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**Credit Problems of Oklahoma
Cotton Farmers**

WITH SPECIAL REFERENCE TO
GARVIN, JACKSON, AND PITTSBURG COUNTIES

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1. Interviews with 449 Oklahoma cotton farmers showed that 65 per cent of the owners and 86 per cent of the tenants used seasonal credit to "make a crop." Two-thirds of the owners used farm mortgage credit.

2. The average amount of seasonal credit used was \$448. Owners used an average of \$610 and tenants, \$390. Over one-fourth of all the seasonal credit was obtained from local stores.

3. The cost of all seasonal credits averaged 16.4 per cent. Cash loans from banks and individuals cost 11.3 per cent while merchant credit cost 32.5 per cent. The rate on farm mortgage loans averaged 7 per cent.

4. In the poorest of the three farming districts, Pittsburg county, 86 per cent of the farmers interviewed used seasonal credit averaging \$398, one-half of which was store credit. The cost of store credit in this district frequently was about 80 per cent, but farmers did not realize that they were, in effect, paying such a rate.

5. Oklahoma cotton farmers who earned the most spent and saved the most and were least commonly dependent upon the use of seasonal credit.

6. Farmers who had other sources of income than cotton and raised most of their feed and food supplies on the farm used seasonal credit less frequently and used less of it than specialized cotton growers.

7. Farmers who owned land they operated tended to become independent of seasonal credit as they grew older and wealthier. But the tenants, although their wealth increased, became if anything more dependent on seasonal credit as they grew older.

8. Following poor crop years, local banks and credit merchants have difficulty in serving the farmers because of slow or "frozen" loans. Bank failures are much too numerous. This problem calls for study of the possibilities of distributing risks through such means as branch banking, crop insurance, and the Federal intermediate credit system.

9. The farmer can help solve this problem by building up a reserve of savings following good crop years. The banker can encourage this policy on the part of the farmer and diversify his own investments.

10. General differences in the cost of seasonal credit between banks and merchants, between districts, and between owners and tenants, can be largely explained by differences in risk and other expenses of the credit business. But within a single borrowing group the good individual risks often pay the same rate of interest as the poor risks.

11. If the good risks would demand a rate of interest in conformance with their reliability, they would probably get the benefit of a lower rate of interest. This, however, would probably necessitate a higher rate of interest to poorer risks and a tightening of credit to them.

12. In all credit transactions, the first question to ask is whether the loan will increase the farm income enough to pay for itself with interest. Therefore, credit is in part a problem of farm management.



MAP OF OKLAHOMA

Figure 1. The principal districts surveyed were located in Jackson, Garvin and Pittsburg Counties. Soil and climatic conditions are most favorable to cotton growing in Jackson County and least favorable in Pittsburg County.

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CREDIT PROBLEMS OF OKLAHOMA COTTON FARMERS

ARTHUR N. MOORE and J. T. SANDERS

Success in farming, as in other industries, depends in no small measure upon the use which is made of borrowed money. For profitable use, credit must first be conveniently obtainable in required amounts and at reasonable rates of interest. It must then be directed into the proper channels by capable management. Improvement in credit conditions is desirable at all times. But when farming in any part of the country fails to prosper, there is particular reason to inquire if some of the trouble is not due to conditions which govern the supply and use of credit.

The first logical step in such an inquiry is to determine what these conditions are. How much credit do cotton farmers generally use, where do they get it, what do they use it for, and how much does it cost them? There has been a lack of reliable information about farm credit in Oklahoma and it was to help provide such information that this study was undertaken as a part of a general study including several Southern States.

Facts are worth little, however, unless they are selected in such a way as to reveal existing problems and suggest ways of solving them. It is common knowledge that in the autumn of 1926 many cotton growers were unable to pay their debts. Is that sort of thing inevitable? What are the underlying causes and to what extent is it a credit problem? This investigation reveals the fact that many farmers pay very high rates of interest for seasonal loans. Why is this? What can be done about it? These are a few of the questions to which answers are needed.

This bulletin is an attempt to bring together the results of several separate investigations made by the Oklahoma Agricultural and Mechanical College in cooperation with the Bureau of Agricultural Economics of the United States Department of Agriculture. Special attention is given to three of these surveys, two covering the credit operations of cotton growers in Jackson and Pittsburg counties in 1925, and one dealing with the credit situation of cotton farmers in Garvin county in 1926. The other studies to which reference will be made were more especially concerned with problems of marketing and tenure and ownership¹.

¹Special acknowledgement is made to Dr. W. W. Fetrow, and Professor L. D. Howell, formerly of the Oklahoma Agricultural and Mechanical College, for much work done on the 1925 surveys and the marketing surveys. The services of Mr. Otis Weaver, formerly a student in the college, were of great assistance in collecting the 1926 data. The authors are also indebted to Mr. Nils A. Olsen and Mr. David L. Wickens of the Bureau of Agricultural Economics, who collaborated in preparing the questionnaires, and to Mr. Eric Englund, Mr. D. L. Wickens, and Mr. Fred L. Garlock for helpful suggestions in writing the manuscript.

DESCRIPTION OF DISTRICTS

Jackson, Garvin and Pittsburg counties represent three distinct types of cotton farming. (See Figure 1.) In Jackson county conditions of soil and climate are most favorable to the production of cotton. A silt loam surface soil predominates, becoming heavier in texture to a depth of 8 to 24 inches. The available fertility is high. The normal annual precipitation is 27 inches and during the months of March, April, and May, the normal rainfall is about eight inches. There is no boll weevil to contend with. Since the topography is slightly undulating to flat, erosion has not destroyed virgin fertility of the soil to a marked extent. In Pittsburg county, on the other hand, the prevailing soil is a light brown sandy loam, deficient in phosphorus, and often showing considerable acidity. The available fertility is low. The normal annual precipitation is 42 inches and the rainfall during the critical spring months is about six inches heavier than in Jackson county. The topography is such that erosion has greatly depleted the fertility of the soil. Early summer rainfall often fosters the stalk growth of cotton, encourages the growth of weeds, and favors the boll weevil. The weevil has been increasingly prevalent both in Pittsburg and in Garvin counties since 1920. In the State as a whole during the three years, 1925-1927, the boll weevil was estimated by crop reporters to have had almost as much effect in preventing a normal yield of cotton as deficient or excessive moisture and all other climatic conditions combined². With respect to soil and rainfall, the uplands of Garvin county, where the surveyed farms were located, represent a mean between the other two. The annual rainfall is about 35 inches and the topography is such that much erosion has taken place and the virgin fertility is rapidly being lost.

The farms of largest average size are found in Jackson county and the smallest in Pittsburg. Between 1920 and 1925 the number of farms increased in Jackson county but decreased in Garvin and Pittsburg. In all three areas there was a decline during this period in the number of improved acres per farm, the greatest decline occurring in Jackson county and the smallest in Pittsburg. (See Table 1.)

Examination of the change in number of farms by tenure shows that in each county the number of rented farms increased between 1920 and 1925 while the number of full-owner and part-owner farms declined (Table 2). During the same interval the average size of farm, both owner-operated and rented, decreased in each county. Yet the value per acre of farm land also declined sharply in Garvin and Pittsburg counties, while in Jackson county it showed a small increase. Ordinarily one would expect to find an increasing percentage of tenancy and decreasing size of farm associated with increasing rather than with decreasing land values. That the reverse was true from 1920 to 1925 in Garvin and Pittsburg counties may be accounted for by the agricultural depression, particularly the slump in the price of cotton in 1921. Insofar as changes in the income of the cotton grower are indicated by the value per acre of cotton, Figure 2 suggests that in Jackson county the year 1921 was not one of unusual depression. This may account for the increased land values shown in that county by the census.

²See "Crops and Markets," May, 1928, page 156.

Table 1. Number of Farms and Improved and Unimproved Acreage per Farm in Jackson, Garvin and Pittsburg Counties, 1919 and 1924*.

Source: United States Census of Agriculture.

Census Year	JACKSON COUNTY			GARVIN COUNTY			PITTSBURG COUNTY		
	Number of farms	Acres per farm		Number of farms	Acres per farm		Number of farms	Acres per farm	
		Improved	Unimproved		Improved	Unimproved		Improved	Unimproved
		Number	Number		Number	Number		Number	Number
1920	2,444	124	47	3,823	74	40	3,817	56	61
1925	2,751	116	21	3,631	71	39	3,788	55	50

*The improved acreage for 1924 was estimated by adding acres in crops to acres in plowable pasture plus 3 acres per farm for the farmstead in Jackson county and 2 acres for the farmstead in Garvin and Pittsburg counties.

Table 2. Number, Size, and Value of Farms in Jackson, Garvin, and Pittsburg Counties, by Tenure, in 1920 and 1925¹.

Source: United States Census of Agriculture.

COUNTY AND TENURE	Number of farms	Average size of farms	Value per acre
	Number	Acres	Dollars
Jackson County			
Owner and part owner			
1925 -----	945	159	52.0
1920 -----	1,110	183	52.0
Rented in full			
1920 -----	1,326	160	50.6
1925 -----	1,804	124	53.4
Garvin County			
Owner and part owner			
1920 -----	1,591	132	51.9
1925 -----	1,197	127	36.0
Rented in full			
1920 -----	2,223	101	56.3
1925 -----	2,422	99	36.7
Pittsburg County			
Owner and part owner			
1920 -----	1,729	134	33.1
1925 -----	1,393	120	27.6
Rented in full			
1920 -----	2,073	91	36.6
1925 -----	2,381	83	27.7

¹Excluding Manager operated farms.

Certain significant changes have been taking place in the crop production of the three counties (Appendix, Table 1). Since 1909 there has been in each area a striking increase in cotton acreage and a decrease in corn. In Jackson county, moreover, between 1919 and 1924, there was a marked displacement of wheat by cotton. The relative increase in cotton acreage since 1919, which has occurred in each of the three counties, has been accompanied by substantial decreases in the number of cattle and swine. It will become apparent as the discussion proceeds that these changes intensify rather than alleviate the credit problems.

Percentage of Tenancy and Color

In 1925 the census showed that about 63 per cent of all farms in Pittsburg county were operated by tenants, 66 per cent in Jackson county, and 67 per cent in Garvin county. Between 1920 and 1925 the percentage of tenancy increased in all three areas, the increase of 21 per cent in Jackson county being greatest, and that of 15 per cent in Garvin county the least.

Of the total population in 1925, only 7.4 per cent in Garvin county, 5.9 per cent in Pittsburg county, and 2.0 per cent in Jackson county were negroes. Since the credit situation was little complicated by racial mixture, no attempt was made to study separately the credit conditions of either race.

Type of Farming

Credit conditions in any community are closely connected with the type of farming practiced. Cotton is the chief cash crop produced in these three counties, although among them the importance of cotton varies considerably. Thus, in Jackson county, 91 per cent of the total sales of the farmers interviewed were sales of cotton². In Pittsburg county, 88 per cent were sales of

²The value of all cotton produced, whether actually sold during the calendar year or not, is here included under sales.

cotton, and in Garvin county, where broomcorn is grown and livestock products are more important, 50 per cent of all sales consisted of cotton (Table 3). In other words, the operations of the farmers interviewed in Garvin county were considerably more diversified than those of the farmers interviewed in the other two counties. The cotton situation is an important determinant of credit conditions in all three counties, but it has less importance in Garvin county than in either Pittsburg or Jackson counties.

Unfortunately, cotton producers in recent years have been subject to great changes in both the yield and the price of their product. The fluctuating cash income of the farmers in these three counties is shown by estimates of its value per acre each year from 1920 to 1927 (See Figure 2). Thus in Garvin county, an extreme instance, the value fell from \$50 per acre in 1920 to \$3 in 1921, and in Jackson county, the value rose from \$18 in 1923 to \$52 in 1924. In the former case, a change of price was the main cause of the change in value; in the latter case, a change of yield. Because of the incessantly changing factors of price and yield, the farmers of these areas are constantly encountering wide fluctuations in income which radically affect their financial status.

In 1926 the average total income from the farms in Garvin county, whether operated by owners or tenants, failed to cover expenses, thus leaving nothing either as a wage for the operator or as interest on capital invested⁴. Data were not available for determining the net farm and labor income of farmers in Jackson and Pittsburg counties.

VALUE PER ACRE OF COTTON HARVESTED IN JACKSON, GARVIN AND PITTSBURG COUNTIES, 1920-1927

(The farm price of cotton December 1 for the State was applied to yield data obtained from the crop reporting service of the U. S. Department of Agriculture at Oklahoma City).

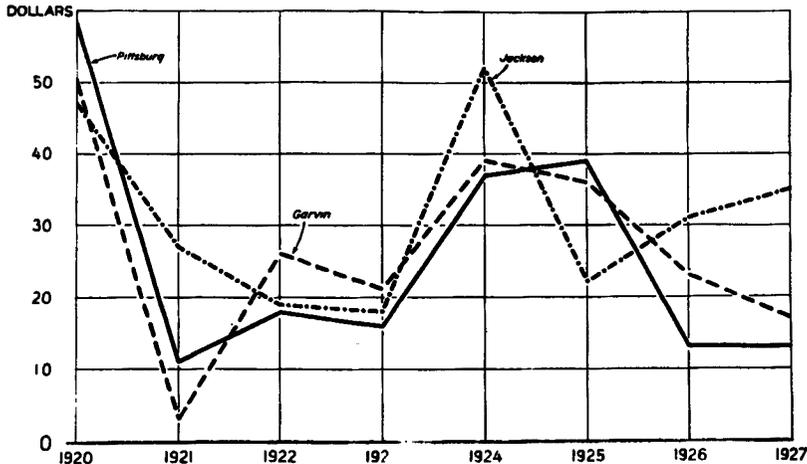


Figure 2—The variations in the value per acre of cotton from year to year show the uncertain nature of the income of the one-crop cotton farmer. The data grouped by crop reporting districts vary from year to year in the same general way as the data for individual counties in the district.

⁴The average net loss was \$35 per owner and \$81 per tenant. Farm and labor income as used in this study embraces the total income from the farm, including sales of all products and all family living derived from the farm, plus increases in inventory or decreases deducted, minus all expenses except a wage for the operator and an interest on capital invested. Any interest paid for mortgage on the farm is added to the gross receipts.

Table 3—Crop Acreage, Sales, and Net Worth of Farmers Interviewed in Jackson, Garvin, and Pittsburg Counties.

