	90	84.3	2.8	104	27.7	26.7	105
WESTERN AREA																				
ARIZONA																				
ELOY				DPL 16						100 PERCENT										
SM		21	35	109	39	6.6	5.4	120	100	12	8	70	72.7	10.9	100	84.8	2.3	108	25.7	28.6	117
M		31	35	107	39	6.5	5.3	120	90	18	13	68	73.5	10.8	101	85.7	2.4	109	26.3	27.9	113
M		31	35	109	38	6.6	5.0	120	90	16	10	68	72.5	11.0	100	85.1	2.8	106	27.3	27.2	108
PARKER				DPL 16						100 PERCENT										
M		31	34	110	38	5.6	4.4	120	80	22	17	67	71.8	11.6	101	84.0	2.6	104	27.7	27.5	109
M		31	34	107	36	5.9	4.4	120	90	19	14	70	73.2	10.9	101	84.2	3.2	103	27.5	27.2	108
M		31	35	108	36	6.1	4.5	120	90	12	9	62	73.4	9.9	98	85.1	2.5	107	28.9	27.3	105
PHOENIX				HOPICALA						100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)								
SLM		41	36	146	56	5.7	4.5	130	100	23	16	79	70.0	10.5	94	84.6	3.1	104	26.9	26.7	107
SLM		41	36	146	55	5.6	4.3	120	100	16	9	89	71.5	10.3	97	83.8	2.9	103	27.4	26.8	106
SGO+		60	35	139	53	5.8	4.4	60	60	76	56	90	66.8	10.1	87	84.0	3.3	102	28.0	25.8	101

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
WESTERN AREA															
ARIZONA															
PHOENIX			DPL 16				100 PERCENT								
M	31	35	1.12	44	5.0	86	23.4	7.0	1.2	2.2	77.2	8.3	102	302	5.2
M	31	35	1.14	43	4.6	81	24.2	7.4	1.5	2.2	77.2	8.3	102	302	4.4
M	31	35	1.11	44	4.2	80	21.8	7.4	1.0	2.3	78.5	7.8	103	301	5.0
YUMA			DPL 16				96 PERCENT								
M	31	35	1.14	46	4.4	88	24.4	7.0	1.1	2.0	78.5	8.4	103	301	4.5
M	31	35	1.14	45	4.7	86	24.2	6.7	1.4	2.7	78.4	7.8	103	301	5.1
SLM	41	35	1.12	45	4.2	86	24.5	7.1	1.9	2.9	77.5	8.0	102	351	5.9
SLM	41	35	1.10	43	4.4	86	23.4	7.4	2.2	3.6	74.1	8.3	98	402	6.0
CALIFORNIA															
ARVIN			ACALA SJ-1				100 PERCENT								
M	31	36	1.13	47	4.5	89	27.6	5.2	1.3	2.2	76.8	8.2	101	352	4.6
SLM	41	36	1.14	47	4.2	98	27.3	5.8	1.8	3.0	76.1	8.3	100	352	5.5
SLM	41	36	1.14	47	4.7	99	26.0	5.0	1.6	2.8	72.5	8.4	95	402	5.8
BAKERSFIELD			ACALA SJ-1				100 PERCENT								
M	31	36	1.16	46	4.5	95	27.8	5.8	1.2	1.9	77.1	8.3	102	302	5.4
SLM	41	36	1.13	46	4.3	99	26.3	5.4	2.3	3.5	71.8	8.4	94	452	5.7
M	31	36	1.13	46	4.5	93	26.7	6.1	1.1	2.2	77.2	8.2	102	302	5.1
CALIPATRIA			DPL SMOOTH LEAF				89 PERCENT								
M	31	34	1.07	43	4.9	86	23.5	6.0	1.0	2.0	77.8	7.8	102	351	5.0
M	31	35	1.09	42	4.7	86	23.4	7.0	1.0	1.8	78.1	7.7	102	351	4.9
SLM	41	34	1.08	42	3.5	91	22.8	7.0	1.9	3.4	76.2	7.6	100	401	6.1
FIREBAUGH			ACALA 4-42				100 PERCENT								
M	31	35	1.08	48	4.3	93	25.9	6.8	1.9	2.8	78.0	8.0	102	301	4.3
M	31	35	1.06	47	4.0	91	26.2	7.1	1.7	2.9	77.9	8.0	102	301	5.7
SLM	41	35	1.07	45	3.7	90	25.0	6.8	1.4	2.6	76.1	7.2	100	401	4.6
FIVE POINTS			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.15	45	4.5	97	26.8	5.4	2.3	3.7	74.3	8.3	98	402	6.7
LM	51	36	1.13	46	4.4	91	25.1	6.0	2.5	3.8	66.3	8.0	83	552	6.8
SGO	61	36	1.07	44	3.7	93	22.9	5.7	2.5	4.1	62.8	7.3	78	602	7.5

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WESTERN AREA																				
ARIZONA																				
PHOENIX				DPL 16					100 PERCENT											
	M	31	35	106	37	6.1	4.5	120	100	21	17	64	72.8	10.1	98	84.3	2.5	106	27.1	27.7	111
	M	31	35	111	40	6.1	5.0	120	100	20	13	70	71.8	10.4	97	84.7	2.4	107	27.5	26.8	106
	M	31	35	114	40	6.7	5.0	130	100	12	11	70	72.7	10.4	99	85.3	2.6	108	27.3	27.4	109
YUMA				DPL 16					96 PERCENT											
	M	31	35	124	45	6.7	5.1	130	100	19	13	73	72.4	10.7	99	85.3	2.4	108	26.8	27.7	111
	M	31	35	116	42	6.2	4.8	120	100	19	11	73	74.7	10.1	101	84.6	2.3	107	28.1	27.4	107
	SLM	41	35	112	40	5.9	4.8	120	90	15	12	69	72.6	10.6	99	84.9	2.6	107	28.7	26.8	104
	SLM	41	35	109	39	5.9	4.3	120	90	15	11	68	72.4	9.8	97	84.8	2.4	107	29.0	26.9	104
CALIFORNIA																				
ARVIN				ACALA SJ-1					100 PERCENT											
	M	31	36	133	50	5.6	4.6	120	100	24	18	77	71.0	10.8	97	83.7	2.8	103	27.1	27.0	108
	SLM	41	36	133	50	6.1	4.9	120	90	16	12	85	70.8	11.2	98	83.9	3.1	102	27.7	26.9	106
	SLM	41	36	130	48	5.6	4.5	120	100	17	11	77	69.3	10.9	94	83.0	2.7	102	28.6	26.5	103
BAKERSFIELD				ACALA SJ-1					100 PERCENT											
	M	31	36	133	49	5.6	4.6	120	90	20	16	83	70.3	10.8	96	83.3	3.0	101	26.2	27.3	111
	SLM	41	36	130	49	5.7	4.6	120	90	22	16	79	67.4	10.9	90	84.2	2.9	104	29.0	25.7	99
	M	31	36	132	49	5.9	4.8	120	100	8	7	77	70.6	10.6	96	84.6	2.9	105	28.4	26.9	105
CALIPATRIA				DPL SMOOTH LEAF					89 PERCENT											
	M	31	34	111	36	5.7	4.3	130	100	12	8	63	74.1	9.4	98	84.7	2.5	106	28.0	27.4	108
	M	31	35	109	36	5.6	4.2	120	100	10	6	59	72.7	9.3	96	84.8	2.3	108	28.4	28.0	109
	SLM	41	34	108	36	5.7	4.1	110	90	24	23	60	70.4	9.5	92	82.4	2.9	99	28.0	25.9	102
FIREBAUGH				ACALA 4-42					100 PERCENT											
	M	31	35	130	49	6.5	5.2	130	100	12	7	78	73.2	11.1	102	83.9	3.0	103	27.6	26.6	105
	M	31	35	129	47	6.3	4.9	130	100	10	6	76	72.3	10.5	98	85.1	2.7	107	28.1	27.5	108
	SLM	41	35	127	48	6.2	5.0	130	100	14	10	79	69.6	9.3	89	84.1	3.3	102	28.8	26.4	102
FIVE POINTS				ACALA SJ-1					100 PERCENT											
	SLM	41	36	128	47	5.6	4.4	120	100	16	8	80	69.4	11.6	97	82.7	2.8	101	27.2	27.0	108
	LM	51	36	125	46	5.6	4.3	120	100	11	8	79	64.0	9.7	81	84.6	3.1	104	28.4	25.7	100
	SGO	61	36	116	43	5.6	4.2	100	80	39	31	71	61.3	8.7	75	81.3	3.2	96	29.4	24.5	93

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
WESTERN AREA															
CALIFORNIA															
HANFORD			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.14	46	4.6	100	25.7	4.8	2.0	3.1	71.8	8.4	94	452	5.7
SLM	41	36	1.12	45	4.8	95	26.3	5.1	1.5	2.6	73.0	7.7	95	452	5.6
LM	51	36	1.13	46	4.2	99	25.3	5.3	1.6	3.0	71.7	7.4	93	452	5.0
HURON			ACALA SJ-1				100 PERCENT								
M	31	35	1.11	48	4.6	93	25.7	5.6	1.5	2.6	76.8	8.4	101	302	5.8
SLM	41	35	1.10	45	4.3	92	26.3	5.8	1.4	2.5	70.8	8.4	92	452	5.2
M LT GR	36	35	1.06	46	4.6	93	24.9	6.2	1.4	2.6	69.1	7.3	87	502	5.1
MERCED			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.12	47	4.5	99	26.2	5.2	1.9	3.2	71.8	8.8	94	403	6.4
SLM	41	36	1.11	46	4.4	93	26.4	5.8	2.0	3.1	74.8	8.1	99	402	7.3
M LT GR	36	36	1.11	45	4.4	95	24.5	5.8	1.2	2.5	72.3	7.0	94	451	5.3
SHAFTER			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.17	47	4.5	90	26.8	5.5	3.2	4.4	75.4	8.2	99	352	6.6
LM+	50	36	1.16	47	4.3	96	27.0	5.5	3.3	4.4	75.8	7.7	100	401	6.4
LM	51	36	1.14	45	3.9	93	25.5	5.8	2.8	4.0	70.8	7.5	91	502	7.1
STRATFORD			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.15	48	4.4	97	27.4	6.0	2.6	3.3	74.9	8.3	99	402	6.2
SLM	41	36	1.14	48	4.6	97	27.4	5.7	2.2	3.6	74.2	8.3	98	402	5.6
LM	51	36	1.14	46	4.4	97	26.3	6.1	2.0	2.9	70.0	7.6	89	502	6.1
TULARE			ACALA SJ-1				100 PERCENT								
M	31	36	1.15	47	4.6	88	26.3	5.4	1.9	2.9	74.9	9.1	99	353	5.4
SLM	41	36	1.15	47	4.4	99	25.8	5.3	2.1	3.4	72.8	8.3	95	402	6.2
SLM	41	36	1.14	47	4.3	95	25.7	5.9	2.0	3.1	72.9	8.6	96	402	6.0
VISALIA			ACALA SJ-1				100 PERCENT								
SLM	41	36	1.13	45	4.3	94	25.9	5.1	2.0	3.1	72.6	8.0	95	452	6.1
SLM	41	36	1.13	45	4.4	93	26.0	5.4	1.6	2.9	70.2	8.2	90	452	6.0
LM	51	35	1.12	45	4.1	95	23.6	5.6	1.8	3.2	67.2	7.6	84	552	5.8

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Grade	Staple																			
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WESTERN AREA																				
CALIFORNIA																				
HANFORD				ACALA SJ-1					100 PERCENT											
SLM		41	36	129	49	5.6	4.5	130	100	15	9	77	69.3	11.4	96	83.6	3.1	102	29.1	26.0	100
SLM		41	36	130	47	5.6	4.3	130	100	8	5	78	67.9	10.4	89	84.2	2.6	105	29.5	26.9	103
LM		51	36	128	47	5.4	4.4	130	100	17	14	74	66.6	9.8	86	83.0	3.4	99	29.3	25.0	95
HURON				ACALA SJ-1					100 PERCENT											
M		31	35	121	45	5.9	4.8	130	100	18	10	72	71.5	11.0	99	84.3	2.8	104	27.7	27.0	107
SLM		41	35	123	44	5.5	4.3	120	90	12	8	75	66.5	10.2	86	84.2	3.1	103	29.3	26.3	101
M LT GR		36	35	117	42	5.6	4.4	120	100	13	10	69	65.4	9.4	83	83.2	3.1	101	28.8	25.8	100
MERCED				ACALA SJ-1					100 PERCENT											
SLM		41	36	127	48	5.4	4.4	120	90	24	17	79	68.1	11.4	94	83.4	3.3	100	28.9	26.0	100
SLM		41	36	126	46	5.3	4.3	120	90	22	17	74	68.9	10.9	93	83.2	2.8	102	28.1	27.5	108
M LT GR		36	36	125	45	5.4	4.2	120	100	22	16	76	66.2	9.1	83	81.3	3.0	96	30.5	25.1	93
SHAFTER				ACALA SJ-1					100 PERCENT											
SLM		41	36	135	50	5.7	4.6	120	100	29	20	79	70.6	10.8	97	83.7	2.9	103	27.2	24.6	98
LM+		50	36	137	52	6.0	4.8	120	100	20	14	88	70.6	10.8	97	83.5	3.0	102	28.1	26.5	104
LM		51	36	134	50	5.7	4.5	120	90	20	14	78	67.1	10.4	88	83.9	2.6	104	29.5	26.5	101
STRATFORD				ACALA SJ-1					100 PERCENT											
SLM		41	36	136	52	5.7	4.6	120	100	22	12	87	69.5	11.4	97	83.5	2.9	102	27.3	27.1	108
SLM		41	36	136	51	5.8	4.6	120	100	19	11	85	70.2	10.5	95	84.1	2.9	103	27.2	26.9	107
LM		51	36	130	49	5.6	4.3	120	100	15	10	81	68.5	10.1	90	83.8	2.7	104	27.5	28.1	111
TULARE				ACALA SJ-1					100 PERCENT											
M		31	36	135	50	5.6	4.4	120	100	17	12	85	69.2	11.5	96	83.5	3.2	101	27.1	27.1	108
SLM		41	36	131	50	5.7	4.5	120	90	18	14	78	69.0	11.6	96	84.4	3.4	102	27.7	26.7	105
SLM		41	36	130	48	6.0	4.7	120	100	14	10	77	67.9	11.1	92	83.5	2.7	103	29.1	26.8	103
VISALIA				ACALA SJ-1					100 PERCENT											
SLM		41	36	122	43	5.6	4.3	120	80	21	16	78	68.6	10.6	92	84.4	2.8	105	29.0	25.9	100
SLM		41	36	117	42	5.5	4.2	110	90	18	13	71	64.9	10.2	84	83.5	3.2	101	30.6	25.5	95
LM		51	35	124	46	5.4	4.4	120	100	17	14	79	63.8	10.1	82	83.6	3.0	102	29.5	25.7	98

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Code	Pct.
WESTERN AREA															
CALIFORNIA															
WASCO			ACALA 4-42				100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)						
M	31	36	1.08	46	4.2	94	26.7	6.0	2.4	3.3	76.6	8.4	101	352	5.9
SLM	41	36	1.13	45	4.0	90	25.7	6.0	2.5	3.5	74.0	7.8	97	402	6.9
SLM	41	36	1.10	44	4.4	90	26.4	6.3	2.6	3.7	74.1	7.4	97	451	5.9
WESTMORLAND			DPL 16				100 PERCENT								
M	31	35	1.08	43	4.5	85	23.7	7.1	1.0	1.5	78.1	7.9	103	301	5.3
M	31	35	1.10	43	4.7	88	23.5	6.8	1.0	2.0	78.3	7.7	103	351	5.2
M	31	35	1.07	43	4.7	88	22.8	7.1	1.0	2.2	79.6	7.4	104	301	4.5

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1968 --Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Grade		Staple																		
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WESTERN AREA																				
CALIFORNIA																				
WASCO				ACALA 4-42						100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)									
M		31 36	131	48	5.9	4.8	120	100	23	15	77	70.4	11.2	97	84.2	3.2	103	28.0	26.9	106
SLM		41 36	126	47	6.2	5.2	120	90	18	14	78	69.8	10.4	94	84.4	3.0	104	27.8	26.5	104
SLM		41 36	130	49	5.9	4.8	120	100	11	8	78	70.4	9.9	93	84.9	2.5	107	27.9	27.7	109
WESTMORLAND				DPL 16						100 PERCENT										
M		31 35	106	35	5.8	4.2	120	80	16	14	59	73.6	10.9	102	84.2	2.8	104	28.1	27.1	106
M		31 35	109	36	6.1	4.4	120	100	16	12	60	74.1	10.1	100	84.9	2.3	108	27.5	27.5	109
M		31 35	106	34	5.3	4.0	120	100	11	9	53	74.1	9.4	98	84.8	2.3	108	29.3	26.8	103

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1968

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d In.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index	Code	Pct.
SOUTH WESTERN AREA															
NORTHWEST TEXAS PLAINS			ACALA 1517 BR2				99 PERCENT								
M	31	37	1.19	46	3.5	92	27.1	5.9	0.7	1.9	78.0	8.8	103	252	8.1
M	31	37	1.17	45	3.2	93	28.0	5.0	0.7	2.2	78.7	8.2	103	301	8.4
M LT SP	32	36	1.14	44	3.0	94	26.9	5.6	1.0	2.2	75.0	9.1	99	352	9.0
STANTON			ACALA 1517 BR2				75 PERCENT								
SLM	41	38	1.16	46	4.2	99	29.8	5.5	1.5	1.6	74.5	9.5	99	303	9.0
M	31	38	1.16	46	4.1	91	28.7	5.8	1.1	2.3	76.5	8.6	101	302	8.1
SLM	41	37	1.18	46	4.2	94	28.4	5.5	1.2	2.3	77.5	8.9	106	302	8.5
WESTERN AREA															
ARIZONA WILLCOX			ACALA 1517D				75 PERCENT								
M	31	38	1.20	47	4.0	88	26.7	6.3	1.2	2.3	79.8	8.1	104	251	7.2
M	31	38	1.19	45	4.1	92	28.1	5.6	0.9	2.4	78.7	7.8	101	301	8.0
M	31	37	1.15	45	3.3	92	25.7	6.1	1.0	2.2	81.5	7.7	106	251	8.0
NEW MEXICO CARLSBAD			ACALA 1517C				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SLM	41	37	1.17	47	4.2	87	26.1	6.6	1.4	2.2	77.3	9.2	102	252	8.7
M	31	37	1.15	44	3.6	88	26.7	5.9	1.2	2.6	79.0	8.0	104	301	9.3
SLM	41	37	1.16	43	3.7	88	27.0	5.3	1.4	2.6	77.8	8.1	102	301	10.8
LAS CRUCES			ACALA 1517V				75 PERCENT								
M	31	37	1.16	44	3.6	91	26.0	5.3	1.5	2.9	79.5	8.6	104	251	8.6
M	31	37	1.16	43	3.1	88	26.6	5.2	1.2	1.8	78.7	7.8	103	301	0.0
SLM	41	36	1.15	43	2.7	90	25.1	5.4	2.1	4.1	79.7	7.3	104	301	11.4
LOVINGTON			ACALA 1517 BR2				95 PERCENT								
SM	21	37	1.16	46	3.6	91	26.9	5.7	0.9	1.9	79.0	8.7	104	252	7.5
M	31	37	1.16	44	3.1	95	28.9	5.2	0.8	2.1	77.2	8.2	101	351	8.5
SLM	41	35	1.10	43	3.0	88	25.2	5.6	1.1	2.6	72.7	7.7	94	452	10.1
ROSWELL			ACALA 1517V				100 PERCENT	(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)							
SM	21	38	1.19	46	4.1	91	28.0	5.8	0.5	1.4	80.0	8.6	105	201	7.0
M	31	37	1.22	44	2.9	88	26.7	5.7	1.0	1.6	81.3	7.7	106	251	8.2

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1968

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name*	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WESTERN AREA																				
NORTHWEST TEXAS																				
PLAINS				ACALA 1517 BR2						99 PERCENT										
M		31	37	143	54	6.6	5.4	110	90	15	10	86	70.4	11.3	98	84.1	3.0	103	27.8	26.7	105
M		31	37	146	55	6.7	5.4	100	80	14	12	86	69.3	10.8	94	83.4	3.3	100	28.1	26.2	103
M LT SP		32	36	142	54	7.0	5.7	90	60	34	19	83	65.8	10.9	87	83.3	3.4	100	28.9	26.0	100
STANTON					ACALA 1517 BR2					75 PERCENT										
SLM		41	38	143	55	6.2	5.1	120	100	24	13	87	68.4	11.5	95	83.6	3.1	102	27.2	27.0	108
M		31	38	143	54	6.0	5.1	110	100	12	9	88	70.9	10.9	97	84.3	3.1	103	26.6	27.2	110
SLM		41	37	139	53	6.1	4.9	120	100	12	10	91	70.5	11.1	97	83.6	2.9	102	26.8	27.2	109
WESTERN AREA																				
ARIZONA																				
WILLCOX					ACALA 1517D					75 PERCENT										
M		31	38	140	53	7.1	5.7	120	100	10	9	93	73.0	10.6	100	84.4	2.6	105	26.1	27.7	113
M		31	38	145	56	6.8	5.7	100	70	19	14	99	72.4	10.1	98	84.3	2.3	106	26.6	28.1	113
M		31	37	140	52	7.6	6.0	100	80	19	16	90	73.3	10.0	99	85.5	2.6	108	27.6	27.4	108
NEW MEXICO																				
CARLSBAD					ACALA 1517C					100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)								
SLM		41	37	135	51	6.6	5.7	110	100	20	12	88	70.8	11.1	98	85.5	2.8	107	26.3	27.6	112
M		31	37	133	49	6.5	5.3	110	80	22	20	82	72.2	10.5	98	84.9	2.6	107	26.9	27.5	110
SLM		41	37	130	49	6.3	5.3	70	60	21	18	77	70.2	10.7	96	84.0	2.6	104	27.8	27.9	110
LAS CRUCES					ACALA 1517V					75 PERCENT										
M		31	37	134	51	6.4	5.2	100	80	24	20	85	68.9	10.1	91	82.4	2.5	101	26.8	27.0	108
M		31	37	137	53	6.5	5.3	80	60	44	38	85	72.7	10.8	100	85.7	2.9	107	27.0	27.0	108
SLM		41	36	135	52	6.8	5.8	60	60	69	50	90	72.2	10.0	97	85.1	3.1	105	29.0	26.0	100
LOVINGTON					ACALA 1517 BR2					95 PERCENT										
SM		21	37	141	54	6.3	5.4	110	90	17	12	89	71.8	11.0	99	85.3	2.8	107	26.9	26.9	108
M		31	37	144	54	6.4	5.3	70	70	20	18	94	68.6	10.5	91	83.3	3.1	101	28.8	26.6	103
SLM		41	35	119	43	6.8	5.4	100	60	32	27	77**	66.7	9.8	86	81.0	3.0	96	29.1	25.7	99
ROSWELL					ACALA 1517V					100 PERCENT		(LESS THAN 100% IN AREA. 100% SELECTED FOR TESTING)								
SM		21	38	148	57	6.5	5.4	120	100	16	13	93**	73.3	11.0	102	84.0	2.8	104	27.1	27.2	109
M		31	37	148	58	7.4	6.1	100	60	28	21	79	74.2	10.2	100	86.8	2.9	110	28.6	26.5	103

**Estimated value, insufficient cotton for complete test

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock				Picker & card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite color		
Name	Code	32d In.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index	Code	Pct.
WESTERN AREA															
WEST TEXAS															
EL PASO			ACALA 1517C				95 PERCENT								
M	31	37	1.14	45	3.8	87	25.0	6.3	1.2	2.3	78.2	8.2	102	301	8.4
M	31	37	1.17	46	3.3	88	26.2	5.5	1.7	2.7	78.5	7.6	102	351	9.2
SLM	41	36	1.15	44	2.8	89	25.5	5.6	2.1	4.3	76.5	8.3	100	352	10.2
PECOS			ACALA 1517C				100 PERCENT								
M	31	37	1.17	44	4.0	85	24.8	6.7	1.0	1.6	78.2	8.7	103	252	8.8
M	31	37	1.14	43	3.7	87	25.3	6.5	1.0	2.0	78.5	8.4	103	301	7.7
SLM	41	36	1.11	42	2.7	90	27.7	5.6	1.7	3.3	77.0	7.7	100	351	11.7

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1968--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WESTERN AREA																				
WEST TEXAS																				
EL PASO				ACALA 1517C					95 PERCENT											
M		31 37	129	49	6.8	5.6	110	80	27	22	84	71.7	10.5	98	85.2	2.9	106	26.8	27.0	108
M		31 37	135	51	6.5	5.3	60	60	38	31	86	70.9	10.1	95	84.3	2.8	104	27.2	27.4	109
SLM		41 36	122	44	6.4	5.2	60	60	90	61	76	69.1	10.4	92	84.3	3.0	104	28.5	26.4	103
PECOS				ACALA 1517C					100 PERCENT											
M		31 37	126	46	7.4	5.7	120	100	12	9	75	71.0	10.9	98	84.6	2.9	105	28.0	26.8	105
M		31 37	135	51	6.9	5.6	110	100	13	10	77	72.6	11.1	101	83.6	2.9	102	27.4	27.5	109
SLM		41 36	131	49	6.7	5.1	60	60	48	42	76	69.8	10.4	94	84.1	3.0	103	28.5	26.4	103

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1968

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 26.8 tex	50s or 11.8 tex	Average Break Factor	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	Average	22s or 26.8 tex	50s or 11.8 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
NORTHWEST TEXAS													
PLAINS			ACALA 1517 BR2				99 PERCENT						
M	31	37	15.0	155	60	3205	6.9	5.8	120	100	110	9	7
M	31	37	17.2	167	61	3362	6.9	5.7	120	100	110	7	5
M LT SP	32	36	19.9	162	64	3382	7.1	6.0	110	80	95	15	10
STANTON			ACALA 1517 BR2				75 PERCENT						
SLM	41	38	15.7	160	61	3285	6.3	5.3	120	100	110	11	7
M	31	38	14.7	157	58	3177	6.7	5.6	130	110	120	7	6
SLM	41	37	16.9	159	61	3274	6.5	5.3	130	100	115	2	2
ARIZONA													
WILLCOX			ACALA 1517D				75 PERCENT						
M	31	38	13.1	154	58	3144	7.0	5.7	130	110	120	3	2
M	31	38	15.5	163	62	3343	6.9	5.9	110	90	100	5	5
M	31	37	15.3	159	61	3274	7.3	6.3	110	100	105	6	5
NEW MEXICO													
CARLSBAD			ACALA 1517C				100 PERCENT						
SLM	41	37	15.7	153	57	3108	7.2	6.1	130	110	120	5	3
M	31	37	17.9	154	56	3094	6.9	5.5	120	100	110	9	5
SLM	41	37	19.0	153	57	3108	6.9	5.7	100	80	90	7	7
LAS CRUCES			ACALA 1517V				75 PERCENT						
M	31	37	18.4	156	57	3141	6.7	5.5	110	90	100	9	9
M	31	37	19.6	159	59	3224	7.2	5.7	80	80	80	16	17
SLM	41	36	18.9	156	60	3216	7.3	6.2	70	60	65	44	39
LOVINGTON			ACALA 1517 BR2				95 PERCENT						
SM	21	37	15.0	154	58	3144	7.0	5.8	120	100	110	10	8
M	31	37	19.1	165	63	3390	7.0	5.5	100	60	80	8	9
SLM	41	35	20.1	131	48	2641	7.1	5.6	100	70	85	18	16
ROSWELL			ACALA 1517V				100 PERCENT						
SM	21	38	14.4	164	63	3379	6.8	5.7	130	110	120	5	3
M	31	37	13.1	161	62	3321	7.6	6.0	90	70	80	19	15

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1968--Continued

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 26.8 tex	50s or 11.8 tex	Average Break Factor	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	Average	22s or 26.8 tex	50s or 11.8 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
WEST TEXAS													
EL PASO			**ACALA 1517C**				**95 PERCENT**						
M	31	37	14.7	144	54	2934	7.1	5.9	120	100	110	15	12
M	31	37	19.4	154	59	3169	7.0	5.7	80	70	75	17	14
SLM	41	36	21.2	146	55	2981	6.9	5.7	80	60	70	48	33
PECOS			**ACALA 1517C**				**100 PERCENT**						
M	31	37	19.4	144	54	2934	7.5	6.3	130	110	120	4	2
M	31	37	17.1	151	57	3086	7.2	5.8	130	100	115	4	3
SLM	41	36	21.6	153	57	3108	7.0	5.8	70	60	65	32	23

