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ALABAMA COTTON MILLS

A Study of Requirements, Buying Procedures, and Practices

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*A Study of Requirements, Buying Procedures, and Practices**

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INTRODUCTION

WHEN COTTON was first produced in volume in the United States, the major outlets were mill markets in England and Europe. However, with expansion of the textile industry in this country, and with an increase in foreign cotton production, the United States mill market became the most important outlet for American cotton.

Although cotton has probably received more research attention than has been directed toward any other single agricultural commodity, many related problems of production and marketing still exist. Considerable progress has been made toward solutions of some of these problems through one-variety cotton production programs sponsored jointly by state Agricultural Extension Services and the United States Department of Agriculture, research conducted by state Agricultural Experiment Stations and various branches of the United States Department of Agriculture, aggressive programs of the National Cotton Council of America among all branches of the cotton industry, and through contributions of other organizations and agencies.

Fiber tests have shown that cotton variety and environment are important in determining fiber properties and spinning performance.[1] Further research is needed, however, concerning the

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** The author, on leave of absence, is indebted to the mill personnel who furnished the information upon which this study is based. For helpful suggestions throughout the study, acknowledgment is due members of the Technical Committee of those states participating in this phase of study, and in particular to William A. Faught, Project Leader, Southern Regional Cotton Marketing Project.

[1] H. D. Barker and E. E. Berkley. "Fiber and Spinning Properties of Cotton, with Special Reference to Varietal and Environmental Effects." Technical Bulletin No. 931. p. 2. U.S.D.A. December 1946.

qualities of cotton used and desired by mills for different end-use products, and information as to the buying procedures, practices, and experiences of mills in obtaining cotton.

In view of these considerations, a study of cotton requirements, buying procedures, and practices of Alabama cotton mills was initiated in the spring of 1949. All of the mills in Alabama that used raw cotton in 1947 and 1948 were included in the study. Major objectives were to determine:

(1) Methods used in the purchase of raw cotton;
(2) Qualities of cotton used for various types of end-products;
(3) Extent of use of Alabama-grown cotton and possible improvements needed to meet mill demands;
(4) Importance of knowing variety in the purchase of cotton to be used for specific end-products; and
(5) Other essential information to help guide cotton breeders, producers, and middlemen in their efforts to provide qualities of cotton that best meet economic and technical requirements of mills.

This report describes the buying procedures and practices used to obtain cotton and the qualities and volume of cotton consumed, and explores the relationships between qualities consumed and end-products manufactured by Alabama mills. Since no significant differences were found between 1947 and 1948 data, most of the 1947 data have been omitted from this report.[2]

Method of Study

The information presented in this report is based on an analysis of mill records obtained by personal interview with cotton buyers and other personnel of the 45 mill firms that were in operation in Alabama during 1947 and 1948.[3] These 45 firms operated 67 cotton mills in Alabama during the period included in the study.

Since cotton buying procedures and practices varied by size of firms, the firms studied were classified into three size groups in order to indicate the amount of such variations due to size.

[2] Data for 1947 were omitted from this report on the recommendation of members of the mill industry. If mills desire these data, they may be obtained by addressing requests to the Department of Agricultural Economics, A.P.I. Agricultural Experiment Station, Auburn, Alabama.

[3] A "mill firm" may operate one or several mills, located at one or at several different locations. The word "firm" as used hereafter in this report refers to a mill firm.

The classification used was based on total volume of cotton purchased in 1948, and was established so that approximately one-third of the total number of firms in the State was included in each group, Table 1.

Since class or type of end-product manufactured was expected to affect not only buying procedures and practices, but also qualities of cotton consumed, a classification of firms according to end-products produced was made to indicate quality of cotton used. A wide range of products was manufactured by Alabama mills during 1947 and 1948 to meet demands of consumers of cotton goods, Appendix Table 1. In some products, quality of raw cotton was apparently more important than in others. In view of the wide range of products manufactured, it was necessary to make groupings of end-products requiring similar qualities of cotton in order to retain validity of data and to facilitate analyzing detailed technological data. Five end-product groups were established and firms were classified according to these groupings, Table 2. No firm was included in an end-product group unless 70 per cent or more of its production was of products listed in that particular group. A miscellaneous group was established to include those firms that produced a variety of end-products that required a wide range of cotton qualities, but which could not be considered as belonging in any of the other five groups. Most of the data are presented by both size and end-product groups so that existing relationships may be easily observed.

Tables 1 and 2 give number of firms, number of mills, and num-

TABLE 1. NUMBER OF MILL FIRMS, NUMBER OF MILLS, AND NUMBER OF PRODUCTS MANUFACTURED, BY SIZE GROUP, ALABAMA, 1948

Size group[1]	Mill firms	Mills[2]	Products manufactured	
			Number	Av. per firm
	Number	*Number*	*Number*	*Number*
Small	16	16	16	1.6
Medium	15	18	20	1.9
Large	14	33	34	3.8
TOTAL	45	67	47	2.4

[1] Small-sized mill firms are those that normally purchase 8,000 bales of cotton or less annually; medium-sized firms are those that normally purchase 8,001 to 25,000 bales annually; and large-sized firms are those that normally purchase over 25,000 bales annually.

[2] The number of mills is not directly related to the number of mill firms. In many instances, a firm operated only one mill; in other cases, a firm operated several mills.

TABLE 2. NUMBER OF MILL FIRMS, NUMBER OF MILLS, AND NUMBER OF PRODUCTS MANUFACTURED, BY END-PRODUCT GROUP, ALABAMA, 1948

End-product group	Group characteristic[1]	Representative type of end-products in each group	Mill firms	Mills[2]	Products manufactured	
					Number	Av. per firm
			No.	*No.*	*No.*	*No.*
I	Fine yarns and thread	Fine yarns, sewing thread	3	4	2	1.3
II	Products of medium-fineness	Broadcloth, print cloth, fine sheeting, chambrays, medium yarns, high quality sateens, twills and flannel, filter cloth, tire fabric	14	14	11	1.5
III	Coarse yarns and twine	Coarse yarns, twine and thread	6	7	4	1.3
IV	Coarse textiles	Osnaburgs, ducks, drills, twills and jeans, toweling, chafer fabrics, low quality sheeting, low quality flannel	7	7	10	2.3
V	Very coarse yarns and twine	Rope, low quality coarse yarn (carpet, insulating, tufting and duck), low quality thread and twine	5	5	8	2.0
VI	Miscellaneous		10	30	31	4.8
TOTAL			45	67	47	2.4

[1] Group characteristic indicates, in general, the nature of products included in each end-product group.
[2] See footnote 2, Table 1.

ber of products manufactured by size and end-product groups. A total of 47 different products were manufactured by the 45 firms reporting. Large firms operated more mills and manufactured a wider range of products than did small- and medium-sized firms. It should be noted in Table 2 that yarn, in some cases, is listed as the final end-product. This was true of those mills that manufactured yarn for sale to other mills. Many mills not only spun their own yarn but also processed it into various types of end-products.

COTTON BUYING PROCEDURES and PRACTICES

In normal times the cotton market is a world market, and is influenced not only by national conditions but by world conditions as well. Thus, the price of cotton is influenced by both the national and international economic situation. The market

for cotton is extremely sensitive; cotton prices quickly reflect changes in supply and demand at home and abroad. For the most part price differentials between regions for like qualities of domestic cotton are the result of differences in transportation charges for moving cotton from production areas to mill points. However, temporary price-quality differentials occur, and, when coupled with transportation differentials, they may influence areas of purchase. Alert firm buyers, whose firms utilize cotton from several areas and particularly those whose firms can utilize a variety of qualities, can take advantage of temporary price differentials between areas in the qualities of cotton desired.

Alabama firms purchased more than a million bales of raw cotton in 1948, Appendix Table 2. The buying practices and procedures used to obtain this cotton, including areas of purchase, varied by size of firms and by types of end-products manufactured.

Basis for Determining Areas of Purchase

Ninety-one per cent of the firms in Alabama reported that their decisions with regard to area of purchase were based upon their previous experience with cotton from various areas, Appendix Table 3. Nine per cent reported that they used early season spinning tests in making decisions, while 11 per cent reported that they used laboratory fiber tests. In some instances, state Extension Service lists of "one-variety" growers and lists of growers that used known sources of seed were used in selecting areas of purchase. Several firms reported the use of more than one method.

Methods Used to Verify Areas of Growth

Mill buyers used a variety of methods in checking to determine whether cotton purchased was actually produced in the area from which cotton was desired; however, none of these methods proved entirely satisfactory, Appendix Table 4. Checking of gin tags was the most satisfactory method used, although this was not always possible because tags were often lost or removed when cotton was compressed. Approximately 45 per cent of the firms reported that they used this method when possible. A third depended on buying from reliable merchants and shippers. Other major means used were to check bills of lading or shipping points, to check warehouse tags or receipts, to buy from dealers in desired areas, and to rely on previous experience and knowledge of the characteristics of cotton from desired areas.

Methods that were infrequently used included checking shipper's tags, buying in area concentration points, and establishing representatives at concentration points. The importance that Alabama mills place on area of purchase is indicated by the fact that 95 per cent of the mill buyers attempted to verify in some manner the area of growth of the cotton they purchased.

Mill Purchases and Buyers' Opinions of Alabama Cotton

Purchases of Alabama cotton reported by firms operating in the State were equivalent to 58 per cent of the cotton produced in Alabama in 1946 and to 53 per cent of that produced in 1947, Appendix Table 5. Large firms bought more than a third of the State's production during this 2-year period, while small- and medium-sized firms purchased almost a fifth. More than a tenth of the firms bought only Alabama cotton, but their total purchases amounted to less than 5 per cent of the total cotton purchased by all firms, Appendix Table 6. Approximately 16 per cent of the firms did not buy any cotton from Alabama, Appendix Table 7.

