## TEXAS AGRICULTURAL EXPERIMENT STATION

A. B. CONNER, DIRECTOR COLLEGE STATION, BRAZOS COUNTY, TEXAS

## DIVISION OF FARM AND RANCH ECONOMICS

## RELATION OF FARM PRICES TO QUALITY OF COTTON

AGRIOULTURAL \& MEOHAMTIAL colleger of Texas Libraby


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## SYNOPSIS

The chief defect of the local or primary cotton market is its failure to recognize quality as a basis for trading. A corollary to this is the failure to properly reflect central market values. The fundamental weakness involved is the prevailing system of "point buying," or the system of buying cotton on the average basis. Such a system fails to adequately reward quality as designated by grade, staple, and character; consequently the individual grower is discouraged in his efforts to improve the quality of his product. The primary object of this study is to more accurately measure and describe the present situation. Such information should contribute to a more satisfactory solution of the problem.

An analysis of the price data collected shows a tendency to follow grade differences, but not a uniform and consistent one. The grades from middling to low middling, inclusive, show a rather uniform difference between the price obtained in the local market and the quoted price for cotton of the same description in the Houston market on the same day less certain handling charges. This uniformity of differences or spreads indicates a conscious effort on the part of the buyer to recognize grade in the price paid. The net spread of this group averaged about $\$ 3.25$ per bale. For the grades below and above this group, with slight exceptions, a much wider spread is shown-averaging about $\$ 5.35$ per bale. A plausible explanation of this is that the lower grades were unduly penalized for the lack of quality, while the extra quality of the upper grades was largely disregarded.

Very little evidence, if any, was found of a conscious effort on the part of the buyer to recognize staple length on the individual bale basis. A decided tendency was shown for the spread to widen with an increase in staple length. The average net spread per bale for the different staple lengths is as follows:

| Staple Length | Average Net Spread Per Bale | Staple Length | Average Net Spread Per Bale |
| :---: | :---: | :---: | :---: |
| $3 / 4^{\prime \prime}$. | \$ 74 | $11 / 32^{\prime \prime}$. | \$ 5.86 |
| $13 / 16^{\prime \prime}$ | -1.56 | $11 / 16^{\prime \prime}{ }^{\prime}$. | + $\begin{array}{r}\text { \% }\end{array}$ |
| //8' $8^{\prime \prime}$ | 4.26 | $13 / 32^{\prime \prime}$. | 8.17 |
| $15 / 16^{\prime \prime}$. | 3.50 3.93 | $11 / 8^{\prime \prime}$. | 8.09 |
| ['] . . . | 3.93 |  |  |

It was quite evident that prices tend to conform to the average quality of cotton produced by each community. As an example, the average monthly price paid per pound for strict middling during October at Robstown, Hillsboro, Henderson, and Lubbock was 13.25 cents, 13 cents, 11.33 cents, and 11.09 cents, respectively. The sample secured at Robstown graded 99 per ent white with 80 per cent of it $1^{\prime \prime}$ to $1-1 / 16^{\prime \prime}$ in length; Hillsboro was 91 jer cent white with 92 per cent $15 / 16^{\prime \prime}$ to $1-1 / 32^{\prime \prime}$ in length; Lubbock was 71 jer cent white with 92 per cent $7 / 8^{\prime \prime}$ to $1^{\prime \prime}$ in length; and Henderson was 97 Jer cent white with 94 per cent $13 / 16^{\prime \prime}$ to $15 / 16^{\prime \prime}$ in length. This fact suggests the possibility of a community's materially raising its price level by mproving the quality of its cotton, particularly the staple. It is too idealstic, however, under the present system of local buying to expect the indiidual producer, actuated largely by economic motives, to make a sacrifice or something as intangible as an increase in the average price for the comnunity. The desired response is much more likely to be secured through a ystem which rewards him personally on the basis of the quality of produçt vhich he produces.

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# RELATION OF FARM PRICES TO QUALITY OF COTTON 

G. L. CRAWFORD AND L. P. GABBARD

In Cooperation with Bureau of Agricultural Economics, Division of Cotton Marketing, United States Department of Agriculture

Cotton is by far the most important crop grown in the state of Texas. Not only is it the most important crop in so far as wealth created is concerned, but it is more universally grown, involving by far a greater aumber of farmers in its production than any other one crop. It is aighly commercialized, and with the exception of a small amount of seed fed to livestock on the farm, is grown entirely for the market. At oresent the bulk of the crop is sold locally by the individual grower. It is through the local market that he makes contacts with the cotton rade, and it is here that a price is put on his cotton. The common practices on this market determine to a large degree whether or not this orice is satisfactory. Furthermore, they may have a far-reaching inluence on the quality of cotton produced.
Those in a position to know claim that the quality of Texas cotton has indergone a gradual deterioration during the past ten to fifteen years. Substantial premiums formerly paid for a Texas bill of lading, on ccount of the rugged, hard, and even character of our cotton, have lmost been lost. Last year (1926) in particular, Europe paid more or short staple cotton from the Southeast than for Texas cotton of imilar descriptions. It is almost impossible to measure the significance f such a condition accurately in terms of money, but it is safe to say hat it is costing the State as a whole an enormous sum. Such a loss reed not be sustained. The soil and climatic conditions of Texas favor he production of a high-quality cotton, and it is fair to assume that he grower would produce a higher-quality product if the premiums paid n the central market were properly reflected in the local prices paid the rower.
The local market may be characterized by two main groups-sellers nd buyers. The sellers are primarily growers and as growers quite ften efficient. As sellers, however, it cannot be claimed that they are qually as efficient. They are selling a commodity, the market value of hich is based on quality as indicated by grade, staple, and character. The bulk of them are not able to class their cotton, and do not have ccess to such a service. This fact practically precludes the possibility $f$ their knowing anything very definite as to the market value of the otton which they are offering for sale. Then, too, it is often necessary or them to sell regardless of price in order to satisfy obligations against he crop they have produced. Thus, as bargainers they are in a very eak position.

## OBJECT OF THE STUDY

The object of this study is to show what quality of cotton selected localities in different parts of the State are producing relative to grade, staple, and character; the extent to which the farmer is paid on the basis of quality for his cotton, and to what extent central market values are reflected in these prices.

The data summarized in this Bulletin are for the season of 1926, and are offered as a preliminary report. It includes data for the first year of a study outlined to extend over a period of three to five years.

The present report is a summary of data collected on four representative local or primary cotton markets in the State for the season of 1926. The aim of such research is to present a more detailed picture and make a more accurate measurement of the present situation than now exists.

The word "primary" is the term used in defining the first sale or country cotton market as found in most literature on the subject. In order to conform to local usage and probably avoid confusion, the term "local" is used in this publication instead of "primary" in designating the markets.

## METHOD OF PROCEDURE

Four local markets, representative of the four principal cottonproducing areas of the State, were selected for this study: Robstown for South Texas, Henderson for East Texas, Hillsboro for the black waxy prairie belt, and Lubbock for West Texas. The study has been expanded to include other points for the season of $192 \%$.

A field man was placed at each of these local points at the beginning of the harvesting season where he remained until its close. Samples were secured daily on each market from growers and local buyers, chiefly growers, throughout the ginning season. Along with each sample such data as the date ginned, the date sold, the price received, the variety grown, etc., were secured. Also general information relative to the organization and practices of each market was noted.

All samples secured were assembled at the Texas Agricultural Experiment Station, where at the close of the season they were classified as to grade, staple, and character by cotton classers of the Division of Cotton Marketing, Bureau of Agricultural Economics, U. S. D. A.

## QUALITY OF COTTON GROWN

One of the first steps in a program for the improvement of cotton in a community is to secure a knowledge of the quality of cotton that is being produced at present. This can be determined fairly accurately by a sample, say, of 10 per cent, secured throughout the ginning season and classified as to grade, staple, and character. With a knowledge of the quality of cotton being produced, with information as to soil and climatic factors, and finally with facts indicating the probable market prospects for cotton of the various grades and staple lengths, the community is in a position to intelligently formulate a constructive program
of cotton production. The logical procedure is to make this program parallel as closely as possible market demands. Mills buy cotton for the purpose of spinning it, and pay for it on the basis of its spinning utility. In all of the important cotton markets of the world cotton is bought and sold on a quality basis. If growers fail in a significant degree to produce the kind of cotton spinners want and are willing to pay for, there must be a serious maladjustment in the methods of buying cotton by the trade which fails to carry back to the grower the full force of the consumptive demand. With this viewpoint in mind a brief analysis of the data collected will be presented.

The first task of this icport will be to present data showing the quality of cotton sold by growers on the local markets mentioned above for the season of 1926-2\%. No doubt the quality of cotton for each of these points will vary considerably from year to year, due principally to variations in climatic factors. A continuation of this study over a period of years should help to reveal the nature and extent of such variations.

