START

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

FARM PRICES OF COTTON RELATED TO ITS GRADE AND STAPLE LENGTH IN THE UNITED STATES, SEASONS 1928–29 TO 1932–33

By

L. D. HOWELL
Senior Agricultural Economist

and

JOHN S. BURGESS, Jr.
Assistant Agricultural Economist
Division of Cotton Marketing, Bureau of Agricultural Economics

FARM PRICES OF COTTON AS RELATED TO ITS GRADE AND STAPLE LENGTH IN THE UNITED STATES, SEASONS 1928–29 TO 1932–33

By L. D. HOWELL, *senior agricultural economist*, and JOHN S. BURGESS, Jr., *assistant agricultural economist, Division of Cotton Marketing, Bureau of Agricultural Economics* [1]

The Bureau of Agricultural Economics in Cooperation With the Agricultural Experiment Stations of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas

CONTENTS

INTRODUCTION

Cotton farmers in the United States have been urged repeatedly to improve the quality of the cotton produced. Especial emphasis has been given to the importance of growing longer staple varieties. Farmers in many localities have been advised that these varieties are more profitable than shorter staple varieties. Although it has been generally recognized that higher grade and longer staple cottons are more valuable for spinning purposes than are lower grade and shorter staple cottons, earlier studies showed that the relation between prices received by growers in local markets and grade and staple length was

extremely irregular. In many cases prices for higher grades and longer staples were lower than prices for lower grades and shorter staples.[2]

Prices received by growers on the basis of grade and staple length are important considerations in determining to what extent they can afford to improve the quality of cotton produced. A practical program for improving or maintaining the quality of cotton in the various localities should take into account the influence of prices received by growers on the quality of cotton produced. Where the prices received by growers are the same for all qualities of cotton, the growers are naturally more interested in yields than in quality, since under these conditions profits vary directly with yields. Growers are unlikely to change to or to continue to grow the longer staple varieties unless differences in income resulting from prices received, along with the yields, are adequate to convince them that longer staple varieties are at least as profitable as the shorter staple varieties.

These facts may well be remembered in connection with statistically unverifiable statements (17),[3] indicating deterioration in the quality of the cotton produced in various sections of the United States since the advent of the bollweevil in 1892. It is known that since 1929–30 the proportion of the United States crop having staples shorter than seven-eighths inch has decreased and the proportion with staples fifteen-sixteenths inch and longer has increased. The average staple length has increased from 15.11 sixteenths of an inch for the crop of 1929 to 15.45 sixteenths of an inch for the crop of 1932 (26). The alleged deterioration during earlier years has been attributed to the fact that prices received by growers were not such as to induce them to grow longer staple varieties; to the invasion of the bollweevil, which stimulated the development and use of early maturing varieties of shorter staple cotton; to the expansion of cotton acreage in areas less favorable to the production of longer staple varieties; to the mixing of varieties at the gins and in the fields; to deterioration in soil fertility; and to other factors. This study deals with the first of these factors, namely, the prices received by growers.

PREVIOUS INVESTIGATIONS OF THE RELATION BETWEEN PRICES AND GRADE AND STAPLE LENGTH

Several investigations of variations in prices received by growers, as related to grade and staple length of cotton sold, were made prior to 1928. The earliest of these studies reported was that made in Oklahoma (36) in 1912. During the season of 1913–14 the study was expanded to cover the entire Cotton Belt (33). Similar studies were made in North Carolina (27) during the seasons 1914–15 and 1915–16 and in Arkansas (3) during the seasons 1913–14, 1914–15, and 1915–16. These studies showed that, although the prices received by growers in the same local market on the same date often varied considerably, they did not always vary directly with the grade and staple length of the cotton. Studies made in four local markets in Texas (14) in 1926 showed that prices received by growers in the same local markets on the same date did not generally vary appreciably with the grade and staple length of the cotton sold, but .

---

[2] HOWELL, L. D., and BURGESS, J. S., JR. FARM PRICES OF COTTON IN RELATION TO ITS GRADE AND STAPLE LENGTH IN LOCAL MARKETS IN THE UNITED STATES, SEASONS 1928–29, 1929–30, AND 1930–31. U. S. Dept. Agr. [Prelim. Rept.], 71 pp., illus. 1932. [Mimeographed.]
[3] Italic numbers in parentheses refer to literature cited, p. 47.

that average prices received by growers in different local markets on the same date did vary directly with the average grade and staple length of the cotton sold. Similar data were collected in Alabama (*32*) in 1926 and 1927 and in South Carolina (*24*) in 1925, 1926, and 1927. Their results are similar for the most part to those reported in Texas.

Beginning in the 1928–29 season, data on prices received by growers for cotton of various grades and staple lengths were gathered in selected local markets throughout the Cotton Belt by the United States Department of Agriculture in cooperation with State agricultural experiment stations. Reports have been issued showing in more or less complete form the results of the analysis of data collected in Alabama (*32*), Arkansas (*29*), Georgia (*21, 22*), Louisiana (*16*), Mississippi (*23*), North Carolina (*25*), Oklahoma (*15*), South Carolina (*10, 19, 24*), and Tennessee (*1*).

LOCAL MARKETS DEFINED AND DESCRIBED (*12*)

Farmers' local cotton markets constitute that part of the cotton-marketing system at which farmers and buyers come in direct contact for the purpose of selling and buying cotton. The farmers' local market represents the first step in the movement of cotton from the hands of the growers to the ultimate consumers. The market places, which in this bulletin are referred to as local markets, are to be found in almost every village, town, and city in the cotton-producing area of the United States. The volume of sales in these local markets varies from a few hundred bales at crossroad stores and country gins to many thousands of bales in the larger cities. The greater part of the crop is sold in the smaller cities and towns.

These local markets supply a meeting place for growers and buyers and give farmers an opportunity to bargain individually in the sale of their cotton; they furnish a ready and convenient market where farmers may sell their cotton at almost any time; they serve as a point for assembling cotton in such quantities as to facilitate handling; and they serve as a medium through which the demand for cotton is transmitted to growers.

The trading personnel of the local markets consists of cotton growers and local buyers. Farmers, as a rule, know very little about the classification of cotton. Their bargaining power is determined largely by their business judgment and their indebtedness to buyers. The number of local buyers varies from only 1 in some markets to more than 20 in others. Among them may be representatives of large cotton firms or mills who buy for their firms on joint account, on salary, or on commission; supply merchants, fertilizer dealers, gin operators, and others who take cotton on account of debts of farmers or for increasing their volume of business; and local cotton merchants who are interested primarily in buying and selling cotton.

The facilities available and the methods of handling cotton in local markets vary considerably. In some of these markets there is a public square, a cotton yard, or a railroad platform where buyers and farmers meet and where the cotton is sold. In other markets farmers deliver their cotton directly from the gin to a warehouse where the bales are weighed and sampled and receipts are issued

in the farmer's name. With the samples and receipts obtained at the warehouse the farmers bargain with local buyers for the sale of their cotton.

In some local markets the local buyers obtain information on futures prices every 15 minutes and on spot prices at the close of the market through the commercial news department of telegraph companies. This and other information is used in determining the maximum prices local buyers can afford to pay growers for cotton. Many local buyers receive limits from merchants in central markets as a basis for buying. In making these limits the merchants take into account the quality of cotton recently received from the local market along with other considerations.

QUALITY OF COTTON

The term "quality" as applied to cotton refers to all the physical properties of cotton that affect its usefulness. These properties are described for commercial purposes in terms of grade, staple length, and character (30). Grade is a term denoting a composite of (1) color, luster, and brightness of the lint; (2) nature and quantity of foreign matter present, such as leaf, shale, motes, sand, and dust; and (3) preparation resulting from ginning as indicated by smoothness of fiber, "neppiness", nappiness, and whether or not the fibers are gin cut or stringy. Staple length of cotton means the normal length by measurement of a typical portion of its fibers and is determined commercially by a certain pulling of the staple with the hands (39). As every sample contains fibers of varying lengths, the drawing out of representative fibers is a process involving much skill. Character of cotton includes all elements of cotton quality not included in grade or staple length.

In determining the spinning quality of the fibers the character of cotton is important, but the factors affecting it are not very definitely known. Differences in character are recognized in the markets, and the prices paid doubtless reflect these to some extent; but in the absence of standards for character no attempt has been made in this study to relate the prices received by growers to the character of the cotton.

The proportional distributions by grades and staple lengths of cotton included in the sample of individual bale sales of Extra White, White, and Spotted cotton ginned in the United States are shown in tables 1 and 2. Although the proportional distribution by grade and staple length of cotton included in the price study was on the whole not very different from that for all upland cotton ginned in the United States, it will be noted that the proportions of the longer staples included in the price study were somewhat smaller than those for cotton ginned in the United States. The smaller proportion of the longer staples included in this study than were found for the domestic crops taken as a whole are largely accounted for by the fact that irrigated cotton was not included in this study and that only a small sample of individual bale sales was obtained in the Mississippi Delta because most of the cotton in the Delta was sold in round lots.

TABLE 1.—*Percentage distribution by grade of Extra White, White, and Spotted cotton included in the price study in selected local markets and ginned in the United States,[1] seasons 1928-29 to 1932-33*

Grade	1928-29		1929-30		1930-31		1931-32		1932-33	
	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
White:[2]										
1, Middling Fair	(³)	(³)								
2, Strict Good Middling	0.1	0.3	0.1	0.3	0.1	0.1	(³)	0.1	(³)	(³)
3, Good Middling	9.4	12.7	6.2	7.3	8.1	7.4	5.6	6.2	2.9	2.8
4, Strict Middling	33.9	35.6	30.0	28.3	34.0	33.5	38.4	36.6	29.9	26.0
5, Middling	24.8	23.8	31.3	31.4	32.8	31.6	31.0	32.2	35.4	36.2
6, Strict Low Middling	10.0	10.0	12.7	13.4	13.3	12.0	11.8	11.0	10.3	13.3
7, Low Middling	2.9	3.2	4.9	5.7	4.1	4.3	3.6	4.0	1.8	2.8
8, Strict Good Ordinary	1.1	1.8	1.8	2.0	.6	1.0	1.0	2.6	.3	.9
9, Good Ordinary	.4	.6	.5	.6	.1	.2	1.2	1.0	.1	.4
Total	82.6	88.0	87.5	89.0	93.1	91.1	94.2	93.7	80.7	82.4
Spotted:										
3, Good Middling	2.5	1.0	.5	.3	.9	1.1	.0	.7	1.9	1.5
4, Strict Middling	8.7	5.7	5.6	4.5	3.4	4.1	2.9	2.6	10.1	8.4
5, Middling	4.2	3.3	4.6	4.0	1.7	2.5	1.4	1.5	5.6	5.4
6, Strict Low Middling	1.7	1.4	1.5	1.7	.8	1.0	.5	1.1	1.3	1.7
7, Low Middling	.3	.6	.4	.5	.1	.2	.1	.4	.4	.6
Total	17.4	12.0	12.5	11.0	6.9	8.9	5.8	6.3	19.3	17.6
Grand total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] U. S. Dept. Agr. Statis. Bull. 47 (26).   [3] Less than 0.05 percent.
[2] Extra White cotton included.

TABLE 2.—*Percentage distribution by staple length of Extra White, White, and Spotted cotton included in the price study in selected local markets and ginned in the United States,[1] seasons of 1928-29 to 1932-33*

Staple length (inches)	1928-29		1929-30		1930-31		1931-32		1932-33	
	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States	Local market sample	Ginnings in the United States
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Shorter than ⅞	12.3	13.5	20.3	19.8	8.4	13.3	4.7	6.0	4.0	6.5
⅞ and ²⁹⁄₃₂	43.3	41.9	44.0	38.0	37.8	38.7	30.9	39.7	39.2	37.7
¹⁵⁄₁₆ and ³¹⁄₃₂	25.7	22.9	21.3	19.1	31.8	25.0	35.0	27.2	34.6	28.9
1 and 1 ¹⁄₃₂	11.8	11.2	9.8	11.8	16.0	12.6	22.0	15.4	18.0	14.4
1¹⁄₁₆ and 1³⁄₃₂	4.0	5.6	3.3	6.6	4.9	7.1	6.5	6.5	3.8	6.9
1⅛ and 1⁵⁄₃₂	2.2	3.5	1.2	3.9	1.0	2.9	.8	3.0	.4	4.9
1³⁄₁₆ and 1⁷⁄₃₂	.6	1.2	.1	.8	.1	.4	.1	1.4	(³)	.7
1¼ and longer	.1	.2	(³)	(³)	(³)	(³)		.2		(³)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] U. S. Dept. Agr. Statis. Bull. 47 (26).   [3] Less than 0.05 percent.

All staple lengths of cotton grown in the United States compete directly with cotton grown in other countries. Cotton ⅞ inch and shorter in staple competes directly with cotton grown in India, China, and other foreign countries. Cotton ¹⁵⁄₁₆ inch to 1¹⁄₃₂ inches in staple competes directly with cotton grown chiefly in Russia, Brazil, and Argentina. Cotton 1¹⁄₁₆ inches and longer in staple

competes directly with cotton grown chiefly in Egypt, Peru, Uganda, Sudan, and Brazil. In order that farmers may make such adjustments as may be necessary to meet this competition to the best advantage, it is necessary that information be had not only on differences in yields and in other factors affecting cost of production but also on differences in prices received for cotton of the various grades and staple lengths.

OBJECTIVES OF THIS STUDY

The objectives of this study were (1) to determine the extent to which prices received by growers in selected local markets for individual bales varied on the basis of their grade and staple length, (2) to compare premiums for the higher grades and longer staples and discounts for the lower grades and shorter staples in local markets with those quoted in central markets, and (3) to determine to what extent average prices in the different local markets varied with the average quality of the cotton sold as indicated by grade and staple length.

As a basis for this study, the price data mentioned above, collected in the various States in the period 1928–29 to 1932–33 have been analyzed from a national point of view.

This bulletin also calls attention to some of the factors responsible for or associated with these variations, indicates some of the influences of the variations in prices received by growers for different grades and staple lengths on the quality of the cotton grown, and suggests means of bringing about a better adjustment of the quality of cotton produced to mill requirements.

METHOD OF PROCEDURE AND SCOPE OF THIS STUDY

LOCAL MARKET PRICES

Data were collected in 141 local markets [4] in 1928–29, 115 in 1929–30, 114 in 1930–31, 38 in 1931–32, and 53 in 1932–33. These markets are widely distributed over the Cotton Belt and were selected to represent the various types of local markets. Their location is shown in figure 1. Arrangements were made by the United States Department of Agriculture, in cooperation with State agricultural experiment stations, to secure from a ginner at each of these markets a sample from each bale of cotton ginned at his plant during the season. These samples were mailed to the offices of the United States Department of Agriculture at Atlanta, Ga.; Memphis, Tenn.; and Dallas or Austin, Tex., where they were classed [5] according to the official cotton standards of the United States, by specialists in cotton classing regularly employed by the United States Department of Agriculture.

Data on prices received by growers and on date of sale were obtained from local buyers and were recorded along with the Government classification, and the type of buyer (ginner, storekeeper, etc.) who bought each bale. Information on marketing methods and prac-

[4] These local markets were selected at points where arrangements had already been made for obtaining samples for grade and staple statistics. A reduction in the funds available for the collection of price data accounts for the smaller number of markets included in the study in 1931–32 and in 1932–33 than in previous seasons.

[5] The classifications were based on samples taken from the press box at the gin, although most of the cotton was sold on the basis of samples cut from the bales.
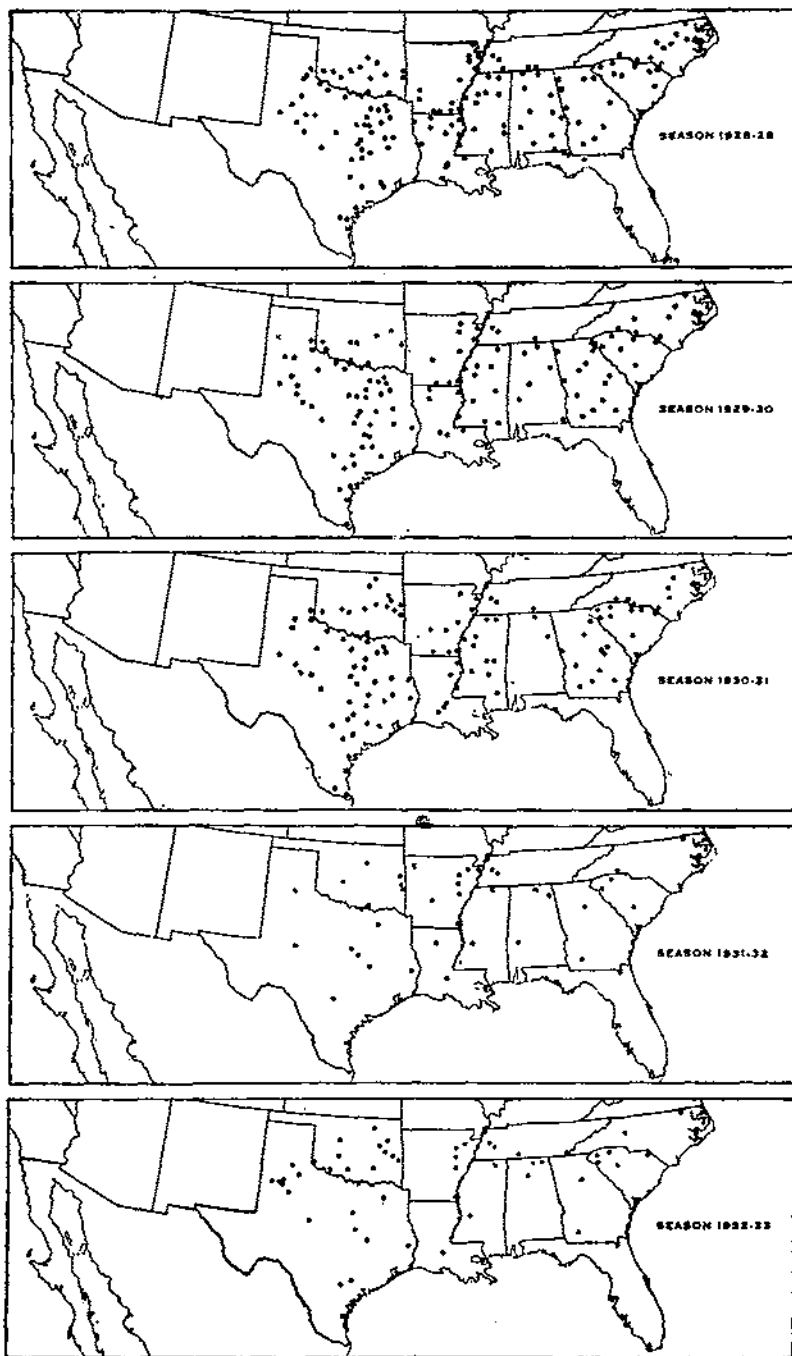
FIGURE 1.—LOCATION OF FARMERS' LOCAL MARKETS STUDIED.

Local markets included in the study of farm prices of cotton as related to its grade and staple length are widely distributed over the Cotton Belt and were selected to represent the various types of local markets.

tices and on central markets and mill towns, if any, to which cotton was shipped, together with data on handling and storage charges, insurance, and freight rates were obtained for each market for use in interpreting the price data.   Complete data were obtained for 106,603 individual-bale sales in 1928–29, 99,493 in 1929–30, 80,725 in 1930–31, 28,836 in 1931–32, and 30,762 in 1932–33.   Before making the analysis, data on cotton sold by farmers in round lots were separated from data on cotton sold as individual bales.   (The details of the methods of analyzing these data are given in the appendix, p. 49.)

CENTRAL MARKET PRICES

The central-market prices used include average prices quoted for Middling ⅞-inch White cotton at the 10 designated spot markets (Augusta, Dallas, Galveston, Houston, Little Rock, Memphis, Montgomery, New Orleans, Norfolk, and Savannah); average premiums and discounts for grade at the 10 designated spot markets; average premiums for staples ¹⁵⁄₁₆ inch and 1 inch at the 6 spot markets (Dallas, Galveston, Houston, Little Rock, Memphis, and New Orleans); average premiums for staples 1¹⁄₁₆ inches and longer at Memphis and New Orleans; and average discounts for ¹³⁄₁₆-inch staples at Houston, Galveston, and New Orleans.   Averages were obtained by weighing these central-market quotations by the number of bales of cotton of the same description sold on the same day and included in the data on prices received by growers in local markets.   This weighting eliminates the influence of differences in date of sale on differences between local-market and central-market prices.

Central-market quotations are here used as a basis for comparison, not because they are considered entirely satisfactory measures of the differences in value, for spinning purposes, of cotton of the various grades and staple lengths, but because no better measures were found. Prices that mills are economically justified in paying for cotton of different grades and staples are limited by its value for spinning purposes.   Prices quoted in central markets are thought to reflect, fairly accurately, mill premiums and discounts for grades and staple lengths. Central-market quotations are used instead of mill quotations because daily quotations for mill markets showing premiums and discounts for all grades and staples included in this study are not available.   Differences in spinning value of cotton of the various grades and staple lengths change from time to time as a result of differences in the supply-and-demand situation.   Competition in mill markets may be limited to such an extent that prices paid by mill buyers do not reflect accurately the differences in spinning value of cotton of the various grades and staple lengths and prices in central markets may represent a somewhat further deflection from a true representation of these differences in spinning value.   But, despite these imperfections, it is believed that central-market quotations reflect differences in the spinning value of the various grades and staples accurately enough for their use in this connection to give significant results.

The use of central-market premiums and discounts for grade and staple length as a basis for comparison does not necessarily mean that prices to growers in local markets should reflect premiums and discounts equal to those quoted in central markets for large lots of even-running cotton.   It is not known to what extent premiums and discounts for grade and staple length for cotton sold in even-running lots

differ from those for cotton bought on "basis Middling" contract, but limits used by merchants in New Orleans for purchases made in the interior were found not to be materially out of line with the official quotations for the medium grades and staples.

RELATION BETWEEN PRICES AND THE GRADE AND STAPLE LENGTH OF INDIVIDUAL BALES

PRICES OF SPECIFIED GRADES AND STAPLES IN LOCAL MARKETS ON SELECTED DAYS

The prices received by growers for cotton of the same grade and staple length sold in the same local market on the same day varied widely. Furthermore, prices received for cotton of different grades and staple lengths varied so irregularly that it was not unusual for some farmers to receive considerably higher prices for cotton of some grades and staples than other farmers received for cotton of higher grade and longer staple sold in the same local market on the same day.

Irregularities in the relationship between prices and grade and staple length are shown in tables 3, 17, 18, and 19. In market A, for example, on October 10, 1928, the prices received by growers for Strict Middling 1⅛-inch cotton varied from 16 cents a pound to 21 cents a pound. On the same day in the same local market the highest price paid for Strict Middling ¹⁵⁄₁₆-inch cotton was 20 cents a pound, whereas the lowest price paid for Middling 1⅛-inch cotton was 18.75 cents a pound. That only a small part of these irregular variations is accounted for by fluctuations in prices during the day is indicated by the fact that on October 10, 1928, the prices of New York futures contracts for December delivery varied only 10 points.[5] Data showing more or less similar variations in other markets and in other years are also shown in tables 3, 17, 18, and 19.

[5] A "point" is one one-hundredth of 1 cent.

TABLE 3.—*Price per pound received by growers for White cotton of various grades and staple lengths sold in selected local markets on specified dates, season 1928–29* [1]

MARKET A, 20 BUYERS OF DIFFERENT TYPES, OCT. 10, 1928 [2]

Grade	7/8 inch Sales	7/8 inch Price	15/16 inch Sales	15/16 inch Price	1 inch Sales	1 inch Price	1 1/16 inches Sales	1 1/16 inches Price	1 1/8 inches Sales	1 1/8 inches Price	1 3/16 inches Sales	1 3/16 inches Price	1 1/4 inches and longer Sales	1 1/4 inches and longer Price
	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents
3, Good Middling							1	20.00	3	21.00	1	20.50	1	20.00
							1	21.00			1	20.75	1	21.50
											1	21.00		
											1	21.13		
4, Strict Middling	1	21.00	1	18.63	1	19.38	1	19.00	1	16.00	2	21.00	1	20.00
			2	20.00			2	19.50	1	18.75	2	21.13	1	20.75
							5	20.00	2	19.25	2	22.00		
									1	19.38				
									1	19.50				
									1	19.75				
									3	20.00				
									2	21.00				
5, Middling					2	19.00	2	19.00	2	18.75	2	20.00	1	21.00
							1	19.13	3	19.00	1	21.00		
							2	19.25	1	19.50	1	22.00		
							1	19.50	2	19.75				
							1	20.00	2	20.00				
									2	20.25				
									1	21.00				
6, Strict Low Middling					1	16.75			1	19.63				
7, Low Middling					1	16.75			1	21.00				

MARKET B, 1 BUYER, WHO BUYS ON COMMISSION FOR A LOCAL MILL, OCT. 6, 1928 [3]

Grade	7/8 inch Sales	7/8 inch Price	15/16 inch Sales	15/16 inch Price	1 inch Sales	1 inch Price	1 1/16 inches Sales	1 1/16 inches Price	1 1/8 inches Sales	1 1/8 inches Price	1 3/16 inches Sales	1 3/16 inches Price	1 1/4 inches and longer Sales	1 1/4 inches and longer Price
3, Good Middling			1	18.00	1	18.13								
			6	18.13										
4, Strict Middling	1	18.00	4	18.00	1	18.13	1	18.00						
	2	18.13	5	18.13										
5, Middling	2	18.00	2	18.13										
	1	18.13												
6, Strict, Low Middling			1	18.13										
7, Low Middling	1	18.13												

[1] No round-lot sales are included.
[2] The price of New York futures contracts for December delivery varied 10 points on this date.
[3] The price of New York futures contracts for December delivery varied 18 points on this date.

