

A STUDY OF THE VARIATIONS IN LOCAL WHEAT PRICES
BETWEEN NORTHWESTERN AND SOUTHWESTERN KANSAS
DURING JULY AND AUGUST 1945

by

GERALD JAMES BROWN

B. S., Kansas State College, 1936

A THESIS

submitted in partial fulfillment of the

requirements for the degree of

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1946

TABLE OF CONTENTS

INTRODUCTION.....	1
PURPOSE.....	7
REVIEW OF LITERATURE.....	7
DATA AND METHODS.....	10
METHODS OF ANALYSIS.....	12
DISCUSSION OF RESULTS.....	14
SUMMARY AND CONCLUSIONS.....	29
ACKNOWLEDGEMENTS.....	30
REFERENCES.....	31

INTRODUCTION

Kansas wheat producers grow many different varieties of hard winter wheat. These varieties vary widely in milling and baking qualities. Some varieties have a thick bran, the flour yield is not as high as the test weight would indicate, and bread produced from these varieties has smaller loaf volume and is of inferior quality. The principal varieties grown in Kansas having these characteristics are Early Blackhull, Chiefkan, and Redchief.

Wheats may be of good or poor milling quality, irrespective of their baking qualities. Wheat has good milling quality if it tempers readily, produces a high yield of flour, mills without excessive use of power, and the flour is of acceptable ash content, color, and degree of freedom from bran specks. Chiefkan and Redchief wheats give good flour yields, but not as high as their test weights would indicate.

Turkey, a variety of wheat introduced into Kansas in 1873 by the Mennonites, was the dominant variety of wheat in this state until about 1918. Turkey is the variety which is most widely preferred by the milling industry as meeting the needs of the consumer. Turkey, therefore, serves as a standard in the evaluation of baking qualities.

Varieties which differ too widely from Turkey in baking characteristics are not desired by millers of Kansas wheat.

Chiefkan and Redchief are wheat varieties which have been found to possess undesirable bread baking qualities. A variety which requires special treatment in the baking process is more or less undesirable. So far, no method has been found whereby Chiefkan and Redchief will produce results equal to those produced by standard varieties.¹

Kansas wheat enters the trade for three principal uses: first, domestic milling of flour for use by large bakeries; second, blending with weaker wheat, both in the United States and other countries, for the purpose of increasing the strength of flour; third, domestic milling of family flour. The first two uses require high protein content of good quality. Wheat of weaker proteins can be used for producing family flour.

Since the passage of the United States Grain Standards Act in 1916, wheat has been uniformly graded on test weight, moisture content, damage, and other grading factors. The percentage of protein has never been a grading factor, but percentage of protein is furnished with the grade certificate of a sample as supplemental information and is a price making factor. However, the quality of protein which is a characteristic of a variety, is not available to the buyer unless he is able to identify the variety from kernel characteristics.

The market has grouped numerous varieties according to their commercial utility into market classes. This system is acceptable so long as varieties within a class are similar, and

¹ Research in Milling Industry. Kansas Agricultural Experiment Station, November 1942, pp. 3-11.

so long as each variety is equally suitable for given uses. A variety having utility different from that of the class in which it is placed will cause variations in the usefulness of the entire class. Variations in varieties may increase the costs of processing and may result in variations in quality of finished product. Such variations in varieties may cause discrimination in price against areas producing wheat of less desirable milling and baking characteristics.

Plants possess the ability of reproducing accurately, plant characteristics peculiar to their kind, year after year. Chiefkan wheat is always beardless and Tenmarq is always bearded, regardless of where these varieties are grown. Quality of protein of a given variety remains the same from year to year, just as do visible plant characteristics. The quality of protein in Chiefkan wheat remains the same, just as any other varieties maintain their given quality of protein.

Mill buyers know the areas in Kansas that grow a large percentage of Chiefkan and Redchief, and it is thought that they might discriminate in price against wheat from those areas. This discrimination could occur by the buyer's being able to identify Chiefkan and Redchief or from knowing the point of origin of the grain.

A system of identifying wheat varieties by kernel characteristics has been developed by L. P. Reitz (1944) of the Kansas Agricultural Experiment Station. Samples of threshed grain of hard wheat varieties are similar but small differences exist.

Wheats of the Chiefkan class, which also includes Redchief, can be distinguished from wheats of the Tenmarq or Turkey class with reasonable accuracy. Schools to teach mill buyers and others to identify varieties of wheat from kernel characteristics have been conducted at Kansas State College by Mr. Reitz. As a result of this work, millers are able to sort out carlots of wheat of the varieties desired. In this manner, buyers on the terminal markets can obtain mill stocks for specific uses.²

The percentage of the wheat acreage in Kansas planted to Redchief and Chiefkan varieties has increased rapidly in recent years. Receipts of these varieties on the terminal markets have increased accordingly. Because of the large percentage of these varieties on the market, they have become a price influencing factor.

It is generally agreed by agronomists that beardless wheat grown in central and western Kansas is either Chiefkan or Redchief. There are other beardless varieties grown in the eastern third of the state where soft red winter wheat is grown, but this study of variations in wheat prices is concerned only with hard winter wheat and with local prices in the western two-thirds of the state where varieties of hard wheat are universal.

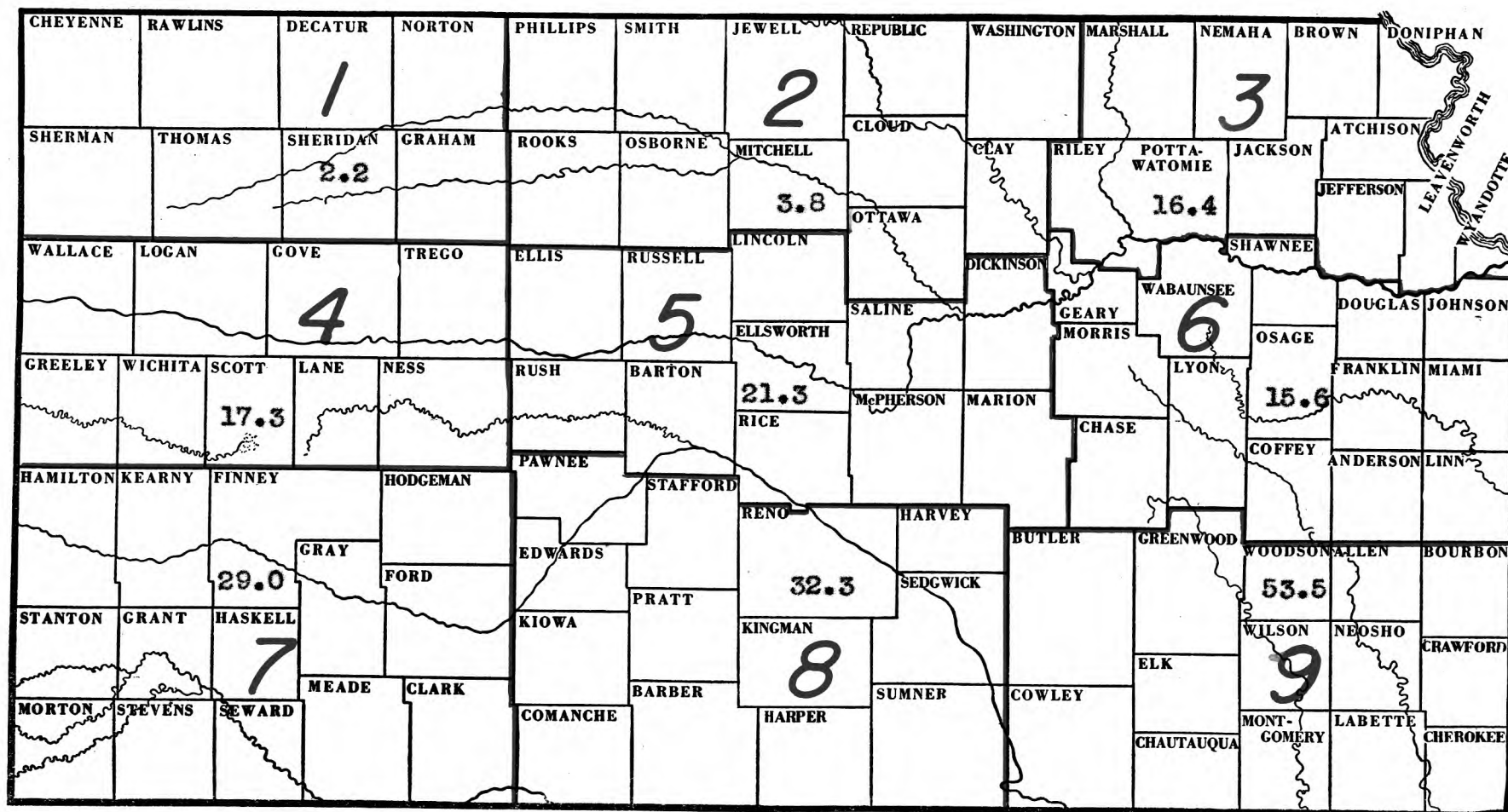
L. P. Reitz, of the Kansas Agricultural Experiment Station, estimated the acreage of Chiefkan in 1938 at one percent of the total wheat acreage. Redchief was introduced as a new variety