County and tenure	Farmers Number	Average crop acres per farm Number	Percentage of total crop acres			Sales of	Operator's share of	Average net worth per farmer at end of year Dollars
			Cotton P ct.	Corn P ct.	Other crops P ct.	Average per farm Dollars	Per cent cotton P ct.	
All Counties								
All farmers -----	449	75	65	16	19	\$1,391	83	\$3,536
Owners -----	148	88	61	13	26	1,933	78	8,847
Tenants -----	301	68	68	17	15	1,128	87	953
Jackson (1925)								
All farmers -----	163	83	73	2	25	1,808	91	4,557
Owners -----	74	83	68	3	29	2,326	90	8,803
Tenants -----	89	84	76	1	23	1,377	92	1,060
Garvin (1926)								
All farmers -----	79	72	48	18	34**	1,350	50	4,977
Owners -----	32	76	42	18	40	1,808	40	10,334
Tenants -----	47	69	52	17	31	1,058	62	1,322
Pittsburg (1925)								
All farmers -----	207	69	64	28	8	1,073	88	2,196
Owners -----	42	105	61	25	14	1,317	81	7,755
Tenants -----	165	59	66	30	4	1,011	90	789

*The value of all cotton produced in the given year was substituted for actual sales of cotton in order to include the carry-over into the following year.

**In Garvin county the owners had 7 per cent of their acreage in broomcorn and 8 per cent in alfalfa, while the tenants had 10 per cent in broomcorn and 5 per cent in alfalfa. Owners and tenants together had 9 per cent in broomcorn and 6 per cent in alfalfa.

The uncertainty of the income from cotton production has an important bearing on the need for credit, the amount supplied, and the rate of interest. The steadier and more evenly distributed one's income, the easier it is to adjust expenditures so as to reduce the need for credit. Irregularity and uncertainty of income not only increase the farmers' need of credit, but they increase the risk, reduce the local supply of loanable funds at certain times, and tend to raise the interest rate.

Fluctuating income intensifies the credit problem in the following manner: The seasonal loans of cotton growers are usually due in October or November at the time cotton is ginned. The growers depend chiefly upon receipts from the sale of cotton to pay these debts. If the receipts are insufficient for this purpose the loans must be renewed. When this happens on a large scale in any community and many farmers are unable to pay their loans when due, the results often are injurious to both debtors and creditors. Not only is it likely to be hard for those immediately concerned, but the loanable funds of local banks are then tied up to such an extent that other borrowers cannot get the credit they need for making the next crop. Consequently, there is a forced restriction of purchasing power in the community. When two or three years of small cotton receipts follow in succession, the strain upon banks and credit merchants is very great. Returns were small in 1921 because of a sharp drop in price of cotton, and were unfavorable in 1922 and 1923 because of low yields. This three-year depression following the peak of cotton prices in 1920 led to the failure of many banks and stores which were caught unprepared.

It has been shown above that of the three districts studied, soil and climatic conditions for the growing of cotton are most unfavorable in Pittsburg county. These conditions tend both to reduce the average yield of cotton and to increase the risk of crop failure in any given year. This difference in risk between the districts helps to explain the difference in cost to the farmer of both seasonal and long-term credit. The cost of mortgage loans is shown in part by the Census of 1920 which gives an average rate of interest of 6.3 per cent in Jackson county, 6.7 per cent in Garvin, and 7.4 per cent in Pittsburg.

THE UNDERLYING CREDIT SITUATION

Dependence on Seasonal Credit

In order to understand the credit problems it is necessary to know something about the underlying credit situation. In the first place, a large proportion of cotton growers of Oklahoma are dependent on seasonal credit¹ for "making a crop." Seventy-nine per cent of all the 449 farmers interviewed, 68 per cent of those in Jackson county, 84 per cent in Garvin county, and 86 per cent in Pittsburg county, used such credit (See Table 4).

That short-term credit is more necessary for tenants than for owners is indicated by the fact that 86 per cent of all tenants in the three districts used such credit, while only 65 per cent of the owners used it. Among tenants the greatest resort to credit was found in Pittsburg county, where 90 per cent had cash or merchant loans. Garvin county tenants were a close second, with a percentage of 89. The Jackson county owners and tenants were the least frequent users of seasonal credit, the percentage being 55 per cent for owners and 78 per cent for tenants.

¹"Seasonal" or "short-term" credit is used in this study to mean credit on personal or collateral security running for periods of a year or less.

Table 4—Number of Farmers Who Used Short-term Credit and Amount of Credit Used; Including Debts Outstanding at the Beginning of the Year¹

County and tenure	Total number of farmers interviewed	Total short-term credit			Merchant credit			Cash credit		
		Farmers who used credit		Average amount used	Farmers who used credit		Average amount used	Farmers who used credit		Average amount used
		No.	Pct.	Dollars	No.	Pct.	Dollars	No.	Pct.	Dollars
All counties										
All farmers	449	355	79	448	190	42	244	274	61	411
Owners	148	96	65	610	40	27	221	86	58	580
Tenants	301	259	86	390	150	50	250	188	62	338
Jackson (1925)										
All farmers	163	110	68	565	42	26	161	107	66	518
Owners	74	41	55	746	15	20	173	40	54	700
Tenants	89	69	78	457	27	30	154	67	75	409
Garvin (1926)										
All farmers	79	66	84	384	13	16	127	64	81	369
Owners	32	24	75	538	3	9	211	23	72	534
Tenants	47	42	89	301	10	21	102	41	87	283
Pittsburg (1925)										
All farmers	207	179	86	398	135	65	281	103	50	324
Owners	42	31	74	473	22	52	256	23	55	397
Tenants	165	148	90	383	113	68	285	80	49	305

¹Exceptional cases were omitted before computing averages.

This picture of the dependence on credit is not complete without consideration of loans on farm mortgage security, since some of the owners without personal or collateral credit had mortgaged their land, and since a few of those classed as tenants had mortgages on land they did not operate. Mortgage and seasonal loans were used in part for the same purposes. Thus, 92 per cent of all mortgage loans in the three districts (Table 22) and 94 per cent of the mortgage loans of the farmers who had no short-term credit, were reported as having been used for the purchase of land. Of the short-term credit of owners in all districts, 23 per cent was used for making payments on land (See Table 7); while 5 per cent of all mortgage loans were used for the payment of old debts, and 11 per cent of the owners' short-term credit was so used. When account is taken, then, both of mortgage and of seasonal loans, it is found that the owners are more dependent on credit than at first appeared. Although only 65 per cent of them used seasonal credit, 80 per cent used credit of some kind (seasonal or mortgage), compared with 87 per cent of the tenants. Even including all the financial requirements of land purchase and maintenance, therefore, a larger proportion of the owners than of the tenants financed themselves at the time of this study.

As a rule, seasonal credit is needed to help support the family and meet operating expenses from spring to fall, that is, for periods of from six to nine months. The weighted average time for which credit was used in all the districts studied was 7.3 months, 7.4 months in Jackson and in Pittsburg counties, and 6.6 months in Garvin (See Table 5). The shorter term in Garvin county probably is to be explained by sales of broom-corn during the summer, receipts from which were used to pay debts. The shorter average term of merchant than cash credit is accounted for in part, at least, by the method of calculation by the farmer⁴.

Volume and Source of Seasonal Credit

All farmers for all areas, who used short-term credit, including debts outstanding at the beginning of the year, used an average amount of \$448. Three hundred and eighty-four dollars were used per farmer in Garvin county, \$398 in Pittsburg, and \$565 in Jackson. The amounts of loans ranged from a few dollars to \$5,000, 63 per cent of the loans in Jackson county, 74 per cent in Garvin county, and 75 per cent in Pittsburg county being \$500 or less.

Most of the merchant or commodity credit in each district was obtained from local stores and all but a few of the cash loans were obtained from local banks⁵. Merchant credit was 27 per cent of the total seasonal credit used in the three districts combined, being 11 per cent of the total seasonal credit in Jackson county, five per cent in Garvin county, and 50 per cent in Pittsburg county (Table 6). Probable reasons for this high percentage of merchant credit in Pittsburg county are suggested on page 36.

⁴In computing these weighted averages for all short-term credit used, including the amount outstanding at the beginning of the year, the term of merchant credit was taken to include the time from the average date of credit purchase to the date of payment of the total account. Where the days of the month in which the line of credit began and ended were not given, it was assumed that the credit began on the first of the given month and ended at the close of the month in which payment was made. This practice makes for conservatism in reducing flat charges to a per annum interest basis.

⁵Fourteen farmers borrowed money from individuals, the amount of which equaled in the aggregate 3 per cent of the total cash credit used by all the farmers interviewed.

Table 5—Weighted Average Term of Short-term Credit in Jackson, Garvin, and Pittsburg Counties

District and tenure	Weighted average term in months of		
	Total short-term credit	Cash credit	Merchant credit
	Months	Months	Months
All counties			
All farmers -----	7.3	7.8	5.9
Owners - -----	7.1	7.4	5.7
Tenants - -----	7.3	8.1	6.0
Jackson			
All farmers -----	7.4	7.6	5.3
Owners - -----	7.3	7.4	5.5
Tenants - -----	7.5	7.8	5.3
Garvin			
All farmers -----	6.6	6.7	5.6
Owners - -----	6.0	6.0	5.6
Tenants - -----	7.2	7.4	5.5
Pittsburg			
All farmers -----	7.4	8.9	6.0
Owners - -----	7.7	9.0	5.8
Tenants - -----	7.3	8.9	6.1

Table 6—Percentage of Total Short-term Credit Consisting of Merchant and Cash Credit in Jackson, Garvin and Pittsburg Counties, by Tenure

County	All farmers		Owners		Tenants	
	Cash credit	Merchant credit	Cash credit	Merchant credit	Cash credit	Merchant credit
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All counties	73	27	86	14	63	37
Jackson	89	11	92	8	87	13
Garvin	95	5	97	3	93	7
Pittsburg	50	50	68	32	43	57

Seasonal credit may be considered part of the farmer's working capital, needed to carry on his business from year to year. In Garvin county such credit equaled 25.4 per cent of the total working capital of the farmers who used credit; in Jackson county, 31.5 per cent; and in Pittsburg county, 32.6 per cent. In this respect, there was little difference between owners and tenants. Although Pittsburg farmers had working assets of less value than those of the other counties, they used on the average more credit in relation to their working capital. (See Appendix, Tables II and IV). Hence the dependence upon credit was relatively greatest in Pittsburg county.

*"Working capital," as here used, includes all assets at the beginning of the year except land and buildings, crops on hand, and household goods. The two latter items were not obtained for Pittsburg and Jackson counties.

There appears to be no uniform relationship between the ratio of credit to working capital and the size of the farm (See Appendix, Table III). In Pittsburg county the larger farms used more credit in proportion to capital; in Jackson and Garvin counties, the smaller farms used the more.

Purpose of Seasonal Credit

The greater part of the short-term credit of Oklahoma cotton growers is used to "make a crop," that is, to support the family until harvest time, buy feed, hire labor, and meet other necessary farm expenses. Living expenses alone accounted for 50 per cent of the total credit used in all districts, or 77 per cent of the total in Pittsburg county, 36 per cent in Jackson, and 32 per cent in Garvin (See Tables 7 and 8). Very little credit was used for the purchase of livestock. Jackson county is distinguished from the others by the large amount of credit which was used in 1925 to buy land or to pay other debts. Twenty-five per cent of the total short-term credit was used for each of these purposes^a.

Table 7—The Purposes for Which all Short-term Credit was Used in Jackson, Garvin, and Pittsburg Counties, by Tenure

County and Tenure	PURPOSE				
	Living expenses	Farm operating expenses	Purchase of Land	Payment of debts	Total
	Per cent	Per cent	Per cent	Per cent	Per cent
All Counties					
All farmers -----	50	28	10	12	100
Owners - -----	24	42	23	11	100
Tenants - -----	69	18	0	13	100
Jackson (1925)					
All farmers -----	36	14	25	25	100
Owners - -----	22	5	53	20	100
Tenants - -----	48	22	0	30	100
Garvin (1926)					
All farmers -----	32	63	2	3	100
Owners - -----	12	81	3	4	100
Tenants - -----	63	35	0	2	100
Pittsburg (1925)					
All farmers -----	77	9	4	10	100
Owners - -----	59	8	18	15	100
Tenants - -----	82	9	0	9	100

The fact that credit for the purchase of livestock and machinery is generally a minor part of the total is verified by the results of a 1925 marketing study covering 359 farmers in eight Oklahoma cotton-growing counties^b. From this survey it appears that 5 per cent of all seasonal credit was used to buy workstock and other livestock, 7 per cent was used for farm equipment and improvements, and the remaining 88 per cent was used to meet living and other operating expenses.

^aThese percentages were obtained by assuming that the credit reported for general and miscellaneous expenses was distributed among the different uses in the same proportion as the credit for which the use was definitely known. They must, therefore, be taken as rough approximations only.

^bMcIntosh, Kiowa, Greer, Tillman, Carter, Love, Stephens, and Jefferson counties.

There are considerable differences between owners and tenants in the use of credit (Table 7). Tenants as a whole used 69 per cent of their seasonal credit for living expenses, while owners used but 24 per cent for this purpose. A similar difference in practice appears in all three counties. Of the total credit used for living expenses, 61 per cent was supplied by merchants and 39 per cent by banks and individuals. By far the greatest part of the merchant credit in each district was used for family living (Table 8). For the three counties together, 93 per cent was used for this purpose.

Table 8—The Purpose of Merchant and Cash Credit Used by All Farmers in Jackson, Garvin and Pittsburg Counties

County and kind of credit	PURPOSE				
	Living expenses	Farm operating expenses	Purchase of land	Payment of debts	Total
	Per cent	Per cent	Per cent	Per cent	Per cent
All counties					
Merchant credit ----	93	7	0	0	100
Cash credit -----	30	38	14	18	100
Jackson (1925)					
Merchant credit ----	87	13	0	0	100
Cash credit -----	20	14	33	33	100
Garvin (1926)					
Merchant credit ----	82 ¹	18 ²	0	0	100
Cash credit -----	30	65	2	3	100
Pittsburg (1925)					
Merchant credit ----	96	4	0	0	100
Cash credit -----	44	17	11	28	100

¹Groceries and clothing. This probably underestimates the living expense item.

²Hardware. This probably overestimates the farm expense item.

Not only did tenants and owners vary widely within an area in the use of credit for living expenses, but the use of credit by the same tenure class varied widely between the different districts. Credit for operating expenses was relatively high for both owners and tenants in Garvin county; particularly high with owners, 81 per cent. In Pittsburg county, owners used only eight per cent for this purpose. In Jackson county 53 per cent of all non-mortgage credit of owners was used in the purchase of land. This unusual resort to non-mortgage credit for this purpose may be explained in that 1924 and 1925 the years immediately preceding the taking of credit data in Jackson county, were years when cotton farming had been comparatively prosperous and land purchases as a result were on a temporary "boom."