These wide and irregular variations, which are considered fairly typical of local-market prices, show that the influence of quality, as indicated by grade and staple-length designations of Government classers on prices received by growers, at least so far as individual bales are concerned, is frequently more than counterbalanced by other factors. Lack of knowledge of the correct classification and commercial value of the cotton on the part of farmers and of many local buyers, differences in bargaining power of farmers and of local buyers, and fluctuations in prices during the day, are considered the most important factors responsible for these irregular variations in prices on the basis of grade and staple length.

PREMIUMS AND DISCOUNTS FOR GRADE

Average prices received by growers for the higher grades were generally somewhat higher than those received for cotton of lower grade but of the same staple length sold in the same local market on the same day. It was found, however, that premiums for the higher grades and also discounts for the lower grades averaged considerably less in local markets than did those quoted in central markets (table 4 and fig. 2).
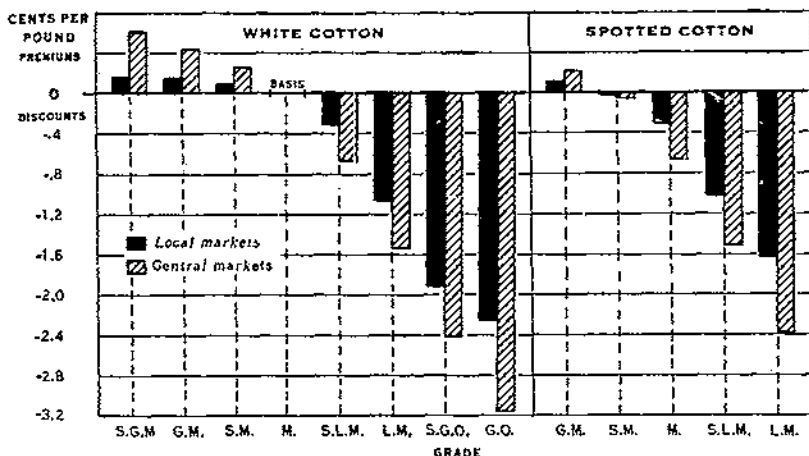
FIGURE 2.—AVERAGE PREMIUMS AND DISCOUNTS FOR SPECIFIED GRADES OF ⅞-INCH COTTON IN SELECTED LOCAL MARKETS AND IN CENTRAL MARKETS. SEASONS 1928–29 TO 1932–33.

Premiums received by growers for grades above Middling averaged only one-third of those quoted in central markets. Discounts made to growers for grades below Middling averaged about 60 percent of those quoted in central markets.

TABLE 4.—*Average premiums and discounts [1] for specified grades of ⅞-inch cotton in selected local markets and in central markets,[2] seasons 1928–29 to 1932–33*

SEASON 1928-29

Grade	Local markets		Central markets
	Size of sample	Premiums and discounts (−)	Premiums and discounts (−)
White: [3]	*Bales*	*Cents*	*Cents*
2, Strict Good Middling	46	0.14	0.60
3, Good Middling	3,180	.21	.40
4, Strict Middling	14,408	.12	.26
5, Middling (basis)	11,377	.00	.00
6, Strict Low Middling	4,305	−.34	*−.77
7, Low Middling	1,319	−.94	−1.57
8, Strict Good Ordinary	425	−1.68	−2.40
9, Good Ordinary	168	−2.06	−3.26
Spotted:			
3, Good Middling	1,153	.13	.23
4, Strict Middling	4,036	−.01	−.03
5, Middling	2,234	−.29	−.75
6, Strict Low Middling	535	−.07	−1.53
7, Low Middling	81	−1.38	−2.31

SEASON 1929-30

White: [2]			
2, Strict Good Middling	22	0.21	0.58
3, Good Middling	1,782	.14	.43
4, Strict Middling	12,277	.11	.27
5, Middling (basis)	14,264	.00	.00
6, Strict Low Middling	5,849	−.40	−.76
7, Low Middling	2,155	−1.46	−1.68
8, Strict Good Ordinary	614	−2.54	−2.76
9, Good Ordinary	132	−2.48	−3.75
Spotted:			
3, Good Middling	192	.08	.19
4, Strict Middling	2,635	−.01	−.07
5, Middling	1,984	−.34	−.74
6, Strict Low Middling	555	−1.16	−1.64
7, Low Middling	101	−2.03	−2.70

SEASON 1930-31

White: [3]			
2, Strict Good Middling	32	0.17	0.70
3, Good Middling	1,761	.07	.52
4, Strict Middling	8,778	.05	.31
5, Middling (basis)	10,214	.00	.00
6, Strict Low Middling	4,766	−.32	−.69
7, Low Middling	1,552	−.96	−1.60
8, Strict Good Ordinary	230	−1.61	−2.57
9, Good Ordinary	27	−1.77	−3.59
Spotted:			
3, Good Middling	274	−.02	.21
4, Strict Middling	1,270	−.11	−.04
5, Middling	673	−.38	−.67
6, Strict Low Middling	310	−1.01	−1.55
7, Low Middling	36	−1.55	−2.48

SEASON 1931-32

| White: [3]			
3, Good Middling	500	0.10	0.44
4, Strict Middling	3,170	.03	.26
5, Middling (basis)	2,913	.00	.00
6, Strict Low Middling	1,069	−.08	−.36
7, Low Middling	227	−.15	−.75
8, Strict Good Ordinary	111	−.52	−1.07
9, Good Ordinary	48	−.92	−1.34
Spotted:			
3, Good Middling	100	.00	.21
4, Strict Middling	208	−.05	.00
5, Middling	125	−.11	−.36
6, Strict Low Middling	22	−.45	−.77
7, Low Middling	7	−.68	−.99

See footnotes at end of table.

TABLE 4.—*Average premiums and discounts [1] for specified grades of ⅞-inch cotton in selected local markets and in central markets,[2] seasons 1928–29 to 1932–33—Continued*

SEASON 1932-33

Grade	Local markets		Central markets
	Size of sample	Premiums and discounts (−)	Premiums and discounts (−)
White: [3]	*Bales*	*Cents*	*Cents*
3, Good Middling	248	0.13	0.34
4, Strict Middling	2,961	.01	.24
5, Middling (basis)	4,336	.00	.00
6, Strict Low Middling	1,406	−.07	−.29
7, Low Middling	247	−.16	−.59
8, Strict Good Ordinary	46	−.47	−.87
9, Good Ordinary	10	−.62	−1.24
Spotted:			
3, Good Middling	168	.04	.23
4, Strict Middling	1,241	−.04	.00
5, Middling	742	−.16	−.23
6, Strict Low Middling	60	−.40	−.57
7, Low Middling	12	−.57	−.91

TOTAL

Grade	Local markets		Central markets
	Size of sample	Premiums and discounts (−)	Premiums and discounts (−)
White: [3]			
2, Strict Good Middling	100	0.16	0.63
3, Good Middling	7,471	.15	.44
4, Strict Middling	41,684	.09	.27
5, Middling (basis)	43,104	.00	.00
6, Strict Low Middling	17,484	−.32	−.68
7, Low Middling	5,500	−1.08	−1.54
8, Strict Good Ordinary	1,426	−1.91	−2.43
9, Good Ordinary	385	−2.27	−3.16
Spotted:			
3, Good Middling	1,887	.09	.22
4, Strict Middling	10,380	−.03	−.04
5, Middling	5,758	−.30	−.67
6, Strict Low Middling	1,482	−1.02	−1.53
7, Low Middling	237	−1.62	−2.39

[1] Premiums and discounts in cents per pound from the price of Middling ⅞-inch White cotton. The price of Middling ⅞-inch White cotton in the selected local markets averaged 17.86 cents per pound in 1928–29, 17.20 cents per pound in 1929–30, 9.74 cents per pound in 1930–31, 5.75 cents per pound in 1931–32, 6.21 cents per pound in 1932–33, and 13.73 cents per pound for the 5 seasons combined. Central-market quotations averaged 18.36, 17.58, 10.03, 5.84, 6.30, and 14.07 cents per pound, respectively. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.

[2] Average quoted prices for Middling ⅞-inch cotton and average premiums and discounts for grade at the 10 designated spot markets were weighted by the number of bales of cotton of the same grade and staple length designation sold on the same day and included in the sample of cotton shown for local markets.

[3] Extra White cotton included. Central-market quotations for Extra White cotton are the same as for the corresponding grades of White cotton.

For example, data for all markets for the five seasons combined show that premiums for the grades of ⅞-inch White cotton higher than Middling averaged 0.09 cent a pound for Strict Middling, 0.15 cent a pound for Good Middling, and 0.16 cent a pound for Strict Good Middling in local markets; whereas central-market premiums averaged 0.27 cent a pound for Strict Middling, 0.44 cent a pound for Good Middling, and 0.63 cent a pound for Strict Good Middling. Discounts for the lower grades in local markets averaged 0.32 cent a pound for Strict Low Middling, 1.08 cents a pound for Low Middling, 1.91 cents a pound for Strict Good Ordinary, and 2.27 cents a pound for Good Ordinary; whereas central-market discounts averaged 0.68 cent a pound for Strict Low Middling, 1.54 cents a pound for Low Middling, 2.43 cents a pound for Strict Good Ordinary, and 3.16 cents a pound for Good Ordinary.

Average premiums for the higher grades and average discounts for the lower grades in the selected local markets for cotton of various staple lengths were somewhat less than those for cotton of ⅞-inch staple (table 5). The influence of staple length was largely eliminated in the average premiums and discounts for grade for various staple lengths by comparing prices of cotton of different grades but of the same staple length and by averaging the premiums and discounts for grade for the longer staple cottons with those for the shorter staple cottons.

TABLE 5.—*Average premiums and discounts* [1] *for specified grades of cotton of various staple lengths* [2] *in selected local markets, seasons 1928–29 to 1932–33*

SEASON 1928-29

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [3]	*Bales*	*Cents*	Spotted:	*Bales*	*Cents*
2, Strict Good Middling...	100	0.10	3, Good Middling.........	2,319	0.12
3, Good Middling.........	7,780	.19	4, Strict Middling.........	8,778	.00
4, Strict Middling.........	33,934	.13	5, Middling...............	4,255	−.30
5, Middling (basis).......	26,426	.00	6, Strict Low Middling.....	1,380	−1.06
6, Strict Low Middling.....	10,226	−.31	7, Low Middling..........	232	−1.47
7, Low Middling..........	2,731	−.88			
8, Strict Good Ordinary....	993	−1.58			
9, Good Ordinary.........	316	−2.43			

SEASON 1929-30

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [1]			Spotted:		
2, Strict Good Middling...	76	0.02	3, Good Middling.........	458	0.24
3, Good Middling.........	5,327	.07	4, Strict Middling.........	5,351	.10
4, Strict Middling.........	28,927	.09	5, Middling...............	4,372	−.15
5, Middling (basis).......	31,117	.00	6, Strict Low Middling.....	1,312	−.69
6, Strict Low Middling.....	12,298	−.38	7, Low Middling..........	279	−1.48
7, Low Middling..........	4,315	−1.29			
8, Strict Good Ordinary....	1,203	−2.17			
9, Good Ordinary.........	274	−2.40			

SEASON 1930-31

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [1]			Spotted:		
2, Strict Good Middling....	111	0.19	3, Good Middling.........	668	0.12
3, Good Middling.........	5,706	.03	4, Strict Middling.........	2,694	.41
4, Strict Middling.........	26,378	.05	5, Middling...............	1,324	−.31
5, Middling (basis).......	26,483	.00	6, Strict Low Middling.....	526	−.95
6, Strict Low Middling.....	10,489	−.30	7, Low Middling..........	67	−1.20
7, Low Middling..........	3,673	−.89			
8, Strict Good Ordinary....	452	−1.54			
9, Good Ordinary.........	52	−1.89			

SEASON 1931-32

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [2]			Spotted:		
2, Strict Good Middling...	9	0.18	3, Good Middling.........	231	0.07
3, Good Middling.........	1,399	.08	4, Strict Middling.........	812	.03
4, Strict Middling.........	10,685	.04	5, Middling...............	356	.01
5, Middling (basis)........	9,201	.00	6, Strict Low Middling.....	106	−.27
6, Strict Low Middling.....	3,220	−.07	7, Low Middling..........	26	−.54
7, Low Middling..........	811	−.28			
8, Strict Good Ordinary....	293	−.46			
9, Good Ordinary.........	63	−.76			

See footnotes at end of table.

TABLE 5.—*Average premiums and discounts [1] for specified grades of cotton of various staple lengths [2] in selected local markets, seasons 1928-29 to 1932-33*—Con.

SEASON 1932-33

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [1]	*Bales*	*Cents*	Spotted:	*Bales*	*Cents*
2, Strict Good Middling___	2	0.26	3, Good Middling_____	543	0.02
3, Good Middling_____	792	.04	4, Strict Middling_____	2,988	—.04
4, Strict Middling_____	8,963	.00	5, Middling_____	1,458	—.13
5, Middling (basis)_____	10,893	.00	6, Strict Low Middling____	119	—.30
6, Strict Low Middling____	2,992	—.07	7, Low Middling_____	18	—.49
7, Low Middling_____	450	—.16			
8, Strict Good Ordinary___	59	—.48			
9, Good Ordinary_____	10	—.62			

TOTAL

Grade	Size of sample	Premiums and discounts (—)	Grade	Size of sample	Premiums and discounts (—)
White: [1]			Spotted:		
2, Strict Good Middling___	298	0.12	3, Good Middling_____	4,219	0.12
3, Good Middling_____	21,004	.10	4, Strict Middling_____	20,621	.07
4, Strict Middling_____	108,937	.08	5, Middling_____	11,769	—.22
5, Middling (basis)_____	104,120	.00	6, Strict Low Middling____	3,443	—.85
6, Strict Low Middling____	39,223	—.29	7, Low Middling_____	622	—1.38
7, Low Middling_____	11,380	—.97			
8, Strict Good Ordinary___	3,000	—1.68			
9, Good Ordinary_____	715	—2.21			

[1] Premiums and discounts in cents per pound from the price of Middling White cotton of the same staple length. The price of Middling White cotton of various staple lengths in the selected local markets averaged 18.63 cents per pound in 1928-29, 17.23 cents per pound in 1929-30, 9.93 cents per pound in 1930-31, 5.88 cents per pound in 1931-32, 6.53 cents per pound in 1932-33, and 13.45 cents per pound for the 5 seasons combined. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.
[2] The influence of staple length was largely eliminated by comparing prices of cotton of different grades but of the same staple length.
[3] Extra White cotton included.

Average premiums and discounts for grade in local markets and in central markets varied somewhat irregularly from year to year; but, on the whole, these average premiums and discounts when expressed in cents a pound decreased from 1928-29 to 1932-33 along with the marked decline in cotton prices. When expressed as percentages of the Middling ⅞-inch prices, however, premiums and discounts for grade in local markets varied irregularly from year to year with no definite trends, whereas in central markets premiums and discounts were relatively greater in 1930-31 and in 1931-32 than in the other years included in this study. That the irregular variations in premiums and discounts for grade in local markets from year to year are not accounted for by the failure to include the same local markets in the study each year is indicated by the fact that average premiums and discounts for grade in 13 selected markets included each year since 1928-29 show irregularities somewhat similar to those shown for all markets combined.

Average premiums and discounts for grade made to growers varied considerably from market to market. Differences between average premiums and discounts in individual local markets of the same type in many cases were as great as, or greater than, the differences between average premiums and discounts in local markets of different types. Furthermore, prices paid by buyers of different types reveal no consistent relationships between type of buyer and the average premiums and discounts for grade made to growers. Average premiums and discounts for grade in the selected local markets show irregular

variations from month to month.   On the whole, however, some indications of increased premiums for the higher grades and increased discounts for the lower grades as the season advanced were in evidence during each of the years.

Two questions arise in connection with these averages, (1) To what extent are premiums and discounts quoted in central markets passed back to the grower at his local selling point, and (2) To what extent does the grower in making his individual sales actually realize the average premium or suffer the average penalty?

An answer to the first question is given by a comparison of the premiums and discounts for grade in local markets with those quoted in central markets.   Premiums for White grades above Middling in local markets for the 5-year period amounted on an average to only 33 percent of those quoted in central markets and ranged from 25 percent for Strict Good Middling to 34 percent for Good Middling. Discounts for White grades below Middling in local markets amounted to 60 percent of those quoted in central markets and ranged from 47 percent for Strict Low Middling to 79 percent for Strict Good Ordinary.   The proportion of central-market premiums for the higher grades reflected in local market prices was greater in 1928–29 than in any other year studied and decreased from 48 percent in 1928–29 to only 8 percent in 1932–33.   The proportions of central-market discounts for the lower grades reflected in local-market prices varied somewhat irregularly from year to year but were considerably less in 1931–32 and 1932–33 than in any of the other years.

The extent to which premiums and discounts for grade made to individual farmers differed from the average premiums and discounts shown is indicated by the data presented in table 6.   These data show that the average premiums and discounts for grade were not in close agreement with those of a large proportion of the individual sales.   An examination of these data shows that the average premiums and discounts for grade (table 4), in many cases were less than the average variations in prices of individual bales of cotton of the same grade and staple length sold in the same local markets on the same days.   Although the average prices received by growers for cotton above Middling in grade were somewhat higher than the average price received for Middling White cotton of the same staple length during the 5-year period, the prices received for 41 percent of the Strict Middling, 32 percent of the Strict Good Middling, and 38 percent of Good Middling were actually below the average price received for Middling White cotton of the same staple length.   Despite the fact that the average prices received by growers for grades below Middling were lower than the average price received for Middling White cotton of the same staple length, the prices received for considerable proportions of the lower grade cotton were actually greater than the average price of Middling White cotton of the same staple length.   The proportions of cotton of the lower grades for which growers received prices higher than the average price of Middling White cotton of the same staple length amounted to about 32 percent for Strict Low Middling, 14 percent for Low Middling, 7 percent for Strict Good Ordinary, and 6 percent for Good Ordinary White cotton.   The distributions of variations in prices for each year were, in general, similar to those for the 5 years combined (table 20).

TABLE 6.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified grades of White [2] cotton of ⅞-inch staple from the average price received for Middling White cotton of the same staple length in selected local markets, seasons 1928–29 to 1932–33 combined*

Variation (cents)	2, Strict Good Middling		3, Good Middling		4, Strict Middling		5, Middling		6, Strict Low Middling		7, Low Middling		8, Strict Good Ordinary		9, Good Ordinary	
	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent
Under −6.00									2	(3)	4	0.1	7	0.5	1	0.3
−6.00 to −5.61											5	.1	9	.6	1	.3
−5.60 to −5.21									1	(3)	16	.3	37	2.6	10	2.6
−5.20 to −4.81									2	(3)	18	.3	24	1.7	8	2.1
−4.80 to −4.41							1	(3)	9	0.1	39	.7	32	2.2	12	3.1
−4.40 to −4.01					2	(3)	1	(3)	10	.1	38	.7	33	2.3	14	3.7
−4.00 to −3.61			1	(3)			2	(3)	17	.1	49	.9	39	2.7	32	8.3
−3.60 to −3.21					2	(3)	6	(3)	28	.2	111	2.0	60	4.2	32	8.3
−3.20 to −2.81					7	(3)	7	(3)	50	.3	159	2.9	109	7.7	46	11.9
−2.80 to −2.41					9	(3)	13	(3)	109	.6	237	4.3	127	8.9	39	10.1
−2.40 to −2.01			6	0.1	13	(3)	39	0.1	191	1.1	331	6.0	134	9.4	27	7.0
−2.00 to −1.61			6	.1	49	0.1	72	.2	366	2.1	503	9.2	156	11.0	19	4.9
−1.60 to −1.21			15	.2	131	.3	241	.6	705	4.0	599	10.9	152	10.7	24	6.2
−1.20 to −0.81			86	1.1	561	1.3	883	2.0	1,651	9.4	783	14.2	159	11.2	46	11.9
−0.80 to −0.41	2	2.0	523	7.0	2,941	7.1	3,915	9.1	3,214	18.4	949	17.3	146	10.2	23	6.0
−0.40 to −0.01	30	30.0	2,239	30.0	13,368	32.1	15,554	36.1	5,570	31.9	879	16.0	107	7.5	28	7.3
0.00 to 0.39	49	49.0	2,896	38.8	17,289	41.5	17,446	40.5	4,083	23.4	585	10.6	64	4.5	19	4.9
0.40 to 0.79	13	13.0	1,172	15.7	5,592	13.4	3,956	9.2	1,125	6.4	134	2.4	19	1.3	3	.8
0.80 to 1.19	4	4.0	274	3.7	1,218	2.9	744	1.7	241	1.4	37	.7	2	.1	1	.3
1.20 to 1.59	1	1.0	113	1.5	316	.8	160	.4	57	.3	12	.2	3	.2		
1.60 to 1.99	1	1.0	110	1.4	109	.3	34	.1	21	.1	7	.1	2	.1		
2.00 to 2.39			27	.4	57	.1	12	(3)	4	(3)	2	(3)	4	.3		
2.40 and over			3	(3)	20	.1	16	(3)	19	.1	3		1	.1		
Total	100	100.0	7,471	100.0	41,684	100.0	43,104	100.0	17,484	100.0	5,500	100.0	1,426	100.0	385	100.0
	Cents		Cents		Cents		Cents		Cents		Cents		Cents		Cents	
Mean	0.16		0.15		0.09		0.00		−0.32		−1.08		−1.91		−2.27	
Standard error of mean	.04		.01		.00		.00		.00		.02		.04		.08	
Average deviation	.26		.35		.32		.32		.50		.88		1.18		1.28	
Approximate range [4]	2.40		7.20		8.40		8.40		11.20		10.40		10.40		7.60	

[1] Minus sign (−) means below the average price for Middling White cotton.
[2] Extra White cotton included.
[3] Less than 0.05 percent.
[4] The approximate range was measured from the midpoint of the extreme classes.

PREMIUMS AND DISCOUNTS FOR STAPLE

Premiums for staples longer than ⅞ inch and discounts for staples shorter than ⅞ inch in selected local markets also averaged considerably less than those quoted in central markets [7] (table 7 and fig. 3).

Data for all markets for the five seasons combined show that for Middling White cotton premiums for staples longer than ⅞ inch averaged 0.04 cent a pound for ¹⁵⁄₁₆ inch, 0.12 cent a pound for 1 inch, 0.29 cent a pound for 1¹⁄₁₆ inches, 0.70 cent a pound for 1⅛ inches,

FIGURE 3.—AVERAGE PREMIUMS AND DISCOUNTS FOR SPECIFIED STAPLE LENGTHS OF MIDDLING WHITE COTTON IN SELECTED LOCAL MARKETS AND IN CENTRAL MARKETS, SEASONS 1928–29 TO 1932–33.

Discounts made to growers for cotton with staple lengths shorter than ⅞ inch averaged only 6 percent of those quoted in central markets for cotton ¹³⁄₁₆ inch in staple. Premiums received by growers for staple lengths longer than ⅞ inch averaged only 17 percent of those quoted in central markets.

0.97 cent a pound for 1³⁄₁₆ inches, and 0.94 cent a pound for 1¼ inches and longer in local markets; whereas in central markets premiums averaged 0.33 cent a pound for ¹⁵⁄₁₆ inch, 0.83 cent a pound for 1 inch, 1.51 cents a pound for 1¹⁄₁₆ inches, 2.08 cents a pound for 1⅛ inches, 3.01 cents a pound for 1³⁄₁₆ inches, and 5.25 cents a pound for 1¼ inches and longer. During the same period average discounts for staples shorter than ⅞ inch amounted to only 0.05 cent a pound in local markets; whereas in central markets discounts for ¹³⁄₁₆-inch cotton averaged 0.84 cent a pound.