² L. P. Reitz and E. G. Heyne. Wheat Planting and Improvement in Kansas, Contribution No. 350, Kansas Agricultural Experiment Station, pp. 10-13, 1944.

in 1940. Since then the acreage of beardless hard winter wheat has increased rapidly. According to a frontage survey conducted in the spring of 1945 by H. L. Collins, Agricultural Statistician for Kansas, 20.6 percent of the Kansas wheat acreage was of the beardless varieties.

Figure 1 indicates the areas of high and low percentages of beardless wheat in Kansas in 1945 by crop reporting districts. Beardless wheat in districts 1, 2, 4, 5, 7, and 8 is assumed to be either Chiefkan or Redchief. These percentages were: district 8, 32.3 percent; district 7, 29.0 percent; district 5, 21.3 percent; district 4, 17.3 percent; district 2, 3.8 percent; and district 1, 2.2 percent. For this study the area referred to as Northwestern Kansas includes districts 1 and 2 and Southwestern Kansas includes districts 4, 5, 7, and 8, as shown in Fig. 1. The Southwestern area comprises the section with the high percentage of Chiefkan and Redchief varieties. The Northwestern section is an area with a high percentage of the varieties possessing good milling and baking qualities.

Fig. 1. The percentage of beardless wheat grown in Kansas in 1945 by crop reporting districts.



As reported by H. L. Collins, Agricultural Statistician, United States Department of Agriculture, Bureau of Agricultural Economics, Topeka, Kansas.

PURPOSE

The objectives of this investigation were to study the variations in wheat prices between Northwestern and Southwestern Kansas and to determine whether or not wheat from these areas sold for the same prices on terminal markets. This study of wheat prices was made for July and August of 1945, Northwestern Kansas being the area having a large percentage of the varieties with good milling and baking qualities and Southwestern Kansas the area of a large percentage of the varieties with undesirable milling and baking qualities.

REVIEW OF LITERATURE

The price received by farmers for wheat tends to be the terminal market price, less cost of freight to the terminal market, less commission at the terminal market, and less the local handling margin. Local margins are affected by several factors such as the extent of competition and the kind of competition. Green (1923) recognized that another factor affecting local handling margins was the protein content of the wheat purchased by the local buyers. "The fact that the local buyer can get an extra premium at the central market for protein content enables him to bid up the local price so as to apparently narrow the margin; whereas, in fact the local margin may not be narrowed

because of the extra price received at the central market."³

In 1925 Call, Green and Swanson said there was an increasing demand for hard wheat high in protein. This came about as a result of the transfer of bread making from the homes to the commercial bakeries. Most bread before this time had been made in the homes and protein content of the flour was not important. The housewife mixes bread by hand. It is handled gently as compared to the treatment received in mechanical mixers. Therefore, the change that took place in the transfer of bread making to commercial bakeries was one of the important reasons for the increased demand for high protein wheat. The baker wants a flour that will make dough strong enough to withstand the severe treatment of the mechanical mixers. To make such a dough requires high protein wheat.⁴

In addition to protein content the quality of protein has become important as a price making factor. Reitz and Heyne (1944) cited a report by Larmour in which he divided what the trade means by quality into three parts, namely: "(a) fundamental quality or capacity of the flour with reference to a standard to fulfill the predictions made on the basis of its protein content as affected by the germ plasm of the wheat plant and the environment under which it is grown; (b) specific adaptability or suitability of wheat for a certain method of milling

³ R. M. Green and E. B. Ballow, Country Elevator Margins and Costs of Marketing Wheat. Bulletin 246, Kansas Agricultural Experiment Station, Sept. 1928, p. 18.

⁴ L. E. Call, R. M. Green and C. O. Swanson, How to Grow and Market High Protein Wheat. Circular 114, Kansas Agricultural Experiment Station, June 1925, pp. 1-5.

or particular baking technic; and (c) preference of individuals for certain classes, grades, or varieties."⁵

Reitz and Heyne (1944) cited reports by Parker and Bayfield in which preference ratings were requested from 26 laboratories after each had an opportunity to bake flour from Turkey, Tenmarq, Blackhull, and Chiefkan milled from wheat grown on adjacent acre plots. Chiefkan was ranked fourth by every laboratory.⁶

Reitz and Heyne (1944) cited work done by Larmour, et. al., in which they found Chiefkan to possess distinctly inferior quality, noting that flour of Chiefkan at 14.6 percent protein gave the same sized loaves as standard varieties at 11.2 percent protein.⁷

Dines (1939) found in a cooperative test by nine milling and baking laboratories in Oklahoma and Kansas that Turkey was preferred and that Chiefkan was decidedly inferior as a variety for making flour for commercial baking. Most of the criticisms of Chiefkan in these tests were poor loaf volume and the short mixing period required.⁸

Data cited above show that flour from Chiefkan and Redchief wheat varieties are decidedly inferior in baking quality as

5 E. G. Heyne and L. P. Reitz, Characteristics and Origins of Blackhull Wheats. Report from Journal of the Amer. Soc. of Agr., Vol. 36, No. 9, Sept. 1944, p. 774.

6 Ibid., p. 774.

7 E. G. Heyne and L. P. Reitz, Characteristics and Origins of Blackhull Wheats. Report from Journal of the Amer. Soc. of Agr., Vol. 36, No. 9, Sept. 1944, pp. 772-775.

8 Frederic T. Dines, Quality of Wheat Varieties Grown in Oklahoma in 1938. Exp. Sta. Circ. No. 85, Oklahoma Agricultural and Mechanical College, Sept. 1939, pp. 5-15.

compared to standard varieties. These wheats differ from Turkey and other desirable milling and baking varieties in dough handling properties and bakeshop performance. They therefore introduce a greater variability in quality among wheats on the market.