Security of Short-term Credit

The most common form of security for seasonal credit was that of a crop and chattel mortgage. Forty-eight and four-tenths per cent of the total credit was secured in this way (Table 9). Five and four-tenths per cent was covered by crop lien only and 8.5 per cent by chattel mortgage only, making a total of 62.3 per cent secured by crop or chattel mortgage but without endorsement. Seven and eight-tenths per cent of the seasonal credit was secured both by crop or chattel mortgage and by one or more endorsements. The bulk of the remainder, or 27.9 per cent of the total, was on unsecured open account or plain note, leaving only 2 per cent covered by endorsement without mortgage of any kind. Of the unsecured part, the bank credit was always on "plain note" and the merchant credit usually on "open account." (See also Appendix, Tables IX and X).

Table 9—Security of Short-term Credit in Jackson, Garvin, and Pittsburg Counties

County and tenure group	PERCENTAGE OF TOTAL SHORT-TERM CREDIT BASED ON						
	Endorsed credit			Unendorsed credit			Total
	Open account or plain note	With crop or chattel mortgage	Without crop or chattel mortgage	Crop lien only	Chattel mortgage only	Crop and chattel mortgage	
Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	
All counties							
All farmers -----	27.9	7.8	2.0	5.4	8.5	48.4	100
Owners -----	43.9	5.8	2.0	2.8	14.1	31.4	100
Tenants -----	16.8	9.1	2.0	7.3	4.6	60.2	100
Jackson							
All farmers -----	28.8	9.0	2.7	5.4	8.0	46.1	100
Owners -----	39.4	9.9	2.1	6.3	11.9	30.4	100
Tenants -----	18.6	8.1	3.4	4.5	4.1	61.3	100
Garvin							
All farmers -----	38.7	7.9	0.4	0	5.6	47.4	100
Owners -----	55.3	3.3	0	0	9.9	31.5	100
Tenants -----	17.5	14.0	0.9	0	0	67.6	100
Pittsburg							
All farmers -----	22.7	6.7	2.0	7.8	10.2	50.6	100
Owners -----	40.9	2.3	3.4	0.2	20.4	32.8	100
Tenants -----	15.6	8.3	1.5	10.7	6.3	57.6	100

Table 10—Farmers Classified by Surveys and Use and Non-use of Credit

Tenure	All Surveys		Jackson County		Garvin County		Pittsburg County	
	Farmers using credit	Farmers not using credit	Farmers using credit	Farmers not using credit	Farmers using credit	Farmers not using credit	Farmers using credit	Farmers not using credit
All Operators								
Number of farmers -----	355	94	100	53	66	13	179	28
Average acres in crops -----	73	82	84	83	72	70	66	83
Per cent of all crops in cotton	67	58	76	65	51	31	66	60
Average sales per farm. (\$) --	1328	1637	1766	1896	1295	1651	1068	1104
Per cent cotton is of ave. sales	84	81	92	88	53	39	88	84
Average net worth of farmer --	2479	7790	3580	6872	3431	12825	1432	6962
Ave. yrs. as a farm operator ⁽¹⁾	16	20	15	19	18	26	16	19
Value of land per acre ⁽²⁾ ---	2479	7790	68	78	59	89	39	44
Owners								
Number of owners -----	96	52	41	33	24	8	31	11
Average acres in crops -----	87	90	86	79	79	67	93	139
Per cent of all crops in cotton	63	57	72	63	44	31	65	54
Average sales per farm. (\$) --	1959	1886	2508	2099	1831	1733	1307	1344
Per cent cotton is of ave. sales	78	79	91	87	41	34	81	79
Average net worth of farmer --	6855	12790	7936	10028	7590	18607	4790	15842
Ave. years as a farm operator ⁽¹⁾	20	26	18	25	23	37	20	23
Tenants								
Number of tenants -----	295	42	69	20	42	5	148	17
Average acres in crops -----	68	71	82	90	68	75	61	46
Per cent of all crops in cotton	69	61	79	68	55	31	67	60
Average sales per farm. (\$) --	1098	1320	1324	1560	1001	1536	1019	927
Per cent cotton is of ave. sales	87	83	93	90	65	47	90	89
Ave. net worth of farmer -----	848	1636	953	1487	1054	3572	739	1216
Ave. yrs. as a farm operator ⁽¹⁾	15	15	13	11	16	16	15	19

⁽¹⁾ Sum of years as a cropper, share or cash tenant, and owner.

⁽²⁾ This figure applies only to the value of farm estate owned, including improvements. Real estate not connected with the farm operated is omitted.

Reasons for the Need of Short-term Credit

Cotton farmers as we have seen usually are not able to finance themselves. Occasionally a cotton farmer is able to finance himself, either because his income is more or less continuous through the year, or his expenditures of cash are small, or because his accumulated wealth is large²¹. Considerable insight may be had on the credit problems of these farmers by comparing the farmers who used seasonal credit with the other one-fifth of them who used none. (See Table 10).

Irregularity of Income

The need for seasonal credit depends partly upon the extent to which sales of farm products are distributed throughout the year. The man who grows nothing but cotton and receives his whole cash income in the fall is more likely to use credit than the man who sells other crop and livestock products and receives an income every month in the year.

The farmers of Jackson, Garvin, and Pittsburg counties who used no short-term credit received 81 per cent of their cash income from sales of cotton. Those who used credit obtained 84 per cent of their income or three per cent more from sales of cotton. A similar difference between credit users and others, ranging from one per cent for the Pittsburg tenants to 18 per cent for the Garvin county tenants, appears for each tenure group in each county (See Table 10). Although these differences are not great enough to account for the use or non-use of credit by many of the farmers concerned, they do indicate a different organization of farms for the credit using farmers as compared with the non-credit using farmers.

Net Wealth Compared

Comparison of the net wealth of credit using and non-credit using farmers reveals the fact that those not using credit (both for owners and tenants) are financially much better off than those who resort to credit. In Jackson county all farmers using credit were worth only about one-half as much as those not using credit; and in Pittsburg county the non-credit farmers were more than four times as wealthy.

The same tendency is shown more clearly by returns from a questionnaire covering the 1926 operations of 372 Oklahoma cotton farmers (See Appendix, Table V). Farmers who specialized most in livestock production were least dependent on credit. A smaller proportion of these farmers, as compared with those who had less livestock, used seasonal credit, and the amount of credit used by them was less, both in dollars per farmer and in relation to total sales.

Size of Cash Expenditures

Other things being equal, one would expect farmers whose seasonal expenditures of cash were largest to be most dependent on seasonal credit. Such evidence as was obtained covering the family living expenses of Garvin county growers, suggests that "other things" were not equal; for those who used no credit in 1926 spent more cash per household and per person than those who used credit (Table 11). It will be noted later that there was a wide difference in the net wealth of credit users and non-credit users in Garvin county and this fact is pertinent in explaining the larger outlay for family living of the non-credit users over the credit users.

²¹Other reasons are possible. For instance, inherited money might enable a cotton farmer to finance himself.

Table 11—Family Living Expenses in Garvin County of Farmers Who Used Short-term Credit in 1926 and of Farmers Who Used None, by Tenure

Tenure and use of credit	Average Family Living Expenses	
	Per Household	Per Person
	Dollars	Dollars
All farmers		
Using credit	653	114
Using no credit.....	833	183
Owners		
Using credit	868	153
Using no credit.....	915	215
Tenants		
Using credit	530	92
Using no credit	701	140

Tabulations for the Garvin county area show that the credit-using farmers produced a somewhat smaller part of their total food and feed requirements than did the farmers who used no credit, although this difference is not marked except with feed production for owners. Had they produced as large a part of these requirements, their cash expenses might have been even less²².

Wealth and Savings

The farmers who used no seasonal credit, being more wealthy than those who did use credit, were able to finance themselves in spite of large expenditures for family living. It is natural to expect the standard of living to increase with wealth. This relationship is clearly shown by the results of two surveys made in 1924 in Jackson, Greer, and Bryan counties, covering 345 farms. Both the family living expenses in cash per person and per household and the total family living, including products of the farm, revealed a tendency to increase with net wealth, both for owners and for tenants.

Table 12—Relation Between the Net Worth and the Family Living of Farmers in Bryan, Jackson, and Greer Counties in 1924, by Tenure

Net worth and tenure	Number of farmers	Cash expenses for family living		Total family living including products of the farm	
		Per household	Per person	Per household	Per person
		Dollars	Dollars	Dollars	Dollars
Owners					
\$1-\$6,000	33	512	140	760	207
\$6,001-\$12,000	26	761	147	1,030	198
Over \$12,000	35	871	226	1,265	328
Tenants					
\$1-\$900	105	414	92	543	129
\$901-\$1,700	78	516	112	656	136
Over \$1,700	68	693	125	1,128	198

²² Self-sufficiency ratios for foods and feeds used by Garvin county farmers who used short-term credit and those who used none, by tenure, are shown in Appendix, Table VI. The "self-sufficiency ratio" is the relation between the value of certain farm products produced and used on the farm and the total value of all such products consumed, whether bought or produced. The commodities selected, such as pork, beef, and dairy and poultry products, are ones which are easily producible on the farms of the community. Products were valued wherever possible at prices for which the farmer stated he could have sold.

Data on the cash savings and the net wealth of the farmers interviewed show a distinct relationship to the use of seasonal credit. Of the farmers who financed themselves, 61 per cent reported cash on hand at the beginning of the year as compared with 41 per cent of the farmers who used seasonal credit (Table 13). Furthermore, of those who had cash, the farmers who used no credit had on the average \$909 in cash, while those who employed credit had an average of but \$251.

Most of the farmers interviewed had few assets of the kind that are easily converted into cash (See Appendix, Table IV). Especially was this true with tenants who had no investments whatever in stocks, bonds or mortgages. Owners had few such securities, except in Garvin county, where the \$500 average was due to the possession of \$16,000 of investments by three of the 32 owners interviewed.

Not only did the farmers who used no short-term credit have more cash on hand than the credit-using farmers, but the average net wealth of the former, or assets minus debts, was three times greater than the net wealth of the latter (Table 10)²³. This difference appears more clearly when owners and

Table 13—Cash on Hand of Farmers Who Used Short-term Credit Compared With Cash Reported by Those Who Used No Credit

County, tenure, and use of credit	Number of farmers			Average cash on hand at beginning of year*
	Total number	Number who had cash	Per cent who had cash	
All Counties				
All farmers				
Farmers who used credit.....	355	147	41	251
Farmers who used no credit....	94	57	61	909
Owners				
Farmers who used credit.....	96	44	46	370
Farmers who used no credit..	52	30	58	1,217
Tenants				
Farmers who used credit.....	259	103	40	200
Farmers who used no credit....	42	27	64	567
Jackson				
All farmers who used credit....	110	30	27	289
All farmers who used no credit	53	22	42	551
Garvin				
All farmers who used credit....	66	40	61	365
All farmers who used no credit	13	11	85	2,415
Pittsburg				
All farmers who used credit....	179	77	43	177
All farmers who used no credit	28	24	86	549

*All averages apply only to farmers who reported cash on hand.

²³As far as the owners are concerned, this difference in net wealth is chiefly the reflection of the greater amount of land owned by the farmers who used no short-term credit. Although these farmers operated with their own labor little more land on the average than their credit-using neighbors, they leased more to tenants.

tenants in each county are taken separately (Table 10). In every case the farmers who used no short-term credit were as a group wealthier. The differences of net wealth in favor of those using no credit ranged from 25 per cent for the Jackson county owners to 350 per cent for the Garvin county tenants (See Table 10). The question then arises whether these relatively well-to-do farmers, about one-fifth of the total number, acquired their property by inheritance or by their own labor and saving.

The available evidence secured in this survey leads one to believe that very little of the property of Oklahoma cotton growers was inherited. Of the owners interviewed in Garvin county only one had inherited land. The other 31 had bought or homesteaded all their holdings. No data on this point were obtained for the Jackson and Pittsburg districts. But of the total net wealth on January 1, 1925, of 759 owners and tenants interviewed in connection with the cotton marketing surveys in eight Oklahoma counties, referred to above, only 6.4 per cent was inherited property. The owners inherited 5.9 per cent of their wealth and the tenants, 8.3 per cent. The farmers who used short-term credit in 1925 inherited 12 per cent of their wealth as compared with 4.4 per cent inherited by the farmers who used no short-term credit (Table 14). The latter had an average net worth less inheritance of \$6,718, the former an average of \$2,282. When owners and tenants are examined separately as to net worth, a similar difference appears. The conclusion is that the farmers who finance themselves are able to do so largely because they have earned and saved more than the usual amount of money.

Table 14—Comparison of Net Worth Less Inheritance, Years as Farm Operators, and Average Annual Accumulation of Wealth of Reporting Farmers Who Used Seasonal Credit and Farmers Who Used None in 1925 in Eight Oklahoma Counties*

Tenure and use of credit	Average net worth less inheritance	Average years as farm operator	Adjusted annual accumulation of wealth**	Percentage of net worth which was inherited
	Dollars	Years	Dollars	Per Cent
All farmers				
Using credit -----	2,282	17.3	138	12.0
Using no credit -----	6,718	21.2	282	4.4
Owners				
Using credit -----	6,219	20.3	305	13.0
Using no credit -----	10,952	24.3	446	4.2
Tenants				
Using credit -----	1,153	16.4	77	10.3
Using no credit -----	1,748	17.6	99	5.4

*The counties are McIntosh, Kiowa, Greer, Tillman, Carter, Love, Stephens, and Jefferson. Net worth less inheritance was reported by 759 farmers; years as farm operator by 824 farmers; and average annual accumulation of wealth by 648 farmers.

**The adjusted average annual accumulation of wealth is the average annual rate at which the individual farmer has accumulated divided by a figure representing the rate at which average accumulation has been accomplished by all operators at the given earning life stage of the operator in question. In other words, rate of accumulation varies at different earning life stages. The average rate of accumulation of all operators in each 5-year stage of earning life was expressed as a percentage of the average accumulation rate of all farmers irrespective of stage of earning life. The average annual rate for each farmer was then divided by the percentage just described.

The question may be pushed still further. How did these farmers who used no seasonal credit succeed in accumulating so much wealth? Were they older than the rest and can their greater wealth be explained by their greater age? Or were they better managers and more careful savers?