Small firms obtained most of their cotton in Alabama; medium- and large-sized firms obtained more than two-fifths of their requirements in the State. In 1948, 60 per cent of the firms made some products composed of 50 per cent or more Alabama cotton. Although some of these products were found in nearly all end-product groups, more were in Groups II (products of medium fineness) and V (very coarse yarns and twine) than in the other groups, Appendix Table 8.

Mill buyers were asked from what general areas of the State did they receive cotton best suited to their needs. Approximately 90 per cent of the firms indicated that they preferred cotton from northern Alabama, 44 per cent from central Alabama, and 22 per cent from southern Alabama. Many buyers expressed a preference for cotton from more than one area; approximately 29 per cent expressed no preference or opinion.

Purchases in Mixed and Even-Running Lots

A high proportion of the cotton obtained by Alabama mills was purchased in even-running lots.[4] Approximately 70 per cent of all mill purchases in 1947 and 1948 were in even-running lots; the

[4] An "even-running" lot of cotton is a lot that has been so assembled that every bale in the lot is of the same grade and staple length. A "mixed lot" of cotton consists of a lot with bales of varying grades and staples.

remainder was bought in mixed lots. Purchases in even-running lots varied between size groups, ranging from 85 per cent of total purchases in the small group to 66 per cent in the large group. Purchases in even-running lots also varied between end-product groups, ranging from 100 per cent in Group I (fine yarns and thread) to approximately 50 per cent for firms in Group III (coarse yarns and twine). With the exception of Group IV (coarse textiles), firms that manufactured finer quality products purchased a larger percentage of their requirements in even-running lots than did firms that manufactured coarser quality products or those that produced a wide variety of end-products, Appendix Table 9.

Methods Used in Indicating and Obtaining Cotton of Desired Qualities

Methods of purchasing cotton also varied among size and end-product groups. Approximately two-fifths of the cotton was bought on the basis of examination of actual samples and a like amount by description in terms of official grades and staples. Approximately a fifth was purchased on the basis of private mill types. Small firms bought half of their requirements by examination of actual samples, and approximately two-fifths on the basis of private mill types. Medium-sized firms purchased approximately three-fourths of their requirements by examination of actual samples and about half of the remainder on the basis of description and half on the basis of private mill types. Large firms bought approximately two-fifths of their requirements by examination of samples and by description, respectively, and one-fifth by private mill types, Appendix Table 10.

Firms in end-product Groups I (fine yarns and thread) and II (products of medium-fineness) purchased nearly all of their requirements on the basis of examination of samples or by description in terms of official grades and staples. Group III firms (coarse yarns and twine) bought over half of their requirements by examination of samples, approximately a third by private mill types, and the remainder on the basis of description. Group IV firms (coarse textiles) purchased over two-fifths of their requirements on the basis of examination of samples and private mill types, respectively, and the remainder by description. Firms in Group V (very coarse yarns and twine) bought 90 per cent of their requirements by examination of samples and the remainder on the basis of private mill types. Firms in miscellaneous

Group VI bought over half of their requirements by description in terms of official grades and staples; approximately equal amounts were purchased on the basis of examination of samples and private mill types.

Small- and medium-sized firms obtained a large proportion of their cotton requirements from nearby areas and found it convenient to examine actual samples, while large firms that utilized a wider range of quality and produced a number of products of varying quality obtained cotton from more distant areas. Large firms, therefore, bought more cotton on the basis of description. The end-products manufactured also affected the basis of purchase. Firms that manufactured coarser quality products had somewhat less stringent quality requirements and could obtain more cotton from nearby areas. Therefore, they found it convenient to examine samples of cotton before purchasing, whereas firms that manufactured finer, better quality products had more stringent quality requirements, and hence, obtained cotton from more distant areas, which made examination of samples before purchasing more difficult.

Fiber Properties and Characteristics Considered by Mills When Purchasing Cotton

Cotton fibers possess certain inherent properties and characteristics that are not indicated by grade and staple descriptions. The most important of these that mills considered when purchasing were strength, uniformity, and hard-bodiedness of fiber, Appendix Table 11. Good or smooth preparation was also considered important. In purchasing cotton, mills particularly avoided cotton with poor preparation, soft or silky fibers, tinge or stain, and large amounts of foreign material, Appendix Table 12. Of all of the various fiber properties and characteristics studied, strength, uniformity and hard-bodiedness were the major factors considered in order of importance.

Use of Laboratory Fiber Tests

Experienced mill buyers can determine some fiber properties and characteristics by examining the cotton considered for purchase; however, laboratory fiber tests can be used to determine some of these properties more accurately. Over a third of the firms used one or more laboratory, fiber-testing methods to facilitate obtaining cotton of desired qualities. The majority of the

firms that used these tests were in the large-sized group and most of them used four or more different testing methods, Appendix Table 13.

Over a third of the firms not using laboratory tests indicated that they planned to install fiber-testing laboratories. The growing importance of laboratory fiber tests is indicated by the fact that 58 per cent of all firms used or were planning to use laboratory fiber tests to facilitate cotton buying.

Although some use was made of government and commercial fiber-testing laboratories, the majority of the tests by Alabama mills were made in private laboratories at the mill. Most of the tests were made to determine length uniformity, strength, maturity, and fineness. The types of equipment used for determining length uniformity, strength, and fineness were in order of importance: fibrographs, breakers, and micronaires. In testing maturity, several methods were used. The major methods were microscopes, photographs, dyes, and polarized light. Some firms used more than one method, Appendix Table 14.

Variety and Quality of Planting Seed as An Aid in Buying Cotton

Approximately 10 per cent of the firms studied used cotton variety as a basis for buying lint. Three-fourths of those that used variety as a basis for buying reported that it was difficult to buy a single variety in adequate volume; all firms reported that the variety they purchased generally fulfilled their expectations, Appendix Table 15.

Although few firms had actually had any experience with handling a single variety of cotton, more than three-fifths of the mill buyers indicated that they thought enough was known about fiber properties and spinning performance to justify giving weight to variety in the purchase of cotton, Appendix Table 16.

Two-fifths of the buyers felt that buying would be facilitated if they knew the number of years that planting seed were removed from breeder seed for each bale purchased, Appendix Table 16.

Use of Bale Identification

Some measure of the importance of bale identification is evident from the fact that the majority of the firms attempted to verify the areas of growth from which they purchased cotton.

Forty-five per cent of the firms reported that they checked gin tags. When asked the importance of bale identification in buying qualities of cotton desired, nearly three-fourths of the firms indicated that bale identification would be of importance, Appendix Table 17. Of those considering bale identification as important, approximately a third indicated it would be of major importance, a third of considerable importance, and a third of minor importance. Nearly a fourth of the firms indicated that bale identification showing name of grower, variety, location, and year of growth would be of no importance. The majority of these firms, however, were small firms that bought most of their cotton from nearby areas.

Firms that considered bale identification to be of importance were asked what methods they would recommend to accomplish adequate bale identification. The most frequently reported recommendation was to use a metal tag or mark on ties. Other suggested methods were to use gin code stencils on bagging, cardboard tags in the middle of bales, and require that tags remain with bales, Appendix Table 18.

Four major methods were suggested for confirming validity of bale identification, Appendix Table 19. These were in order of importance: (1) check back through shipper, compress, or gin; (2) make the farmer and ginner responsible for the tag on the bale; (3) regulate by law – a Federal offense to remove tags from bales; and (4) make shipper responsible. The first two methods of verifying validity do not differ greatly from what happens in actual practice. The last two methods, although not mentioned as often as the first two, offer a more standardized method, and suggest a means of making identification more effective throughout the trade.

Importance of Supplemental Buying Aids

The relative importance of supplemental buying aids is indicated in Appendix Table 20, which shows the proportion of firms that use or recommend the use of various supplemental buying aids, and which gives the proportion of total consumption handled by these firms. Firms that made some use of variety of cotton in buying accounted for approximately 26 per cent of the total consumption of cotton by all firms, while firms that used laboratory testing methods accounted for 68 per cent of total cotton consumption. Firms that recommended adequate bale identi-

fication accounted for approximately 75 per cent of total consumption, and those that recommended the purchase of cotton that was produced from seed not more than 3 years removed from breeder seed accounted for 54 per cent of the total.

Factors Affecting Spinning Performance and Processing Costs

Approximately 96 per cent of the firms in Alabama kept cotton processing cost records and 56 per cent kept performance records in 1948, Appendix Table 21.

Of the 43 firms that kept such cost records, 42 per cent reported variations in processing costs between different grades, 40 per cent reported variations between different staple lengths, 9 per cent reported variations between different varieties, and 21 per cent reported variations between different areas of growth. Although the proportion of firms that reported a variation in processing costs between different varieties was small, the 9 per cent that reported represents four of the five firms that had used variety as an aid in purchasing cotton, Appendix Table 22.

Of the 25 firms that kept performance records, 56 per cent reported variations in performance rates between different grades and staples, 24 per cent reported variations between different varieties, and 40 per cent reported variations between different areas of growth, Appendix Table 23.

The method and form in which records were kept varied between firms, and several firms reported that failure of their records to show differences in specified items was because their records were designed for other purposes; therefore, this should not be interpreted to mean that differences did not exist.

Specific relationships indicated by processing cost records were that lower grades and staples tended to result in higher processing costs due to greater waste and less strength, and that higher grades and staples tended to have lower processing costs because of greater efficiency and more strength. Firms that kept performance records reported that lower grades and staples run poorly and have more breaks and ends down. Higher grades and staples show less breakage on spindles, greater efficiency, higher roll speed, and more evenly spun yarn, Appendix Tables 24 and 25.