DATA AND METHODS

Prices of wheat in Northwestern and Southwestern Kansas were obtained from two sources, local buyers and prices reported by farmers to the Kansas Agricultural Experiment Station. Prices paid for wheat on the terminal market were collected from a milling company.

Daily prices paid to farmers were obtained from 14 local buyers. Some of the prices were on cards kept by the local buyers and part were taken from their scale books. The average protein content used as a basis of pricing wheat by the local buyers was collected. Seven of the elevators were located in Northwestern Kansas and seven in Southwestern Kansas.

To check prices paid by local buyers and to furnish additional data, farm prices collected by the Kansas Agricultural Experiment Station were used in this study. These prices are reported by farmers as prices paid for No. 2 hard wheat at their local elevators on the first of each month.

The wheat prices of the two areas were equalized by adding the amount of the freight per bushel to Kansas City, Missouri, to the local prices. This was necessary in order to have all

the prices on a comparable basis.

To determine if mill buyers paid higher prices for the varieties of wheat having more desirable milling and baking qualities or for wheat from the different areas of Kansas, an effort was made to obtain prices on carlot purchases of wheat. One of the largest milling companies in Kansas City, Missouri, furnished prices paid for carlots of wheat together with protein content, test weight, and point of origin. Millers in Wichita and Hutchinson indicated that they purchased only wheat of the desirable varieties; consequently, no comparisons could be made.

In comparing prices of No. 2 wheat, the differences paid for variations in protein content must be eliminated to obtain prices which are on a comparable basis. This was done by use of premiums paid for protein as reported on carlot sales. These premiums paid or indicated for each range of protein were taken from the Kansas City Grain Market Review during July and August 1945. The Kansas City Grain Market Review is the daily report of the Kansas City Grain market. The premium paid is the difference between the carlot price and the current future price.

For example, on July 2, 1945, the premium for No. 2 dark hard of the range of protein 11.40 percent and less was 3 to 4½ cents over the July future price of \$1.58½ (closing price). This means that wheat of this grade with 11.40 percent or less protein was selling for \$1.61½ to \$1.63 per bushel.

The following table taken from the Kansas City Grain Market Review of July 2 is an example of premiums paid or indicated for

cash wheat, compared with the Kansas City current future.

Hard and dark												
Protein	:	No. 1			:	No. 2			:	No. 3		
11.40 and less		4	@	5 $\frac{1}{2}$		3	@	4 $\frac{1}{2}$		2	@	3 $\frac{1}{2}$
11.50 - 11.90		4 $\frac{1}{2}$	@	8 $\frac{1}{2}$		3 $\frac{1}{2}$	@	7 $\frac{1}{2}$		2 $\frac{1}{2}$	@	6 $\frac{1}{2}$
12.00 - 12.40		7	@	10 $\frac{1}{2}$		6	@	9 $\frac{1}{2}$		5	@	8 $\frac{1}{2}$
12.50 - 12.90		10	@	12 $\frac{1}{2}$		9	@	11 $\frac{1}{2}$		8	@	10 $\frac{1}{2}$
13.00 - 13.90		13 $\frac{1}{2}$	@	14 $\frac{1}{2}$		12 $\frac{1}{2}$	@	13 $\frac{1}{2}$		11 $\frac{1}{2}$	@	12 $\frac{1}{2}$
14.00 - 14.40		14 $\frac{1}{2}$	@	16 3/4		13 $\frac{1}{2}$	@	15 3/4		12 $\frac{1}{2}$	@	14 3/4

It was necessary to obtain the percentage of protein of the 1945 wheat crop by counties to use with the prices of wheat reported by local farmers. The Kansas Agricultural Experiment Station each year conducts cooperative variety tests in part of the counties in the state. The protein content of these variety tests were obtained for this purpose. It is realized that protein quantity will vary from field to field in the county, depending on cultural practices and weather conditions. However, these protein samples should be an accurate indicator of the protein content of the wheat for the county as a whole.

METHODS OF ANALYSIS

The premiums paid or indicated over the current future as reported by the Kansas City Grain Market Review were tabulated for each day of July and August. The premiums tabulated were for the protein contents grouped as follows: 11.40 percent and

less; 11.50 - 11.90; 12.00 - 12.40; 12.50 - 12.90; 13.00 - 13.90; 14.00 - 14.40. The closing quotation of the current future was tabulated for each day. The lower range of premiums paid was added to the closing future quotation. These prices were then used as a basis for calculating the margin between the equalized price paid by local buyers and the price quoted for a comparable grade and protein percentage in Kansas City. This method eliminated the differences in prices paid because of protein content of the wheat from the various country points.

The margins taken by the local buyers for the 14 country points were then tabulated by days for the months of July and August. The country points were grouped according to the area of Kansas in which they were located. This resulted in seven in the Northwestern Kansas group and seven in the Southwestern Kansas group. Daily average margins and monthly average margins for each group were calculated.

The equalized prices reported by farmers on August 1 and September 1 from six counties in each of the two areas, Northwestern and Southwestern Kansas, were averaged. The average protein of the six counties as reported by the Kansas Agricultural Experiment Station from the cooperative variety tests was used to determine the protein range for the groups. Margins were then calculated as indicated above. This resulted in a margin for each group as of August 1 and September 1.

The carlot prices paid by a milling company for wheat on the Kansas City cash market were compared with the minimum of

the range of carlot prices for wheat of a comparable grade and protein content. This established margins equal to or above the minimum of the range of carlot prices. The point of origin was known for each car load purchased. The margins were then grouped into Northwestern Kansas and Southwestern Kansas groups. Average margins paid during July and August were calculated.

DISCUSSION OF RESULTS

The average equalized prices paid to farmers in the two areas (Table 1) indicate that wheat producers in the Southwestern area received a higher price for their wheat than the farmers in the Northwestern area, when protein content is not considered. This was the situation for both the months of July and August.

As indicated before in the study, protein content is a major price determining factor. The average protein and average prices on Table 1 are simple averages. The average protein in the Southwestern area was 12.21 percent, and the average in the Northwestern area was 11.07. Thus the equalized average prices between the two areas cannot be compared unless the differences in protein are accounted for.

When grade and protein content are considered, the average margins taken by local buyers in the Southwestern area (Table 2) during July were larger than those taken by local buyers in the Northwestern area.

Table 1. Wheat prices paid to farmers as reported by local buyers equalized to a Kansas City basis by adding freight.