In the first place, it appears that of 824 farmers covered by the 1925 marketing study, those who used no seasonal credit had been farming on the average 21 years, or about four years longer than those who used credit (Table 14). In Pittsburg county there was a difference of three years (Table 10). In Jackson county, the difference in favor of the non-credit-using farmers was over four years, and in Garvin county, eight years. Nevertheless, this distinction does not always hold true, as will be shown later in connection with data based on a survey in 1924 in Jackson and Bryan counties.

These differences in the length of earning period are not adequate to explain the differences in wealth, since the farmers who used no seasonal credit had accumulated wealth more rapidly than had the credit-using farmers. Considering the eight counties of the marketing study as a whole, the credit-using owners accumulated an average amount of wealth of \$305 per year during their earning life. This figure makes allowance for the effects of age on the rate of accumulation. On the other hand, the owners who used no credit accumulated \$446 annually. The corresponding figures for tenants were \$77 and \$99. The 1924 survey in Bryan, Jackson, and Greer counties indicated a similar relation, the average yearly accumulation being \$279 for the credit-using owners and \$431 for those who financed themselves. For tenants, the figures were \$108 and \$170 respectively (See Table 15).

It appears, then, that the credit-using farmers had not accumulated wealth as rapidly as the farmers who used no seasonal credit in 1924 and 1925. It does not follow, however, that such credit is a hindrance to progress, for the same farmers who financed themselves in 1925 may have borrowed money for crop production in earlier years. There is nothing to prove that the use of credit did not increase their profits and hasten the coming of the time when they no longer need it. At the same time, there is little doubt that seasonal credit often retards farming progress, either through unwise expenditures by the borrower or through the burden of high interest charges. However that may be, it would seem that the farmers who financed themselves were either more efficient or more thrifty than those who were dependent on seasonal loans.

Table 15—Average Annual Accumulation of Wealth by Credit-using and Non-credit Using Farmers in Bryan, Jackson and Greer Counties, by Tenure (1924 Survey)

Tenure and use of credit	Number of farmers	Average annual accumulation of wealth
	Number	Dollars
All farmers		
Using credit	195	140
Using no credit	143	274
Owners		
Using credit	37	279
Using no credit	57	431
Tenants		
Using credit	158	108
Using no credit	86	170

The results of this study, however, do not bear out the assertion sometimes made that the farmers who do not use credit are "stingy" and restrict their standard of living in order to operate on a cash basis; for it has been shown that these farmers spent more as well as saved more (Table 11). They spent more on family living both per family and per person than the credit-using farmers. It is well known that living standards vary in close harmony with ability to pay. Ability to pay varies with the productive efficiency of the farmer, which is partly dependent upon the savings of the farmer but chiefly upon his managerial capacity.

To summarize, therefore, it appears that cotton farmers who earn the most are able to spend and save the most and are least dependent upon the use of expensive seasonal credit. In part because using little such credit, especially store credit, they can save and spend more than those who pay high interest rates for the use of seasonal credit. Furthermore, there is probably less likelihood of wasting one's own money than borrowed money. Greater earnings and savings mean less credit, and less credit of the kind under discussion means somewhat greater earnings and savings. But it does not follow that such credit is always a bad thing. It may be the only stepping stone by which some farmers can advance to an independent position or to a position from which they can command mortgage credit at low rates of interest. After all, the important consideration in the use of credit is the same as that of any other purchase, for credit is only the purchase of the use of wealth, viz., will it cost less than it will return? This question can more readily be answered by the farmer borrowing for farm production purposes than by the farmer borrowing for living purposes. In fact the question seldom occurs to the cotton farmer who is forced to resort to living credit, although doubtless his financial progress is often checked by his inability to apply this test to his borrowing.

Short-term loans, the use of which promises to create a future profit which can be roughly estimated in advance, clearly can be made to the benefit of the financial progress of the borrower. Similarly this is true for emergency loans which prevent a serious loss from unused land, labor, and equipment. Such loans will always be advantageous. But it will probably be agreed that most cotton farmers in Oklahoma would profit by any readjustment in their business which would enable them to reduce or entirely to dispense with their present seasonal credit which is used mainly to maintain customary standard of living⁴. Especially does this apply to loans where interest rates are relatively high compared with returns on first class securities, which is normally the case with credit used for living expenses on cotton farms.

Relation of Years of Farming Life to the Use of Credit

It has already been observed that the farmers who used no seasonal credit were older in farming experience than those who used credit. This was found to be significant only for the owners, however. In fact, the reverse was true among 254 tenants interviewed in Bryan, Jackson, and Greer counties in 1924, 88 of whom used no credit, although owners who did not use credit were 3.6 years older than those using credit, non-credit-using tenants were found to average 3.4 years younger than credit-using tenants.

There is, however, evidence of a tendency for farm owners in the cotton growing districts of Oklahoma to become independent of Short-term credit as they grow older.

For the purpose of showing this tendency, 1,621 farmers in 11 districts, including Jackson, Garvin, and Pittsburg counties, and those included in the

⁴This assertion might need to be qualified to fit the case of a few farmers who could get a higher return on savings permanently invested than the interest rate they would have to pay on current short-term borrowings. It would profit such farmers to continue the use of seasonal credit rather than reduce their permanent investments.

marketing and tenure studies referred to above, were grouped together (See Table 16). Of 127 owners who had been operating a farm as tenant or owner for less than 14 years, 55 per cent used short-term credit. Of 243 owners who had been farming from 14 to 26 years, 39 per cent used credit; and of 203 owners who had been farming over 26 years, only 29 per cent used seasonal credit. Therefore, the percentage of those who used credit decreased consistently as years of farming experience increased.

The older group of owners was also the wealthier, as indicated by their net worth of \$12,000, and this fact probably explains the ability of many of them to finance themselves. The owners who continued to use credit in their old age, however, used just as much on the average as the younger groups. The middle-aged group operated the largest farms and those in this group who had credit used the largest average amount, or \$531. That there was no clearly defined relation between this decreased use of credit with greater age and the size of the farm is indicated by the fact that the size of farm does not vary in accordance with the amount of credit used or the net worth per farmer.

In striking contrast to the owners, the older tenants were more dependent on seasonal credit than were the younger tenants. Although the proportion of those who used credit remained fairly constant at about 70 per cent, the average amount of credit increased from \$230 for the youngest group of tenants to \$430 for the oldest.

It would be an error to assume from these data that tenants become more and more dependent on credit as they grow older, for such an assumption from these data is not warranted. To the more competent farmers, tenancy is an agency of progress toward ownership; and normally after the more successful tenants have farmed for a few years they pass into the ownership status, leaving behind as tenants in the older age groups less financially successful tenants. In all probability these older age group tenants have always been excessively dependent on credit—possibly more dependent than they are in their older stages.

Table 16—Relation Between Years as Farm Operator and Use of Seasonal Credit by 1,621 Cotton Growers in 11 Surveyed Districts in Oklahoma

Tenure and years as farm operator	Total number of farmers	Farmers who used credit		Average amount of credit used	Average net worth per farmer	Average crop acres per farm
		Number	Per cent of all farmers	Dollars	Dollars	Number
Owners						
1-33 years	127	70	55	435	6,920	84
14-26 years	243	95	39	531	9,547	104
Over 26	203	58	29	493	12,030	95
Tenants						
1-8 years	344	250	73	231	1,064	59
9-18 years	336	244	73	349	1,599	77
Over 18	368	257	70	430	2,007	85

Comparison of Credit Conditions Among Owners and Tenants

There are several important differences between farm owners and tenants in the use of seasonal credit and the terms upon which it is obtained. Within the tenancy status, each form of tenure has a different credit basis. Croppers, who usually own no livestock or machinery, generally use the crop lien as a

basis for credit. Frequently they must also secure the landlord's endorsement, a practice which varies greatly in different parts of the South. Cash and share tenants have a sounder basis for credit than croppers, since they have larger accumulations of wealth, including their own livestock and machinery, and are known as better business risks. Owners have the advantage of landed property and other wealth, which, in case of emergency, can be sold or mortgaged to insure the payment of seasonal loans.

A larger proportion of the owners than of the tenants get along without such loans (Table 4). Grouping together the three districts surveyed, 35 per cent of the owners and only 14 per cent of the tenants financed themselves. Less dependence on short time loans by owners is possibly explained by the facts that owners have accumulated more capital than tenants, that they are less dependent on a single cash crop, and that they possibly in a few instances may use a portion of their farm mortgage credit for production purposes. Both their total working assets and their cash on hand averaged well over twice the assets and cash of the tenants. Cotton averaged 78 per cent of the total sales of all the owners in Jackson, Garvin, and Pittsburg counties, and 87 per cent of the total sales of the tenants (Table 3).

The importance of the third factor, the use of farm mortgage funds for crop-producing purposes, is hard to measure. Of 52 owners who used no seasonal credit, however, 29 had no mortgage debt and 17 others reported that such debt was used for the purchase of land or the payment of other mortgage debts. The use of long-term loans for short-term purposes would therefore seem to be of minor importance in explaining the fact that a larger proportion of owners than of tenants financed their seasonal needs.

Owners who used credit received over 50 per cent more credit per person than the tenants. For each acre in crops, the owner-operators used \$8.60 of short-term credit and the tenants, \$6.10. For each acre in cotton, the same credit amounted to \$13.80 for the owners and \$9.60 for the tenants. The larger use of credit by owners may in some cases be due to their loans to tenants. However, in Garvin county, the only district for which these data are available, only eight in 24 credit-using owners had tenants on their farms, and of these eight, only one made any direct loans to tenants in 1926. In this district advances to tenants do not explain either the use of credit by owners or the amount of credit used.

Another probable explanation of the larger per acre use of credit by owners who use credit may be that they borrow for livestock production to a larger extent than do tenants. It stands to reason that this is the case since crop production is an annual affair whereas the cycle of livestock production frequently is completed only after a series of years. Tenants cannot as readily undertake livestock production enterprises as can owners and doubtless the higher credit of owners per acre of crops is explained in part by this difference in tenants and owners. Also since, as it has been shown, owners used considerable credit for purchase of land, this in part probably explains the difference in use of credit by owners and tenants.

With respect to the term of credit, the owners of the three counties borrowed for an average period of 7.1 months and the tenants for 7.3 months (Table 5). In Pittsburg county, however, the tenants used credit for a shorter term than the owners.

A more significant difference between owners and tenants is shown by the use of merchant credit. In Jackson and Garvin counties, few of the farmers were dependent on merchants for an appreciable amount of their seasonal credit (Table 6). But in the Pittsburg county district half the total short-term credit was supplied by merchants. The owners interviewed, of whom 52 per cent patronized these stores, obtained 32 per cent of their total short-term credit from this source. Pittsburg county tenants, 68 per cent of whom used merchant credit, secured 57 per cent of their total short-term credit from such

stores. This greater resort of tenants to merchant loans is typical of the South. In all the cotton-growing districts of North and South Carolina, Georgia, Arkansas, and Oklahoma, surveyed in 1926 by the Experiment Stations and the United States Department of Agriculture, where merchant credit was widely used, it appeared that owners secured a relatively greater part of their short-term credit from banks and a smaller part from merchants than did tenants.

Another important difference is found in the purposes for which credit is obtained by farm owners and tenants. Tenants generally use a larger part of their seasonal credit for the purchase of food, clothing, and other family needs. Averaging the three districts covered in this study, the owners used 24 per cent of their short-term credit for living expenses, as compared with 69 per cent for such expenses used by the tenants (Table 7). Twenty-three per cent of the owners' credit was for the purchase of land and the rest for farm operating expenses and the payment of debts.

Finally, the security for credit differs between owners and tenants. About 44 per cent of the owners' short-term credit was obtained on plain note (or, in case of merchant credit, on open account) without any mortgage or endorsement (See Table 9). Only 16.8 per cent of the tenants' credit was thus obtained. About eight per cent of the owners' credit was endorsed and 5.8 per cent secured by crop and chattel mortgage, whereas 11.1 per cent of the tenants' credit carried one or more endorsements and 9.1 per cent was secured by crop and chattel mortgage. The fact that more security is required of tenants reflects the greater risk of making loans to them.

The Carry-over of Short-term Credit

The ability of cotton farmers to pay their short-term debts which fall due in October or November depends chiefly on the value of their cotton crop. When the returns from cotton are small, either by reason of a poor yield or of a low price, the growers find it difficult to meet their obligations. The result is an increased renewal or carry-over into the following year of loans many of which must wait for payment until another crop of cotton is harvested.

It so happened that in the years for which these studies were made in Jackson and Garvin counties the cotton returns were unusually poor, 1925 being a bad crop year in Jackson county and 1926 a bad year in Garvin (See Figure 2). In each case the previous year had been good. The effect of this change of fortune was to increase the carry-over of cash loans in the Jackson district from 14 per cent at the beginning of the year to 26 per cent at the close of 1925. In the Garvin district the carry-over rose from 14 per cent at the beginning of 1926 to 37 per cent at the close. In Pittsburg county, on the other hand, the year 1925 was a favorable one for cotton. As a result, the carry-over of seasonal credit declined during the year from 37 per cent of the total cash credit used to 18 per cent.

Not all of the cash credit outstanding at the end of the year, however, was overdue at that time. Of the total cash credit used during the year, 22 per cent in Jackson, 31 per cent in Garvin, and 15 per cent in Pittsburg county was outstanding and overdue at the close of the year (See Table 17).

The carry-over of merchant credit was less than the carry-over of cash credit, there being nine per cent overdue at the end of the survey year for the three districts as a whole as compared with 22 per cent of the cash credit²⁴. Except in Garvin county the carry-over of short-term credit, both cash and merchant, was greater for tenants than for owners. In the Garvin district, however, a larger part of the owners' than of the tenants' cash loans were overdue at the close of 1926.

²⁴Data were lacking on the merchant credit outstanding at the beginning of the year.

Table 17—Short-term Credit Outstanding and Overdue at the Close of the Year in Per Cent of Total Short-term Credit Used During Year, by Kind of Credit and Tenure of Operator

County and tenure	TYPE OF CREDIT		
	Total short-term credit	Cash credit	Merchant credit
	Per cent overdue	Per cent overdue	Per cent overdue
All counties			
All farmers -----	19	22	9
Owners - -----	19	22	1
Tenants - -----	18	22	11
Jackson (1925)			
All farmers -----	20	22	11
Owners - -----	16	17	5
Tenants - -----	25	26	15
Garvin (1926)			
All farmers -----	31	31	24
Owners - -----	32	33	0
Tenants - -----	29	29	39
Pittsburg (1925)			
All farmers -----	12	15	8
Owners - -----	11	16	0
Tenants - -----	12	15	10

This problem of overdue loans is a very serious one in rural communities because of the inherent uncertainties of farming, especially in regions which specialize in the production of a single cash crop. Theoretically, perhaps, farmers could borrow each year as much money as could be repaid from average crop returns, saving enough from the good crops to cover the deficit from bad ones. But many farmers normally borrow as much as this without accumulating a reserve of savings for emergencies. The consequence is that in bad crop years many debts remain temporarily or permanently unpaid and the functioning of the credit agencies is impaired.