COTTON CONSUMPTION

Volume of Cotton Consumed

Alabama mills consumed 1,117,923 bales or approximately 12 per cent of the total United States mill consumption of domestic cotton in 1948. The major products produced by Alabama mills were coarse to medium yarns, ducks, osnaburgs, drills, twills, sateens, laundry and other coarse to medium sheeting. These end-products accounted for approximately three-fifths of the cotton consumed in 1947 and for more than half of that consumed in 1948. Consumption of cotton by specific end-products is shown in Appendix Table 1.

The volume of cotton consumed varied by size and end-product groups, Appendix Table 2. Large firms accounted for approximately three-fourths of the total cotton consumed, medium-sized firms accounted for approximately one-fifth, and small firms accounted for the remainder.

Group I firms (fine yarns and thread) consumed only 5 per cent of total cotton consumption in 1948. Firms in this group were medium- and large-sized firms. Firms in Group II (products of medium-fineness) accounted for about 13 per cent of total consumption in 1948, those in Group III (coarse yarns and twine) consumed nearly 5 per cent, firms in Group IV (coarse textiles) accounted for approximately 15 per cent, and firms in Group V (very coarse yarns and twine) accounted for slightly over 6 per cent. Firms in miscellaneous Group IV accounted for more than half of the total consumption of cotton by Alabama mills in 1948.

Qualities of Cotton Consumed

More than two-fifths of the cotton consumed by Alabama mills in 1947 and 1948 averaged Strict Low Middling in grade and 1 to 1-1/16 inches in staple length, Appendix Table 26. The largest proportion of grades and staples consumed was concentrated in qualities of cotton classing Strict Low Middling 1 inch, Middling 15/16 inch, and Middling 1 inch. These three classes accounted for more than 45 per cent of that consumed in 1948. All staple lengths of Strict Low Middling and Middling grades made up nearly three-fourths of total consumption, while less than 15 per cent was Strict Middling and slightly more than 12 per cent was Low Middling or below in grade. Cotton of all grades having an

average staple length of 15/16 to 1-1/16 inches accounted for approximately 90 per cent of total consumption, while cotton measuring 1-3/32 inches or longer accounted for approximately 4 per cent. Cotton with an average staple length of less than 15/16 inch accounted for approximately 6 per cent of total cotton consumption.

The bulk of the qualities of cotton, Strict Middling 1-1/16 to 1-1/8 inches was consumed by Group I firms (fine yarns and thread). The bulk of the qualities of cotton, Strict Middling 31/32 to 1-1/32 inches, was consumed by Group II firms (products of medium-fineness). These firms also used a large proportion of Middling 1 inch and Strict Low Middling 1-1/32 inches. The major proportion of cotton consumed by firms in Group III (coarse yarns and twine) averaged Middling 1 inch in quality. The major quality of cotton consumed by Group IV firms (coarse textiles) was Middling 15/16. Other important qualities consumed were Strict Low Middling 15/16 and Strict Low Middling 1 inch. Firms in Group V (very coarse yarns and twine) accounted for more than half of the consumption of the qualities of cotton classing Strict Good Ordinary and below in grade. The major qualities consumed by these firms were Good Ordinary and Strict Good Ordinary 1-1/16 inches. Firms in miscellaneous Group IV, although utilizing cotton with a wide range in quality, consumed for the most part cotton averaging from Strict Low Middling to Middling in grade and from 1 to 1-1/16 inches in staple length. The grades and staples used by firms in the manufacture of specific end-products are shown in Appendix Table 27.

Areas from Which Cotton Was Purchased

Firms in Alabama purchased a total of 1,163,842 running bales in 1947 and 1,117,923 bales in 1948. Firms generally were able to obtain the qualities and quantities of cotton desired from nearby areas in the Southeast and the Delta, Appendix Table 28. Purchases of Alabama cotton accounted for more than two-fifths of the total bought and purchases of Delta cotton accounted for an additional fifth. Firm purchases of Alabama cotton accounted for nearly three-fifths of the cotton produced in the State in 1946 and for more than half of that produced in 1947. Purchases of cotton from other states in the Southeast accounted for approximately 6 per cent of the total. Approximately 15 per cent came from the "central" part of the Cotton Belt, the greater part being

from the Texas Blacklands and Rio Grande Valley, Figure 1. The Plains areas of Texas and Oklahoma and the Far West supplied approximately 6 per cent of the cotton obtained in 1948. Mill buyers reported that they did not know the area of growth of 7 per cent of their purchases.

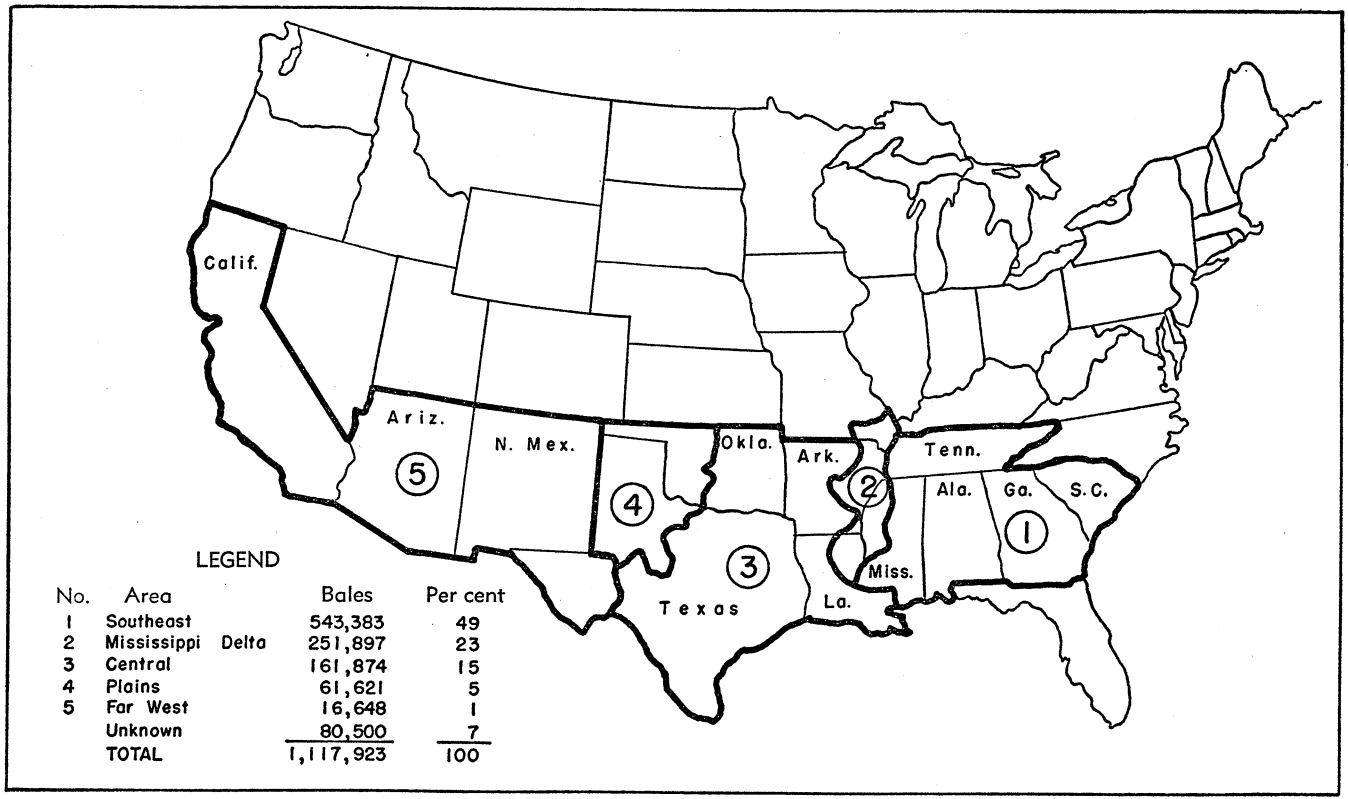
The proportion of total purchases from each area varied considerably among size and end-product groups, Appendix Tables 28 and 29. Volume of purchases and qualities of cotton required were apparently the more important factors determining areas of purchase.

Small firms, which generally bought cotton in relatively small lots, were able to obtain most of their cotton requirements from nearby areas, and therefore, concentrated their purchases in the Southeast to a greater extent than did any other group. These firms purchased nearly four-fifths of their cotton in Alabama.

Although purchases by medium-sized firms were not as concentrated in the Southeast as those by small firms, these firms purchased over half of their requirements from this area. More than two-fifths of their purchases were in Alabama; of the remainder approximately equal proportions were in the Delta and the Plains areas of Texas and Oklahoma.

Firms in the large-sized group generally purchased cotton in large lots and required a wider range of qualities than did other groups because of the greater number of end-products manufactured. Therefore, these firms made a smaller proportion of their purchases in the Southeast than did other groups. More than two-fifths of their requirements were purchased in the Southeast, while more than a third were purchased in Alabama alone. Nearly one-fourth of the purchases of these firms were in the Delta. The remainder was in the Texas Blacklands and Rio Grande Valley, the Plains areas of Texas and Oklahoma, and the Far West. Mill buyers reported that areas of growth of approximately 10 per cent of the purchases by large firms were unknown.

Although differences in size of firm apparently predominated in determining area patterns of purchase, the qualities of cotton required by each end-product group also seemed to be an important factor. The firms in Group I (fine yarns and thread) used predominantly cotton of 1-1/16 to 1-1/8 inches in staple length. The bulk of these qualities of cotton was obtained from the Delta. The remainder was procured from Alabama and the



No.	Area	Bales	Per cent
1	Southeast	543,383	49
2	Mississippi Delta	251,897	23
3	Central	161,874	15
4	Plains	61,621	5
5	Far West	16,648	1
	Unknown	80,500	7
	TOTAL	1,117,923	100

FIGURE 1. Areas from which Alabama mills obtained cotton, 1948.