Northwestern Kansas										Southwestern Kansas							
Country point	Republic	Prairie View	Warrick	Belleville	Niles	Lenora	Penokee	Average		Tribune	Bloom	Jetmore	Ness City	Bazine	Hanston	Haggard	Average
County	Republic	Phillips	Republic	Republic	Ottawa	Norton	Graham			Greeley	Ford	Hodgeman	Ness	Ness	Hodgeman	Gray	
Average protein:	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11	11	10 $\frac{1}{2}$	11	11	11.07		12 $\frac{1}{2}$	12	12	12	13	12	12	12.21
1945																	
July 9	\$1.55 $\frac{1}{2}$	\$1.56 $\frac{1}{2}$	\$1.53 $\frac{1}{2}$	\$1.53	\$1.50 $\frac{1}{2}$		\$1.51			\$1.53	\$1.50 $\frac{1}{2}$	\$1.55	\$1.57	\$1.52	\$1.53		
10	1.53 $\frac{1}{2}$	1.54 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.53	1.50 $\frac{1}{2}$	\$1.51	1.51			1.53	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.53		
11	1.53 $\frac{1}{2}$	1.54 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.53	1.51 $\frac{1}{2}$	1.51	1.51			1.53	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.53		
12	1.53 $\frac{1}{2}$	1.54 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.53	1.51 $\frac{1}{2}$	1.51	1.51			1.53	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.55		
13	1.53 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.53	1.51 $\frac{1}{2}$	1.51	1.51			1.53	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.54		
14	1.53 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.52	1.51 $\frac{1}{2}$	1.51	1.51			1.53	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.54		
16	1.51 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.52	1.50 $\frac{1}{2}$	1.51	1.51		\$1.51 $\frac{1}{2}$	1.51	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.54		
17	1.51 $\frac{1}{2}$	1.50 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.52	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.51	1.50 $\frac{1}{2}$	1.55	1.57	1.52	1.54		
18	1.51 $\frac{1}{2}$	1.47 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.49	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.51	1.52 $\frac{1}{2}$	1.55	1.57	1.52	1.54		
19	1.51 $\frac{1}{2}$	1.47 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.49	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.51	1.52 $\frac{1}{2}$	1.55	1.57	1.50	1.54		
20	1.51 $\frac{1}{2}$	1.49 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.50		1.51 $\frac{1}{2}$	1.52	1.52 $\frac{1}{2}$	1.55	1.57	1.50	1.54		
21	1.52 $\frac{1}{2}$	1.49 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.52	1.50 $\frac{1}{2}$	1.51	1.50		1.51 $\frac{1}{2}$	1.52	1.52 $\frac{1}{2}$	1.55	1.57	1.53	1.54		
23	1.52 $\frac{1}{2}$	1.50 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.50		1.51 $\frac{1}{2}$	1.52	1.52 $\frac{1}{2}$	1.55	1.57	1.53	1.56		
24	1.52 $\frac{1}{2}$	1.50 $\frac{1}{2}$	1.52 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.50		1.51 $\frac{1}{2}$	1.52	1.54 $\frac{1}{2}$	1.55	1.57	1.52	1.56		
25	1.52 $\frac{1}{2}$	1.50 $\frac{1}{2}$	1.52 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.50		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.52	1.56		
26	1.52 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.55	1.55		
27	1.52 $\frac{1}{2}$	1.51 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.55	1.55		
28	1.52 $\frac{1}{2}$	1.49 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.51	1.51		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.55	1.55		
30	1.52 $\frac{1}{2}$	1.49 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.48	1.51		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.55	1.55		
31	1.53 $\frac{1}{2}$	1.49 $\frac{1}{2}$	1.53 $\frac{1}{2}$	1.50	1.50 $\frac{1}{2}$	1.48	1.51		1.51 $\frac{1}{2}$	1.52	1.55 $\frac{1}{2}$	1.55	1.57	1.55	1.55		
Average	1.52	1.51	1.53	1.51	1.50	1.51	1.51	\$1.51 $\frac{1}{2}$	1.51	1.52	1.53	1.55	1.57	1.53	1.54	\$1.53 $\frac{5}{8}$	

Table 1 (continued).

Northwestern Kansas									Southwestern Kansas						
Country point	Republic	Prairie View	Warrick	Belleville	Niles	Lenora	Penokee	Average	Tribune	Bloom	Jetmore	Ness City	Bazine	Hanston	Haggard
County	Republic	Phillips	Republic	Republic	Ottawa	Norton	Graham		Greeley	Ford	Hodgeman	Ness	Ness	Hodgeman	Gray
Average protein:	11½	11½	11	11	10½	11	11	11.07	12	12	12	12	13	12	12
1945															
August 1	1.52½	1.52½	1.53½	1.50	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.57	1.55	1.55
2	1.54½	1.52½	1.53½	1.51	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.57	1.55	1.55
3	1.54½	1.53	1.53½	1.51	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.57	1.55	1.56
4	1.54½	1.53	1.53½	1.51	1.50½	1.48	1.51		1.54½	1.55	1.55½	1.55	1.57	1.55	1.56
6	1.54½	1.54	1.53½	1.51	1.51½	1.48	1.51		1.54½	1.55	1.55½	1.55	1.57	1.55	1.56
7	1.54½	1.53	1.53½	1.54	1.50½	1.48	1.51		1.54½	1.55	1.55½	1.55	1.59	1.55	1.56
8	1.54½	1.53	1.53½	1.53	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.59	1.55	1.56
9	1.54½	1.53	1.52½	1.53	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.59	1.55	1.56
10	1.54½	1.51	1.56½	1.53	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.59	1.55	1.57
11	1.53½	1.51	1.56½	1.53	1.50½	1.48	1.51		1.53½	1.55	1.55½	1.55	1.59	1.55	1.57
13	1.53½	1.51	1.53½	1.52	1.50½	1.50	1.51		1.53½	1.55	1.55½	1.55	1.59	1.55	1.57
14	1.53½	1.49	1.53½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.55	1.57
15	1.53½	1.49	1.53½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.55	1.57
16	1.53½	1.49	1.53½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.55	1.57
17	1.52½	1.49	1.53½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.55	1.57
18	1.52½	1.49	1.53½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
20	1.52½	1.49	1.53½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
21	1.52½	1.49	1.51½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
22	1.52½	1.49	1.51½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
23	1.52½	1.49	1.51½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
24	1.52½	1.49	1.51½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.57	1.55	1.55
25	1.52½	1.49	1.51½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.55	1.55
27	1.52½	1.52	1.52½	1.52	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.56	1.55
28	1.53½	1.53	1.52½	1.51	1.50½	1.50	1.51		1.52½	1.55	1.55½	1.55	1.59	1.56	1.55
29	1.53½	1.53	1.52½	1.51	1.50½	1.52	1.51		1.52½	1.55	1.55½	1.55	1.59	1.56	1.55
30	1.53½	1.53	1.52½	1.51	1.50½	1.52	1.51		1.52½	1.55	1.55½	1.56	1.59	1.56	1.55
31	1.53½	1.53	1.52½	1.51	1.50½	1.52	1.51		1.52½	1.55	1.55½	1.56	1.59	1.56	1.55
Average	1.53	1.52	1.53	1.52	1.50	1.49	1.51	1.51½	1.53	1.55	1.55½	1.55	1.58	1.55	1.56 1.55 3/8

Table 2. Margin between country prices equalized to a Kansas City basis and the minimum of the range of carlot prices for wheat of comparable grade and protein content at Kansas City, Missouri.