_____
[7] Bales sold in local markets, when classed in odd-numbered thirty-seconds of an inch have been tabulated as of the next lower sixteenth of an inch.
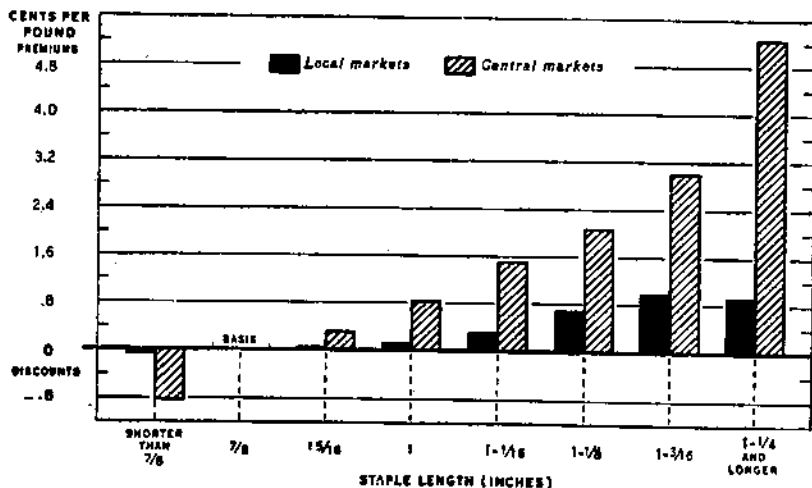
TABLE 7.—*Average premiums and discounts*[1] *for specified staple lengths of Middling White*[2] *cotton in selected local markets and in central markets,*[3] *seasons 1928-29 to 1932-33*

SEASON 1928-29

Staple length (inches)[4]	Local markets		Central markets	Staple length (inches)[4]	Local markets		Central markets
	Size of sample	Premiums and discounts (—)	Premiums and discounts (—)		Size of sample	Premiums and discounts (—)	Premiums and discounts (—)
	Bales	*Cents*	*Cents*		*Bales*	*Cents*	*Cents*
Shorter than ⅞	2,236	−0.08	[5] −0.54	1¹⁄₁₆	1,221	0.45	1.65
⅞ (basis)	11,377	.00	.00	1⅛	553	.98	2.08
¹⁵⁄₁₆	6,813	.04	.28	1³⁄₁₆	171	1.13	2.95
1	3,318	.13	.82	1¼ and longer	47	.95	5.22

SEASON 1929-30

Shorter than ⅞	6,658	−0.05	[5] −0.97	1¹⁄₁₆	832	0.37	1.98
⅞ (basis)	14,264	.00	.00	1⅛	262	.73	2.37
¹⁵⁄₁₆	6,606	.07	.43	1³⁄₁₆	18	.82	3.25
1	2,711	.14	1.28	1¼ and longer	2	.68	5.94

SEASON 1930-31

Shorter than ⅞	1,732	−0.04	[5] −1.00	1¹⁄₁₆	1,233	0.18	1.55
⅞ (basis)	10,214	.00	.00	1⅛	240	.23	2.00
¹⁵⁄₁₆	8,097	.02	.38	1³⁄₁₆	23	.05	3.39
1	3,372	.11	.89				

SEASON 1931-32

Shorter than ⅞	383	0.00	[5] −0.45	1¹⁄₁₆	642	0.23	1.03
⅞ (basis)	2,913	.00	.00	1⅛	77	.29	1.81
¹⁵⁄₁₆	2,898	.03	.25	1³⁄₁₆	2	.33	2.93
1	2,139	.08	.56				

SEASON 1932-33

Shorter than ⅞	315	−0.02	[5] −0.26	1¹⁄₁₆	428	0.12	0.80
⅞ (basis)	4,336	.00	.00	1⅛	37	.14	1.11
¹⁵⁄₁₆	3,310	.04	.16	1³⁄₁₆	2	.14	2.00
1	1,809	.11	.41				

TOTAL

Shorter than ⅞	10,324	−0.05	[5] −0.84	1¹⁄₁₆	4,357	0.29	1.51
⅞ (basis)	43,104	.00	.00	1⅛	1,169	.70	2.08
¹⁵⁄₁₆	27,726	.04	.33	1³⁄₁₆	216	.97	3.01
1	13,349	.12	.83	1¼ and longer	49	.94	5.25

[1] Premiums and discounts in cents per pound from the price of Middling ⅞-inch cotton. The price of Middling ⅞-inch White cotton in the selected local markets averaged 17.86 cents per pound in 1928-29, 17.20 cents per pound in 1929-30, 9.74 cents per pound in 1930-31, 5.75 cents per pound in 1931-32, 6.21 cents per pound in 1932-33, and 13.73 cents per pound for the 5 seasons combined. Central-market quotations averaged 18.36, 17.58, 10.03, 5.84, 6.30, and 14.07 cents per pound, respectively. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.
[2] Includes Extra White cotton.
[3] Quotations for Middling ⅞-inch cotton (average for the 10 designated spot markets), average premiums for 1¹⁄₁₆-inch and 1-inch cotton at the 6 spot markets, average premiums for 1³⁄₁₆-inch cotton and longer at Memphis and New Orleans, and average discount for 1³⁄₁₆-inch cotton at Houston, Galveston, and New Orleans were weighted by the number of bales of cotton of the same grade and staple-length designations sold on the same day and included in the sample of cotton shown for local markets.
[4] Bales sold in local markets when classed in odd-numbered thirty-seconds of an inch, have been tabulated as of the next lower sixteenth of an inch.
[5] 1³⁄₁₆-inch cotton only.

Average premiums for the longer staples and average discounts for the shorter staples in selected local markets for cotton of various grades differed somewhat from those for cotton Middling in grade

(table 8). The influence of grade was largely eliminated by comparing prices of cotton of different staples but of the same grade, and by averaging the staple premiums and discounts for the higher grades with those for the lower grades. It should be stated that in central markets, staple premiums are generally somewhat greater for the higher grades than for the lower grades. Differences in average staple premiums and discounts for cotton of all grades from those for Middling may result from the failure of the larger staple premiums and discounts for the higher grade cotton to be counterbalanced by the smaller staple premiums and discounts for the lower grade cotton and vice versa.

TABLE 8.—*Average premiums and discounts* [1] *for specified staple lengths of various grades* [2] *of Extra White, White, and Spotted cotton in selected local markets, seasons 1928–29 to 1932–33*

SEASON 1928–29

Staple length (inches) [1]	Size of sample	Premiums and discounts (−)	Staple length (inches) [1]	Size of sample	Premiums and discounts (−)
	Bales	*Cents*		*Bales*	*Cents*
Shorter than 7/8	12,352	−0.06	1 1/16	3,511	0.36
7/8 (basis)	46,103	.00	1 1/8	1,652	.61
15/16	26,440	.04	1 3/16	491	.85
1	11,741	.12	1 1/4 and longer	95	.68

SEASON 1929–30

Shorter than 7/8	19,348	−0.08	1 1/16	2,556	0.46
7/8 (basis)	43,800	.00	1 1/8	895	.07
15/16	20,433	.07	1 3/16	99	.86
1	8,621	.14	1 1/4 and longer	10	1.09

SEASON 1930–31

Shorter than 7/8	6,539	−0.08	1 1/16	2,823	0.23
7/8 (basis)	30,520	.00	1 1/8	537	.22
15/16	24,530	.03	1 3/16	56	.18
1	10,971	.12	1 1/4 and longer	3	.50

SEASON 1931–32

Shorter than 7/8	1,255	−0.01	1 1/16	1,532	0.21
7/8 (basis)	8,922	.00	1 1/8	188	.28
15/16	9,418	.04	1 3/16	16	.53
1	5,434	.09			

SEASON 1932–33

Shorter than 7/8	1,177	−0.02	1 1/16	822	0.14
7/8 (basis)	12,005	.00	1 1/8	80	.20
15/16	9,843	.03	1 3/16	4	.22
1	4,233	.11			

TOTAL

Shorter than 7/8	40,671	−0.07	1 1/16	11,244	0.31
7/8 (basis)	141,410	.00	1 1/8	3,352	.54
15/16	90,664	.04	1 3/16	686	.79
1	41,000	.12	1 1/4 and longer	108	.71

[1] Premiums and discounts in cents per pound from the price of 7/8-inch cotton of the same grade. The price of 7/8-inch cotton of various grades in the selected local markets averaged 17.82 cents per pound in 1928–29, 17.08 cents per pound in 1929–30, 9.56 cents per pound in 1930–31, 5.61 cents per pound in 1931–32, 6.25 cents per pound in 1932–33, and 14.05 cents per pound for the 5 seasons combined. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.

[2] The influence of grade was largely eliminated by comparing prices of cotton of different staple lengths but of the same grade. Grades from Strict Good Middling White to Good Ordinary White and from Good Middling Spotted to Low Middling Spotted, inclusive, included.

[3] Bales sold in local markets, when classed in odd-numbered thirty-seconds of an inch, have been tabulated as of the next lower sixteenth of an inch.

Average staple premiums and discounts in local markets and those quoted in central markets varied somewhat irregularly from year to year, but, on the whole, these average premiums and discounts when expressed in cents a pound narrowed from 1928–29 and 1929–30 to 1932–33 along with the marked decline in cotton prices. When expressed as percentages of Middling ⅞-inch prices, however, staple premiums and discounts both in local and in central markets varied irregularly from year to year but were somewhat greater in 1931–32 than in the other years. That the irregular variations in staple premiums and discounts in local markets from year to year are not accounted for by the failure to include the same local markets in the study each year is indicated by the fact that average staple premiums and discounts for 13 selected markets included each year since 1928–29 also show irregularities that are more or less similar to those shown for all markets combined.

Average staple premiums and discounts made to growers also varied considerably from market to market. Differences between average staple premiums and discounts in individual local markets of the same type in many cases were as great as or greater than the differences between average staple premiums and discounts in local markets of different types. Furthermore, prices paid by buyers of different types revealed no consistent relationships between type of buyer and the average staple premiums and discounts made to growers. Average staple premiums and discounts in the selected local markets varied irregularly from month to month. However, the data for 1928–29 show some indication of increased staple premiums and discounts to growers as the season advanced, but for the other years no distinct indications of trends were in evidence.

The questions, What proportion of the central-market staple premiums and discounts are passed back to the farmer at his local selling point? and, To what extent do the premiums and discounts for individual-bale sales differ from the averages shown? are also important in connection with the average staple premiums and discounts shown.

In connection with the first question, it was found that for the 5-year period, on an average, premiums for staples longer than ⅞ inch in local markets amounted to only 17 percent of those quoted in central markets and varied from only 12 percent for ¹⁵⁄₁₆-inch cotton to 34 percent for 1⅛-inch cotton. Discounts for cotton shorter than ⅞ inch in local markets amounted to only 6 percent of those quoted in central markets for cotton with a staple length of ¹³⁄₁₆ inch. The proportion of central-market premiums for the longer staples and discounts for the shorter staples reflected in prices received by growers varied irregularly from year to year.

The extent to which staple premiums and discounts for individual bales differed from the averages is indicated by the data presented in table 9. An examination of these data shows that the average staple premiums and discounts (table 7) in many cases were less than the average variations in prices of individual bales of cotton of the same grade and staple length sold in the same local markets on the same days. Although the average prices received by growers for cotton shorter than ⅞ inch were somewhat higher than the average price received for ⅞-inch cotton of the same grade during the 5-year period studied, the prices received for 46 percent of the cotton shorter than ⅞ inch were actually higher than the average price received for ⅞-inch

cotton of the same grade. Despite the fact that prices received by growers for staples longer than $\frac{7}{8}$ inch averaged somewhat higher than those received for $\frac{7}{8}$-inch cotton of the same grade, the prices received were actually lower than the average price received for $\frac{7}{8}$-inch cotton of the same grade for 45 percent of the $\frac{15}{16}$-inch cotton; 41 percent of the 1 inch; 32 percent of the $1\frac{1}{16}$ inch; 20 percent of the $1\frac{1}{8}$ inch; 16 percent of the $1\frac{3}{16}$ inch; and 20 percent of the cotton $1\frac{1}{4}$ inches and longer. The distributions of variations in prices for each year were, in general, similar to those for the 5 years combined (table 21).

TABLE 9.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified staple lengths of Middling White [2] cotton from the average price received for 7/8-inch cotton of the same grade in selected local markets, seasons 1928-29 to 1932-33, combined*

Variation (cents)	Shorter than 7/8 inch		7/8 inch		15/16 inch		1 inch		1 1/16 inches		1 1/8 inches		1 3/16 inches		1 1/4 inches and longer	
	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent
Under -2.80	10	0.1	19	(³)	15	0.1	7	0.1	----	----	----	----	----	----	----	----
-2.80 to -2.41	11	.1	13	(³)	19	.1	6	(³)	2	(³)	----	----	----	----	----	----
-2.40 to -2.01	32	.3	39	0.1	39	.1	15	.1	5	0.1	----	----	----	----	----	----
-2.00 to -1.61	46	.4	72	.2	76	.3	29	.2	17	.4	3	0.3	----	----	----	----
-1.60 to -1.21	120	1.2	241	.6	205	.7	88	.7	37	.9	4	.3	2	0.9	----	----
-1.20 to -0.81	399	3.9	883	2.0	678	2.4	290	2.2	94	2.2	18	1.5	3	1.4	1	2.0
-0.80 to -0.41	1,331	12.9	3,915	9.1	2,454	8.9	1,094	8.2	322	7.4	59	5.1	12	5.6	2	4.1
-0.40 to -0.01	3,666	35.5	15,551	36.1	8,885	32.1	3,901	29.2	915	21.0	149	12.7	18	8.3	7	14.3
0.00 to 0.39	3,284	31.8	17,446	40.5	10,687	38.5	4,789	35.9	1,352	31.0	270	23.1	35	16.2	12	24.4
0.40 to 0.79	999	9.7	3,956	9.2	3,552	12.8	2,051	15.4	829	19.0	218	18.6	40	18.5	4	8.2
0.80 to 1.19	279	2.7	744	1.7	805	2.9	725	5.4	426	9.8	157	13.4	32	14.8	4	8.2
1.20 to 1.59	91	.9	160	.4	203	.7	231	1.7	193	4.4	120	10.3	22	10.2	5	10.2
1.60 to 1.99	31	.3	34	.1	51	.2	70	.5	88	2.0	70	6.0	12	5.6	5	10.2
2.00 to 2.39	14	.1	12	(³)	23	.1	29	.2	38	.9	44	3.8	14	6.5	4	8.2
2.40 to 2.79	8	.1	8	(³)	17	.1	15	.1	21	.5	26	2.2	12	5.6	----	----
2.80 to 3.19	3	(³)	3	(³)	7	(³)	4	(³)	8	.2	15	1.3	5	2.3	2	4.1
3.20 and over	----	----	5	(³)	10	(³)	5	(³)	10	.2	16	1.4	9	4.1	3	6.1
Total	10,324	100.0	43,104	100.0	27,726	100.0	13,349	100.0	4,357	100.0	1,169	100.0	216	100.0	49	100.0
	Cents		Cents		Cents		Cents		Cents		Cents		Cents		Cents	
Mean	-0.05		0.00		0.04		0.12		0.29		0.70		0.97		0.94	
Standard error of mean	.01		.00		.00		.00		.01		.03		.08		.16	
Average deviation	.39		.32		.36		.39		.50		.70		.86		.95	
Approximate range [4]	8.00		8.40		9.60		7.60		9.60		6.40		6.00		4.40	

[1] Minus sign (-) means below the average price for 7/8-in. White cotton.
[2] Extra White cotton included.
[3] Less than 0.05 percent.
[4] The approximate range was measured from the mid-point of the extreme classes.

FACTORS AFFECTING PREMIUMS AND DISCOUNTS FOR GRADE AND STAPLE LENGTH IN LOCAL MARKETS

Several factors may help to explain the failure of local-market premiums and discounts for grade and staple length to equal those quoted in central markets. These include differences in classification, differences in character of cotton, inadequate volume, risks from fluctuations in prices, and differences in bargaining power of growers.

DIFFERENCES IN CLASSIFICATION

The classification on the basis of which the cotton was sold in local markets was often considerably different from that designated by Government classers (tables 10 and 11). Data on cotton sold in the selected local markets for which the classifications of local buyers and of Government classers were available show that during the seasons 1928–29 to 1932–33, inclusive, local buyers' classifications averaged almost one-half grade lower and between one thirty-second and one-sixteenth inch longer in staple than those of Government classers. Local buyers' classification for 35 percent of the cotton was 1 grade below, for 7 percent was 2 grades below, and for less than 1 percent was 3 or more grades below Government classification; although local buyers' classification for about 12 percent of the cotton was 1 grade above and for about 1 percent was 2 or more grades above Government classification. Local buyers classed about 37 percent of this cotton one-sixteenth inch longer, 17 percent one-eighth inch longer, and 4 percent three-sixteenths inch or more longer than Government classers; but about 10 percent was classed as one-sixteenth inch shorter, and almost 2 percent was classed one-eighth inch or more shorter by local buyers than by Government classers.

TABLE 10.—*Differences between the grade of White cotton as classed by local buyers in selected local markets and the grade as indicated by Government classers, seasons 1928–29 to 1932–33* [1]

SEASON 1928–29

Grade	Size of sample		Proportion of cotton classed as higher grade by local buyers than by Government classers				Proportion of cotton classed as lower grade by local buyers than by Government classers			
	Government classification	Local buyers' classification	Total	One grade higher	Two grades higher	Three or more grades higher	Total	One grade lower	Two grades lower	Three or more grades lower
	Bales	*Bales*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
2, Strict Good Middling___	60	_____	_____	_____	_____	_____	100.0	20.0	70.0	10.0
3, Good Middling_____	1,996	354	_____	_____	_____	_____	93.4	70.0	20.4	3.0
4, Strict Middling_____	6,216	4,429	3.1	3.1	_____	_____	59.1	46.9	11.7	.5
5, Middling_____	5,582	6,944	11.0	10.9	0.1	_____	37.1	32.9	3.8	.4
6, Strict Low Middling____	2,171	3,932	29.8	27.8	2.0	_____	20.4	18.7	1.5	.2
7, Low Middling_____	541	930	58.2	38.6	19.0	0.6	5.2	4.6	.6	_____
8, Strict Good Ordinary___	147	141	66.0	49.0	9.5	7.5	3.4	3.4	_____	_____
9, Good Ordinary_____	34	17	88.2	50.0	26.4	11.8	_____	_____	_____	_____

See footnotes at end of table.

TABLE 10.—*Differences between the grade of White cotton as classed by local buyers in selected local markets and the grade as indicated by Government classers, seasons 1928-29 to 1932-33* [1]—Continued

SEASON 1929-30

Grade	Size of sample		Proportion of cotton classed as higher grade by local buyers than by Government classers				Proportion of cotton classed as lower grade by local buyers than by Government classers			
	Government classification	Local buyers' classification	Total	One grade higher	Two grades higher	Three or more grades higher	Total	One grade lower	Two grades lower	Three or more grades lower
	Bales	Bales	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
2, Strict Good Middling	5						100.0	20.0	20.0	60.0
3, Good Middling	667	223					98.7	33.7	61.9	3.1
4, Strict Middling	2,427	1,677	8.0	8.0			45.1	45.1		
5, Middling	1,967	2,530	15.4	14.4	1.0		43.3	40.3	2.6	.4
6, Strict Low Middling	815	1,345	25.8	22.9	2.9		15.7	13.7	1.8	.2
7, Low Middling	223	250	27.3	21.5	5.8		39.5	32.3	7.2	
8, Strict Good Ordinary	51	125	25.5	19.6	3.9	2.0	13.7	9.8	3.9	
9, Good Ordinary	8	33	12.5			12.5				

SEASON 1930-31

Grade	Gov.	Local	Total	One higher	Two higher	Three+ higher	Total	One lower	Two lower	Three+ lower
2, Strict Good Middling	3						100.0		100.0	
3, Good Middling	701	173					92.3	85.0	7.1	0.2
4, Strict Middling	2,529	3,036	3.9	3.9			21.7	19.9	1.7	.1
5, Middling	1,365	1,348	41.0	39.5	1.5		10.4	10.1	.2	.1
6, Strict Low Middling	352	399	41.7	36.6	4.5	0.6	12.8	8.0	4.8	
7, Low Middling	97	79	52.6	50.5	2.1		11.3	11.3		
8, Strict Good Ordinary	21	37	85.7	47.6	33.3	4.8				
9, Good Ordinary	4		100.0	50.0		50.0				

SEASON 1931-32

Grade	Gov.	Local	Total	One higher	Two higher	Three+ higher	Total	One lower	Two lower	Three+ lower
3, Good Middling	303	133					87.8	55.1	32.7	
4, Strict Middling	1,158	996	7.5	7.5			33.3	32.1	1.0	0.2
5, Middling	374	661	39.8	37.4	2.4		15.0	14.7		.3
6, Strict Low Middling	63	109	38.0	31.7	6.3					
7, Low Middling	5	2	80.0	60.0	20.0		20.0	20.0		
8, Strict Good Ordinary		1								
9, Good Ordinary		1								

SEASON 1932-33

Grade	Gov.	Local	Total	One higher	Two higher	Three+ higher	Total	One lower	Two lower	Three+ lower
3, Good Middling	12	3					100.0	91.7	8.3	
4, Strict Middling	409	505	0.5	0.5			26.4	24.7	1.5	0.2
5, Middling	477	382	40.0	39.8	0.2		12.1	11.5	.4	.2
6, Strict Low Middling	118	118	44.9	40.7	4.2		15.2	14.4		.8
7, Low Middling	16	22	77.8	55.6	22.2		5.6	5.6		
8, Strict Good Ordinary		2								
9, Good Ordinary		2								

TOTAL

Grade	Gov.	Local	Total	One higher	Two higher	Three+ higher	Total	One lower	Two lower	Three+ lower
2, Strict Good Middling	68						100.0	19.1	67.7	13.2
3, Good Middling	3,070	888					93.7	65.1	26.4	2.2
4, Strict Middling	12,739	10,643	4.5	4.5			45.6	39.1	6.2	.3
5, Middling	9,785	11,805	18.5	18.0	0.5		32.6	29.5	2.8	.3
6, Strict Low Middling	3,519	5,903	30.7	28.1	2.6	(2)	18.0	15.9	1.9	.2
7, Low Middling	884	1,283	50.2	36.1	13.8	0.3	14.6	12.4	2.2	
8, Strict Good Ordinary	219	306	59.4	42.0	10.5	5.9	5.5	4.6	.9	
9, Good Ordinary	40	53	76.1	41.3	19.6	15.2				

[1] The samples classed by local buyers were generally cut from the bales, whereas most of the samples classed by Government classers were taken from the gin press box.
[2] Less than 0.05 percent.

9406°—36——4

TABLE 11.—*Differences in the staple length of White cotton as classed by local buyers in selected local markets from the staple length as indicated by Government classers, seasons 1928-29 to 1932-33* [1]

SEASON 1928-29

Staple length (inches)	Size of sample		Proportion of cotton classed as longer staple length by local buyers than by Government classers				Proportion of cotton classed as shorter staple length by local buyers than by Government classers			
	Government classification	Local buyers' classification	Total	1/16 inch longer	1/8 inch longer	3/16 inch plus longer	Total	1/16 inch shorter	1/8 inch shorter	3/16 inch shorter
	Bales	*Bales*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Shorter than 7/8	409	117	93.4	46.5	29.8	17.1				
7/8	1,224	844	61.9	35.8	21.8	4.3	4.2	4.2		
15/16	1,238	1,149	48.5	38.6	8.6	1.3	17.9	15.8	2.1	
1	850	1,308	28.4	18.4	5.9	4.1	24.6	18.5	4.7	1.4
1-1/16	653	383	75.6	28.8	35.6	11.2	16.4	13.9	1.9	.6
1-1/8	960	683	67.6	48.6	19.0		2.9	1.4	1.0	.5
1-3/16	551	1,104	27.4	27.4			20.3	20.3		
1-1/4 and longer	132	438					81.8	61.4	20.4	
SEASON 1929-30										
Shorter than 7/8	804	93	66.1	34.7	15.3	16.1	1.7	1.7		
7/8	835	553	72.2	22.1	44.5	6.6				
15/16	203	314	73.5	40.6	9.1	17.8	18.3	14.4	1.9	
1	242	660	74.3	9.5	41.7	23.1	2.9	2.1	.8	
1-1/16	696	117	84.0	48.7	34.6	.4	12.1	11.8	.2	0.1
1-1/8	840	799	61.3	60.5	.8		5.5	1.7	3.8	
1-3/16	200	985	1.0	1.0			19.0	18.5		.5
1-1/4 and longer	9	13					100.0	55.6	33.3	11.1
SEASON 1930-31										
Shorter than 7/8	2		100.0	50.0	50.0					
7/8	22	19	77.2	31.8	40.9	4.5				
15/16	49	21	59.2	49.0	10.2		22.4	22.4		
1	20	42	35.0	25.0			25.0	20.0	5.0	
1-1/16	4	15					50.0	25.0		25.0
SEASON 1931-32										
Shorter than 7/8	33	3	100.0	39.4	33.3	27.3				
7/8	491	119	88.6	30.8	57.4	.4				
15/16	821	406	73.0	71.5	1.2	.3	4.0	4.6	0.3	
1	470	1,287	5.9	5.5	.4		15.5	13.0	2.3	0.2
1-1/16	51	51	5.9	5.9			74.6	70.6	2.0	2.0
1-1/8	8	10					75.0	25.0	50.0	
1-3/16	2						100.0	50.0	50.0	
SEASON 1932-33										
Shorter than 7/8	4	4	75.0	25.0	25.0	25.0				
7/8	203	87	77.3	45.8	31.5		1.5	1.5		
15/16	458	438	45.0	45.0			7.4	7.4		
1	353	533	.6	.6			37.1	34.6	2.5	
1-1/16	40	3					100.0	90.0	10.0	
1-1/8	7						100.0	14.3	85.7	
TOTAL										
Shorter than 7/8	1,252	217	91.4	46.7	24.2	20.5				
7/8	2,475	1,622	70.8	32.6	34.7	3.5	2.6	2.6		
15/16	2,774	2,328	67.2	50.2	5.0	2.0	12.3	11.1	1.2	
1	1,935	3,830	23.7	11.1	7.9	4.7	22.0	18.0	3.3	0.7
1-1/16	1,444	569	74.9	36.7	33.0	5.2	18.8	17.0	1.3	.5
1-1/8	1,824	1,492	64.2	53.7	10.5		4.8	1.8	2.9	.3
1-3/16	753	2,069	20.3	20.3			20.1	19.9	.1	.1
1-1/4 and longer	141	451					83.0	61.0	21.3	.7

[1] The samples classed by local buyers were generally cut from the bales, whereas most of the samples classed by Government classers were taken from the gin press box.