How do the local banks handle such a situation? Have they prepared for it in advance by diversifying their loans and investments and by discouraging large loans to farmers during good crop years? Have they been able to follow such a policy and still finance all the farmers' legitimate credit needs? The banks try to meet conditions as they find them. They must expect to find that not infrequently a large proportion of their seasonal loans turn out to be long-term loans because of the necessity of renewal. Does this involve a risk too great for local agencies? The number of rural bank failures in recent years lends emphasis to this question. Is there a need for branch or group banking with diversified loans covering a wide area? Or can some means be devised for carrying the risk by insurance? These and related questions call for a great deal more of concerted thought and study than has yet been given to them.

THE COST OF SHORT-TERM CREDIT

In describing credit practices in Oklahoma as reported by the farmers and business men of the selected communities this study can picture the situation in only a single year. It provides little measure of changes in credit practice

from year to year. It is believed, however, that the cost of short-term credit to the farmer does not vary greatly over short periods of time except as a result of changes in the amounts and kinds of credit used.

Considerable allowance must be made for inaccurate reports. All the tables and charts are based on information obtained from farmers who did not always know what the interest charge really was. In fact, the interviews with credit merchants in Pittsburg county showed that the cost of merchant credit there was greater than the farmers realized. In Garvin county, however, and in most of the districts covered by the studies in other states, the reports of merchants agreed closely with the reports of farmers. There is less probability of error in the reports of interest on bank loans.

Knowledge of the facts is particularly important where the cost of credit is high. When many farmers are unable, year in and year out, to earn a satisfactory livelihood from the soil, high interest rates on short-term loans become a heavy burden. Indications are that the amount of such interest payable in Jackson and Pittsburg counties in 1925 and in Garvin county in 1926 averaged at least \$46 per borrower (See Table 18). In Garvin county where income data were obtained for 1926, which was a year of relatively low income for farmers, the average amount of interest exceeded the average net income of the operators. A lowering of the interest charge would be of real benefit to the cotton grower. As a basis for determining the possibilities and methods of bringing about such reduction analysis of the facts is essential.

Table 18—Annual Cost of Short-term Credit, Based on the Period of Actual Use

County and tenure	Total short-term credit		Merchant credit		Cash credit	
	Weighted average interest rate	Average amount of interest payable	Weighted average interest rate	Average amount of interest payable	Weighted average interest rate	Average amount of interest payable
	Per cent	Dollars	Per cent	Dollars	Per cent	Dollars
All farmers	16.7*	46	34.8	55	11.4	30
All owners	11.9	43	18.4	28	11.0	39
All tenants	19.3	47	38.5	62	11.6	27
Jackson						
All farmers	10.6	37	11.5	17	10.5	34
Owners	10.5	48	13.8	20	10.3	44
Tenants	10.7	31	10.3	5	10.8	28
Garvin						
All farmers	11.4	24	11.7	12	11.4	23
Owners	12.2	31	20.6**	20	11.7	30
Tenants	10.9	20	5.3**	6	11.2	20
Pittsburg						
All farmers	24.2	61	39.8	65	12.7	31
Owners	14.7	47	20.1	34	12.5	39
Tenants	26.6	63	43.1	71	12.7	29

*The simple averages of the weighted rates for all counties are as follows: All farmers 15.4 per cent, owners 12.5, tenants 16.1.

**These data not significant due to fact that only a few farmers used merchant credit in Garvin county.

The average interest rate on all short-term loans in the three districts was about 17 per cent per annum (Table 18)¹⁶. These short-term loans combine cash loans, the cost of which was 11 per cent, and merchant loans, the cost of which averaged 35 per cent. Because of this great difference in cost, the two types of short-term loans will be discussed separately.

The Cost of Cash Credit

The rate of interest on cash loans, on an annual basis, varied for individual farmers from nothing at all to 40 per cent, but more than three-fourths of the farmers paid rates of from 10 to 15 per cent (See Appendix, Table VI). The local bankers sometimes charged 10 per cent per annum for the time the note ran and sometimes 10 per cent of the face of the note regardless of the time. In Jackson county a per annum rate was customary, in Pittsburg county a flat rate prevailed, and in Garvin county both per annum and flat rates were common.

Sometimes a flat rate of more than 10 per cent on cash loans was reported, and occasionally a per annum rate of less than 10 per cent, especially if the loan was large. Two out of three bankers interviewed in Garvin county gave preferential rates to large loans, the spread being 2 per cent. Frequently, the interest was deducted in advance.

The Cost of Merchant Credit

The cost of merchant credit to individual farmers varied even more widely than the cost of cash credit, ranging from nothing to 233 per cent per annum. According to their own reports, more than one-half of the farmers interviewed paid rates of 20 per cent or more (See Appendix, Table VII). About one-fourth of them paid from 20 to 39 per cent.

It is noteworthy that 26 per cent of all those who used merchant credit received goods at cash prices and paid no interest¹⁷. In Pittsburg county, however, only 16 per cent of the farmers were in this category. About one-half the total volume of merchant credit in each of the other two districts, where such credit was relatively little used, was advanced free of charge, but in the Pittsburg district only nine per cent of the merchant credit was advanced without interest (Appendix, Table VII).

Those who did pay interest for store credit usually paid a flat 10 per cent or more. Extremely high annual rates result when flat charges are applied to lines of credit which run for short periods of time. The interest rate on a loan running for two months and bearing a flat charge of 30 per cent would equal 180 per cent per annum. For this reason very high rates of interest on store credit are usually associated with short terms. As in the case of bank credit, large loans often got the benefit of the lowest rates.

In the Pittsburg community, the bulk of the merchant credit was extended on the basis of unendorsed notes secured by crop and chattel mortgage. Upon signing a note for \$100, the farmer would receive coupons entitling him to buy goods at time prices to the value of \$90. Special inquiry revealed the fact that these time prices ranged from 10 to 40 per cent above cash prices, the average difference for selected commodities being 25 per cent.

¹⁶This includes both cash and merchant credit. For each separate loan the yearly equivalent of the principal was first computed. Thus the yearly equivalent of a \$100 loan repaid after 6 months would equal \$50. Then the actual interest charge in dollars was found, including time prices for goods bought on credit. Thus, if the interest rate on the above loan were 10 per cent per annum, the amount of interest would be \$5. If the rate were 10 per cent flat, regardless of term, as was often the case for merchant credit, the amount of interest would be \$10. Finally, the sum of all the separate interest charges was divided by the sum of all the annual equivalents to get the weighted average interest rate on an annual basis.

¹⁷Store accounts running for more than 30 days were classed as credit whether interest was charged or not.

THE ANNUAL COST OF SHORT-TERM CREDIT IN JACKSON, GARVIN, AND PITTSBURG COUNTIES

EXPRESSED AS A WEIGHTED ANNUAL RATE OF INTEREST

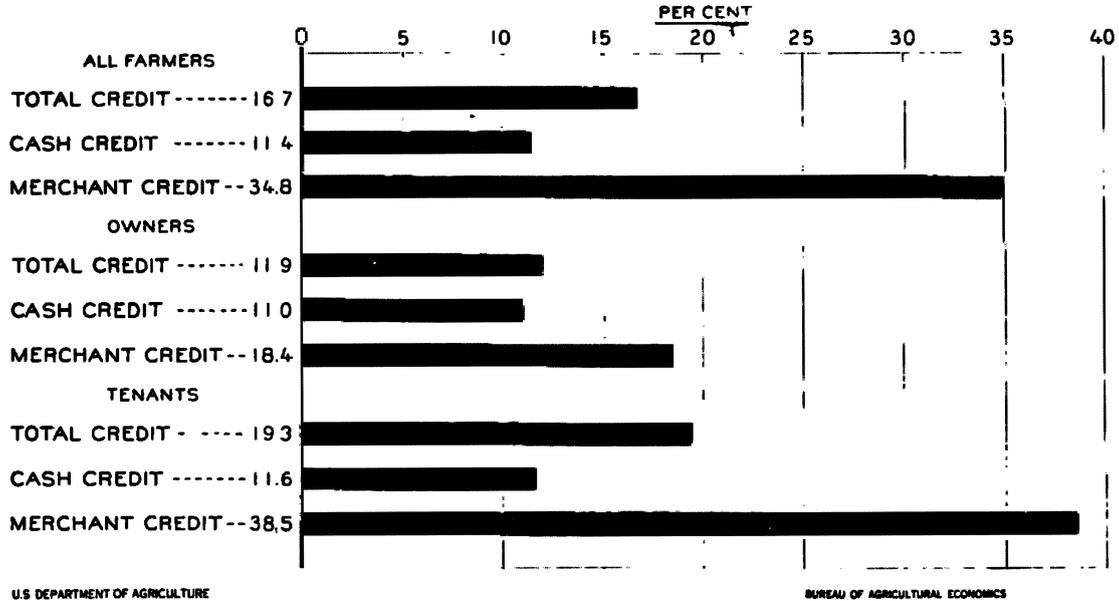


Figure 3

What then would be the rate of interest for a six month's term? For a \$100 note the farmer gets coupons for \$90 worth of goods at time prices. The cash price of these goods is \$72. In other words, the farmer pays \$28 interest on \$72 worth of commodities, or 39 per cent flat. Since 39 per cent for half a year is the same as 78 per cent for a full year, the rate of interest would be 78 per cent per annum. When farmers bought supplies on open account instead of using coupons, the rate of interest was not materially less, for a flat 10 per cent was added at the end of the season to the amount of the bill reckoned at time prices²⁸.

This estimate is more than twice the average of 35 per cent derived from the farmers' reports (Table 18). There is, therefore, ground for believing that the farmers were charged more than they realized. This belief is strengthened by a detailed examination of the farm schedules. Of 110 Pittsburg county tenants giving information on the cost of merchant credit, 55 said that the merchant from whom they bought supplies on time offered no discount for cash, while 34 named a definite discount, 13 reported a discount of unknown amount, and 8 replied they didn't know whether there was a discount or not. The average interest rate paid by the 34 who reported a discount was over 80 per cent, a figure which agrees pretty closely with the suggested 78 per cent derived from the lists of cash and time prices quoted above. The discount for the 13 schedules indicating a discount of unknown amount was conservatively estimated at 20 per cent. The chief problem was how to interpret the 55 cases of "no discount."

These 55 tenants apparently had no charges on merchant credit other than the flat 10 per cent common to all. It was thought that possibly they were the more well-to-do farmers, the better credit risks. But their average net wealth was found to be little more than half the net wealth of the tenants who reported a discount. If anything, they were the poorest risks. The most probable explanation is that a majority of these tenants paid the equivalent of time prices even on cash purchases. Either they could not get a discount for cash by demanding one, or they did not know one existed, or they did not dare to ask for a discount in cash transactions, or they did so little cash business that the question of a discount was never raised. In other words the merchant possibly had two sets of cash prices, one probably as high as the level of time prices. These 55 farmers, most of whom may have been among the less desirable customers, or the weakest in bargaining power, were discriminated against, not in their credit but in their cash purchases. A few of them, however, may have been exceptionally good risks, paying no higher cash price than any others and no time price other than the flat 10 per cent. This 10 per cent is the only charge which can be treated as a strictly credit cost. But if the higher cash price could be accurately determined and computed as a credit charge, it is our opinion that credit cost for this group of tenants would approximate the 80 per cent average of the discount-reporting group.

Comparison of Costs in the Three Districts

The cost of short-term credit was found to be more than twice as high in Pittsburg county as in either of the other two districts, the average rate being 24.2 per cent in Pittsburg, 10.6 per cent in Jackson and 11.4 per cent in Garvin. This difference was not due to cash credit, for the rates on cash loans varied little between districts. It can be explained only by the large volume of merchant credit used in Pittsburg county and the high cost of such credit.

Thus it appears that in the districts where farming conditions are most difficult, where farms are smallest²⁹, and the people are poorest, the farmers

²⁸Farmers whose debts were carried over from one year to the next were charged an additional flat rate of 10 per cent.

²⁹See the Census data of Table 1 for comparison of size of farm by counties.

are most dependent on expensive merchant credit for the support of their families between harvests. The use of such credit, arising out of these unfortunate conditions, has a tendency to perpetuate the conditions by retarding the economic progress of the farm population.

Differences Between Owners and Tenants

Interest, unlike some taxes, is not assumed to be levied according to "ability to pay." The farm owners of Jackson, Garvin and Pittsburg counties paid on the average 11.9 per cent interest on their total short-term loans, while the tenants, who did a smaller farm business, paid 19.3 per cent (See Figure 3). With a smaller expenditure for interest, the owners obtained credit averaging \$610 and the tenants obtained less than \$400 each, the time for which the credit was used being roughly the same.

Cash credit cost the owners 11.0 per cent per annum and the tenants, 11.6 per cent. Merchant credit cost the owners 18.4 per cent and the tenants, 38.5 per cent. Because the tenants used more merchant credit than the owners and because this and other kinds of credit cost them more, the rate they paid on all short-term loans was over seven per cent higher.

The foregoing description of the cost of short-term credit has shown that merchant credit costs the farmer by far more than cash credit, that the cost of both kinds of credit varies greatly between districts, and that tenants usually pay a higher rate than owners. It remains to find reasons for these and other differences in credit costs.

Analysis of Differences in Credit Costs

Where interest rates are high, one expects to find an unusually high degree of risk. Possibly, therefore, credit merchants charge high rates in order to cover heavy losses in their credit business.

The evidence, such as it is, lends weight to this opinion. Estimates were obtained from six merchants in Garvin county whose credit sales to farmers from 1923 to 1926, inclusive, equaled 24 per cent of their total sales to farmers. These merchants charged on the average the equivalent of 19 per cent interest³⁰. Their losses on farm credit sales during this 4-year period, however, equaled 28 per cent on the same basis, making an equivalent of a net loss of 9 per cent interest.

Three of the merchants made a net gain in interest (over and above losses) which averaged 12 per cent per annum. Yet their credit charge was no less than that of the others—a flat 10 per cent of the bill with an additional 10 per cent per annum on overdue accounts. Some merchants, by careful selection of customers or close supervision of credit sales, succeed in avoiding losses and in securing the full benefit of the high interest rates prevailing in the community. Their credit customers then pay rates that reflect risks which they do not represent. The customers are penalized by a credit system which, by requiring all to pay the same interest rate, compels the good risks to pay for the bad ones. Many of the more reliable customers should be able to get loans from banks at much lower rates of interest and this possibly is the most practical way of obviating the penalty of unduly high interest.