	Northwestern Kansas								Southwestern Kansas								
Country point	Republic	Prairie View	Warrick	Belleville	Niles	Lenora	Penokee	Average	Tribune	Bloom	Jetmore	Ness City	Bazine	Hanston	Haggard	Average	
1945																	
July 9	3 4/8¢	2 2/8¢	3 ¢	3 4/8¢	6 ¢	7 ¢	5 4/8¢	3.95¢			8 ¢	10 4/8¢	6 ¢	11 4/8¢	9 ¢	8 ¢	8.83¢
10	6	4 6/8	4 4/8	5	7 4/8	7 ¢	7	5.96			8 4/8	11	6 4/8	12	9 4/8	8 4/8	9.33
11	5 2/8	4	1 6/8	2 2/8	3 6/8	4 2/8	4 2/8	3.64			7 6/8	10 2/8	5 6/8	11 2/8	8 6/8	7 6/8	8.58
12	5 6/8	4 4/8	3 2/8	3 6/8	5 2/8	5 6/8	5 6/8	4.88			8 2/8	10 6/8	6 2/8	12 6/8	9 2/8	6 2/8	8.91
13	5 6/8	6 4/8	4	4 4/8	6	6 4/8	6 4/8	5.68			8 4/8	11	6 4/8	11 4/8	9 4/8	7 4/8	9.08
14	5 3/8	7 1/8	3 6/8	4 7/8	5 3/8	5 7/8	5 7/8	5.46			7 7/8	10 3/8	5 7/8	10 7/8	8 7/8	6 7/8	8.45
16	5 4/8	5 2/8	4 4/8	3	4 4/8	4	4	4.39	10 6/8¢	7 4/8	8		3 4/8	10	6 4/8	4 4/8	7.25
17	5 2/8	6	3 4/8	2 6/8	4 2/8	3 6/8	3 6/8	4.18	10 4/8	8 2/8	8 6/8		4 2/8	9 6/8	7 2/8	5 2/8	7.71
18	4 2/8	8	2 2/8	4 6/8	3 2/8	2 6/8	2 6/8	4.00	10 4/8	7 6/8	6 2/8		3 6/8	9 2/8	6 6/8	5 6/8	7.14
19	5 1/8	8 7/8	3 1/8	5 5/8	4 1/8	3 5/8	3 5/8	4.73	11 3/8	8 5/8	7 1/8		4 5/8	10 5/8	9 5/8	5 5/8	8.23
20	6 6/8	8 7/8	4 6/8	6 2/8	5 6/8	5 2/8	6 2/8	6.26	13	9 2/8	8 6/8		6 2/8	12 6/8	11 2/8	7 2/8	9.78
21	5 7/8	8 5/8	2 7/8	4 3/8	5 7/8	5 3/8	6 3/8	5.64	14 1/8	9 7/8	9 3/8		6 7/8	13 3/8	8 7/8	7 7/8	10.05
23	4 7/8	6 5/8	3 3/8	6 7/8	6 3/8	5 7/8	6 7/8	5.84	13 1/8	9 3/8	8 7/8		6 3/8	10 3/8	8 3/8	5 3/8	8.83
24	5 3/8	7 1/8	4 7/8	7 3/8	6 7/8	6 3/8	7 3/8	6.48	12 5/8	9 3/8	6 7/8		6 3/8	11 7/8	9 3/8	5 3/8	8.83
25	5	6 6/8	5	7 4/8	7	6 4/8	7 4/8	6.46	11 2/8	7 4/8	4		4 4/8	9 4/8	7 4/8	3 4/8	6.82
26	4 2/8	5	3 2/8	6 6/8	6 2/8	5 6/8	5 6/8	5.28	12	6 2/8	2 6/8		3 2/8	10 2/8	3 2/8	3 2/8	5.85
27	5 3/8	6 1/8	4 3/8	7 7/8	7 3/8	6 7/8	6 7/8	6.41	13 1/8	8 7/8	5 3/8		5 7/8	11 7/8	5 7/8	5 7/8	8.12
28	5 3/8	8 1/8	4 3/8	7 7/8	7 3/8	6 7/8	6 7/8	6.70	14 1/8	9 3/8	5 7/8		6 3/8	12 5/8	6 3/8	6 3/8	8.73
30	5 2/8	8	4 2/8	7 6/8	7 2/8	9 6/8	6 6/8	7.00	13 4/8	8 6/8	5 2/8		2 6/8	11 6/8	5 6/8	5 6/8	8.07
31	5 1/8	7 7/8	4 1/8	7 5/8	7 1/8	9 5/8	6 5/8	8.02	13 3/8	9 1/8	5 5/8		6 1/8	11 5/8	6 1/8	6 1/8	8.30
Average	5.25	6.52	3.74	5.51	5.86	5.88	5.81	5.55	12.38	8.43	7.83		5.53	11.32	7.88	6.13	8.32

Table 2 (continued).

Northwestern Kansas										Southwestern Kansas							
Country point	Republic	Prairie View	Warrick	Belleville	Niles	Lenora	Penokee	Average	Tribune	Bloom	Jetmore	Ness City	Bazine	Hanston	Haggard	Average	
1945																	
August	1	5 6/8¢	5 4/8¢	4 2/8¢	7 6/8¢	7 2/8¢	9 6/8¢	6 6/8¢	6.71¢	8 ¢	6 2/8¢	5 6/8¢	6 2/8¢	14 ¢	6 2/8¢	6 2/8¢	7.53¢
	2	4 3/8	6 1/8	4 7/8	7 6/8	7 7/8	10 3/8	7 3/8	6.87	8 5/8	6 7/8	6 3/8	6 5/8	13 7/8	6 7/8	6 7/8	8.02
	3	5 7/8	6 5/8	6 3/8	8 7/8	9 3/8	11 7/8	8 7/8	8.26	10 1/8	8 3/8	7 7/8	8 3/8	12 7/8	8 3/8	7 3/8	9.05
	4	5 7/8	6 5/8	6 3/8	8 7/8	9 3/8	11 7/8	8 7/8	8.26	9 5/8	8 7/8	8 3/8	8 7/8	13 2/8	8 7/8	7 7/8	9.39
	6	5	4 6/8	5	7 4/8	7	10 4/8	7 4/8	6.75	8 2/8	7 4/8	7	7 4/8	12 4/8	7 4/8	6 4/8	8.10
	7	3 4/8	4 2/8	4	3 4/8	7	9 4/8	6 4/8	5.46	7 2/8	6 4/8	6	6 4/8	10	6 4/8	5 4/8	6.89
	8	4 1/8	4 7/8	4 5/8	5 1/8	7 5/8	10 1/8	7 1/8	6.23	7 7/8	6 1/8	5 5/8	6 1/8	11 1/8	6 1/8	5 1/8	6.87
	9	3 4/8	4 2/8	5 5/8	5	7 4/8	10	7	6.12	8 2/8	6 4/8	6	6 4/8	8	6 4/8	5 4/8	6.75
	10	3 2/8	6	1	4 4/8	7	9 4/8	6 4/8	5.39	7 4/8	5 6/8	5 2/8	5 6/8	8 6/8	5 6/8	5 6/8	6.07
	11	3 6/8	5 4/8	2/8	3 6/8	6 2/8	8 6/8	5 6/8	4.85	7	5 2/8	4 6/8	5 2/8	8 2/8	5 2/8	3 2/8	5.57
	13	4	5 6/8	4	5 4/8	7	7 4/8	6 4/8	5.75	4 6/8	3	2 4/8	3	5	3	1	3.18
	14	4 2/8	8	4	5 4/8	7	7 4/8	6 4/8	6.10	7	4 2/8	3 6/8	4 2/8	5 6/8	4 2/8	2 2/8	4.50
	15																
	16																
	17	5 4/8	8 2/8	4	6 4/8	7	7 4/8	6 4/8	6.46	6 6/8	4	3 4/8	4	7	5	2	4.61
	18	5 2/8	8	3 6/8	5 2/8	6 6/8	7 2/8	6 2/8	6.07	6	3 2/8	2 6/8	3 2/8	8 2/8	3 2/8	3 2/8	4.28
	20	4 4/8	7 2/8	3 4/8	5	6 4/8	7	6	5.68	6 6/8	5	3 4/8	4	8 4/8	4	4	5.11
	21	4 6/8	7 4/8	5 2/8	5 6/8	6 2/8	6 6/8	5 6/8	6.00	6	3 2/8	2 6/8	3 2/8	8 2/8	3 2/8	3 2/8	4.28
	22	4 5/8	7 3/8	5 1/8	5 5/8	6 1/8	6 5/8	5 5/8	5.87	5 7/8	3 1/8	3 5/8	3 1/8	7 5/8	3 1/8	3 1/8	4.20
	23	4 6/8	7 4/8	5 2/8	5 6/8	6 2/8	6 6/8	5 6/8	6.00	6 4/8	3 6/8	3 2/8	3 6/8	8 2/8	3 6/8	3 6/8	4.70
	24	5 5/8	8 3/8	6 5/8	7 1/8	7 5/8	8 1/8	7 1/8	7.23	7 3/8	4 5/8	4 1/8	4 5/8	10 1/8	4 5/8	4 5/8	5.73
	25	5 3/8	8 1/8	6 1/8	5 5/8	7 1/8	7 5/8	6 5/8	6.66	8 1/8	5 3/8	4 7/8	5 3/8	8 3/8	5 3/8	5 3/8	6.13
	27	5	4 6/8	4 4/8	5	6 4/8	7	6	5.53	7 6/8	5	4 4/8	5	8 4/8	4	5	5.68
	28	5 1/8	4 7/8	5 5/8	7 1/8	7 5/8	8 1/8	7 1/8	6.52	8 7/8	6 1/8	5 5/8	6 1/8	9 1/8	5 1/8	6 1/8	6.73
	29	5	4 6/8	5 4/8	7	7 4/8	6	7	6.10	8 2/8	5 4/8	5	5 4/8	10	4 4/8	5 4/8	6.32
	30	5 3/8	5 1/8	5 5/8	7 3/8	7 7/8	6 3/8	7 3/8	6.44	8 5/8	5 7/8	5 3/8	4 7/8	9 3/8	4 7/8	5 7/8	6.41
	31	4 5/8	4 3/8	5 1/8	6 5/8	7 1/8	5 5/8	6 5/8	5.73	7 3/8	4 5/8	4 1/8	3 5/8	7 5/8	3 5/8	4 5/8	5.09
Average		4.75	6.18	4.65	6.13	7.22	8.32	6.76	6.28	7.54	5.39	4.89	5.26	9.37	5.19	4.71	6.05