Texas Rio Grande Valley. This group reported no purchases from the Plains areas and the Far West.

Group II firms (products of medium-fineness) used cotton primarily of 31/32 to 1-1/32 inches in staple length. These firms obtained the bulk of their cotton from Alabama and the Delta, getting 51 and 40 per cent from these areas respectively. The remainder was obtained from other nearby southeastern states, and from the Texas Blacklands and Rio Grande Valley in the "central" part of the Cotton Belt.

Firms in Group III (coarse yarns and twine) used predominantly cotton of 1 inch in staple length. These firms obtained nearly all of their cotton from Alabama, securing less than 8 per cent from the Delta and from other southeastern states.

Group IV firms (coarse textiles) used predominantly cotton 15/16 inch in staple length. These firms were able to utilize a wider range of qualities and obtained the majority of their purchases from three areas. Nearly a third of their requirements were obtained from Alabama, and a fourth were obtained from both the Delta and the Texas Blacklands.

Group V firms (very coarse yarns and twine) consumed primarily the lower grades of cotton with staple lengths of 1 to 1-1/16 inches. These firms were able to utilize cotton from many areas and obtained a considerable proportion from all areas except from the Texas Rio Grande Valley and the Plains areas of Texas and Oklahoma. The Delta furnished nearly two-fifths of their requirements, and the Southeast supplied nearly a fourth, most of which was from Alabama.

Firms in miscellaneous Group VI, producing a wide variety of end-products of varying quality, were able to utilize cotton from practically all areas. Although significant amounts were obtained from all areas, over two-fifths of their requirements were obtained in Alabama.

The extent to which mills were able to utilize cotton of varying qualities and different areas was influenced both by size of firm and quality and type of end-product produced. Small firms, in general, tended to draw more of their requirements from nearby areas, while large firms that manufactured a wider range of products could utilize cotton from many areas. Firms that manufactured fine, high quality products were limited as to quality of cotton they could utilize. Therefore, they purchased cotton only from certain areas, whereas firms that manufactured coarse

products were not so discriminating in their selection and could utilize a wider range of quality (particularly grades) and thus obtained cotton from many areas. It should be noted that mills that used lower qualities of cotton and that manufactured industrial products such as ducks, chafer fabrics, etc., obtained considerable amounts of cotton from the "hard cotton" regions of Texas and Oklahoma where strength tends to be greater and staple length shorter than average.[5]

SUMMARY and CONCLUSIONS

The major consumers of raw cotton in the United States are domestic cotton mills. Since little information was available concerning the buying procedures and practices of cotton mills and the factors considered by mills in purchasing cotton, a study was begun in 1949 to determine the methods used by Alabama cotton mills to purchase cotton, the qualities of cotton used for different end-products, the sources of supply, and to obtain other information to aid individuals and agencies concerned with supplying qualities of cotton needed to meet economic and technical requirements of mills.

Alabama mills consumed over a million bales of cotton in 1948 or approximately 12 per cent of the United States' mill consumption of domestic cotton. Major end-products produced by Alabama mills were coarse to medium cotton yarns, ducks, osnaburgs, drills, twills, sateens, laundry sheeting, and coarse to medium sheeting. These products accounted for more than half of the cotton consumed by Alabama firms. Large firms accounted for about three-fourths of the total cotton consumption, medium-sized firms about one fifth, and small firms about one-twentieth.

Firms in Group I (fine yarns and thread) consumed 5 per cent of Alabama's total mill consumption of cotton in 1948 and Group II firms (products of medium-fineness) accounted for 13 per cent of the total. Firms in Group III (coarse yarns and twine) consumed nearly 5 per cent; firms in Group IV (coarse textiles) accounted for approximately 15 per cent; while those in Group V (very coarse yarns and twine) consumed over 6 per cent. Firms in miscellaneous Group VI accounted for more than half of the total.

[5] H. D. Barker and E. E. Berkley. "Fiber and Spinning Properties of Cotton, with Special Reference to Varietal and Environmental Effects." Technical Bulletin No. 931. p. 2. U.S.D.A. December 1946.

Major qualities of cotton consumed by Alabama mills were those classing Strict Low Middling 1 inch, Middling 15/16 inch, and Middling 1 inch. All staple lengths of Strict Low Middling and Middling grades made up nearly three-fourths of total consumption. All grades of cotton with staple lengths ranging from 15/16 to 1-1/16 inches made up approximately 90 per cent of total consumption.

In general, the quality of cotton consumed was directly related to the quality of end-product manufactured. Firms that manufactured finer quality end-products consumed the higher qualities of cotton, while those that manufactured coarser quality products used lower grades of cotton. Some exceptions, however, were found.

In general, firms were able to obtain a large proportion of the kinds of cotton that met their quality requirements from nearby areas in the Southeast and from the Delta. Purchases of Alabama cotton accounted for more than two-fifths of the total and purchases of Delta cotton accounted for an additional fifth. Most of the remainder was procured from the Texas Blacklands and Rio Grande Valley, and from the Plains areas of Texas and Oklahoma.

Small firms that purchased in relatively small lots obtained most of their cotton from the Southeast, while medium- and large-sized firms, though they obtained large proportions of their cotton from this area, purchased substantial proportions from the Delta and other areas.

Firms that manufactured finer quality products had more stringent quality requirements and utilized cotton from a limited number of areas, whereas firms that manufactured coarser quality products had less stringent requirements and utilized cotton from many areas. However, the Southeast, Alabama in particular, was the major area of supply for all firms.

Decisions by Alabama mills as to areas of purchase were usually based on previous experience with cotton from various areas. A few firms used early season spinning tests and laboratory fiber tests. The major method used to verify the area from which cotton came was to check gin tags; however, none of the methods used were entirely satisfactory. The importance placed on area of purchase by Alabama mills is indicated by the fact that 95 per cent of the State's firms attempted to verify the areas from which cotton was purchased.

Alabama firms purchased in 1948 the equivalent of 50 per cent of the cotton produced in Alabama in 1947. More mills seemed to prefer cotton from central and northern Alabama than from southern Alabama; however, location of firm was apparently one of the factors in determining this preference. A large proportion of the cotton mills in Alabama are located in the central and northern parts.

Approximately 70 per cent of the cotton purchases by Alabama mills were in even-running lots. Although the proportion purchased in even-running lots by small firms was greater than that purchased by large firms, even-running lots accounted for more than three-fifths of the purchases in all size groups. There was no consistent pattern of purchases among end-product groups.

Approximately two-fifths of the cotton purchased by Alabama firms was purchased on the basis of examination of actual samples and a like amount was bought on the basis of description in terms of official grades and staples. The remaining fifth was purchased on the basis of private mill types. Methods of purchase varied depending somewhat on the size of the firm and its end-products. Small- and medium-sized firms tended to buy a large proportion on the basis of actual samples and/or private mill types, while large-sized firms tended to purchase more on the basis of description than on the basis of other methods. However, in terms of number of firms reporting, more purchases were made on the basis of actual samples than any other method.

In addition to grade and staple, firms also considered smooth preparation, strength, uniformity, and hard-bodiedness of fiber in purchasing cotton. They attempted to avoid cotton with poor preparation, soft or silky fiber, tinge or stain, and large amounts of foreign materials. Over a third of the firms used one or more laboratory tests to determine some fiber properties as an aid to buying, the majority of the tests being made by large firms. The growing importance of laboratory tests was indicated in that nearly three-fifths of the firms used, or were contemplating the use of laboratory tests to facilitate cotton buying. Few firms had had experience with one-variety cotton; however, more than three-fifths of the firm buyers thought that enough was known about variety to give weight to it in purchasing cotton. Of the buyers having experience with variety, three-fourths indicated that the variety bought generally fulfilled expectations, although it was difficult to buy a single variety in adequate volume. Two-

fifths indicated that they thought buying would be facilitated if they knew, for the cotton being purchased, the number of years that planting seed were removed from the breeder.

Approximately 45 per cent of the firm buyers checked gin tags to verify areas of growth. Nearly three-fourths indicated that bale identification would be of importance to them in buying cotton. The major method suggested to accomplish adequate bale identification was to use a metal tag or mark on the tie. Major methods suggested for checking the validity of bale identification were practically the same as those now in actual practice.

Mills that kept processing cost and performance records indicated that processing costs were affected by differences in grade, staple, variety, and areas of growth. Performance was significantly affected by differences in grades and staple lengths.

Although mills in Alabama were unable to secure the wide range of cotton quality needed for efficient operation from Alabama, they apparently obtained adequate supplies of various qualities from other areas. This does not imply that a state or an area should strive to produce all of the qualities of cotton required by a group of mills within its boundaries. Since mills utilize various qualities, often in the same end-product, and since quality of cotton is affected by environmental as well as other conditions, it is extremely doubtful whether increased economic returns could be attained by adjusting production to more nearly meet requirements of nearby mills. Nevertheless, since mills indicated that "poor preparation" was one of the major factors avoided in purchasing cotton, more careful attention to preparation during harvesting and ginning should result in a product that is more readily marketable. Better preparation of cotton prior to and during ginning probably can increase the usability of cotton at mills more than improvement in any other single factor.

The methods used by mills to purchase raw cotton were apparently adequate under existing market conditions. This may not be true as future technological advances are made. The number of firms attempting to determine and verify areas of purchase and the number of firms using or contemplating use of laboratory fiber-testing equipment indicate the inadequacy of the grade and staple system of classification in describing particular quality factors that affect performance and costs of processing cotton into end-products of varying quality. Although informa-

tion secured from laboratory tests may be of considerable value to mills, it is not known whether the costs of making these tests would tend to offset such increased values. Thus, there may be a need for further research to determine the economic feasibility of expanding such tests in marketing cotton.