Table 8.--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1968

State, Production Area, Chronological Sampling and Classification			Array length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Comber waste
Grade		Staple	Upper Quartile	Coeff. of Var'n		Zero gage	1/8" gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite		
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index	Code	Pct.	Pct.
WESTERN AREA																
Arizona																
Aquila			Del Cerro 100 Percent													
Mid	31	40	1.42	27	3.7	107	32.4	4.8	1.3	2.6	78.3	8.2	103	301	9.9	16.5
Mid	31	40	1.40	28	3.4	106	31.9	5.1	1.0	1.9	78.8	7.7	103	301	10.0	17.7
Mid	31	40	1.39	29	3.2	107	30.6	5.7	1.6	2.4	80.5	7.3	104	301	10.0	17.2
New Mexico																
Las Cruces			Del Cerro 100 Percent													
Mid	31	42	1.56	27	3.7	105	32.7	4.6	1.0	1.8	79.8	8.0	104	251	8.3	15.0
LM+	50	42	1.47	26	3.5	108	32.2	5.5	3.6	4.4	75.7	7.2	99	401	11.3	14.4
LM+	50	42	1.48	32	3.5	102	31.0	5.5	2.9	4.3	76.2	7.4	99	401	9.5	16.4

Table 8.--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1968--(Continued)

State, Production Area, Chronological Sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 50s gray yarn			Color - 50s bleached yarn			Color - 50s dyed yarn		
Grade		Staple	50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
WESTERN AREA																			
Arizona																			
Aquila			Del Cerro 100 Percent																
Mid	31	40	73	40	5.3	4.5	110	110	2	1	73.0	9.8	98	82.8	2.4	102	26.6	28.5	115
Mid	31	40	72	40	5.2	4.3	110	100	2	1	72.6	9.4	96	84.2	2.3	106	27.0	29.3	117
Mid	31	40	71	42	5.3	4.5	110	100	3	1	74.8	8.8	98	86.3	2.5	110	27.6	28.3	112
New Mexico																			
Las Cruces			Del Cerro 100 Percent																
Mid	31	42	77	40	5.4	4.7	110	100	1	1	75.0	12.0	107	85.1	2.2	109	25.9	28.9	118
LM+	50	42	76	42	5.5	4.8	110	110	2	2	73.6	9.5	98	85.9	2.3	110	27.5	28.4	113
LM+	50	42	72	41	5.7	4.7	110	110	2	1	70.2	8.6	89	81.9	2.3	101	27.6	27.4	108

Table 9.--Cotton, American Egyptian extra long staple: Quality characteristics by production area, crop of 1968

State, Production Area, Chronological Sampling, and Classification			Array length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Comber waste
	Grade	Staple	Upper Quartile	Coeff. of Var'n		Zero gage	1/8" gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Composite		
		32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index Code	Pct.	Pct.
WESTERN AREA															
ARIZONA															
Marana			Pima S-2 100 Percent												
	3	44	1.45	30	3.9	98	34.2	7.6	1.2	2.5	65.6	11.0	84 456	9.6	22.4
	3	44	1.45	30	3.8	98	33.2	7.3	1.4	2.5	68.0	11.2	88 405	8.4	19.2
	4	44	1.37	34	3.3	99	33.8	6.5	2.2	3.6	68.5	10.5	89 405	11.4	21.0
Phoenix			Pima S-4 100 Percent												
	3	46	1.45	33	4.1	104	31.9	6.8	1.2	2.1	69.5	10.7	91 405	8.8	19.1
	3	46	1.50	30	4.1	100	35.6	6.5	1.4	2.3	69.7	10.8	91 355	9.1	18.0
	4	44	1.49	31	3.6	104	35.7	7.1	1.7	2.7	67.5	10.2	87 454	10.0	19.4
Safford			Pima S-4 *100 Percent												
	3	44	1.48	29	3.7	97	33.5	6.1	1.2	1.6	68.3	11.0	89 405	9.0	18.3
	3	44	1.50	30	3.7	97	34.2	6.8	0.9	2.2	69.0	11.2	90 355	8.6	17.4
	3	44	1.44	32	3.5	101	33.7	6.9	1.4	1.8	68.3	10.9	89 405	8.8	19.3
CALIFORNIA															
Ripley			Pima S-4 100 Percent												
	4	44	1.47	28	3.9	97	35.2	6.8	1.4	2.9	68.5	10.2	88 404	9.0	18.1
	5	44	1.48	27	4.0	105	35.0	6.6	2.1	3.7	68.7	10.1	89 404	10.6	17.2
	4	44	1.48	27	3.7	102	35.0	6.7	1.9	2.9	69.0	10.2	90 404	9.0	19.5
NEW MEXICO															
Las Cruces			Pima S-3 70 Percent												
	4	46	1.47	35	3.7	96	30.5	7.0	1.3	2.5	64.7	11.2	82 456	9.1	17.8
	4	46	1.44	32	3.7	94	32.1	6.5	1.5	2.9	66.5	11.4	85 406	9.6	19.8
	4	46	1.42	33	3.1	99	31.1	6.6	2.3	3.2	66.0	11.0	85 455	11.4	19.6
WEST TEXAS															
El Paso			Pima S-3 *100 Percent												
	3	46	1.48	34	3.5	96	30.8	6.9	2.1	3.3	66.0	11.0	84 405	10.7	18.3
	3	46	1.39	32	3.3	95	31.7	6.7	1.7	3.2	76.6	11.4	85 406	9.4	18.4
	3	46	1.38	35	3.1	101	30.6	6.7	2.9	3.7	66.2	11.7	85 406	11.9	19.3
El Paso			Pima S-2 74 Percent												
	2	44	1.42	31	3.9	95	30.9	7.1	1.1	2.1	67.8	11.6	88 356	7.4	17.6
	3	44	1.49	28	3.7	95	32.0	6.5	0.9	2.6	68.5	10.9	89 405	8.5	16.8
	3	44	1.39	29	3.6	101	32.0	6.7	1.1	1.8	67.0	10.7	87 405	9.1	19.4
Pecos			Pima S-2 85 Percent												
	3	44	1.40	33	3.6	95	32.6	7.4	1.5	2.3	68.2	11.0	89 405	9.1	18.4
	3	44	1.45	28	3.8	96	33.6	5.8	1.7	3.5	69.5	11.2	90 355	9.3	17.8
	4	44	1.37	33	3.2	100	30.9	6.7	2.6	3.9	65.2	12.0	83 406	11.0	20.1
AVERAGES															
1967 22 Lots	3.5	44	1.44	31	3.7	98	33.6	7.3	2.0	3.0	67.5	10.8	87 405	8.5	17.7
1968 24 Lots	3.4	45	1.44	31	3.6	99	32.9	6.8	1.6	2.7	68.0	11.0	87 405	9.5	18.8

*Less than 100% planted in area, 100% selected for spinning lots.

Table 9.--Cotton, American Egyptian extra long staple: Quality characteristics by production areas, crop of 1968--(Continued)

State, Production Area, Chronological Sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 50s gray yarn			Color -50s bleached yarn			Color - 50s dyed yarn		
		50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	50s or 11.8 tex	80s or 7.4 tex	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Grade	Staple																	
	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WESTERN AREA																		
ARIZONA																		
Marana				Pima S-2	100 Percent													
	3	44	66	36	5.5	4.9	120	120	1	0	64.2	13.5	92	83.4	3.7	99	27.2	27.9	111
	3	44	67	38	5.8	4.9	120	120	1	0	63.5	13.3	89	82.9	3.9	97	27.5	27.4	109
	4	44	68	37	6.1	5.3	110	110	2	2	65.3	12.8	92	83.3	3.9	98	28.2	27.1	106
Phoenix				Pima S-4	100 Percent													
	3	46	68	39	5.4	4.5	120	120	1	0	66.7	13.4	98	82.3	3.8	96	29.1	27.0	104
	3	46	72	40	5.7	4.8	120	110	1	0	66.9	13.0	97	83.3	3.3	100	29.2	27.4	105
	4	44	73	40	6.0	5.2	110	110	0	0	63.9	12.4	87	83.2	4.1	97	29.0	26.3	101
Safford				Pima S-4	*100 Percent													
	3	44	70	38	5.8	4.8	120	110	0	0	63.8	13.1	89	83.6	3.8	99	26.9	27.3	109
	3	44	70	38	5.7	4.8	120	100	1	0	64.8	13.4	94	83.0	3.6	98	27.8	27.9	110
	3	44	67	36	5.7	4.9	110	110	2	0	64.6	13.2	92	84.6	4.3	99	28.7	26.5	103
CALIFORNIA																		
Ripley				Pima S-4	100 Percent													
	4	44	69	39	5.6	4.8	120	120	1	0	67.6	12.8	98	83.1	3.8	98	28.5	26.5	103
	5	44	72	40	5.7	4.7	120	110	0	1	64.1	12.7	89	83.8	4.0	98	27.9	27.0	106
	4	44	71	39	6.0	4.9	110	110	0	0	67.0	12.7	96	85.1	3.6	103	29.4	26.4	101
NEW MEXICO																		
Las Cruces				Pima S-3	70 Percent													
	4	46	65	36	5.8	4.8	120	120	1	0	60.3	13.5	83	82.7	4.2	95	27.0	27.3	109
	4	46	70	38	5.8	4.8	110	110	1	1	61.2	13.7	86	83.0	4.4	95	28.9	27.0	104
	4	46	69	38	5.8	5.2	110	110	1	1	60.2	13.6	83	84.1	5.2	94	28.5	25.8	100
WEST TEXAS																		
El Paso				Pima S-3	*100 Percent													
	3	46	66	38	5.8	4.9	120	120	1	1	60.9	13.4	84	82.4	4.0	95	27.3	26.9	107
	3	46	71	39	6.2	5.2	110	110	1	1	61.0	13.5	85	83.1	4.5	95	28.2	27.2	106
	3	46	70	39	5.7	5.0	100	100	2	2	60.8	13.4	84	83.6	4.7	95	29.3	26.2	100
El Paso				Pima S-2	74 Percent													
	2	44	64	35	5.6	4.9	120	120	0	0	63.7	13.3	90	82.2	4.2	94	27.2	27.6	110
	3	44	67	37	5.7	4.9	110	110	0	0	64.3	13.4	92	83.5	3.8	98	27.2	28.3	113
	3	44	68	37	5.7	4.8	110	110	0	1	62.6	13.3	87	83.2	4.5	95	27.5	26.0	103
Pecos				Pima S-2	85 Percent													
	3	44	66	37	6.0	5.2	130	120	0	0	64.5	13.4	93	82.7	3.8	97	27.5	27.5	109
	3	44	71	39	6.1	4.8	120	120	1	1	64.0	13.4	91	83.1	3.5	99	27.5	27.5	109
	4	44	69	37	5.8	4.9	100	100	1	1	61.7	13.8	87	83.5	4.7	95	29.1	26.9	103
AVERAGES																		
1967 22 Lots	3.5	44	69	38	6.0	5.1	114	111	2	2	63.6	13.4	91	83.4	3.9	98	27.0	26.4	106
1968 24 Lots	3.3	45	69	38	5.8	4.9	115	112	1	1	63.6	13.2	90	83.3	4.1	97	28.1	27.0	106

*Less than 100% planted in area, 100% selected for spinning lots

Table 10.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 57 short staple samples collected at triweekly intervals from selected gin points, crop of 1968

Item	Grade	Staple	Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	SPY Number
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Com-posite		
Sample Distribution:	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index	Pct.	
Mean	94.2	30.7	.95	45.5	4.34	80.7	20.8	7.4	2.10	3.33	73.4	9.4	96.9	6.22	46.7
Standard deviation (±)	4.6	.9	.04	1.2	.66	4.4	1.2	.9	.74	.82	2.2	.8	3.5	.91	6.1
Correlation Coef. for:															
Classification:															
Grade.....index		-.407	-.442	-.050	+.328	-.070	-.276	-.179	-.628	-.623	+.766	-.164	+.791	-.716	-.517
Staple.....32d inches	-.407		+.758	+.106	-.043	+.071	+.285	-.114	+.411	+.411	-.126	-.370	-.158	+.045	+.817
Fiber length:															
2.5% span .....inches	-.442	+.758		-.157	-.144	-.049	+.249	+.029	+.353	+.322	-.118	-.322	-.150	+.035	+.818
50/2.5.....percent	-.050	+.106	-.157		+.379	+.105	+.058	-.007	+.051	+.052	+.018	-.177	+.007	-.103	-.001
Micronaire.....reading	+.328	-.043	-.144	+.379		-.009	-.331	-.235	-.087	-.199	+.431	-.562	+.394	-.404	-.404
Fiber strength:															
Zero gage.....1,000 psi	-.070	+.071	-.049	+.105	-.009		+.610	-.724	+.352	+.264	+.196	-.151	+.208	+.199	+.131
1/8" gage.....grams/tex	-.276	+.285	+.249	+.058	-.331	+.610		-.340	+.452	+.366	+.022	-.172	+.021	+.244	+.484
Elongation (1/8").....pct	-.179	-.114	+.029	-.007	-.235	-.724	-.340		-.292	-.215	-.408	+.329	-.434	-.058	-.003
Shirley Analyzer:															
Visible waste.....percent	-.628	+.411	+.353	+.051	-.087	+.352	+.452	-.292		+.945	-.230	-.220	-.236	+.726	+.428
Total waste.....percent	-.623	+.411	+.322	+.052	-.199	+.264	+.366	-.215	+.945		-.285	-.131	-.287	+.741	+.426
Color of raw stock:															
Reflectance.....R_d	+.766	-.126	-.118	+.018	+.431	+.196	+.022	-.408	-.230	-.285		-.616	+.983	-.566	-.212
Yellowness.....+b	-.164	-.370	-.322	-.177	-.562	-.151	-.172	+.329	-.220	-.131	-.616		-.541	+.350	-.241
Composite.....index	+.791	-.158	-.150	+.007	+.394	+.208	+.021	-.434	-.236	-.287	+.983	-.541		-.551	-.243
Picker & card waste.....pct	-.716	+.045	+.035	-.103	-.404	+.199	+.244	-.058	+.726	+.741	-.566	+.350	-.551		+.161
Spinning Potential....number	-.517	+.817	+.818	-.001	-.404	+.131	+.484	-.003	+.428	+.426	-.212	-.241	-.243	+.161	
Yarn skein strength:															
8s (73.8 tex).....pounds	-.411	+.476	+.432	+.039	-.460	+.501	+.844	-.181	+.462	+.446	-.126	-.150	-.144	+.244	+.734
22s (26.8 tex).....pounds	-.372	+.583	+.494	+.037	-.412	+.548	+.812	-.273	+.478	+.456	-.030	-.256	-.053	+.295	+.785
Yarn elongation:															
8s (73.8 tex).....percent	-.150	+.068	+.352	-.122	-.380	-.548	-.116	+.663	-.174	-.119	-.277	+.223	-.283	-.370	+.313
22s (26.8 tex).....percent	-.269	+.027	+.265	-.257	-.563	-.505	-.123	+.704	-.124	-.066	-.471	+.041	-.474	-.338	+.297
Yarn appearance:															
8s (73.8 tex).....index	+.321	+.217	+.051	+.334	+.753	+.152	-.114	-.385	+.002	-.075	+.512	-.776	+.470	+.101	-.036
22s (26.8 tex).....index	+.332	+.236	+.064	+.300	+.796	+.150	-.146	-.410	-.023	-.100	+.575	-.787	+.528	+.168	-.063
Yarn imperfections:															
8s (73.8 tex).....number	-.396	-.249	-.174	-.169	-.701	-.106	+.061	+.433	-.024	+.067	-.646	+.838	-.614	-.193	-.031
22s (26.8 tex).....number	-.410	-.259	-.191	-.170	-.680	-.133	+.055	+.425	+.003	+.095	-.643	+.812	-.612	-.162	-.044
Color - 22s gray yarn:															
Reflectance.....R_d	+.546	-.057	-.085	+.120	+.633	+.257	+.057	-.479	-.025	-.134	+.831	-.761	+.800	+.211	-.213
Yellowness.....+b	-.072	-.418	-.270	-.203	-.534	+.112	+.040	+.197	-.078	-.037	-.332	+.770	-.262	-.068	-.162
Composite.....index	+.596	-.210	-.206	+.088	+.548	+.326	+.069	-.470	-.051	-.161	+.832	-.609	+.822	+.219	-.307
Color-22s bleached yarn:															
Reflectance.....R_d	+.355	-.541	-.270	-.177	-.022	-.103	-.270	-.018	-.270	-.322	+.220	+.236	+.284	-.146	-.444
Yellowness.....+b	-.522	+.285	+.310	-.094	-.630	-.055	+.225	+.340	+.048	+.125	-.668	+.532	-.659	-.173	+.466
Composite.....index	+.554	-.504	-.360	-.058	+.368	-.033	-.316	-.240	-.213	-.300	+.550	-.176	+.594	+.001	-.560
Color - 22s dyed yarn:															
Reflectance..... R_d	-.264	+.093	-.148	-.006	-.087	+.181	+.332	-.103	+.208	+.215	-.265	-.022	-.288	+.079	+.052
Blueness..... -b	+.496	-.276	-.209	+.033	+.561	-.156	-.322	-.108	-.148	-.293	+.497	-.295	+.500	+.021	-.417
Composite.....index	+.488	-.265	-.127	+.018	+.491	-.187	-.366	-.060	-.180	-.305	+.490	-.236	+.500	-.013	-.363

Table 10.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color -22s bleached yarn			Color - 22s dyed yarn		
	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Sample Distribution:	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
Mean	310.3	93.0	7.3	6.2	122.0	114.5	42.0	24.7	67.7	11.6	93.4	84.1	3.3	102.0	27.6	27.0	106.9
Standard deviation (±)	19.2	6.1	0.5	0.5	10.6	11.7	28.3	15.8	2.9	0.5	5.4	0.8	0.5	3.1	0.5	0.7	3.3
Correlation Coef. for:																	
Classification:																	
Grade.....index	-.411	-.372	-.150	-.269	+.321	+.332	-.396	-.409	+.546	-.072	+.597	+.355	-.522	+.554	-.264	+.496	+.488
Staple.....32d inches	+.476	+.583	+.068	+.027	+.217	+.236	-.249	-.259	-.057	-.418	-.210	-.541	+.285	-.504	+.093	-.276	-.265
Fiber length:																	
2.5% span.....inches	+.432	+.494	+.352	+.265	+.051	+.064	-.174	-.191	-.085	-.270	-.206	-.270	+.310	-.360	-.148	-.209	-.127
50/2.5 unif.....percent	+.039	+.037	-.122	-.257	+.334	+.300	-.169	-.170	+.120	-.203	+.088	-.177	-.094	-.058	-.006	+.033	+.018
Micronaire.....reading	-.460	-.412	-.380	-.563	+.753	+.800	-.701	-.680	+.633	-.534	+.548	-.022	-.630	+.368	-.087	+.561	+.491
Fiber strength:																	
Zero gage.....1,000 psi	+.501	+.548	-.548	-.505	+.152	+.150	-.106	-.133	+.257	+.112	+.326	-.103	-.055	-.033	+.181	-.156	-.187
1/8" gage.....grams.tex	+.844	+.812	-.116	-.123	-.114	-.146	+.061	+.055	+.057	+.040	+.069	-.270	+.225	-.316	+.332	-.322	-.366
Elongation (1/8")...pct	-.181	-.273	+.663	+.704	-.385	-.410	+.433	+.425	-.479	+.197	-.470	-.018	+.340	-.240	-.103	-.108	-.060
Shirley Analyzer:																	
Visible waste...percent	+.462	+.478	-.174	-.124	+.002	-.023	-.024	+.003	-.025	-.078	-.051	-.270	+.048	-.213	+.208	-.148	-.180
Total waste.....percent	+.446	+.456	-.119	-.066	-.075	-.100	+.067	+.095	-.134	-.037	-.161	-.322	+.125	-.300	+.215	-.293	-.305
Color of raw stock:																	
Reflectance.....R_d	-.126	-.030	-.277	-.471	+.512	+.575	-.646	-.643	+.831	-.332	+.832	+.220	-.668	+.550	-.265	+.497	+.490
Yellowness.....+b	-.150	-.256	+.223	+.411	-.776	-.787	+.838	+.812	-.761	+.770	-.609	+.236	+.532	-.176	-.022	-.295	-.236
Composite.....index	-.144	-.053	-.283	-.474	+.470	+.528	-.614	-.612	+.800	-.262	+.822	+.284	-.659	+.594	-.288	+.500	+.500
Picker & card waste...pct	+.301	+.244	-.046	+.125	-.459	-.480	+.494	+.530	-.425	+.336	-.367	-.062	+.299	-.242	+.156	-.302	-.297
Spinning Potential number	+.734	+.785	+.313	+.297	-.036	-.063	-.031	-.044	-.213	-.162	-.307	-.444	+.466	-.560	+.052	-.417	-.363
Yarn skein strength:																	
8s (73.8 tex)...pounds		+.960	+.107	+.100	-.118	-.206	+.131	+.119	-.145	+.019	-.163	-.471	+.429	-.565	+.279	-.510	-.510
22s (26.8 tex)...pounds	+.960		+.026	+.016	-.021	-.085	+.004	-.007	-.046	-.065	-.078	-.475	+.370	-.530	+.209	-.470	-.454
Yarn elongation:																	
8s (73.8 tex)..percent	+.107	+.026		+.863	-.350	-.387	+.310	+.286	-.399	+.177	-.403	-.037	+.380	-.248	-.181	-.082	-.012
22s (26.8 tex)..percent	+.100	+.016	+.863		-.480	-.557	+.483	+.466	-.580	+.375	-.542	+.034	+.527	-.297	-.143	-.203	-.122
Yarn appearance:																	
8s (73.8 tex)....index	-.118	-.021	-.350	-.480		+.911	-.867	-.861	+.709	-.621	+.602	-.089	-.539	+.281	-.026	+.327	+.283
22s (26.8 tex)....index	-.206	-.085	-.387	-.557	+.911		-.883	-.870	+.748	-.646	+.631	-.086	-.592	+.312	-.030	+.429	+.363
Yarn imperfections:																	
8s (73.8 tex)...number	+.131	+.004	+.310	+.483	-.867	-.883		+.983	-.830	+.700	-.709	+.066	+.595	-.330	+.077	-.472	-.415
22s (26.8 tex)...number	+.119	-.007	+.286	+.466	-.861	-.870	+.983		-.822	+.662	-.712	+.073	+.578	-.318	+.076	-.460	-.402
Color - 22s gray yarn:																	
Reflectance.....R_d	-.145	-.046	-.399	-.580	+.709	+.748	-.830	-.822		-.537	+.959	+.166	-.805	+.596	-.145	+.571	+.521
Yellowness.....+b	+.019	-.065	+.177	+.375	-.621	-.646	+.700	+.662	-.537		-.286	+.340	+.463	-.068	-.133	-.171	-.092
Composite.....index	-.163	-.078	-.403	-.542	+.602	-.631	-.709	-.712	+.959	-.286		+.300	-.769	+.660	-.214	+.593	+.563
Color-22s bleached yarn:																	
Reflectance.....R_d	-.471	-.475	-.037	+.034	-.089	-.086	+.066	+.073	+.166	+.340	+.300		-.266	+.791	-.463	+.392	+.481
Yellowness.....+b	+.429	+.370	+.380	+.527	-.539	-.592	+.595	+.578	-.805	+.463	-.769	-.266		-.784	+.130	-.663	-.579
Composite.....index	-.565	-.530	-.248	-.297	+.281	+.312	-.330	-.318	+.596	-.068	+.660	+.791	-.784		-.363	+.662	+.660
Color-22s dyed yarn:																	
Reflectance.....R_d	-.279	+.209	-.181	-.143	-.026	-.030	+.077	+.076	-.145	-.133	-.214	-.463	+.130	-.363		-.446	-.680
Blueness.....-b	-.510	-.470	-.082	-.203	+.327	+.429	-.472	-.460	+.571	-.171	+.593	+.392	-.663	+.662	-.446		+.951
Composite.....index	-.510	-.454	-.012	-.122	+.283	+.363	-.415	-.402	+.521	-.092	+.563	+.481	-.579	+.660	-.680	+.951	

Table 11.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 361 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Item	Grade	Staple	Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potent'l
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Reflect-ance	Yellow-ness	Com-posite		
	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	R_d	+b	Index	Pct.	No.
Sample Distribution:															
Mean	93.3	34.3	1.08	45.3	4.35	86.6	23.3	6.25	2.03	3.07	73.8	8.4	96.7	6.01	67.4
Standard deviation (±)	5.1	1.2	.05	1.5	.49	5.4	1.7	.95	1.00	1.10	2.6	0.6	4.2	1.13	7.8
Correlation Coef. for:															
Classification:															
Grade.....index		+.089	+.037	+.035	+.205	-.091	+.056	+.160	-.621	-.660	+.721	+.128	+.766	-.701	+.023
Staple.....32d inches	+.089		+.814	+.004	-.012	+.222	+.468	-.070	-.012	-.048	+.206	-.461	+.158	-.099	+.724
Fiber length:															
2.5% span.....inches	+.037	+.814		-.163	-.136	+.114	+.438	+.015	+.019	+.005	+.215	-.390	+.166	-.011	+.772
50/2.5 unif.....percent	+.035	+.004	-.163		+.490	+.242	+.245	-.222	+.085	+.016	-.070	+.143	-.029	-.082	000
Micronaire.....reading	+.205	-.012	-.136	+.490		+.023	-.055	-.164	-.111	-.173	+.081	+.080	+.099	-.299	-.294
Fiber strength:															
Zero gage.....1,000 psi	-.091	+.222	+.114	+.242	+.023		+.645	-.618	+.277	+.245	-.186	+.052	-.174	+.180	+.242
1/8" gage.....grams/tex	+.056	+.468	+.438	+.245	-.055	+.645		-.220	+.146	+.120	+.072	-.104	+.049	+.065	+.595
Elongation (1/8").....pct	+.160	-.070	+.015	-.222	-.164	-.618	-.220		-.207	-.148	+.228	-.156	+.218	-.156	-.002
Shirley Analyzer:															
Visible waste.....percent	-.621	-.012	+.019	+.085	-.111	+.277	+.146	-.207		+.960	-.427	-.038	-.427	+.799	+.024
Total waste.....percent	-.660	-.048	+.005	+.016	-.173	+.245	+.120	-.148	+.960		-.452	-.096	-.460	+.817	+.021
Color of raw stock:															
Reflectance.....R_d	+.721	+.206	+.215	-.070	+.081	-.186	+.072	+.228	-.427	-.452		-.169	+.966	-.522	+.132
Yellowness.....+b	+.128	-.461	-.390	+.143	+.080	+.052	-.104	-.156	-.038	-.096	-.169		-.059	-.065	-.346
Composite.....index	+.766	+.158	+.166	-.029	+.099	-.174	+.049	+.218	-.427	-.460	+.966	-.059		-.536	+.108
Picker & card waste.....pct	-.701	-.099	-.011	-.082	-.299	+.180	+.065	-.156	+.799	+.817	-.522	-.065	-.346		-.012
Spinning Potential....number	+.023	+.724	+.772	000	-.294	+.242	+.595	-.002	+.024	+.021	+.132	-.346	+.108	-.012	
Yarn skein strength:															
22s (26.8 tex).....pounds	+.039	+.629	+.646	+.108	-.275	+.529	+.810	-.131	+.155	+.143	+.109	-.237	+.096	+.072	+.826
50s (11.8 tex).....pounds	+.024	+.678	+.705	+.060	-.335	+.404	+.736	-.045	+.119	+.116	+.122	-.276	+.100	+.051	+.886
Yarn elongation:															
22s (26.8 tex).....percent	+.124	+.245	+.371	-.255	-.440	-.468	+.016	+.539	-.188	-.174	+.366	-.305	+.320	-.130	+.392
50s (11.8 tex).....percent	+.120	+.387	+.490	-.196	-.428	-.382	+.135	+.472	-.182	-.179	+.361	-.310	+.316	-.150	+.540
Yarn appearance:															
22s (26.8 tex).....index	+.326	+.034	-.061	+.369	+.580	+.108	-.013	-.070	-.126	-.179	+.202	+.041	+.245	-.388	-.125
50s (11.8 tex).....index	+.375	+.110	-.035	+.418	+.531	+.163	+.111	-.138	-.115	-.201	+.178	+.146	+.219	-.347	-.021
Yarn imperfections:															
22s (26.8 tex).....number	-.448	-.073	+.066	-.256	-.523	-.024	+.041	+.166	+.380	+.436	-.381	000	-.385	+.563	+.079
50s (11.8 tex).....number	-.409	-.120	+.033	-.310	-.565	-.057	-.010	+.175	+.311	+.374	-.364	+.030	-.364	+.535	+.042
Color - 22s gray yarn:															
Reflectance.....R_d	+.506	+.259	+.273	-.059	+.220	-.162	+.049	+.201	-.186	-.211	+.798	-.358	+.753	-.329	+.135
Yellowness.....+b	+.063	-.337	-.263	+.198	+.043	+.193	+.047	-.242	+.165	+.104	-.117	+.794	-.030	+.102	-.211
Composite.....index	+.556	+.138	+.146	+.047	+.250	-.052	+.067	+.087	-.114	-.166	+.755	-.045	+.773	-.293	+.065
Color - 22s bleached yarn:															
Reflectance..... R_d	+.226	+.345	+.380	-.087	+.101	-.193	+.010	+.048	-.074	-.127	+.376	-.144	+.340	-.126	+.152
Yellowness..... +b	-.276	-.370	-.307	+.049	-.244	+.207	+.037	-.130	+.132	+.148	-.468	+.450	-.430	+.212	-.124
Composite.....index	+.301	+.396	+.363	-.040	+.177	-.185	-.015	+.084	-.108	-.151	+.456	-.299	+.443	-.179	+.183
Color - 22s dyed yarn:															
Reflectance.....R_d	-.381	-.182	-.182	-.127	-.147	+.241	-.034	-.317	+.115	+.115	-.448	-.102	-.480	+.221	-.218
Blueness.....-b	+.444	+.147	+.139	+.128	+.352	-.272	-.072	+.228	-.191	-.209	+.575	-.068	+.562	-.289	+.018
Composite.....index	+.446	+.170	+.175	+.136	+.281	-.286	-.032	+.278	-.171	-.185	+.540	-.046	+.564	-.288	+.105