The averages for the month of July were 8.32 cents in the Southwestern area and 5.55 cents in the Northwestern area. The difference in margins between the two areas was 2.77 cents. During August the margin in the Southwestern area averaged 6.05 cents while in Northwestern Kansas the average was 6.28 cents. The difference during August was 0.23 cents in favor of the Southwestern area.

Figure 2 shows the average margins by areas for each day during July and August. The average daily margins taken in the Southwestern area were substantially larger than the average daily margins in the Northwestern area, until about July 25. From that date until the end of August, the difference narrowed, and by the end of the period the margins in the two areas were practically the same.

The average equalized prices reported by farmers (Table 3) show that the prices for wheat were higher in the Southwestern area during July and August, when protein content is not considered. The simple average price on August 1 for the Southwestern area in six counties was \$1.54 $\frac{3}{8}$ compared to \$1.41 $\frac{1}{2}$ in the Northwestern area. The average protein content for the Southwestern area was 12.5 percent compared to 10.8 percent in the Northwestern area. The equalized prices on September 1 indicate that the farmers in the Southwestern area received a high price for their wheat, if protein content is not considered.

When the differences in the quantity of protein are accounted for (Table 4), the margins under the Kansas City price for

Cents

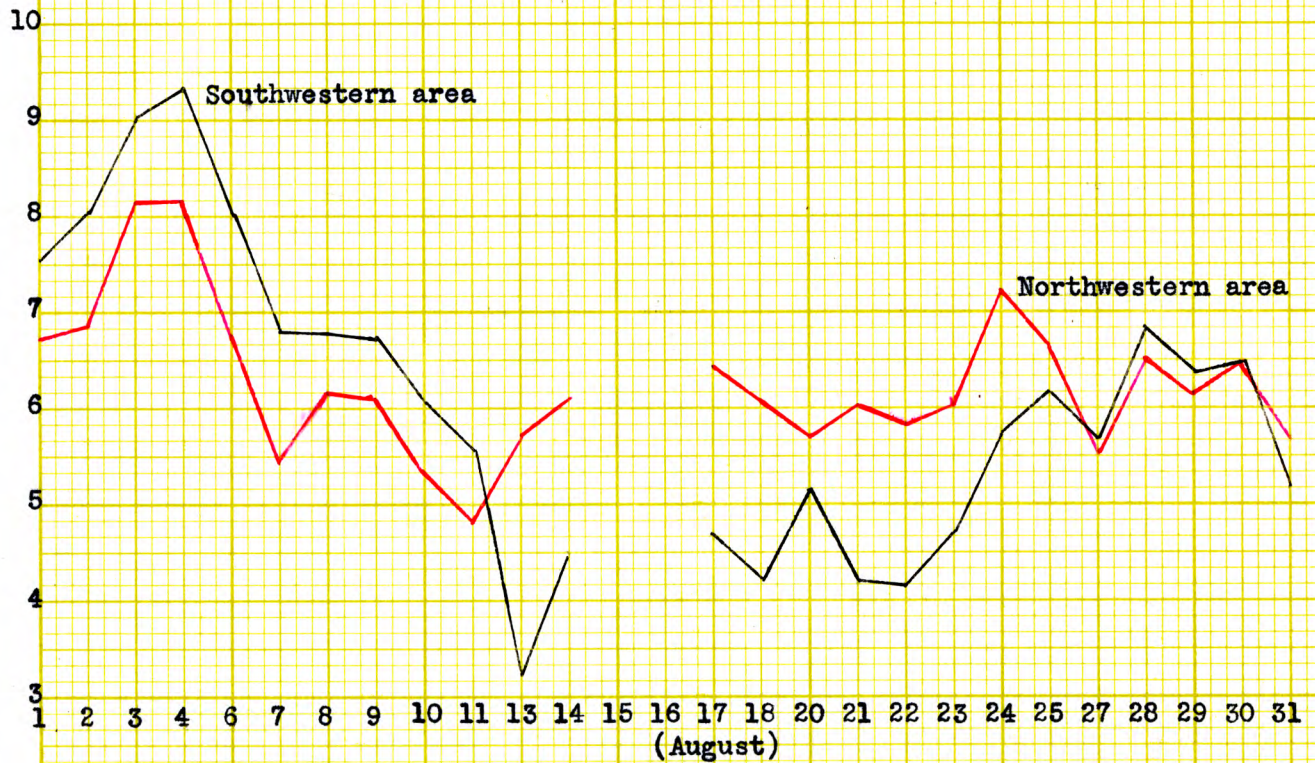
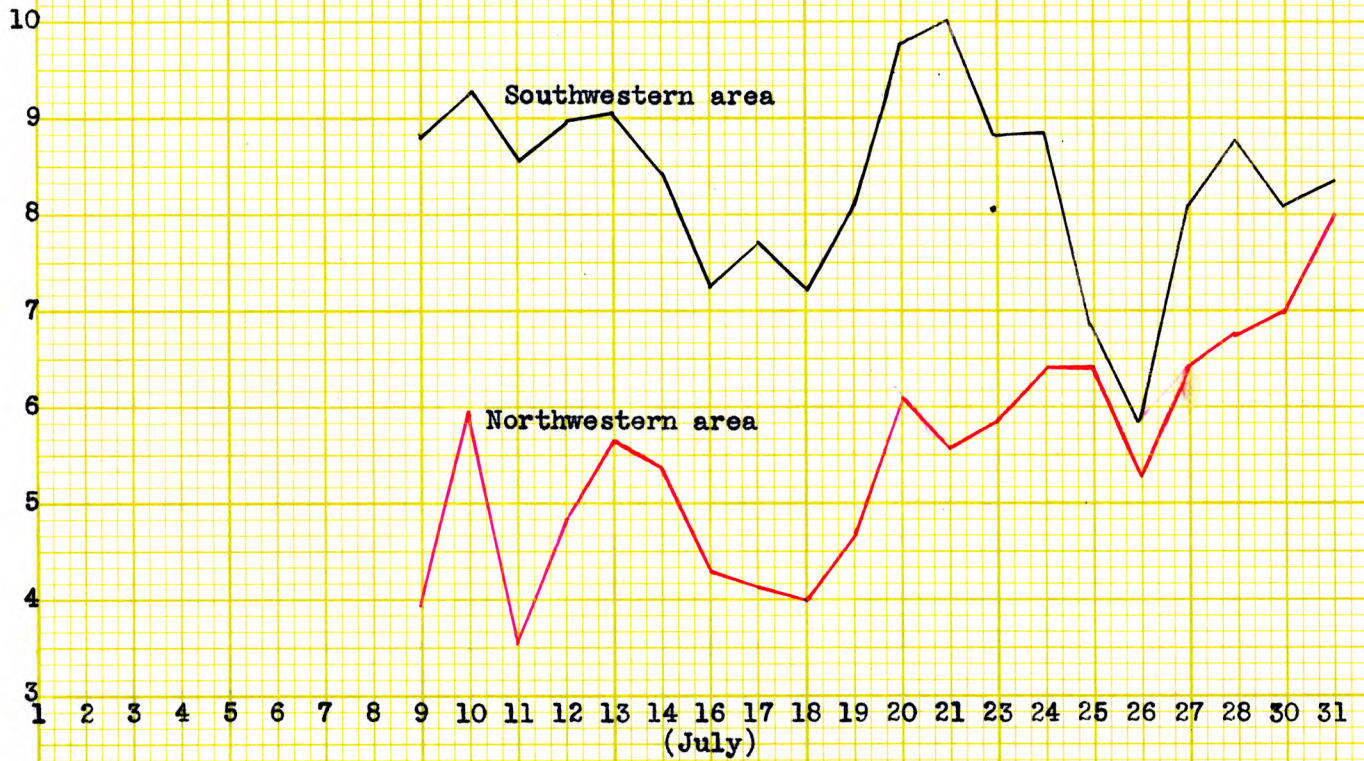