Since quality factors vary because of environmental and inherited factors, it is expected that if laboratory testing becomes more prevalent in the future, a knowledge of source of production and variety will become more important to mills in locating desired qualities of cotton. As this occurs, cotton middlemen can expect to receive orders from mills specifying not only certain grade and staple requirements, but also specifications based on laboratory test data pertaining to strength, uniformity, fineness, and other fiber properties and characteristics. Thus, as further technological advances are made, present marketing procedures and practices may undergo tremendous changes.

APPENDIX TABLES

APPENDIX TABLE 1. MILL CONSUMPTION OF COTTON, BY END-PRODUCTS MANUFACTURED, ALABAMA, 1947 AND 1948

End-products manufactured[1]	1947			1948		
	Firms reporting	Bales 500 lb. gross wt.	Percentage of total	Firms reporting	Bales 500 lb. gross wt.	Percentage of total
	Number	*Number*	*Per cent*	*Number*	*Number*	*Per cent*
Drills, twills, sateens, laundry sheetings	9	214,598	18.4	9	205,796	18.4
Cotton yarns coarse to medium	15	173,034	14.9	15	176,666	15.8
Sheeting coarse and medium	12	120,151	10.3	12	108,394	9.7
Osnaburgs	6	108,541	9.3	6	100,370	9.0
Ducks	5	96,950	8.3	5	91,266	8.2
Chambray	2	45,847	3.9	2	46,163	4.1
Printcloth	4	46,627	4.0	4	44,362	4.0
Ticking	3	41,499	3.6	3	40,231	3.6
Chafer fabrics	4	39,603	3.4	4	38,130	3.4
Denim	1	32,299	2.8	1	37,243	3.3
Toweling	2	37,040	3.2	2	37,165	3.3
Tire cords or fabrics	2	40,000	3.4	2	30,000	2.7
Fine cotton yarns	1	24,000	2.1	1	24,000	2.2
Hose, belting, high speed sewing thread	2	20,163	1.7	2	20,313	1.8
Corduroy	1	16,412	1.4	1	16,820	1.5
Fine sheeting	2	15,878	1.4	2	14,704	1.3
Seine twine	2	15,869	1.4	2	14,403	1.3
Flannel	2	13,710	1.2	2	13,710	1.2
Wrapping twine	3	12,794	1.1	3	12,176	1.1
Underwear	1	11,856	1.0	1	11,856	1.1
Top closing thread	1	7,954	.7	1	6,664	.6
Sewing thread	1	6,000	.5	1	6,000	.5
High rate cord	1	4,600	.4	1	4,600	.4
Crochet thread	1	4,493	.4	1	4,537	.4
Ply twine	1	4,400	.4	1	4,400	.4
Drapery	1	3,720	.3	1	3,448	.3
Broom twine	1	2,400	.2	1	2,400	.2
Milk filters	1	960	.1	1	960	.1
Broadcloth	1	2,028	.2	1	624	.1
Birdseye	1	416	[2]	1	336	[2]
Cotton rope	0	...	...	1	186	[2]
TOTAL	90[3]	1,163,842	100.0	90[3]	1,117,923	100.0

[1] The number of end-products manufactured was 47. The number shown here is less than 47, however, because varying qualities and constructions of the same mill were combined when manufactured from the same qualities of cotton.

[2] Less than 0.1 per cent

[3] The totals for firms reporting are greater than the actual number (45), because many firms made more than one end-product.

APPENDIX TABLE 2. MILL CONSUMPTION OF COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

End-product group[1]	Consumption by size group[2]							
	Small		Medium		Large		Total	
	Bales	*Pct.*	*Bales*	*Pct.*	*Bales*	*Pct.*	*Bales*	*Pct.*
I	0	.0	26,800	11.8	30,000	3.7	56,800	5.1
II	43,538	57.3	45,731	20.1	58,586	7.2	147,855	13.2
III	17,718	23.3	36,105	15.8	0	.0	53,823	4.8
IV	0	.0	68,136	29.9	94,020	11.5	162,156	14.5
V	11,418	15.0	21,840	9.6	36,070	4.4	69,328	6.2
VI	3,360	4.4	29,068	12.8	595,533	73.2	627,961	56.2
TOTAL	76,034	100.0	227,680	100.0	814,209	100.0	1,117,923	100.0

[1] Group I firms manufactured **fine yarns** and sewing **thread;**

Group II firms manufactured **yarns and products of medium fineness,** such as broadcloth, printcloth, fine sheetings, chambrays, medium yarns, high quality sateens, avills, flannel, filter cloth, and tire fabric;

Group III firms manufactured primarily **coarse yarns and twine,** and coarse thread;

Group IV firms manufactured **coarse textiles,** such as osnaburgs, duck, drills, twills, jeans, toweling, chafer fabrics, and low quality sheeting and flannel;

Group V firms manufactured **very coarse yarns and twine** including such products as rope, low quality-coarse carpet, insulating duck, tufting yarns, and low quality thread and twine; and

Group VI firms manufactured a wide variety of products and were classified as **miscellaneous.**

[2] Small-sized firms are those that normally purchase 8,000 bales of cotton or less annually; medium-sized firms are those that normally purchase 8,001 to 25,000 bales of cotton annually; and large-sized firms are those that normally purchase over 25,000 bales of cotton annually.

APPENDIX TABLE 3. METHODS USED BY MILL FIRMS TO LOCATE QUALITIES OF COTTON DESIRED, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Number that—[1]				
		Made early season spinning tests	Made laboratory fiber tests	Bought from areas where experience indicated cotton could be depended on	Used other methods[2]	Total
	No.	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[3]						
Small	16	0	0	15	5	20
Medium	15	2	0	14	2	18
Large	14	2	5	12	5	24
TOTAL	45	4	5	41	12	62
End-product group[3]						
I	3	0	1	3	1	5
II	14	1	0	12	6	19
III	6	1	0	6	0	7
IV	7	0	0	6	3	9
V	5	0	0	5	1	6
VI	10	2	4	9	1	16
TOTAL	45	4	5	41	12	62

[1] Some firms used more than one method; totals, therefore, do not check, but each firm reported using at least one method.

[2] Includes use of A.P.I. Extension Service one-variety list, buying from growers using known sources of seed, etc.

[3] See Appendix Table 2 for definition of size and end-product groups.

APPENDIX TABLE 4. MILL FIRMS THAT USED SPECIFIC METHODS TO DETERMINE WHETHER COTTON PURCHASED CAME FROM SPECIFIED AREAS, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms that—										
	Bought from dealers in desired areas	Bought from reliable merchants or shippers	Checked gin tags	Had previous experience or knowledge of cotton from areas	Checked bill of lading or shipping points	Had representation at concentration points[1]	Checked warehouse tags or receipts	Checked shippers tags	Bought in area concentration points[2]	Had no method	Total[3]
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[4]											
Small	3	5	10	2	1	0	0	1	1	0	23
Medium	1	4	4	3	6	1	3	1	1	1	25
Large	2	6	6	0	2	0	4	2	1	1	24
TOTAL	6	15	20	5	9	1	7	4	3	2	72
End-product group[4]											
I	0	2	1	0	0	0	1	0	0	0	4
II	2	1	10	1	3	0	3	3	0	0	23
III	0	3	2	1	0	1	0	0	1	1	9
IV	1	3	2	1	3	0	1	1	0	0	12
V	1	2	1	2	0	0	1	0	0	0	7
VI	2	4	4	0	3	0	1	0	2	1	17
TOTAL	6	15	20	5	9	1	7	4	3	2	72

[1] Includes buyers or buyer representatives at concentration points.
[2] Includes buying at concentration points at which cotton is assembled from known areas.
[3] Totals are greater than number of firms reporting because some firms used more than one method.
[4] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 5. PERCENTAGE OF ALABAMA COTTON PRODUCTION BOUGHT BY ALABAMA MILLS, BY SIZE AND END-PRODUCT GROUPS, 1947 AND 1948

Item	1947		1948	
	Bales (running bales)	Percentage of total production	Bales (running bales)	Percentage of total production
	Number	*Per cent*	*Number*	*Per cent*
Cotton produced in Alabama[1]	803,338	100.0	904,889	100.0
Amount purchased by Alabama mills by **size group:**[2]				
Small	56,159	7.0	58,839	6.5
Medium	104,298	13.0	103,971	11.5
Large	308,807	38.4	316,427	35.0
TOTAL	469,264	58.4	479,237	53.0
Amount purchased by Alabama mills by **end-product group:**[2]				
I	5,400	.7	6,480	.7
II	96,784	12.0	76,731	8.5
III	48,956	6.1	49,437	5.5
IV	51,428	6.4	50,331	5.6
V	9,909	1.2	9,721	1.1
VI	256,787	32.0	286,537	31.6
TOTAL	469,264	58.4	479,237	53.0

[1] "Cotton Production in the United States, Crop of 1949." Bureau of the Census, U. S. Department of Commerce. Washington, D. C. 1950. Table 2, page 3. Figures shown are production in running bales for the years 1946 and 1947, respectively.