Classifications made by local buyers were lower than those made by Government classers for a considerable proportion of the higher grade and longer staple cotton and were higher than Government classification for a considerable proportion of the lower grade and shorter staple cotton (tables 10 and 11). The proportions of the cotton of the various grades as classed by Government classers that were given a lower grade by local buyers varied from 100 percent for Strict Good Middling to 0 for Good Ordinary; and the proportions that were given a higher grade by local buyers varied from 76 percent for Good Ordinary to 0 for Good Middling and Strict Good Middling. The proportions of cotton of the various staple lengths as classed by Government classers that were classed as longer in staple by local buyers varied from 91' percent for staples shorter than ⅞ inch to 0 for staples 1¼ inches long and longer; and the proportions that were classed as shorter by local buyers varied from 83 percent for staples 1¼ inches long and longer to 0 for staples shorter than ⅞ inch. Obviously the staple-length group 1¼ inches long and longer could not be raised and the staple-length group shorter than ⅞ inch could not be lowered, because all the cotton with staples 1¼ inches long and longer or shorter than ⅞ inch, respectively, were included in these groups.

Differences between the classification of local buyers and that of Government classers may be the result of a number of factors. The classification of cotton is not an exact science, but an art, and is subject to considerable subjective error on the part of all classers. Balls (4, pp. 3–4) states:

Thus I have seen so much of the grader's skill, and that under circumstances which tested his skill far more severely than daily routine, as to have no doubt whatever that the decisions of the grader are real evaluations of certain properties possessed by cotton. Such properties are perceptible by many persons, are appreciable by fewer, and the appreciation is capable of practical use only by those who combine perception and appreciation with years of daily experience. Tactile and muscular perceptions are employed, as well as sight, and the impressions yielded by each are integrated, consciously and subconsciously, into a recognition of the individuality of each sample, which then is stored in the memory. It is not surprising that such a complex mental process should easily be thrown off its balance by having to work in a strange light, or by unusual amounts of moisture in the cotton; most students of the crop have known a grader who praised and purchased a damp sample, though casting out a duplicate which had been dried. It cannot be expected that grading should be infallible. Even now, when we have material for measuring the degree of its fallibility, we may well be surprised that its errors are not greater; compare it with the error involved in judging the weight of an animal, which is comparatively child's play.

Many of the local buyers were not thoroughly trained cotton classers and were not familiar with the official cotton standards. The conditions under which the local buyers classed much of the cotton were not conducive to accurate classification on the basis of the official standards. The samples on the basis of which most of this cotton was sold were cut from the bales, whereas the samples on which the classifications of Government classers were based were loose samples taken at the gin press box. Where the cotton is not uniform in quality throughout the bale a sample taken from the press box and one cut from the bale may show differences in grade and staple length as a result of having been taken from different parts of the bale and/or of possible differences in physical condition.

Differences in classification upon the basis of which the cotton was sold, from that upon the basis of which premiums and discounts were calculated, affect materially the average premiums and dis-

counts for grade and staple length shown. For example, if full central-market premiums and discounts on the basis of local buyers' classification (tables 10 and 11) had been made to growers when premiums and discounts for the same cotton were calculated on the basis of Government classification (tables 10 and 11), the average premiums and discounts shown for the various grades would have amounted to the following percentages of those quoted in central markets:

	Percent		Percent
Strict Good Middling	75	Low Middling	62
Good Middling	89	Strict Good Ordinary	65
Strict Middling	115	Good Ordinary	62
Strict Low Middling	65		

Average premiums and discounts shown for the various staples would have amounted to the following percentages of those quoted in central markets:

	Percent		Percent
13/16 inch	27	1⅛ inches	117
15/16 inch	61	1 3/16 inches	94
1 inch	66	1¼ inches	52
1 1/16 inches	122		

That these differences in premiums and discounts are not entirely due to possible inaccuracies in the classification of local buyers is indicated by a comparison of the premiums and discounts for grade and staple length based on two classifications of 3,776 bales in 1930–31 made by Government experts. For example, when full central-market premiums and discounts were applied to the classification by Government experts of samples cut from the compressed bales and when the premiums and discounts for the same bales were calculated on the basis of Government classification of loose samples taken at the gin press box, the average premiums and discounts shown for the various grades amounted to the following percentages of those quoted in central markets:

	Percent		Percent
Good Middling	75	Low Middling	68
Strict Middling	75	Strict Good Ordinary	84
Strict Low Middling	69	Good Ordinary	101

Average premiums and discounts for the various staples amounted to the following percentages of those quoted in central markets:

	Percent		Percent
13/16 inch	42	1 1/16 inches	82
15/16 inch	92	1⅛ inches	88
1 inch	90		

The differences in premiums and discounts resulting from differences in classification can be explained only in part by differences in the samples resulting from their having been taken from different parts of the bale and by possible differences in the physical conditions of the samples as a result of compression. A comparison of the classifications of split samples from over 4,000 bales by Government experts shows significant differences. For example, when full central-market premiums and discounts were applied to this cotton on the basis of the classification of one set of samples and the premiums and discounts for the same bales were calculated on the basis of the classification of the other set of samples, the average premiums and

discounts shown for the various grades amounted to the following percentages of the premiums and discounts quoted in central markets:

	Percent		Percent
Strict Good Middling	76	Low Middling	87
Good Middling	86	Strict Good Ordinary	91
Strict Middling	96	Good Ordinary	90
Strict Low Middling	76		

Average premiums and discounts shown for the various staples amounted to the following percentages of the premiums and discounts quoted in central markets:

	Percent		Percent
13/16 inch	45	1⅛ inches	90
15/16 inch	81	1 3/16 inches	77
1 inch	70	1¼ inches	51
1 1/16 inches	88		

Average premiums and discounts made to growers on the basis of local buyers' classification were considerably greater than those shown on the basis of the classification of Government classers, but were considerably less than those quoted in central markets (tables 12 and 13). The average premiums received by growers, on the basis of local buyers' classification, for grades above Middling, amounted to 64 percent of those quoted in central markets, whereas on the basis of Government classification the premiums received by growers amounted to only 46 percent of those quoted in central markets.

TABLE 12.—*Average premiums and discounts [1] for specified grades of White cotton of ⅞-inch staple length in selected local markets on the basis of local buyers' classifications, seasons 1928–29 and 1929–30*

SEASON 1928–29

Grade	Size of sample	Premiums and discounts (−)	Grade	Size of sample	Premiums and discounts (−)
	Bales	Cents		Bales	Cents
3, Good Middling	81	0.29	7, Low Middling	2	−1.42
4, Strict Middling	336	.20	8, Strict Good Ordinary		
5, Middling (basis)	294	.00	9, Good Ordinary	12	−2.14
6, Strict Low Middling	95	−.54			

SEASON 1929–30

Grade	Size of sample	Premiums and discounts (−)	Grade	Size of sample	Premiums and discounts (−)
4, Strict Middling	86	0.01	6, Strict Low Middling	16	−.73
5, Middling (basis)	347	.00			

TOTAL

Grade	Size of sample	Premiums and discounts (−)	Grade	Size of sample	Premiums and discounts (−)
3, Good Middling	81	0.29	7, Low Middling	2	−1.42
4, Strict Middling	422	.16	8, Strict Good Ordinary		
5, Middling (basis)	641	.00	9, Good Ordinary	12	−2.14
6, Strict Low Middling	111	−.57			

[1] Premiums and discounts in cents per pound from the price of Middling ⅞-inch White cotton. The price of Middling ⅞-inch White cotton in the selected local markets averaged 17.91 cents per pound in 1928–29, 17.86 cents per pound in 1929–30, and 17.77 cents per pound for the 2 seasons combined. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.

TABLE 13.—*Average premiums and discounts* [1] *for specified staple lengths of Middling White cotton in selected local markets on the basis of local buyers' classification, seasons 1928–29 and 1929–30*

SEASON 1928-29

Staple length (inches)	Size of sample	Premiums and discounts (−)	Staple length (inches)	Size of sample	Premiums and discounts (−)
	Bales	*Cents*		*Bales*	*Cents*
Shorter than ⅞	10	−0.13	1	26	−0.56
⅞ (basis)	294	.00	1¹⁄₁₆	6	1.07
1¹⁄₁₆	168	.06	1⅛	2	1.41

SEASON 1929-30

Shorter than ⅞	76	−0.86	1	302	−0.73
⅞ (basis)	347	.00	1¹⁄₁₆	49	1.23
1¹⁄₁₆	220	.34	1⅛	12	1.53

TOTAL

Shorter than ⅞	86	−0.78	1	328	−0.72
⅞ (basis)	641	.00	1¹⁄₁₆	55	1.21
1¹⁄₁₆	388	.22	1⅛	14	1.51

[1] Premiums and discounts in cents per pound from the price of Middling ⅞-inch cotton. The price of Middling ⅞-inch White cotton in the selected local markets averaged 17.91 cents per pound in 1928–29, 17.66 cents per pound in 1929–30, and 17.77 cents per pound for the 2 seasons combined. Data for these averages are confined largely to sales made during the first 8 or 9 months of the season.

The discounts made to growers for White grades below Middling on the basis of local buyers' classification amounted to 70 percent of those quoted in central markets, whereas on the basis of Government classification the discounts made to growers for this lower-grade cotton amounted to only 58 percent of those quoted in central markets. The discounts made to growers for cotton with staples shorter than ⅞ inch, on the basis of local buyers' classification, amounted to 92 percent of those quoted in central markets, while on the basis of Government classification the discounts made to growers for this short cotton amounted to less than 7 percent of those quoted in central markets.

Premiums received by growers on the basis of local buyers' classification for the longer staples amounted to 65 percent of those quoted in central markets, but on the basis of Government classification the premiums received by growers amounted to only 18 percent of those quoted in central markets.

Although the size of the sample used in this study of premiums and discounts made to growers on the basis of local buyers' classification was relatively small and was confined to only eight local markets, the results are considered significant. The data indicate that the differences in classification accounted for a considerable part of the apparent failure of prices received by growers to reflect premiums and discounts for grade and staple length equal to those quoted in central markets.

Less irregular variations in prices received by growers with the grade and staple length of the cotton were shown on the basis of local buyers' classification than on the basis of Government classification (tables 14 and 15). Although the irregular variations in prices received by growers on the basis of local buyers' classifications were considerably less than those received on the basis of Government classification, in many cases they were considerably greater than the average premiums and discounts for grade and staple length made to growers.

TABLE 14.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified grades of White cotton of ⅞-inch staple from the average price received for Middling White cotton of the same staple length in selected local markets, on the basis of local buyers' classifications, seasons 1928–29 and 1929–30 combined*

Variation (cents)	3, Good Middling		4, Strict Middling		5, Middling		6, Strict Low Middling		7, Low Middling	
	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent
Under −1.60							1	0.9	1	50.0
−1.60 to −1.21					1	0.2	4	3.6	1	50.0
−1.20 to −0.81			2	0.5	3	.5	24	21.6		
−0.80 to −0.41	1	1.2	9	2.1	38	5.9	57	51.4		
−0.40 to −0.01	16	19.8	72	17.1	303	47.3	14	12.6		
0.00 to 0.39	43	53.1	296	70.1	257	40.1	7	6.3		
0.40 to 0.79	10	12.3	31	7.4	32	5.0	3	2.7		
0.80 to 1.19	7	8.6	10	2.4	2	.3	1	.9		
1.20 to 1.59	2	2.5	1	.2	2	.3				
1.60 to 1.99	2	2.5	1	.2	2	.3				
2.00 and over					1	.1				
Total	81	100.0	422	100.0	641	100.0	111	100.0	2	100.0
	Cents		Cents		Cents		Cents		Cents	
Mean	0.29		0.16		0.00		−0.57		−1.42	
Standard error of mean	.05		.01		.00		.04			
Average deviation	.32		.17		.26		.29		.20	
Approximate range [2]	2.40		2.80		3.60		2.80		.40	

[1] Minus sign (−) means below the average price for Middling White cotton.
[2] The approximate range was measured from the mid-point of the extreme classes.

TABLE 15.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified staple lengths of Middling White cotton from the average price received for ⅞-inch cotton of the same grade in selected local markets, on the basis of local buyers' classifications, seasons 1928–29 and 1929–30 combined*

Variation (cents)	Shorter than ⅞ inch		⅞ inch		15/16 inch		1 inch		1 1/16 inches		1⅛ inches	
	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent	Bales	Percent
Under −2.00	1	1.2										
−2.00 to −1.81	5	5.8										
−1.60 to −1.21	10	11.6	1	0.2								
−1.20 to −0.81	25	29.1	3	.5	1	0.2						
−0.80 to −0.41	21	24.4	38	5.9	19	4.9						
−0.40 to −0.01	20	23.3	303	47.3	59	15.2	14	4.3	2	3.6		
0.00 to 0.39	4	4.6	257	40.1	209	53.9	41	12.5	1	1.8		
0.40 to 0.79			32	5.0	92	23.7	148	45.1	4	7.3	1	7.1
0.80 to 1.19			2	.3	7	1.8	91	27.8	15	27.3	1	7.1
1.20 to 1.59			2	.3			29	8.8	24	43.6	4	28.6
1.60 to 1.99			2	.3	1	.3	5	1.5	8	14.6	8	57.2
2.00 to 2.39			1	.1								
2.40 and over									1	1.8		
Total	86	100.0	641	100.0	388	100.0	328	100.0	55	100.0	14	100.0
	Cents		Cents		Cents		Cents		Cents		Cents	
Mean	−0.78		0.00		0.22		0.72		1.21		1.61	
Standard error of mean	.01		.00		.02		.02		.06		.10	
Average deviation	.44		.26		.23		.31		.36		.30	
Approximate range [2]	2.20		3.60		2.80		2.00		2.80		1.20	

[1] Minus sign (−) means below the average price for ⅞-inch White cotton.
[2] The approximate range was measured from the mid-point of the extreme classes.

It is not known to what extent the greater premiums and discounts result from bias on the part of local buyers, subjective errors which apply to all classers, differences in the physical condition of the samples and other factors. Although the calculation of premiums and

discounts on the basis of a classification different from that upon which the cotton was sold affects the premiums and discounts shown, even when the two classifications are equally reliable, the available data are not adequate for making adjustments for the influences of these variations in classification on the premiums and discounts made to growers, as shown in tables 4, 5, 7, and 8. Available data do indicate, however, that adjustments for the influence of these differences in classification in many cases would result in increased premiums and discounts shown.

DIFFERENCES IN CHARACTER OF COTTON

Prices of cotton of the same grade and staple-length designation sold in the same market on the same day may also differ as a result of differences in character. In the absence of standards for character no attempt was made to determine to what extent differences in prices received by growers resulted from differences in the character of cotton. The limited information available indicates, however, that only a part of the differences in prices noted could be attributed to differences in the character of the cotton.

INADEQUATE VOLUME

Cotton of the higher grades and longer staples could not always be had in sufficient quantities in local markets to justify local buyers in paying the same premiums for grade and staple length that were paid for similar qualities of cotton sold in even-running lots in the central markets. Nevertheless, since the sale of small quantities of the lower grades and shorter staples (too small to be handled economically) have a tendency to increase the discounts for this cotton, they do not help to explain the failure of the local buyers to discount it as much as cotton of the same description was discounted in central markets.

RISKS FROM FLUCTUATIONS IN PRICES

Fluctuations in central-market premiums and discounts for grade and staple length increase the risk that buyers in local markets must assume and may account in part for the failure of central-market premiums and discounts to be more fully reflected in the prices paid to growers.

Fluctuations in cotton prices in local markets during the day result in irregular variations in the prices received by growers on the basis of the grade and staple length of cotton sold. It is believed that these irregular variations tend to compensate each other when averaged and that only a small part, if any, of the failure of average prices in local markets to reflect greater proportions of central-market premiums and discounts is thus accounted for. A part of the irregular variations shown in frequency distributions of variations in prices, however, may be accounted for by changes in prices during the day.

DIFFERENCES IN BARGAINING POWER

Differences in bargaining power of farmers and local buyers doubtless account for at least a part of the wide and irregular variations in prices received by growers for cotton of the same grade and staple length sold in the same local market on the same day. Differences in

bargaining power result from differences in general business ability, from differences in knowledge of the quality and commercial value of cotton, from differences in financial obligations, etc.   For example, it was found that in a selected local market in Georgia in 1928 one buyer paid his tenant as much as 4.25 cents a pound more than he paid another farmer for cotton of the same grade as classed by the local buyer and of the same grade and staple length as classed by Government classers.

This instance may be a rather extreme one, but many somewhat smaller variations were noted.   Some farmers were in debt to the local buyers and for that reason may have been able to exact relatively high prices for their cotton because of the buyers' willingness to pay relatively high prices in order to collect on accounts, whereas farmers who were obligated to sell their cotton to specific buyers may have been forced to take less than the prevailing market price for their cotton. Some buyers who were purchasing cotton as a means of collecting debts, or to increase their volume of business, may have been able to pay a considerably higher price for cotton than other buyers not similarly situated.   Irregular variations in prices as a result of differences in bargaining power tend to compensate each other when averaged, but differences in bargaining power no doubt account for a considerable proportion of the irregular variations shown.

RELATION BETWEEN AVERAGE PRICES AND AVERAGE GRADE AND STAPLE LENGTH

FROM MARKET TO MARKET

Another phase of this study was to determine to what extent the average prices received by growers in different local markets reflected the average quality of the cotton sold in these markets as indicated by grade and staple length.   Premiums and discounts for grade and staple length represent the average differences in prices received for other grades as compared with the average prices received for Middling White cotton of the same staple length and the average differences in prices received for other staple lengths as compared with the average prices received for ⅞-inch cotton of the same grade sold in the same local markets, with the influence of difference in date of sale largely eliminated.   These differences were found to be more or less independent of the average level of prices in these markets. Consequently, they do not indicate to what extent the average prices received by growers in the various local markets varied with the average grade and staple length of the cotton sold in each of these markets.

Average prices paid in different local markets may reflect differences in the average quality of the cotton sold in these markets, even though prices paid for individual bales do not vary appreciably with the grade and staple length.   To the extent that the average prices of cotton in different markets reflect the average quality of the cotton sold in these markets, the production of cotton of the higher grades and longer staples is rewarded on a community basis.   To determine the extent to which the production of cotton of higher grade and longer staple was rewarded on a community basis, comparisons were

made of the differences in average prices [8] received by growers in local markets with differences in average central-market values of the cotton resulting from differences in grade and staple length.[9]

The results show that in general during the period 1928–29 to
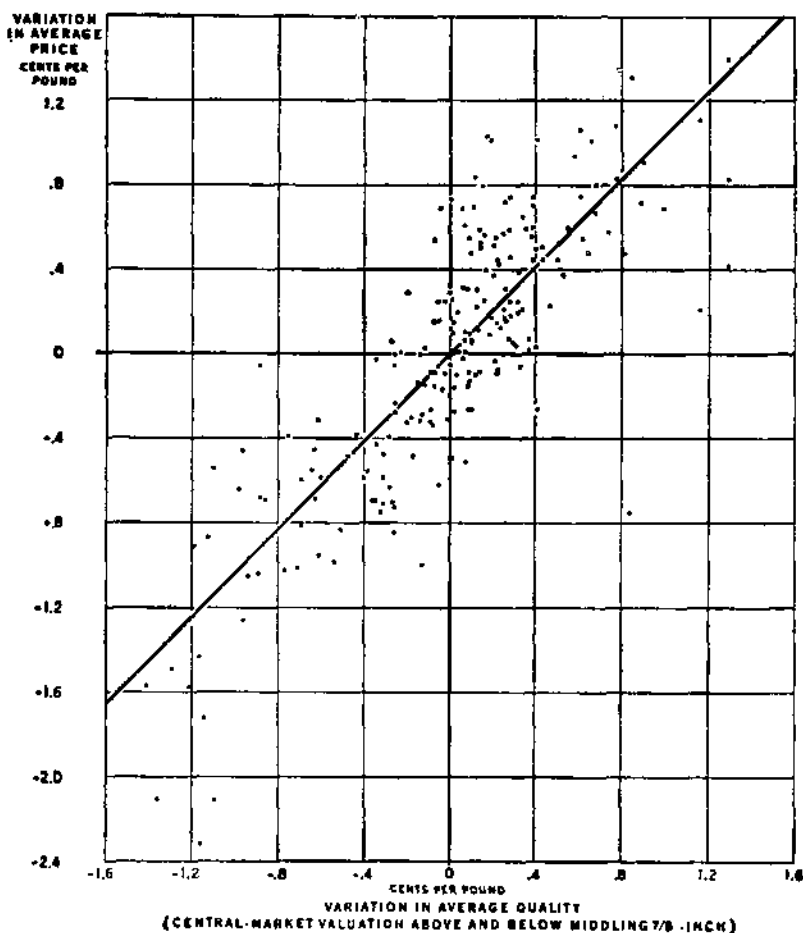
FIGURE 4.—RELATION OF AVERAGE PRICE TO AVERAGE QUALITY OF COTTON IN SELECTED LOCAL MARKETS IN TEXAS AND OKLAHOMA, SEASONS 1928–29 TO 1932–33, INCLUSIVE,

For the most part the average price received by growers in local markets where cotton of higher grade and longer staple was sold was somewhat higher than the average price received by growers in local markets where cotton of lower grade and shorter staple was sold, adjustments having been made for differences in cost of transportation to Houston, Tex.   The coefficient of correlation amounted to 0.83±0.02.

1932–33, the average prices received by growers in the selected local markets where the cotton averaged higher in grade and longer in staple were somewhat higher than the average prices received by growers in local markets where the cotton averaged lower in grade

---

[8] Adjustments were made in average local-market prices in Texas and Oklahoma for differences in costs of compression and freight to Houston; and in Arkansas, Tennessee, Mississippi, and Louisiana for differences in costs of compression and freight to New Orleans. No adjustments were made in the average prices in local markets in mill sections of North Carolina, South Carolina, Alabama, and Georgia (p. 51).

[9] Differences in average central-market values of the cotton sold in these markets were arrived at by weighting the number of bales of each grade and staple length by the central-market premiums and discounts.

and shorter in staple (figs. 4, 5, and 6).   These differences in average prices were great enough in many cases to equal the premiums and discounts for grade and staple length quoted in central markets.   In other words, farmers who sold cotton in local markets where the average quality as indicated by grade and staple length was relatively
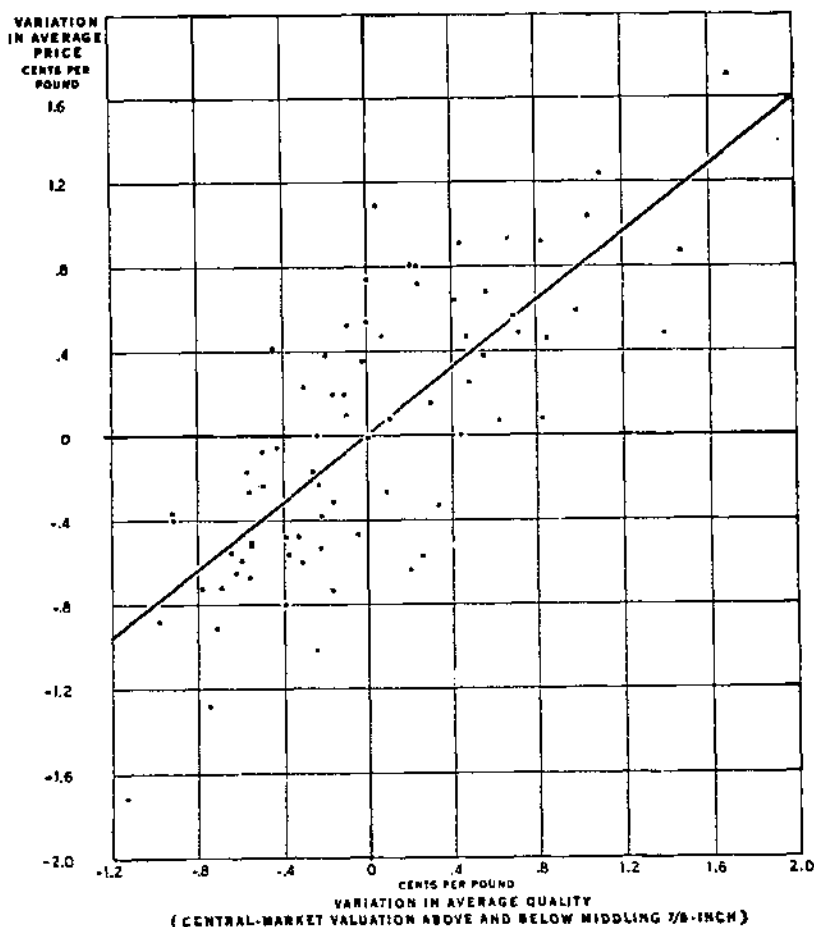
FIGURE 5.—RELATION OF AVERAGE PRICE TO AVERAGE QUALITY OF COTTON IN SELECTED LOCAL MARKETS IN ARKANSAS, LOUISIANA, MISSISSIPPI, AND TENNESSEE, SEASONS 1928–29 TO 1930–31, INCLUSIVE.