Fig. 2. Average margins between country prices equalized to a Kansas City basis and the minimum of the range of carlot prices for wheat of a comparable grade and protein content.

Table 3. Wheat prices on the first of the month as reported by farmers to the Kansas Agricultural Experiment Station. Farm prices were equalized to a Kansas City basis by adding freight to the reported farm price. Counties are those for which protein analyses were available from the cooperative variety tests.

Counties	: August 1, 1945 :	September 1, 1945
<u>Southwestern Kansas</u>		
Barber	\$1.52	\$1.53
Comanche	1.58	1.55
Ford	1.55	1.57
Lane	1.53	1.57
Stevens	1.54	1.54
Seward	1.54	1.54
Average...	1.54 3/8	1.55
<u>Northwestern Kansas</u>		
Clay	1.52	1.52
Cloud	1.53	1.52
Graham	1.50	1.52
Republic	1.51	1.51
Osborne	1.51	1.51
Ottawa	1.52	1.50
Average...	1.51 4/8	1.51 3/8

Table 4. Margins between prices reported by farmers equalized to a Kansas City basis and the minimum of the range of carlot prices for wheat of a comparable grade and protein content at Kansas City, Missouri.

Date	Southwestern counties ¹					Northwestern counties ²				
	Average of:	Minimum	Margin			Average of:	Minimum	Margin		
	:equalized	:Average:	:comparable:	:under		:equalized	:Average:	:comparable:	:under	
	: farm	:protein:	:Kansas City:	:Kansas City		: farm	:protein:	:Kansas City:	:Kansas City	
	: prices	: price	: price	: price		: prices	: price	: price	: price	
August 1, 1945	\$1.54 3/8	12.5%	\$1.64 6/8	10 3/8¢		\$1.51 4/8	10.8%	\$1.57 6/8	3 2/8¢	
September 1, 1945	1.55	12.5	1.62	7		1.51 3/8	10.8	1.57 6/8	6 3/8	

1. Stevens, Seward, Lane, Ford, Comanche, Barber.

2. Graham, Osborne, Republic, Ottawa, Clay, Cloud.

comparable grade and protein content indicate that wheat prices were lower in the Southwestern area. The local prices in the Southwestern area on August 1, 1945, were $10 \frac{3}{8}$ cents under the Kansas City price, while the local prices on August 1 in the Northwestern area were only $3 \frac{2}{8}$ cents under a comparable price in Kansas City. This is a difference in margins between the two areas of $7 \frac{1}{8}$ cents. By September 1 the difference between margins had narrowed to only $5 \frac{1}{8}$ cent.

A study of the prices paid by the milling company (Table 5) indicates that during July this company purchased wheat from the Southwestern area at a smaller premium than from the Northwestern area. The 15 carloads of wheat from the Southwestern area were purchased at 0.97 cents over the minimum of the range while the 11 carloads from the Northwestern area were purchased at a price of 2.57 cents over. During August, the wheat from the Southwestern area was purchased at a price slightly higher than the wheat from the Northwestern area. After the differences for protein quantity are accounted for, prices paid during July in the Northwestern area were 1.6 cents higher than in the Southwestern area. During August, the price averaged 0.26 cents higher for wheat from the Southwestern area.

The difference in margins of 2.77 cents, taken by local buyers during July, indicates that prices for wheat of comparable grade and protein content were lower in the Southwestern area. Figure 2 shows that differences in margins between the two areas were wide until July 25, indicating that local buyers

in the Southwestern area were not paying prices equal to those paid in the Northwestern area. Since costs of operation and margins for handling grain tend to be about equal in the two areas, and local prices reflect premiums for average protein content, the high percentage of undesirable milling and baking varieties may explain the difference in margins between the two areas. The wider margins taken in the Southwestern area indicate that wheat from this area was selling nearer the minimum price, and the narrow spread in the Northwestern area indicates that wheat from this area was selling above the minimum price at the terminal markets. The uncertainty of the price at which grain would sell in central markets, together with lower prices of actual sales on the terminal markets, was probably a factor causing the wider margins in the Southwestern area.

Table 5. Average of the margins over the minimum of the range of carlot prices for wheat of a comparable grade and protein content paid by a milling company for purchases on the Kansas City cash wheat market.

Date	Southwestern counties		Northwestern counties	
	Number of carloads purchased	Margin paid	Number of carloads purchased	Margin paid
July 1945	15	0.97¢	11	2.57¢
August 1945	14	2.09	15	1.83

Comparison of prices reported by farmers to the Kansas Agricultural Experiment Station shows a difference in margins

between the two areas of $7 \frac{1}{8}$ cents in favor of the Northwestern area. This is additional evidence that wheat prices in the Southwestern area were under those of the Northwestern area for comparable grade and protein contents.

The difference in margins between the two areas, shown by these prices is greater than the difference in margins shown by the prices from local buyers. It is recognized that prices of wheat reported by farmers to the Kansas Agricultural Experiment Station are not as accurate as prices of wheat taken from the records of local buyers, and that the protein content of a variety test in a county is not as reliable an indicator of protein for an area as the average protein content upon which a local buyer bases his buying prices. These prices are used as an additional source of data and give another indication of variation in prices of wheat between the two areas.