## Grade

In Table 1 is given a distribution by grades of the 2,518 samples of cotton collected at the four local markets during the months of August, September, October, November, December, 1926, and January, 1927. One will readily observe that almost 90 per cent of this cotton was white, 10.5 per cent spotted, and .1 per cent tinged. All but 4.6 per cent of it was within tenderable grades.

Table 1. Distribution of grades, 2,518 bales, four local markets, Texas, 1926.

| Grade | Color |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White |  | Spotted |  | Tinged |  |
|  | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Strict Good Middling | 3 | . 1 |  |  |  |  |
| Good Middling. . | 98 | 3.9 | 115 | . 1 |  |  |
| Strict Middling. | 532 | 21.1 | 115 | 4.5 |  |  |
| Middling. . ${ }_{\text {Strict Low }}$ | 887 | 35.2 | 100 | 4.0 |  |  |
| Strict Low Middling Low Middling. ${ }^{\text {a }}$. | 482 | 19.2 | 40 8 | 1.6 .3 | 2 | 1 |
| Strict Good Ordinary | 188 | 2.3 | 8 | . 3 | 2 | . 1 |
| Good Ordinary...... | 8 | 2.3 |  |  |  |  |
| Total. | 2251 | 89.4 | 265 | 10.5 | 2 | . 1 |

Table 2. Distribution of grades on four local cotton markets, Texas, 1926.

| Grade | Color |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White |  | Spotted |  | Tinged |  |
|  | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Robstown: Good Middling. |  |  |  |  |  |  |
| Good Middling. | 81 | 1.2 19.9 | 0 3 | . $7^{\circ}$ |  |  |
| Middling. ${ }_{\text {Strict Low Middlin }}$ | 244 65 | 19.9 59.8 15 | 1 0 0 | . 3 |  |  |
| Strict Low Middling | 65 9 | 15.9 2.2 | 0 0 |  |  |  |
| Total | 404 | 99.0 | 4 | 1.0 |  |  |
| Henderson: Good Middling | 16 |  |  |  |  |  |
| Soid Middling | 324 | 34.5 | 24 | 2.6 |  |  |
| Middling. . | 407 | 43.4 | 0 |  |  |  |
| Strict Low Middling | 151 | 16.1 | 0 |  |  |  |
| Low Middling. .i... | 12 | 1.3 .2 | 0 0 |  |  |  |
| Good Ordinary.... | 1 | .1 |  |  |  |  |
| Total. | 913 | 97.3 | 25 | 2.7 | . . . |  |
| Hillsboro: | 6 | 1.3 | 1 | . 2 |  |  |
| Strict Middling | 90 | 18.8 | 13 | 2.7 |  |  |
| Middling. . | 146 | 30.5 | 23 | 4.8 |  |  |
| Strict Low Midding. | 139 33 | 29.1 | 3 | . 7 |  |  |
| Low Middling. | 33 21 | 6.9 4.4 |  |  |  |  |
| Gocd Ordinary...... | - 3 | $\begin{array}{r}4.4 \\ \hline .6\end{array}$ |  |  |  |  |
| Total | 438 | 91.6 | 40 | 8.4 |  |  |
| Lubbock: <br> Strict Good Middling. | 3 | 4 |  |  |  |  |
| Good Middling....... | 71 | 10.2 |  |  |  |  |
| Strict Middling. | 37 | 5.3 | 75 | 10.8 |  |  |
| Middling. . ${ }_{\text {did }}$ | 90 | 13.0 | 76 | 11.0 |  |  |
| Strict Low Middling. | 127 | 18.3 | 37 | 5.3 |  |  |
| Low Middling. ${ }_{\text {Strict Good Ordinary }}$ | 129 35 | 18.6 | 8 | 1.2 | 2 | . 3 |
| Strict Good Ordinary Good Ordinary...... | 35 4 | 5.0 .6 |  |  |  |  |
| Total........ | 496 | 71.4 | 196 | 28.3 | 2 | 3 |

Table 2 shows the distribution of grades for each local point in a way similar to that shown for all points in Table 1. It is apparent that grade is influenced very decidedly by the date of harvest. For example, as shown in Table 2 the samples collected at Robstown class out 99 per cent white while those collected at Lubbock class out only 71 per cent white. The bulk of the cotton crop was harvested at Robstown during the months of August and September, while at Lubbock a very small amount of the crop was harvested before October 1. This means that the cotton crop at Lubbock was subjected much more severely to weather hazards such as frost and wind than at any of the other three points. Then, too, the methods of harvesting at Lubbock were considerably different from the methods used in other markets studied. The bulk of the cotton crop at Lubbock during the season of 1926 was either snapped or sledded. These methods, it has been found, lower the grade from one to two grades. The marked improvements being made in ginning machinery of this region is doing much to offset the disadvantages of snapping and sledding, and should encourage the mechanical harvesting of cotton.

## Date of Harvest

Table 3 shows a distribution of grades by months for each of the four markets. It will be observed that the grades became lower as the harvesting season advanced. This fact shows the importance of getting the crop out of the field as early as possible. It is in this connection that mechanical methods of harvesting cotton, once they are satisfactorily perfected, may function in a very beneficial way.

Table 3. Distribution of grades by months of samples collected at four local cotton markets, Texas, 1926.*

| Grade | DATE |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | July |  | August |  | September |  | October |  | November |  | ( December |  | January |  |
|  | No. Bales | Per Cent | No. Bales | Per Cent | $\begin{gathered} \text { No. } \\ \text { Bales } \end{gathered}$ | Per Cent | No. Bales | Per Cent | No. Bales | Per Cent | No. Bales | Per Cent | $\left.\begin{gathered} \text { No. } \\ \text { Bales } \end{gathered} \right\rvert\,$ | Per Cent |
| Robstown: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Good Middling. |  |  | 5 | 1.2 |  |  |  |  |  |  |  |  |  |  |
| Strict Middling |  | . 2 | 35 | 8.6 | 44 | 10.8 | 1 | . 2 |  |  |  |  |  |  |
| Middling. . ${ }_{\text {M }}$ |  |  | 106 | 26.0 | 122 | 29.9 | 16 | 4.0 |  |  |  |  |  |  |
| Strict Low Middling |  |  | 19 | 4.7 | 33 | 8.1 | 13 | 3.2 |  |  |  |  |  |  |
| Low Middling.. |  |  | 2 |  | 7 | 1.7 |  |  |  |  |  |  |  |  |
| Strict Middling Spotted. |  |  | 2 |  | 1 |  |  |  |  |  |  |  |  |  |
| Middling Spotted....... |  |  |  |  |  |  | 1 | . 2 |  |  |  |  |  |  |
| Total |  | . 2 | 169 | 41.5 | 207 | 50.7 | 31 | 7.6 |  |  |  |  |  |  |
| Henderson: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Good Middling. ${ }_{\text {Good Middling } \text { Spotted. }}$ |  |  |  | . 2 | 10 | 1.1 .1 |  |  | 3 | . 3 | 1 | . 1 |  |  |
| Strict Middling. . . . . . |  |  | 12 | 1.3 | 183 | 19.5 | 77 | 8.2 | 32 | 3.4 | 16 | 1.7 | 2 | . 2 |
| Strict Middling Spotted. |  |  | 3 | . 3 | 11 | 1.2 | 8 | . 9 | 1 |  |  |  | 1 | . 1 |
| Middling. . |  |  | 3 | . 3 | 110 | 11.8 | 185 | 19.6 | 92 | 9.8 | 13 | 1.4 | 4 | . 5 |
| Strict Low Middling |  |  |  |  | 3 | . 3 | 49 | 5.2 | 80 | 8.6 | 16 | 1.7 | 2 | 2 |
| Low Middling. ..... |  |  |  |  |  |  | , | . 1 | 8 | . 9 | 3 | . 3 |  |  |
| Strict Good Ordinary |  |  |  |  |  |  |  |  | 2 | . 2 |  |  |  |  |
| Good Ordinary. |  |  |  |  |  |  |  |  | 1 | . 1 |  |  |  |  |
| Total |  |  | 20 | 2.1 | 318 | 34.0 | 320 | 34.2 | 219 | 23.4 | 49 | 5.2 | 9 | 1.0 |
| Hillsboro: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Good Middling. . . . . . . |  |  |  |  | 6 | 1.3 |  |  |  |  |  |  |  |  |
| Good Middling Spotted. |  |  |  |  | 1 | . 2 |  |  |  |  |  |  |  |  |
| Strict Middling. . . . . . |  |  |  |  | 45 | 9.6 | 40 | 8.5 | 2 | . 4 |  |  |  | .... |
| Strict Middling Spotted. |  |  |  |  | 10 | 2.1 | 3 |  |  |  |  |  |  | . |
| Middling. . . |  |  |  |  | 68 | 14.4 | 76 | 16.1 |  |  |  |  |  | .... |
| Middling Spotted |  |  |  |  | 16 | 3.4 | 6 | 1.3 | 1 | . 2 |  |  |  |  |
| Strict Low Middling. |  |  |  |  | 14 | 3.0 | 67 | 14.2 | 57 | 12.1 |  |  |  |  |
| Strict Low Middling Spotted. |  |  |  |  |  |  | 2 |  |  | . 2 |  |  |  |  |
| Low Middling |  |  |  |  |  |  | 9 | 1.9 | 22 | 4.7 | 1 | . 2 |  |  |
| Strict Good Ordinary |  |  |  |  |  |  | 2 | . 4 | 17 | 3.6 | 2 | . 4 |  |  |
| Good Ordinary. |  |  |  |  |  |  |  |  | 3 | 7 |  |  |  |  |
| Tot |  |  |  |  | 160 | 34.0 | 205 | 43.5 | 103 | 21.9 | 3 | . 6 |  | $\ldots$ |
| Lubbock: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Strict Good Middling. |  |  |  |  | 3 | 4 |  |  |  |  |  |  |  |  |
| Good Middling. |  |  |  |  | 66 | 9.6 | 3 | . 5 | 2 | . 3 |  |  |  | . |
| Strict Middling. . . . . . |  |  |  |  | 22 | 3.2 | 14 | 2.1 | 1 | . 1.1 |  |  |  |  |
| Strict Middling Spotted |  |  |  |  |  |  | 65 | 9.4 | 10 | 1.5 |  |  |  |  |
| Middling. . . . . . . . . . . |  |  |  |  | 3 | . 5 | 58 | 8.4 | 29 | 4.2 |  |  |  |  |
| Middling Spotted |  |  |  |  |  |  | 56 | 8.1 | 19 | 2.8 |  |  |  |  |
| Strict Low Midd ling |  |  |  |  |  |  | 67 | 9.7 | 56 | 8.1 | 4 | . 6 |  |  |
| Strict Low Spotted. . |  |  |  |  |  |  | 17 | 2.5 | 18 | 2.6 | 1 | . 1 |  |  |
| Low Middling. |  |  |  |  | 1 | . 1 | 24 | 3.5 | 90 | 13.1 | 12 | 1.7 |  |  |
| Low Middling Spotted. . |  |  |  |  |  |  | 1 | . 1 | 1 | . 1 | 3 | . 5 | 3 | . 5 |
| Low Middling Tinged... |  |  |  |  |  |  | 1 | . 1 |  |  |  |  | 1 | . 1 |
| Strict Good Ordinary . . |  |  |  |  |  |  | 1 | 1 | 7 | 1.0 | 13 | 1.9 | 14 | 2.0 |
| Good Ordinary.. |  |  |  |  |  |  | 1 | . 1 |  |  | 1 | 1 | 2 | 3 |
| Total |  |  |  |  | 95 | 13.8 | 308 | 44.6 | 233 | 33.8 | 34 | 4.9 | 20 | 2.9 |