Table 11.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color-22s gray yarn			Color-22s bleached yarn			Color-22s dyed yarn		
	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8tex	50s or 11.8tex	22s or 26.8tex	50s or 11.8tex	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean.....	112.3	39.6	6.0	4.7	116.6	92.5	19.5	14.6	68.9	10.6	9.5	84.0	3.0	102.6	28.3	26.8	104.4
Standard Deviation (±)...	10.1	5.3	0.5	0.5	9.4	9.4	8.6	6.9	2.5	0.6	4.8	1.0	0.4	3.7	1.1	0.8	5.2
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.039	+.024	+.124	+.120	+.326	+.375	-.448	-.409	+.506	+.063	+.556	+.226	-.276	+.301	-.381	+.444	+.446
Staple.....32d inches	+.629	+.678	+.245	+.387	+.034	+.110	-.073	-.120	+.259	-.337	+.138	+.345	-.370	+.396	-.182	+.147	+.170
Fiber length:																	
2.5% span.....inches	+.646	+.705	+.371	+.490	-.061	-.035	+.066	+.033	+.273	-.263	+.146	+.380	-.307	+.363	-.182	+.139	+.175
50/2.5 unif.....percent	+.108	+.060	-.255	-.196	+.369	+.418	-.256	-.310	-.059	+.198	+.047	-.087	+.049	-.040	-.127	+.128	+.136
Micronaire.....reading	-.275	-.335	-.440	-.428	+.580	+.531	-.523	-.565	+.220	+.043	+.250	+.101	-.244	+.177	-.147	+.352	+.281
Fiber strength:																	
Zero gage.....1,000 psi	+.529	+.404	-.468	-.392	+.108	+.163	-.024	-.057	-.162	+.193	-.052	-.193	+.207	-.085	+.241	-.272	-.286
1/8" gage.....grams/tex	+.810	+.736	+.016	+.135	-.013	+.111	+.041	-.010	+.049	+.047	+.067	+.010	+.037	-.015	-.034	-.072	-.032
Elongation (1/8")...pct	-.131	-.045	+.539	+.472	-.070	-.138	+.166	+.175	+.201	-.242	+.087	+.048	-.130	+.084	-.317	+.228	+.278
Shirley Analyzer:																	
Visible waste.....pct	+.155	+.119	-.188	-.182	-.126	-.115	+.380	+.311	-.186	+.165	-.114	-.074	+.132	-.108	+.115	-.191	-.171
Total waste.....pct	+.153	+.116	-.174	-.179	-.179	-.201	+.436	+.374	-.211	+.104	-.166	-.127	+.148	-.151	+.114	-.209	-.185
Color of raw stock:																	
Reflectance..... R_d	+.109	+.122	+.366	+.361	+.202	+.178	-.381	-.364	+.798	-.117	+.755	+.376	-.468	+.456	-.448	+.575	+.540
Yellowness..... +b	-.237	-.276	-.305	-.310	+.041	+.146	000	+.030	-.358	+.794	-.045	-.144	+.450	-.299	-.010	-.068	-.046
Composite.....index	+.096	-.099	+.320	+.316	+.245	+.219	-.385	-.364	+.753	-.030	+.773	+.340	-.430	-.443	-.480	+.562	+.564
Picker & card waste...pct	+.072	+.051	-.130	-.150	-.388	-.347	+.563	+.535	-.329	+.102	-.293	-.126	+.212	-.179	+.221	-.289	-.288
Spinning Potential.number	+.826	+.886	+.392	+.540	-.124	-.021	+.079	+.042	+.135	-.211	+.065	+.152	-.124	+.183	-.218	+.018	+.105
Yarn skein strength:																	
22s (26.8 tex)...pounds		+.963	+.237	+.369	-.036	+.067	+.082	+.034	+.073	-.051	+.069	+.047	-.030	+.070	-.179	-.035	+.053
50s (11.8 tex)...pounds	+.963		+.325	+.492	-.084	+.022	+.125	+.078	+.081	-.114	+.043	+.091	-.051	+.098	-.225	-.019	+.086
Yarn elongation:																	
22s (26.8 tex)..percent	+.237	+.325		+.916	-.311	-.260	+.093	+.106	+.303	-.287	+.180	+.196	-.197	+.217	-.309	+.236	+.276
50s (11.8 tex)..percent	+.369	+.492	+.916		-.303	-.202	+.098	+.098	+.269	-.287	+.148	+.200	-.182	+.216	-.326	+.199	+.262
Yarn appearance:																	
22s (26.8 tex)....index	-.036	-.084	-.311	-.303		+.684	-.629	-.669	+.240	+.079	+.305	+.052	-.199	+.158	-.190	+.267	+.253
50s (11.8 tex)....index	+.067	+.022	-.260	-.202	+.684		-.600	-.638	+.177	+.144	+.266	+.037	-.126	+.118	-.197	+.229	+.232
Yarn imperfections:																	
22s (26.8 tex)...number	+.082	+.125	+.093	+.098	-.629	-.600		+.956	-.378	+.040	-.375	-.144	+.242	-.207	+.103	-.310	-.245
50s (11.8 tex)...number	+.034	+.078	+.106	+.098	-.669	-.638	+.956		-.395	+.039	-.394	-.151	+.267	-.222	+.123	-.324	-.264
Color - 22s gray yarn:																	
Reflectance..... R_d	+.073	+.081	+.303	+.269	+.240	+.177	-.378	-.395		-.268	+.897	+.513	-.625	+.618	-.444	-.617	+.563
Yellowness.....+b	-.051	-.114	-.287	-.287	+.079	+.144	+.040	+.039	-.268		+.135	-.023	+.376	-.185	-.069	-.018	+.014
Composite.....index	+.069	+.043	+.180	+.148	+.305	+.266	-.375	-.394	+.897	+.135		+.488	-.494	+.576	-.506	+.605	+.602
Color - 22s bleached yarn:																	
Reflectance..... R_d	+.047	+.091	+.196	+.200	+.052	+.037	-.144	-.151	+.513	-.023	+.488		-.578	+.882	-.322	+.612	+.462
Yellowness.....+b	-.030	-.051	-.197	-.182	-.199	-.126	+.242	+.267	-.625	+.376	-.494	-.578		-.835	+.329	-.562	-.508
Composite.....index	+.070	+.098	+.217	+.216	+.158	+.118	-.207	-.222	+.618	-.185	+.576	+.882	-.835		-.394	+.612	+.555
Color - 22s dyed yarn:																	
Reflectance..... R_d	-.179	-.225	-.309	-.326	-.190	-.197	+.103	+.123	-.444	-.069	-.506	-.322	+.329	-.394		-.715	-.895
Blueness.....-b	-.035	-.019	+.236	+.199	+.267	+.229	-.310	-.324	-.617	-.018	+.605	+.612	-.562	+.612	-.715		+.954
Composite.....index	-.053	+.086	+.276	+.262	+.253	+.232	-.245	-.264	+.563	+.014	+.602	+.462	-.508	+.555	-.895	+.954	

Table 12.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 26 long staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Item	Grade	Staple	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	SPY Number
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Reflectance	Yellowness	Composite		
Sample Distribution:	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Rd	+b	Index	Pct.	No.
Mean	98.3	37.0	1.16	44.7	3.5	90.2	26.8	5.7	1.2	2.4	73.0	8.3	102.3	8.5	85.2
Standard deviation (±)	3.2	0.7	.03	1.4	0.5	3.1	1.3	0.4	0.4	0.7	2.0	0.6	2.6	2.1	6.4
Correlation Coef. for:															
Classification:															
Grade.....index		+.509	+.414	+.290	+.200	-.096	+.028	+.149	-.658	-.538	+.465	-.044	+.465	-.516	+.333
Staple.....32d inches	+.509		+.678	+.629	+.751	+.219	+.522	+.166	-.379	-.540	+.397	+.306	+.454	-.390	+.572
Fiber length:															
2.5% span.....inches	+.414	+.678		+.569	+.391	+.065	+.285	+.064	-.328	-.416	+.573	+.147	+.633	-.316	+.457
50/2.5 unif.....percent	+.290	+.629	+.569		+.663	+.242	+.326	+.281	-.272	-.378	+.119	+.498	+.266	-.168	+.607
Micronaire.....reading	+.200	+.751	+.391	+.663		+.068	+.298	+.443	-.328	-.509	+.023	+.587	+.206	-.179	+.384
Fiber strength:															
Zero gage..... 1,000 psi	-.096	+.219	+.065	+.242	+.068		+.766	-.520	-.164	-.137	-.260	+.398	-.103	+.055	+.488
1/8" gage..... grams/tex	+.028	+.522	+.285	+.326	+.298	+.766		-.460	-.298	-.325	-.188	+.351	-.037	-.084	+.474
Elongation (1/8")..... pct	+.149	+.166	+.064	+.281	+.443	-.520	-.460		-.135	-.258	+.138	+.239	+.149	+.013	-.153
Shirley Analyzer:															
Visible waste..... percent	-.658	-.379	-.328	-.272	-.328	-.164	-.298	-.135		+.808	-.155	-.234	-.183	+.412	-.296
Total waste.....percent	-.538	-.540	-.416	-.378	-.509	-.137	-.325	-.258	+.808		-.112	-.421	-.215	+.540	-.196
Color of raw stock:															
Reflectance..... R_d	+.465	+.397	+.573	+.119	+.023	-.260	-.188	+.138	-.155	-.112		-.370	+.897	-.264	+.288
Yellowness ..... +b	-.044	+.306	+.147	+.498	+.587	+.398	+.351	+.239	-.234	-.421	-.370		-.064	-.056	+.065
Composite.....index	+.465	+.454	+.633	+.266	+.206	-.103	-.037	+.149	-.183	-.215	+.897	-.064		-.282	+.304
Picker & card waste.....pct	-.516	-.390	-.316	-.168	-.179	+.055	-.084	+.013	+.412	+.540	-.264	-.056	-.282		-.279
Spinning Potential.....number	+.333	+.572	+.457	+.607	+.384	+.488	+.474	-.153	-.296	-.196	+.288	+.065	+.304	-.279	
Yarn skein strength:															
22s (26.8 tex).....pounds	+.486	+.639	+.646	+.458	+.225	+.563	+.662	-.210	-.550	-.533	+.393	+.201	+.452	-.336	+.662
50s (11.8 tex).....pounds	+.453	+.632	+.656	+.489	+.224	+.518	+.622	-.230	-.481	-.519	+.414	+.173	+.468	-.370	+.651
Yarn elongation:															
22s (26.8 tex).....percent	+.169	-.174	+.091	-.191	-.256	-.355	-.532	+.464	-.183	-.149	+.387	-.351	+.184	+.004	-.175
50s (11.8 tex).....percent	+.232	-.028	+.271	-.016	-.151	-.335	-.489	+.443	-.195	-.168	+.476	-.295	+.263	-.041	+.057
Yarn appearance:															
22s (26.8 tex).....index	+.364	+.518	+.341	+.564	+.753	+.072	+.140	+.523	-.599	-.685	+.064	+.566	+.244	-.274	+.223
50s (11.8 tex).....index	+.284	+.620	+.315	+.653	+.820	+.110	+.220	+.565	-.387	-.511	+.089	+.657	+.321	-.170	+.288
Yarn imperfections:															
22s (26.8 tex).....number	-.474	-.588	-.352	-.459	-.688	-.114	-.328	-.309	+.766	+.785	-.157	-.375	-.273	+.230	-.313
50s (11.8 tex).....number	-.432	-.605	-.398	-.544	-.734	-.187	-.341	-.354	+.751	+.788	-.098	-.517	-.244	+.190	-.328
Color- 22s gray yarn:															
Reflectance.....R_d	+.485	+.497	+.527	+.180	+.223	-.407	-.159	+.360	-.147	-.217	+.828	-.367	-.742	-.376	+.257
Yellowness .....+b	+.062	+.421	+.235	+.412	+.535	+.286	+.428	+.224	-.325	-.530	-.201	+.817	+.107	-.265	+.038
Composite .....index	+.459	+.634	+.557	+.327	+.442	-.295	-.014	+.443	-.234	-.384	+.703	-.055	+.728	-.424	+.255
Color - 22s bleached yarn:															
Reflectance..... R_d	+.246	+.290	+.463	+.162	-.001	-.309	-.140	+.296	+.066	-.130	+.640	-.186	+.602	-.297	+.097
Yellowness ..... +b	-.249	-.386	-.283	-.137	-.398	+.318	+.158	-.219	+.003	+.014	-.490	+.246	-.354	+.111	-.247
Composite .....index	+.308	+.368	+.481	+.185	+.111	-.355	-.179	+.341	+.053	-.128	+.706	-.218	+.635	-.285	+.147
Color - 22s dyed yarn:															
Reflectance..... R_d	-.345	-.734	-.372	-.647	-.793	+.096	-.170	-.336	+.136	+.313	-.283	-.305	-.372	+.422	-.447
Blueness..... -b	+.252	+.722	+.408	+.408	+.704	-.160	+.152	+.332	-.116	-.259	+.386	+.089	+.392	-.237	+.348
Composite.....index	+.298	+.780	+.423	+.553	+.786	-.131	+.200	+.341	-.130	-.299	+.340	+.197	+.384	-.331	+.416

Table 12.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color-22s gray yarn			Color-22s bleached yarn			Color-22s dyed yarn		
	22s or 26.8tex	50s or 11.8tex	22s or 26.8tex	50s or 11.8tex	22s or 26.8tex	50s or 11.8tex	22s or 26.8tex	50s or 11.8tex	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Sample Distribution:	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
Mean	137.0	51.8	6.7	5.4	96.9	79.2	26.9	20.6	70.8	10.6	96.2	84.3	2.9	103.9	25.6	27.0	106.8
Standard Deviation (±)	7.7	3.7	0.4	0.3	21.1	17.0	18.6	13.5	2.1	0.5	4.1	1.1	0.2	3.0	0.9	0.6	4.0
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.486	+.453	+.169	+.232	+.364	+.284	-.474	-.432	+.485	+.062	+.459	+.246	-.249	+.308	-.345	+.252	+.298
Staple.....32d inches	+.639	+.632	-.174	-.028	+.518	+.620	-.588	-.605	+.497	+.421	+.634	+.290	-.386	+.368	-.734	+.722	+.780
Fiber length:																	
2.5% span.....inches	+.646	+.656	+.091	+.271	+.341	+.315	-.352	-.398	+.267	+.235	+.557	+.463	-.283	+.481	-.372	+.408	+.423
50/2.5 unif.....percent	+.458	+.419	-.191	-.016	+.564	+.653	-.459	-.544	+.180	+.412	+.327	+.162	-.137	+.185	-.647	+.408	+.553
Micronaire.....reading	+.225	+.224	-.256	-.151	+.753	+.820	-.688	-.734	+.223	+.535	+.442	-.001	-.398	+.111	-.793	+.704	+.786
Fiber strength:																	
Zero gage.....1,000 psi	+.563	+.518	-.355	-.335	+.072	+.110	-.114	-.187	-.407	+.286	-.296	-.309	+.318	-.355	+.096	-.160	-.131
1/8" gage.....grams/tex	+.662	+.622	-.532	-.489	+.140	+.220	-.328	-.341	-.159	+.428	-.014	-.140	+.158	-.179	-.170	+.152	+.200
Elongation (1/8")...pct	-.210	-.230	+.464	+.443	+.523	+.565	-.309	-.354	+.359	+.224	+.443	+.296	-.219	+.341	-.336	+.332	+.341
Shirley Analyzer:																	
Visible waste...percent	-.550	-.481	-.183	-.195	-.599	-.387	+.766	+.751	-.147	-.325	-.234	+.066	+.003	+.053	+.136	-.116	-.130
Total waste.....percent	-.533	-.519	-.149	-.168	-.685	-.511	+.785	+.788	-.217	-.530	-.384	-.130	+.014	-.128	+.313	-.259	-.299
Color of raw stock:																	
Reflectance.....R_d	+.393	+.414	+.387	+.476	+.064	+.089	-.157	-.098	+.828	-.201	+.703	+.640	-.490	+.706	-.283	+.386	+.340
Yellowness .....+b	+.201	+.173	-.351	-.295	+.566	+.657	-.375	-.517	-.367	+.817	-.055	-.186	+.246	-.218	-.305	+.089	+.197
Composite .....index	+.452	+.468	+.184	+.263	+.244	+.321	-.273	-.244	+.742	+.107	+.728	+.602	-.354	+.635	-.372	+.392	+.384
Picker & card waste...pct	-.336	-.370	+.004	-.041	-.274	-.175	+.230	+.190	-.376	-.265	-.424	-.297	+.111	-.285	+.422	-.237	-.331
Spinning Potential.number	+.662	+.651	-.175	+.057	+.223	+.288	-.313	-.328	+.257	+.038	+.255	+.096	-.247	+.147	-.447	+.348	+.416
Yarn skein strength:																	
22s (26.8 tex)...pounds		+.982	-.046	+.177	+.265	+.229	-.406	-.439	+.344	+.309	+.403	+.314	+.031	+.258	-.247	+.201	+.241
50s (11.8 tex)...pounds	+.982		-.030	+.160	+.290	+.274	-.454	-.491	+.299	+.327	+.363	+.264	+.064	+.208	-.222	+.188	+.224
Yarn elongation:																	
22s (26.9 tex)..percent	-.030	-.046		+.864	+.091	-.129	-.052	-.049	+.303	-.363	+.150	+.294	-.097	+.300	+.285	-.121	-.223
50s (11.8 tex)..percent	+.160	+.177	+.160		+.104	-.106	-.062	-.102	+.430	-.311	+.282	+.478	-.147	+.476	+.162	+.003	-.090
Yarn appearance:																	
22s (26.8 tex)...index	+.290	+.265	+.290	+.091		+.831	-.749	-.800	+.215	+.500	+.386	-.009	-.166	+.059	-.546	+.295	+.425
50s (11.8 tex)...index	+.274	+.229	+.274	-.129	-.106		-.663	-.720	+.234	+.666	+.480	+.005	-.099	+.038	-.623	+.409	+.538
Yarn imperfections:																	
22s (26.8 tex)...number	-.454	-.406	-.454	-.052	-.062	-.749		+.975	-.178	-.402	-.322	+.092	+.243	+.026	+.489	-.464	-.496
50s (11.8 tex)...number	-.491	-.439	-.491	-.049	-.102	-.800	-.720		-.117	-.495	-.294	+.087	+.174	+.036	+.478	-.440	-.478
Color-22s gray yarn:																	
Reflectance.....R_d	+.299	+.344	+.299	+.303	+.430	+.215	+.234	-.178		-.063	+.924	+.744	-.522	+.808	-.442	+.532	+.515
Yellowness.....+b	+.327	+.309	+.327	+.363	-.311	+.500	+.666	-.402	-.495		+.304	+.056	+.321	-.047	-.320	+.178	+.268
Composite.....index	+.363	+.403	+.363	+.150	+.282	+.386	+.480	-.322	-.294	+.924		+.079	-.413	+.744	-.562	+.601	+.617
Color-22s bleached yarn:																	
Reflectance.....R_d	+.264	+.314	+.264	+.294	+.478	-.009	+.005	+.092	+.087	+.744	+.056		-.189	+.951	-.235	+.296	+.277
Yellowness.....+b	+.064	+.031	+.064	-.097	-.147	-.166	-.099	+.243	+.174	-.522	+.321	-.413		-.464	+.582	-.760	-.707
Composite.....index	+.208	+.258	+.208	+.300	+.476	+.059	+.038	+.026	+.036	+.808	-.047	+.744	+.951		-.366	+.463	+.436
Color-22s dyed yarn:																	
Reflectance.....R_d	-.222	-.247	-.222	+.285	+.162	-.546	-.623	+.489	+.478	-.442	-.320	-.562	-.235	+.582		-.797	-.932
Blueness.....-b	+.188	+.201	+.188	-.121	+.003	+.295	+.409	-.464	-.440	+.532	+.178	+.601	+.296	-.760	+.463		+.957
Composite.....index	+.224	+.241	+.224	-.223	-.090	+.425	+.538	-.496	-.478	+.515	+.268	+.617	+.277	-.707	+.436	-.932	

Table 12a--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on combed yarns from 26 long staple samples from selected gin points, crop of 1968

Statistical Items	Picker & card waste	Comber waste	Combed Yarn Values							
			Yarn strength		Yarn elongation		Yarn appearance		Yarn imperfections	
			22s	50s	22s	50s	22s	50s	22s	50s
	Pct.	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Sample Distribution:										
Mean.....	8.4	17.2	155.2	58.6	7.0	5.8	109.2	89.2	12.9	10.3
Standard deviation (±).....	2.1	2.5	7.7	3.5	0.3	0.3	20.0	17.9	11.8	9.3
Correlation Coeff. for:										
Classification:										
Grade.....index	-.516	-.483	+.310	+.260	+.163	+.095	+.353	+.416	-.458	-.435
Staple.....32d inches	-.390	-.699	+.535	+.453	-.358	-.196	+.554	+.650	-.619	-.620
Fiber length:										
2.5% span.....inches	-.316	-.646	+.534	+.548	+.016	+.040	+.291	+.343	-.363	-.357
50/2.5.....percent	-.168	-.694	+.249	+.271	-.363	-.126	+.612	+.652	-.474	-.518
Micronaire.....reading	-.179	-.568	-.080	+.035	-.436	-.212	+.823	+.836	-.736	-.760
Fiber strength:										
Zero gage.....1,000 psi	+.055	-.097	+.604	+.626	-.647	-.434	+.093	-.018	-.105	-.110
1/8" gage.....grams/tex	-.084	-.229	+.669	+.595	-.678	-.592	+.188	+.114	-.311	-.323
Elongation (1/8").....pct	+.013	-.362	-.417	-.330	+.388	+.487	+.529	+.561	-.286	-.361
Shirley Analyzer:										
Visible waste.....percent	+.412	+.492	-.318	-.301	-.054	-.005	-.611	-.514	+.735	+.721
Total waste.....percent	+.541	+.553	-.286	-.292	-.031	+.031	-.610	-.598	+.784	+.770
Color of raw stock:										
Reflectance.....R_d	-.264	-.446	+.408	+.363	+.376	+.381	+.009	+.193	-.143	-.102
Yellowness .....+b	-.056	-.220	+.128	+.155	-.475	-.252	+.665	+.558	-.413	-.500
Composite.....index	-.282	-.482	+.473	+.441	+.168	+.203	+.211	+.356	-.266	-.240
Picker & card waste.....pct		+.265	-.276	-.212	-.086	+.072	-.160	-.307	+.355	+.281
Spinning Potential..number	-.279	-.511	+.601	+.596	-.316	-.109	+.260	+.277	-.347	-.274
Comber waste.....percent	+.265		-.298	-.306	+.055	-.059	-.602	-.654	+.516	+.515
Combed yarn strength:										
22s (26.8 tex)....pounds	-.276	-.298		+.945	-.234	-.110	+.063	+.091	-.257	-.232
50s (11.8 tex)....pounds	-.212	-.306	+.945		-.152	+.007	+.023	+.020	-.182	-.165
Combed yarn elongation:										
22s (26.8 tex)....percent	-.086	+.055	-.234	-.152		+.814	-.272	-.216	+.185	+.222
50s (11.8 tex)....percent	+.072	-.059	-.110	+.007	+.814		-.118	+.012	+.158	+.162
Combed yarn appearance:										
22s (26.8 tex).....index	-.160	-.602	+.063	+.023	-.272	-.118		+.917	-.802	-.852
50s (11.8 tex).....index	-.307	+.654	+.091	+.020	-.216	+.012	+.917		-.752	-.794
Combed yarn imperfections:										
22s (26.8 tex)....number	+.355	+.516	-.257	-.182	+.185	+.158	-.802	-.752		+.977
50s (11.8 tex)....number	+.281	+.515	-.232	-.165	+.222	+.162	-.852	-.794	+.977	

Table 13.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 51 short staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.2	310	93	7.3	6.2	122	115	42	25	47	68	102	107
Grade index	94	94	94	94	94	94	94	94	94	94	94	94	94
Staple length	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber strength (0 gage)	81	81	81	81	81	81	81	81	81	81	81	81	81
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:													
Dependent variable	.91	19.2	6.1	.5	.5	10.6	11.7	28.3	15.8	6.1	2.9	.8	.5
Grade index	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Staple length	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88
Micronaire	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66
Fiber strength (0 gage)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Uniformity ratio	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Simple Correlation Coef. for:													
Grade index	-.72	-.41	-.37	-.15	-.27	+.32	+.33	-.40	-.41	-.52	+.60	+.55	+.49
Staple length	+.05	+.48	+.58	+.07	+.03	+.22	+.24	-.25	-.26	+.82	-.21	-.50	-.27
Micronaire	-.40	-.46	-.41	-.38	-.56	+.75	+.80	-.70	-.68	-.40	+.55	+.37	+.49
Fiber strength (0 gage)	+.20	+.50	+.55	-.55	-.50	+.15	+.15	-.11	+.13	+.13	+.33	-.03	-.19
Uniformity ratio	-.10	+.04	+.04	-.12	-.26	+.33	+.30	-.17	-.17	00	+.09	-.06	+.02
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.76	.53	.60	.15	.28	.50	.52	.60	.62	.84	.60	.63	.49
Partial Cor. Coef. for:													
Grade index	-.76	-.27	-.18	-.13	-.28	+.46	+.48	-.56	-.58	-.35	+.57	+.44	+.43
Staple length	-.38	+.37	+.51	+.01	-.09	+.40	+.43	-.49	-.51	+.78	+.05	-.37	-.08
Beta Coefficients for:													
Grade index	-.84	-.26*	-.16*	-.15*	-.31*	+.49	+.51	-.60	-.62	-.22*	+.61	+.42	+.46
Staple length	-.29*	+.37*	+.52	+.01*	-.10*	+.42	+.45	-.49	-.51	+.73	+.04*	-.33*	-.08*
Regression Equation:													
Constant (a)	+31.12	+166.31	+3.28	+8.80	+10.70	-137.96	-190.03	+871.96	+505.53	-80.08	+18.20	+111.38	+84.98
Regression Coef. for:													
Grade index	-.17	-1.09	-.22	-.02	-.03	+1.13	+1.31	-3.68	-2.13	-.30	+.72	+.28	+.33
Staple length	-.30	+8.05	+3.59	+.01	-.05	+4.99	+5.90	-15.75	-9.13	+5.04	+.24	-1.18	-.30
Standard Error (±)	.59	16.29	4.89	.54	.44	9.18	9.97	22.67	12.44	3.31	4.32	2.42	2.88
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.78	.65	.70	.38	.57	.82	.87	.82	.82	.90	.70	.67	.61
Partial Cor. Coef. for													
Grade index	-.73	-.12	-.02	-.01	-.12	+.33	+.38	-.49	-.52	-.18	+.49	+.35	+.32
Staple length	-.37	+.45	+.58	+.05	-.05	+.48	+.55	-.56	-.58	+.85	- 00	-.40	-.14
Micronaire	-.24	-.45	-.45	-.36	-.52	+.75	+.81	-.70	-.68	-.59	+.46	+.30	+.41
Beta Coefficients for:													
Grade index	-.78	-.11*	-.02*	-.01*	-.11*	+.23*	+.24*	-.37	-.41	-.10*	+.47	+.33*	+.31*
Staple length	-.28*	+.41	+.56	+.05*	-.04*	+.34	+.37	-.43	-.45	+.76	- 00*	-.36	-.12*
Micronaire	-.16*	-.41	-.38	-.38*	-.53	+.69	+.73	-.60	-.57	-.34	+.40	+.25*	+.38
Regression Equation:													
Constant (a)	+30.41	+128.57	-8.00	+7.81	+9.53	-102.59	-148.58	+790.40	+462.21	-90.12	+28.49	+115.08	+91.12
Regression Coef. for:													
Grade index	-.15	-.46	-.03	- 00	-.01	+.54	+.61	-2.31	-1.40	-.13	+.55	+.22	+.23
Staple length	-.28	+9.01	+3.87	+.03	-.02	+4.10	+4.85	-13.69	-8.04	+5.29	-.01	-1.27	-.45
Micronaire	-.22	-11.83	-3.54	-.31	-.37	+11.09	+12.99	-25.56	-13.58	-3.15	+3.22	+1.16	+1.92
Standard Error (±)	.57	14.55	4.37	.50	.38	6.08	5.87	16.20	9.15	2.67	3.83	2.31	2.62