In view of the fact that 86 per cent of the credit sales to farmers, as reported by the merchants, were on open account, the question arises whether losses could not be avoided by taking more security or by requiring endorse-

³⁰Time prices and interest charges as reported by the merchants were included, as well as an estimate of the additional charges on overdue accounts. The credit sales to farmers, reduced to cash prices, were used in conjunction with the term of these sales, as reported by the merchants, to estimate the annual equivalent. The total interest charges of all the merchants divided by the total annual equivalent equaled 19 per cent.

ments. In many rural communities the endorsement of bank loans is a customary practice, but the merchant hesitates to ask for endorsement because he fears the loss of his customers' business. If farmers were willing to cooperate with the creditors and with one another in providing ample security, they could probably reduce the cost of their merchant credit.

It should be noted, however, that credit merchants must meet other expenses incident to their credit business in addition to those due to bad debts. Frequently the credit they extend to farmers prevents them from taking advantage of cash discounts offered by wholesale dealers. Furthermore, there are the expenses of bookkeeping, supervision of loans, and examination of security.

Commercial banks lose a much smaller part of their loans to farmers than do the merchants. Of two bankers interviewed in Garvin county, one reported no losses since 1922. The other had charged off since 1923 between 1 and 2 per cent of his total loans and discounts. A merchant often can afford to lose much more than this if the extension of credit increases his total sales, because his income comes chiefly from the profits of sale rather than from interest on credit. What he loses in interest he can recover on the cash price of his goods. The banker, on the other hand, is chiefly dependent on interest earnings for the maintenance of his business and cannot afford to lose more than a small portion of his loans.

For this reason, the banker is usually much more discriminating than the credit merchant in the selection of his customers and is more exacting in the matter of security. Of the total cash credit used by the farmers interviewed, almost all of which was obtained from banks, 76 per cent was secured by crop or chattel mortgage, with or without endorsement (See Appendix, Table VIII). Only 62 per cent of the merchant credit was thus secured, the rest having been extended on open account (Appendix, Table IX). Although the risks of merchant credit are probably greater than the risks of an equal amount of cash credit, even on the same security, the merchants actually required less security.

Discrimination in the selection of customers for cash loans may be shown by comparing the tenure status of the Pittsburg farmers who used nothing but cash credit with that of other farmers in the same county who used nothing but merchant credit (See Table 19). Of those who used cash loans, 20 per cent were owners, while of those who used merchant credit, only 12 per cent were owners. It has already been noted that the tenants of the Pittsburg county district obtained 57 per cent of their short-term credit from local stores, while the owners of that district obtained but 32 per cent from this source. Farm owners are generally considered better credit risks than tenants both because they have land which may, in case of necessity, be mortgaged or sold to pay short-term debts, and because their ownership of land tends to make them more stable and responsible members of a community².

It will also be noted that the farmers who used only cash credit had larger farms, received a smaller percentage of their income from sales of cotton, were wealthier, and had more cash on hand at the end of the year than the farmers who used only merchant credit. Each of these statements holds true also of the tenants taken as a separate group.

To summarize the facts on cost of credit it appears:

²The owners interviewed in the three districts had stayed on the average about 5.4 years in each place since they began farming for themselves, whereas the tenants had stayed only 2.6 years.

**Table 19—Comparison of Farming Practices and Wealth of Pittsburg County
Farmers Who Used Cash Credit Only With Those Who
Used Merchant Credit Only**

Kind of credit used	Number of farmers			Average crop acres per farm	Total sales per farm		Average net worth Jan. 1, 1926	Average cash on hand Jan. 1, 1926*
	All farmers	Owners	Tenants		Average	Per cent cotton		
	Number	Number	Number	Number	Dollars	Per cent	Dollars	Dollars
Farmers who used cash credit only	44	9	35	78	1,206	83	1,819	254
Farmers who used merchant credit only	69	8	61	53	912	89	1,111	118

*This average applies to farmers who had cash on hand. About the same proportion in each group reported cash on hand.

First, that a large part of the difference between the cost of bank credit and the cost of merchant credit may be explained by the difference of risk. Bankers, who live upon interest earnings cannot afford to take as many chances in making loans as merchants whose incomes are largely derived from profits on commodity sales. Therefore the bankers exercise greater care in selecting customers and in making loans, have fewer losses from bad debts, and can afford a lower interest rate. Hence banking rather than merchant credit should be encouraged as the better means of financing profitable types of farming at rates of interest commensurate with the risk.

Second, the higher interest rates in the Pittsburg district were seen to be due to the greater use of merchant credit and the higher cost of such credit. Geographical differences such as soil and climatic conditions help to explain these variations in the cost and type of credit used. Soil and climate in Pittsburg county are least favorable to cotton production and boll weevil damage is greatest. Consequently the income of the cotton grower has been small and uncertain, making the credit risk in many instances too great to attract the banker. The same conditions discourage and hinder the accumulation of savings which constitute the basis of bank deposits and the scarcity of deposits results in a scarcity of loanable funds, except where means have been found for attracting an adequate volume of outside capital. The need for seasonal credit is great because of this same lack of savings and a large part of this need has been filled, at a high cost, by the credit merchant with resulting injustice to individuals who regularly pay their debts.

Third, the cost of credit to owners and tenants varies widely. Reasons for the fact that tenants frequently pay higher rates of interest than do owners have been suggested above in the comparison of bank and merchant credit. The ownership of land reduces the risk by adding a new basis for credit and by encouraging stability of tenure and responsibility in business affairs.

Fourth, the remaining differences in credit costs are difficult to account for. After explaining differences in interest rates between banks and merchants, between one district and another, and between owners and tenants, there remain many differences of rates to individual farmers which are unaccounted for. Analysis of these remaining differences soon brings one to the point where one needs to know the circumstances of each individual loan. A few things may be said, however, which help to explain some of these differences.

There is evidence that bankers and merchants both gave preference to large loans, and some favorable interest rates may be explained by the size of the loan. One of the bankers interviewed stated that he gave a two per cent preferential rate on loans in excess of \$250. The farmers' reports showed little relation between rate of interest and size of cash or merchant loan for loans under \$500. Loans of over \$500 were usually obtained at relatively lower cost.

Also, the abnormally high rates of interest were generally the result of customary flat charges on loans which remained outstanding for a short period of time, as noted above. Conversely, some of the lower rates resulted from low flat charges on loans which ran the full year. As a rule no additional charge was made for unpaid merchant credit until the beginning of the new year. This practice offers no inducement to prompt payment, to say the least.

Other causes of differences in credit costs are not clearly shown by the data. Some of these differences are probably due to errors of estimate on the part of the farmers. Others are due to the general credit standing of individual borrowers. There may be some cases where advantage is taken of the ignorance of customers to charge them an unduly high rate. One would expect to find such cases more frequently in Pittsburg county than in Jackson or Garvin.

How Interest Rates May Be Reduced

The foregoing analysis of differences in credit costs throws light on the methods which must be employed if these costs are to be reduced.

First of all, there is the fundamental factor of risk to be dealt with. Only by reducing the risk can some types of loans be made attractive enough to merit a lower rate of interest from investors. The problem of lessening the risk is not easy, for it involves changes in farming practice and changing the saving customs of the farmers. Thus, in Pittsburg county, particularly, a more stable and profitable type of farming is needed. Successful boll weevil control would go far to improve credit conditions.

Some farmers may find it possible to improve their standing as credit risks by reducing the amount of their credit. This plan usually requires careful scrutiny of expenditures in order to effect economies and generally could not be applied where no savings could be made without injury to the well-being of the farm family. Greater diversification, however, and the production on the farm of more of the foods and feeds consumed would also tend to reduce the amount of credit needed, although such practices should not be undertaken without careful consideration of other factors whether or not such changes conform to economically sound farm organization requirements.

Reduction in the amount of credit would be of greatest benefit if it made the farmer less dependent on the credit merchant, not only because it would effect a direct interest saving, but also because it would tend to reduce the rate of interest in the community. In districts where the volume of store credit is relatively small, the rate of interest on such credit tends to be low, because losses do not bulk large. Furthermore, farmers who borrowed less from stores would, in many instances, be able to borrow somewhat more from banks, though their total indebtedness would probably be reduced. The shifting of part of their store credit to banks would save them something in interest and by increasing the size of the bank loans would give more of them the benefit of preferential rates on large loans.

The shift from merchant credit to cash credit should be easiest for those farmers who are already bank customers. Thus in Pittsburg county, 59 of 179 borrowers used both cash and merchant credit. For their cash credit, they paid an average rate of interest of 12 per cent and for their merchant credit (according to their own estimates) 29 per cent. These farmers should find it possible to transfer at least a part of their store credit to the bank, thus reducing the amount of bank credit used by the merchants and freeing a corresponding amount of bank credit for the use of the farmers.

Where it is found that local banks are unable, because of a lack of loanable funds, to handle the reasonable credit needs of a community at prevailing rates of interest, means should be sought for drawing capital into the community from outside, as, for example, by the formation of an agricultural credit corporation under the intermediate credit system. In some localities the banker himself has taken the initiative and offered his services free of charge in organizing such a corporation to take advantage of the discounting facilities of the Federal intermediate credit banks. In other regions part of the farmers' credit needs are met by a credit corporation managed by a cooperative marketing association. The United States Department of Agriculture is now engaged in a study of the services of such corporations. An alternative method of increasing the local supply of loanable funds which deserves more attention is through branch or group banking.

Table 20—Mortgage Debt of Surveyed Farms at Beginning and End of Year*

County	Farm mortgage debt outstanding at beginning of year			Farm mortgage debt outstanding at end of year					
	Farmers with mortgage at beginning of year	Total amount	Average per farmer	Farmers with mortgage	Total amount	Average per farmer	Average value of mortgaged farms	Ratio of debt to value of mortgaged land	
	Number	Dollars	Dollars	Number	Per cent	Dollars	Dollars	Dollars	Per cent
All farmers -----	97	296,992	3,062	103	66	299,178	2,905	9,581	30.3
Jackson (1925) -----	52	133,472	2,567	55	69	131,557	2,392	7,652	31.3
Garvin (1926) -----	22	89,020	4,046	25	76	95,121	3,805	16,614	22.9
Pittsburg (1925) -----	23	74,500	3,239	23	55	72,500	3,152	6,548	48.1

*This table includes four tenants in Jackson county who became owners during the survey year, and three farmers who were classed as tenants in this study but who owned some land they did not operate.

Thus far emphasis has been laid on the desirability of reducing risks. But many risks of farming will remain even after all possible reduction has taken place. Risks may be distributed, as well, by being spread among so many people that the cost to each one is small. The local banker or credit merchant does most of his business in a single community. If the farmers of that community are all dependent on cotton for a livelihood and have little income from anything else, the lender has most of his eggs in one basket. That is one of the principal reasons for the numerous bank failures in agricultural regions. Were the rural bankers to play absolutely safe they would have to loan much of their money altogether outside their community even during the growing season. But, as it is, they find it hard enough in many cases to meet all the reasonable credit requirements of the farmers in their locality. A small country bank may fail because of a succession of bad crop years even though, if given time enough, it could collect all its outstanding loans. Even if actual failure does not occur the bank's services to the farmer are practically stopped for the time being. Banks in neighboring communities or states may have had no such difficulty. The situation seems to call for some method of distributing the risk, either by spreading the capital and credit over a wide area or by some form of specialized insurance.

FARM MORTGAGE CREDIT

Of the farm owners interviewed in the three counties, 66 per cent reported a mortgage on the farm at the end of the year. The amounts of the mortgages, ranging for individual farmers from \$400 to \$24,900, averaged at this time \$2,905 per farm, or roughly 30 per cent of the value of the mortgaged land (See Table 20).

The largest proportion of mortgaged farms was found in Garvin county where 76 per cent were mortgaged, and the smallest proportion in Pittsburg county where the percentage mortgaged was 55. Mortgages as a percentage of value of farms were largest in the Pittsburg district, being 48 per cent of the value, and smallest in the Garvin district, where they constituted only 23 per cent of the value of the land.

Mortgage data from the 1925 Census on farms operated by their owners is given for the three counties in Table 21. The figures for the total debt, however, and for the percentage of farms mortgaged are subject to considerable error on account of the probable failure of many farmers to report mortgages that really existed. In the 1920 Census for Jackson, Garvin, and Pittsburg counties, eight per cent, 21 per cent, and 28 per cent, respectively of the total number of full-owner and part-owner farms were not reported upon as to the existence or non-existence of mortgage debt. Farms with mortgage unknown may have been just as numerous in 1925.

Comparison of the survey data with the Census shows that the mortgaged farms surveyed in Garvin county were far above the average in value as shown by the Census, while they were mortgaged for an abnormally low percentage of their value. The surveyed farms in Jackson and Pittsburg counties were not greatly different in these respects from the Census averages.

Of the total mortgage credit of the farmers interviewed, 78 per cent was obtained from mortgage or insurance companies²², seven per cent from the Federal Land Bank of Wichita, five per cent from the Oklahoma State School Funds, two per cent from commercial banks, and eight per cent from individual lenders (Table 23). In Pittsburg county, practically all the loans were obtained from mortgage and insurance companies, no use whatever being made

²²No separation is possible, since the farmers did not distinguish between the different kinds of "loan" or "investment" companies.

of either the Federal Land Bank of Wichita or the School Funds. The largest use of Federal farm loans was made in Garvin county, where 16 per cent of the total mortgage credit was of this kind.

Table 21—Mortgage Debt in 1925 on Farms Operated by Their Owners in Jackson, Garvin, and Pittsburg Counties, from the Census of Agriculture

Full-owner farms mortgaged	Jackson	Garvin	Pittsburg
Number reporting amount.....	301	478	523
Per cent of all reporting farms..	40%	54%	45%
Average amount of mortgage---	\$2,830	\$2,950	\$2,042
Average value of mortgaged farms.....	\$8,809	\$5,971	\$4,376
Ratio of mortgage to value.....	32.1%	49.4%	46.7%

Table 22—Purposes of Farm Mortgage Loans, by District and Source

District and source of credit	PURPOSE				
	Buying land	Paying debts	Making improvements	Other purposes	All purposes
	Per cent	Per cent	Per cent	Per cent	Per cent
District:					
All counties	92	5	2	1	100
Jackson county	97	1	2	0	100
Garvin county	94	2	1	3	100
Pittsburg county ...	80	15	3	2	100
Source:					
Mortgage and insurance companies ..	91	5	3	1	100
Federal land banks...	100	0	0	0	100
State school funds...	85	6	0	9	100
Commercial banks ..	100	0	0	0	100
Individuals*	96	4	0	0	100

*Including one merchant.