[^1]Table 4. Percentage of staple lengths, 2,518 bales, four local markets, Texas, 1926.

| Staple in Inches | Number of Bales | Per Cent of Total |
| :---: | :---: | :---: |
| $3 / 4$ | 25 | 1.0 |
| 13/16 | 283 568 | 11.2 |
| 15/16 | 737 | 29.3 |
| 1... | 533 | 21.2 |
| 1 1/32. | 151 | 6.0 |
| $\begin{array}{ll}1 & 1 / 16 \\ 1 & 3\end{array}$ | 1504 15 | 8.1 0.6 |
| 1 1/8.. | 2 | . 1 |
| Total. | 2.518 | 100.0 |

Table 5. Number and percentage of staple lengths at four local cotton markets, Texas, 1926

| Staple in Inches | Number of Bales | Percentage |
| :---: | :---: | :---: |
| Robstown: $\begin{array}{r} 7 / 8 \\ 15 / 16 \ldots \end{array}$ | ${ }_{56}^{2}$ | 13.7 |
| 1. $1 / 32 .$. | 125 | 30.6 108 18 |
| $1{ }_{1}^{1} 1 / 16$. | 168 | 41.2 |
| ${ }_{1}^{1} 18 / 32$. | 12 | 13.9 |
| Total. | 408 | 100.0 |
| Henderson: |  |  |
| $3 / 4$ $13 / 16$ | 23 278 | 29.5 29.7 |
|  | 427 | 45.5 |
| 15/16 | 172 33 | 18.3 3.5 |
| $1{ }_{1}^{1 / 32}$ | 1 | 3. 1 |
| 1 1/16. | 4 | . 4 |
| Total. | 938 | 100.0 |
| Hillsboro: |  |  |
| 15/16... | 13 180 | 2.7 37.7 |
|  | 194 | 40.6 13 |
| $\begin{array}{ll}1 \\ 1 & 1 / 1 / 16\end{array}$ | 65 24 | 13.6 |
| $13 / 32$. | 1 | .$_{2}$ |
| $11 / 8$. | 1 | 2 |
| Total. | 478 | 100.0 |
| Lubbock; |  |  |
| 13/16.. | ${ }_{5}$ | .$^{7}$ |
| $7 / 8$. $15 / 16$ | 126 | 18.2 |
| 15/16 | 329 181 | ${ }_{26.1}^{47}$ |
| 1132 | 41 | 5.9 |
| $\begin{array}{ll}1 & 1 / 16 \\ 1 & 3 / 32\end{array}$ | ${ }_{2}^{8}$ | 1.1 |
| Total. | 694 | 100.0 |

## Staple

Table 4 gives the number of bales and percentages of staple lengths for the same 2,518 bales of cotton for which a distribution of grade is shown in Table 1. Almost 88 per cent of this cotton is of tenderable length, $\frac{7}{8}{ }^{\prime \prime}$ and above, while 36 per cent has a staple length of one inch and above. As will be pointed out in a distribution of staple by local points, the staple lengths in Table 4 below $\frac{7^{\prime \prime}}{8}$ are due, with the exception of seven bales, to a single local point. Of the 2,518 bales secured on the four local markets, 383 , or 15.2 per cent, are not tenderable because of grade or staple, or both.

Table 5 shows the percentage of staple lengths for each of the four local markets studied. This table admits of some rather interesting comparisons. For example, the samples secured at Robstown and Hillsboro show no cotton below $\frac{7^{\prime \prime}}{8}$ in length, while one per cent of the sample secured at Lubbock, and 32.2 per cent of the sample secured at Henderson are below $\frac{7}{8}$ " in staple length, or untenderable on account of length. The relatively large amount of "short" cotton coming on to the Henderson market is due largely to the growing of varieties of short staple.

## RELATION OF FARM PRICES TO QUALITY

The ideal situation for the local cotton market would be one in which cotton is sold on the basis of quality as indicated by its grade, staple, and character. In this event, there would be a more or less constant parallel between central and local prices at any given time for cotton of the same grade, staple, and character. Unfortunately this is an ideal yet to be realized. General observation and the facts available agree that far too little consideration is given to the grade and staple of cotton on the local market.

## Grade

Table 6 gives monthly average prices received by farmers, arranged according to grade. This indicates a slight tendency to recognize grade differences, but not a uniform and consistent one. For example, the monthly average prices paid for cotton on the Robstown market for the month of August show a gradual decline from 18.8 cents for good middling to 15.0 cents for low middling. On the other hand, the same degree of regularity is not true of the month of October. The prices are 13.25 cents for strict middling, 12.55 cents for middling, 13.75 cents for middling spotted, and 12.38 cents for strict low middling. This illustration holds good in a general way for the other three markets. As a further illustration in this connection, let us examine the daily prices paid for different grades of the same staple. For nine different sales during the period August 17 to September 16, strict middling sold only twice for more, four times for the same, and three times for less than middling. Illustrations of this nature could be duplicated many times from the data secured on the local markets studied.