For the most part the average price received by growers in local markets where cotton of higher grade and longer staple was sold was somewhat higher than the average price received by growers in local markets where cotton of lower grade and shorter staple was sold, adjustments having been made for differences in cost of transportation to New Orleans, La.   The coefficient of correlation amounted to 0.77±0.05.

high received, on an average, correspondingly higher prices than those who sold cotton in local markets where the average quality of the cotton was relatively low.

Considerable irregularity was found in the relationship of average prices received by growers for cotton sold in different local markets to the average central-market value of this cotton.   The coefficient of determination shows that, on an average, for the period 1928–29 to

1932–33, 69 percent of the differences in averaged prices received in the specified local markets in Texas and Oklahoma combined was accounted for by differences in central-market value of the cotton sold in these markets. The corresponding percentage for Arkansas, Louisiana, Tennessee, and Mississippi combined was found to be 59; and that for North Carolina, South Carolina, Georgia, and
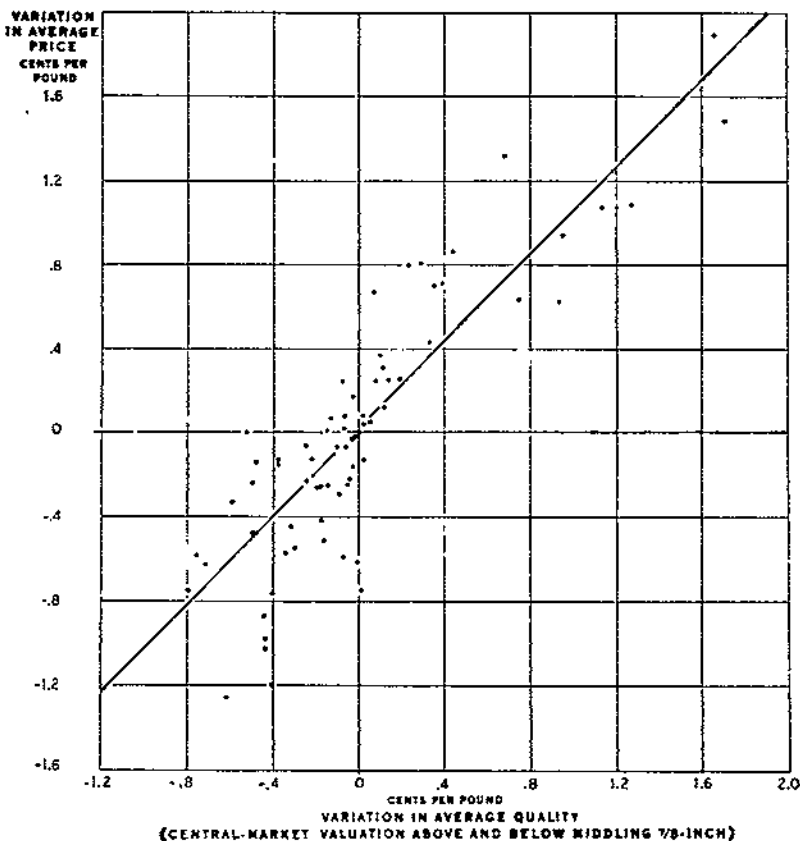
FIGURE 6.—RELATION OF AVERAGE PRICE TO AVERAGE QUALITY OF COTTON IN SELECTED LOCAL MARKETS IN ALABAMA, GEORGIA, NORTH CAROLINA, AND SOUTH CAROLINA. SEASONS 1928–29 TO 1930–31, INCLUSIVE.

For the most part the average price received by growers in local markets where cotton of higher grade and longer staple was sold was somewhat higher than the average price received by growers in local markets where cotton of lower grade and shorter staple was sold. The coefficient of correlation amounted to 0.87±0.03.

Alabama combined, 76. This means that during the period covered for Texas and Oklahoma, 31 percent; for Arkansas, Louisiana, and Mississippi, 41 percent; and for North Carolina, South Carolina, Georgia, and Alabama, 24 percent of the differences in average prices in selected local markets were due to factors other than differences in average grade and staple length and in cost of carrying cotton from local to central markets.

It is realized, of course, that conditions in local markets—such as differences in the kind and extent of local competition, differences in

outlet for cotton, differences in weight on which the cotton was sold, differences in the bargaining power of farmers and of local buyers, and differences in the character of the cotton—may greatly influence average prices received by growers in these local markets.

The analysis indicates that differences in central-market values as a result of differences in staple length were on the whole of relatively greater importance in determining the average price level in local markets than were differences in central-market value due to differences in grade. Differences in central-market value due to differences in staple length were generally somewhat greater than differences in central-market value due to differences in grade, particularly in the States east of Texas and Oklahoma.

FROM MONTH TO MONTH

Average prices to growers in local markets reflected differences in average quality as indicated by grade and staple length from month to month, as well as from market to market. During months when the average quality as indicated by grade and staple length was relatively high, the average price received by growers in local markets was for the most part correspondingly higher, in relation to the price of Middling ⅞-inch cotton in central markets, than during months when the average quality as indicated by grade and staple length was relatively low.

Monthly average prices received by growers in selected local markets during the seasons 1928-29 to 1932–33 were higher, for the most part, as compared with central-market prices during the first part of the season than during the later part of the season (table 16 and figs. 7 and 8).[10] These relatively high local-market prices during the first part of the season may be accounted for in part by the larger volume of sales, which made it possible to handle cotton on relatively narrow margins and by competition of buyers, who having sold in advance, were in need of cotton with which to fulfill their commitments.

TABLE 16.—*Average price per pound paid for cotton in selected local markets [1] and in central markets,[2] by months, seasons 1928–29 to 1932–33*

SEASON 1928-29

Month	Middling ⅞-inch White [3] cotton			Various grades and staple lengths of White [3] and Spotted cotton		
	Size of sample [4]	Local-market price	Central-market price	Size of sample [4]	Local-market price	Central-market price
	Bales	Cents	Cents	Bales	Cents	Cents
August	212	18.11	18.43	3,538	18.26	18.92
September	2,703	17.15	17.58	27,819	17.52	18.10
October	4,400	18.10	18.45	40,004	18.30	18.67
November	2,951	18.01	18.67	21,590	18.10	18.75
December	865	18.17	19.09	10,125	17.68	18.58
January	123	17.85	18.87	2,414	16.73	18.46
February	48	17.98	18.85	575	16.26	17.82
March	40	18.92	19.81	396	17.02	18.93
April	4	18.58	19.24	7	18.34	19.06
Total	11,376	17.86	18.36	106,558	17.94	18.53

See footnotes at end of table.

[10] The influences of differences in price level in different local markets, together with monthly changes in the proportion of the total sample coming from different local markets, on the variations in monthly average prices in all local markets combined, were eliminated. Central-market prices represent average prices at the 10 designated spot markets on each day, weighted by the number of bales of cotton of the same description sold on the same day and included in the sample of cotton sold in the selected local markets.

TABLE 16.—*Average price per pound paid for cotton in selected local markets and in central markets, by months, seasons 1928–29 to 1932–33*—Continued

SEASON 1929-30

Month	Middling ⅞-inch White [3] cotton			Various grades and staple lengths of White [3] and Spotted cotton		
	Size of sample [4]	Local-market price	Central-market price	Size of sample [4]	Local-market price	Central-market price
	Bales	Cents	Cents	Bales	Cents	Cents
August	1,686	17.67	18.00	12,347	17.97	18.51
September	3,927	17.75	17.96	29,492	17.98	18.18
October	5,719	17.29	17.65	34,685	17.25	17.49
November	2,195	16.20	16.73	13,279	15.76	16.16
December	565	15.58	16.60	6,741	14.62	15.48
January	106	15.44	16.54	1,778	13.79	15.19
February	31	14.38	15.26	678	13.83	15.52
March	9	13.63	14.65	136	11.57	12.95
April				10	14.17	15.32
Total	14,238	17.20	17.58	99,146	17.08	17.45

SEASON 1930-31

Month	Size of sample	Local-market price	Central-market price	Size of sample	Local-market price	Central-market price
August	1,041	10.43	10.71	11,515	11.05	11.67
September	3,450	9.93	10.12	25,020	10.10	10.44
October	4,011	9.44	9.79	25,694	9.42	9.87
November	1,345	9.79	10.12	12,317	9.63	10.00
December	216	8.81	9.35	3,466	8.21	8.84
January	75	8.87	9.36	813	8.27	9.00
February	55	9.81	10.02	473	9.45	10.04
March	19	9.91	10.22	156	10.00	10.67
Total	10,212	9.74	10.03	80,060	9.84	10.28

SEASON 1931-32

Month	Size of sample	Local-market price	Central-market price	Size of sample	Local-market price	Central-market price
August	13	6.47	6.38	259	6.40	7.00
September	625	5.74	5.74	7,417	5.85	6.25
October	1,372	5.63	5.76	11,606	5.80	6.00
November	705	5.95	6.05	6,168	6.01	6.19
December	153	5.70	5.74	2,024	5.38	5.68
January	30	6.00	6.15	801	5.35	5.94
February	10	6.29	6.51	316	5.46	6.17
March	5	6.39	6.54	247	6.07	6.88
Total	2,913	5.75	5.84	28,836	5.74	6.10

SEASON 1932-33

Month	Size of sample	Local-market price	Central-market price	Size of sample	Local-market price	Central-market price
August	192	7.92	7.91	1,359	7.24	7.50
September	989	6.17	6.18	6,841	7.27	7.42
October	1,980	6.31	6.38	11,715	6.38	6.57
November	857	5.88	6.07	7,321	5.46	5.77
December	193	5.42	5.67	2,122	5.32	5.62
January	86	5.73	6.02	1,119	5.40	5.83
February	18	5.66	5.81	199	5.20	5.53
March	5	6.14	6.29	57	6.35	6.52
April	3	6.45	6.92	36	6.85	7.42
May	7	8.94	9.09	27	8.89	9.18
Total	4,336	6.21	6.30	30,596	6.28	6.51

[1] The influence of differences in price level in different local markets, together with variations in the proportion of the total sample coming from different local markets on monthly variations in average price were eliminated. (See appendix, p. 51, for method.)

[3] Central market prices for Middling ⅞-inch cotton are averages of quotations at the 10 designated spot markets. Central market prices for cotton of grades and staple lengths other than Middling ⅞-inch were obtained by applying to the average price of Middling ⅞-inch cotton at the 10 spot markets, average premiums and discounts for grade at the 10 designated spot markets; average premiums for 1¹⁵⁄₁₆-inch and 1-inch at the 6 spot markets (Dallas, Houston, Galveston, New Orleans, Memphis, and Little Rock); average premiums for lengths 1¹⁄₁₆ inches and longer at Memphis and New Orleans; and average discounts for 1³⁄₁₆-inch staple at New Orleans, Houston, and Galveston. The premiums and discounts for grade are for ⅞-inch staple length and the premiums and discounts for staple are for Middling grade. These daily central market prices were weighted by the number of bales of cotton of the same description sold on the same day and included in the sample of cotton sold in the selected local markets.

[3] Extra White cotton included.

[4] 1 bale sold in July 1928, 26 bales sold in July and April 1929, and 2 bales sold in July 1930, not included.

[5] 45 bales sold in July 1928, 347 bales sold in July 1929, 665 bales sold in July 1930, and 166 bales sold in July 1932, not included.
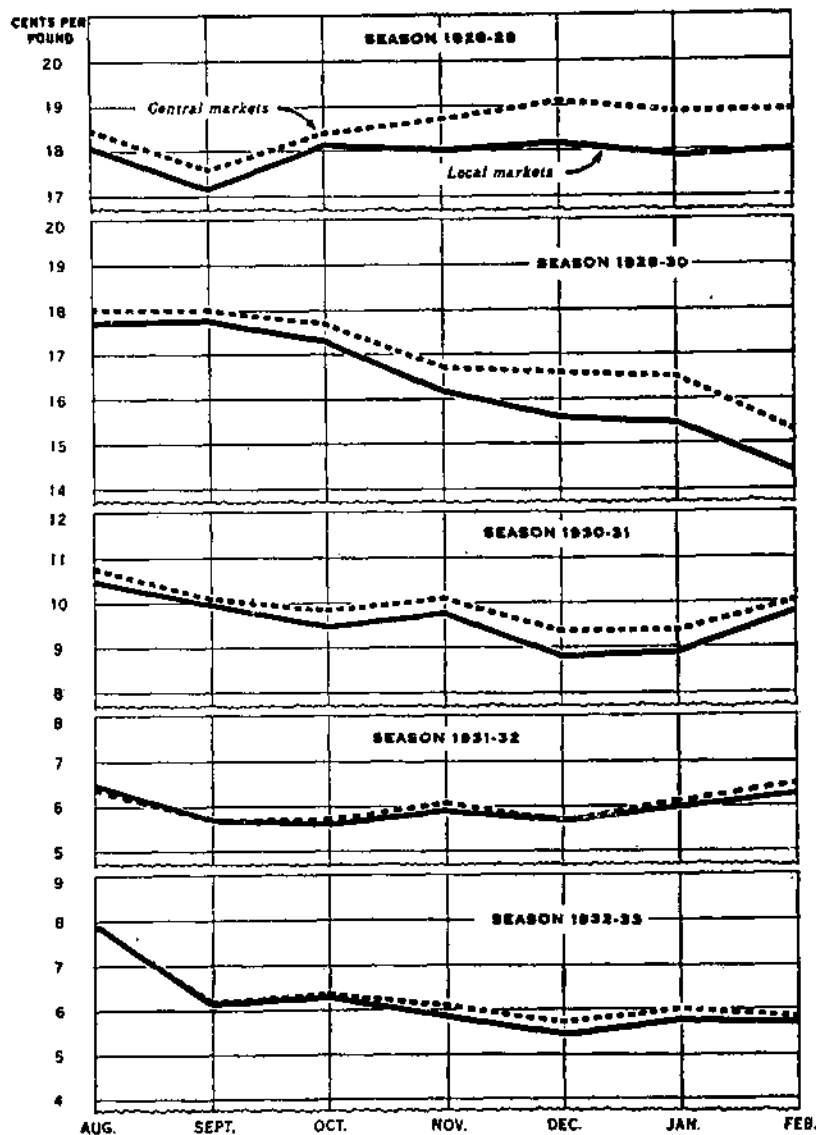
FIGURE 7.—AVERAGE PRICE FOR MIDDLING ⅞-INCH WHITE COTTON IN SELECTED LOCAL MARKETS AND IN CENTRAL MARKETS, BY MONTHS, SEASONS 1928-29 TO 1932-33.

The spreads between the average prices for Middling ⅞-inch White cotton in local markets and those quoted in central markets were relatively narrow from the first of the season up to November. After November the spreads widened as the volume of sales decreased.
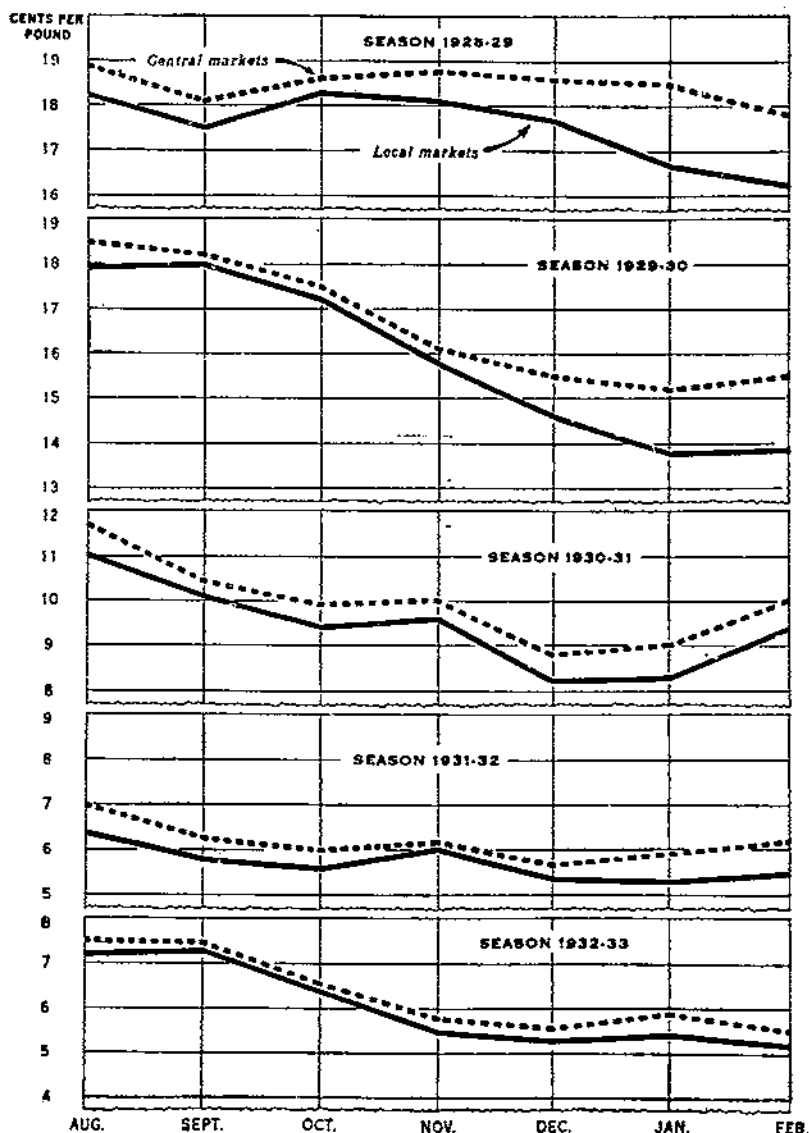
FIGURE 8.—AVERAGE PRICE FOR COTTON OF VARIOUS GRADES AND STAPLE LENGTHS IN SELECTED LOCAL MARKETS AND IN CENTRAL MARKETS, BY MONTHS, SEASONS 1928–29 TO 1932–33.

The spreads between average prices for cotton of various grades and staple lengths in selected local markets and prices quoted in central markets for cotton of the same grade and staple length sold on the same days were for the most part relatively narrow in September, October, and November, when the volume of sales in local markets was relatively large, but they widened as the season advanced and as the volume of sales in local markets decreased.

Cotton sold in round lots in the selected local markets was not even-running in grade and staple length. For example, a round lot sold in a local market in Mississippi on November 1, 1928, consisted of 141 bales, the grades of which ranged from Strict Low Middling to Good Middling, while the staple lengths ranged from $^{15}/_{16}$ inch to $1\frac{1}{4}$ inches and longer. Since the price received for cotton sold in a round lot represents an average for all grades and staple lengths included, such data cannot be used in determining the extent to which prices vary with grade and staple length of individual bales. An analysis of the data collected shows no consistent differences between prices received by growers for cotton sold in round lots and for cotton sold as individual bales. On the whole, however, prices received for cotton sold in round lots averaged somewhat higher than those for cotton of the same grade and staple length sold as individual bales in the same local markets on the same dates. The somewhat higher average prices for cotton sold in round lots than for cotton sold as individual bales may be largely accounted for by the somewhat reduced marketing costs resulting from buying cotton in volume and from the better than average bargaining power of the larger farmers who sell much of their cotton in round lots.

INFLUENCE OF FARM PRICES ON QUALITY OF COTTON PRODUCED

Differences in prices received by growers on the basis of quality may reasonably be expected to influence materially the grade and staple length of the cotton produced, particularly the latter, provided the grower has some knowledge of differences in quality. It is not enough that premiums be paid for higher grades and longer staples and that discounts be made for lower grades and shorter staples in central markets. To be effective, they must be reflected to an appreciable extent in prices received by the grower, the person who finally determines the variety of cotton to be planted. When prices received by growers fail to vary appreciably with the grade and staple length of the cotton sold, growers are naturally more interested in yields than in quality. The grower's apparent indifference to improving the quality of his cotton may be accounted for, partially at least, by the fact that differences in prices received in local markets offer little inducement to the individual grower to attempt such improvement.

Differences in yield obtained also constitute an important factor in determining which variety growers can produce most profitably. In some localities growers are apparently convinced that longer staple varieties out yield the shorter stapled, and are thus more profitable, even when no premiums are paid for longer staples. In other localities, apparently, shorter staple varieties give higher yields, and the costs of production are less than for longer staple varieties, so that the former are more profitable unless the premiums paid for the longer staples counterbalance the differences in yields.

Farmers are generally inclined to grow the kind of cotton which, at prices received in local markets, yields them as individuals the greatest net returns. Although adjustments in cotton production require considerable time and are complicated by seasonal and other factors largely beyond the control of the individual operators, many cotton farmers do respond to economic conditions and do constantly readjust

their productive enterprises in the directions that promise the greatest income (18).

The total supply of the different grades and staple lengths of cotton produced by growers who follow their individual economic interests is likely to be out of line with mill demand [11] if prices received by growers fail to reflect accurately the spinning value of the different grades and staple lengths. It is practically impossible, under a system of individual economy, to adjust even fairly accurately the grade and staple length of cotton produced to mill demand unless prices received by growers reflect at least a major part of the differences in spinning value of cotton of different grades and staple lengths.

The prices received in local markets by growers are the media through which the market demand is expressed to them, and these prices, together with information on differences in costs of production, indicate how much and what varieties of cotton they can afford to grow. Relatively high prices received by growers for all cotton tend to result in an increased acreage planted the following year (37). Likewise, appreciable premiums received by growers for longer staple cotton offer an inducement for growing longer staple varieties.

Coupled with the failure of prices received by growers to reflect to an appreciable extent premiums and discounts for grade and staple length is the belief on the part of some farmers that the shorter staple varieties give higher yields and that the costs of production are less than for the longer staple varieties. Since very small premiums, on an average, are received in local markets for cotton of longer staples, farmers in some localities are apparently convinced that they can make more money from the production of shorter staple than from the production of longer staple varieties. The proportion of lint to seed cotton is usually greater for shorter staple than for longer staple varieties, and it is possible that growers misjudge the relative yields of varieties because of this difference in the proportion of lint. Total yield per acre of lint cotton is more important than a high gin turn-out, but it is far more difficult to compare yields per acre than it is to compare the proportion of lint to seed cotton.

As a means of pointing out more specifically the relationship between staple length, yield, and comparative value per acre [12] of cotton grown at selected stations, results of cotton variety tests as reported by certain State agricultural experiment stations are shown in table 22. The tabulations are confined to data reported for different stations in Georgia, South Carolina, Alabama, Mississippi, Tennessee, Arkansas, and Louisiana. Results for other stations in these and in other States were not included because completed data for the five seasons included in the study were not available at the time these calculations were made. The stations included are not intended to represent a cross section of cotton-growing conditions in the United States, but are presented merely to show some of the differences in comparative value per acre for cotton of different staple lengths. The data presented for these stations are not complete in that they do not represent cotton of all staple lengths, nor do they indicate the possibilities for improvement of varieties or for the

---

[11] No accurate measures of mill demand are available. Differences in mill demand are presumably based on difference in spinning utility. Central-market prices are used in this study to represent differences in spinning value or differences in marginal utility, not because they are considered entirely satisfactory measures, but because no better measures were found.

[12] The comparative value per acre represents the value of the lint cotton and cottonseed minus the cost of picking and ginning.

introduction of new varieties at each station. The data presented for each year represent the highest yielding variety of each staple length reported.

These results help to explain why farmers in some localities are not interested in growing longer staple varieties and they emphasize the importance of taking into consideration differences in average yield as well as differences in price received for cotton of different staple lengths in determining the varieties of cotton which can be grown most profitably in each locality. An examination of these data shows that in some localities the differences in yields of the varieties reported are such that longer staple varieties would give a higher comparative value per acre than shorter staple varieties even if no premiums were paid for length of staple. Under such conditions, yields and prices already favor the production of the longer staples. In other localities the differences in yields of the varieties reported are such that shorter staple varieties give a higher comparative value per acre even if full central-market premiums and discounts were reflected in the prices received by growers. Under these conditions, improvements in length of staple are not likely to be made as a result of differences in prices.

Intermediate between these extremes are localities in which differences in yields of the varieties reported are such that when local-market premiums and discounts are applied, shorter staple varieties give the highest comparative value per acre, whereas, when central-market premiums and discounts are applied, longer staple varieties give the highest comparative value per acre. In localities in which these intermediate conditions prevail, differences in premiums and discounts determine the staple length that gives the highest comparative value per acre. The significance of differences in staple premiums and discounts is illustrated by the data for Raymond, Miss., in 1930. By increasing the staple premiums from those received by growers in local markets to those quoted in central markets, the staple length showing the highest comparative value per acre increased from $1\frac{5}{16}$ inch to $1\frac{1}{16}$ inches on "valley land" and from $1\frac{3}{16}$ inch to 1 inch on "hill land" (table 22).