*Statistically insignificant

Table 13.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.80	.80	.86	.68	.77	.83	.88	.83	.83	.90	.79	.67	.63
Partial Cor. Coef. for:													
Grade index.....	-.74	-.22	-.18	-.14	-.29	+.35	+.39	-.50	-.53	-.18	+.57	+.36	+.33
Staple length.....	-.39	+.51	+.69	+.10	-.02	+.48	+.56	-.56	-.58	+.85	-.03	-.41	-.13
Micronaire.....	-.25	-.54	-.58	-.43	-.61	+.76	+.82	-.71	-.69	-.60	+.52	+.30	+.42
Fiber str. (0 gage).....	+.26	+.61	+.71	-.60	-.63	+.26	+.29	-.19	-.23	+.15	+.51	+.02	-.19
Beta Coefficients for:													
Grade index.....	-.77	-.16*	-.11*	-.12*	-.23*	+.24*	+.24*	-.37	-.41	-.09*	+.49	+.33*	+.31*
Staple length.....	-.29*	+.39	+.53	+.08*	-.02*	+.33	+.36	-.42	-.44	+.76	-.02*	-.36	-.11
Micronaire.....	-.16*	-.41	-.39	-.37	-.52	+.69	+.73	-.60	-.56	-.34	+.39	+.25*	+.38
Fiber str. (0 gage).....	+.16*	+.46	+.51	-.56	-.52	+.15*	+.15*	-.11*	-.14*	+.07*	+.36	+.02*	-.15*
Regression Equation:													
Constant (a).....	+27.85	+2.91	-48.09	+14.09	+14.50	-129.97	-176.34	+840.98	+497.20	-96.98	-6.66	+114.13	+99.66
Regression Coef. for:													
Grade index.....	-.15	-.67	-.14	-.01	-.02	+.55	+.61	-2.32	-1.40	-.13	+.58	+.22	+.22
Staple length.....	-.29	+8.50	+3.70	+.05	-.01	+4.01	+4.75	-13.51	-7.91	+5.27	-.13	-1.28	-.42
Micronaire.....	-.22	-11.96	-3.58	-.31	-.36	+11.06	+12.97	-25.52	-13.55	-3.15	+3.19	+1.16	+1.93
Fiber str. (0 gage)....	+.03	+2.01	+.70	-.07	-.05	+.36	+.39	-.69	-.48	+.09	+.44	+.01	-.11
Standard Error (±).....	.55	11.53	3.09	.40	.29	5.87	5.61	15.91	8.89	2.64	3.29	2.31	2.57
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.80	.81	.87	.68	.77	.83	.88	.83	.83	.90	.80	.68	.64
Partial Cor. Coef. for:													
Grade index.....	-.74	-.19	-.15	-.12	-.29	+.35	+.38	-.48	-.51	-.17	+.56	+.34	+.31
Staple length.....	-.39	+.51	+.69	+.09	-.02	+.48	+.56	-.57	-.59	+.85	-.03	-.40	-.13
Micronaire.....	-.18	-.56	-.59	-.43	-.57	+.72	+.80	-.71	-.69	-.58	+.52	+.33	+.43
Fiber str. (0 gage).....	+.27	+.60	+.70	-.61	-.63	+.25	+.30	-.21	-.25	+.14	+.52	+.04	-.18
Uniformity ratio.....	-.12	+.19	+.16	+.10	-.02	+.07	-.04	+.18	+.17	+.09	-.13	-.15	-.12
Beta Coefficients for:													
Grade index.....	-.78	-.14*	-.09*	-.11*	-.23*	+.25*	+.23*	-.36	-.39	-.09*	+.48	+.31*	+.29*
Staple length.....	-.28*	+.38	+.53	+.07*	-.01*	+.33	+.36	-.43	-.45	+.76	-.02*	-.36*	-.11*
Micronaire.....	-.13*	-.46	-.43	-.41	-.52	+.67	+.74	-.65	-.61	-.36	+.43	+.30*	+.43
Fiber str. (0 gage).....	+.17*	+.45	+.50	-.57	-.52	+.15*	+.15*	-.12*	-.15*	+.06*	+.37	+.03*	-.14*
Uniformity ratio.....	-.08*	+.12*	+.09*	+.08*	-.01*	+.04*	-.02*	+.12*	+.10*	+.04*	-.09*	-.12*	-.10*
Regression Equation:													
Constant (a).....	+30.45	-80.62	-67.76	+12.51	+14.67	-144.93	-167.04	+727.07	+439.59	-106.45	+9.89	+127.22	+111.62
Regression Coef. for:													
Grade index.....	-.16	-.58	-.12	-.01	-.02	+.57	+.60	-2.19	-1.34	-.12	+.56	+.21	+.21
Staple length.....	-.29	+8.36	+3.66	+.05	-.01	+3.98	+4.77	-13.70	-8.01	+5.26	-.10	-1.26	-.40
Micronaire.....	-.18	-13.54	-3.95	-.34	-.36	+10.78	+13.14	-27.68	-14.64	-3.33	+3.51	+1.41	+2.16
Fiber str. (0 gage)....	+.04	+1.96	+.69	-.07	-.05	+.35	+.40	-.76	-.52	+.09	+.45	+.02	-.11
Uniformity ratio.....	-.06	+1.97	+.46	+.04	- 00	+.36	-.22	+2.71	+1.37	+.23	-.39	-.31	-.28
Standard Error (±).....	.55	11.33	3.05	.40	.29	5.86	5.60	15.64	8.77	2.63	3.26	2.28	2.56

*Statistically insignificant

Table 14.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 51 short staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections			Color of 22s yarn		
	Picker & card waste	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	SPY Number	Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.2	310	93	7.3	6.2	122	115	42	25	47	93	102	107
Color index	97	97	97	97	97	97	97	97	97	97	97	97	97
Nonlint content (S.A.)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
2.5% span length	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber str. (1/8" gage)	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Standard Deviation (±) for:													
Dependent variable	.91	19.2	6.1	.5	.5	10.6	11.7	28.3	15.8	6.1	5.4	3.1	3.3
Color index	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Nonlint content (S.A.)	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
2.5% span length	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66
Fiber str. (1/8" gage)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Simple Correlation Coef. for:													
Color index	-.55	-.14	-.05	-.28	-.47	+.47	+.53	-.61	-.61	-.24	+.82	+.59	+.50
Nonlint content (S.A.)	+.74	+.45	+.46	-.12	-.07	-.08	-.10	+.07	+.09	+.43	-.16	-.30	-.30
2.5% span length	+.04	+.43	+.49	+.35	+.26	+.05	+.06	-.17	-.19	+.82	-.21	-.36	-.13
Micronaire	-.40	-.46	-.41	-.38	-.56	+.75	+.80	-.70	-.68	-.40	+.55	+.37	+.49
Fiber str. (1/8" gage)	+.24	+.84	+.81	-.12	-.12	-.11	-.15	+.06	+.06	+.48	+.07	-.32	-.37
Multiple Cor. Data for:													
DEPENDENT VARIABLE with COLOR INDEX, NONLINT													
Multiple Cor. Coef.	.82	.45	.46	.35	.52	.47	.53	.62	.62	.44	.83	.61	.53
Partial Cor. Coef. for:													
Color index	-.53	-.02	+.09	-.33	-.52	+.47	+.52	-.62	-.61	-.14	+.82	+.56	+.45
Nonlint	+.73	+.43	+.46	-.22	-.24	+.07	+.06	-.14	-.11	+.38	+.14	-.17	-.19
Beta Coefficients for:													
Color index	-.37	-.02*	+.08*	-.35*	-.54	+.49	+.54	-.65	-.64	-.13*	+.85	+.55	+.45
Nonlint	+.64	+.44	+.48	-.22*	-.22*	+.07*	+.06*	-.12*	-.09*	+.39*	+.08*	-.14*	-.17*
Regression Equation:													
Constant (a)	+13.15	+285.33	+66.58	+13.03	+13.43	-23.88	-64.64	+563.43	+309.79	+59.28	-34.50	+55.96	+68.05
Regression Coef. for:													
Color index	-.10	-.10	+.15	-.05	-.07	+1.48	+1.82	-5.24	-2.88	-.23	+1.30	+.49	+.43
Nonlint	+.70	+10.36	+3.59	-.15	-.12	+.84	+.81	-4.11	-1.70	+2.90	+.54	-.54	-.71
Standard Error (±)	.52	17.22	5.43	.51	.39	9.32	9.93	22.11	12.46	5.49	3.03	2.47	2.82
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH													
Multiple Cor. Coef.	.85	.54	.59	.53	.58	.49	.55	.67	.68	.84	.83	.66	.53
Partial Cor. Coef. for:													
Color index	-.58	+.00	+.13	-.34	-.52	+.48	+.53	-.65	-.65	-.15	+.82	+.56	+.45
Nonlint	+.78	+.35	+.38	-.35	-.33	+.03	+.01	-.05	-.00	+.26	+.19	-.07	-.18
2.5% span length	-.42	+.34	+.42	+.42	+.32	+.12	+.16	-.32	-.35	+.80	-.20	-.31	-.00
Beta Coefficients for:													
Color index	-.38	+.00*	+.11*	-.32*	-.52	+.50	+.55	-.66	-.66	-.08*	+.84	+.54	+.45
Nonlint	+.71	+.34*	+.36*	-.34*	-.31*	+.03*	+.01*	-.04*	-.00*	+.16*	+.12*	-.06*	-.17*
2.5% span length	-.25	+.32*	+.39	+.42	+.29*	+.12*	+.14*	-.26*	-.29*	+.75	-.12*	-.26*	-.00*
Regression Equation:													
Constant (a)	+19.17	+122.39	+3.01	+7.06	+9.98	-56.19	-108.83	+757.98	+430.22	-62.53	-17.64	+77.24	+68.39
Regression Coef. for:													
Color index	-.10	+.01	+.19	-.05	-.07	+1.50	+1.85	-5.37	-2.96	-.15	+1.29	+.48	+.43
Nonlint	+.79	+8.06	+2.70	-.23	-.17	+.38	+.18	-1.37	-.00	+1.19	+.78	-.24	-.70
2.5% span length	-6.19	+167.68	+65.41	+6.15	+3.55	+33.24	+45.48	-200.22	-123.94	+125.36	-17.35	-21.90	-.35
Standard Error (±)	.47	16.20	4.93	.46	.37	9.25	9.80	20.98	11.68	3.32	2.97	2.35	2.82

*Statistically insignificant

Table 14.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.87	.66	.69	.60	.72	.80	.86	.86	.84	.88	.87	.67	.61
Partial Cor. Coef. for:													
Color index.....	-.46	+.17	+.29	-.22	-.40	+.30	+.39	-.49	-.46	+.05	+.80	+.51	+.34
Nonlint.....	+.79	+.35	+.39	-.39	-.41	+.12	+.12	-.14	-.07	+.25	+.25	-.06	-.17
2.5% span length.....	-.45	+.35	+.43	+.42	+.33	+.25	+.33	-.48	-.50	+.82	-.19	-.30	+.02
Micronaire.....	-.31	-.45	-.45	-.34	-.51	+.73	+.79	-.72	-.69	-.47	+.45	+.16	+.36
Beta Coefficients for:													
Color index.....	-.30*	+.15*	+.24*	-.20*	-.34	+.22*	+.25*	-.35	-.34	+.03*	+.74	+.49	+.33*
Nonlint.....	+.70*	+.31*	+.33*	-.37*	-.34	+.08*	+.07*	-.08*	-.04*	+.14*	+.14*	-.05*	-.15*
2.5% span length.....	-.26*	+.29*	+.37	+.39	+.26*	+.16*	+.19*	-.20	-.33	+.74	-.10*	-.25*	+.02*
Micronaire.....	-.18*	-.42	-.39	-.32*	-.45	+.70	+.72	-.58	-.56	-.28	+.27	+.13*	+.33*
Regression Equation:													
Constant (a).....	+18.36	+112.82	+1.24	+6.73	+9.53	-37.29	-82.33	+650.19	+367.44	-67.41	-15.11	+77.78	+70.27
Regression Coef. for:													
Color index.....	-.08	+.82	+.42	-.03	-.04	+.65	+.83	-2.80	-1.54	+.05	+1.14	+.44	+.31
Nonlint.....	+.78	+7.34	+2.48	-.25	-.19	+1.05	+.95	-2.86	-.80	+1.03	+.91	-.20	-.60
2.5% span length.....	-6.47	+153.44	+61.14	+5.84	+3.18	+46.38	+60.52	-229.51	-139.62	+122.34	-14.77	-21.19	+1.62
Micronaire.....	-.24	-12.11	-3.64	-.26	-.32	+11.18	+12.79	-24.92	-13.34	-2.56	+2.20	+.61	+1.68
Standard Error (±).....	.45	14.46	4.41	.44	.32	6.34	6.05	14.64	8.48	2.94	2.66	2.32	2.63
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)													
Multiple Cor. Coef.....	.87	.90	.88	.64	.76	.80	.86	.86	.85	.90	.88	.71	.66
Partial Cor. Coef. for:													
Color index.....	-.44	-.09	+.13	-.14	-.32	+.27	+.36	-.46	-.43	-.07	+.78	+.57	+.42
Nonlint.....	+.77	+.15	+.21	-.30	-.31	+.09	+.10	-.12	-.05	+.13	+.15	+.05	-.06
2.5% span length.....	-.44	+.39	+.49	+.46	+.39	+.23	+.32	-.47	-.49	+.83	-.23	-.27	+.07
Micronaire.....	-.29	-.30	-.29	-.41	-.59	+.72	+.77	-.70	-.67	-.36	+.51	+.04	+.25
Fiber str. (1/8" gage)...	+.01	+.81	+.76	-.27	-.35	+.08	+.04	-.04	-.05	+.39	+.28	-.32	-.31
Beta Coefficients for:													
Color index.....	-.30	-.05*	+.07*	-.13*	-.26*	+.20*	+.24*	-.34	-.33	-.03*	+.69	+.57	+.41
Nonlint.....	+.70	+.08*	+.12*	-.29*	-.25*	+.06*	+.06*	-.07*	-.03*	+.07*	+.08*	+.04*	-.05*
2.5% span length.....	-.26	+.20*	+.28	+.43	+.29*	+.15*	+.19*	-.30	-.32	+.71	-.12*	-.21*	+.06*
Micronaire.....	-.18*	-.16*	-.16*	-.40	-.56	+.72	+.73	-.59	-.57	-.19*	+.33	+.03*	+.23*
Fiber str. (1/8" gage)...	+.00*	+.71	+.64	-.25*	-.28*	+.06*	+.02*	-.02*	-.03*	+.22*	+.16*	-.28*	-.29*
Regression Equation:													
Constant (a).....	+18.34	+13.47	-27.85	+7.68	+10.42	-41.47	-83.97	+653.68	+370.01	-76.31	-21.24	+84.03	+77.11
Regression Coef. for:													
Color index.....	-.08	-.25	+.12	-.02	-.03	+.60	+.81	-2.74	-1.49	-.06	+1.07	+.51	+.39
Nonlint.....	+.77	+1.78	+.89	-.19	-.14	+.80	+.85	-2.59	-.60	+.49	+.56	+.15	-.21
2.5% span length.....	-6.48	+103.92	+46.95	+6.33	+3.65	+44.15	+59.61	-227.15	-137.81	+117.51	-17.91	-18.05	+5.12
Micronaire.....	-.24	-4.72	-1.52	-.33	-.38	+11.51	+12.93	-25.28	-13.61	-1.84	+2.66	+.14	+1.16
Fiber str. (1/8" gage).	.00	+11.37	+3.26	-.11	-.11	+.51	+.21	-.54	-.41	+1.11	+.72	-.72	-.80
Standard Error (±).....	.45	8.52	2.88	.42	.30	6.32	6.05	14.63	8.47	2.71	2.56	2.20	2.49

*Statistically insignificant

Table 13.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 51 short staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.2	310	93	7.3	6.2	122	115	42	25	47	68	102	107
Grade index	94	94	94	94	94	94	94	94	94	94	94	94	94
Staple length	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber strength (0 gage)	81	81	81	81	81	81	81	81	81	81	81	81	81
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:													
Dependent variable	.91	19.2	6.1	.5	.5	10.6	11.7	28.3	15.8	6.1	2.9	.8	.5
Grade index	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Staple length	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88	.88
Micronaire	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66
Fiber strength (0 gage)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Uniformity ratio	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Simple Correlation Coef. for:													
Grade index	-.72	-.41	-.37	-.15	-.27	+.32	+.33	-.40	-.41	-.52	+.60	+.55	+.49
Staple length	+.05	+.48	+.58	+.07	+.03	+.22	+.24	-.25	-.26	+.82	-.21	-.50	-.27
Micronaire	-.40	-.46	-.41	-.38	-.56	+.75	+.80	-.70	-.68	-.40	+.55	+.37	+.49
Fiber strength (0 gage)	+.20	+.50	+.55	-.55	-.50	+.15	+.15	-.11	+.13	+.13	+.33	-.03	-.19
Uniformity ratio	-.10	+.04	+.04	-.12	-.26	+.33	+.30	-.17	-.17	00	+.09	-.06	+.02
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.76	.53	.60	.15	.28	.50	.52	.60	.62	.84	.60	.63	.49
Partial Cor. Coef. for:													
Grade index	-.76	-.27	-.18	-.13	-.28	+.46	+.48	-.56	-.58	-.35	+.57	+.44	+.43
Staple length	-.38	+.37	+.51	+.01	-.09	+.40	+.43	-.49	-.51	+.78	+.05	-.37	-.08
Beta Coefficients for:													
Grade index	-.84	-.26*	-.16*	-.15*	-.31*	+.49	+.51	-.60	-.62	-.22*	+.61	+.42	+.46
Staple length	-.29*	+.37*	+.52	+.01*	-.10*	+.42	+.45	-.49	-.51	+.73	+.04*	-.33*	-.08*
Regression Equation:													
Constant (a)	+31.12	+166.31	+3.28	+8.80	+10.70	-137.96	-190.03	+871.96	+505.53	-80.08	+18.20	+111.38	+84.98
Regression Coef. for:													
Grade index	-.17	-1.09	-.22	-.02	-.03	+1.13	+1.31	-3.68	-2.13	-.30	+.72	+.28	+.33
Staple length	-.30	+8.05	+3.59	+.01	-.05	+4.99	+5.90	-15.75	-9.13	+5.04	+.24	-1.18	-.30
Standard Error (±)	.59	16.29	4.89	.54	.44	9.18	9.97	22.67	12.44	3.31	4.32	2.42	2.88
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.78	.65	.70	.38	.57	.82	.87	.82	.82	.90	.70	.67	.61
Partial Cor. Coef. for													
Grade index	-.73	-.12	-.02	-.01	-.12	+.33	+.38	-.49	-.52	-.18	+.49	+.35	+.32
Staple length	-.37	+.45	+.58	+.05	-.05	+.48	+.55	-.56	-.58	+.85	- 00	-.40	-.14
Micronaire	-.24	-.45	-.45	-.36	-.52	+.75	+.81	-.70	-.68	-.59	+.46	+.30	+.41
Beta Coefficients for:													
Grade index	-.78	-.11*	-.02*	-.01*	-.11*	+.23*	+.24*	-.37	-.41	-.10*	+.47	+.33*	+.31*
Staple length	-.28*	+.41	+.56	+.05*	-.04*	+.34	+.37	-.43	-.45	+.76	- 00*	-.36	-.12*
Micronaire	-.16*	-.41	-.38	-.38*	-.53	+.69	+.73	-.60	-.57	-.34	+.40	+.25*	+.38
Regression Equation:													
Constant (a)	+30.41	+128.57	-8.00	+7.81	+9.53	-102.59	-148.58	+790.40	+462.21	-90.12	+28.49	+115.08	+91.12
Regression Coef. for:													
Grade index	-.15	-.46	-.03	- 00	-.01	+.54	+.61	-2.31	-1.40	-.13	+.55	+.22	+.23
Staple length	-.28	+9.01	+3.87	+.03	-.02	+4.10	+4.85	-13.69	-8.04	+5.29	-.01	-1.27	-.45
Micronaire	-.22	-11.83	-3.54	-.31	-.37	+11.09	+12.99	-25.56	-13.58	-3.15	+3.22	+1.16	+1.92
Standard Error (±)	.57	14.55	4.37	.50	.38	6.08	5.87	16.20	9.15	2.67	3.83	2.31	2.62

*Statistically insignificant

Table 13.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.80	.80	.86	.68	.77	.83	.88	.83	.83	.90	.79	.67	.63
Partial Cor. Coef. for:													
Grade index.....	-.74	-.22	-.18	-.14	-.29	+.35	+.39	-.50	-.53	-.18	+.57	+.36	+.33
Staple length.....	-.39	+.51	+.69	+.10	-.02	+.48	+.56	-.56	-.58	+.85	-.03	-.41	-.13
Micronaire.....	-.25	-.54	-.58	-.43	-.61	+.76	+.82	-.71	-.69	-.60	+.52	+.30	+.42
Fiber str. (0 gage).....	+.26	+.61	+.71	-.60	-.63	+.26	+.29	-.19	-.23	+.15	+.51	+.02	-.19
Beta Coefficients for:													
Grade index.....	-.77	-.16*	-.11*	-.12*	-.23*	+.24*	+.24*	-.37	-.41	-.09*	+.49	+.33*	+.31*
Staple length.....	-.29*	+.39	+.53	+.08*	-.02*	+.33	+.36	-.42	-.44	+.76	-.02*	-.36	-.11
Micronaire.....	-.16*	-.41	-.39	-.37	-.52	+.69	+.73	-.60	-.56	-.34	+.39	+.25*	+.38
Fiber str. (0 gage).....	+.16*	+.46	+.51	-.56	-.52	+.15*	+.15*	-.11*	-.14*	+.07*	+.36	+.02*	-.15*
Regression Equation:													
Constant (a).....	+27.85	+2.91	-48.09	+14.09	+14.50	-129.97	-176.34	+840.98	+497.20	-96.98	-6.66	+114.13	+99.66
Regression Coef. for:													
Grade index.....	-.15	-.67	-.14	-.01	-.02	+.55	+.61	-2.32	-1.40	-.13	+.58	+.22	+.22
Staple length.....	-.29	+8.50	+3.70	+.05	-.01	+4.01	+4.75	-13.51	-7.91	+5.27	-.13	-1.28	-.42
Micronaire.....	-.22	-11.96	-3.58	-.31	-.36	+11.06	+12.97	-25.52	-13.55	-3.15	+3.19	+1.16	+1.93
Fiber str. (0 gage)....	+.03	+2.01	+.70	-.07	-.05	+.36	+.39	-.69	-.48	+.09	+.44	+.01	-.11
Standard Error (±).....	.55	11.53	3.09	.40	.29	5.87	5.61	15.91	8.89	2.64	3.29	2.31	2.57
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.80	.81	.87	.68	.77	.83	.88	.83	.83	.90	.80	.68	.64
Partial Cor. Coef. for:													
Grade index.....	-.74	-.19	-.15	-.12	-.29	+.35	+.38	-.48	-.51	-.17	+.56	+.34	+.31
Staple length.....	-.39	+.51	+.69	+.09	-.02	+.48	+.56	-.57	-.59	+.85	-.03	-.40	-.13
Micronaire.....	-.18	-.56	-.59	-.43	-.57	+.72	+.80	-.71	-.69	-.58	+.52	+.33	+.43
Fiber str. (0 gage).....	+.27	+.60	+.70	-.61	-.63	+.25	+.30	-.21	-.25	+.14	+.52	+.04	-.18
Uniformity ratio.....	-.12	+.19	+.16	+.10	-.02	+.07	-.04	+.18	+.17	+.09	-.13	-.15	-.12
Beta Coefficients for:													
Grade index.....	-.78	-.14*	-.09*	-.11*	-.23*	+.25*	+.23*	-.36	-.39	-.09*	+.48	+.31*	+.29*
Staple length.....	-.28*	+.38	+.53	+.07*	-.01*	+.33	+.36	-.43	-.45	+.76	-.02*	-.36*	-.11*
Micronaire.....	-.13*	-.46	-.43	-.41	-.52	+.67	+.74	-.65	-.61	-.36	+.43	+.30*	+.43
Fiber str. (0 gage).....	+.17*	+.45	+.50	-.57	-.52	+.15*	+.15*	-.12*	-.15*	+.06*	+.37	+.03*	-.14*
Uniformity ratio.....	-.08*	+.12*	+.09*	+.08*	-.01*	+.04*	-.02*	+.12*	+.10*	+.04*	-.09*	-.12*	-.10*
Regression Equation:													
Constant (a).....	+30.45	-80.62	-67.76	+12.51	+14.67	-144.93	-167.04	+727.07	+439.59	-106.45	+9.89	+127.22	+111.62
Regression Coef. for:													
Grade index.....	-.16	-.58	-.12	-.01	-.02	+.57	+.60	-2.19	-1.34	-.12	+.56	+.21	+.21
Staple length.....	-.29	+8.36	+3.66	+.05	-.01	+3.98	+4.77	-13.70	-8.01	+5.26	-.10	-1.26	-.40
Micronaire.....	-.18	-13.54	-3.95	-.34	-.36	+10.78	+13.14	-27.68	-14.64	-3.33	+3.51	+1.41	+2.16
Fiber str. (0 gage)....	+.04	+1.96	+.69	-.07	-.05	+.35	+.40	-.76	-.52	+.09	+.45	+.02	-.11
Uniformity ratio.....	-.06	+1.97	+.46	+.04	- 00	+.36	-.22	+2.71	+1.37	+.23	-.39	-.31	-.28
Standard Error (±).....	.55	11.33	3.05	.40	.29	5.86	5.60	15.64	8.77	2.63	3.26	2.28	2.56

*Statistically insignificant

Table 14.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 51 short staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
	Picker & card waste	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.2	310	93	7.3	6.2	122	115	42	25	47	93	102	107
Color index	97	97	97	97	97	97	97	97	97	97	97	97	97
Nonlint content (S.A.)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
2.5% span length	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber str. (1/8" gage)	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Standard Deviation (±) for:													
Dependent variable	.91	19.2	6.1	.5	.5	10.6	11.7	28.3	15.8	6.1	5.4	3.1	3.3
Color index	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Nonlint content (S.A.)	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
2.5% span length	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66	.66
Fiber str. (1/8" gage)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Simple Correlation Coef. for:													
Color index	-.55	-.14	-.05	-.28	-.47	+.47	+.53	-.61	-.61	-.24	+.82	+.59	+.50
Nonlint content (S.A.)	+.74	+.45	+.46	-.12	-.07	-.08	-.10	+.07	+.09	+.43	-.16	-.30	-.30
2.5% span length	+.04	+.43	+.49	+.35	+.26	+.05	+.06	-.17	-.19	+.82	-.21	-.36	-.13
Micronaire	-.40	-.46	-.41	-.38	-.56	+.75	+.80	-.70	-.68	-.40	+.55	+.37	+.49
Fiber str. (1/8" gage)	+.24	+.84	+.81	-.12	-.12	-.11	-.15	+.06	+.06	+.48	+.07	-.32	-.37
Multiple Cor. Data for:													
DEPENDENT VARIABLE with COLOR INDEX, NONLINT													
Multiple Cor. Coef.	.82	.45	.46	.35	.52	.47	.53	.62	.62	.44	.83	.61	.53
Partial Cor. Coef. for:													
Color index	-.53	-.02	+.09	-.33	-.52	+.47	+.52	-.62	-.61	-.14	+.82	+.56	+.45
Nonlint	+.73	+.43	+.46	-.22	-.24	+.07	+.06	-.14	-.11	+.38	+.14	-.17	-.19
Beta Coefficients for:													
Color index	-.37	-.02*	+.08*	-.35*	-.54	+.49	+.54	-.65	-.64	-.13*	+.85	+.55	+.45
Nonlint	+.64	+.44	+.48	-.22*	-.22*	+.07*	+.06*	-.12*	-.09*	+.39*	+.08*	-.14*	-.17*
Regression Equation:													
Constant (a)	+13.15	+285.33	+66.58	+13.03	+13.43	-23.88	-64.64	+563.43	+309.79	+59.28	-34.50	+55.96	+68.05
Regression Coef. for:													
Color index	-.10	-.10	+.15	-.05	-.07	+1.48	+1.82	-5.24	-2.88	-.23	+1.30	+.49	+.43
Nonlint	+.70	+10.36	+3.59	-.15	-.12	+.84	+.81	-4.11	-1.70	+2.90	+.54	-.54	-.71
Standard Error (±)	.52	17.22	5.43	.51	.39	9.32	9.93	22.11	12.46	5.49	3.03	2.47	2.82
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH													
Multiple Cor. Coef.	.85	.54	.59	.53	.58	.49	.55	.67	.68	.84	.83	.66	.53
Partial Cor. Coef. for:													
Color index	-.58	+.00	+.13	-.34	-.52	+.48	+.53	-.65	-.65	-.15	+.82	+.56	+.45
Nonlint	+.78	+.35	+.38	-.35	-.33	+.03	+.01	-.05	-.00	+.26	+.19	-.07	-.18
2.5% span length	-.42	+.34	+.42	+.42	+.32	+.12	+.16	-.32	-.35	+.80	-.20	-.31	-.00
Beta Coefficients for:													
Color index	-.38	+.00*	+.11*	-.32*	-.52	+.50	+.55	-.66	-.66	-.08*	+.84	+.54	+.45
Nonlint	+.71	+.34*	+.36*	-.34*	-.31*	+.03*	+.01*	-.04*	-.00*	+.16*	+.12*	-.06*	-.17*
2.5% span length	-.25	+.32*	+.39	+.42	+.29*	+.12*	+.14*	-.26*	-.29*	+.75	-.12*	-.26*	-.00*
Regression Equation:													
Constant (a)	+19.17	+122.39	+3.01	+7.06	+9.98	-56.19	-108.83	+757.98	+430.22	-62.53	-17.64	+77.24	+68.39
Regression Coef. for:													
Color index	-.10	+.01	+.19	-.05	-.07	+1.50	+1.85	-5.37	-2.96	-.15	+1.29	+.48	+.43
Nonlint	+.79	+8.06	+2.70	-.23	-.17	+.38	+.18	-1.37	-.00	+1.19	+.78	-.24	-.70
2.5% span length	-6.19	+167.68	+65.41	+6.15	+3.55	+33.24	+45.48	-200.22	-123.94	+125.36	-17.35	-21.90	-.35
Standard Error (±)	.47	16.20	4.93	.46	.37	9.25	9.80	20.98	11.68	3.32	2.97	2.35	2.82