Table 6. Monthly Average price paid farmers for cotton, 1926.
(Basis-Grade)

| Grade | Average Price of Lint Per Pound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | August | Sept. | Oct. | Nov. | Dec. | Jan. |
| Robstown: |  |  |  |  |  |  |
| Good Middling. | 18.80 18.25 | 17.34 | 13.25 |  |  |  |
| Strict Middling Spot | 18.38 | 18.00 |  |  |  |  |
| Middling. ${ }_{\text {Middling }}$ Spotted | 17.84 | 16.44 | 12.55 |  |  |  |
| Strict Low Middling | 17.34 | 14.79 | 12.38 |  |  |  |
| Low Middling. ..... | 15.00 | 15.13 |  |  |  |  |
| Henderson: |  |  |  |  |  |  |
| Good Middling | 18.02 16.08 | 17.08 15.41 | 11.33 | 10.97 | 11.00 10.78 | 12.22 |
| Strict Middling S | 16.97 16.98 | 15.19 | 10.90 |  |  | 12.45 |
| Middling. . | 17.68 | 15.09 | 11.09 | 10.86 | 9.98 | 11.50 |
| Strict Low Midd |  | 15.87 | 10.17 10.00 | 9.94 10.05 | 9.50 | 11.00 |
| Low Middling. ${ }_{\text {Strict Good Ordinary }}$ |  |  | 10.00 | 10.05 6.88 |  |  |
| Hillsboro: |  |  |  |  |  |  |
| Good Middling Good Middling Spotted |  | 15.05 17.75 |  |  |  |  |
| Strict Middling. ${ }^{\text {Stat... }}$ |  | 14.95 | 13.00 | 10.25 |  |  |
| Strict Middling Spotted |  | 15.86 | 13.03 | 11.00 |  |  |
| Middling <br> Middling Spotted |  | 15.96 17.41 | 12.38 12.00 |  |  |  |
| Midding Low Middling |  | 16.80 | 10.99 | 9.98 |  |  |
|  |  |  | 10.42 | 8.92 |  |  |
| Strict Good Ordinar Good Ordinary. |  |  | 8.75 | 7.83 8.50 | 7.00 |  |
|  |  |  |  | 8.50 |  |  |
| Lubbock: ${ }_{\text {Strict }}$ Gidding |  |  |  |  |  |  |
| Strict Good Middling Good Middling. |  | 13.83 <br> 14.52 | 11.25 |  | 11.25 |  |
| Good Middling........ |  | 14.62 | 11.09 | 8.60 |  |  |
| Strict Middling Spotted Middling. . . . . . . |  | 14.75 | 10.56 | 10.09 |  |  |
| Middling <br> Middling Spotted |  | 14.75 | 10.49 10.24 | 10.09 9.50 |  |  |
| Strict Low Middling |  |  | 9.38 | 8.83 | 5.50 |  |
| Strict Low Middling Spotted. |  |  | 8.99 | 8.92 |  |  |
| Low Middling. ${ }^{\text {L }}$. . . . |  | 14.85 | 8.94 | 8.38 | 6.28 |  |
| Low Middling Spotted |  |  |  |  | 5.87 | 7.22 |
| Low Middling Tinged. <br> Strict Good Ordinary |  |  | 8.00 8.00 | 7.75 |  | 6.75 |
| Good Ordinary...... |  |  | 8.00 |  | 6.50 | 6.65 |

## Staple

Table 7 gives a tabulation of the monthly average prices paid farmers grouped on the basis of staple. An examination of these figures indicates that very little, if any, recognition is given staple length in determining the price paid the cotton grower. This fact is further illustrated by an examination of daily local sales selected at random. For example; on one of the local markets during the period September 18 to 24 , a sale of 7 bales of good middling cotton, varying in staple from $\frac{3}{4}$ to an inch in length, is recorded. In the case of three bales the lower grade sold for more, in one for the same, and in three for less than the next longer staple. On the same market during the period October 19 to October 28 a record of the sale of 9 bales of middling cotton varying in length from $\frac{7}{8}$ to $1-1 / 16$ inch shows that five times the
shorter staple sold for less and four times for more than the next longer staple. Here, as in the case of grade, similar illustrations may be duplicated many times from the data available.

Table 7. Monthly average price paid farmers for cotton, 1926.
(Basis-Staple)

| Staple Length, Inches | Average Price of Lint Per Pound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | August | Sept. | Oct. | Nov. | Dec. | Jan. |
|  |  |  |  |  |  |  |
|  | 17.92 17.95 | 15.06 16.24 1. | 12.33 | 12.44 |  |  |
|  | 17.59 | 16.24 16.47 | 13.00 | 12.44 |  |  |
| $\begin{array}{ll}1 & 1 / 16 \\ 1 & 3 / 32 \\ 1 & 1 / 8 .\end{array}$ | 17.86 18.45 17.00 | 17.56 16.69 | 12.50 |  |  |  |
| $11 / 8$. | 17.00 |  |  |  |  |  |
| Henderson: |  |  |  |  |  |  |
| $13 / 16$ | 18.35 | 15.10 | 10.96 | 10.36 | 10.42 | ${ }_{10}^{12.00}$ |
| 15/16. | 17.51 17.70 | 15.21 15.83 | 11.06 11.85 | 10.36 10.62 10.66 | 10.08 10.92 | 11.90 |
| $1{ }_{1}^{1} 1 / 32$ | 17.65 | 15.79 | 10.85 11.05 10.00 | 10.92 |  |  |
| 1 1/16. |  |  |  | 11.31 |  |  |
|  |  |  |  |  |  |  |
|  |  | 15.58 | 11.75 | 9.20 | 6.50 |  |
| 113 |  | 16.24 15.90 | 11.74 12.01 | 9.03 8.00 | 6.00 |  |
| $\begin{array}{ll}1 & 1 / 1 / 16 \\ 1 & 1 / 8 . .\end{array}$ |  | 16.86 17.80 | 11.55 |  |  |  |
| Lubbock: ${ }^{\text {a }}$, 75 9 50 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| $13 / 16$ $7 / 8$ 1516 |  | 14.25 14.41 | ${ }_{10}^{10.00}$ | 8.60 9.08 | 6.15 |  |
| 15/16 |  | 14.58 15.39 | 10.06 10.13 | 9.01 8.90 | 5.96 5.94 | 6.98 |
|  |  |  | 10.12 10.94 |  |  |  |
| ${ }_{1}^{1} 11 / 16$. |  |  | 10.94 10.75 | 8.50 | 6.50 |  |

## THE GROWER'S PRICE IS LARGELY ON AN AVERAGE OR "HOG ROUND" BASIS

As shown by Tables 6 and 7 with accompanying illustrations the grower generally sells his cotton locally on an average or "hog round" basis. This practice places a premium on cotton below the average for the community and a penalty on cotton above the average for the community. As a result of this practice, many growers have resorted to the growing of varieties of shorter staple and higher yields. Such a reaction is quite logical on the part of the individual grower, even though by this act the level of quality for the community and the State is lowered, the average price reduced, and the total wealth of the community diminished.

The harmfulness of this practice is not its failure to pay the community what its cotton is worth. No doubt it is paid approximately the worth of the cotton produced, some of it selling for more and some of it
for less than its market value, but all of it for about what it is worth. The unsound and uneconomic principle involved, however, is the fact that the local cotton market as organized and operated at present not only fails to reward the grower for the production of quality, but in reality places a penalty on quality and a premium on volume regardless of quality.

Table 8. The average price paid for cotton during the month of October, 1926, on four local markets compared by grades.

| Local Market | Average Monthly Price Per Pound by Grade. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Strict Middling | Strict Middling Spotted | Middling | Middling Spotted | Strict Low Middling | Low Middling |
| Robstown. | 13.25 | 12.55 |  | 13.75 | 12.38 |  |
| Hillsboro. | 13.00 | 13.03 | 12.38 | 12.00 | 10.99 | 10.42 |
| Henderson. | 11.33 | 10.90 | 11.09 |  | 10.17 | 10.00 |
| Lubbock..... | 11.09 | 10.56 | 10.49 | 10.24 | 9.38 | 8.94 |

Under the system of "point buying," or buying on an average basis, the price paid tends to conform to the average grade and staple value of the cotton in that market. Or, stated differently, the price paid for the same grade of cotton on different markets will vary relative to the average quality of cotton produced on each market. This fact is illustrated in Table 8. The month of October has been chosen because the sample for this period is more adequate. It is evident from these figures that prices paid for the same grade of cotton on the Henderson and Lubbock markets were consistently, and in some cases, considerably lower than prices paid on either the Robstown or Hillsboro market. This difference is accounted for very largely by the difference in the average quality of cotton sold on these markets. It has already been pointed out in Tables 2 and 5 that 99 per cent of the cotton secured at Robstown was white and none of it below $\frac{7^{\prime \prime}}{8}$ in length; almost 92 per cent of the cotton secured at Hillsboro was white and none less than $\frac{7^{\prime \prime}}{s}$ in length; slightly above 97 per cent of the Henderson sample was white, but 32 per cent of it was below $\frac{7{ }^{\prime \prime}}{}{ }^{\prime \prime}$ in length; and 71 per cent of the sample secured at Lubbock was white and one per cent below $\frac{7^{\prime \prime}}{8}$ in length.

## PRICES ON LOCAL COTTON MARKET COMPARED WITH QUOTATIONS ON CENTRAL MARKET

In an attempt to compare local prices received by growers with central market values, certain difficulties arose and it is felt that an explanation of the manner in which they were met should be made clear before going into the details of this part of the report. In the first place it was necessary to reduce local and central prices to a comparable basis. This was done by adding to the grower's price the handling charges
necessary to move the cotton from the local markets to the Houston market. Such charges as freight and compress, interest, exchange, insurance, and drayage have been included. The amount per bale for each of these items and for each of the local markets studied is given in Table 9. One will readily observe that the item "freight and compress" comprises a very large part of the total handling charges.