[2] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 6. MILL FIRMS THAT PURCHASED ALL OF THEIR RAW COTTON REQUIREMENTS FROM ALABAMA, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Total running bales purchased	Reporting cotton purchased from Alabama only			
			Number of firms	Running bales purchased	Percentage of total	
					Firms	Bales
	Number	*Number*	*Number*	*Number*	*Per cent*	*Per cent*
Size group[1]						
Small	16	76,034	3	15,718	18.8	20.7
Medium	15	227,680	1	8,076	6.7	3.5
Large	14	814,209	1	26,000	7.1	3.2
TOTAL	45	1,117,923	5	49,794	11.1	4.5
End-product group[1]						
I	3	56,800	0	0	.0	.0
II	14	147,855	1	5,000	7.1	3.4
III	6	53,823	3	18,794	50.0	34.9
IV	7	162,157	0	0	.0	.0
V	5	69,328	0	0	.0	.0
VI	10	627,960	1	26,000	10.0	4.1
TOTAL	45	1,117,923	5	49,794	11.1	4.5

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 7. MILL FIRMS THAT DID NOT PURCHASE ANY ALABAMA COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Total running bales purchased	Reporting no cotton purchased from Alabama			
			Number of firms	Running bales purchased	Percentage of total	
					Firms	Bales
	Number	*Number*	*Number*	*Number*	*Per cent*	*Per cent*
Size group[1]						
Small	16	76,034	1	186	6.3	.2
Medium	15	227,680	2	25,600	13.3	11.2
Large	14	814,209	4	176,500	28.6	21.7
TOTAL	45	1,117,923	7	202,286	15.6	18.1
End-product group[1]						
I	3	56,800	2	46,000	66.7	81.0
II	14	147,855	1	30,000	7.1	20.3
III	6	53,823	0	0	.0	.0
IV	7	162,157	2	45,600	28.6	28.1
V	5	69,328	1	186	20.0	.3
VI	10	627,960	1	80,500	10.0	12.8
TOTAL	45	1,117,923	7	202,286	15.6	18.1

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 8. NUMBER OF FIRMS THAT MADE SPECIFIC PRODUCTS WITH 50 PER CENT OR MORE OF ALABAMA COTTON, BY END-PRODUCT GROUP, ALABAMA, 1948

End-product group[1]	Number of firms	Number of firms making products that used 50 per cent or more Alabama cotton	Specific products made[2]	Average number of products made per firm that used 50 per cent or more Alabama cotton
	Number	*Number*		*Number*
I	3	2	Cotton yarns	1.0
II	14	10	Sheeting, knitting yarns, broadcloth, printcloth, chambray, flannels, filtercloth	1.5
III	6	6	Cotton yarns (rug, crochet), seine and wrapping twine	1.2
IV	7	2	Drills, twills, jeans	2.0
V	5	2	Rug yarns, seine and wrapping twine, ducks	1.5
VI	10	5	Miscellaneous	2.6
TOTAL	45	27		1.6

[1] See Appendix Table 2 for definitions of end-product groups.
[2] Includes only the more important products; many other products were made by only one firm, and therefore, are not shown in the different groups.

APPENDIX TABLE 9. MILL FIRM PURCHASES OF COTTON ACCORDING TO MIXED OR EVEN-RUNNING LOTS, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Total running bales purchased	Running bales purchased in—		Percentage of total	
		Mixed lots	Even-running lots	Mixed lots	Even-running lots
	Number	*Number*	*Number*	*Per cent*	*Per cent*
Size group[1]					
Small	76,034	11,467	64,567	15.1	84.9
Medium	227,680	62,650	165,030	27.5	72.5
Large	814,209	277,438	536,771	34.1	65.9
TOTAL	1,117,923	351,555	766,368	31.4	68.6
End-product group[1]					
I	56,800	0	56,800	.0	100.0
II	147,855	26,133	121,722	17.7	82.3
III	53,823	27,032	26,791	50.2	49.8
IV	162,157	21,015	141,142	13.0	87.0
V	69,328	25,627	43,701	37.0	63.0
VI	627,960	251,748	376,212	40.1	59.9
TOTAL	1,117,923	351,555	766,368	31.4	68.6

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 10. MILL FIRM PURCHASES BASED ON SPECIFIC METHODS OF DETERMINING COTTON QUALITIES, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Total running bales purchased	Running bales purchased by			Percentage of total		
		Actual sample	Description	Private type	Actual sample	Description	Private type
	No.	*No.*	*No.*	*No.*	*Pct.*	*Pct.*	*Pct.*
Size group[1]							
Small	76,034	37,876	13,200	24,958	49.8	17.4	32.8
Medium	227,680	173,061	30,105	24,514	76.0	13.2	10.8
Large	814,209	206,941	428,775	178,493	25.4	52.7	21.9
TOTAL	1,117,923	417,878	472,080	227,965	37.4	42.2	20.4
End-product group[1]							
I	56,800	26,800	30,000	0	47.2	52.8	.0
II	147,855	86,638	58,732	2,485	58.6	39.7	1.7
III	53,823	28,813	8,892	16,118	53.5	16.5	30.0
IV	162,157	76,115	22,005	64,036	46.9	13.6	39.5
V	69,328	61,736	0	7,592	89.0	.0	11.0
VI	627,960	137,776	352,451	137,734	21.9	56.2	21.9
TOTAL	1,117,923	417,878	472,080	227,965	37.4	42.2	20.4

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 11. DESIRABLE FIBER PROPERTIES AND CHARACTERISTICS THAT ALABAMA MILLS LOOK FOR WHEN PURCHASING COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Desirable properties and characteristics						
		Good color	Good character	Smooth preparation	Strength	Hard-bodied fiber	Uniformity	Other[1]
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[2]								
Small	16	3	2	4	5	1	5	1
Medium	15	2	2	3	9	5	6	1
Large	14	1	4	8	5	4	1	2
TOTAL[3]	45	6	8	15	19	10	12	4
End-product group[2]								
I	3	0	0	0	1	1	1	1
II	14	1	3	5	6	1	4	0
III	6	2	0	1	1	1	2	1
IV	7	1	3	3	4	1	3	0
V	5	1	0	1	2	2	0	1
VI	10	1	2	5	5	4	2	1
TOTAL[3]	45	6	8	15	19	10	12	4

[1] Includes dyeing affinity, foreign material, and few neps.
[2] See Appendix Table 2 for definitions of size and end-product groups.
[3] Total of properties and characteristics desired does not equal total of mill firms, because some firms desired more than one characteristic or property.

APPENDIX TABLE 12. UNDESIRABLE FIBER PROPERTIES AND CHARACTERISTICS THAT ALABAMA MILLS AVOID WHEN PURCHASING COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Undesirable properties and characteristics					
		Tinge or stain	Poor preparation	Soft or silky cotton	Large amount of foreign material	Motes or neppiness	Other[1]
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Size-group[2]							
Small	16	5	10	1	5	2	4
Medium	15	3	10	7	3	0	4
Large	14	1	6	8	1	2	2
TOTAL	45	9	26	16	9	4	10
End-product group[2]							
I	3	0	2	2	0	0	0
II	14	2	9	3	4	1	5
III	6	2	5	0	2	1	1
IV	7	2	4	3	0	1	0
V	5	2	1	2	2	1	1
VI	10	1	5	6	1	0	3
TOTAL	45	9	26	16	9	4	10

[1] Includes high waste, spotted cotton, non-uniformity, immaturity, kerosene, and poor warehousing.
[2] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 13. MILL FIRMS THAT USED OR CONTEMPLATED USE OF VARIOUS LABORATORY FIBER-TESTING METHODS TO FACILITATE COTTON BUYING, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Numbers of firms that—					
		Did not use laboratory fiber tests	Used one testing method	Used two testing methods	Used three testing methods	Used four or more testing methods	Contemplated installation of fiber-testing laboratory
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[1]							
Small	16	13	2	0	1	0	0
Medium	15	12	1	1	0	1	4
Large	14	4	1	0	2	7	6
TOTAL	45	29	4	1	3	8	10
End-product group[1]							
I	3	2	0	0	1	0	0
II	14	9	3	0	1	1	1
III	6	6	0	0	0	0	1
IV	7	6	0	1	0	0	3
V	5	4	0	0	0	1	0
VI	10	2	1	0	1	6	5
TOTAL	45	29	4	1	3	8	10

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 14. MILL FIRMS THAT USED SPECIFIED LABORATORY FIBER-TESTING METHODS AS AIDS IN BUYING COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Number that used laboratory fiber tests[1]	Number that used specified tests for determining—										
			Length uniformity			Strength		Fineness	Maturity				Other
			Fibrograph			Breakers		Micronaire	Microscope	Photograph	Dye method	Polarized light	[2]
			Private	Com.	Govt.	Private	Govt.	Private	Private	Private	Private	Private	Private
	No.		*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[3]													
Small	16	3	1	1	0	2	0	1	0	0	0	0	0
Medium	15	3	2	0	0	2	1	1	1	1	1	1	0
Large	14	10	9	0	1	9	0	6	9	3	3	3	1
TOTAL	45	16	12	1	1	13	1	8	10	4	4	4	1
End-product group[3]													
I	3	1	1	0	0	1	0	0	1	0	0	0	0
II	14	5	2	1	0	3	1	2	1	1	1	1	0
III	6	0	0	0	0	0	0	0	0	0	0	0	0
IV	7	1	1	0	0	1	0	0	0	0	0	0	0
V	5	1	1	0	0	1	0	0	1	1	1	0	1
VI	10	8	7	0	1	7	0	6	7	2	2	3	0
TOTAL	45	16	12	1	1	13	1	8	10	4	4	4	1

[1] Sub-totals may be more than the number that used these tests because some firms used more than one test, and some firms used private, commercial, and government facilities.

[2] Includes Suter-Webb Sorter for measuring fiber length. Only privately owned equipment was used.