*Statistically insignificant

Table 14.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex	8s or 73.8 tex	22s or 26.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.87	.66	.69	.60	.72	.80	.86	.86	.84	.88	.87	.67	.61
Partial Cor. Coef. for:													
Color index.....	-.46	+.17	+.29	-.22	-.40	+.30	+.39	-.49	-.46	+.05	+.80	+.51	+.34
Nonlint.....	+.79	+.35	+.39	-.39	-.41	+.12	+.12	-.14	-.07	+.25	+.25	-.06	-.17
2.5% span length.....	-.45	+.35	+.43	+.42	+.33	+.25	+.33	-.48	-.50	+.82	-.19	-.30	+.02
Micronaire.....	-.31	-.45	-.45	-.34	-.51	+.73	+.79	-.72	-.69	-.47	+.45	+.16	+.36
Beta Coefficients for:													
Color index.....	-.30*	+.15*	+.24*	-.20*	-.34	+.22*	+.25*	-.35	-.34	+.03*	+.74	+.49	+.33*
Nonlint.....	+.70*	+.31*	+.33*	-.37*	-.34	+.08*	+.07*	-.08*	-.04*	+.14*	+.14*	-.05*	-.15*
2.5% span length.....	-.26*	+.29*	+.37	+.39	+.26*	+.16*	+.19*	-.20	-.33	+.74	-.10*	-.25*	+.02*
Micronaire.....	-.18*	-.42	-.39	-.32*	-.45	+.70	+.72	-.58	-.56	-.28	+.27	+.13*	+.33*
Regression Equation:													
Constant (a).....	+18.36	+112.82	+1.24	+6.73	+9.53	-37.29	-82.33	+650.19	+367.44	-67.41	-15.11	+77.78	+70.27
Regression Coef. for:													
Color index.....	-.08	+.82	+.42	-.03	-.04	+.65	+.83	-2.80	-1.54	+.05	+1.14	+.44	+.31
Nonlint.....	+.78	+7.34	+2.48	-.25	-.19	+1.05	+.95	-2.86	-.80	+1.03	+.91	-.20	-.60
2.5% span length.....	-6.47	+153.44	+61.14	+5.84	+3.18	+46.38	+60.52	-229.51	-139.62	+122.34	-14.77	-21.19	+1.62
Micronaire.....	-.24	-12.11	-3.64	-.26	-.32	+11.18	+12.79	-24.92	-13.34	-2.56	+2.20	+.61	+1.68
Standard Error (±).....	.45	14.46	4.41	.44	.32	6.34	6.05	14.64	8.48	2.94	2.66	2.32	2.63
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)													
Multiple Cor. Coef.....	.87	.90	.88	.64	.76	.80	.86	.86	.85	.90	.88	.71	.66
Partial Cor. Coef. for:													
Color index.....	-.44	-.09	+.13	-.14	-.32	+.27	+.36	-.46	-.43	-.07	+.78	+.57	+.42
Nonlint.....	+.77	+.15	+.21	-.30	-.31	+.09	+.10	-.12	-.05	+.13	+.15	+.05	-.06
2.5% span length.....	-.44	+.39	+.49	+.46	+.39	+.23	+.32	-.47	-.49	+.83	-.23	-.27	+.07
Micronaire.....	-.29	-.30	-.29	-.41	-.59	+.72	+.77	-.70	-.67	-.36	+.51	+.04	+.25
Fiber str. (1/8" gage)...	+.01	+.81	+.76	-.27	-.35	+.08	+.04	-.04	-.05	+.39	+.28	-.32	-.31
Beta Coefficients for:													
Color index.....	-.30	-.05*	+.07*	-.13*	-.26*	+.20*	+.24*	-.34	-.33	-.03*	+.69	+.57	+.41
Nonlint.....	+.70	+.08*	+.12*	-.29*	-.25*	+.06*	+.06*	-.07*	-.03*	+.07*	+.08*	+.04*	-.05*
2.5% span length.....	-.26	+.20*	+.28	+.43	+.29*	+.15*	+.19*	-.30	-.32	+.71	-.12*	-.21*	+.06*
Micronaire.....	-.18*	-.16*	-.16*	-.40	-.56	+.72	+.73	-.59	-.57	-.19*	+.33	+.03*	+.23*
Fiber str. (1/8" gage)...	+.00*	+.71	+.64	-.25*	-.28*	+.06*	+.02*	-.02*	-.03*	+.22*	+.16*	-.28*	-.29*
Regression Equation:													
Constant (a).....	+18.34	+13.47	-27.85	+7.68	+10.42	-41.47	-83.97	+653.68	+370.01	-76.31	-21.24	+84.03	+77.11
Regression Coef. for:													
Color index.....	-.08	-.25	+.12	-.02	-.03	+.60	+.81	-2.74	-1.49	-.06	+1.07	+.51	+.39
Nonlint.....	+.77	+1.78	+.89	-.19	-.14	+.80	+.85	-2.59	-.60	+.49	+.56	+.15	-.21
2.5% span length.....	-6.48	+103.92	+46.95	+6.33	+3.65	+44.15	+59.61	-227.15	-137.81	+117.51	-17.91	-18.05	+5.12
Micronaire.....	-.24	-4.72	-1.52	-.33	-.38	+11.51	+12.93	-25.28	-13.61	-1.84	+2.66	+.14	+1.16
Fiber str. (1/8" gage).	.00	+11.37	+3.26	-.11	-.11	+.51	+.21	-.54	-.41	+1.11	+.72	-.72	-.80
Standard Error (±).....	.45	8.52	2.88	.42	.30	6.32	6.05	14.63	8.47	2.71	2.56	2.20	2.49

*Statistically insignificant

Table 15.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 361 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections			Color of 22s yarn		
	Picker & card waste	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	SPY Number	Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.0	112	40	6.0	4.8	117	92	19	15	67	92	103	104
Grade index	97	97	97	97	97	97	97	97	97	97	97	97	97
Staple length	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber strength (0 gage)	87	87	87	87	87	87	87	87	87	87	87	87	87
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviation (±) for:													
Dependent variable	1.1	10.1	5.3	.52	.51	9.4	9.4	8.6	6.9	7.8	4.8	3.7	5.2
Grade index	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Staple length	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Micronaire	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Fiber strength (0 gage)	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Uniformity ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Simple Correlation Coef. for:													
Grade index	-.70	+.04	+.02	+.12	+.12	+.33	+.38	-.45	-.41	+.02	+.56	+.30	+.45
Staple length	-.10	+.63	+.68	+.25	+.39	+.03	+.11	-.07	-.12	+.72	+.14	+.40	+.17
Micronaire	-.30	-.28	-.34	+.44	-.43	+.58	+.53	-.52	-.56	-.29	+.25	+.18	+.28
Fiber strength (0 gage)	+.18	+.53	+.40	-.47	-.39	+.11	+.16	-.02	-.06	+.24	-.05	-.18	-.29
Uniformity ratio	-.08	+.11	+.06	-.26	-.20	+.37	+.42	-.26	-.31	00	+.05	-.04	+.14
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.70	.63	.68	.27	.40	.33	.38	.45	.42	.73	.56	.48	.46
Partial Cor. Coef. for:													
Grade index	-.70	-.02	-.05	+.11	+.09	+.32	+.37	-.44	-.40	-.06	+.55	+.29	+.44
Staple length	-.05	+.63	+.68	+.24	+.38	+.01	+.08	-.04	-.09	+.73	+.11	+.39	+.15
Beta Coefficients for:													
Grade index	-.70	-.02*	-.04*	+.10*	+.09*	+.33	+.37	-.45	-.40	-.04*	+.55	+.27	+.43
Staple length	-.04*	+.63	+.68	+.24	+.38	+.01*	+.08*	-.03*	-.08*	+.73	+.09*	+.37	+.13*
Regression Equation:													
Constant (a)	+21.79	-69.60	-62.06	+1.49	-1.71	+59.09	+7.82	+98.03	+83.00	-92.13	+31.87	+45.20	+43.52
Regression Coef. for:													
Grade index	-.16	-.03	-.04	+.01	+.01	+.60	+.68	-.75	-.55	-.06	+.52	+.19	+.44
Staple length	-.04	+5.39	+3.06	+.10	+.16	+.04	+.62	-.24	-.50	+4.82	+.36	+1.15	+.57
Standard Error (±)	.81	7.83	3.89	.50	.46	8.85	8.65	7.65	6.31	5.37	3.95	3.21	4.56
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.72	.68	.75	.54	.60	.62	.60	.63	.65	.78	.58	.49	.50
Partial Cor. Coef. for:													
Grade index	-.68	+.05	+.05	+.23	+.22	+.26	+.31	-.40	-.35	+.03	+.53	+.26	+.40
Staple length	-.06	+.65	+.71	+.25	+.41	+.03	+.11	-.06	-.13	+.75	+.11	+.40	+.16
Micronaire	-.22	-.35	-.45	-.49	-.49	+.56	+.51	-.49	-.54	-.41	+.17	+.15	+.22
Beta Coefficients for:													
Grade index	-.66	+.04*	+.03*	+.20	+.18	+.21	+.27	-.35	-.30	+.01*	+.52	+.24	+.39
Staple length	-.04*	+.62	+.67	+.22	+.37	+.02*	+.09*	-.05*	-.10*	+.72	+.09*	+.38	+.14
Micronaire	-.16	-.28	-.33	-.48	-.46	+.54	+.48	-.45	-.50	-.29	+.14	+.13	+.20
Regression Equation:													
Constant (a)	+22.88	-53.10	-51.56	+2.96	-.33	+29.33	-18.66	+120.97	+103.81	-78.75	+27.77	+42.34	+37.35
Regression Coef. for:													
Grade index	-.15	+.08	+.03	+.02	+.02	+.39	+.50	-.59	-.41	+.03	+.49	+.17	+.40
Staple length	-.04	+5.32	+3.02	+.10	+.16	+.17	+.73	-.34	-.59	+4.76	+.38	+1.17	+.60
Micronaire	-.38	-5.68	-3.62	-.51	-.48	+10.25	+9.12	-7.90	-7.17	-4.61	+1.41	+.99	+2.13
Standard Error (±)	.79	7.34	3.48	.44	.40	7.36	7.46	6.65	5.30	4.90	3.89	3.17	4.45

*Statistically insignificant

Table 15.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.73	.80	.80	.74	.76	.63	.63	.63	.65	.78	.58	.56	.58
Partial Cor. Coef. for:													
Grade index.....	-.68	+.08	+.06	+.09	+.08	+.27	+.34	-.41	-.36	+.04	+.52	+.24	+.40
Staple length.....	-.11	+.64	+.70	+.44	+.58	-.01	+.07	-.05	-.11	+.74	+.12	+.46	+.24
Micronaire.....	-.24	-.44	-.50	-.55	-.55	+.55	+.51	-.49	-.54	-.42	+.17	+.17	+.25
Fiber str. (0 gage).....	+.20	+.57	+.42	-.60	-.58	+.15	+.20	-.05	-.07	+.15	-.04	-.30	-.34
Beta Coefficients for:													
Grade index.....	-.65	+.05*	+.04*	+.06*	+.06*	+.23	+.29	-.36	-.30	+.03*	+.51	+.22	+.36
Staple length.....	-.07*	+.52	+.60	+.34	+.48	-.01*	+.05*	-.04*	-.09*	+.70	+.10*	+.44	+.21
Micronaire.....	-.17	-.30	-.35	-.45	-.44	+.53	+.47	-.45	-.50	-.29	+.15	+.15	+.22
Fiber str. (0 gage).....	+.14	+.43	+.28	-.52	-.48	+.12*	+.17	-.04*	-.05*	+.10*	-.03*	-.27	-.30
Regression Equation:													
Constant (a).....	+21.11	-92.63	-65.59	+6.66	+2.94	+17.04	-36.03	+124.58	+107.92	-86.54	+29.38	+52.55	+53.97
Regression Coef. for:													
Grade index.....	-.14	+.10	+.04	+.01	+.01	+.42	+.54	-.60	-.42	+.04	+.49	+.16	+.37
Staple length.....	-.07	+4.46	+2.72	+.15	+.20	-.05	+.42	-.28	-.51	+4.61	+.41	+1.36	+.91
Micronaire.....	-.40	-6.13	-3.77	-.48	-.45	+10.14	+8.96	-7.87	-7.12	-4.69	+1.43	+1.09	+2.29
Fiber str. (0 gage)....	-.03	+.80	+.28	-.05	-.04	+.21	+.29	-.06	-.07	+.14	-.03	-.18	-.29
Standard Error (±).....	.77	6.03	3.16	.35	.33	7.28	7.31	6.65	5.29	4.84	3.89	3.03	4.18
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.73	.82	.82	.74	.77	.63	.65	.63	.65	.80	.58	.56	.59
Partial Cor. Coef. for:													
Grade Index.....	-.68	+.10	+.09	+.09	+.09	+.28	+.35	-.41	-.36	+.06	+.52	+.24	+.41
Staple length.....	-.11	+.67	+.72	+.45	+.59	- 00	+.08	-.05	-.11	+.75	+.12	+.45	+.25
Micronaire.....	-.20	-.51	-.57	-.55	-.57	+.47	+.38	-.43	-.47	-.47	+.18	+.19	+.16
Fiber str. (0 gage).....	+.19	+.53	+.36	-.61	-.60	+.11	+.15	-.04	-.05	+.09	-.02	-.27	-.36
Uniformity ratio.....	-.02	+.29	+.32	+.15	+.23	+.11	+.21	-.02	-.06	+.23	-.05	-.08	+.13
Beta Coefficients for:													
Grade index.....	-.65	+.06*	+.06*	+.06*	+.06*	+.23	+.30	-.36	-.31	+.03*	+.51	+.21	+.37
Staple length.....	-.08*	+.53	+.61	+.35	+.48	- 00*	+.06*	-.04*	-.09*	+.70	+.10*	+.44	+.21
Micronaire.....	-.16	-.40	-.46	-.51	-.53	+.48	+.37	-.44	-.47	-.38	+.17	+.19	+.15
Fiber str. (0 gage).....	+.14	+.38	+.23	-.55	-.52	+.09*	+.12*	-.03*	-.04*	+.06*	-.02*	-.25	-.33
Uniformity ratio.....	-.01*	+.21	+.22	+.12*	+.18	+.10*	+.20	-.02*	-.06*	+.17	-.05*	-.08*	+.13*
Regression Equation:													
Constant (a).....	+21.49	-143.25	-94.39	+5.19	+.81	-5.93	-79.54	+128.59	+117.32	+117.76	+35.13	+59.55	+38.21
Regression Coef. for:													
Grade index.....	-.14	+.12	+.06	+.01	+.01	+.43	+.55	-.60	-.42	+.05	+.48	+.15	+.37
Staple length.....	-.07	+4.53	+2.76	+.15	+.21	-.02	+.48	-.28	-.53	+4.66	+.40	+1.35	+.93
Micronaire.....	-.38	-8.23	-4.97	-.54	-.54	+9.17	+7.12	-7.70	-6.73	-6.00	+1.67	+1.38	+1.63
Fiber str. (0 gage)...	+.03	+.71	+.23	-.05	-.05	+.16	+.21	-.05	-.05	+.08	-.02	-.17	-.32
Uniformity ratio.....	-.01	+1.38	+.79	+.04	+.06	+.64	+1.21	-.11	-.26	+.86	-.16	-.19	+.44
Standard Error (±).....	.77	5.77	3.00	.35	.32	7.23	7.15	6.64	5.28	4.72	3.88	3.02	4.15

*Statistically insignificant

Table 16.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 361 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
	Picker & card waste	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.0	112	40	6.0	4.7	117	92	19	15	67	92	103	104
Color index	97	97	97	97	97	97	97	97	97	97	97	97	97
Nonlint content (S.A.)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2.5% span length	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Micronaire	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Fiber str. (1/8" gage)	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Standard Deviation (±) for:													
Dependent variable	1.1	10.1	5.3	.5	.5	9	9	9	7	8	4.8	3.7	5.2
Color index	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Nonlint content (S.A.)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5% span length	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Micronaire	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49
Fiber str. (1/8" gage)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Simple Correlation Coef. for:													
Color index	-.54	+.10	+.10	+.32	+.32	+.25	+.22	-.39	-.36	+.11	+.77	+.44	+.41
Nonlint content (S.A.)	+.82	+.14	+.12	-.17	-.18	-.18	-.20	+.44	+.37	+.02	-.17	-.15	-.18
2.5% span length	-.01	+.65	+.70	+.37	+.49	-.06	-.04	+.07	+.03	+.77	+.15	+.36	+.17
Micronaire	-.30	-.28	-.34	-.44	-.43	+.58	+.53	-.52	-.56	-.29	+.25	+.18	+.28
Fiber str. (1/8" gage)	+.07	+.81	+.74	+.02	+.13	-.01	+.11	+.04	-.01	+.60	+.07	-.01	-.03
Multiple Cor. Data for:													
DEPENDENT VARIABLE with COLOR INDEX, NONLINT													
Multiple Cor. Coef	.84	.23	.21	.32	.32	.26	.25	.48	.43	.13	.80	.44	.57
Partial Cor. Coef. for:													
Color index	-.31	+.18	+.17	+.27	+.27	+.19	+.15	-.23	-.23	+.13	+.80	+.43	+.55
Nonlint	+.76	+.21	+.18	-.03	-.04	-.08	-.12	+.32	+.25	+.08	+.34	+.07	+.10
Beta Coefficients for:													
Color index	-.20	+.21	+.19	+.30	+.30	+.21	+.16*	-.23	-.24	+.15*	+.88	+.47	+.61
Nonlint	+.72	+.24	+.20	-.03*	-.04*	-.08*	-.13*	+.33	+.26	+.09*	+.24	+.07*	+.09*
Regression Equation:													
Constant (a)	+9.04	+57.92	+12.82	+2.43	+1.26	+74.10	+61.09	+58.05	+48.69	+38.39	-8.49	+62.08	+30.71
Regression Coef. for:													
Color index	-.05	+.49	+.25	+.04	+.04	+.46	+.36	-.48	-.40	+.28	+1.01	+.41	+.75
Nonlint	+.74	+2.17	+.98	-.02	-.02	-.71	-1.08	+2.55	+1.65	+.64	+1.05	+.22	+.44
Standard Error (±)	.62	9.80	5.18	.49	.48	9.04	9.07	7.50	6.27	7.73	2.85	3.27	4.23
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH													
Multiple Cor. Coef	.84	.66	.71	.46	.55	.27	.25	.49	.44	.77	.80	.53	.57
Partial Cor. Coef. for:													
Color index	-.31	+.08	+.06	+.22	+.20	+.20	+.15	-.25	-.24	-.02	+.79	+.39	+.53
Nonlint	+.76	+.20	+.17	-.07	-.09	-.07	-.11	+.31	+.24	+.01	+.34	+.04	+.09
2.5% span length	+.03	+.64	+.70	+.34	+.47	-.10	-.06	+.12	+.08	+.77	-.00	+.32	+.09
Beta Coefficients for:													
Color index	-.21	+.07*	+.05*	+.23	+.20	+.23	+.17*	-.26	-.26	-.02*	+.89	+.41	+.59
Nonlint	+.72	+.17	+.13	-.07*	-.09*	-.07*	-.12*	+.32	+.25	+.01*	+.24	+.04*	+.09*
2.5% span length	+.02*	+.63	+.70	+.33	+.46	-.10*	-.06*	+.11*	+.07*	+.77	-.00*	+.29	+.08*
Regression Equation:													
Constant (a)	+8.66	-53.23	-51.40	-.56	-2.76	+90.04	+71.45	+42.13	+39.62	-66.75	-8.29	+43.38	+23.87
Regression Coef. for:													
Color index	-.06	+.17	+.06	+.03	+.02	+.51	+.39	-.53	-.43	-.03	+1.01	+.36	+.73
Nonlint	+.74	+1.57	+.64	-.03	-.04	-.63	-1.02	+2.46	+1.60	+.07	+1.05	+.12	+.41
2.5% span length	+.46	+133.48	+77.12	+3.59	+4.83	-19.15	-12.44	+19.12	+10.89	+126.28	-.24	+22.46	+8.22
Standard Error (±)	.62	7.53	3.71	.46	.42	9.00	9.06	7.45	6.25	4.96	2.85	3.09	4.22

*Statistically insignificant

Table 16.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.85	.69	.75	.64	.69	.61	.56	.66	.66	.79	.83	.56	.63
Partial Cor. Coef. for:													
Color index.....	-.33	+.10	+.08	+.28	+.27	+.23	+.18	-.28	-.28	+.01	+.81	+.39	+.55
Nonlint.....	+.76	+.17	+.13	-.15	-.18	+.01	-.05	+.28	+.21	-.03	+.39	+.07	+.14
2.5% span length.....	-.01	+.63	+.70	+.32	+.47	-.02	+.01	+.05	+.00	+.77	+.05	+.35	+.14
Micronaire.....	-.28	-.23	-.33	-.50	-.49	+.57	+.51	-.51	-.55	-.30	+.35	+.22	+.31
Beta Coefficients for:													
Color index.....	-.21	+.08*	+.06*	+.26	+.23	+.22	+.17	-.25	-.26	+.00*	+.89	+.40	+.59
Nonlint.....	+.70	+.15	+.10*	-.13*	-.15	+.01*	-.05*	+.25	+.18	-.02*	+.27	+.06*	+.12*
2.5% span length.....	-.00*	+.61	+.66	+.27	+.40	-.02*	+.01*	+.04*	+.00*	+.75	+.03*	+.32	+.11*
Micronaire.....	-.16	-.17	-.23	-.45	-.42	+.56	+.51	-.45	-.51	-.19	+.21	+.19	+.26
Regression Equation:													
Constant (a).....	+10.95	-33.67	-38.20	+2.04	-.44	+25.99	+12.05	+89.40	+83.47	-51.09	-21.33	+35.13	+7.13
Regression Coef. for:													
Color index.....	-.06	+.19	+.08	+.03	+.03	+.49	+.38	-.51	-.42	+.01	+1.01	+.35	+.73
Nonlint.....	+.72	+1.33	+.47	-.06	-.07	+.07	-.39	+1.95	+1.13	-.13	+1.18	+.21	+.58
2.5% span length.....	-.09	+128.15	+73.37	+2.89	+4.18	-3.29	+2.03	+7.41	+.14	+121.67	+2.86	+24.59	+12.30
Micronaire.....	-.37	-3.60	-2.53	-.48	-.44	+10.69	+9.76	-7.90	-7.25	-3.10	+2.09	+1.44	+2.74
Standard Error (±).....	.60	7.33	3.50	.40	.37	7.41	7.77	6.43	5.20	4.73	2.67	3.02	4.01
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)													
Multiple Cor. Coef.....	.85	.89	.88	.65	.69	.61	.58	.66	.67	.85	.83	.60	.64
Partial Cor. Coef. for:													
Color Index.....	-.32	+.11	+.08	+.29	+.27	+.23	+.17	-.28	-.28	-.01	+.81	+.41	+.56
Nonlint.....	+.76	+.11	+.05	-.13	-.17	+.01	-.07	+.[illegible]3	+.21	-.10	+.39	+.10	+.16
2.5% span length.....	+.01	+.54	+.63	+.36	+.46	-.03	-.07	+.06	+.03	+.71	+.05	+.41	+.20
Micronaire.....	-.28	-.38	-.46	-.50	-.49	+.57	+.52	-.51	-.55	-.35	+.35	+.23	+.32
Fiber str. (1/8" gage)...	-.03	+.79	+.71	-.18	-.08	+.02	+.18	-.03	-.07	+.48	-.01	-.24	-.16
Beta Coefficients for:													
Color index.....	-.21	+.05*	+.04*	+.27	+.23	+.22	+.16	[illegible]25	-.25	-.01*	+.89	+.41	+.60
Nonlint.....	+.70	+.06*	+.02*	-.11*	-.14	+.01*	-.07*	[illegible]05	+.19	-.06*	+.27	+.10*	+.14
2.5% span length.....	+.00*	+.32	+.43	+.33	+.43	-.02*	-.06*	[illegible]02	+.03*	+.60	+.03*	+.42	+.17
Micronaire.....	-.16	-.19	-.25	-.45	-.42	+.56	+.51	-.45	-.[illegible]2	-.20	+.21	+.20	+.26
Fiber str. (1/8" gage)...	-.02*	+.65	+.53	-.15	-.07*	+.02*	+.17	-.03*	-.06[illegible]	+.33	-.01*	-.22	-.14
Regression Equation:													
Constant (a).....	+11.00	-50.94	-45.66	+2.25	-.34	+25.53	+7.93	+89.99	+84.60	-57.94	-21.18	+37.24	+9.02
Regression Coef. for:													
Color index.....	-.06	+.13	+.06	+.03	+.03	+.49	+.37	-.51	-.42	-.02	+1.01	+.36	+.73
Nonlint.....	+.72	+.51	+.12	-.05	-.06	+.04	-.59	+1.98	+1.18	-.45	+1.19	+.32	+.67
2.5% span length.....	+.11	+69.15	+48.01	+3.61	+4.50	-4.86	-12.21	+9.43	+4.05	+98.43	+3.39	+31.82	+18.82
Micronaire.....	-.37	-3.92	-2.67	-.47	-.43	+10.69	+9.68	-7.88	-7.23	-3.23	+2.10	+1.47	+2.78
Fiber str. (1/8" gage).	-.01	+3.89	+1.67	-.05	-.02	+.10	+.94	-.13	-.26	+1.53	-.03	-.48	-.43
Standard Error (±).....	.59	4.50	2.47	.39	.37	7.41	7.64	6.42	5.19	4.15	2.67	2.93	3.96