Table 9. Handling charges from local points to Houston, season of 1926-1927.

| Local Points | Charges on 514-pound Bale of Cotton* |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Freight and Compress Charges to Houston | Interest (Cents) | Exchange (Cents) | Insurance (Cents) | Drayage (Cents) | Total | Points |
| Robstown. | 4.11 | 19.0 | 22 | 10 | 0 | \$ 4.62 | 90 |
| Henderson | 4.11 | 14.0 | 16 | 8 | 0 | 4.49 | 87 |
| Hillsboro. . | 4.11 | 14.0 | 16 | 8 | 0 | 4.49 | 87 |
| Lubbock. | 4.75 | 14.0 | 13 | 6 | 40 | 5.48 | 106 |
| Average. | 4.43 | 16.5 | 17 | 8 |  | ; 4.86 | 92 |

*514 pounds average weight of cotton per bale, Texas, 1926. Estimate of the Bureau of Agricultural Economics.

The central market values as used in this comparison were calculated by adding to or subtracting from the Houston middling spot price* the grade and staple differences of a particular bale of cotton for a specified date. For example, the price of middling spot cotton quoted for Houston, September 21, 1926, was 15.95 cents per pound. On this date strict middling cotton was 50 points on, and the staple premium for $15 / 16^{\prime \prime}$ over $\frac{7^{\prime \prime}}{8}$ was 60 points. The central market value, therefore, of strict middling $15 / 16^{\prime \prime}$ cotton on the Houston market, September 21, 1926 , was 15.95 cents plus 1.10 cents, grade and staple premiums, or 17.05 cents per pound. Staple differences corresponding to the daily grade differences are not quoted by the cotton exchanges. This being the case, an effort was made to secure such differences from concerns handling cotton on the Houston market. The most complete and satisfactory data were found in the records of the Texas Farm Bureau Cotton Association. This association kept a daily record by grade and staple of the premiums received for its cotton sold on the Houston market for the season 1926-2\%. For those grades and for those days for which no sales were made a judgment figure in line with the market was recorded. A complete record of the staple differences used is given in the appendix of this report, Table 1-a.

## SPREAD BETWEEN LOCAL PRICE AND CENTRAL MARKET PRICE

The term local price as used in this comparison may be defined as the grower's price plus the necessary expenses incurred in moving the cotton

[^2]to the Houston market. The central market value is the middling spot quotation on the Houston market plus grade and staple differences. The spread is the difference between these two prices. To illustrate: on October 19, 1926, a grower received on the Henderson market 11.25 cents per pound for a middling $15 / 16^{\prime \prime}$ bale of cotton. The handling charges required to move cotton from this point to Houston, as calculated, amount to 87 cents per 100 pounds or .87 cent per pound. The grower's price ( 11.25 cents) plus handling charges per pound (. 87 cent) equals 12.12 cents per pound delivered on the Houston market. On this date the middling spot quotation for Houston was 12.75 cents per pound. The staple premium for $15 / 16^{\prime \prime}$ over $\frac{7^{\prime \prime}}{8}$ was 10 points or . 10 cent per pound. The central market value, therefore, for this cotton was 12.75 cents plus .10 cent or 12.85 cents per pound. The spread is 12.85 cents minus 12.12 cents or . 73 cents per pound, making a spread of $\$ 3.75$ for a bale weighing 514 pounds. This is to say, the grower at Henderson received $\$ 3.75$ less for this bale than it was selling for on the Houston market.

In presenting the average net spread per bale for each market studied attention is called to the fact that wide variations on individual bales are evident in the data secured. For example, at Lubbock the highest plus spread recorded is $\$ 35.15$ and the highest minus spread is $\$ 15.21$ per bale. In other words, the farmer's price plus handling charges was $\$ 35.15$ less than the central market value in the first case, and $\$ 15.21$ more than the central market value in the second case.

Table 10. Average spread per bale on local markets studied.

| Local Market | Number of Bales | Average Spread Per Bale |
| :---: | :---: | :---: |
| Hillsboro. | 231 | \$1.10 |
| Henderson | 542 | 2.43 |
| Lubbock. | 408 | 3.51 6.65 |
| Total. | 1,702 | \$3.80 |

The average spread per bale for each local market studied is given in Table 10. It ranges from $\$ 1.10$ per bale for Hillsboro to $\$ 6.65$ for Lubbock, with an average spread of $\$ 3.80$ for the four local markets. This means that of the four local points cotton growers on the Hillsboro market received the best price and growers on the Lubbock market the poorest price relative to central market values. Without attempting to explain the wide difference in the spread between cotton prices at Hillsboro and Lubbock, it may be observed that a greater amount of cotton on the Lubbock market sold on a rapidly declining price than on any of the other three markets. The decline in cotton prices for the season of 1926-27 started around the middle of September, at which time cotton harvesting in the Lubbock area was just getting well under way. Added
to this situation was the uncertainty introduced by a new method of harvesting known as "sledding." Naturally local buyers were reluctant to buy this cotton until it had been generally accepted by the trade, which action tended to cause a further depression of prices.

Table 11. Average spread per bale between local and central market value, for season 1926-27.
(Basis-Grade)

| Grade | Local Markets |  |  |  |  |  |  |  | All Points |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hillsboro |  | Henderson |  | Robstown |  | Lubbock |  |  |  |
|  | No. Bales | Average <br> Spread <br> Per Bale | No. Bales | Average <br> Spread <br> Per Bale | No. Bales | Average Spread Per Bale | No. Bales | Average <br> Spread <br> Per Bale | No. Bales | Average <br> Spread <br> Per Bale |
| Strict Good Middling. |  |  |  |  |  |  | 3 | 9.03 | 3 | 9.03 |
| Good Middling. . . . |  | 8.38 | 10 | 5.93 | 5 | 6.42 | 61 | 6.22 | 78 | 6.25 |
| Good Middling Spotted...... . |  |  |  |  |  |  |  |  | 1 | . 92 |
| Strict Middling | 28 | 5.13 | 176 | 3.78 | 81 | $\begin{array}{r}7.15 \\ \hline\end{array}$ | 30 | 6.57 | 315 | 5.03 |
| Strict Middling Spotted. | 7 | -2.93 | 17 | . 24 | 3 | -2.06 | 68 | 6.87 | 95 | 4.68 |
| Middling | 67 | . 59 | 258 | 1.95 | 244 | +3.77 | 80 | 7.83 | 649 | 3.22 |
| Middling Spotted............ | 13 | -2.16 |  | .... |  | $-8.48$ | 61 | 4.82 | 75 | 3.43 |
| Strict Low Middling. | 73 | . 76 | 75 | 1.14 | 65 | $-.38$ | 79 | 8.63 | 292 | 2.73 |
| Strict Low Middling Spotted. . |  | 172 |  | -3.09 |  | -6.80 | 20 | 2.88 | 20 | 2.88 |
| Low Middling | 20 | 1.72 | 4 | -2.09 |  | -6.80 | 79 | 5.71 | 112 | 3.86 |
| Low Middling Spotted. . . . . . . |  | 2.33 | 2 |  |  |  | 28 | 7.83 8.58 | 6 | 7.83 |
| Good Ordinary ............. | 17 | -9.35 |  |  |  |  | $\begin{array}{r}28 \\ 4 \\ \hline\end{array}$ | 8.58 $-\quad .82$ | 47 7 | 6.14 -4.48 |
| Low Middling Tinged........ |  |  |  |  |  |  | 2 | . 33 |  | . 33 |
| Total. | 231 | 1.10 | 542 | 2.43 | 408 | 3.51 | 521 | 6.65 | 1702 | 3.80 |

A more detailed analysis of spread may be had by an examination of its relation to grade and staple considered separately. Table 11 shows the average spread per bale by grade for each of the four local markets considered, and for all combined. As one would surmise, a great many bales sold for more on the local market than they were being quoted on the central market. The comparison in such cases would result in a minus spread and has been so designated. In other words, the minus sign designates the average amount per bale by which the local price exceeds the central price. For all other bales the local price was less than or equal to the central market price. Theoretically local buyers lost on the former and made a profit on the latter.

Figure 1 shows graphically the amount and nature of the spread when like grades from the four markets were grouped and averaged. It will be observed at a glance that the widest fluctuations in spread are found among both the lower and higher grades. The most uniform spread is grouped about middling and includes the range of grades from strict middling to low middling. With but one exception, that of seven bales of good ordinary, the average spread by grade resulted in a plus quantity. The average spread for all grades and all points is $\$ 3.80$ per bale.

The fact that the spread was found to be considerably wider for both the lower and the higher grades is interpreted as significant. It suggests that the low grades show a marked contrast when compared with


Figure 1.-Shows the nature and extent of the average spread per7bale grouped according to grade. Zero indicates the point at which local and central market prices coincide, or the Foint of no spread. The bars above this line indicate the amount per bale by which central market prices exceed those of the local market, and vice versa below the line. The number of bales in each group is indicated by the figure in each bar. This \$scheme is followed for Figures 2, 3 , and 4 .

igure 2.-Average spread per bale according to grade with all plus spreads and minus spreads grouped and averaged separately.


Figure 3.-Average spread per bale grouped according to staple lengths.