In calculating the comparative value per acre, no account was taken of the possible differences in grade resulting from differences in date of maturity and other factors; differences in the strength and uniformity of the fibers; differences in cost per 100 pounds of picking seed cotton; and differences in cost of planting seed. These factors were omitted from the calculations not because they were considered unimportant, but because data available were not adequate for measuring the possible influences of each of these factors. It is realized that the factors not included in the calculations may be of enough importance to increase considerably the differences shown or perhaps in some cases to change the order of relative desirability of different varieties from that indicated by the comparative value per acre.

The failure of prices received by growers to reflect premiums and discounts for grade and staple length equal to those quoted in central markets indicates that the price incentive to growers for the production of different grades and staple lengths was out of line with the spinning value of cotton as reflected by central-market prices. This situation tends to result in the production of larger proportions of the

lower grades and shorter staples than would be the case if production were adjusted more accurately to mill demand as reflected in central-market prices. This lack of adjustment tends to reduce net income to growers as a group and to lower the quality of cotton goods or increase costs to consumers.

MEANS OF ADJUSTING THE QUALITY OF COTTON PRODUCED TO MILL REQUIREMENTS

Needed adjustments in cotton production in the United States can be brought about by improving the marketing system so that a greater proportion of the differences in spinning value of cotton of different grades and staple lengths is reflected in the prices received by growers. Improvements can also be made by giving farmers accurate information regarding the relative profitableness of producing cotton of different qualities in each community and by making readily available at reasonable costs to growers an adequate supply of good planting seed of the varieties of cotton relatively best adapted to conditions in each locality. The opportunities for improving the quality of the cotton produced in many localities in the Cotton Belt by the use of improved varieties that are now available can be materially increased by perfecting the marketing system so as to insure discriminate buying on the basis of quality.

Advice to growers relative to the varieties of cotton which are most profitable in each locality must of necessity be based on differences in prices actually received by growers for cotton of the various grades and staple lengths, along with the differences in cost of production. Profits to individual growers in some localities can be increased by producing longer staple cotton, even under present marketing conditions. The best information available indicates that not all farmers in each locality are producing cotton of staple lengths best adapted to their condition at the present time. Some farmers grow shorter staple varieties in localities where longer staple varieties would be evidently more profitable, and vice versa. These maladjustments may be due in part to the farmers' lack of reliable information relative to the varieties of cotton best adapted to conditions in each locality and to difficulties in obtaining good seed of the best varieties.

Conditions in local markets can be improved by:

(1) *Classification of cotton before it is sold by growers.*—In order that farmers might sell their cotton in local markets strictly on a quality basis, under the present marketing system, it would be necessary that both growers and local buyers know the quality and commercial value of the cotton at the time of making the transaction. Since farmers and many local cotton buyers are not able to classify cotton accurately, a means of improvement would be to have disinterested, competent, and reliable persons classify the cotton according to a uniform standard and issue a certificate showing the grade, staple length, and character of each bale before it is sold. This classification and certification of cotton while it is in the possession of the grower would increase the bargaining power of farmers who produce the higher qualities of cotton, increase the usefulness of price quotations for grade and staple length, reduce the waste from resampling, improve the use of cotton-warehouse receipts as collateral

for loans, and result in other economies in cotton marketing. Difficulties such as assembling the cotton in sufficient volume and providing adequate facilities for classing the cotton accurately and economically, securing competent classers and providing for their supervision, developing standards for character, and other problems would be encountered. Although considerable time and effort would be required to overcome these difficulties, they are not considered insurmountable.

(2) *Producing cotton of more uniform quality in each community.*— Discriminate buying in local markets on the basis of quality can be facilitated by producing cotton of more uniform quality in each community so that the volume of cotton of each grade and staple length produced in each community will be large enough to be handled more economically. This is being accomplished at the present time in some communities by the standardization of varieties and by reducing the number of varieties grown. Increased profits can be obtained in many communities by standardizing the production of longer staple varieties.

(3) *Supplying farmers with adequate information on cotton prices.*— Farmers in each community need information on cotton prices in central markets and in nearby points of concentration, including prices for Middling ⅞-inch cotton and premiums and discounts for the various other grades and staple lengths. With this information and a knowledge of the quality of the cotton before it is sold, farmers who produce the higher qualities will be in a better position to bargain more effectively with buyers.

SUMMARY AND CONCLUSIONS

Cotton prices in local markets in the United States do not accurately reflect differences in the spinning value of the various grades and staple lengths. Prices in local markets varied so irregularly on the basis of grade and staple length during the seasons 1928–29 to 1932–33 that it was not unusual for some farmers to receive considerably higher prices for some grades and staples than other farmers received for higher grades and longer staples sold in the same markets on the same days.

Average prices in local markets were somewhat higher for the higher grades and longer staples than for the lower grades and shorter staples, but the average premiums paid for the higher grades and longer staples and the average discounts made for the lower grades and shorter staples were considerably less than those quoted in central markets. The proportion of central-market premiums reflected in local-market prices amounted to about 33 percent for the grades above Middling and to only about 17 percent for staples longer than ⅞ inch. The proportions of central-market discounts made to growers amounted to 60 percent for grades below Middling and to less than 6 percent for staples shorter than ⅞ inch.

Average premiums and discounts in local markets were considerably less in many cases than the differences in prices received for cotton of the same grade and staple-length designations sold in the same local markets on the same days.

Average premiums for the higher grades and longer staples and average discounts for the lower grades and shorter staples in local markets varied irregularly from month to month. No consistent

differences were found between average premiums for higher grades and longer staples and average discounts for lower grades and shorter staples in local markets of different types. No consistent relationships were found between the number of buyers or the type of buyers and the average premiums and discounts for grade and staple length in local markets.

Lack of knowledge of the correct classification and of the commercial value of the cotton, differences in the character of cotton, inadequate volume of some of the grades and staple lengths, and differences in bargaining power of farmers and of local buyers are considered the principal factors responsible for the failure of local market prices to reflect a larger proportion of central-market premiums and discounts for grade and staple length.

Although local-market prices paid for individual bales did not vary consistently with the grade and staple length of the cotton, average prices were generally somewhat higher in selected local markets where the cotton sold averaged higher in grade and longer in staple than in those in which the cotton sold averaged lower in grade and shorter in staple. These differences in average prices were great enough in many cases to equal the premiums and discounts for grade and staple length quoted in central markets for the cotton included in the study.

The failure of local-market prices to reflect a larger proportion of central-market premiums and discounts for different grades and staple lengths makes it impossible for growers who could otherwise afford to produce the higher grades and longer staples to realize the full benefits of their favorable positions. It results in the production of larger proportions of the lower grades and shorter staples than would be the case if production were better adjusted to mill demand as reflected in central-market prices. Such conditions tend to reduce net income to growers as a group and to lower the quality of the cotton goods or increase the costs to consumers.

Needed adjustments in cotton production in the United States can be brought about (1) by improving the marketing system so that a greater proportion of the differences in spinning value of cotton of different grades and staple lengths will be reflected in the prices received by growers, (2) by giving farmers accurate information regarding the varieties of cotton relatively best adapted to conditions in each locality, and (3) by making readily available at reasonable costs to growers an adequate supply of good planting seed of the varieties of cotton relatively best adapted to conditions in each locality.

The present local-marketing practices can be improved (1) by having disinterested, competent, and reliable persons classify the cotton according to a uniform standard and issue a certificate showing the grade, staple length, and character of each bale before it is sold by the grower; (2) by encouraging the production of cotton of more uniform quality in each community so that the volume of cotton of each grade and staple length produced in each community will be large enough to be handled more economically; and (3) by supplying farmers with more adequate information on cotton prices in central markets and in nearby points of concentration, including prices for Middling ⅞-inch cotton and premiums and discounts for the various other grades and staple lengths.

LITERATURE CITED

(1) ALLRED, C. E., HATFIELD, G. H., and BOYER, P. B.
   1934. FARM PRICE OF COTTON IN RELATION TO QUALITY. A PROGRESS
        REPORT. Tenn. Agr. Expt. Sta. Bull. 153, 32 pp., illus.
(2) AMES, C. T., and CASANOVA, O. B.
   1928–29. REPORT OF HOLLY SPRINGS BRANCH EXPERIMENT STATION.
        1928, 1929. Miss. Agr. Expt. Sta. Bulls. 264, 42 pp., illus.,
        1928; 272, 23 pp., illus., 1929.
(3) ATKINSON, C. E., and BEERS, J. B.
   1920. A STUDY OF COTTON MARKETING CONDITIONS IN ARKANSAS. Ark.
        Col. Agr., Ext. Circ. 92, 15 pp., illus.
(4) BALLS, W. L.
   1928. STUDIES OF QUALITY IN COTTON. 376 pp., illus. London.
(5) BLEDSOE, R. P., BRABHAM, H. K., and HALE, G. A.
   1929. COTTON VARIETY TEST, 1928. Ga. Expt. Sta. Circ. 83, [3] pp.
(6) BRABHAM, H. K.
   1932. COTTON VARIETY TESTS, 1931. Ga. Expt. Sta. Circ. 100, 8 pp.
(7) ——— and HALE, G. A.
   1930. COTTON VARIETY TESTS, 1930. Ga. Expt. Sta. Circ. 90, 4 pp.
(8) BROWN, H. B.
   1930. COTTON VARIETIES FOR LOUISIANA; A PRELIMINARY REPORT. La.
        Agr. Expt. Sta. Bull. 207, 35 pp., illus.
(9) BUIE, T. S.
   1929. COTTON VARIETY TESTS, 1928. S. C. Agr. Expt. Sta. Circ. 35, 11 pp.
(10) BURGESS, J. S., JR., and GUIN, M.
   1933. FARM PRICES OF COTTON RELATED TO ITS GRADE AND STAPLE
        LENTH IN SELECTED LOCAL MARKETS IN SOUTH CAROLINA, SEA-
        SONS 1930–31 AND 1931–32. S. C. Agr. Expt. Sta. Bull. 290, 31
        pp., illus.
(11) CASANOVA, O. B.
   1931. REPORT OF THE HOLLY SPRINGS BRANCH EXPERIMENT STATION, 1931.
        Miss. Agr. Expt. Sta. Bull. 296, 12 pp.
(12) COX, A. B.
   1926. COTTON PRICES AND MARKETS. U. S. Dept. Agr. Bull. 1444, 78
        pp., illus.
(13) CRANDALL, W. G., AYERS, T. L., PAULUS, A. J., and CARY, D., eds.
   1934. COTTON VARIETY TESTS . . . Clemson Agr. Col., S. C., Dept. Agr.
        Ed., Agr. Ed. 10: 65–80.
(14) CRAWFORD, G. L., and GABBARD, L. P.
   1928. RELATION OF FARM PRICES TO QUALITY OF COTTON. Tex. Agr.
        Expt. Sta. Bull. 383, 29 pp., illus.
(15) ELLIS, L. S., DICKSON, A. M., and McWHORTER, C. C.
   1934. THE SALE OF COTTON IN THE SEED IN OKLAHOMA. Okla. Agr.
        Expt. Sta. Bull. 219, 64 pp., illus.
(16) FARRINGTON, C. C.
   1931. COTTON PRICE-QUALITY RELATIONSHIP IN LOCAL MARKETS OF
        LOUISIANA. La. Agr. Expt. Sta. Bull. 221, 59 pp., illus.
(17) GARSIDE, A. H.
   [1930.] FOREIGN GROWTHS OF COTTON AND THEIR RELATION TO THE
        AMERICAN COTTON INDUSTRY. Address delivered before Con-
        vention of American Cotton Shippers Association, Memphis,
        Tenn., April 25, 1930. 15 pp. New York.
(18) GENUNG, A. B.
   1931. ABILITY OF FARMERS TO ADJUST PRODUCTION TO MARKET DEMANDS.
        U. S. Daily 6 (35): 1, 3.
(19) GUIN, M.
   1931. RELATION OF PRICE TO QUALITY OF SOUTH CAROLINA COTTON,
        1929–30 SEASON. S. C. Agr. Expt. Sta. Bull. 279, 32 pp., illus.
(20) HALE, G. A., and BRABHAM, H. K.
   1930. COTTON VARIETY TESTS, 1929. Ga. Expt. Sta. Circ. 87, 3 pp.
(21) HOWELL, L. D., and FULLILOVE, W. T.
   1930. FARM PRICES OF COTTON RELATED TO QUALITY, GEORGIA CROP
        1928–29. Ga. Agr. Expt. Sta. Bull. 165, 33 pp., illus.
(22) ——— and FULLILOVE, W. T.
   1933. FARM PRICES OF COTTON RELATED TO ITS GRADE AND STAPLE LENGTH
        IN GEORGIA, SEASONS 1929–30 AND 1930–31. Ga. Expt. Sta. Bull.
        174, 37 pp., illus.

(23) HOWELL, L. D., LONG, L. E., BURGESS, J. S. JR., GARNER, M. L., and SOXMAN, R. C.
      1933. FARM PRICES OF COTTON RELATED TO ITS GRADE AND STAPLE LENGTH IN SELECTED LOCAL MARKETS IN MISSISSIPPI, SEASONS 1928–29, 1929–30, AND 1930–31. Miss. Agr. Expt. Sta. Tech. Bull. 21, 63 pp., illus.
(24) JENSEN, W. C., GUIN, M., and WHITE, H. A.
      1931. COTTON MARKETING STUDIES, 1925–30. S. C. Agr. Expt. Sta. Bull. 270, 79 pp., illus.
(25) KNAPP, J. G., and CLEMENT, S. L.
      1934. NORTH CAROLINA FARM PRICES OF COTTON IN RELATION TO GRADE AND STAPLE LENGTH. N. C. Agr. Expt. Sta. Bull. 289, 63 pp., illus.
(26) LANHAM, W. B., EGAN, J. T., HARPER, F. H., NELSON, F. E., and McCOLLUM, J. L.
      1934. GRADE, STAPLE LENGTH, AND TENDERABILITY OF COTTON IN THE UNITED STATES, 1928–29 TO 1932–33. U. S. Dept. Agr. Statis. Bull. 47, 130 pp., illus.
(27) McCONNELL, O. J., and CAMP, W. R.
      1917. A STUDY OF COTTON MARKET CONDITIONS IN NORTH CAROLINA WITH A VIEW TO THEIR IMPROVEMENT. U. S. Dept. Agr. Bull. 476, 19 pp., illus.
(28) McGEHEE, T. F., and CASANOVA, O. B.
      1930. REPORT OF THE HOLLY SPRINGS BRANCH EXPERIMENT STATION, 1930. Miss. Agr. Expt. Sta. Bull. 286, 19 pp., illus.
(29) MADDOX, J. G.
      1932. RELATION OF GRADE AND STAPLE LENGTH OF COTTON TO PRICES RECEIVED BY FARMERS IN LOCAL MARKETS OF ARKANSAS. Ark. Agr. Expt. Sta. Bull. 274, 76 pp., illus.
(30) PALMER, A. W.
      1924. THE COMMERCIAL CLASSIFICATION OF AMERICAN COTTON; WITH REFERENCE TO THE STANDARDS FOR GRADE, COLOR, AND STAPLE. U. S. Dept. Agr. Dept. Circ. 278, 35 pp., illus.
(31) PERKINS, W. R., ANDERSON, W. S., and WELBORNE, W. W.
      1928–29. REPORT OF THE SOUTH MISSISSIPPI BRANCH EXPERIMENT STATION. 1928, [1929]. Miss. Agr. Expt. Sta. Bulls. 266, 38 pp., 1928; 274, 34 pp., illus., 1929.
(32) POPE, J. D., and CLARK, C. M.
      1931. THE RELATION OF QUALITY OF COTTON TO PRICES PAID TO FARMERS IN ALABAMA. Ala. Agr. Expt. Sta. Bull. 235, 48 pp., illus.
(33) ROBERT, J. C., ANDERSON, W. S., and WELBORNE, W. W.
      1931. REPORT OF THE SOUTH MISSISSIPPI BRANCH EXPERIMENT STATION FOR 1931. Miss Agr. Expt. Sta. Bull. 297, 13 pp.
(34) ——— WELBORNE, W. W., and COOLEY, J. L. JR.
      1930. REPORT OF THE SOUTH MISSISSIPPI BRANCH EXPERIMENT STATION. Miss. Agr. Expt. Sta. Bull. 285, 32 pp., illus.
(35) ROGERS, W. B., and HALL, E. E.
      1930. COTTON VARIETY TESTS, 1929. S. C. Agr. Expt. Sta. Circ. 40, 11 pp.
(36) SHERMAN, W. A., TAYLOR, F., and BRAND, C. J.
      1913. STUDIES OF PRIMARY COTTON MARKET CONDITIONS IN OKLAHOMA. U. S. Dept. Agr. Bull. 36, 36 pp.
(37) SMITH, B. B.
      1928. FACTORS AFFECTING THE PRICE OF COTTON. U. S. Dept. Agr. Tech. Bull. 50, 75 pp., illus.
(38) TAYLOR, F.
      1916. RELATION BETWEEN PRIMARY MARKET PRICES AND QUALITY OF COTTON. U. S. Dept. Agr. Bull. 457, 15 pp.
(39) UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF MARKETS.
      1919. [COTTON STANDARDS.] U. S. Dept. Agr. Serv. and Regulat. Announc. 41, 16 pp., illus.
(40) WALLACE, H. F.
      1930–31. REPORT OF THE RAYMOND BRANCH EXPERIMENT STATION. [1930, 1931.] Miss. Agr. Expt. Sta. Bulls. 287, 20 pp., illus., 1930; 299, 16 pp., illus. 1931.
(41) ——— and COOLEY, J. L. JR.
      1928. REPORT RAYMOND BRANCH EXPERIMENT STATION. 1928, 1929. Miss. Agr. Expt. Sta. Bulls. 262, 40 pp., illus., 1928; 271, 38 pp., illus., 1929.

APPENDIX

METHOD OF ANALYZING LOCAL-MARKET PRICES

CALCULATION OF LOCAL MARKET PREMIUMS AND DISCOUNTS

The average local-market premiums and discounts for grade and staple were obtained from spreads between prices received by growers in local markets and those quoted in central markets for cotton of the same grade and staple length sold on the same dates. Averages of actual prices received by growers were not used in calculating premiums and discounts for grade and staple length. This was in part because of the enormous number of tabulations required to calculate differences on the basis of daily average prices, and also because monthly or seasonal averages of actual prices might be influenced enough by price fluctuations, along with variations in the grade and staple length of the cotton, to indicate that higher average prices were received by growers for cotton of lower grade and shorter staple length than for cotton of higher grade and longer staple length. This might occur even if prices received by growers from day to day varied appreciably with the grade and staple length of the cotton.

It is believed that premiums and discounts for grade and staple length calculated from the average spreads between local- and central-market prices, as in this study, do not differ appreciably from those that would have been obtained on the basis of daily average prices. This belief is supported by the fact that the average premiums and discounts for grade and staple length in 11 selected local markets in Alabama in 1928–29, and in 13 selected local markets included in the study each year from 1929–30 to 1932–33, when calculated on the basis of average spreads, generally did not differ by amounts as great as the standard error of the mean from those calculated from the same data on the basis of daily average prices.

To obtain a figure representing the spread between local- and central-market prices, the price received by the grower was subtracted from an average of the prices quoted in central markets for cotton of the same grade and staple length sold on the same day. Variations in spread resulting from fluctuations in prices in local markets during the day were not eliminated. It is believed that variations in spread for cotton of different grades and staple lengths resulting from fluctuations in prices during the day tend to compensate each other when averaged, since there appears no good reason for assuming that any one grade or staple length is more likely to be sold than any other during the period of the day when the prices are relatively high or relatively low. Fluctuations in prices during the day, however, may account for a considerable portion of the irregular variations in prices received by growers for cotton of different grades and staple lengths sold in the same local markets on the same date.

An average spread was calculated for cotton of each grade and staple length marketed each month in each local market. The monthly average spread for $\frac{7}{8}$-inch cotton of each grade in each local market was subtracted from the monthly average spread for each staple length of the same grade in the same market to give monthly average adjusted spreads for cotton of different staple lengths. For example, if the average spread for Middling $\frac{7}{8}$-inch White cotton was 0.15 cent a pound and the average spread for Middling $^{15}\!/_{16}$-inch White cotton sold in the same market during the same month was 0.45 cent a pound, the average adjusted spread for Middling $\frac{7}{8}$-inch White cotton would be 0 and for Middling $^{15}\!/_{16}$-inch White cotton would be 0.30 cent a pound. Similarly, the monthly average spread for Middling White cotton of each staple length was subtracted from the monthly average spread for each grade of the same staple length to give monthly average adjusted spreads for cotton of different grades. These spreads were adjusted for each market each month on the basis of Middling White grade and of $\frac{7}{8}$-inch staple length, in an attempt to eliminate from consideration differences in price level in the same market, from month to month, as well as differences in different markets, and also to make possible the combination of the adjusted spreads for cotton of the same grade and staple length sold during different months and in different markets.

It is realized that such adjustment of spreads does not eliminate completely the influence of month-to-month fluctuations in prices in local markets along with changes in the grade and staple length of the cotton sold when local market price fluctuations do not move parallel with those in central markets. If the price changes in local markets were always made at the same time, in the same amounts, and in the same direction, as those quoted in central markets, monthly adjustments would be unnecessary. When the spread between local and central-

market prices increases as the season advances, along with decreases in the grade and staple length of the cotton sold, average premiums and discounts for grade and staple length, calculated from the spread, and not adjusted monthly, show differentials somewhat greater than actually prevailed in the markets.   Irregular variations in spread with grade and staple length result in errors that are compensating in nature and are thought not to affect materially the average result when the sample is large, as was the case in this study.   The spread between local- and central-market prices increased somewhat as the season advanced during each of the 5 years included in the study, and these increases were accompanied by some decreases in average grade and staple length of the cotton sold. That the influence of these fluctuations in spread from one part of the season to another, along with changes in average grade and staple length of the cotton sold, was largely eliminated by making monthly adjustments is evidenced by the fact that premiums and discounts for grade and staple lengths in selected local markets in South Carolina in 1929-30, when calculated from spreads adjusted weekly, did not differ appreciably from those for the same data calculated from spreads adjusted monthly.

An adjusted average spread for cotton of each grade and staple length in each local market for the season was obtained by taking an average of the monthly adjusted spreads calculated as indicated above.   An adjusted average spread for cotton of each grade and staple length for the United States was obtained by taking an average of the adjusted spreads in all selected local markets.

The adjusted spread for the different grades and staple lengths shows the extent to which the premiums and discounts for grade and staple length in local markets varied from those quoted in central markets.   The adjusted spread of 0.30 cent a pound for Middling 1⁵⁄₁₆-inch White cotton obtained as indicated above means that staple premiums received by growers averaged 0.30 cent a pound less than the average premium quoted in central markets.   The actual premiums and discounts for grade and staple length in local markets were obtained by subtracting these adjusted spreads from the premiums and discounts for grade and staple length quoted in central markets.   For example, if the central-market staple premiums for Middling 1⁵⁄₁₆-inch White cotton amounted to 0.35 cent a pound, then by subtracting the adjusted spread of 0.30 cent a pound, referred to above, from the central-market premium, 0.05 cent a pound is obtained which represents the average staple premium for Middling 1⁵⁄₁₆-inch White cotton actually received by growers.

CALCULATION OF FREQUENCY DISTRIBUTIONS

Frequency distributions of the variations in prices received by growers were calculated for the purpose of determining the extent of variations in prices received by growers for cotton of the same grade and staple length sold in the same local markets, with the influence of differences in date of sale largely eliminated. In arriving at frequency distributions of the variations in prices received by growers for cotton of different grades and staple lengths, frequency distributions of the spreads were calculated for Middling White cotton of each staple length, and for ⅞-inch White cotton of each grade sold each month in each local market.   These monthly frequency distributions of spreads were then adjusted by subtracting the monthly average spread for Middling ⅞-inch White cotton from the class intervals of the frequency distributions of the spread for each staple length of Middling White cotton, and for each grade of ⅞-inch White cotton.   The frequency distributions of the spreads for each market for each month were adjusted on the basis of Middling White grade and of ⅞-inch staple length.   This was an attempt to eliminate from consideration differences in price level in the same market, from month to month, and also in different markets, and to make it possible to combine the adjusted frequencies of the spreads for cotton of the same grade and staple length sold during different months and in different markets.   An adjusted frequency distribution of the variations in spread for cotton of each grade and staple length for the United States was obtained by combining the adjusted frequency distributions of spread for all months and for all local markets studied.

These adjusted-frequency distributions of spread for cotton of different grades and staple lengths show the extent to which the premiums and discounts for grade and staple length in local markets varied from those quoted in central markets. Frequency distributions of the actual premiums and discounts for grade and staple length in local markets were obtained by subtracting the class intervals of the frequency distributions of spread from the average premiums and discounts for grade and staple length quoted in central markets.