[3] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 15. MILL FIRMS THAT USED VARIETY AS A SUPPLEMENTARY BASIS FOR BUYING COTTON, AND DIFFICULTIES ENCOUNTERED, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Number that used variety as a basis for buying	Is it difficult to buy in adequate volume? Firms responding—		Does variety bought generally fulfill expectations? Firms responding—	
			Yes	No	Yes	No
	No.	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[1]						
Small	16	0	0	0	0	0
Medium	15	1	1	0	1	0
Large	14	3	2	1	3	0
TOTAL	45	4	3	1	4	0
End-product group[1]						
I	3	2	1	1	2	0
II	14	0	0	0	0	0
III	6	0	0	0	0	0
IV	7	1	1	0	1	0
V	5	0	0	0	0	0
VI	10	1	1	0	1	0
TOTAL	45	4	3	1	4	0

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 16. OPINION OF MILL FIRMS REGARDING IMPORTANCE OF VARIETY AND KNOWLEDGE OF ORIGIN OF SEED IN PURCHASE OF COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Is enough known about fiber properties and spinning performance to justify giving weight to variety in the purchase of cotton? Firms responding—		Would buying of cotton be facilitated if the number of years that seed are removed from the breeder is known? Firms responding—	
		Yes	No	Yes	No
	Number	*Number*	*Number*	*Number*	*Number*
Size group[1]					
Small	16	10	6	6	10
Medium	15	9	6	7	8
Large	14	10	4	5	9
TOTAL	45	29	16	18	27
End-product group[1]					
I	3	2	1	2	1
II	14	9	5	5	9
III	6	2	4	2	4
IV	7	4	3	2	5
V	5	3	2	1	4
VI	10	9	1	6	4
TOTAL	45	29	16	18	27

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 17. IMPORTANCE OF BALE IDENTIFICATION TO MILL FIRMS IN BUYING QUALITIES OF COTTON DESIRED, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948[1]

Size and end-product groups	Firms reporting	Number of firms that indicated bale identification would be of—			
		Major importance	Considerable importance	Minor importance	No importance
	Number	*Number*	*Number*	*Number*	*Number*
Size group[2]					
Small	16	2	4	2	8
Medium	15	5	5	4	1
Large	14	4	3	4	3
TOTAL	45	11	12	10	12
End-product group[2]					
I	3	2	0	0	1
II	14	3	4	3	4
III	6	1	2	1	2
IV	7	1	1	4	1
V	5	1	0	1	3
VI	10	3	5	1	1
TOTAL	45	11	12	10	12

[1] Bale identification should show name of grower, variety, location and year of growth.

[2] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 18. METHODS RECOMMENDED BY MILL FIRMS TO ACCOMPLISH ADEQUATE BALE IDENTIFICATION, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Methods recommended	Number of firms that believed bale identification was important[1]	Number of firms by methods recommended								
		Size group[2]			End-product group[2]					
		Small	Medium	Large	I	II	III	IV	V	VI
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Use metal tags or improved metal tags on ties	10	2	4	4	0	1	4	1	1	3
Use gin code stencils on bagging	1	0	1	0	1	0	0	0	0	0
Use tags or marks on ties	2	1	1	0	0	2	0	0	0	0
Use cardboard in middle of bales (notarized)	2	1	0	1	0	0	0	0	0	2
Require tags to remain with bales	2	0	0	2	0	0	0	0	0	2
Other[3]	6	0	5	1	1	3	0	2	0	0
No opinion	10	2	3	5	0	4	0	3	1	2
TOTAL	33	6	15	12	2	10	4	6	2	9

[1] Methods were reported only by those mill firms that thought bale identification would be of importance to them in buying the qualities of cotton desired.

[2] See Appendix Table 2 for definitions of size and end-product groups.

[3] Includes: require gin tag information (transferred if necessary) stay with cotton, use area identification (color) woven into bagging, use stencils on cotton bagging, Manufacturing Association and Shippers Association cooperate in keeping tags on bales, and use metal tags plus cardboard tags on bales.

APPENDIX TABLE 19. METHODS RECOMMENDED BY MILL FIRMS TO CONFIRM VALIDITY OF BALE IDENTIFICATION, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Methods recommended	Number of firms that believed bale identification was important[1]	Number of firms by methods recommended								
		Size group[2]			End-product group[2]					
		Small	Medium	Large	I	II	III	IV	V	VI
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Check through shipper or compress and gin	5	0	2	3	0	1	1	1	1	1
Make shipper responsible	2	1	0	1	0	1	0	0	0	1
Make farmer and ginner responsible for tags on bales	4	0	2	2	1	0	1	0	0	2
Regulate by law and make it a Federal offense to remove tags from bales	3	0	1	2	0	0	1	0	1	1
Other[3]	8	2	4	2	1	2	1	1	0	3
No opinion	12	3	5	4	0	6	0	4	1	1
TOTAL	34[4]	6	14	14	2	10	4	6	3	9

[1] Methods were reported only from those mill firms that thought bale identification would be of importance to them in buying the qualities of cotton desired.

[2] See Appendix Table 2 for definitions of size and end-product groups.

[3] Includes notarization of tags, cardboard tags in bale, organization to check identification certifying cotton in bales similar to seed certification, extra tags on ties, law requiring tags to remain with cotton, certificate number of grower to stay with cotton, penalty for false statement, trade will eventually take care of it.

[4] One firm recommended two different methods; therefore, the total of methods recommended will not check with the number of firms that believed bale identification was important.

APPENDIX TABLE 20. RELATIVE IMPORTANCE OF VARIOUS SUPPLEMENTAL METHODS USED AND/OR RECOMMENDED BY MILL FIRMS AS AIDS IN BUYING DESIRED QUALITIES OF COTTON, ALABAMA, 1948[1]

Supplemental methods used and/or recommended[2]	Mill firms		Cotton consumed	
	Number	Percentage of total	Quantity	Percentage of total
	Number	*Per cent*	*Number*	*Per cent*
Use of variety	5	11.1	288,114	25.8
Use of laboratory fiber tests	16	35.6	759,919	68.0
Recommend adequate bale identification	33	73.3	834,175	74.6
Recommend proper use of seed not more than 3 years removed from breeder	18	40.0	607,267	54.3

[1] All firms (45) in Alabama purchased 1,117,923 bales of cotton in 1948.
[2] These methods are not mutually exclusive; a particular firm may be reported under only one or under all four methods.

APPENDIX TABLE 21. MILL FIRMS THAT KEPT INDICATED TYPES OF RECORDS ON COTTON USED, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Firms reporting	Kind of record			
		Processing cost		Mill performance	
		Number of firms	Percentage of total	Number of firms	Percentage of total
	Number	*Number*	*Per cent*	*Number*	*Per cent*
Size group[1]					
Small	16	15	93.8	6	37.5
Medium	15	15	100.0	11	73.3
Large	14	13	92.9	8	57.1
TOTAL	45	43	95.6	25	55.6
End-product group[1]					
I	3	3	100.0	3	100.0
II	14	12	85.7	5	35.7
III	6	6	100.0	4	66.7
IV	7	7	100.0	4	57.1
V	5	5	100.0	3	60.0
VI	10	10	100.0	6	60.0
TOTAL	45	43	95.6	25	55.6

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 22. NUMBER OF MILL FIRMS THAT REPORTED DIFFERENCES IN PROCESSING COSTS ASSOCIATED WITH VARIOUS FACTORS THAT AFFECT QUALITY AND SPINABILITY OF COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Number of firms that kept processing cost records	Number of firms that reported a processing cost difference in different—			
			Grades	Staples	Varieties	Areas of growth
	No.	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[1]						
Small	16	15	8	7	2	5
Medium	15	15	7	6	2	3
Large	14	13	3	4	0	1
TOTAL	45	43	18	17	4	9
End-product group[1]						
I	3	3	2	3	1	3
II	14	12	6	6	1	1
III	6	6	4	3	0	2
IV	7	7	1	1	1	1
V	5	5	1	0	0	1
VI	10	10	4	4	1	1
TOTAL	45	43	18	17	4	9

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 23. NUMBER OF MILL FIRMS THAT REPORTED DIFFERENCES IN PERFORMANCE RATES ASSOCIATED WITH VARIOUS FACTORS THAT AFFECT QUALITY AND SPINABILITY OF COTTON, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Number of firms that kept performance records	Number of firms that reported a performance difference in different—			
			Grades	Staples	Varieties	Areas of growth
	No.	*No.*	*No.*	*No.*	*No.*	*No.*
Size group[1]						
Small	16	6	4	4	2	4
Medium	15	11	7	7	4	5
Large	14	8	3	3	0	1
TOTAL	45	25	14	14	6	10
End-product group[1]						
I	3	3	3	3	2	3
II	14	5	3	3	1	2
III	6	4	3	3	1	3
IV	7	4	2	2	1	1
V	5	3	0	0	0	0
VI	10	6	3	3	1	1
TOTAL	45	25	14	14	6	10

[1] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 24. SPECIFIC DIFFERENCES IN PROCESSING COSTS AS REPORTED BY MILL FIRMS THAT KEPT PROCESSING COST RECORDS, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Number of firms that kept processing cost records	Specific processing cost differences reported			
			Lower grades and staples cause a higher processing cost, greater waste, less strength	Higher grades and staples cause a lower processing cost, greater efficiency, more strength	Other[1]	No comment
	Number	*Number*	*Number*	*Number*	*Number*	*Number*
Size group[2]						
Small	16	15	8	4	1	4
Medium	15	15	6	4	4	5
Large	14	13	3	1	2	8
TOTAL	45	43	17	9	7	17
End-product group[2]						
I	3	3	1	2	2	0
II	14	12	7	1	0	4
III	6	6	3	2	0	2
IV	7	7	1	1	1	5
V	5	5	1	1	3	1
VI	10	10	4	2	1	5
TOTAL	45	43	17	9	7	17

[1] Includes wirey fiber, eliminates twist and increases production, certain growth areas of compressed cotton do not run as good as flat cotton, etc.