Figure 4.-Average spread per bale according to staple with all plus spreads and minus spreads grouped and averaged separately.
middling cotton-hence are readily recognized and penalized. On the other hand the high grades show less contrast with middling and are less easily recognized. Then, too, it is to the advantage of the buyer to ignore or minimize the importance of the high grades.

As has already been stated, the local buyer does not always buy at a figure that will insure a profit. This is well illustrated in Figure 2. It will be observed from this figure that only three out of thirteen grades showed a profit in every bale, while the other ten grades showed that some of the bales lost money; but on an average a profit was realized for all grades except one. To illustrate: there were 112 bales of cotton of low middling grade in the sample secured on the four local markets. Of these, 24 were bought at a price which shows an average loss to the buyer of about $\$ 6.50$ per bale, while 88 bales were bought at a price which shows a profit of about $\$ 6.40$ per bale, or an average net profit on the entire lot of about $\$ 3.70$ per bale.

Table 12. Average spread per bale between local and central market value, for season 1926-27.
(Basis-Staple)

| Staple | Local Markets |  |  |  |  |  |  |  | All Points |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hillsboro |  | Henderson |  | Robstown |  | Lubbock |  |  |  |
|  | $\begin{gathered} \text { No. } \\ \text { Bales } \end{gathered}$ | $\begin{aligned} & \text { Average } \\ & \text { Spread } \\ & \text { Per Bale } \end{aligned}$ | $\begin{gathered} \text { No. } \\ \text { Bales } \end{gathered}$ | $\left\|\begin{array}{c} \text { Average } \\ \text { Spread } \\ \text { Per Bale } \end{array}\right\|$ | $\begin{aligned} & \text { No. } \\ & \text { Bales } \end{aligned}$ | Average Spread Per Bale | $\begin{gathered} \text { No. } \\ \text { Bales } \end{gathered}$ | $\left\|\begin{array}{c} \text { Average } \\ \text { Spread } \\ \text { Per Bale } \end{array}\right\|$ | $\stackrel{\text { Noo }}{\text { Bales }}$ | $\left\lvert\, \begin{aligned} & \text { Averaye } \\ & \text { Spread } \\ & \text { Per Bale } \end{aligned}\right.$ |
| 3/4. |  |  | 20 | . 04 |  |  |  | 8.56 | 22 |  |
| ${ }_{13 / 16}$ |  |  | ${ }_{243}^{163}$ |  |  |  | 88 |  |  | ${ }_{4}^{-1.56}$ |
| \%/78, | $121^{7}$ | $\begin{array}{r}4.01 \\ -.59 \\ \hline\end{array}$ | 243 86 | 4.09 4.26 | ${ }_{56}^{2}$ | -9.12 | $\begin{array}{r}88 \\ 241 \\ \hline\end{array}$ | - 6.35 | 340 <br> 504 | 4.26 <br> 3.50 |
|  | ${ }_{75}$ | 2.20 | ${ }_{25}$ | ${ }_{6.47}$ | 125 | -. 61 | 144 | ${ }_{7.28}$ | ${ }_{369}$ | ${ }_{3.93}$ |
| ${ }^{1} 1 / 3 / 16$. | 20 | ${ }_{6}^{4.37}$ | ${ }_{4}^{1}$ | 19.94 | + 46 | 3. ${ }^{3} 7$ | ${ }^{35}$ | 9.12 | 102 185 | 5.86 |
| $\begin{array}{ll}1 & 1 / 16 \\ 1 & 3 / 32\end{array}$ |  | 6.03 |  | 9.66 | 168 10 | 6.93 8.17 |  | 16.40 | 185 10 | 7.26. 8.17 |
| $11 / 8$. | 1 | 2.47 |  |  | 1 | ${ }_{3.60}$ | $\cdots$ | 18.20 | 3 | 8.09 |
| Total | 231 | 1.10 | 542 | 2.43 | 408 | 3.51 | 521 | 6.65 | 1702 | 3.80 |

Still more light is thrown on the nature of the spread if examined in its relation to staple length. Table 12 exhibits the average spread per bale for the different staple lengths represented in the sample secured. The relation of spread to these different staple lengths is shown graphically in Figure 3. Out of the nine lengths included only one shows a minus spread, or was bought presumably at a loss to the buyer. The greatest uniformity of spread is indicated for $\frac{7}{8}{ }^{\prime \prime}, 15 / 16^{\prime \prime}$, and $1^{\prime \prime}$ lengths. These lengths include at least 70 per cent of the total number of bales considered. The widest spread is shown for those staple lengths above an inch. There is a decided tendency for the spread to widen as the length increases. This indicates little, if any, effort on the part of the local buyer to recognize staple on the individual bale. A uniform spread for all staple lengths would have resulted had the cotton been bought strictly on a quality basis.

A similar fact holds here as in the case of the distribution on the
basis of grade that a considerable number of bales for the majority of staple lengths were bought at a price above the central market value or at a loss to the buyer. On the other hand, the bulk of the cotton showed a substantial plus spread, with the spread being more pronounced in the longer staple.

In relation to staple it was evident that little, if any, recognition was given length in the determination of local prices for individual bales. It is observed that spread is roughly divided into three groups. The first of these may be designated as "short" cotton, or the cotton of $\frac{3}{4}$ " and $13 / 16^{\prime \prime}$ in length. These lengths made up about 11 per cent of the total sample and taken together show a minus spread. The second group is that cotton included in $\frac{7_{3}^{\prime \prime}}{3}, 15 / 16^{\prime \prime}$, and $1^{\prime \prime}$ lengths, composing about 71 per cent of the total. The spread for this group is fairly uniform and about equal to the average for the entire sample. The third group, including $1-1 / 32,1-1 / 16,1-3 / 32$, and $1 \frac{1}{8}{ }^{\prime \prime}$ lengths, and composing about 18 per cent of the total, shows the widest spread, with a marked tendency to increase with the increase in length. It appears evident that a prevailing or type staple length is recognized for each local market, which more or less fixes the staple basis for that point. The lengths above this basis are penalized, while those lengths below are paid a premium.

## SUMMARY AND CONCLUSIONS

The primary object of this study is to determine the degree to which the local markets discriminate between the different grades and staples of cotton, and to show the extent to which central market values are reflected in the prices received by cotton growers.

A tabulation of monthly averages of local prices according to grade shows some effort on the part of the local trade to follow grade but not a consistent effort. Illustrations from the sale of individual bales of the same staple length for the same date revealed the fact that a given grade quite frequently sold for less than the next lower grade. In a study of the spread between local prices and central market values grouped according to grade, regardless of staple, it was quite evident that the low grades had been recognized and penalized. The higher grades seemed to have been bought on a flat basis, thus being automatically penalized.

In the case of staple there was no evidence of a conscious effort on the part of the local trade to reward long staple and penalize short staple. Each point seems to have had a staple rating and all cotton regardless of staple length bought on that basis. Such a practice fails to penalize cotton of short staple and to adequately reward cotton of long staple. This was evident in a study of the spread between local prices and central market values on the basis of staple. Thus it is seen that the great bulk of cotton is bought from the farmer, not on a quality basis, but on an average basis, and particularly so in regard to staple.

It is quite generally recognized that this method of local buying is
encouraging the farmers to plant varieties that will give them the highest yields regardless of staple. It has been estimated that of the fifteen million bushels or more of cotton seed planted in Texas during the spring of 1927, more than ten million bushels were gin-run seed, more than four and one-half million bushels were somewhat improved, and less than one-half million bushels were pedigreed seed. It is evident that the farmer who plants low quality varieties tends to reduce the average of the quality or spinning utility of the cotton of his community. However, under the method of buying "point cotton," the grower who grows cotton of high quality is penalized for his efforts to hold the average of the community high. In effect he is paying his neighbor who grows the poor-quality cotton a premium.

The responsibility for the solution of this problem cannot be placed upon any one group. It is one in which the full cooperation of growers, spinners, ginners, breeders, the cotton trade, and agricultural workers is required. Agricultural Experiment Stations in the cotton belt have done much to test and develop cotton varieties in an effort to keep the quality of cotton high. Cotton breeders have a constructive program of improvement, but all of these efforts fall far short of their possible application because the farmers' market fails to properly recognize and adequately reward a quality product.