*Statistically insignificant

Table 17.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 26 long staple samples, carded yarns, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	8.5	137	52	6.7	5.4	97	79	27	21	85	96	104	107
Grade index	98	98	98	98	98	98	98	98	98	98	98	98	98
Staple length	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Micronaire	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber strength (0 gage)	90	90	90	90	90	90	90	90	90	90	90	90	90
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:													
Dependent variable	2.1	7.7	3.7	.4	.3	21	17	19	14	6	4.0	3.0	4.0
Grade index	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Staple length	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
Micronaire	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber strength (0 gage)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Uniformity ratio	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Simple Correlation Coef. for:													
Grade index	-.52	+.49	+.45	+.17	+.23	+.36	+.28	-.47	-.43	+.33	+.46	+.31	+.30
Staple length	-.39	+.64	+.63	-.17	-.03	+.52	+.62	-.59	-.61	+.57	+.63	+.37	+.78
Micronaire	-.18	+.23	+.22	-.26	-.15	+.75	+.82	-.69	-.73	+.38	+.44	+.11	+.79
Fiber strength (0 gage)	+.06	+.56	+.52	-.36	-.34	+.07	+.11	-.11	-.19	+.49	-.30	-.35	-.13
Uniformity ratio	-.17	+.46	+.42	-.19	-.02	+.56	+.65	-.46	-.54	+.61	+.33	+.19	+.55
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.54	.67	.65	.35	.29	.53	.62	.62	.62	.57	.65	.39	.79
Partial Cor. Coef. for:													
Grade index	-.40	+.24	+.20	+.30	+.29	+.14	-.05	-.25	-.18	+.06	+.21	+.15	-.18
Staple length	-.17	+.52	+.52	-.31	-.17	+.41	+.58	-.46	-.50	+.50	+.52	+.26	+.76
Beta Coefficients for:													
Grade index	-.43*	+.21*	+.18*	+.35*	+.33*	+.14*	-.04*	-.24*	-.17*	+.06*	+.19*	+.16*	-.13*
Staple length	-.17*	+.53*	+.54	-.35*	-.20*	+.45*	+.64	-.47*	-.52*	+.54*	+.54*	+.28*	+.85
Regression Equation:													
Constant (a)	+54.56	-121.58	-70.35	+9.59	+5.43	-477.37	-456.81	+608.30	+450.70	-105.33	-38.97	+44.69	-49.81
Regression Coef. for:													
Grade index	-.28	+.52	+.20	+.04	+.03	+.90	-.22	-1.37	-.70	+.11	+.23	+.15	-.16
Staple length	-.50	+5.62	+2.76	-.19	-.08	+13.15	+15.08	-12.09	-9.76	+4.85	+3.04	+1.19	+4.67
Standard Error (±)	1.77	5.72	2.79	.37	.28	17.90	13.29	14.57	10.58	5.27	3.07	2.78	2.45
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.54	.75	.74	.36	.31	.82	.83	.78	.80	.58	.65	.45	.84
Partial Cor. Coef. for:													
Grade index	-.37	+.10	+.05	+.26	+.24	+.47	+.25	-.47	-.44	+.04	+.20	+.07	-.03
Staple length	-.16	+.64	+.64	-.12	-.02	-.37	-.13	+.15	+.15	+.39	+.37	+.34	+.41
Micronaire	+.07	-.46	+.46	-.11	-.12	+.73	+.71	-.59	-.63	-.07	-.00	-.24	+.46
Beta Coefficients for:													
Grade index	-.41*	+.08*	+.04*	+.31*	+.29*	+.38*	+.18*	-.42*	-.36*	+.04*	+.18*	+.08*	-.02*
Staple length	-.25*	+1.01	+1.03	-.21*	-.04*	-.42*	-.13*	+.18*	+.17*	+.62*	+.54*	+.59*	+.45*
Micronaire	+.09*	-.55*	-.56*	-.16*	-.18*	+.99	+.89	-.74	-.79	-.09*	-.00*	-.35*	+.45*
Regression Equation:													
Constant (a)	+60.53	-249.65	-132.62	+7.66	+3.85	+160.73	+.72	+189.74	+125.25	-122.97	-39.08	+12.89	+4.76
Regression Coef. for:													
Grade index	-.26	+.20	+.05	+.04	+.03	+2.49	+.93	-2.41	-1.52	+.07	+.23	+.07	-.03
Staple length	-.74	+10.73	+5.25	-.12	-.02	-12.31	-3.18	+4.62	+3.22	+5.56	+3.04	+2.46	+2.49
Micronaire	+.39	-8.34	-4.05	-.13	-.10	+41.56	+29.80	-27.26	-21.19	-1.15	-.01	-2.07	+3.55
Standard Error (±)	1.76	5.08	2.48	.37	.28	12.18	9.39	11.76	8.20	5.25	3.07	2.70	2.17

*Statistically insignificant

Table 17.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray Yarn	Bleached Yarn	Dyed Yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.55	.86	.82	.46	.44	.83	.84	.79	.83	.70	.78	.67	.89
Partial Cor. Coef. for:													
Grade index.....	-.35	+.38	+.26	+.22	+.20	+.46	+.27	-.47	-.42	+.14	+.12	+.01	-.23
Staple length.....	-.18	+.57	+.56	+.01	+.11	-.43	-.20	+.24	+.29	+.22	+.58	+.55	+.59
Micronaire.....	+.09	-.41	-.40	-.19	-.20	+.75	+.72	-.62	-.69	+.06	-.17	-.41	+.40
Fiber str. (0 gage).....	+.09	+.64	+.54	-.31	-.33	+.25	+.19	-.25	-.37	+.48	-.57	-.55	-.53
Beta Coefficients for:													
Grade index.....	-.39*	+.27*	+.19*	+.25*	+.23*	+.36*	+.18*	-.40*	-.32*	+.13*	+.10*	+.01*	-.14*
Staple length.....	-.31*	+.69	+.75	+.01*	+.20*	-.53*	-.21*	+.30*	+.34*	+.32*	+.87	+.96	+.67
Micronaire.....	+.12*	-.38*	-.41*	-.28*	-.31*	+1.05	+.93	-.80	-.88	+.07*	-.18*	-.55*	+.33*
Fiber str. (0 gage).....	+.08*	+.46	+.40	-.32*	-.34*	+.16*	+.11*	-.17*	-.24*	+.43*	-.47	-.54*	-.31*
Regression Equation:													
Constant (a).....	+60.15	-279.95	-144.11	+7.88	+4.02	+186.05	+3.28	+169.42	+95.64	-130.39	-35.49	+12.68	+14.40
Regression Coef. for:													
Grade index.....	-.25	+.65	+.22	+.03	+.02	+2.37	+.98	-2.33	-1.35	+.25	+.12	+.01	-.17
Staple length.....	-.90	+7.34	+3.84	+.01	+.08	-15.53	-5.03	+7.65	+6.40	+2.90	+4.87	+4.02	+3.69
Micronaire.....	+.51	-5.70	-2.96	-.22	-.18	+44.06	+31.24	-29.62	-23.66	+.92	-1.44	-3.29	+2.62
Fiber str. (0 gage)....	+.05	+1.13	+.47	-.04	-.03	+1.08	+.62	-1.01	-1.06	+.89	-.61	-.52	-.40
Standard Error (±).....	1.76	3.91	2.09	.35	.26	11.79	9.22	11.40	7.62	4.60	2.52	2.25	1.85
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.55	.87	.83	.46	.46	.83	.85	.80	.83	.75	.78	.69	.89
Partial Cor. Coef. for:													
Grade index.....	-.35	+.35	+.23	+.22	+.18	+.46	+.25	-.48	-.42	+.10	+.12	-.01	-.24
Staple length.....	-.19	+.57	+.56	+.01	+.10	-.44	-.21	+.23	+.29	+.21	+.58	+.55	+.59
Micronaire.....	+.06	-.46	-.42	-.18	-.25	+.71	+.65	-.62	-.66	-.12	-.17	-.45	+.34
Fiber str. (0 gage).....	+.07	+.61	+.51	-.31	-.36	+.23	+.13	-.28	-.37	+.43	-.56	-.58	-.53
Uniformity ratio.....	+.06	+.25	+.16	+.02	+.16	+.09	+.21	+.16	+.04	+.39	+.03	+.22	+.08
Beta Coefficients for:													
Grade index.....	-.40*	+.24*	+.18*	+.25*	+.20*	+.36*	+.17*	-.41*	-.32*	+.08*	+.09*	-.01*	-.15*
Staple length.....	-.32*	+.67	+.74	+.01*	+.17*	-.54*	-.23*	+.28*	+.34*	+.28*	+.86	-.94*	+.66
Micronaire.....	+.08*	-.47*	-.48*	-.29*	-.42*	+1.01	+.84	-.88	-.90	-.15*	-.19*	-.67*	+.30*
Fiber str. (0 gage).....	+.06*	+.42	+.37*	-.32*	-.38*	+.14*	+.08*	-.20*	-.25*	+.35*	-.48	-.59	-.32*
Uniformity ratio.....	+.07*	+.18*	+.13*	+.02*	+.21*	+.07*	+.17*	+.14*	+.04*	+.40*	+.02*	+.23*	+.06*
Regression Equation:													
Constant (a).....	+58.09	-297.68	-150.34	+7.75	+3.17	+162.36	-38.11	+128.70	+87.73	-166.36	-36.91	+2.57	+11.48
Regression Coef. for:													
Grade index.....	-.26	+.58	+.20	+.03	+.02	+2.34	+.90	-2.38	-1.35	+.16	+.12	-.01	-.18
Staple length.....	-.92	+7.14	+3.77	+.00	+.07	-15.74	-5.43	+7.28	+6.33	+2.53	+4.86	+3.92	+3.66
Micronaire.....	+.35	-7.20	-3.48	-.23	-.24	+42.46	+28.21	-32.40	-24.19	-1.86	-1.54	-4.04	+2.38
Fiber str. (0 gage)....	+.04	+1.05	+.44	-.04	-.04	+.98	+.44	-1.18	-1.09	+.73	-.62	-.57	-.41
Uniformity ratio.....	+.11	+1.00	+.35	+.01	+.04	+1.07	+2.03	+1.87	+.35	+1.86	+.07	+.50	+.16
Standard Error (±).....	1.75	3.79	2.06	.35	.26	11.74	9.01	11.25	7.61	4.24	2.51	2.19	1.84

Table 18.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 26 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	8.5	137	52	6.7	5.4	97	79	27	21	85	96	104	107
Color index.....	102	102	102	102	102	102	102	102	102	102	102	102	102
Nonlint content (S.A.).....	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2.5% span length.....	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Micronaire.....	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber str. (1/8" gage).....	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8
Standard Deviation (±) for:													
Dependent variable.....	2.1	7.7	3.7	.4	.3	21	17	19	14	6	4.0	3.0	4.0
Color index.....	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Nonlint content (S.A.).....	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
2.5% span length.....	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire.....	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber str. (1/8" gage).....	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Simple Correlation Coef. for:													
Color index.....	-.28	+.45	+.46	+.18	+.26	+.24	+.32	-.27	-.24	+.30	+.73	+.64	+.38
Nonlint content (S.A.).....	+.54	-.53	-.52	-.15	-.17	+.68	-.51	+.78	+.79	-.20	-.38	-.13	-.30
2.5% span length.....	-.32	+.65	+.66	+.09	+.27	+.34	+.32	-.35	-.40	+.46	+.56	+.48	+.42
Micronaire.....	-.18	+.23	+.22	-.26	-.15	+.75	+.82	-.69	-.73	+.38	+.44	+.11	+.79
Fiber str. (1/8" gage).....	-.08	+.66	+.62	-.53	-.49	+.14	+.22	-.33	-.34	+.47	-.01	-.18	+.20
Multiple Cor. Data for:													
DEPENDENT VARIABLE with COLOR INDEX, NONLINT													
Multiple Cor. Coef.....	.57	.63	.63	.22	.29	.69	.55	.79	.79	.33	.76	.64	.44
Partial Cor. Coef. for:													
Color index.....	-.20	+.41	+.43	+.16	+.24	+.14	+.25	-.17	-.12	+.27	+.72	+.63	+.34
Nonlint.....	+.51	-.50	-.48	-.11	-.12	-.67	-.48	+.77	+.78	-.14	-.34	+.01	-.24
Beta Coefficients for:													
Color index.....	-.17*	+.35*	+.37*	+.16*	+.24*	+.10*	+.22*	-.11*	-.08*	+.27*	+.68	+.64	+.34*
Nonlint.....	+.50*	-.46	-.44*	-.11*	-.12*	-.66	-.46*	+.76	+.77	-.14*	-.24*	+.01*	-.23*
Regression Equation:													
Constant (a).....	+19.05	+43.40	+3.70	+4.34	+2.86	+61.26	-40.50	+57.94	+26.31	+19.43	-7.50	+28.70	+57.81
Regression Coef. for:													
Color index.....	-.14	+1.03	+.52	+.02	+.03	+.82	+1.43	-.78	-.40	+.67	+1.05	+.73	+.51
Nonlint.....	+1.53	-5.06	-2.33	-.07	-.05	-20.24	-11.35	+20.48	+15.07	-1.27	-1.40	+.04	-1.30
Standard Error (±).....	1.73	5.92	2.84	.39	.28	15.25	14.10	11.36	8.26	6.07	2.61	2.33	3.56
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.57	.71	.71	.23	.30	.69	.56	.79	.79	.46	.77	.65	.47
Partial Cor. Coef. for:													
Color index.....	-.16	+.11	+.12	+.17	+.13	+.11	+.22	-.18	-.06	+.02	+.61	+.48	+.18
Nonlint.....	+.49	-.39	-.37	-.14	-.07	-.64	-.46	+.76	+.75	-.01	-.30	+.07	-.16
2.5% span length.....	+.01	+.42	+.43	-.08	+.10	+.00	-.03	+.08	-.06	+.33	+.06	+.15	+.18
Beta Coefficients for:													
Color index.....	-.17*	+.10*	+.11*	+.22*	+.16*	+.10*	+.24*	-.15*	-.05*	+.03*	+.64	+.55*	+.21*
Nonlint.....	+.50*	-.33*	-.30*	-.15*	-.08*	-.66	-.47*	+.78	+.76	-.01*	-.22*	+.06*	-.16*
2.5% span length.....	+.01*	+.45*	+.46*	-.11*	+.14*	+.00*	-.03*	+.06*	-.05*	+.44*	+.06*	+.16*	+.22*
Regression Equation:													
Constant (a).....	+18.76	-38.81	-36.71	+5.41	+1.90	+60.14	-26.76	+29.01	+43.80	-47.88	-13.10	+17.35	+36.49
Regression Coef. for:													
Color index.....	-.14	+.29	+.16	+.03	+.02	+.81	+1.56	-1.04	-.24	+.06	+.99	+.63	+.32
Nonlint.....	+1.53	-3.60	-1.61	-.08	-.03	-20.22	-11.60	+20.99	+14.76	-.08	-1.30	+.24	-.92
2.5% span length.....	+.47	+133.49	+65.62	-1.73	+1.56	+1.81	-22.32	+46.98	-28.39	+109.30	+9.09	+18.44	+34.61
Standard Error (±).....	1.73	5.38	2.57	.39	.28	15.25	14.10	11.33	8.24	5.72	2.61	2.31	3.50

*Statistically insignificant

Table 18.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Multiple Cor. Coef.	.58	.73	.73	.46	.45	.84	.85	.86	.88	.52	.79	.65	.83
Partial Cor. Coef. for:													
Color index	-.20	+.16	+.18	+.26	+.22	-.04	+.04	-.03	+.06	-.00	+.60	+.49	+.24
Nonlint	+.50	-.44	-.42	-.30	-.22	-.54	-.23	+.71	+.70	+.11	-.16	+.04	+.26
2.5% span length	-.03	+.45	+.46	+.00	+.18	-.17	-.28	+.22	+.08	+.29	-.00	+.15	+.04
Micronaire	+.16	-.23	-.23	-.41	-.35	+.65	+.78	-.56	-.62	+.27	+.32	-.05	+.78
Beta Coefficients for:													
Color index	-.21*	+.15*	+.16*	+.32*	+.27*	-.03*	+.03*	-.02*	+.04*	-.00*	+.60	+.56*	+.17*
Nonlint	+.57*	-.41*	-.38*	-.35*	-.24*	-.43	-.15*	+.61	+.57	+.11*	-.12*	+.03*	+.18*
2.5% span length	-.03*	+.49*	+.50*	+.00*	+.23*	-.13*	-.22*	+.16*	+.05*	+.37*	-.00*	+.17*	+.03*
Micronaire	+.16*	-.19*	-.19*	-.47*	-.39*	+.56	+.77	-.41	-.45	+.29*	+.25*	-.05*	+.82
Regression Equation:													
Constant (a)	+22.67	-58.41	-45.74	+3.51	+.39	+197.70	+143.40	-78.14	-14.65	-36.71	-3.27	+15.78	+49.62
Regression Coef. for:													
Color index	-.17	+.44	+.23	+.05	+.03	-.26	+.20	-.17	+.18	-.00	+.92	+.64	+.26
Nonlint	+1.73	-4.49	-2.03	-.20	-.10	-13.07	-3.68	+16.42	+11.06	+1.05	-.69	+.15	+1.04
2.5% span length	-2.65	+147.24	+72.09	+.03	+2.63	-108.61	-144.40	+117.59	+28.71	+91.89	-.27	+19.84	+4.36
Micronaire	+.67	-2.93	-1.38	-.37	-.23	+23.53	+26.02	-15.05	-12.17	+3.71	+2.00	-.30	+6.44
Standard Error (±)	1.71	5.24	2.50	.35	.26	11.57	8.83	9.38	6.44	5.50	2.47	2.30	2.20
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)													
Multiple Cor. Coef.	.59	.89	.87	.72	.73	.85	.85	.87	.88	.63	.80	.68	.83
Partial Cor. Coef. for:													
Color index	-.16	+.50	+.47	+.09	+.02	-.12	+.05	-.08	+.03	+.14	+.55	+.42	+.24
Nonlint	+.51	-.48	-.43	-.47	-.39	-.57	-.23	+.70	+.69	+.19	-.19	-.01	+.26
2.5% span length	-.05	+.38	+.39	+.23	+.43	-.09	-.28	+.25	+.10	+.18	+.05	+.23	+.03
Micronaire	+.15	-.44	-.40	-.43	-.35	+.68	+.78	-.55	-.62	+.25	+.35	-.02	+.77
Fiber str. (1/8" gage)	+.08	+.74	+.69	-.63	-.64	-.26	+.03	-.13	-.09	+.42	-.19	-.27	+.03
Beta Coefficients for:													
Color index	-.19*	+.37*	+.36*	+.08*	+.02*	-.09*	+.04*	-.05*	+.02*	+.14*	+.55	+.47*	+.18*
Nonlint	+.58*	-.31*	-.29*	-.46*	-.35*	-.46	-.15*	+.60	+.56	+.18*	-.14*	-.01*	+.18*
2.5% span length	-.06*	+.28*	+.31*	+.24*	+.48*	-.07*	-.22*	+.19*	+.07*	+.21*	+.05*	+.26*	+.02*
Micronaire	+.15*	-.27*	-.26*	-.39*	-.31*	+.58	+.77	-.40	-.45	+.24*	+.27*	-.02*	+.82
Fiber str. (1/8" gage)	+.07*	+.57	+.53	-.63	-.65	-.16*	+.02*	-.08*	-.05*	+.41*	-.13*	-.23*	+.02*
Regression Equation:													
Constant (a)	+20.01	-136.23	-80.06	+7.84	+3.74	+256.09	+138.70	-52.71	-2.93	-80.62	+5.72	+27.79	+48.32
Regression Coef. for:													
Color index	-.15	+1.08	+.51	+.01	+.00	-.74	+.24	-.38	+.09	+.35	+.85	+.54	+.27
Nonlint	+1.77	-3.38	-1.54	-.26	-.15	-13.91	-3.62	+16.06	+10.89	+1.71	-.82	-.02	+1.06
2.5% span length	-4.86	+83.04	+43.72	+3.69	+5.40	-59.83	-148.28	+138.43	+38.66	+53.57	+7.35	+29.97	+3.20
Micronaire	+.62	-4.09	-1.89	-.31	-.18	+24.41	+25.95	-14.67	-11.99	+3.02	+2.13	-.12	+6.43
Fiber str. (1/8" gage)	+.11	+3.30	+1.46	-.19	-.14	-2.51	+.20	-1.07	-.51	+1.97	-.39	-.52	+.06
Standard Error (±)	1.70	3.49	1.82	.27	.20	11.18	8.83	9.29	6.41	4.99	2.42	2.22	2.20

*Statistically insignificant

Table 19.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 26 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables							
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	17.2	155	59	7.0	5.8	109	89	13	10
Grade index	98	98	98	98	98	98	98	98	98
Staple length	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Micronaire	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber strength (0 gage)	90	90	90	90	90	90	90	90	90
Uniformity ratio	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:									
Dependent variable	2.47	7.7	3.5	.28	.26	20.0	17.9	11.8	9.3
Grade index	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Staple length	.72	.72	.72	.72	.72	.72	.72	.72	.72
Micronaire	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber strength (0 gage)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Uniformity ratio	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Simple Correlation Coef. for:									
Grade index	-.48	+.31	+.26	+.16	+.09	+.35	+.42	-.46	-.44
Staple length	-.70	+.54	+.45	-.36	-.20	+.55	+.65	-.62	-.62
Micronaire	-.57	+.08	+.03	-.44	-.21	+.82	-.84	-.74	-.76
Fiber strength (0 gage)	-.10	+.60	+.63	-.65	-.43	+.09	-.01	-.11	-.11
Uniformity ratio	-.69	+.25	+.27	-.36	-.13	+.61	+.65	-.47	-.52
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH									
Multiple Cor. Coef	.71	.54	.45	.54	.30	.56	.66	.64	.64
Partial Cor. Coef. for:									
Grade index	-.21	+.05	+.04	+.43	+.23	+.10	+.13	-.21	-.18
Staple length	-.60	+.46	+.39	-.52	-.28	+.46	+.56	-.50	-.51
Beta Coefficients for:									
Grade index	-.17*	+.05*	+.04*	+.46*	+.26*	+.10*	+.12*	-.19*	-.16*
Staple length	-.61	+.51*	+.03*	-.59*	-.33*	+.50*	+.59	-.52*	-.54*
Regression Equation:									
Constant (a)	+107.88	-57.98	-23.47	+11.55	+8.12	-467.36	-516.40	+396.74	+312.56
Regression Coef. for:									
Grade index	-.13	+.12	+.04	+.04	+.02	+.60	+.64	-.71	-.47
Staple length	-2.10	+5.44	+2.10	-.23	-.12	+13.99	+14.67	-8.49	-6.93
Standard Error (±)	1.73	6.50	3.12	.24	.25	16.56	13.46	9.03	7.17
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE									
Multiple Cor. Coef	.72	.73	.66	.55	.30	.88	.88	.81	.82
Partial Cor. Coef. for:									
Grade index	-.25	-.17	-.16	+.38	+.21	+.53	+.51	-.47	-.45
Staple length	-.34	+.70	+.63	-.26	-.17	-.46	-.26	+.15	+.17
Micronaire	-.17	-.59	-.53	-.16	-.03	+.82	+.78	-.64	-.67
Beta Coefficients for:									
Grade index	-.22*	-.14*	-.14*	+.41*	+.25*	+.36	+.35*	-.39*	-.36*
Staple length	-.45*	+1.21	+1.10	-.41*	-.29*	-.44*	-.23*	+.17*	+.18*
Micronaire	-.19*	-.80	-.76	-.21*	-.04*	+1.08	+.94	-.78	-.83
Regression Equation:									
Constant (a)	+93.68	-244.70	-104.59	+9.73	+7.76	+192.22	-4.66	+116.09	+79.34
Regression Coef. for:									
Grade index	-.17	-.34	-.16	+.04	+.02	+2.25	+1.92	-1.41	-1.05
Staple length	-1.53	+12.89	+5.34	-.16	-.11	-12.33	-5.75	+2.71	+2.37
Micronaire	-.92	-12.16	-5.28	-.12	-.02	+42.95	+33.33	-18.28	-15.19
Standard Error (±)	1.71	5.25	2.64	.23	.25	9.50	8.40	6.94	5.33

*Statistically insignificant

Table 19.--Continued

Statistical Items	Dependent Variables							
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)									
Multiple Cor. Coef.....	.72	.84	.80	.78	.48	.90	.88	.82	.83
Partial Cor. Coef. for:									
Grade index.....	-.25	+.11	+.11	+.37	+.16	+.48	+.51	-.47	-.45
Staple length.....	-.31	+.64	+.54	+.01	-.00	-.54	-.24	+.23	+.26
Micronaire.....	-.17	-.57	-.50	-.39	-.14	+.84	+.77	-.66	-.69
Fiber str. (0 gage).....	-.01	+.61	+.61	-.66	-.39	+.35	+.00	-.23	-.25
Beta Coefficients for:									
Grade index.....	-.22*	+.08*	+.09*	+.31*	+.18*	+.31*	+.35*	-.37*	-.35*
Staple length.....	-.44*	+.89	+.75*	+.01*	-.01*	-.57	-.23*	+.27*	+.29*
Micronaire.....	-.19*	-.63	-.57*	-.44*	-.20*	+1.15	+.94	-.84	-.88
Fiber str. (0 gage).....	-.01*	+.45	+.50	-.60	-.41*	+.18*	+.00*	-.15*	-.15*
Regression Equation:									
Constant (a).....	+93.71	-283.93	-122.63	+9.96	+7.95	+239.28	-4.66	+104.85	+69.72
Regression Coef. for:									
Grade index.....	-.17	+.19	+.09	+.03	+.01	+1.92	+1.92	-1.37	-1.01
Staple length.....	-1.51	+9.54	+3.64	+.00	-.00	-15.79	-5.78	+4.39	+3.74
Micronaire.....	-.94	-9.56	-3.96	-.24	-.10	+45.65	+33.35	-19.59	-16.26
Fiber str. (0 gage).....	-.01	+1.12	+.57	-.05	-.03	+1.16	+.01	-.56	-.46
Standard Error (±).....	1.71	4.16	2.08	.18	.23	8.91	8.40	6.75	5.16
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.....	.79	.84	.81	.78	.49	.90	.89	.83	.83
Partial Cor. Coef. for:									
Grade index.....	-.22	+.12	+.09	+.37	+.14	+.48	+.50	-.48	-.46
Staple length.....	-.31	+.64	+.54	+.00	-.01	-.55	-.27	+.22	+.25
Micronaire.....	+.05	-.53	-.50	-.37	-.18	+.81	+.72	-.67	-.68
Fiber str. (0 gage).....	+.12	+.60	+.59	-.65	-.41	+.31	-.05	-.27	-.27
Uniformity ratio.....	-.47	-.04	+.11	+.03	+.13	+.12	+.22	+.19	+.11
Beta Coefficients for:									
Grade index.....	-.17*	+.09*	+.07*	+.31*	+.16*	+.31*	+.33*	-.38*	-.35*
Staple length.....	-.39*	+.90	+.74*	+.00*	-.02*	-.58*	-.25*	+.25*	+.28*
Micronaire.....	+.06*	-.61*	-.62*	-.45*	-.29*	+1.11	+.86	-.93	-.93
Fiber str. (0 gage).....	+.08*	+.46	+.49	-.61	-.44*	+.17*	-.03*	-.18*	-.17*
Uniformity ratio.....	-.46*	-.03*	+.09*	+.03*	+.17*	+.08*	+.15*	+.16*	+.09*
Regression Equation:									
Constant (a).....	+109.97	-281.24	-126.62	+9.84	+7.33	-212.95	-43.77	+75.13	+56.45
Regression Coef. for:									
Grade index.....	-.13	+.21	+.08	+.03	+.01	+1.91	+1.84	-1.40	-1.02
Staple length.....	-1.35	+9.57	+3.60	+.00	-.01	-16.01	-6.16	+4.12	+3.63
Micronaire.....	+.29	-9.32	-4.31	-.25	-.15	+43.98	+30.44	-21.62	-17.16
Fiber str. (0 gage).....	+.07	+1.13	+.55	-.05	-.04	+1.06	-.16	-.68	-.51
Uniformity ratio.....	-.82	-.16	+.23	+.01	+.03	+1.12	+1.95	+1.36	+.61
Standard Error (±).....	1.51	4.16	2.07	.17	.23	8.85	8.18	6.63	5.13