[2] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 25. SPECIFIC DIFFERENCES IN PERFORMANCE RATES AS REPORTED BY MILL FIRMS THAT KEPT PERFORMANCE RECORDS, BY SIZE AND END-PRODUCT GROUPS, ALABAMA, 1948

Size and end-product groups	Number of firms	Number of firms that kept performance records	Specific performance differences reported: Lower grades and staples run poorly, have more breaks and ends down	Higher grades and staples show less breakage on spindles, greater efficiency, higher roll speed, more even spun yarn	Other[1]	No comment
	Number	*Number*	*Number*	*Number*	*Number*	*Number*
Size group[2]						
Small	16	6	4	1	1	2
Medium	15	11	4	4	1	6
Large	14	8	1	0	0	7
TOTAL	45	25	9	5	2	15
End-product group[2]						
I	3	3	0	1	0	2
II	14	5	4	0	1	2
III	6	4	2	2	0	1
IV	7	4	1	1	1	3
V	5	3	0	0	0	3
VI	10	6	2	1	0	4
TOTAL	45	25	9	5	2	15

[1] Includes less waste as same grade and staple of other areas, certain areas affect strength, performance, cost, etc.

[2] See Appendix Table 2 for definitions of size and end-product groups.

APPENDIX TABLE 26. COTTON GRADES AND STAPLES CONSUMED BY MILLS, BY END-PRODUCT GROUP, ALABAMA, 1948

Average grade and staple length	Consumption by end-product group[1]													
	I		II		III		IV		V		VI		Total	
	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total
	No.	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*
SM 1 1/8	30,000	52.8							6,664	9.6			36,664	3.3
SM 1 1/16	16,000	28.2									9,475	1.5	25,475	2.3
SM 1 1/32	10,800	19.0	30,000	20.3									40,800	3.6
SM 1			9,590	6.5							18,439	2.9	28,029	2.5
SM 31/32			7,500	5.1									7,500	.7
SM 15/16											22,338	3.6	22,338	2.0
SM 29/32											2,085	.3	2,085	.2
M 1 7/32											1,600	.2	1,600	.1
M 1 5/32											3,000	.5	3,000	.3
M 1 1/16					7,087	13.2					73,419	11.7	80,506	7.2
M 1 1/32			6,000	4.0			7,632	4.7			11,808	1.9	25,440	2.3
M 1			58,931	39.9	31,429	58.4			728	1.0	109,198	17.4	200,286	17.9
M 31/32							23,001	14.2			33,142	5.3	56,143	5.0
M 15/16							69,424	42.8			98,939	15.8	168,363	15.1
M 29/32											14,000	2.2	14,000	1.3
M 7/8											27,489	4.4	27,489	2.5
M 27/32											6,000	1.0	6,000	.5
SLM 1 1/16											4,000	.6	4,000	.3
SLM 1 1/32			29,834	20.2					1,616	2.3			31,450	2.8
SLM 1					8,718	16.2	25,002	15.4			104,536	16.6	138,256	12.4
SLM 31/32							9,600	5.9					9,600	.9
SLM 15/16							22,500	13.9			5,120	.8	27,620	2.5
SLM 29/32											6,189	1.0	6,189	.6
SLM 7/8							4,998	3.1			13,400	2.1	18,398	1.6

(Continued)

APPENDIX TABLE 26 *(Continued).* COTTON GRADES AND STAPLES CONSUMED BY MILLS, BY END-PRODUCT GROUP, ALABAMA, 1948

Average grade and staple length	Consumption by end-product group[1]													
	I		II		III		IV		V		VI		Total	
	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total	Bales	Pct. of total
	No.	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*
LM 1					6,184	11.5							6,184	.6
LM 15/16											3,961	.6	3,961	.3
LM 7/8											578	.2	578	[2]
SGO 1 1/16											20,125	3.2	20,125	1.8
SGO 1					405	.7			21,840	31.5	2,400	.4	24,645	2.2
SGO 29/32									186	.3			186	[2]
SGO 7/8											5,281	.8	5,281	.5
GO 1 1/16									27,790	40.1			27,790	2.5
GO 1									2,912	4.2	21,015	3.3	23,927	2.1
GO 7/8									7,592	11.0			7,592	.7
M (TG) 1			6,000	4.0									6,000	.5
LM (strip) 1 1/16											1,117	.2	1,117	.1
LG 1											9,306	1.5	9,306	.8
TOTAL	56,800	100.0	147,855	100.0	53,823	100.0	162,157	100.0	69,328	100.0	627,960	100.0	1,117,923	100.0

[1] See Appendix Table 2 for definitions of end-product groups.
[2] Less than 0.1 per cent.

APPENDIX TABLE 27. GRADES AND STAPLES OF COTTON USED IN THE MANUFACTURE OF SPECIFIED END-PRODUCTS, ALABAMA, 1948

End-products manufactured	Firms rptg.	No. firms using average grade of—								No. firms using average staple of—						
		SM	M	SLM	LM	SGO	GO	Low grade	M (TG)	1-3/32" and longer	1-1/16"	1-1/32"	1"	31/32"	15/16"	29/32" and shorter
	No.	*Number*								*Number*						
Cotton yarns (coarse to medium)	19	6	12	2	2	1	2	2			3	1	18	1	2	2
Fine cotton yarns	1	1								1						
Cotton rope	1					1										1
High rated cord	1		1							1						
Seine twine	2		2										2			
Broom twine	1					1							1			
Ply twine	1		1								1					
Wrapping twine	3		3	1	1	1						1	4			1
Top closing thread	1	1								1						
Sewing thread	1	1								1						
Crochet thread	1		1										1			
Hose, belting & high speed sewing thread	2		1	1							1		1			
Tire cords or fabrics	1	1										1				
Chafer fabrics	4		2	2									1	1	2	
Ducks	6	1	6	3									1		6	3
Milk filters	1		1										1			
Osnaburgs	5			1		2	2				2		2	1		

(Continued)

APPENDIX TABLE 27 *(Continued).* GRADES AND STAPLES OF COTTON USED IN THE MANUFACTURE OF SPECIFIED END-PRODUCTS, ALABAMA, 1948

End-products manufactured	Firms rptg.	No. firms using average grade of—								No. firms using average staple of—						
		SM	M	SLM	LM	SGO	GO	Low grade	M (TG)	1-3/32" and longer	1-1/16"	1-1/32"	1"	31/32"	15/16"	29/32" and shorter
	No.	*Number*								*Number*						
Drills, twills, sateen & laundry sheetings	9	1	9	2							1		1	5	5	
Denim	1			1									1			
Ticking	3		1	2									2		1	
Drapery	1			1									1			
Corduroy	1	2												2		
Flannel	2		1	1									1		1	
Toweling	2		1	3									1		2	1
Underwear	1		1									1				
Birdseye	1			1										1		
Chambray	3		3								2		1			
Sheeting (coarse and medium)	12	1	8	3					1				11	1	1	
Printcloth	4		2	2							2	2				
Broadcloth	1			1								1				
Fine sheeting	2		2									2				
TOTAL[1]	94	15	58	27	3	6	4	2	1	4	12	9	51	12	20	8

[1] Totals are greater than the number of firms reporting (45) because some firms made several products.

APPENDIX TABLE 28. PURCHASES OF COTTON BY MILL FIRMS FROM SPECIFIED PRODUCTION AREAS, BY SIZE GROUP, ALABAMA, 1948[1]

Area[2]	Running bales bought by size group[3]			
	Small	Medium	Large	Total
	Number	*Number*	*Number*	*Number*
Southeast:				
Alabama	58,839	103,971	316,427	479,237
Other southeastern states[4]	5,373	15,287	45,486	66,146
Mississippi Delta	9,307	39,410	203,180	251,897
Central:				
Texas Blacklands	2,137	45,720	39,542	87,399
Texas Rio Grande Valley	308	12,924	61,243	74,475
Plains areas of Texas and Oklahoma	70	10,368	51,183	61,621
Far West:				
El Paso Area	0	0	6,168	6,168
Arizona	0	0	2,017	2,017
California	0	0	8,463	8,463
Unknown	0	0	80,500	80,500
TOTAL	76,034	227,680	814,209	1,117,923

[1] See Figure 1 for location of production areas.
[2] Minor areas of production, such as Ozark and Ouachita Mountain areas and Gulf Coastal Plains were not listed, but were included in the nearest major area.
[3] See Appendix Table 2 for definition of size groups.
[4] Includes all southeastern states east of the Mississippi River except Alabama.

APPENDIX TABLE 29. PURCHASES OF COTTON BY MILL FIRMS FROM SPECIFIED PRODUCTION AREAS, BY END-PRODUCT GROUP, ALABAMA, 1948[1]

Area[2]	Running bales bought by end-product group[3]						
	I	II	III	IV	V	VI	Total
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Southeast:							
Alabama	6,480	76,731	49,437	50,331	9,721	286,537	479,237
Other southeastern states[4]	0	5,191	412	8,245	7,110	45,188	66,146
Mississippi Delta	47,320	59,865	3,974	39,630	25,980	75,128	251,897
Central:							
Texas Blacklands	0	5,760	0	39,030	12,740	29,869	87,399
Texas Rio Grande Valley	3,000	308	0	7,452	0	63,715	74,475
Plains areas of Texas and Okla.	0	0	0	17,469	70	44,082	61,621
Far West:							
El Paso Area	0	0	0	0	6,168	0	6,168
Arizona	0	0	0	0	0	2,017	2,017
California	0	0	0	0	7,539	924	8,463
Unknown	0	0	0	0	0	80,500	80,500
TOTAL	56,800	147,855	53,823	162,157	69,328	627,960	1,117,923

[1] See Figure 1 for location of production areas.
[2] Minor areas of production, such as Ozark and Ouachita Mountain areas and Gulf Coastal Plains were not listed, but were included in the nearest major area.
[3] See Appendix Table 2 for definition of end-product groups.
[4] Includes all southeastern states east of the Mississippi River except Alabama.