The milling company paid 1.6 cents per bushel more for wheat of a comparable grade and protein from the Northwestern area in July than for wheat from the Southwestern area. This indicates that this mill was discriminating against wheat from the Southwestern area. The buyer for this company was able to identify Chiefkan wheats with reasonable accuracy. Prices at which he purchased wheat during July show that he paid more for wheat originating in the Northwestern area, probably because of variety.

The wheat market during July and August of 1945 was a steady market as indicated by the uniformity of prices paid to farmers.

Local buyers changed prices infrequently. During the first part of July, wheat supplies on the market were plentiful and mill buyers could bargain in regard to price and quality. The Commodity Credit Corporation started buying wheat, mainly for export, on July 20. On July 23 it announced that wheat would be purchased at \$1.57 for No. 1 wheat in store at Kansas City. This established a floor under the market. Quality of protein was not a factor in wheat purchased by the Commodity Credit Corporation. This assured an outlet for varieties of undesirable milling and baking qualities.

On August 3, 1945, the Commodity Credit Corporation announced a new method of buying wheat. From July 21 until August 2, the Corporation had maintained a buying price of \$1.57 for No. 1 wheat in store at Kansas City. At this price sufficient wheat to meet the government's needs for army and lend lease had not been obtained. In the new method of buying, the Commodity Credit Corporation announced it would pay competitive prices for wheat. Until this time the activities of this agency had been primarily a price support program, but later action established the agency as a competitive buyer on the open market.

The heavy movement from the hard winter wheat area reached its peak the latter part of July and began to taper off during August. In addition to the large requirements for wheat by the government, there was a strong demand for wheat for livestock feed during August. This demand was especially heavy from feed mixers who used a large quantity of wheat in mixed feeds because

other feed grains were scarce. Protein quality was of no consideration in either feed wheat or wheat for lend lease. Although millers who were milling wheat for domestic flour were probably discriminating against certain varieties during August the other outlets for such varieties were sufficient to absorb market supplies of such varieties.

H. O. Wales, manager of the Farmers Cooperative Association at Johnson, Kansas, stated that wheat from Southwestern Kansas was discounted during July of 1945 on the terminal markets even though it was of a desirable variety. A manager of a large terminal grain commission company in Hutchinson, Kansas, made the statement that wheat from Southwestern Kansas of either Chiefkan or Redchief varieties often sold for one to two cents discount under the more desirable varieties.

The following comments of the grain trade taken from the Kansas City Grain Market Review during July and August indicate the market appraisal of Chiefkan or Redchief wheat varieties. Such statements indicate that these varieties were selling for a lower price than the more desirable varieties.

"The tendency was for 13 percent and moderately higher protein grain to work back toward ceilings, especially if free of Chiefkan."⁹

"The basic scale was three cents over July for ordinary No. 1 and starting at about 11.50 percent buyers paid 1 cent to 1½ cents added premium for each 0.25 of 1 percent protein according to variety and origin."¹⁰

⁹ Kansas City Grain Market Review, July 10, 1945.

¹⁰ Ibid., July 12, 1945.

"Type and variety accounted for rather wide spreads in better protein samples going to mills, those with rather outstanding percentages of Chiefkan selling lowest on the scale for the different protein brackets."¹¹

"Ceilings again were paid for fair amounts of select variety and weight No. 1 and No. 2 scaling down to 12.50 percent, but eventually the market settled to as much as $1\frac{1}{2}$ cents under the maximum for Southwestern Kansas grain containing notable percentages of Chiefkan and as much as one cent under was indicated for 12.75 to above 13 percent."¹²

"Mills were more highly selective in their purchases and sales of medium protein Chiefkan at $1\frac{1}{2}$ to 3 cents discount under more desirable varieties."¹³

The results of this study are indicative of what the price for undesirable milling and baking varieties might be in years of surpluses of wheat as existed prior to 1942 when the annual carryover of wheat was more than 600 million bushels. If this situation develops in future years when there is neither an outlet in industrial uses nor in feed, and the export market is limited to 80 to 100 million bushels, these undesirable varieties may be discounted more heavily than was the case during July of 1945. During 1945, because of the large demands for wheat from the unusual world conditions, there was only a short period during July and August when millers could discriminate against these varieties.

¹¹ Kansas City Grain Market Review, August 1, 1945.

¹² Ibid., August 7, 1945.

¹³ Ibid., August 9, 1945.

SUMMARY AND CONCLUSIONS

During most of July wheat prices in Southwestern Kansas were lower than the prices in the Northwestern Kansas area for wheat of comparable protein content. The difference in margins taken by local buyers in the two areas for July was 2.77 cents.

After July 25 the spread in margins between the two areas narrowed and in August, wheat prices in the two areas were practically the same when protein content was considered.

The Southwestern area of Kansas which grew a large percentage of the varieties of wheat of undesirable milling and baking qualities in 1945 was discriminated against in prices of wheat to the farmer and on prices paid for wheat on the terminal market. If other factors affecting margins in the two areas are considered equal, the difference in price may be explained by higher percentages of undesirable varieties in the southwestern area.

This discrimination was materially reduced after July 25 when the Commodity Credit Corporation entered the market with offers to purchase wheat at competitive prices. The demand for wheat for lend-lease, army, and for feed purposes was large enough to furnish an outlet for the undesirable milling and baking varieties of wheat.

The results of this study are indicative of price discrimination against varieties of undesirable milling and baking qualities which may occur in the postwar period when surpluses of wheat may appear again and the demand for wheat may be mainly for domestic milling of bakery flours.

ACKNOWLEDGEMENTS

Indebtedness is acknowledged to Professor George Montgomery, Professor of Agricultural Economics, for counsel and guidance in this study, to Professor Louis P. Reitz, Associate Professor of Agronomy, for assistance with references in regard to milling and baking characteristics of varieties, and to Mr. C. E. Skiver, Director of the Kansas Wheat Improvement Association, for suggestions.

REFERENCES

- Call, L. E., Green, R. M. and Swanson, C. O.
How to Grow and Market High Protein Wheat, Kansas Agricultural Experiment Station, Manhattan, Kansas, Circular No. 114, June 1925, 21 p.
- Collins, H. L.
Wheat Varieties Survey. (Unpublished) June 1945, 2 p.
- Dines, Frederic T.
Quality of Wheat Varieties Grown in Oklahoma in 1938, Agricultural Experiment Station, Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, Experiment Station Circular No. 85, September 1939, 15 p.
- Green, R. M. and Ballow, E. G.
Country Elevator Margins and Costs of Marketing Wheat, Kansas Agricultural Experiment Station, Bulletin 246, September 1928, 60 p.
- Heyne, E. G. and Reitz, L. P.
Characteristics and Origins of Blackhull Wheats, Report from Journal of the American Society of Agronomy, Volume 36, No. 9, September 1944, 10 p.
- Kansas City Grain Market Review, July 1 to August 31, 1945.
- Reitz, L. P. and Heyne, E. G.
Wheat Planting and Wheat Improvement in Kansas, Kansas Agricultural Experiment Station, Manhattan, Kansas, Contribution No. 350, Department of Agronomy, 1944, 40 p.
- Research in Milling Industry, Kansas Agricultural Experiment Station, Manhattan, Kansas, November 1942, 16 p.
- Shollenberger, J. H. and Clark, J. Allen.
Milling and Baking Experiments with American Wheat Varieties, United States Department of Agriculture, Department Bulletin, No. 1183, February 1924, 93 p.
- Shollenberger, J. H. and Marshall, Walter K.
Experimental Milling and Baking, United States Department of Agriculture, Department Bulletin No. 1187, April 1924, 53 p.