The extent to which average prices received by growers in different local markets reflected the average quality of the cotton sold, as indicated by grade and staple length, was determined as follows:

Average prices received by growers for cotton of various grades and staple lengths sold in the different local markets were adjusted for differences in location by adding to the prices at selected local markets in Texas and Oklahoma the costs of compression and freight to Houston, Tex., and to prices at selected local markets in Arkansas, Louisiana, Mississippi, and Tennessee the cost of compression and freight to New Orleans. These adjustments were based on the assumption that prices in local markets tend to equal central-market prices, minus carrying charges from the local to the central markets. Interest, risk, insurance, and other costs enter into carrying charges, but the differences in these costs were so small that they had little influence on the differences in price level. It was recognized that concentration privileges, savings from through bills of lading, and other factors, may result in prices in local markets which differ considerably from central-market prices, minus costs of compressing and freight from the local to the central market but adequate data were not available for making adjustments for these factors.

Railroad rates were used in making adjustments for differences in transportation costs. It is realized that in some years cotton was shipped by truck from some of the markets included in the study, and it is not known to what extent the truck rates differed from rail rates. Furthermore, part of the cotton from Mississippi, Arkansas, Louisiana, Tennessee, and eastern Texas and Oklahoma moved directly overland to eastern mills, but the data available are not adequate for making satisfactory adjustments in local-market prices for differences in cost of transportation to domestic mills. No adjustments were made in local-market prices in the mill sections of North Carolina, South Carolina, Georgia, and Alabama for differences in transportation costs to central markets.

The problem of making adjustments for differences in the location of the selected local markets in the Southeastern States was complicated by the fact that some localities included in the study had some of the characteristics of both a deficit- and a surplus-producing territory. Mills in some localities of North Carolina, South Carolina, Georgia, and Alabama consumed more of certain grades and staple lengths than were produced in the immediate territory, whereas other grades and staple lengths not suitable for local mill consumption had to be exported or shipped to other mills. Data available are not adequate for determining to what extent prices in each of the selected local markets in these States were determined upon the basis of export prices.

Prices of Middling ⅞-inch cotton in central markets were subtracted from these adjusted local-market prices to give a spread between local- and central-market prices. The average of these spreads for all local markets combined was subtracted from the average spread for each local market to give variations in average adjusted spreads from market to market. Central-market premiums and discounts for grade and staple length were applied to the cotton sold in each local market and included in the sample, and the averages were calculated to show the number of cents a pound the cotton in each local market averaged "on" or "off" the prices of Middling ⅞-inch cotton. The average number of cents a pound "on" or "off" Middling ⅞-inch for all local markets combined was subtracted from the average number of cents a pound "on" or "off" Middling ⅞ inch for each local market to give average adjusted variations in central-market evaluations from market to market. The variations in average adjusted spreads were related to variations in average adjusted central-market evaluations to show the extent to which average prices received by growers in different local markets reflected differences in the average quality of the cotton sold.

CALCULATION OF MONTHLY AVERAGE PRICES

In calculating monthly average prices in all local markets combined, the influences of differences in price level in different local markets, together with monthly changes in the proportion of the total sample coming from different local markets, were eliminated by the following procedure:

The average spread for the season for each selected local market was obtained by subtracting the prices received by growers from those quoted in central markets for cotton of the same grade and staple length sold on the same dates. These average spreads for the season were subtracted from the average spreads for each month, to give monthly variations in spread from the seasonal average.

The monthly variations in spread for the different local markets were combined to give monthly average variations in spread for all local markets included in the sample. The average spread for the season for cotton sold in all local markets was added to the average monthly variations in spread for all local markets to obtain the monthly average adjusted spread for all local markets combined. The average monthly local market prices were obtained by subtracting the monthly average adjusted spreads from the monthly central-market prices.

Monthly central-market prices were obtained by weighting the daily quotations by the number of bales of cotton of the same description sold on the same day and included in the sample of cotton sold in the selected local markets. In obtaining average central-market prices for cotton of various grades and staple lengths, premiums and discounts for grades of ⅞-inch staple were applied to other staple lengths, and staple premiums and discounts for Middling grade were applied to other grades. The prices obtained in this way are obviously only rough approximations, and their accuracy depends upon the extent to which the greater staple premiums and discounts for the higher grades are counterbalanced by the smaller staple premiums and discounts for the lower grades.

CALCULATION OF COMPARATIVE VALUE PER ACRE

The comparative values per acre for cotton of different staple lengths were obtained by subtracting from the value of the lint cotton and cottonseed the costs of picking, ginning, and bagging and ties. Data on average staple length, yield per acre, and percentage of lint to seed, were obtained from reports of the State agricultural experiment stations. The value of the cottonseed was based on the average seasonal price received by growers as reported by the Bureau of Agricultural Economics. The prevailing rates for picking, ginning, and bagging and ties, were used in calculating the cost. The average price received by growers in local markets for Middling ⅞-inch White cotton was used as a basis, and to this basis were applied local-and central-market staple premiums and discounts.

TABLES

Table 17.—*Price per pound received by growers for White cotton of various grades and staple lengths sold in selected local markets on specified dates, season 1929–30*[1]

MARKET C, 4 BUYERS OF DIFFERENT TYPES, OCT. 12, 1929[1]

Grade	Shorter than ⅞ inch		⅞ inch		1⁵⁄₁₆ inch		1 inch		1¹⁄₁₆ inches		1⅛ inches	
	Sales	Price	Sales	Price	Sales	Price	Sales	Price	Sales	Price	Sales	Price
	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents	Bales	Cents
4, Strict Middling			1	17.75	1	18.25			1	18.65		
			1	18.55	1	18.60						
			4	18.60	1	18.62						
			1	18.63	2	18.65						
			4	18.65	3	18.75						
			1	18.67	1	18.80						
			1	18.70	1	18.85						
			1	18.75	1	18.90						
			1	18.85								
			1	18.25	1	18.55						
			1	18.50	1	18.62						
5, Middling			1	18.60								
			2	18.63								
			1	18.65								
			5	18.75								
			1	18.85								
6, Strict Low Middling			1	18.10	1	17.00						
			1	18.80								

MARKET D, 9 BUYERS OF DIFFERENT TYPES, OCT. 10, 1929[3]

4, Strict Middling					1	18.60	1	17.75	1	19.25	1	19.25
							1	18.00	1	19.37		
							1	18.50				
5, Middling			2	18.00	1	18.40	1	18.00	3	19.00		
			1	18.55	1	18.50	1	18.35				
			1	18.60	2	18.60	1	19.00				
			1	18.75								

See footnotes at end of table.

TABLE 17.—*Price per pound received by growers for White cotton of various grades and staple lengths sold in selected local markets on specific dates, season 1929-30*—Continued

MARKET E, 3 BUYERS OF DIFFERENT TYPES, OCT. 26, 1929 [4]

Grade	Shorter than 7/8 inch Sales	Price	7/8 inch Sales	Price	15/16 inch Sales	Price	1 inch Sales	Price	1 1/16 inches Sales	Price	1 1/8 inches Sales	Price
	Bales	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*
5, Middling			4	16.50	2	16.50						
6, Strict Low Middling	1	16.50	6	16.50	1	16.50						
7, Low Middling	2	16.50	3	16.50	1	16.50						

[1] No round lot sales are included.
[2] The price of New York futures contracts did not vary on this date because it was a holiday.
[3] The price of New York futures contracts for December delivery varied 12 points on this date.
[4] The price of New York futures contracts for December delivery varied 9 points on this date.

TABLE 18.—*Price per pound received by growers for White cotton of various grades and staple lengths sold in selected local markets on specified dates, season 1930-31* [1]

MARKET F, 5 BUYERS, SEPT. 19, 1930 [2]

Grade	Shorter than 7/8 inch Sales	Price	7/8 inch Sales	Price	15/16 inch Sales	Price
	Bales	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*
4, Strict Middling	1	9.75	1	10.00		
5, Middling			1	9.25		
			1	9.50		
			1	9.88		
			1	10.00		
			1	11.00		
6, Strict Low Middling			1	9.75	1	9.25
7, Low Middling			1	9.81	1	9.49

MARKET G, 2 BUYERS, SEPT. 26, 1930 [3]

Grade	Shorter than 7/8 inch Sales	Price	7/8 inch Sales	Price	15/16 inch Sales	Price
4, Strict Middling			1	8.50	1	9.00
			1	9.00		
5, Middling	1	8.50	2	9.00	1	8.38
			1	9.25	1	8.75
			3	9.63		
			1	8.25		
			1	8.38		
6, Strict Low Middling	2	8.50	1	8.44		
	1	8.63	1	8.50		
	2	8.75	1	8.56		
	3	8.81	3	8.63		
	1	9.00	1	8.69		
	1	9.06	3	8.75		
	1	9.50	5	8.81		
			1	8.88		
			2	9.00		
			1	9.31		
	1	8.75	1	8.38		
7, Low Middling	1	8.81	2	8.50		
	1	9.25	1	8.63		
			1	8.75		

MARKET H, 1 BUYER, OCT. 10, 1930 [4]

Grade	Shorter than 7/8 inch Sales	Price	7/8 inch Sales	Price	15/16 inch Sales	Price
3, Good Middling			1	8.40		
			1	9.00		
4, Strict Middling	3	8.40	3	8.40	1	9.25
	1	9.00	1	8.50	1	9.50
	1	8.50	1	8.25	1	8.40
			4	8.40	1	8.50
5, Middling			1	9.25		
			2	9.37		

[1] No round-lot sales are included.
[2] The price of New York futures contracts for December delivery varied 12 points on this date.
[3] The price of New York futures contracts for December delivery varied 13 points on this date.
[4] The price of New York futures contracts for December delivery varied 25 points on this date.

TABLE 19.—*Price per pound received by growers for White cotton of various grades and staple lengths sold in selected local markets on specified dates, seasons 1931-32 and 1932-33* [1]

MARKET I, 1 BUYER, WHO OPERATED A STORE, OCT. 2, 1931 [2]

Grade	⅞ inch		15/16 inch		1 inch		11/16 inches		1⅛ inches	
	Sales	Price	Sales	Price	Sales	Price	Sales	Price	Sales	Price
	Bales	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*	*Bales*	*Cents*
4, Strict Middling	1	5.50			1	5.75	4	6.25		
					7	6.25				
5, Middling	3	5.50	3	5.50	1	5.50				
	1	5.60	2	5.75	1	6.00				
	6	5.75	1	6.25	4	6.25				
6, Strict Low Middling	1	5.75			1	5.75				

MARKET J, 1 BUYER, WHO OPERATED A STORE, SEPT. 23, 1932 [3]

	⅞ inch		15/16 inch		1 inch		11/16 inches		1⅛ inches	
4, Strict Middling	2	7.25								
	4	7.50								
5, Middling	3	7.25	1	7.25	1	6.75	1	6.00	1	7.75
	1	7.50	1	7.75	2	7.25	1	7.00	1	8.00
	1	7.75			1	7.75	1	7.75		
6, Strict Low Middling					1	7.75	1	7.75		

[1] No round-lot sales are included.
[2] The price of New York futures contracts for December delivery varied 14 points on this date.
[3] The price of New York futures contracts for December delivery varied 21 points on this date.

TABLE 20.—*Frequency distribution of variations in prices* [1] *per pound received by growers for individual bales of specified grades of White* [2] *cotton of ⅞-inch staple from the average price received for Middling White cotton of the same staple length in selected local markets, seasons 1928-29 to 1932-33*

SEASON 1928-29

Variation (cents)	2, Strict Good Middling	3, Good Middling	4, Strict Middling	5, Middling	6, Strict Low Middling	7, Low Middling	8, Strict Good Ordinary	9, Good Ordinary
	Bales	*Bales*	*Bales*	*Bales*	*Bales*	*Bales*	*Bales*	*Bales*
−5.60 to −5.21								1
−5.20 to −4.81				1			1	
−4.80 to −4.41					1	2	5	5
−4.40 to −4.01					1	4	6	12
−4.00 to −3.61			1		3	10	16	25
−3.60 to −3.21				1	5	19	11	22
−3.20 to −2.81				2	1	16	34	43	19
−2.80 to −2.41				5	2	36	55	40	21
−2.40 to −2.01			3	7	10	50	51	38	18
−2.00 to −1.61			4	19	27	98	100	60	13
−1.60 to −1.21			6	51	90	220	164	42	9
−1.20 to −0.81			38	290	342	513	220	54	9
−0.80 to −0.41	1		212	1,148	1,293	923	267	49	7
−0.40 to −0.01	14	791	4,143	3,748	1,146	202	36	4
0.00 to 0.39	24	1,257	5,640	4,171	896	129	15	3
0.40 to 0.79	4	517	2,317	1,347	377	43	7	
0.80 to 1.19	2	144	568	251	75	12	1	
1.20 to 1.59		80	185	62	17	4	1	
1.60 to 1.99	1	99	75	18	5	1		
2.00 to 2.39		27	38	8	1			
2.40 and over		1	8	7	13	2		
Total	46	3,180	14,498	11,377	4,395	1,319	425	168
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Mean	0.14	0.21	0.12	0.00	−0.34	−0.94	−1.68	−2.66
Standard error of mean	.06	.01	.00	.00	.01	.03	.06	.09
Average deviation	.26	.38	.36	.36	.54	.75	.97	.96
Approximate range [3]	2.40	7.20	6.00	8.40	9.60	8.00	6.40	5.60

See footnotes at end of table.

TABLE 20.—*Frequency distribution of variations in prices* [1] *per pound received by growers for individual bales of specified grades of White* [2] *cotton of ⅞-inch staple from the average price received for Middling White cotton of the same staple length in selected local markets, seasons 1928–29 to 1932–33*—Continued

SEASON 1929-30

Variation (cents)	2, Strict Good Middling	3, Good Middling	4, Strict Middling	5, Middling	6, Strict Low Middling	7, Low Middling	8, Strict Good Ordinary	9, Good Ordinary
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
Under −6.00					2	3	7	1
−6.00 to −5.61						5	9	1
−5.60 to −5.21					1	16	37	8
−5.20 to −4.81					2	18	23	8
−4.80 to −4.41				1	8	34	27	6
−4.40 to −4.01			2	2	7	33	26	1
−4.00 to −3.61				2	12	35	18	5
−3.60 to −3.21			1	5	20	85	41	10
−3.20 to −2.81			3	5	26	110	54	26
−2.80 to −2.41			1	7	62	149	66	17
−2.40 to −2.01		1	2	21	108	178	67	8
−2.00 to −1.61			12	30	183	219	47	2
−1.60 to −1.21		2	32	107	297	246	59	1
−1.20 to −0.81		16	113	340	603	254	43	3
−0.80 to −0.41	1	107	779	1,347	1,033	268	43	4
−0.40 to −0.01	3	535	3,768	4,937	1,770	246	22	15
0.00 to 0.39	13	726	5,231	5,586	1,162	171	14	14
0.40 to 0.79	4	318	1,813	1,464	386	53	4	1
0.80 to 1.19	1	61	403	310	117	19		1
1.20 to 1.59		9	72	72	35	7	1	
1.60 to 1.99		5	22	12	10	4	2	
2.00 to 2.39			14	6	2	2	4	
2.40 and over		2	9	7	5			
Total	22	1,782	12,277	14,264	5,849	2,155	614	132
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	0.21	0.14	0.11	0.00	−0.40	−1.46	−2.54	−2.48
Standard error of mean	.07	.01	.00	.00	.01	.03	.07	.16
Average deviation	.20	.32	.31	.34	.53	1.07	1.33	1.45
Approximate range [3]	1.60	5.60	7.00	8.00	11.20	8.80	9.60	7.80

SEASON 1930-31

Variation (cents)	2, Strict Good Middling	3, Good Middling	4, Strict Middling	5, Middling	6, Strict Low Middling	7, Low Middling	8, Strict Good Ordinary	9, Good Ordinary
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
Under −6.00						1		
−6.00 to −5.61								
−5.60 to −5.21								1
−5.20 to −4.81								1
−4.80 to −4.41					2	1		1
−4.40 to −4.01					2	4	5	1
−4.00 to −3.61					3	7	8	2
−3.60 to −3.21			2	1	8	15	12	1
−3.20 to −2.81			3	3	11	33	21	1
−2.80 to −2.41			3	5	33	102	29	1
−2.40 to −2.01		1	18	15	84	184	49	4
−2.00 to −1.61		1	43	41	185	188	33	5
−1.60 to −1.21		7	123	176	512	280	29	4
−1.20 to −0.81		27	681	922	1,013	229	17	1
−0.80 to −0.41		162	2,927	3,033	1,486	230	13	3
−0.40 to −0.01	13	605	3,662	4,403	1,098	132	6	
0.00 to 0.39	12	606	1,034	842	270	25	4	2
0.40 to 0.79	5	261	211	149	44	5	1	
0.80 to 1.19	1	62	52	21	6	1	1	
1.20 to 1.59	1	23	12	3	6	2		
1.60 to 1.99		6	4		1			
2.00 to 2.39			3		2	1		1
2.40 and over								
Total	32	1,761	8,778	10,214	4,766	1,552	230	27
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	0.17	0.07	0.05	0.00	−0.32	−0.96	−1.61	−1.77
Standard error of mean	.07	.01	.00	.00	.01	.02	.07	.29
Average deviation	.29	.36	.32	.31	.46	.65	.79	1.15
Approximate range [3]	1.60	4.00	7.20	4.80	6.80	9.60	7.60	6.00

See footnotes at end of table.

TABLE 20.—*Frequency distribution of variations in prices* [1] *per pound received by growers for individual bales of specified grades of White* [2] *cotton of ⅞-inch staple from the average price received for Middling White cotton of the same staple length in selected local markets, seasons 1928–29 to 1932–33*—Continued

SEASON 1931-32

Variation (cents)	2, Strict Good Middling	3, Good Middling	4, Strict Middling	5, Middling	6, Strict Low Middling	7, Low Middling	8, Strict Good Ordinary	9, Good Ordinary
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
−2.40 to −2.01			1					
−2.00 to −1.61								
−1.60 to −1.21				2	2	1	16	9
−1.20 to −0.81			15	8	10	7	24	27
−0.80 to −0.41		16	153	145	108	42	21	6
−0.40 to −0.01		170	1,294	1,275	492	101	26	5
0.00 to 0.39		244	1,451	1,367	411	64	21	1
0.40 to 0.79		64	228	98	43	12	3	
0.80 to 1.19		5	25	17	2			
1.20 to 1.59		1	3	1				
1.60 to 1.99								
Total		500	3,170	2,913	1,068	227	111	48
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean		0.10	0.03	0.00	−0.06	−0.15	−0.52	−0.92
Standard error of mean		.01	.00	.00	.01	.02	.05	.05
Average deviation		.25	.26	.24	.26	.28	.49	.27
Approximate range [3]		2.00	3.60	2.80	2.40	2.00	2.00	1.60

SEASON 1932-33

Variation (cents)	2, Strict Good Middling	3, Good Middling	4, Strict Middling	5, Middling	6, Strict Low Middling	7, Low Middling	8, Strict Good Ordinary	9, Good Ordinary
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
−2.80 to −2.41				1				
−2.40 to −2.01		1						
−2.00 to −1.61		1			1			
−1.60 to −1.21			5	1	1		2	
−1.20 to −0.81		5	20	17	13	13	9	3
−0.80 to −0.41		26	180	208	137	43	16	5
−0.40 to −0.01		138	1,236	1,961	685	100	10	1
0.00 to 0.39		63	1,305	1,919	516	89	8	1
0.40 to 0.79		12	200	205	49	1	1	
0.80 to 1.19		2	11	17	3	1		
1.20 to 1.59			3	4	1			
1.60 to 1.99				1				
2.00 to 2.39			1					
2.40 to 2.79				1				
2.80 to 3.19				1				
Total		248	2,961	4,336	1,406	247	46	10
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean		0.13	0.0	0.00	−0.07	−0.16	−0.47	−0.62
Standard error of mean		.02	.01	.00	.01	.02	.07	.12
Average deviation		.35	.26	.25	.25	.27	.39	.25
Approximate range [3]		3.20	3.60	5.60	3.20	2.00	2.00	1.20

[1] Minus sign (−) means below the average price for Middling White cotton.
[2] Extra White cotton included.
[3] The approximate range was measured from the mid-point of the extreme classes.

TABLE 21.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified staple lengths of Middling White [2] cotton from the average price received for 7/8-inch cotton of the same grade in selected local markets, seasons 1928-29 to 1932-33.*

SEASON 1928-29

Variation (cents)	Shorter than 7/8 inch	7/8 inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
Under −2.80	4	3	3					
−2.80 to −2.41	7	2	4	1	2			
−2.40 to −2.01	19	10	18	6	1			
−2.00 to −1.61	13	27	33	11	7	3		
−1.60 to −1.21	36	90	78	39	15	2		
−1.20 to −0.81	99	342	292	126	41	9	2	1
−0.80 to −0.41	321	1,293	801	395	92	25	9	2
−0.40 to −0.01	679	3,748	1,851	830	214	48	13	7
0.00 to 0.39	683	4,171	2,213	948	282	83	25	11
0.40 to 0.79	200	1,347	1,001	551	212	69	27	4
0.80 to 1.19	59	251	296	225	147	76	25	4
1.20 to 1.59	20	62	71	105	95	84	20	4
1.60 to 1.99	4	18	31	42	54	49	10	5
2.00 to 2.39	1	6	15	22	26	32	14	4
2.40 to 2.79		4	8	10	17	22	12	
2.80 to 3.19	1	1	3	3	6	15	5	2
3.20 and over		2	5	3	10	16	9	3
Total	2,236	11,377	6,813	3,318	1,221	553	171	47
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	−0.08	0.00	0.04	0.13	0.45	0.98	1.13	0.95
Standard error of mean	.01	.00	.01	.01	.03	.04	.09	.17
Average deviation	.44	.36	.44	.49	.58	.81	.91	.97
Approximate range [3]	6.80	8.40	8.00	7.60	9.60	6.40	5.60	4.40

SEASON 1929-30

Variation (cents)	Shorter than 7/8 inch	7/8 inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
Under −2.80	6	15	11	6				
−2.80 to −2.41	4	7	4	3				
−2.40 to −2.01	9	24	11	3				
−2.00 to −1.61	27	30	21	7	5			
−1.60 to −1.21	70	107	54	16	9	1	1	
−1.20 to −0.81	233	340	151	58	15	1		
−0.80 to −0.41	807	1,347	499	199	45	5		
−0.40 to −0.01	2,024	4,937	1,984	766	156	26		1
0.00 to 0.39	1,656	5,586	2,615	941	237	59	2	
0.40 to 0.79	521	1,464	952	481	177	60	5	
0.80 to 1.19	186	310	224	161	115	55	6	1
1.20 to 1.59	65	72	55	52	44	26	2	
1.60 to 1.99	27	12	12	8	16	13	2	
2.00 to 2.39	13	6	4	4	9	12		
2.40 to 2.79	8	3	5	4	4	4		
2.80 to 3.19	2	1	3	1	2			
3.20 and over		3	3	1				
Total	5,658	14,264	6,608	2,711	833	262	18	2
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	−0.05	0.00	0.07	0.14	0.37	0.73	0.82	0.68
Standard error of mean	.01	.00	.01	.01	.02	.04	.17	
Average deviation	.41	.34	.36	.39	.52	.55	.49	.80
Approximate range [4]	8.00	8.00	9.20	7.60	4.80	4.00	3.20	1.60

SEASON 1930-31

Variation (cents)	Shorter than 7/8 inch	7/8 inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
Under −2.80		1	1	1				
−2.80 to −2.41		3	9	2				
−2.40 to −2.01	4	5	10	6	4			
−2.00 to −1.61	6	15	20	10	5			
−1.60 to −1.21	14	41	69	29	11	1	1	
−1.20 to −0.81	62	176	205	84	32	7	1	
−0.80 to −0.41	151	922	829	298	127	24	2	
−0.40 to −0.01	663	3,633	2,518	936	272	54	5	
0.00 to 0.39	651	4,403	3,164	1,172	376	74	7	
0.40 to 0.79	142	842	989	551	240	45	6	

See footnotes at end of table.