The principal part of the mortgage credit, or 92 per cent of the total, was reported to have been used for the purchase of land. In many cases an existing mortgage was assumed at the time of the purchase. Undoubtedly some of the loans extended primarily for buying land were used in part for unreported purposes such as the payment of outstanding debts²². In the Pittsburg district, 15 per cent of the total mortgage credit was borrowed in order to pay other debts (See Table 22).

²²The Ninth Annual Report of the Federal Farm Loan Board indicates that of the total mortgage loans of the Federal Land Bank of Wichita, made in Oklahoma up to October 31, 1925, 77 per cent were extended for the payment of mortgages or other debts.

Table 23—Distribution of Farm Mortgage Loans by Source for Jackson, Garvin and Pittsburg Counties*

District	Farmers	SOURCE					
		Mortgage and insurance companies	Federal land bank	State school funds	Commercial banks	Individuals	All sources
	Number	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
All counties -----	104	78	7	5	2	8	100
Jackson county -----	56	71	5	8	3	13	100
Garvin county -----	25	72	16	4	2	6	100
Pittsburg county -----	23	97	0	0	1	2	100

*This table covers the original amount of all loans outstanding at the beginning of the year and all loans made during the survey year.

In the districts covered by this survey, the mortgage and insurance companies seemed to have been active in promoting land ownership. However, much of the land acquired with the aid of mortgage loans was bought at high prices. About one-half of the total mortgage debt outstanding on January 1, 1926, was incurred during the period 1918-1923, inclusive, when land values were high. Fourteen per cent of the debt was incurred during the two peak years of 1920 and 1921²⁴.

Changes in Mortgage Debt During the Year

The number of farms mortgaged increased during the survey year from 52 to 55 in Jackson county and from 22 to 25 in Garvin county while the average amount of mortgage declined (Table 20). New mortgage loans were taken out by seven Jackson county and six Garvin county farmers. No new mortgages were taken out in Pittsburg county during that year. The seven Jackson county farmers borrowed in order to buy land; in fact, at the beginning of the year, four of them were tenants and owned no land whatever. Of the six farmers securing mortgages in Garvin county, three used their loans to buy land, one for living expenses, one for paying an old mortgage, and one for land and educational purposes combined. Some of these loans in Garvin county probably reflect the depression of cotton prices in the fall of 1926. Also it is probable that less borrowing would have been necessary in 1925 in Jackson county if the yield of cotton had not been so low (See Figure 2).

A better indication of the effect of low cotton returns on mortgage indebtedness in the course of a single year is the movement of the total mortgage debt which increased about eight per cent in Garvin county and declined three per cent in Pittsburg and one per cent in Jackson (Table 20). Of the total outstanding at the beginning of the year, moreover, only 1.3 per cent was paid off before the close in Garvin county, compared with 2.7 per cent in Pittsburg and 11.7 per cent in Jackson. The new loans made during the year, on the other hand, were, for the same counties, 8.1 per cent, zero, and 10.3 per cent respectively. Liquidations were smallest and the increase in total debt greatest in a year of abnormally low cotton prices²⁵.

The new loans made during the year on mortgage security were not obtained primarily from mortgage and insurance companies. There was a shift to individual lenders on the one hand and to the State School Funds and the Federal Land Bank on the other. The number of loans in the sample was too small, however, to lend much significance to this apparent tendency.

Cost of Mortgage Loans

The interest rate on mortgage loans, including commission charges, averaged about seven per cent per annum (Table 24), but the rates for individual farmers ranged from 5 to 10 per cent. In each county, six per cent was the most common rate of interest, with the frequent addition of a commission equivalent to one or two per cent per annum for the period of the loan. The average per annum cost of second and third mortgage loans was 7.9 per cent,

²⁴See the "Farm Real Estate Situation, 1927-28," Circular No. 60, United States Department of Agriculture, page 9, for an index number by years of the estimated value per acre of land.

²⁵In view of the low value per acre of cotton in 1925 in Jackson county, as shown by Figure 2, one might have expected the mortgage debt to have increased as it did in Garvin county. The explanation for the decline may be that the farmers had savings available to meet their debts, or that previous good crop years in Jackson county had given farmers a better credit standing with bankers who did not demand extensive funding of short-time loans into mortgage indebtedness.

Table 24—The Average Per Annum Cost, Including Interest and Commission, of Farm Mortgage Credit, by District and Source of Credit*

District and source of credit	Total mortgage loans		First mortgage loans		Second and third mortgage loans	
	Loans	Average cost	Loans	Average cost	Loans	Average cost
	Number	Per cent	Number	Per cent	Number	Per cent
All counties						
All sources	126	7.1	112	7.0	14	7.9
Mortgage and insurance companies	88	7.2	83	7.1	5	9.1
Federal land banks	7	5.7	7	5.7	0	-
State school funds	9	5.3	9	5.3	0	-
Commercial banks	4	8.9	4	8.9	0	-
Individuals	18	7.3	9	7.4	9	7.2
Jackson county	69	6.9	60	6.9	9	6.9
Garvin county	31	6.9	27	6.4	4	10.3
Pittsburg county	26	7.8	25	7.8	1	7.5

*The cost figures of this table are simple averages of the rates on individual loans.

but 88.9 per cent of all loans were secured by a first mortgage. The average cost of mortgage credit was notably higher in Pittsburg county (7.8 per cent) than in either of the other counties (6.9 in Garvin county and 6.9 per cent in Jackson county).

When the average rates of mortgage interest for each county in 1920, according to the Census of Agriculture, are put upon a map of Oklahoma, it is interesting to note how the rates increase as one moves from the western cotton-growing counties to the eastern. The rates in the three counties studied, having varied from 6.3 per cent in Jackson county to 6.7 per cent in Garvin and 7.4 per cent in Pittsburg, are typical of the above tendency, which probably reflects in large measure the policy of farm mortgage agencies of adjusting the rate to the risks and other costs of doing business. Because of soil and weather conditions, these risks and costs are in general greatest in the eastern counties of the state where the income from farming and the value of the land are more unstable. Moreover, the average size of loan is notably smaller and the cost per dollar loaned greater in the eastern district. Finally, there is a tendency for the higher interest rates to be associated with loans which have the smallest margin of security, or, in other words, with those which are large in proportion to the value of the mortgaged land.

The relation between the rate of interest and the size of loan and margin of security is shown in Table 25. Of course there are some counties which vary widely from the average relation here indicated. Some, for example, in which

interest rates are low, have good farming land which is heavily mortgaged. The same causes which lessen the risks of lending justify both a low rate of interest and a smaller margin of security. On the other hand, there are some counties in which the uncertainties of farming, together with the poverty of the people, lead both to high interest rates and to a cautious policy on the part of loaning agencies expressing itself in a low ratio of debt to value. In fact, we should expect to find, and do find, low interest rates associated with high land values for the country as a whole, and high rates associated with low values²⁶. For the state of Oklahoma alone, however, the 1920 Census does not show any relationship by counties between the rate of interest and the value of land (improved and unimproved), or between the value of the land and the ratio of debt to value. If the value of the improved land in farms were given separately, a relationship might appear.

Table 25—Relation of Interest Rates on Farm Mortgage Loans to the Size of Loan and the Ratio of Debt to Value in 47 Cotton-growing Counties in Oklahoma, 1925*

Rate of interest	Number of counties	Average size of mortgage loan	Average ratio of mortgage debt to value of mortgaged land
Per cent	Number	Dollars	Per cent
6.0-6.4	14	\$2,284	26.8
6.5-6.9	10	1,858	29.6
7.0-7.4	17	1,764	31.6
7.5-8.0	6	1,637	32.0

*From the Census of Agriculture.

The growth since 1920 of the Federal Farm Loan System has probably had a tendency to equalize the average rates of interest between different parts of the state. The rates on loans from Federal and joint stock land banks are limited by law to six per cent, and they do not vary at a given time between farmers in different parts of the same district. If the risks are greater in a certain territory, the land banks must either make no loans there or use special care in selecting borrowers, in appraising the land conservatively, and in regulating the amount of the loan. The only other alternative would be to make loans just as freely in such a territory as in any other, with a correspondingly large proportion of foreclosures. Resulting losses to the bank in cases where the market value of the land fell below the amount of the loan, whether because of inaccurate appraisal or poor management, would then have to be made up out of gains derived from loaning operations in other territories. Such a policy could not be justified from a sound business standpoint.

As yet, however, the Federal Loan System does not seem to have made as much headway in Oklahoma as in the country at large. On January 1, 1920, the loans of the Federal land banks were approximately three per cent of the total farm mortgage loans in the state²⁷.

²⁶See the article on "Farm Mortgage Interest Rates" by Clara F. Wigder in the Journal of Land and Public Utility Economics, January, 1925, which analyzes variations in interest rates as shown by the Census, by counties.

²⁷The amount loaned by the Federal land banks since organization, as reported on November 30, 1919, in the third annual report of the Farm Loan Board (\$5,476,100), was divided by the total farm mortgage debt January 1, 1920, as estimated by the Bureau of the Census and the Bureau of Agricultural Economics (\$188,890,000).

Eight years later, on December 31, 1927, this percentage for Oklahoma had advanced to seven, as compared with 12 per cent for the United States as a whole²⁴. On the same date, the farm mortgage companies held 30 per cent of the total mortgage loans in Oklahoma, the school funds and miscellaneous agencies, 35 per cent; farmers (48 per cent of whom were retired), 10 per cent; other individuals, nine per cent; insurance companies, seven per cent; and commercial banks, two per cent.

Term of Mortgage Loans

Fifty-six per cent of all the mortgage loans of the farmers interviewed ran for periods of six to 10 years, inclusive. Another 30 per cent of the loans ran for one to five years, leaving only 14 per cent which had terms of more than 10 years. Most of these longer-term loans were obtained either from the Federal Land Bank or from the State School Fund.

Farm Mortgage and Seasonal Loans Compared

For the owner of land, the utilization and repayment of farm mortgage credit is a far more important problem than that of personal and collateral or short-term credit. For the owners interviewed in this study, mortgage credit represented 80 per cent of their total indebtedness; cash credit, 17 per cent; and merchant credit, three per cent. It has already been shown that there is no hard and fast line between the purposes for which mortgage and short-term credit are used, although the former is more largely applied to the purchase of land and the latter to operating and living expenses. Furthermore, there is sometimes a shift from one type of loan to the other, as when a short-term loan is obtained in order to meet a mortgage payment, or, more often, when a farm is mortgaged to repay an outstanding short-term debt. Just previous to 1930, a great deal of personal credit was funded into mortgage credit and so shifted from commercial banks and other local creditors to farm mortgage agencies. A short-term loan which has been renewed and cannot be repaid in the immediate future is in effect a long-term loan. Changing it into a loan based on the security of land is merely recognition of this fact and is a means of securing the benefits of a lower rate of interest.

The average rate of interest on first mortgage loans, as shown in Table 24, was seven per cent. The average rate on all short-term credit for owners was 11.9 per cent. However, the frequent practice of charging flat rates on seasonal loans, particularly on merchant credit, makes the annual cost of such loans much higher the first year than in subsequent years in cases of renewal. The banks usually charged 10 per cent per annum on overdue loans. The difference in interest secured by changing to a mortgage loan, would then average from three to four per cent. It should not be thought that this difference in interest rate is a net saving to the farmer who shifts from a short to a long-term loan. The former is usually entirely flexible and interest can be stopped at almost any time the farmer has funds to meet his debt payments. The long-time loan frequently can not be reduced by payment since it is more rigid in payment date requirements. Consequently interest is often paid when the farmer could easily stop it if he were permitted to make payment.

Furthermore, we have seen from Table 5 that the average term of short-time credit was 7.4 months for owners. Interest, therefore, is not paid on an average 4.6 months of the year; whereas, interest on a short-term loan converted into a long-term loan must be paid 12 months in the year. A farmer who is burdened practically 12 months in the year with short-time loans may well consider conversion of them into long time loans.

²⁴These percentages are based upon forthcoming data of the Bureau of Agricultural Economics. For Oklahoma the sample covers 263 mortgaged farms in three selected counties, or 55.8 per cent of all replying, having a total mortgage debt of \$818,000. The counties were Beckham, Cimarron, and Okmulgee.

Whether it is wise under normal circumstances to use mortgage credit for operating and living expenses is, however, a different matter. Theoretically it would be advantageous for a farmer who needed \$500 for production credit each year to take out a \$500 Federal farm loan at 5 or 6 per cent interest if he needed it throughout the year and keep it out as long as needed—say for 33 years—instead of borrowing each year from the local bank at 10 per cent. Actually, however, such a farmer would be tempted to spend a part of his surplus income instead of saving it to finance the following year's production. When he borrowed from the local bank his loan would come due each fall. He would have to pay it in order to maintain his credit standing in the community. But with the Federal farm loan nothing need be paid except the semi-annual installment (for a 5½%, 34½ year loan) of about \$16.

The crop receipts of the first year after the shift in source of credit had been made would form a surplus of about \$500 which formerly had been used to pay the bank. If this money were safely kept or invested until needed for the next year's crop, all would be well. But if it were spent in advance, then the farmer might be forced to resort to additional credit. This is primarily a problem of personal budgeting and thrift, and so far the experiment does not seem to have been tried on any large scale.

Choosing the Agency for a Farm Mortgage Loan

Many farmers could save money by exercising greater care in choosing the agency from which to secure their farm mortgage loans. The rates of interest were found to vary from five to 10 per cent. Most of the loans were obtained from mortgage or insurance companies at rates which including commissions, averaged more than 2 per cent higher than the rate of the Federal land bank (Table 24).

Loans from the Federal land bank and from some insurance companies have the further advantage of the amortization plan, by which a portion of the principal is repaid each year. This plan not only spreads the burden of repayment over the whole period, but it reduces the interest charge in proportion to the continuous reduction of principal. The chief benefit of this plan is that it requires the borrower to devote a part of his income each year to paying off his debt, thereby to lessening his overhead expenses in the months following.

In this connection it has been contended that further adaptation of making payments on loans other than the straight annual equal payment amortization plan, is needed for long-time loans to farmers. Statistics on the gross and net income of the individual farmer show a wide fluctuation in income from year to year. This marked variation in the source from which loan payments must be made puts grave strains on the farmer's financial status during years of low income. To relieve this situation, it has been suggested that amortization payments might be proportional to gross income which would obligate the farmer to make heavier payments in years of large income and relieve him by requiring a reduced payment during years of low income.