The seriousness of the situation is recognized by the trade. A very wholesome and constructive attitude was recently expressed by H. G. Safford, President of the Texas Cotton Association, in an address delivered before the Seventeenth Annual Convention of the Texas Cotton Association at Galveston, Texas, relative to this immediate problem. He said:
"In a discussion of our 'buying methods' here at home, we must admit that we have been very remiss in a number of ways and have allowed to creep in, mistakes and abuses we should have avoided. By failure to give to the individual farmer the proper inducement for planting good seed and raising even stapled cotton of good character, we have helped to pave the way for the introduction of poor seed, such as half and half, of mixed planting and other reprehensible farming methods. We have allowed the State to lose its fair name and the premium it used to receive for the good character of its cotton. If we do adopt the principle of selling only against physical standards for staple, we must apply it equally in our buying. We must issue difference sheets for staple as well as for grade and must follow them as closely. In this way only, can the proper rewards be given to the growers for the use of good seed and proper farming methods and just penalties be assessed for poor seed and lack of intelligent farming. We must encourage 'community standardization,' proper ginning, crop rotation and the complete good farming program. In other words, we must help the farmer to improve the quality of our Texas cotton, but we cannot hope to succeed in this, unless we can show him that it is to his own direct profit and selfish
interest to do so. We must absolutely discontinue the unfair and unjust custom of buying 'point cotton.' "

What should be done about it? Evidently one of the first tasks is to assemble, analyze, and focus as much information as possible pertinent to the solution of the problem. The Bureau of Agricultural Economics, U. S. D. A., Division of Cotton Marketing, has under way some very constructive research work in this connection. For example, a ten per cent sample of the crop will be taken from which an estimate of the grade, staple, and character of the entire cotton crop will be made this year (1928). Also data as to the utilization of this cotton by mills are being studied. Such facts should help very much to indicate what we are producing as compared with what spinners need and are willing to pay most for. The final and important application of such information should be to help the grower fit his production program to mill needs. Such a program is possible only when the prices received by the grower reflect the values of the central market. For this situation to obtain, cotton must be sold in the local market on the same basis as in the central market-strictly a quality basis.

## APPENDIX

Table 1-a. Staple differences used in calculating the central market value of cotton.
STRICT GOOD MIDDLING

| Month | Short | 7/8' | 15/16 ${ }^{\prime \prime}$ | $1^{\prime \prime}$ | $11 / 32^{\prime \prime}$ | 11/16 ${ }^{\prime \prime}$ | $11 / 8^{\prime \prime}$ | $13 / 16^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 11 | 100 off | pass | 90 on | 150 on | 225 on | 300 on | 365 on | 465 on |
| Aug. 18 | 100 off | pass | 50 on | 110 on | 150 on | 225 | 325 on | 425 on |
| Aug. 25 | 100 off | pass | 100 on | 110 on | 115 on | 250 on | 335 on | 425 on |
| Sept. | 100 off | pass | 90 on | 120 on | 150 on | 250 on | 350 on | 450 on |
| Sept. 8 | 100 off | pass | 100 on | 125 on | 155 on | 225 on | 340 on | 425 on |
| Sept. 15 | 100 off | pass | 95 on | 130 on | 160 on | 210 on | 300 on | 385 on |
| Sept. 22 | 100 off | pass | 85 on | 115 on | 150 on | 275 on | 340 on | 440 on |
| Sept. 29 | 100 off | pass | 50 on | 100 on | 150 on | 275 on | 360 on | 460 on |
| Oct. | 100 off | pass | 30 on | 55 on | 105 on | 240 on | 315 on | 415 on |
| Oct. 13 | 100 off | pass | 15 on | 60 on | 115 on | 230 on | 305 on | 405 on |
| Oct. 20 | 100 off | pass | 25 on | 80 on | 130 on | 245 on | 320 on | 420 on |
| Oct. 27 | 100 off | pass | 20 on | 75 on | 130 on | 250 on | 325 on | 425 on |
| Nov. 3 | 100 off | pass | 25 on | 100 on | 150 on | 275 on | 350 on | 450 on |
| Nov. 10 |  | pass |  |  |  |  | 350 on | 450 on |
| Nov. 17 | 100 off | pass | 25 on | 90 on | 155 on | 275 on | 350 on | 450 on |
| Nov. 24 | 100 off | pass | 25 on | 90 on | 160 on | 280 on | 355 on | 455 on |
| Dec. | 90 off | pass | 60 on | 125 on | 180 on | 270 on | 345 on | 445 on |
| Dec. | 100 off | pass | 70 on | 135 on | 190 on | 285 on | 360 on | 460 on |
| Dec. 15 | 100 off | pass | 90 on | 135 on | 205 on | 290 on | 345 on | 440 on |
| Dec. 22 | 100 off | pass | 75 on | 135 on | 200 on | 275 on | 325 on | 400 on |
| Dec. 29 | 100 off | pass | 75 on | 135 on | 190 on | 290 on | 355 on | 445 on |
| Jan. | 100 off | pass | 75 on | 130 on | 185 on | 285 on | 340 on | 440 on |
| Jan. 12 | 100 off | pass | 75 on | 130 on | 185 on | 285 on | 340 on | 440 on |
| Jan. 19 | 100 off | pass | 75 on | 130 on | 185 on | 285 on | 335 on | 435 on |
| Jan. 26 | 100 off | pass | 55 on | 115 on | 170 o | 260 on | 315 on | 415 on |

GOOD MIDDLING


Table 1-a. Staple differences used in calculating the central market value of cotton.
STRICT MIDDLING

| Month | Short | $7 / 8^{\prime \prime}$ | $15 / 16^{\prime \prime}$ | $1^{\prime \prime}$ | $11 / 32^{\prime \prime}$ | $11 / 16^{\prime \prime}$ | $11 / 8^{\prime \prime}$ | $13 / 16^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 11 | 100 off | pass | 75 on | 130 on | 175 on | 275 on | 350 on | 450 on |
| Aug. 18 | 100 off | pass | 50 on | 105 on | 160 on | 235 on | 310 on | 410 on |
| Aug. 25 | 100 off | pass | 75 on | 100 on | 125 on | 235 on | 310 on | 410 on |
| Sept. | 100 off | pass | 65 on | 100 on | 135 on | 240 on | 315 on | 410 on |
| Sept. 8 | 100 off | pass | 60 on | 95 on | 140 on | 215 on | 290 on | 400 on |
| Sept. 15 | 100 off | pass | 60 on | 95 on | 135 on | 210 on | 285 on | 395 on |
| Sept. 22 | 100 off | pass | 50 on | 100 on | 150 on | 235 on | 310 on | 400 on |
| Sept. 29 | 100 off | pass | 45 on | 100 on | 150 on | 275 on | 345 on | 445 on |
| Oct. | 100 off | pass | 10 on | 65 on | 115 on | 250 on | 315 on | 415 on |
| Oct. 13 | 100 off | pass | 15 on | 75 on | 130 on | 260 on | 335 on | 435 on |
| Oct. 20 | 100 off | pass | 20 on | 70 on | 125 on | 250 on | 325 on | 425 on |
| Oct. 27 | 100 off | pass | 20 on | 75 on | 130 on | 255 on | 330 on | 430 on |
| Nov. | 100 off | pass | 40 on | 95 on | 150 on | 275 on | 350 on | 450 on |
| Nov. 10 | 100 off | pass | 50 on | 105 on | 165 on | 275 on | 350 on | 450 on |
| Nov. 17 | 100 off | pass | 50 on | 110 on | 170 on | 275 on | 350 on | 450 on |
| Nov. 24. | 100 off | pass | 45 on | 105 on | 165 on | 265 on | 340 on | 440 on |
| Dec. | 100 off | pass | 45 on | 105 on | 165 on | 245 on | 320 on | 420 on |
| Dec. 8 | 100 off | pass | 35 on | 105 on | 170 on | 245 on | 310 on | 415 on |
| Dec. 15 | 100 off | pass | 50 on | 120 on | 190 on | 270 on | 325 on | 415 on |
| Dec. 22 | 100 off | pass | 35 on | 95 on | 155 on | 250 on | 300 on | 375 on |
| Dec. 29 | 100 off | pass | 35 on | 100 on | 165 on | 260 on | 300 on | 390 on |
| Jan. | 100 off | pass | 40 on | 105 on | 165 on | 255 on | 290 on | 380 on |
| Jan. 12 | 100 off | pass | 40 on | 90 on | 140 on | 255 on | 305 on | 390 on |
| Jan. 19 | 100 off | pass | 35 on | 90 on | 150 on | 250 on | 300 on | 385 on |
| Jan. 26 | 100 off | pass | 30 on | 90 on | 150 on | 245 on | 290 on | 380 on |