*Statistically insignificant

Table 18.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 26 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		SPY Number	Color of 22s yarn		
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	8.5	137	52	6.7	5.4	97	79	27	21	85	96	104	107
Color index.....	102	102	102	102	102	102	102	102	102	102	102	102	102
Nonlint content (S.A.).....	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2.5% span length.....	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Micronaire.....	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber str. (1/8" gage).....	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8
Standard Deviation (±) for:													
Dependent variable.....	2.1	7.7	3.7	.4	.3	21	17	19	14	6	4.0	3.0	4.0
Color index.....	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Nonlint content (S.A.).....	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
2.5% span length.....	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire.....	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber str. (1/8" gage).....	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Simple Correlation Coef. for:													
Color index.....	-.28	+.45	+.46	+.18	+.26	+.24	+.32	-.27	-.24	+.30	+.73	+.64	+.38
Nonlint content (S.A.).....	+.54	-.53	-.52	-.15	-.17	+.68	-.51	+.78	+.79	-.20	-.38	-.13	-.30
2.5% span length.....	-.32	+.65	+.66	+.09	+.27	+.34	+.32	-.35	-.40	+.46	+.56	+.48	+.42
Micronaire.....	-.18	+.23	+.22	-.26	-.15	+.75	+.82	-.69	-.73	+.38	+.44	+.11	+.79
Fiber str. (1/8" gage).....	-.08	+.66	+.62	-.53	-.49	+.14	+.22	-.33	-.34	+.47	-.01	-.18	+.20
Multiple Cor. Data for:													
DEPENDENT VARIABLE with COLOR INDEX, NONLINT													
Multiple Cor. Coef.....	.57	.63	.63	.22	.29	.69	.55	.79	.79	.33	.76	.64	.44
Partial Cor. Coef. for:													
Color index.....	-.20	+.41	+.43	+.16	+.24	+.14	+.25	-.17	-.12	+.27	+.72	+.63	+.34
Nonlint.....	+.51	-.50	-.48	-.11	-.12	-.67	-.48	+.77	+.78	-.14	-.34	+.01	-.24
Beta Coefficients for:													
Color index.....	-.17*	+.35*	+.37*	+.16*	+.24*	+.10*	+.22*	-.11*	-.08*	+.27*	+.68	+.64	+.34*
Nonlint.....	+.50*	-.46	-.44*	-.11*	-.12*	-.66	-.46*	+.76	+.77	-.14*	-.24*	+.01*	-.23*
Regression Equation:													
Constant (a).....	+19.05	+43.40	+3.70	+4.34	+2.86	+61.26	-40.50	+57.94	+26.31	+19.43	-7.50	+28.70	+57.81
Regression Coef. for:													
Color index.....	-.14	+1.03	+.52	+.02	+.03	+.82	+1.43	-.78	-.40	+.67	+1.05	+.73	+.51
Nonlint.....	+1.53	-5.06	-2.33	-.07	-.05	-20.24	-11.35	+20.48	+15.07	-1.27	-1.40	+.04	-1.30
Standard Error (±).....	1.73	5.92	2.84	.39	.28	15.25	14.10	11.36	8.26	6.07	2.61	2.33	3.56
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.57	.71	.71	.23	.30	.69	.56	.79	.79	.46	.77	.65	.47
Partial Cor. Coef. for:													
Color index.....	-.16	+.11	+.12	+.17	+.13	+.11	+.22	-.18	-.06	+.02	+.61	+.48	+.18
Nonlint.....	+.49	-.39	-.37	-.14	-.07	-.64	-.46	+.76	+.75	-.01	-.30	+.07	-.16
2.5% span length.....	+.01	+.42	+.43	-.08	+.10	+.00	-.03	+.08	-.06	+.33	+.06	+.15	+.18
Beta Coefficients for:													
Color index.....	-.17*	+.10*	+.11*	+.22*	+.16*	+.10*	+.24*	-.15*	-.05*	+.03*	+.64	+.55*	+.21*
Nonlint.....	+.50*	-.33*	-.30*	-.15*	-.08*	-.66	-.47*	+.78	+.76	-.01*	-.22*	+.06*	-.16*
2.5% span length.....	+.01*	+.45*	+.46*	-.11*	+.14*	+.00*	-.03*	+.06*	-.05*	+.44*	+.06*	+.16*	+.22*
Regression Equation:													
Constant (a).....	+18.76	-38.81	-36.71	+5.41	+1.90	+60.14	-26.76	+29.01	+43.80	-47.88	-13.10	+17.35	+36.49
Regression Coef. for:													
Color index.....	-.14	+.29	+.16	+.03	+.02	+.81	+1.56	-1.04	-.24	+.06	+.99	+.63	+.32
Nonlint.....	+1.53	-3.60	-1.61	-.08	-.03	-20.22	-11.60	+20.99	+14.76	-.08	-1.30	+.24	-.92
2.5% span length.....	+.47	+133.49	+65.62	-1.73	+1.56	+1.81	-22.32	+46.98	-28.39	+109.30	+9.09	+18.44	+34.61
Standard Error (±).....	1.73	5.38	2.57	.39	.28	15.25	14.10	11.33	8.24	5.72	2.61	2.31	3.50

*Statistically insignificant

Table 20.--Continued

Statistical Items	Dependent Variables							
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.....	.77	.59	.62	.57	.34	.86	.89	.88	.89
Partial Cor. Coef. for:									
Color index.....	-.17	+.26	+.23	+.32	+.27	-.13	+.07	+.01	+.07
Nonlint.....	+.29	-.18	-.21	-.30	-.07	-.44	-.43	+.71	+.70
2.5% span length.....	-.35	+.33	+.39	-.02	-.04	-.25	-.36	+.22	+.20
Micronaire.....	-.35	-.22	-.29	-.55	-.25	+.77	+.81	-.65	-.68
Beta Coefficients for:									
Color index.....	-.14*	+.29*	+.25*	+.36*	+.35*	-.09*	+.04*	+.01*	+.04*
Nonlint.....	+.23*	-.18*	-.21*	-.31*	-.08*	-.30*	-.26*	+.58	+.54
2.5% span length.....	-.34*	+.40*	+.48*	-.02*	-.06*	-.19*	-.24*	+.15*	+.14*
Micronaire.....	-.28*	-.21*	-.29*	-.64	-.29*	+.72	+.74	-.47	-.52
Regression Equation:									
Constant (a).....	+71.63	-53.97	-41.48	+4.82	+3.43	+268.68	+179.07	-54.66	-46.23
Regression Coef. for:									
Color index.....	-.14	+.85	+.33	+.04	+.04	-.68	+.31	+.04	+.16
Nonlint.....	+.84	-2.01	-1.05	-.13	-.03	-8.54	-6.70	+9.78	+7.28
2.5% span length.....	-32.39	+119.39	+64.84	-.22	-.62	-146.59	-170.04	+68.28	+48.92
Micronaire.....	-1.39	-3.26	-2.00	-.35	-.15	+28.59	+26.11	-11.04	-9.48
Standard Error (±).....	1.59	6.19	2.76	.23	.25	10.11	8.09	5.49	4.30
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)									
Multiple Cor. Coef.....	.77	.88	.82	.87	.66	.87	.90	.89	.89
Partial Cor. Coef. for:									
Color index.....	-.15	+.64	+.52	+.14	+.11	-.17	-.01	-.01	+.04
Nonlint.....	+.29	-.09	-.14	-.58	-.20	-.45	-.47	+.71	+.69
2.5% span length.....	-.34	+.17	+.28	+.33	+.16	-.21	-.29	+.23	+.22
Micronaire.....	-.35	-.47	-.48	-.67	-.22	+.77	+.82	-.64	-.68
Fiber str. (1/8" gage)...	+.04	+.80	+.69	-.79	-.61	-.15	-.27	-.07	-.09
Beta Coefficients for:									
Color index.....	-.13*	+.56*	+.49*	+.10*	+.11*	-.12*	-.01*	-.01*	+.03*
Nonlint.....	+.24*	-.05*	-.10*	-.44	-.19*	-.31*	-.28*	+.57	+.53
2.5% span length.....	-.35*	+.13*	+.25*	+.26*	+.18*	-.16*	-.19*	+.16*	+.15*
Micronaire.....	-.29*	-.31*	-.37*	-.54	-.20*	+.73	+.76	-.47	-.51
Fiber str. (1/8" gage)...	+.03*	+.72	+.62	-.73	-.64	-.08*	-.14*	-.04*	-.05*
Regression Equation:									
Constant (a).....	+70.51	-152.12	-79.85	+8.32	+6.38	+297.98	+223.27	-46.59	-38.79
Regression Coef. for:									
Color index.....	-.13	+1.65	+.65	+.01	+.01	-.92	-.06	-.03	+.09
Nonlint.....	+.85	-.60	-.50	-.18	-.07	-8.96	-7.33	+9.67	+7.17
2.5% span length.....	-33.38	+37.95	+33.36	+2.78	+1.87	-122.23	-133.96	+74.94	+55.12
Micronaire.....	-1.41	-4.73	-2.57	-.30	-.11	+29.03	+26.76	-10.92	-9.37
Fiber str. (1/8" gage).	+.05	+4.18	+1.62	-.15	-.13	-1.25	-1.85	-.34	-.32
Standard Error (±).....	1.59	3.73	1.99	.14	.20	10.00	7.79	5.47	4.28

*Statistically insignificant

Table 19.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 26 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	17.2	155	59	7.0	5.8	109	89	13	10
Grade index	98	98	98	98	98	98	98	98	98
Staple length	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Micronaire	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber strength (0 gage)	90	90	90	90	90	90	90	90	90
Uniformity ratio	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:									
Dependent variable	2.47	7.7	3.5	.28	.26	20.0	17.9	11.8	9.3
Grade index	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Staple length	.72	.72	.72	.72	.72	.72	.72	.72	.72
Micronaire	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber strength (0 gage)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Uniformity ratio	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Simple Correlation Coef. for:									
Grade index	-.48	+.31	+.26	+.16	+.09	+.35	+.42	-.46	-.44
Staple length	-.70	+.54	+.45	-.36	-.20	+.55	+.65	-.62	-.62
Micronaire	-.57	+.08	+.03	-.44	-.21	+.82	-.84	-.74	-.76
Fiber strength (0 gage)	-.10	+.60	+.63	-.65	-.43	+.09	-.01	-.11	-.11
Uniformity ratio	-.69	+.25	+.27	-.36	-.13	+.61	+.65	-.47	-.52
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH									
Multiple Cor. Coef.	.71	.54	.45	.54	.30	.56	.66	.64	.64
Partial Cor. Coef. for:									
Grade index	-.21	+.05	+.04	+.43	+.23	+.10	+.13	-.21	-.18
Staple length	-.60	+.46	+.39	-.52	-.28	+.46	+.56	-.50	-.51
Beta Coefficients for:									
Grade index	-.17*	+.05*	+.04*	+.46*	+.26*	+.10*	+.12*	-.19*	-.16*
Staple length	-.61	+.51*	+.03*	-.59*	-.33*	+.50*	+.59	-.52*	-.54*
Regression Equation:									
Constant (a)	+107.88	-57.98	-23.47	+11.55	+8.12	-467.36	-516.40	+396.74	+312.56
Regression Coef. for:									
Grade index	-.13	+.12	+.04	+.04	+.02	+.60	+.64	-.71	-.47
Staple length	-2.10	+5.44	+2.10	-.23	-.12	+13.99	+14.67	-8.49	-6.93
Standard Error (±)	1.73	6.50	3.12	.24	.25	16.56	13.46	9.03	7.17
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE									
Multiple Cor. Coef.	.72	.73	.66	.55	.30	.88	.88	.81	.82
Partial Cor. Coef. for:									
Grade index	-.25	-.17	-.16	+.38	+.21	+.53	+.51	-.47	-.45
Staple length	-.34	+.70	+.63	-.26	-.17	-.46	-.26	+.15	+.17
Micronaire	-.17	-.59	-.53	-.16	-.03	+.82	+.78	-.64	-.67
Beta Coefficients for:									
Grade index	-.22*	-.14*	-.14*	+.41*	+.25*	+.36	+.35*	-.39*	-.36*
Staple length	-.45*	+1.21	+1.10	-.41*	-.29*	-.44*	-.23*	+.17*	+.18*
Micronaire	-.19*	-.80	-.76	-.21*	-.04*	+1.08	+.94	-.78	-.83
Regression Equation:									
Constant (a)	+93.68	-244.70	-104.59	+9.73	+7.76	+192.22	-4.66	+116.09	+79.34
Regression Coef. for:									
Grade index	-.17	-.34	-.16	+.04	+.02	+2.25	+1.92	-1.41	-1.05
Staple length	-1.53	+12.89	+5.34	-.16	-.11	-12.33	-5.75	+2.71	+2.37
Micronaire	-.92	-12.16	-5.28	-.12	-.02	+42.95	+33.33	-18.28	-15.19
Standard Error (±)	1.71	5.25	2.64	.23	.25	9.50	8.40	6.94	5.33

*Statistically insignificant

Table 19.--Continued

Statistical Items	Dependent Variables							
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE)									
Multiple Cor. Coef.....	.72	.84	.80	.78	.48	.90	.88	.82	.83
Partial Cor. Coef. for:									
Grade index.....	-.25	+.11	+.11	+.37	+.16	+.48	+.51	-.47	-.45
Staple length.....	-.31	+.64	+.54	+.01	-.00	-.54	-.24	+.23	+.26
Micronaire.....	-.17	-.57	-.50	-.39	-.14	+.84	+.77	-.66	-.69
Fiber str. (O gage).....	-.01	+.61	+.61	-.66	-.39	+.35	+.00	-.23	-.25
Beta Coefficients for:									
Grade index.....	-.22*	+.08*	+.09*	+.31*	+.18*	+.31*	+.35*	-.37*	-.35*
Staple length.....	-.44*	+.89	+.75*	+.01*	-.01*	-.57	-.23*	+.27*	+.29*
Micronaire.....	-.19*	-.63	-.57*	-.44*	-.20*	+1.15	+.94	-.84	-.88
Fiber str. (O gage).....	-.01*	+.45	+.50	-.60	-.41*	+.18*	+.00*	-.15*	-.15*
Regression Equation:									
Constant (a).....	+93.71	-283.93	-122.63	+9.96	+7.95	+239.28	-4.66	+104.85	+69.72
Regression Coef. for:									
Grade index.....	-.17	+.19	+.09	+.03	+.01	+1.92	+1.92	-1.37	-1.01
Staple length.....	-1.51	+9.54	+3.64	+.00	-.00	-15.79	-5.78	+4.39	+3.74
Micronaire.....	-.94	-9.56	-3.96	-.24	-.10	+45.65	+33.35	-19.59	-16.26
Fiber str. (O gage).....	-.01	+1.12	+.57	-.05	-.03	+1.16	+.01	-.56	-.46
Standard Error (±).....	1.71	4.16	2.08	.18	.23	8.91	8.40	6.75	5.16
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.....	.79	.84	.81	.78	.49	.90	.89	.83	.83
Partial Cor. Coef. for:									
Grade index.....	-.22	+.12	+.09	+.37	+.14	+.48	+.50	-.48	-.46
Staple length.....	-.31	+.64	+.54	+.00	-.01	-.55	-.27	+.22	+.25
Micronaire.....	+.05	-.53	-.50	-.37	-.18	+.81	+.72	-.67	-.68
Fiber str. (O gage).....	+.12	+.60	+.59	-.65	-.41	+.31	-.05	-.27	-.27
Uniformity ratio.....	-.47	-.04	+.11	+.03	+.13	+.12	+.22	+.19	+.11
Beta Coefficients for:									
Grade index.....	-.17*	+.09*	+.07*	+.31*	+.16*	+.31*	+.33*	-.38*	-.35*
Staple length.....	-.39*	+.90	+.74*	+.00*	-.02*	-.58*	-.25*	+.25*	+.28*
Micronaire.....	+.06*	-.61*	-.62*	-.45*	-.29*	+1.11	+.86	-.93	-.93
Fiber str. (O gage).....	+.08*	+.46	+.49	-.61	-.44*	+.17*	-.03*	-.18*	-.17*
Uniformity ratio.....	-.46*	-.03*	+.09*	+.03*	+.17*	+.08*	+.15*	+.16*	+.09*
Regression Equation:									
Constant (a).....	+109.97	-281.24	-126.62	+9.84	+7.33	-212.95	-43.77	+75.13	+56.45
Regression Coef. for:									
Grade index.....	-.13	+.21	+.08	+.03	+.01	+1.91	+1.84	-1.40	-1.02
Staple length.....	-1.35	+9.57	+3.60	+.00	-.01	-16.01	-6.16	+4.12	+3.63
Micronaire.....	+.29	-9.32	-4.31	-.25	-.15	+43.98	+30.44	-21.62	-17.16
Fiber str. (O gage).....	+.07	+1.13	+.55	-.05	-.04	+1.06	-.16	-.68	-.51
Uniformity ratio.....	-.82	-.16	+.23	+.01	+.03	+1.12	+1.95	+1.36	+.61
Standard Error (±).....	1.51	4.16	2.07	.17	.23	8.85	8.18	6.63	5.13

*Statistically insignificant

Table 20.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 26 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1968

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex.	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	17.2	155	59	7.0	5.8	109	89	13	10
Color index	102	102	102	102	102	102	102	102	102
Nonlint content (S.A.)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2.5% span length	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Micronaire	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Fiber str. (1/8" gage)	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8
Standard Deviation (±) for:									
Dependent variable	2.47	7.7	3.5	.28	.26	20.0	17.9	11.8	9.3
Color index	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Nonlint content (S.A.)	.69	.69	.69	.69	.69	.69	.69	.69	.69
2.5% span length	.026	.026	.026	.026	.026	.026	.026	.026	.026
Micronaire	.50	.50	.50	.50	.50	.50	.50	.50	.50
Fiber str. (1/8" gage)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Simple Correlation Coef. for:									
Color index	-.48	+.47	+.44	+.17	+.20	+.21	+.36	-.27	-.24
Nonlint content (S.A.)	+.55	-.29	-.29	-.03	-.03	-.61	-.60	+.78	+.77
2.5% span length	-.64	+.53	+.55	+.02	+.04	+.29	+.34	-.36	-.36
Micronaire	-.57	-.08	+.03	-.44	-.21	+.82	-.84	-.74	-.76
Fiber str. (1/8" gage)	-.23	+.67	+.59	-.68	-.59	+.19	+.11	-.31	-.32
Multiple Cor. Data for:									
DEPENDENT VARIABLE with COLOR INDEX, NONLINT									
Multiple Cor. Coef.	.67	.51	.48	.17	.22	.62	.64	.79	.77
Partial Cor. Coef. for:									
Color index	-.45	+.43	+.40	+.17	+.22	+.10	+.29	-.16	-.12
Nonlint	+.52	-.21	-.22	+.00	+.08	-.59	-.57	+.77	+.76
Beta Coefficients for:									
Color index	-.38*	+.43*	+.40*	+.17*	+.22*	+.08*	+.23*	-.10*	-.08*
Nonlint	+.47	-.19*	-.21*	+.01*	+.08*	-.59	-.55	+.76	+.75
Regression Equation:									
Constant (a)	+49.97	+30.70	+6.80	+5.15	+3.43	+84.08	-43.58	+28.96	+14.77
Regression Coef. for:									
Color index	-.36	+1.27	+.53	+.02	+.02	+.64	+1.62	-.46	-.28
Nonlint	+1.68	-2.16	-1.04	+.00	+.03	-17.10	-14.12	+12.96	+10.11
Standard Error (±)	1.84	6.63	3.06	.28	.26	15.75	13.71	7.20	5.88
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH									
Multiple Cor. Coef.	.73	.57	.57	.21	.24	.62	.64	.79	.77
Partial Cor. Coef. for:									
Color index	-.17	+.21	+.15	+.21	+.23	+.09	+.27	-.15	-.10
Nonlint	+.42	-.10	-.09	-.04	+.04	-.57	-.56	+.75	+.74
2.5% span length	-.39	+.29	+.34	-.13	-.09	-.01	-.06	+.04	+.01
Beta Coefficients for:									
Color index	-.15*	+.23*	+.16*	+.27*	+.29*	+.09*	+.28*	-.12*	-.09*
Nonlint	+.35*	-.09*	-.08*	-.05*	+.04*	-.60	-.57	+.77	+.76
2.5% span length	-.40*	+.35*	+.41*	-.17*	-.13*	-.02*	-.07*	+.04*	+.01*
Regression Equation:									
Constant (a)	+73.94	-33.40	-27.35	+6.30	+4.24	+91.74	-14.32	+18.81	+12.05
Regression Coef. for:									
Color index	-.14	+.68	+.22	+.03	+.03	+.71	+1.89	-.55	-.30
Nonlint	+1.26	-1.02	-.44	-.02	+.02	-17.23	-14.64	+13.14	+10.16
2.5% span length	-38.93	+104.08	+55.44	-1.87	-1.32	-12.44	-47.53	+16.48	+4.42
Standard Error (±)	1.70	6.34	2.85	.27	.26	15.75	13.68	7.20	5.88

*Statistically insignificant

Table 20.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex	22s or 26.8 tex	50s or 11.8 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.....	.77	.59	.62	.57	.34	.86	.89	.88	.89
Partial Cor. Coef. for:									
Color index.....	-.17	+.26	+.23	+.32	+.27	-.13	+.07	+.01	+.07
Nonlint.....	+.29	-.18	-.21	-.30	-.07	-.44	-.43	+.71	+.70
2.5% span length.....	-.35	+.33	+.39	-.02	-.04	-.25	-.36	+.22	+.20
Micronaire.....	-.35	-.22	-.29	-.55	-.25	+.77	+.81	-.65	-.68
Beta Coefficients for:									
Color index.....	-.14*	+.29*	+.25*	+.36*	+.35*	-.09*	+.04*	+.01*	+.04*
Nonlint.....	+.23*	-.18*	-.21*	-.31*	-.08*	-.30*	-.26*	+.58	+.54
2.5% span length.....	-.34*	+.40*	+.48*	-.02*	-.06*	-.19*	-.24*	+.15*	+.14*
Micronaire.....	-.28*	-.21*	-.29*	-.64	-.29*	+.72	+.74	-.47	-.52
Regression Equation:									
Constant (a).....	+71.63	-53.97	-41.48	+4.82	+3.43	+268.68	+179.07	-54.66	-46.23
Regression Coef. for:									
Color index.....	-.14	+.85	+.33	+.04	+.04	-.68	+.31	+.04	+.16
Nonlint.....	+.84	-2.01	-1.05	-.13	-.03	-8.54	-6.70	+9.78	+7.28
2.5% span length.....	-32.39	+119.39	+64.84	-.22	-.62	-146.59	-170.04	+68.28	+48.92
Micronaire.....	-1.39	-3.26	-2.00	-.35	-.15	+28.59	+26.11	-11.04	-9.48
Standard Error (±).....	1.59	6.19	2.76	.23	.25	10.11	8.09	5.49	4.30
DEPENDENT VARIABLE with COLOR INDEX, NONLINT, 2.5% SPAN LENGTH, MICRONAIRE, FIBER STRENGTH (1/8" GAGE)									
Multiple Cor. Coef.....	.77	.88	.82	.87	.66	.87	.90	.89	.89
Partial Cor. Coef. for:									
Color index.....	-.15	+.64	+.52	+.14	+.11	-.17	-.01	-.01	+.04
Nonlint.....	+.29	-.09	-.14	-.58	-.20	-.45	-.47	+.71	+.69
2.5% span length.....	-.34	+.17	+.28	+.33	+.16	-.21	-.29	+.23	+.22
Micronaire.....	-.35	-.47	-.48	-.67	-.22	+.77	+.82	-.64	-.68
Fiber str. (1/8" gage)...	+.04	+.80	+.69	-.79	-.61	-.15	-.27	-.07	-.09
Beta Coefficients for:									
Color index.....	-.13*	+.56*	+.49*	+.10*	+.11*	-.12*	-.01*	-.01*	+.03*
Nonlint.....	+.24*	-.05*	-.10*	-.44	-.19*	-.31*	-.28*	+.57	+.53
2.5% span length.....	-.35*	+.13*	+.25*	+.26*	+.18*	-.16*	-.19*	+.16*	+.15*
Micronaire.....	-.29*	-.31*	-.37*	-.54	-.20*	+.73	+.76	-.47	-.51
Fiber str. (1/8" gage)...	+.03*	+.72	+.62	-.73	-.64	-.08*	-.14*	-.04*	-.05*
Regression Equation:									
Constant (a).....	+70.51	-152.12	-79.85	+8.32	+6.38	+297.98	+223.27	-46.59	-38.79
Regression Coef. for:									
Color index.....	-.13	+1.65	+.65	+.01	+.01	-.92	-.06	-.03	+.09
Nonlint.....	+.85	-.60	-.50	-.18	-.07	-8.96	-7.33	+9.67	+7.17
2.5% span length.....	-33.38	+37.95	+33.36	+2.78	+1.87	-122.23	-133.96	+74.94	+55.12
Micronaire.....	-1.41	-4.73	-2.57	-.30	-.11	+29.03	+26.76	-10.92	-9.37
Fiber str. (1/8" gage).	+.05	+4.18	+1.62	-.15	-.13	-1.25	-1.85	-.34	-.32
Standard Error (±).....	1.59	3.73	1.99	.14	.20	10.00	7.79	5.47	4.28

*Statistically insignificant

MEASURES USED IN STATISTICAL ANALYSIS

Results reported in this study include the means, standard deviations, simple and multiple correlation coefficients, beta values, partial correlation coefficients, and regression equations for each cotton quality measurement. Because some of the statistical concepts may be unfamiliar to many who will find the information in this report useful, a common language explanation is given of each item as it is used in this report. Formulas for each may be found in any good textbook on statistical correlation methods.

(1) Mean Value is the arithmetical average of each measured property for the spinning lots included in the study.

(2) Standard deviation is a measure of dispersion around the mean value, expressed in the same terms as the variable. For a normal distribution, approximately 68 percent of the values will be within plus or minus one standard deviation of the mean, 95 percent within plus or minus two standard deviations, and nearly all values will be within plus or minus three standard deviations. For example, if the mean for staple length in 32nds of an inch is 34.0 with a standard deviation of ± 1.0 32nds, approximately 68 percent of the lots should be between 33.0 and 35.0 in staple length, 95 percent between 32.0 and 36.0, and nearly all lots between 31.0 and 37.0.

(3) Simple correlation coefficient (r) is a measure of the linear relationship between two variables. A correlation coefficient of 0 indicates no relationship, and 1.0 indicates a perfect relationship. A plus sign before the correlation coefficient indicates that the values for both variables change in the same direction, whereas a minus sign indicates that they change in opposite directions.

(4) Multiple correlation coefficient (R) is a measure of the linear relationship between one dependent variable and two or more independent variables. It has no plus or minus sign because one independent variable may contribute positively, and another negatively, in explaining the variation in the dependent variable. The multiple R may fall between 0 and 1.0, in which case 0 indicates no relationship and 1.0 a perfect relationship.

(5) Although the coefficient of determination (R^2, or r^2) is not given, it can be obtained easily by squaring the simple r's or multiple R's and multiplying by 100. This gives the percentage of variation explained, a measure of the amount of variation in the dependent variable which is explained by variation in the independent variables. For example, a correlation of R = 0.50, when squared and multiplied by 100, gives 25. This means that 25 percent of the variation in the dependent variable is explained by the independent variables; the remaining 75 percent of the variation is unexplained.

(6) Partial correlation coefficient (r) in a multiple analysis is similar to a simple correlation coefficient. The simple r indicates the statistical

relationship between two variables without any control of other variables. In a multiple analysis, the partial correlation coefficient is one measure of the net relationship between one independent variable and the dependent variable while the influence of the other independent variables are statistically removed.

(7) Beta coefficients (B) in a multiple analysis are sometimes preferred over use of partial r's. A Beta coefficient is another measure of the relative importance of a variable in a multiple correlation, with the influence of the other variables removed. Quite often, only one of these measures (Beta or partial r) is used for interpretation; both are included in this report. An asterisk beside the Beta value indicates that the result is statistically insignificant (less than three times its standard error).

(8) Regression equation or estimating equation is used to predict changes in the dependent variable which will result from changes in the independent variable or variables. It is written:

$$Y = a + b_1X_1 + b_2X_2 + \ldots b_NX_N$$

where Y is the dependent variable and the X's are independent variables.

The constant "a" indicates the starting point or height of the regression line when it is to be plotted on a graph or to be used in calculating changes in the dependent variable. The regression coefficient "b" indicates the change in the dependent variable that is associated with each unit change in the independent variable. For example, if the regression coefficient "b" is +4.0 for staple length expressed in one-thirty-seconds of an inch in a regression equation in which yarn skein strength is the dependent variable, then for every one-thirty-second increase in staple length, yarn strength increases four pounds.

The spread or scatter of the data around the regression line is measured by the standard error. Using the same example, for one standard error of 3.0 pounds, it can be expected that approximately 68 percent of the lots will have a calculated yarn strength within plus or minus three pounds of the measured yarn strength. The standard error has the same relationship to the regression line as the standard deviation (see paragraph (2) above) has to the mean value.

Regression equations are given in the tables for multiple relationships only. The following example of the use of these equations is shown by using the equation given in the first column of Table 15 at the bottom of page 85.

Regression equation for picker and card waste:

Constant (a)	+22.88
Regression coefficient for:	
Grade index	-.15
Staple length	-.04
Micronaire	-.38
Standard error	±.79

Expressing these figures algebraically we have:

Estimated picker and card waste (percent) =
22.88 - .15 (grade index) - .04 (staple length) - .38 (micronaire)

Thus if we wished to predict the amount of picker and card waste from a bale of cotton of Middling grade (index--100), a staple length of 1-1/16 inches (34 32ds) and a micronaire of 4.5, the equation would be:

Estimated picker and card waste = 22.88 - .15(100) - .04(34) - .38(4.5)

Estimated picker and card waste = 4.81%

The standard error of the equation of ±.79 indicates that the actual picker and card waste obtained from this kind of cotton would be within plus or minus .79 percent (between 5.60 and 4.02) 68 times in 100.

A check on the accuracy of this figure can be made from the average results for Middling grade, 1-1/16 inch staple, in Table 3 for the different Areas.