TABLE 21.—*Frequency distribution of variations in prices [1] per pound received by growers for individual bales of specified staple lengths of Middling White [2] cotton from the average price received for ⅞-inch cotton of the same grade in selected local markets, seasons 1928–29 to 1932–33*—Continued

SEASON 1930-31—Continued

Variation (cents)	Shorter than ⅞ inch	⅞ inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
0.80 to 1.19	33	149	208	217	108	19	1	
1.20 to 1.59	6	21	59	56	38	8		
1.60 to 1.99		3	7	17	17	8		
2.00 to 2.39			2	1	3			
2.40 to 2.79			4	1				
2.80 to 3.19			1					
3.20 and over			2	1				
Total	1,732	10,214	8,097	3,372	1,233	240	23	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	−0.04	0.00	0.02	0.11	0.18	0.23	0.05	
Standard error of mean	.01	.00	.00	.01	.02	.04	.12	
Average deviation	.33	.31	.36	.40	.45	.45	.45	
Approximate range [3]	3.60	4.80	7.60	5.40	4.40	3.20	2.40	

SEASON 1931-32

Variation (cents)	Shorter than ⅞ inch	⅞ inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
−2.00 to −1.61			1	1				
−1.60 to −1.21		2	2	2				
−1.20 to −0.81	4	8	10	11	3			
−0.80 to −0.41	22	145	132	105	12	4		
−0.40 to −0.01	169	1,275	1,261	826	156	11		
0.00 to 0.39	158	1,357	1,245	875	303	30	1	
0.40 to 0.79	29	96	191	223	113	10	1	
0.80 to 1.19	1	17	46	79	43	6		
1.20 to 1.59		1	9	14	11	1		
1.60 to 1.99				3	1			
2.00 to 2.39			1					
Total	383	2,913	2,898	2,139	642	77	2	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	0.00	0.00	0.03	0.08	0.23	0.29	0.33	
Standard error of mean	.02	.00	.00	.01	.02	.05		
Average deviation	.26	.24	.26	.30	.28	.30	.20	
Approximate range [3]	2.00	2.80	4.00	3.60	2.80	2.00	.40	

SEASON 1932-33

Variation (cents)	Shorter than ⅞ inch	⅞ inch	15/16 inch	1 inch	1 1/16 inches	1 1/8 inches	1 3/16 inches	1 1/4 inches and longer
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
−2.80 to −2.41		1	2					
−2.40 to −2.01								
−2.00 to −1.61			1					
−1.60 to −1.21		1	2	2	2			
−1.20 to −0.81	1	17	20	11	3			
−0.80 to −0.41	30	208	193	97	46	1		
−0.40 to −0.01	131	1,961	1,271	553	118	10	1	
0.00 to 0.39	136	1,919	1,450	853	154	18		
0.40 to 0.79	17	205	329	245	87	5	1	
0.80 to 1.19		17	31	43	13	1		
1.20 to 1.59		4	9	3	5	1		
1.60 to 1.99		1	1					
2.00 to 2.39			1	2				
2.40 to 2.79								
2.80 to 3.19		1						
Total	315	4,336	3,310	1,809	428	37	2	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Mean	−0.02	0.00	0.04	0.11	0.12	0.14	0.14	
Standard error of mean	.02	.00	.01	.01	.01	.07	.60	
Average deviation	.26	.25	.28	.28	.35	.29	.60	
Approximate range [3]	1.60	5.60	4.80	3.60	2.80	2.40	1.20	

[1] Minus sign (−) means below the average price for ⅞-inch White cotton.
[2] Extra White cotton included.
[3] The approximate range was measured from the midpoint of the extreme classes.

TABLE 22.—*Comparative value per acre [1] of cotton of various staple lengths included in variety tests [2] in specified localities, seasons 1928-29 to 1932-33*

Location and staple length (⅟₃₂ inch)	Local-market premiums and discounts applied					Central-market premiums and discounts applied				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Raymond, Miss. (valley land):[3]										
23	----	----	----	----	21.77	----	----	----	----	20.77
24	----	----	67.38	----	----	----	----	60.10	----	----
26	92.55	----	----	23.27	----	90.06	----	----	21.07	----
27	----	----	59.33	----	----	----	----	53.21	----	----
28	112.23	----	68.46	25.46	37.02	112.23	----	68.46	25.46	37.02
29	----	140.72	----	27.69	33.84	----	140.72	----	27.69	33.84
30	121.37	----	86.17	30.02	35.53	123.03	----	89.53	31.38	36.32
31	----	126.37	84.21	32.89	37.06	----	129.16	87.50	34.39	37.89
32	103.39	131.22	75.47	32.83	35.21	107.44	140.39	81.67	36.07	37.15
33	99.91	----	80.10	31.61	30.10	103.81	----	86.79	34.73	31.74
34	96.18	140.16	79.90	32.39	33.12	102.58	153.79	91.48	37.55	37.15
35	114.97	152.83	76.91	26.19	23.60	122.58	167.79	87.92	30.33	26.50
36	101.22	149.63	71.40	30.30	28.81	107.17	164.24	84.65	39.30	33.84
37	141.80	150.92	----	24.56	----	150.16	165.59	----	31.86	----
38	83.01	138.74	50.63	----	----	91.02	158.57	68.37	----	----
39	----	131.12	----	----	----	----	149.69	----	----	----
40	----	139.50	----	----	----	----	152.74	----	----	----
Raymond, Miss. (hill land):[3]										
22	----	----	60.86	----	----	----	----	54.20	----	----
23	----	----	----	----	24.65	----	----	----	----	23.54
24	43.26	----	46.79	19.43	----	42.09	----	41.82	17.59	----
25	----	----	54.03	----	----	----	----	46.28	----	----
26	45.99	----	62.92	21.86	----	44.77	----	56.20	19.81	----
27	----	86.40	53.51	----	23.79	----	81.37	47.79	----	22.73
28	----	98.70	53.29	19.85	23.31	----	98.70	53.29	19.85	23.31
29	----	82.51	53.43	18.35	29.16	----	82.51	53.43	18.35	29.16
30	48.11	91.02	46.96	20.44	27.94	48.77	93.04	48.82	21.38	28.50
31	----	----	45.65	23.18	29.42	----	----	47.43	21.24	30.08
32	41.16	92.65	53.97	19.36	26.63	42.77	99.17	58.49	21.29	28.11
33	44.11	90.45	----	22.74	24.78	45.84	96.84	----	24.99	26.11
34	51.17	92.98	----	21.55	24.50	54.55	102.09	----	25.00	27.60
35	52.47	91.44	34.97	18.52	23.80	55.96	100.39	39.99	21.47	26.84
36	41.23	81.23	----	16.95	21.75	43.66	89.17	----	22.01	25.54
37	----	87.50	----	----	----	----	96.04	----	----	----
38	----	64.64	----	----	----	----	73.82	----	----	----
Holly Springs, Miss. (valley land):[4]										
22	----	102.22	----	----	----	----	96.35	----	----	----
24	----	----	69.86	----	27.43	----	----	62.38	----	26.18
26	110.80	----	68.99	----	----	107.92	----	61.97	----	----
27	----	----	63.23	15.13	----	----	----	56.80	13.71	----
28	99.16	111.65	----	11.38	20.44	99.10	111.65	----	11.38	20.44
29	----	----	65.08	13.39	23.00	----	----	65.08	13.39	23.00
30	124.45	----	72.67	----	25.29	126.14	----	75.47	----	25.84
31	125.41	104.26	65.23	22.30	26.32	----	106.58	67.72	23.32	26.91
32	111.61	121.37	63.48	23.06	30.33	130.29	129.90	68.68	25.32	31.98
33	110.12	115.04	62.58	18.58	27.14	115.91	123.14	67.79	20.39	28.63
34	123.60	133.34	86.14	11.50	29.13	117.41	146.46	75.50	13.32	32.70
35	106.83	107.54	----	34.65	28.36	131.52	118.05	----	40.14	31.84
36	130.98	112.50	----	30.66	29.57	113.06	123.47	----	39.78	34.68
37	101.59	103.28	54.29	----	27.24	135.66	113.35	81.05	----	31.97
38	----	103.55	----	15.29	----	111.34	118.37	----	23.01	----
39	----	101.91	----	----	----	----	116.42	----	----	----
Holly Springs, Miss. (hill land):[4]										
22	----	----	34.36	----	----	----	----	30.64	----	----
23	----	----	26.90	----	25.95	----	----	24.13	----	24.76
24	73.26	----	25.44	----	----	71.27	----	22.52	----	----
26	64.28	----	----	----	20.14	62.53	----	----	----	19.24
27	----	85.92	26.40	29.94	18.29	----	80.79	23.63	27.10	17.47
28	----	83.38	27.54	26.70	23.73	----	83.38	27.54	26.70	23.73
29	----	74.49	30.16	30.15	24.44	----	74.49	30.16	30.15	24.44
30	69.59	79.34	24.74	28.65	24.26	70.55	80.10	25.70	30.17	24.80
31	----	----	23.73	32.92	24.24	----	----	24.64	34.43	24.78
32	78.88	79.28	----	39.44	23.95	82.01	84.99	----	43.34	25.27
33	67.00	87.10	----	36.08	22.66	69.64	93.28	----	39.64	23.90
34	63.98	97.79	20.63	28.75	21.64	68.30	107.41	23.56	33.32	24.30
35	71.85	91.28	----	44.63	15.97	76.67	100.25	----	51.77	17.92
36	52.01	78.80	----	29.34	----	65.10	86.52	----	38.11	----
37	----	80.18	----	45.63	----	----	88.00	----	59.28	----
38	----	68.19	----	----	----	----	77.96	----	----	----

See footnotes at end of table.

TABLE 22.—*Comparative value per acre [1] of cotton of various staple lengths included in variety tests [2] in specified localities, seasons 1928-29 to 1932-33*—Continued

Location and staple length (½ inch)	Local-market premiums and discounts applied					Central-market premiums and discounts applied				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Poplarville, Miss.:[3]										
22			31.09					27.77		
24	47.16				8.05	45.83				
25			27.95					25.13		7.68
26	50.23		27.49	21.43	10.45	54.75		24.65	19.40	9.99
27		47.86	26.04	17.42			45.06	24.17	15.79	
28		34.90		27.35	11.34		34.90		27.35	11.34
29		63.98	35.62	28.27	8.97		63.98	35.62	26.27	8.97
30	57.74	62.10	34.34	25.66	15.86	58.53	63.49	35.66	26.83	16.21
31			29.99	24.91				31.13	28.05	
32	46.42	64.92	28.04	23.82	13.26	48.25	69.51	30.32	31.67	14.01
33	56.80	65.71		27.85	13.04	59.04	59.65		30.36	13.75
34	59.76	49.35		24.97	12.45	63.74	54.21		28.93	13.98
35	62.46	51.95	15.68	27.69	6.99	60.63	57.05	17.90	32.07	7.85
36	49.98	65.20		28.11	10.57	52.94	71.59		36.50	12.76
37		57.10					62.66			
38		19.06		17.47			22.46		26.28	
Stoneville, Miss.:[4]										
22		107.04	39.92				100.78	35.68		
24	113.44	112.96			11.83	110.38	106.37			11.29
25	104.81	104.92	37.98	7.88		102.04	98.86	34.10	7.12	
26			35.71					31.97		
27		99.07		5.46			94.19		4.95	
28	123.18	105.89		10.07	10.09	123.18	105.89		10.07	10.69
29	108.92		36.20	10.70		108.92		36.26	10.70	
30	101.80		40.97	10.88		103.19		42.53	11.37	
31	107.43	109.90	41.97	9.53	13.53	108.91	112.36	43.58	9.96	13.54
32	97.04	102.85	32.42	9.46	12.77	101.74	110.10	35.07	10.39	13.47
33	97.90		37.89	16.12	15.01	101.70		40.96	17.70	15.83
34		99.17	35.44	14.01	15.77		108.88	40.45	16.24	17.70
35	112.45	100.42	34.93	16.69	17.02	119.93	110.29	39.00	19.35	19.12
36	117.23	115.86	30.35	14.77	12.17	124.25	127.28	42.93	19.16	14.30
37	134.49	92.09	32.91	14.09	16.70	142.41	101.04	38.87	18.25	19.01
38	103.25			13.35	13.32	113.21			20.05	17.79
39				16.00	14.44				25.11	19.30
Auburn, Ala.:[7]										
20			44.57					39.58		
24			50.00					44.48		
26			49.04		17.90			43.58		17.13
27	74.30	63.72		25.10		72.71	60.04		22.86	
28	92.28	68.57	44.63	27.36	20.86	92.26	68.57	44.63	27.36	20.86
29	92.17	56.30	45.69	27.68	24.74	92.17	56.30	45.69	27.68	24.74
30	84.09	71.23	45.32	24.23	17.50	85.24	72.82	47.18	25.27	17.87
31	87.64			25.44	19.59	88.84			26.53	20.00
32	75.87	71.58		25.50	23.24	78.85	76.59		27.85	24.43
33	102.50	57.52	37.74	22.32	22.60	106.55	61.53	41.03	24.38	23.77
34	92.85	56.04		22.48		99.04	61.44		25.84	
35	91.73	44.20		19.68	20.27	97.88	48.46		22.60	22.83
36	71.51	54.42	30.14			75.71	59.63	35.98		
37		37.53			14.10		41.10			16.41
Prattville, Ala.:[7]										
25				27.09	20.83				25.52	19.92
26		75.70	18.50	29.63			71.32	16.46	26.98	
27		78.20		28.04	20.47		73.69		25.57	19.60
28	110.61	70.25	19.47	29.89	20.34	110.61	70.25	19.47	29.89	20.34
29		74.93	13.47	26.09	21.17		74.93	13.47	26.09	21.17
30	112.42	73.15	12.75	28.49	19.53	113.93	74.78	13.27	29.71	22.67
31		69.37		25.36	18.05		70.91		26.44	18.43
32	108.18	65.54	17.06	26.79	16.80	112.29	70.11	18.55	29.27	17.06
33		65.14	12.78	25.26			69.69	13.88	27.57	
34	85.12	63.82	14.19			90.74	70.00	16.34		
35		61.83					67.79			
36	119.83	61.24	9.99			126.90	67.14	11.92		
40	91.00					111.58				
Marianna, Ark.:[9]										
24			30.15		21.24			26.73		20.22
25					22.80					21.70
27	79.53	64.80	17.38			77.48	61.19	15.47		24.08
28	79.82	55.24	26.91	24.08		79.82	55.24	26.91	24.08	
29	80.53	53.92	26.32	24.52	15.54	86.53	53.92	26.32	24.52	15.54
30	88.73	64.34	25.40	18.52	19.53	69.67	65.73	26.46	19.44	20.00
31	92.47	53.66	22.21	24.23	19.87	93.73	54.82	23.12	25.44	20.34
32	81.37	57.44	23.09	26.75	21.34	84.50	61.36	25.12	29.03	22.59
33	98.90	61.47	20.80	25.54	20.78	102.73	65.67	22.63	28.30	21.99

See footnotes at end of table.

TABLE 22.—*Comparative value per acre [1] of cotton of various staple lengths included in variety tests [2] in specified localities, seasons 1928–29 to 1932–33*—Continued

Location and staple length (½ inch)	Local-market premiums and discounts applied					Central-market premiums and discounts applied				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
Marianna, Ark.—Contd.	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*	*Dol.*
34	78.52	88.03	10.10	26.84	20.77	83.61	74.18	22.00	31.52	23.51
35	80.71	62.17		24.81	17.68	95.52	68.03		29.13	20.00
36	60.60	64.06	22.03	26.65	17.52	73.64	70.08	24.34	35.34	20.79
37		51.81			13.20		56.67			15.65
38		41.44		18.15			47.15		28.21	
Athens, Ga.[9]										
24			42.54	26.73	23.30			37.78	24.37	22.31
26	155.88	87.00	40.06	45.02	27.09	151.67	81.95	35.66	40.97	25.95
27			32.04					20.07		
28	175.99	91.41	39.36	29.09	27.93	175.99	91.41	39.30	29.09	27.98
29			35.55					35.55		
30	169.46	86.63	34.71	30.38	21.19	171.80	88.61	36.12	31.70	21.62
31			45.21					47.07		
32	172.02	91.95	37.33	38.60	27.77	178.83	98.53	40.50	42.30	20.10
33			38.26	29.98	25.38			41.62	32.77	29.82
34	161.17	92.02	35.67	30.48	28.50	172.16	102.13	41.10	35.04	31.81
35			35.13					40.10		
36	170.24	98.13	28.50	28.90	25.37	150.50	107.54	34.02	37.15	20.53
37			28.29					33.53		
38	164.78	80.85	26.10	35.07	16.86	180.91	92.61	35.05	51.89	22.10
40	133.60	82.49				164.51	108.89			
Experiment, Ga.[10]										
26			64.73	35.70				57.51	32.51	
27		80.98	31.70				76.21		23.93	
28	91.44	79.91	62.25	20.73	23.08	91.44	70.91	62.25	29.74	23.08
29		79.30		31.98			79.30		31.98	
30	106.42	81.14	57.03	34.30	23.09	107.80	82.97	59.37	35.80	23.57
31		80.04			24.10		81.85			26.64
32	99.02	83.98	50.95	27.25	22.93	93.54	89.99	55.39	20.79	24.10
33	110.12	86.75	63.70		24.80	120.06	92.95	69.37		28.18
34	109.77	75.92	64.51	25.30	22.96	117.92	83.44	74.33	32.57	25.60
35	110.48	74.28	51.04		23.75	117.83	81.64	58.77		26.48
36	92.02	73.61				97.41	80.89			
37		64.35	62.00		18.73		70.70	74.05		21.78
39			45.73					62.70		
Clemson College, S. C.[11]										
26		53.86					50.86			
28	88.72	53.38	36.92	19.28		88.72	53.38	36.92	19.28	
29		53.37	42.88	19.24			53.37	42.88	19.21	
30	74.44	53.04	39.08	18.93	27.00	75.40	54.18	40.55	19.73	27.55
31		61.16	44.15	17.37	31.75		62.47	45.80	18.11	32.41
32	83.65		45.78		26.98	86.73		49.48		28.33
33	79.03	56.65	35.19		32.32	81.88	60.52	41.24		33.98
34	55.50		38.76		31.97	58.97		44.25		35.63
35		54.01			26.56		60.08			29.92
36	73.55	48.16			25.30	77.65	52.66			29.56
37	78.54		34.09			82.04		40.16		
38	80.56		23.44			87.00		35.13		
40	69.62					84.22				
Jackson, Tenn.[12]										
24	120.48					122.84				
28	99.40		31.04			99.40		31.04		
30	113.05	132.73	31.67	20.98		115.33	135.91	32.96	28.28	
31	82.91	127.00	26.16		26.75	54.12	136.05	27.24		27.39
32	109.36	120.09			29.27	113.97	132.70			30.98
33				28.54	25.61				31.51	27.11
34			25.62	28.09	23.71			29.50	33.87	26.85
35	102.19					109.43				33.27
36		108.29			28.00		110.55			33.27
37					21.34					25.35
Murfreesboro, Tenn.[13]										
26	28.95					28.12				
28	20.92					20.92				
30	35.99		31.84			36.52		33.16		
31		50.04	28.20	16.01	20.65		61.48	20.37	16.79	21.14
32	28.43	54.05	28.96	23.47	23.27	29.61	58.13	31.51	25.92	24.64
33		42.18	25.91	23.41	23.33		45.36	28.15	25.86	24.70
34		56.95	25.41	20.24	22.20		62.93	28.26	23.85	25.15
35					19.70					22.40
36	31.12	40.77				33.07	45.02			

See footnotes at end of table.

TABLE 22.—*Comparative value per acre [1] of cotton of various staple lengths included in variety tests [2] in specified localities, seasons 1928–29 to 1932–33*—Continued

Location and staple length (1/32 inch)	Local-market premiums and discounts applied					Central-market premiums and discounts applied				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
Baton Rouge, La.[13] (bluff land):	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
26	48.50	44.61	------	------	19.06	47.14	41.99	------	17.20	------
28	79.87	64.86	57.16	26.99	18.81	79.87	64.86	57.16	26.99	18.81
29	------	65.58	------	32.41	19.40	------	65.58	------	32.41	19.40
30	93.63	84.10	57.96	------	21.10	94.96	85.98	60.28	------	19.40
31	81.54	------	------	------	24.07	82.70	------	------	------	21.58
32	81.00	73.71	50.29	28.61	22.67	84.32	78.96	54.60	31.57	24.62
33	------	------	------	31.97	24.06	------	------	------	35.28	23.94
34	88.70	67.72	------	29.83	22.20	94.85	74.37	------	34.81	25.40
35	88.63	------	------	27.82	23.60	94.75	------	------	32.47	25.01
36	79.75	64.18	42.26	22.65	17.16	84.66	70.43	50.44	29.74	26.58
37	81.66	78.95	36.38	25.46	17.78	86.71	84.48	43.24	33.44	20.25
38	70.93	72.83	51.70	21.02	------	78.05	83.32	70.80	32.20	20.97
39	------	49.41	------	------	------	------	56.48	------	------	------
Baton Rouge, La.[13] (alluvial land):										
26	53.16	------	55.35	------	20.20	51.68	------	49.19	------	19.26
28	59.13	92.17	51.06	34.21	------	59.13	92.17	51.00	34.21	------
30	58.82	94.66	51.83	26.83	18.71	59.66	95.71	51.30	28.12	19.14
31	------	------	------	37.01	19.35	------	------	------	38.79	19.79
32	82.93	83.57	59.83	31.57	21.38	65.48	89.46	65.02	34.84	22.58
33	49.40	69.18	44.66	17.71	21.36	51.40	74.10	48.51	19.54	22.58
34	------	80.78	------	34.73	19.80	------	88.68	------	40.53	22.30
35	------	72.35	------	31.75	16.34	------	79.40	------	37.05	18.38
36	63.40	83.22	50.84	34.22	20.94	67.27	91.33	60.57	44.95	24.70
37	------	82.54	58.99	37.92	------	------	90.57	70.26	49.81	------
38	51.07	79.78	51.77	------	10.99	56.18	91.28	70.81	------	14.76
39	------	50.94	49.35	------	------	------	58.23	67.42	------	------

[1] The comparative value per acre represents the value of the lint cotton and cottonseed minus the cost of picking, ginning, and bagging and ties. Value of the cottonseed was based on the average price received by growers as reported by the Bureau of Agricultural Economics. Prevailing rates for picking, ginning, and bagging and ties were used in calculating the costs. Average prices received by growers in selected local markets in the United States for Middling ⅞-inch white cotton were used as a basis. To this basis were applied local and central-market staple premiums and discounts.

[2] Cotton-variety tests as reported by State agricultural experiment stations. Data for highest yielding variety for each staple length for each year were used.

[3] Miss. Agr. Expt. Sta. Bulls. 262 and 271 (11), 287 and 299 (10) and mimeographed report for 1932.
[4] Miss. Agr. Expt. Sta. Bulls. 264 and 272 (2), 286 (28), 296 (11), and mimeographed report for 1932.
[5] Miss. Agr. Expt. Sta. Bulls. 266 and 274 (31), 285 (34), 297 (33). Data for 1932 obtained in unpublished form from Mississippi Agricultural Experiment Station.
[6] Cotton-variety tests as reported by the Delta Experiment Station, Stoneville, Miss. (Mimeographed reports.)
[7] Data on yields and staple length obtained in unpublished form from H. B. Tisdale, Department of Agronomy and Soils, Alabama Polytechnic Institute.
[8] Cotton-variety tests as reported by the Arkansas Agricultural Experiment Station. (Mimeographed reports.)
[9] Cotton-variety tests as reported by the Georgia State College of Agriculture. (Mimeographed reports.)
[10] Ga. Agr. Expt. Sta. Circ. 83 (5), 87 (20), 90 (7), 100 (6), and mimeographed report for 1932.
[11] S. C. Agr. Expt. Sta. Circ. 35 (9), 40 (36), and Agricultural Education (19).
[12] Data on yields and staple lengths obtained in unpublished form from the Tennessee Agricultural Experiment Station.
[13] La. Agr. Expt. Sta. Bull. 207 (8) and mimeographed reports for 1928, 1930, 1931, and 1932.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE WHEN THIS PUBLICATION WAS LAST PRINTED

Secretary of Agriculture	HENRY A. WALLACE.
Under Secretary	REXFORD G. TUGWELL.
Assistant Secretary	M. L. WILSON.
Director of Extension Work	C. W. WARBURTON.
Director of Personnel	W. W. STOCKBERGER.
Director of Information	M. S. EISENHOWER.
Director of Finance	W. A. JUMP.
Solicitor	MASTIN G. WHITE.
Agricultural Adjustment Administration	CHESTER C. DAVIS, *Administrator.*
Bureau of Agricultural Economics	A. G. BLACK, *Chief.*
Bureau of Agricultural Engineering	S. H. MCCRORY, *Chief.*
Bureau of Animal Industry	JOHN R. MOHLER, *Chief.*
Bureau of Biological Survey	IRA. N. GABRIELSON, *Chief.*
Bureau of Chemistry and Soils	H. G. KNIGHT, *Chief.*
Bureau of Dairy Industry	O. E. REED, *Chief.*
Bureau of Entomology and Plant Quarantine	LEE A. STRONG, *Chief.*
Office of Experiment Stations	JAMES T. JARDINE, *Chief.*
Food and Drug Administration	WALTER G. CAMPBELL, *Chief.*
Forest Service	FERDINAND A. SILCOX, *Chief.*
Grain Futures Administration	J. W. T. DUVEL, *Chief.*
Bureau of Home Economics	LOUISE STANLEY, *Chief.*
Library	CLARIBEL R. BARNETT, *Librarian.*
Bureau of Plant Industry	FREDERICK D. RICHEY, *Chief.*
Bureau of Public Roads	THOMAS H. MACDONALD, *Chief.*
Soil Conservation Service	H. H. BENNETT, *Chief.*
Weather Bureau	WILLIS R. GREGG, *Chief.*

This bulletin is a contribution from

Bureau of Agricultural Economics	A. G. BLACK, *Chief.*
Division of Cotton Marketing	A. W. PALMER, *Principal Marketing Specialist, in Charge.*

63

END