MIDDLING

| Aug. 11 | 100 off | pass | 30 on | 100 on | 150 on | 240 on | 315 on | 415 on |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 18 | 100 off | pass | 50 on | 80 on | 110 on | 210 on | 285 on | 385 on |
| Aug. 25 | 100 off | pass | 50 on | 60 on | 75 on | 200 on | 275 on | 375 on |
| Sept. | 100 off | pass | 50 on | 75 on | 100 on | 185 on | 260 on | 360 on |
| Sept. | 100 off | pass | 45 on | 75 on | 100 on | 175 on | 250 on | 335 on |
| Sept. 15 | 100 off | pass | 45 on | 70 on | 100 on | 165 on | 235 on | 325 on |
| Sept. 22 | 100 off | pass | 30 on | 65 on | 105 on | 185 on | 260 on | 350 on |
| Sept. 29 | 100 off | pass | 15 on | 50 on | 90 on | 190 on | 265 on | 365 on |
| Oct. | 100 off | pass | 10 on | 45 on | 80 on | 185 on | 260 on | 360 on |
| Oct. 13 | 100 off | pass | 10 on | 45 on | 80 on | 210 on | 295 on | 395 on |
| Oct. 20 | 100 off | pass | 10 on | 40 on | 80 on | 225 on | 300 on | 400 on |
| Oct. 27 | 100 off | pass | 20 on | 55 on | 90 on | 250 on | 325 on | 425 on |
| Nov. 3 | 100 off | pass | 30 on | 75 on | 120 on | 250 on | 315 on | 415 on |
| Nov. 10 | 100 off | pass | 25 on | 70 on | 115 on | 245 on | 320 on | 420 on |
| Nov. 17 | 100 off | pass | 25 on | 70 on | 115 on | 245 on | 320 on | 420 on |
| Nov. 24. | 100 off | pass | 25 on | 70 on | 110 on | 235 on | 315 on | 415 on |
|  |  |  |  |  |  |  |  | 390 on |
| Dec. 8 | 100 off | pass | 35 on | 75 on | 125 on | 215 on | 290 on | 390 on |
| Dec. 15 | 100 off | pass | 45 on | 90 on | 140 on | 245 on | 300 on | 390 on |
| Dec. 22 | 100 off | pass | 25 on | 75 on | 125 on | 225 on | 280 on | 375 on |
| Dec. 29 | 100 off | pass | 30 on | 80 on | 130 on | 235 on | 275 on | 375 on |
|  |  | pass |  |  | 125 on |  |  |  |
| Jan. 12 | 100 off | pass | 15 on | 55 on | 100 on | 215 on | 265 on | 350 on |
| Jan. 19 | 100 off | pass | 15 on | 65 on | 120 on | 215 on | 265 on | 350 on |
| Jan. 2 | 100 off | pass | 15 on | 65 on | 120 on | 215 on | 265 on | 350 on |

Table 1-a. Staple differences used in calculating the central market value of cotton.
STRICT LOW MIDDLING

| Month | Short | 7/8 ${ }^{\prime \prime}$ | 15/16 ${ }^{\prime \prime}$ | 1' | $11 / 32^{\prime \prime}$ | $11 / 16^{\prime \prime}$ | 1 1/8' | $13 / 16^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 11 | 100 off | pass | 40 on | 95 on | 150 on | 240 on | 315 on | 415 |
| Aug. 18 | 100 off | pass | 35 on | 85 on | 135 on | 210 on | 285 on | 385 on |
| Aug. 25 | 100 off | pass | 35 on | 85 on | 135 on | 210 on | 285 on | 385 on |
| Sept. | 100 off | pass | 50 on | 85 on | 125 on | 210 on | 280 on | 380 on |
| Sept. 8 | 100 off | pass | 50 on | 75 on | 110 on | 195 on | 265 on | 365 on |
| Sept. 15 | 100 off | pass | 55 on | 70 on | 100 on | 180 on | 255 on | 350 on |
| Sept. 22 | 100 off | pass | 45 on | 75 on | 100 on | 200 on | 275 on | 365 on |
| Sept. 29 | 100 off | pass | 20 on | 55 on | 85 on | 185 on | 260 on | 360 on |
| Oct. | 100 off | pass | 25 on | 55 on | 85 on | 185 on | 260 on | 360 on |
| Oct. 13 | 100 off | pass | 15 on | 45 on | 75 on | 175 on | 250 on | 350 on |
| Oct. 20 | 100 off | pass | 15 on | 45 on | 75 on | 175 on | 250 on | 350 on |
| Oct. 27 | 100 off | pass | 30 on | 65 on | 100 on | 210 on | 255 on | 385 on |
| Nov. 3 | 100 off | pass | 30 on | 65 on | 105 on | 215 on | 290 on | 390 on |
|  | 100 off | pass | 25 on | 65 on | 95 on | 205 on | 280 on | 380 on |
| Nov. 17 | 100 off | pass | 25 on | 65 on | 95 on | 205 on | 280 on | 380 on |
| Nov. | 100 off | pass | 20 on | 60 on | 85 on | 200 on | 275 on | 375 on |
| Dec. | 100 off | pass | 15 on | 60 on | 105 on | 180 on | 255 on | 355 on |
| Dec. 8 | 100 off | pass | 10 off | 35 on | 80 on | 145 on | 220 on | 320 on |
| Dec. 15 | 95 off | pass | 25 on | 70 on | 120 on | 190 on | 240 on | 315 on |
| Dec. 22 | 90 off | pass | 25 on | 60 on | 100 on | 200 on | 265 on | 325 on |
| Dec. 29 | 100 off | pass | 25 on | 35 on | 85 on | 200 on | 260 on | 325 on |
| Jan. | 100 off | pass | 25 on. | 35 on | 85 on | 190 on | 255 on | 325 on |
| Jan. 12 | 100 off | pass | 10 on | 40 on | 70 on | 185 on | 240 on | 310 on |
| Jan. 19 | 100 off | pass | 15 on | 45 on | 75 on | 190 on | 240 on | 315 on |
| Jan. | 100 off | pass | 20 on | 45 on | 75 on | 175 on | 225 on | 300 on |

LOW MIDDLING


Table 1-a. Staple differences used in calculating the central market value of cotton.
STRICT GOOD ORDINARY

| Month | Short | $7 / 8^{\prime \prime}$ | 15/16 ${ }^{\prime \prime}$ | $1^{\prime \prime}$ | $11 / 32^{\prime \prime}$ | $11 / 16^{\prime \prime}$ | $11 / 8^{\prime \prime}$ | $13 / 16^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 11 | 100 off | pass | 95 on | 130 on | 170 on | 295 on | 365 on | 465 on |
| Aug. 18 | 90 off | pass | 65 on | 110 on | 150 on | 275 on | 355 on | 435 on |
| Aug. 25 | 90 off | pass | 65 on | 110 on | 150 on | 275 on | 350 on | 440 \%on |
| Sept. | 115 off | pass | 35 on | 100 on | 145 on | 300 on | 375 on | 450 on |
| Sept. | 100 off | pass | 65 on | 90 on | 175 on | 300 on | 375 on | 450 on |
| Sept. 15 | 100 off | pass | 75 on | 90 on | 190 on | 310 on | 365 on | 435 on |
| Sept. 22 | 100 off | pass | 65 on | 100 on | 135 on | 285 on | 365 on | 440 on |
| Sept. 29 | 100 off | pass | 65 on | 90 on | 140 on | 260 on | 355 on | 455 on |
| Oct. | 100 off | pass | 60 on | 85 on | 115 on | 250 on | 335 on | 435 on |
| Oct. 13 | 100 off | pass | 75 on | 100 on | 115 on | 240 on | 305 on | 405 on |
| Oct. 20 | 100 off | pass | 40 on | 65 on | 90 on | 215 on | 290 on | 390 on |
| Oct. 27 | 100 off | pass | 50 on | 75 on | 100 on | 225 on | 300 on | 400 on |
| Nov. 3 | 100 off | pass | 15 on | 40 on | 65 on | 185 on | 260 on | 360 on |
| Nov. 10 | 100 off | pass | 10 on | 25 on | 55 on | 180 on | 255 on | 355 on |
| Nov. 17 | 100 off | pass | 10 on | 35 on | 55 on | 180 on | 255 on | 355 on |
| Nov. 24 | 100 off | pass | 5 on | 30 on | 45 on | 170 on | 245 on | 345 on |
| Dec. | 100 off | pass | 10 off | 30 on | 65 on | 180 on | 255 on | 355 on |
| Dec. | 100 off | pass | 25 off | 15 on | 50 on | 150 on | 245 on | 345 on |
| Dec. 15 | 100 off | pass | 35 on | 50 on | 75 on | 180 on | 175 on | 345 on |
| Dec. 22 | 100 off | pass | 25 on | 50 on | 55 on | 150 on | 215 on | 315 on |
| Dec. 29 | 100 off | pass | 25 on | 50 on | 75 on | 135 on | 210 on | 280 on |
| Jan. | 100 off | pass | 25 on |  |  | 140 on | 210 on | 310 on |
| Jan. 12 | 100 off | pass | 25 on | 50 on | 75 on | 150 on | 215 on | 315 on |
| Jan. 19 | 100 on | pass | 25 on | 50 on | 75 on | 150 on | 215 on | 315 on |
| Jan. 26 | 100 off | pass | 25 on | 45 on | 65 on | 140 on | 205 on | 305 on |

GOOD ORDINARY



[^0]:    $\dagger$ As of July 1, 1928.
    *Dean, School of Veterinary Medicine.
    **In cooperation with U. S. Department of Agriculture.
    ***In cooperation with the School of Agriculture.

[^1]:    *One bale secured in February.

[^2]:    *All middling spot prices and grade differences used were furnished by the Division of Cotton Marketing, Bureau of Agricultural Economics.