Equations for simple relationships may be calculated by using the formula:

$$Y = a + bX$$

where a = Mean Y - b(Mean X)

$$b = r \frac{\text{Std. Dev. Y}}{\text{Std. Dev. X}}$$

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it is well to keep in mind several factors which influence the results and could lead to erroneous conclusions.

Correlation values are significantly influenced by the specific variables included, and by their number. This is due to the interrelationships of fiber properties. As interrelated properties are added to a correlation, the specific contribution of a given property may decrease sharply while at the same time the overall correlation will increase. For example, a correlation of staple length with yarn strength usually shows a good relationship, with a large amount of the variation in yarn strength explainable by differences in staple length. But, as other measures are taken into consideration, particularly fiber strength at 1/8-inch gage, the importance of staple length in explaining the total variation in yarn strength decreases rather sharply, even though the total variation explained is increased. This situation occurs because fiber strength is more closely related to yarn strength than is staple length. Yet, when fiber strength is not included in the correlation, some of the effects of strength are evidence through the interrelation of strength and staple length.

Perhaps the most important fact to be kept in mind is that the use of only one statistic, such as a multiple R, a partial r, or a Beta value, can lead to erroneous conclusions. In order to determine the importance of any variable, all of the statistical items for each study should be considered.

BASIS FOR INTERPRETATION

The following explanation of the data published in Tables 1 through 9 of this report 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 for the individual lots but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for white, spotted, tinged and gray grades of upland cotton are shown below:

Grade Name	Grade index for					
	White	Light Spotted	Spotted	Tinged	Light Gray	Gray
Good Middling	105	103	101	94	99	93
Strict Middling	104	102	99	91	98	91
Middling plus	102					
Middling	100	97	93	82	92	84
Strict Low Middling plus	97					
Strict Low Middling	94	89	83	75	85	75
Low Middling plus	90					
Low Middling	85	80	75	68		
Strict Good Ordinary plus	81					
Strict Good Ordinary	76					
Good Ordinary plus	73					
Good Ordinary	70					
Below Grade	60					

The grade of cotton, as the term is generally understood, is obtained 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 fiber color and the waste content of a sample of cotton. 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 in the subsequent section on manufacturing waste. In comparing these average grade figures with the picker and card waste data, 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 is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. 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 also influenced by other fiber properties, the measurements of which will be discussed in the paragraphs which follow.

Fiber Tests

Fiber length data were obtained by the Digital Fibrograph method for the short, medium, and long staple American upland samples and by the array method for the extra long American Egyptian samples. Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton weighing approximately 30 centigrams at random on a pair of combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at 3 length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe. The 2.5 percent span length and the 50/2.5 uniformity ratio values reported for each lot are based on five specimens tested by each of two technicians.

The Digital Fibrograph 2.5 percent span length values reported indicate the length which will be spanned by 2.5 percent of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5 percent of the amount of fibers reading at the starting point of 0.15 inch. The Digital Fibrograph 2.5 percent span length values are closely related to staple length designations.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50 percent span length and the 2.5 percent span length, expressed as percentages. Larger values indicate more uniform fiber length distribution. Unusually low fiber length uniformity tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. The following adjective descriptions will serve to classify cottons from the standpoint of 2.5 percent span length and fiber length uniformity:

2.5 Percent Span Length	50/2.5 Uniformity Ratio
Below 1.00....Short	Below 42.....Very low uniformity
1.00 - 1.14...Medium	42 - 43.....Low uniformity
1.15 - 1.29...Long	44 - 45.....Average uniformity
Above 1.29....Extra Long	46 - 47.....High uniformity
	Above 47.....Very high uniformity

Data source - 2897 American upland lots tested from crops of 1960-62.

Array tests for the extra long staple American Egyptian and upland samples were performed on the Suter-Webb fiber sorter. Briefly, this method consists of parallelizing the fibers in a representative 75-milligram specimen of cotton through a series of combs, separating the fibers into length groups at 1/8-inch intervals, and weighing the fibers in each length group. The upper quartile length and coefficient of variation values reported are based on one specimen tested by each of two technicians.

The array upper quartile length values reported indicate the length which is exceeded by 25 percent of the weight of the fibers in the samples. They are closely related to and longer than both the Fibrograph and the classer's staple designations. This relationship may vary, however, because the methods measure different fiber length characteristics.

The array coefficient of length variation values reported indicate the relative variability of fiber length in the samples. They represent the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. Smaller values indicate more uniform fiber length distributions. Excessive fiber length variation 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. The following adjective descriptions will serve to classify cottons from the standpoint of upper quartile length and fiber length variation:

Upper Quartile Length	Coefficient of Fiber Length Variation
Below 1.10.....Short	Below 26.....Very low variation
1.10 - 1.24....Medium	26 - 29.....Low variation
1.25 - 1.39....Long	30 - 33.....Average variation
Above 1.39.....Extra Long	34 - 37.....High variation
	Above 37.....Very high variation

Data source - 830 American upland lots tested from crops of 1958-60.

Fiber fineness and maturity in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. A representative standard weight of cotton fibers is placed in the instrument specimen holder and compressed to a fixed volume. Air at a known pressure is forced through the specimen and the

amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight per unit length, or the cross sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings are taken from the curvilinear scale adopted in 1950, and now in international use. 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.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps, and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, and Port-Ar, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e. "micronaire reading." The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

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 without a space between the clamp jaws (0 gage) using the Pressley flat bundle tester, and with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer. Strength results from both the Pressley and the Stelometer were controlled at the same level by use of standard calibration cottons. Use of the Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than the results of the zero gage tests. Results for both methods are reported, however, because the zero gage tests are widely used by the cotton industry.

The results for the Pressley zero gage test are reported in terms of thousand pounds per square inch, as calculated by the use of Formula 1. These results may be converted to other methods of expressing fiber strength by use of Formulas 2, 3, and 4:

(1) Thousand pounds per square inch (Mpsi) =

$$\frac{\text{breaking load in lb} \times 10.81}{\text{bundle weight in mg}}$$

(2) Grams per tex (gm/tex) = Mpsi x 0.496

(3) Strength-weight ratio = Mpsi ÷ 10.81

(4) Strength-weight ratio = gm/tex ÷ 5.36

The results of the 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM), and the Internation Standards Organization (ISO). A tex unit is equal to the weight in grams of 1000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and fiber length. Cottons with short lengths tend to have lower average strength values than long staple cottons. Results for 1/8-inch gage tests are calculated by use of Formula 5. Stelometer results are adjusted to Pressley level by use of calibration cottons.

$$(5)\quad \text{Grams per tex} = \frac{\text{breaking load (kg) x 15}}{\text{bundle weight}}$$

The following descriptive terms may be applied to the data shown in this report:

Staple length group and adjective description	Zero gage (thousand psi)	1/8-inch gage (grams per tex)
Short staple:		
Low strength	71 - 76	18.5 - 19.9
Average strength	77 - 82	20.0 - 21.4
High strength	83 - 88	21.5 - 22.9
Medium staple:		
Low strength	74 - 79	19.0 - 20.9
Average strength	80 - 85	21.0 - 22.9
High strength	86 - 91	23.0 - 24.9
Long staple:		
Low strength	82 - 85	23.5 - 24.4
Average strength	86 - 89	24.5 - 25.4
High strength	90 - 93	25.5 - 26.4
Extra long staple:		
Low strength	91 - 94	31.5 - 32.4
Average strength	95 - 98	32.5 - 33.4
High strength	99 - 102	33.5 - 34.4

These values are based on the averages and standard deviations of the results reported in the Annual Quality Survey for the 1962, 63, and 64 crops.

Fiber elongation results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument and are reported in both the periodic and summary reports. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

Fiber elongation (1/8-inch gage)

Designation	Percent
Very low	4.8 and below
Low	4.9 to 5.7
Average	5.8 to 6.6
High	6.7 to 7.5
Very high	7.6 and above

Data source - 1991 American upland lots tested from the crops of 1961-62.

Nonlint content for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

Average nonlint content for white grades of upland cotton

Grade of cotton	Nonlint content Percent
Good Middling	1.5
Strict Middling	1.6
Middling	2.2
Strict Low Middling	3.1
Low Middling	4.5
Strict Good Ordinary	5.8

Data source - 2897 American upland lots tested from crops of 1960-62.

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

Nonlint content for grades of American Egyptian cotton

Grade of cotton	Nonlint content Percent
1	1.1
2	1.9
3	2.7
4	3.6
5	4.4
6	5.3

Data source - 158 American Egyptian lots tested from the crops of 1956-60.

Differences between results obtained for individual lots and the percentages shown for the grades 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.

Color measurements were made on samples of raw stock from each lot by using the Nickerson-Hunter Colorimeter. The basic color values reported 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 of raw cotton is also reported as both a single index number and as a single code number. The index number is related to market value and is equivalent to the grade index described in the earlier section on classification. It also provides a method for averaging the composite color for a number of individual lots. The code number provides an identification of the color measurements for an individual lot with the color of the grade standards, but it cannot be used to average the composite color of a number of individual lots (Figure 2). The first digit of this 3-digit code relates to grade as indicated by numbers 1 for Good Middling through 7 for Good Ordinary. The second digit of the code relates to placement within the grade as indicated by 0 for the upper half and by 5 for the lower half. The third digit in the code relates to yellowness as indicated by numbers 1 for the whitest side of the grade through 9 for the color of the yellow stained grades. The color values for the American upland samples may also be plotted on the diagram shown as Figure 2, or those for American Egyptian samples may be plotted on the diagram shown as Figure 3, for comparison with the color of the cotton in official grade standards.

Yarn Processing Tests

The results of yarn processing tests reported in this summary were obtained by procedures adopted in 1962 which include heavier weights for laps,

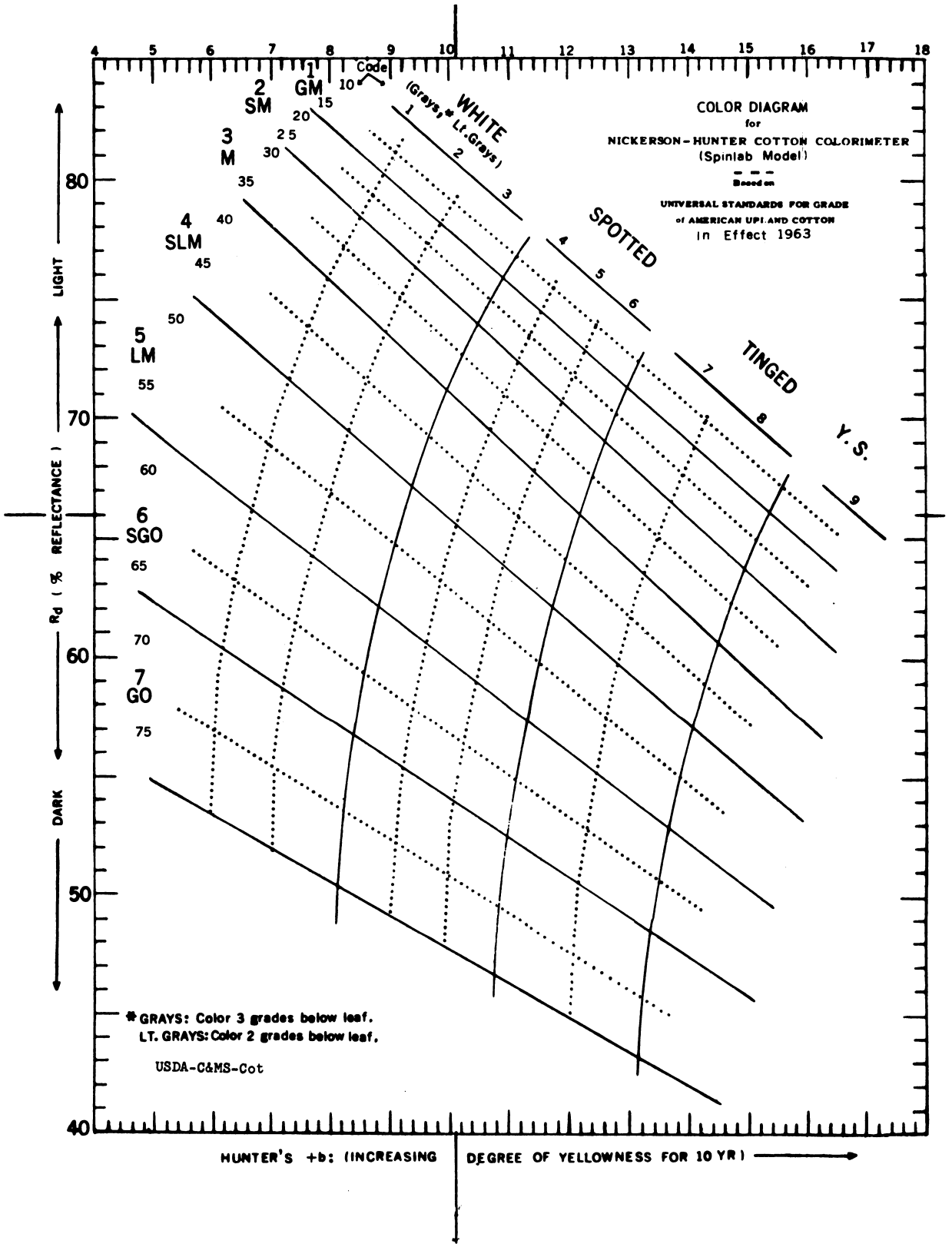

Fig. 2.--Code for relating color measurements of raw cotton to the color of American upland grade standards.

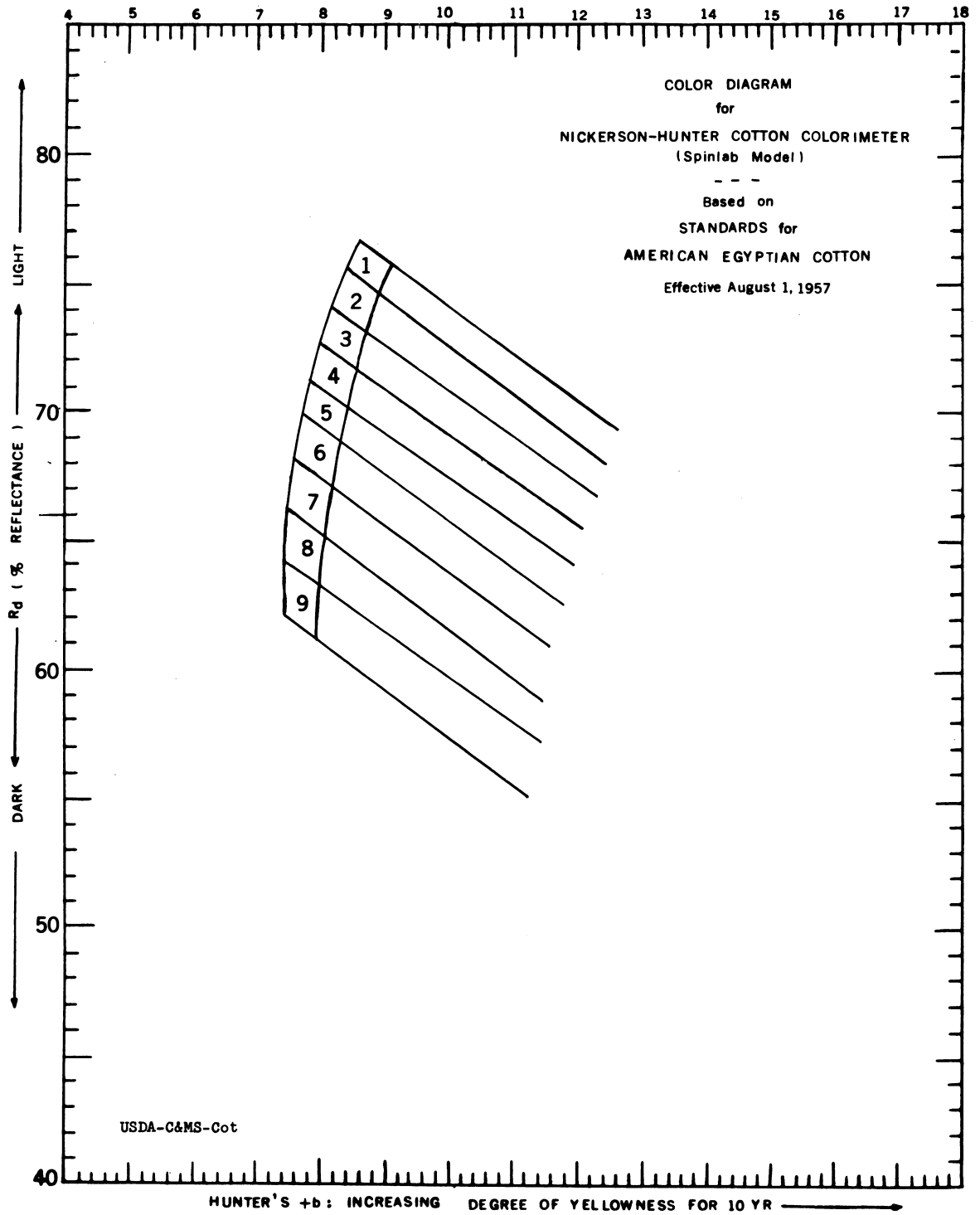

Fig. 3.--Diagram for relating color measurements of raw cotton to the color of American Egyptian grade standards

slivers and rovings than those used in previous years. These procedures also include spinning from single roving instead of double roving for the two standard yarn numbers and the spinning of a third yarn number on all the samples to provide a small-scale measure of spinning end-breakage or spinning performance. In 1965, metallic card clothing was installed on the carding machines to replace the conventional fillet clothing used previously, and in 1966, crusher rolls were installed on the card machines. These changes reflect similar changes that have taken place in the cotton textile industry including increased emphasis on running quality since the mid-1940's when long-draft systems were adopted for both the roving and spinning processes in the routine laboratory spinning test procedures. These changes were designed to bring the laboratory processing procedures more in line with current textile mill practices and thus make the processing evaluations more applicable to present day mill operations.

The card production rate employed and the yarn numbers spun for each cotton were selected on the basis of the staple length expected in the specified area of growth as described in the earlier section on test procedures. Four different length groupings were used to cover the range of cottons grown in this country and to approach commercial practices in processing these cottons. The spinning twist multipliers were selected to provide maximum yarn strength on the basis of staple length. Details of the spinning test procedures are shown at the end of this section of the report (Table 21). Results of previous tests show that decreasing the card production rate results in fewer neps, improved yarn appearance grades, and removal of more waste at the card. Results of tests on the various lots should therefore be compared directly for only those lots in the same length group which were processed in a comparable manner.

Manufacturing waste reported for a sample of cotton 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 in the previous section on the grade of cotton. 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. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American upland grade	Average picker and card waste (percent)*	American Egyptian grade	Average picker and card waste (percent)
Good Middling	4.4	1	4.9
Strict Middling	4.5	2	6.0
Middling	5.0	3	7.0
Strict Low Middling	5.7	4	8.0
Low Middling	6.8	5	9.0
Strict Good Ordinary	7.8	6	10.0

*Adjusted for difference in waste removed by metallic clothing in use since 1965

Data source - 2897 lots tested from crops of 1960-62 for American upland and 158 lots tested from crops of 1956-60 for American Egyptian.

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 for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

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 gray or natural yarn (number x strength) for the two numbers spun, are reported for each lot. There is an average relationship between yarn strength and staple length but it varies for the individual cottons because of differences in other characteristics of the fiber.

The following descriptive terms may be of help in determining the relative level of yarn strength in this report:

Carded Yarn Skein Strength

Short Staple Group

	8s	22s
Low	259 - 280	78 - 86
Average	281 - 302	87 - 95
High	303 - 324	96 - 104

Medium Staple Group

	22s	50s
Low	89 - 100	29 - 34
Average	101 - 112	35 - 40
High	113 - 124	41 - 46

Long Staple Group

	22s	50s
Low	126 - 132	44 - 48
Average	133 - 141	49 - 53
High	142 - 150	54 - 58

Combed Yarn Skein Strength

Long Staple Group

	22s	50s
Low	140 - 148	50 - 54
Average	149 - 157	55 - 59
High	158 - 166	60 - 64

Data source - Annual Quality Surveys, 1961-64.

Extra Long Staple Group

	50s	80s
Low	67 - 69	37 - 38
Average	70 - 72	39 - 40
High	73 - 75	41 - 42

Data source - Annual Quality Surveys, 1956-60.

Yarn elongation results were obtained in connection with yarn skein strength tests. Elongation in the yarn is highly correlated with fiber elongation. Yarns with high elongation give less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in determining the relative levels of yarn elongation:

Short Staple Group

	8s	22s
Low	5.8 - 6.3	5.2 - 5.7
Average	6.4 - 6.9	5.8 - 6.3
High	7.0 - 7.5	6.4 - 6.9

Medium Staple Group

	22s	50s
Low	5.2 - 5.7	3.8 - 4.3
Average	5.8 - 6.3	4.4 - 4.9
High	6.4 - 6.9	5.0 - 5.5

Long Staple Group

	22s	50s
Low	5.9 - 6.4	4.6 - 5.1
Average	6.5 - 7.0	5.2 - 5.7
High	7.1 - 7.6	5.8 - 6.3

Data source - Annual Quality Surveys, 1961-64.

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 latest standards adopted by the American Society for Testing and Materials. Since 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 indices for both yarn numbers spun. Tests performed in recent years have shown approximately the following relationship of yarn appearance to staple length:

Carded Yarns
Yarn Appearance Index

Short Staple Group

	8s	22s
Low	103 - 110	90 - 99
Average	111 - 118	100 - 109
High	119 - 126	110 - 119

Medium Staple Group

	22s	50s
Low	96 - 105	85 - 93
Average	106 - 115	94 - 102
High	116 - 125	103 - 111

Long Staple Group

	22s	50s
Low	86 - 94	74 - 84
Average	95 - 103	85 - 95
High	104 - 112	96 - 106

Combed Yarns
Yarn Appearance Index

Long Staple Group

	22s	50s
Low	93 - 101	81 - 91
Average	102 - 110	92 - 102
High	111 - 119	103 - 113

Data source - Annual Quality Surveys, 1961-64.

Extra Long Staple Group

	50s	80s
Low	102 - 111	95 - 103
Average	112 - 121	104 - 112
High	122 - 131	113 - 121

Data source - Annual Quality Surveys, 1956-60.

Yarn Appearance Grades

Grade	Index
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
BG	60

Yarn imperfections are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on "Neptel" instruments which electronically count the abrupt changes in the silhouette of the yarn while passing it through a beam of light. They are expressed as the number of imperfections per 50 yards of yarn and are based on the average of 10 determinations. This value is an instrument measure of product quality which is associated with the characteristics of the cotton. It is more highly correlated with fiber properties than either neps in card web or yarn appearance grade. The following descriptive terms may be of help in determining the relative level of yarn imperfections in this report:

Carded Yarns
Yarn Imperfections

Short Staple Group

	8s	22s
Low	17 - 31	9 - 19
Average	32 - 45	20 - 29
High	46 - 59	30 - 39

Medium Staple Group

	22s	50s
Low	5 - 12	4 - 8
Average	13 - 19	9 - 14
High	20 - 26	15 - 19

Long Staple Group

	22s	50s
Low	5 - 15	4 - 11
Average	16 - 26	12 - 19
High	27 - 37	20 - 26

Combed Yarns
Yarn Imperfections

Long Staple Group

	22s	50s
Low	0 - 8	0 - 6
Average	9 - 19	7 - 14
High	20 - 30	15 - 22

Data source - Annual Quality Surveys, 1961-64.

Extra Long Staple Group

	50s	80s
Low	0 - 2	0 - 1
Average	3 - 5	2 - 4
High	6 - 8	5 - 6

Data source - Annual Quality Surveys, 1956-60.

Spinning potential yarn number indicates the finest yarn number that can be spun from a cotton sample without any end-breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end-breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end-breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end-breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a 1-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end-breakages during the 1-hour test run. The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

Spinning Potential (SPY No.)*

	Short Staple	Medium Staple	Long Staple
Low	36 - 41	51 - 58	75 - 79
Average	42 - 45	59 - 66	80 - 85
High	46 - 52	67 - 74	86 - 90

Data source - Annual Quality Surveys, 1962-64.

Chemical Finishing Tests

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. Details of the chemical finishing tests are described in Agricultural Information Bulletin No. 167 - "Bleaching, Dyeing, and Mercerizing Test Results on Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955."

Color measurements of cotton yarn samples were made on a Gardner Automatic Color Difference Meter. These values are reported in terms of R_d and b, two of the three scales on the instrument. The R_d scale measures percentages 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 either yellowness or blueness increases as the scale numbers increase. These data when plotted with R_d on the vertical ordinate and with b on the horizontal ordinate are similar to the color values for raw cotton when plotted in relation to the official grade standards as described in the earlier section on color of raw stock.

While the color factors R_d and b are not independent of each other and should be considered together in any overall interpretation, for many purposes it would be convenient in evaluating results to have them in terms of a single number. For raw cotton the grade index provides one way to do this in a straightforward manner. A similar method has been followed in developing conversion formulae and diagrams for each form of cotton measured for color as a part of the chemical finishing studies of the Cotton Division. In each, the index for Middling is held at 100 and that for Good Ordinary is held close to 70. By use of such indices the color measurements of raw stock, gray yarns, bleached yarns, and bleached and dyed yarns may be converted to a single number specification. For details see "Grade and Color Indexes Developed for Evaluating Results of USDA Cotton Finishing Tests," (AMS-245, June 1958).

Table 21.--Cotton: Standard machine settings and specifications for processing specified staple length groupings

Process	Staple length groups			
	Short	Medium	Long	Extra long
1. PICKER				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Each test lot is processed through a finisher type picker twice to produce the specified weight of lap.....ounces per yard	14	14	14	11
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				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Picker lap fed.....ounces per yard	14	14	14	11
Sliver delivered.....grains per yard	50	50	50	40
Production rate.....pounds per hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer speed.....r.p.m.	11	8	6	4
Cylinder speed.....r.p.m.	165	165	165	165
Flat speed.....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
Clothing:				
Cylinder, Hollingsworth metallic.....number	35	35	25	25
Doffer, Hollingsworth metallic.....number	29	29	29	29
Flats, Fillet.....number	110	110	130	130
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
Crusher rolls pressure.....pounds	281	281	281	281
3. SLIVER LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Sliver fed, 20 each.....grains per yard	--	--	50	40
Lap delivered.....grains per yard	--	--	595	525
Speed.....yards per minute	--	--	46	46
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	5/16	5/16
Second to third.....inches plus fiber length 1/	--	--	9/16	9/16

1/ Allowances listed are in addition to fiber lengths in terms of "pulls" made on card sliver. These pulls are estimated from Fibrograph length tests except for extra long staple cottons.

Table 21.--Cotton: Standard machine settings and specifications for processing specified staple length groupings--Continued

Process	Staple length groups			
	Short	Medium	Long	Extra long
4. RIBBON LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 4.....grains per yard	--	--	595	525
Laps delivered.....grains per yard	--	--	610	610
Speed.....yards per minute	--	--	47	47
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	4/16	4/16
Second to third.....inches plus fiber length 1/	--	--	7/16	7/16
Third to fourth.....inches plus fiber length 1/	--	--	10/16	10/16
5. COMBER (Model D-4)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 8 each.....grains per yard	--	--	610	610
Sliver delivered.....grains per yard	--	--	50	40
Production per hour.....pounds	--	--	16	13
Setting of cushion plate to detaching roll.....inches	--	--	.48	.54
Nominal waste.....percent	--	--	16 to 17	16 to 17
6. DRAWING FRAME (synthetic top rolls)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
First process:				
Sliver fed, 6 each.....grains per yard	50	50	50	40
Sliver delivered.....grains per yard	60	53	53	42
Second process:				
Sliver fed, 6 each.....grains per yard	60	53	53	42
Sliver delivered.....grains per yard	70	55	55	44
Speed.....yards per minute	36	36	36	36
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	4/16	4/16	4/16	4/16
Second to third.....inches plus fiber length 1/	7/16	7/16	7/16	7/16
Third to fourth.....inches plus fiber length 1/	10/16	10/16	10/16	10/16
7. LONG DRAFT ROVING (8 x 4, 2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Sliver fed.....grains per yard	70	55	55	44
Roving delivered.....hank	1.10	1.80	1.80	4.25
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 1/	1/4	1/4	1/4	1/4
8. LONG DRAFT SPINNING (2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	65	65	65	65
Roving fed single.....hank	1.10	1.80	1.80	4.25
Twist multiplier.....number	4.4	4.0	3.8	3.6
Carded yarns.....number 2/	8s & 22s	22s & 50s	22s & 50s	--
Combed yarns.....number	--	--	22s & 50s	50s & 80s
Spindle speed.....r.p.m. 3/	9000	9000	9000	9000
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

2/ Additional yarn is spun on a 96 spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end-breakage.

3/ All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed ot 5,500 r.p.m.

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