Deciding When to Borrow

Consideration of the advisability of loans for farmers is too often characterized by two undesirable extremes of viewpoint, namely, the viewpoint that complete avoidance of all credit is advisable and the viewpoint on the part of the borrower that any loan that can be put over on the lender is advisable regardless of cost and return from the loan. The one view overlooks entirely the fact that credit is an economic service, that often is worth much more to the borrower than it costs—it is a narrow viewpoint to say the least. The other extreme emphasizes the tendency of the average man toward failure to balance costs against returns. Both viewpoints are unbusinesslike and useless in a sound determination of the advisability of a loan.

Determination of the advisability of either a long time, intermediate or a short time loan should be based on a careful consideration of costs and returns from the loan. This consideration varies in importance as between the three classes of loans mentioned and as between loans within a class. Nevertheless, in nearly all cases it is the most important factor in determining the advisability of a loan. If the borrower, after careful consideration, is unable to conclude that all costs of the new loan will probably be less than returns that are likely to flow from it, he should consider seriously any other consideration indicating the advisability of the loan. The final limit in this regard is that no loan is advisable where the borrower cannot see a possibility of meeting the necessary payment of interest and principal. To ask for a loan with no assurance that the required payments can be met, is to ask for an outright gift of economic value.

The accurate estimation of the costs of a loan is far easier than the calculation of the returns to be derived from the loan. Even the direct returns from a loan are difficult to calculate, to say nothing of the indirect returns. For example, a short time loan may be needed to start a certain crop enterprise. The hazards of nature on this crop must be taken into account in calculating direct returns on the loan; but suppose that the crop within itself yields a net loss over costs and that only by tracing the increase in return to the farm business as a whole can one finally include all returns that are traceable to the loan. Estimates of returns from a loan under these conditions would become difficult and not possible of accurate estimation.

To elaborate still further on the complexity of calculating indirect returns to a loan an instance of a loan for land purchase may be given. First estimates of returns must take into account the returns from the farm as realized at present and as influenced by all the natural and economic hazards to which land income is subjected. But aside from the possibility of a large error in properly evaluating this, there is the possibility that the new loan will change the organization of the farm and that it may or may not bring out latent elements of earning power in the borrower, thus influencing indirectly the income from the loan. The average borrower can at best make only a reasoned guess at estimating these elements of income traceable to the loan.

The foregoing discussion is confined to the factors affecting the economic advisability of a loan. There are other considerations on the part of a borrower that might make a loan advisable. An extreme example is that of a cropper who is compelled to borrow in order to live. Considerations of balancing costs against money returns from such a loan are small compared with prevention of starvation. Domestic and social needs undoubtedly play a vital part in many agricultural loans and cannot be omitted in arriving at the advisability of loans.

A few important general facts may be deduced from this discussion of the advisability of a loan. One of these is that the factors determining the advisability of a loan are extremely complex; another is that each loan must necessarily have its own particular set of circumstances determining its advisability; third, since a loan is an economic transfer of value, costs should in all cases be carefully weighed against actual monetary returns both direct and indirect; and finally, the probable extreme economic limit, beyond which advisability of the loan cannot go, is that no loan is justified where the borrower has no assurance whatever that he can meet the necessary payments of costs and principal.

OTHER CREDIT PROBLEMS

Credit for the Holding of Cotton

It is the usual practice of cotton growers to sell their cotton as it is ginned in September, October, November, or December. Of 286 Oklahoma farmers

replying to a questionnaire mailed from the United States Department of Agriculture, 79 per cent replied that they followed this practice in 1926. Pressure of debts and lack of credit for holding are reasons often given for selling immediately after ginning.

Of the 286 farmers mentioned above, 31 per cent reported that they sold their cotton from the gin in order to pay debts. Of the farmers interviewed in Jackson, Garvin, and Pittsburg counties in 1925 and 1926, 83 per cent sold from the gin and 22 per cent reported that debts caused the early sale of their cotton. There was seldom any agreement with the creditors to sell the cotton from the gin, and creditors did not usually urge immediate sale. Nevertheless, the cotton was generally sold in this way as a matter of course and the proceeds used to pay debts.

When a grower says that he sold his cotton early because of the pressure of debts, he may mean one of two things: either that he was unable to finance the holding of his cotton due to lack of credit, or that he was unwilling, though able, to borrow money for the purpose²⁹.

When the difficulty of predicting the future price, even for those who are professional observers of the market, is considered, it is no wonder that many farmers are afraid of incurring debt in order to hold cotton for an uncertain rise in price³⁰.

There are no data showing the amount of cotton which is sold from the gin because of a lack of credit for holding it. If warehouse facilities are available, there should be no difficulty in borrowing money on the security of a warehouse receipt, particularly if the warehouse is Federally licensed. The only obstacle would then be the farmers' lack of familiarity with this method of procedure. Difficulty might be encountered, however, where the amount of money obtainable on a warehouse receipt was not enough to cover the farmer's seasonal debts. If an outright sale yielded the needed cash, the farmer would either have to sell instead of borrowing on a warehouse certificate or obtain the consent of the creditor to the renewal of part of his production loan.

This is one of the problems facing cooperative marketing associations. In years of poor cotton returns, some members find that the amount of the first advance from the association upon delivery of their cotton is not enough to cover their production debts. They must then either secure renewals or sell part or all of their cotton at once for what it will bring. Creditors do not generally like to grant such renewals. Sometimes they advise their customers not to join the Oklahoma Cotton Growers Association for this reason. Several Garvin county members of the association indicated that the method of payment for cotton was a handicap to them. Since this inquiry was made, however, considerable improvement in the association's method of payments has been made, and the present response to the same inquiry no doubt would be more favorable.

That the debts of the growers may be an important factor in the success of cooperative cotton marketing is further suggested by examination of the deliveries of cotton to the Oklahoma Cotton Growers Association. In a

²⁹An Arkansas credit study showed that of 52 farmers who sold cotton early in order to pay debts, 13 thought it bad policy to borrow money in order to hold and 11 others had made no effort to secure renewals of seasonal loans. See Bulletin No. 233, Ark. Agr. Exp. Sta.

³⁰For a discussion of the possibilities of gain by holding cotton for a seasonal rise in price, see "Agricultural Reform in the United States," by John D. Black, Chapter VI. It is there shown that "the possibilities of making gains from holding cotton are much greater in years when cotton supply is below normal than when it is above normal." Cotton supply here includes the world carry-over of American cotton on August 1. It should be stated that this conclusion does not apply to cotton held over from one year to the next, but only to holding within a single season.

master's thesis, "A Business Study of Some Cotton Cooperatives," Mr. Ronald E. Betts has shown that from 1921 to 1926, inclusive, the Oklahoma Association received a much larger proportion of the cotton that was ginned late in the season than of the cotton ginned in the early months (See Table 26). This was true in each of the six years, even in seasons when the price of cotton rose from August or September to December. Deliveries to the Association for the six-year period constituted an ever increasing percentage of total cotton ginned, by months, rising from an average of 1.5 per cent in August to 5.6 per cent in September, 13.7 per cent in October, 18.0 per cent in November, and 28.3 per cent in December.

Mr. Betts concludes "this indicates that during this period the members have been more inclined to sell outside the association during the early part of the season than they have during the latter part. This condition very likely places the Association at a decided disadvantage in disposing of their cotton, as the late cotton is very likely to be of lower grade than the earlier cotton, due to unfavorable weather."

It would seem probable, since members' cotton is doubtless ready for market as soon as the cotton of non-members, and since deliveries to the association were relatively small in the early months of the season regardless of price, that the debts and other financial requirements of members were partly responsible for sales of cotton outside the association during those months.

Table 26—Total Delivery of Cotton, by Months, to the Oklahoma Cotton Growers' Association in Per Cent of the Total Cotton Ginned During Those Months, 1921-1926*

Year	August	September	October	November	December
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
1921 -----	1.0	9.4	18.3	47.4	79.8
1922 -----	--	8.9	11.2	11.6	11.0
1923 -----	1.3	4.4	30.9	17.3	24.8
1924 -----	--	5.3	7.7	11.4	14.3
1925 -----	2.1	4.7	10.5	13.4	19.6
1926 -----	--	1.1	3.5	6.9	20.3
6-year average -----	1.5	5.6	13.7	18.0	28.3

*Adapted by permission from the thesis by Ronald E. Betts.

The recent provision by the Oklahoma Cotton Growers Association of a daily or optional pool is now helping to solve this membership problem. After delivering their cotton and receiving the first advance, members may, under the daily pool, name the day on which the sale is to be made and price fixed. This enables them to receive the balance of their payments soon after delivery of the cotton by calling the sale if circumstances require it. Especially when the price of cotton is depressed, this provision may be of great value in retaining the business of needy members²¹. The daily pool does not help farmers to gain by holding cotton in low-price years, but it does help some

²¹See Okla. Exp. Sta. Bulletin 186, by W. W. Fetrow. "So long as farmers depend on cotton for such a large part of their income, and get such a small part of their living from the farm, they will have difficulty in adjusting their business to the Association payments as made in the past. The daily pool is no doubt helping to correct this situation as shown by the increased deliveries to the Association since provision was made for this pool."

farmers to profit by other benefits of cooperative marketing. Except for this option, many farmers would be compelled to sell their cotton outside the association.

Is More Credit Needed to Finance Diversification Programs?

A questionnaire sent to cotton farmers in different parts of the State in the spring of 1927 by the United States Department of Agriculture showed a widespread desire for some change in production programs. Of 263 farmers who answered the questionnaire, 222, or 84 per cent, expressed a desire for some change. Of these 222 growers, 74 per cent wanted more livestock or more forage crops.

Of the farmers who wished to make some changes in their cropping system, 42 per cent reported a need for additional credit in order to accomplish the change. These farmers stated that they needed an average of \$530 credit per person. Of the total amount of credit, 64 per cent was needed for the purchase of livestock, 24 per cent for equipment for livestock, and the remaining 12 per cent for miscellaneous purposes.

Interviews in Garvin county throw light upon the farmer's attitude toward incurring debt for such purposes. In this county it was found that many growers—more than half the total number—desired to make some change in their farm organization and that most of these farmers needed credit in order to make the desired change. But, of all those who stated that they needed such credit, two-thirds were not willing to increase their debt, either because the risk was too great or the interest rate too high. Others lacked adequate security or thought the bank would not be willing to make the loan they required. Practically none of the farmers had tried to borrow the money needed for carrying out the proposed changes.

These facts do not show that farmers want credit in order to diversify their farming because they consider that greater diversification pays better. They do indicate, however, that farmers think that there is an inadequacy of credit. Whether or not diversification will make farmers more prosperous is a subject for a study in farm organization and not a study in credit. It is true that each individual loan must be tested on the basis of whether the proposed enterprise to be instituted by the proceeds of the loan will pay or not. Nevertheless, the question of whether or not an increase of loans to promote greater diversification in a given area is a sound credit policy or not, is an entirely different question. It is a question that could not be adequately dealt with in the scope of this discussion even if facts on which sound conclusions could be based were at hand; and such facts are not at hand. The fundamental question of whether new crop and livestock enterprises can be made profitable is one which each farmer must answer for himself, after careful consideration of the possible ways of using his land and labor.

CONCLUSION

Some credit problems of cotton growers are common to farmers everywhere, some of these problems are confined to those who specialize in the production of a single crop, others are chiefly associated with cotton, and still others are peculiar to certain cotton-growing districts.

The question of when and how to use credit profitably is a question of great importance to farmers generally. In order to be financially profitable, a production loan must increase the farm income more than enough to pay the interest and the principal. If the loan is used to buy machinery, then the resulting income must cover the operating expenses. The borrower should give careful consideration to the income-producing possibilities of credit and to the other available means of repaying the debt in case of miscalculation.

The relation between credit and the resulting income is especially hard to determine over short periods of time and for credit which is used in the

production of a single crop. The income received from cotton in a given year for example, depends very largely on weather conditions. One year the returns are large, the next year the returns may be small. Only over a series of years can the effect on average income of any change in production methods be determined.

Farmers who depend on one crop need to be prepared for years of poor crop returns. The credit agencies themselves are in a large measure responsible for the adoption of such a program. That will overcome the credit difficulty of short crop years.

This problem of poor crops and "frozen" loans also demands improvement in the policy and perhaps in the organization of the credit institutions. A sound policy requires greater caution in the extension of credit and greater diversification of loans and investments following good crop years. Serious consideration should be given to the possibilities of distributing risk by rural bank consolidations, by branch or group banking, or by some form of crop insurance.

The problem of merchant credit is still an important one in some parts of Oklahoma. Its use is often a handicap to the cotton grower both because its cost is high and because it has a tendency to encourage careless methods of doing business. Lines of credit at the store are not usually payable at a definite time and a considerable proportion of them are never collected. Furthermore, the merchant is less careful than the banker in limiting the amount of credit he extends, and the farmer who does not keep account of his purchases may find that he has bought more than he needs. The high time prices charged for credit purchases are generally paid by all the credit customers whether they are good or poor risks, so that the former pay in effect for the losses caused by the latter. The customers of stores which have few losses from bad debts generally pay the same interest rates as the customers of stores which have heavy losses. The enterprising farmer should seek to free himself of these handicaps by transferring his store credit to a bank or other specialized credit agency, and, wherever practicable, by increasing his savings, his diversification of crops (when not unprofitable for other reasons), or his production of foods and feeds. Store credit should be abandoned wherever it is possible and as soon as possible, for it is fruitful of poor business both on the farm and in town, and is usually not profitable to either the farmer or the townsman.

Closely related to the problem of seasonal credit is that of farm mortgage credit. The would-be owner of land must decide whether it is more advantageous for him to borrow on mortgage security for the purpose of buying land or to remain a tenant. If he chooses the first course, he must decide how much to borrow and how much to save before he makes his purchase. Both the borrower and the lender need to know how much the land is really worth on the basis of its income-producing power in order to avoid unsound financing and failure to carry out the purchase in later years. Land appraisal is a very important line of future study in the field of mortgage credit.

The variation in mortgage interest rates of from five to 10 per cent in the same community suggests that some farmers possibly could save money by shifting from the high-cost to the low-cost agencies. Many would also profit by use of the amortization feature of the Federal farm loans and of loans from some insurance companies.

All of the foregoing credit problems are intensified in districts where natural conditions are least favorable to farming. Farming conditions were seen to be most difficult in Pittsburg county, where incomes are most uncertain, farmers are most dependent on seasonal loans, and the use of merchant credit is most general. Credit problems are therefore part of the larger problem of creating and maintaining to the largest possible extent a permanently profitable agriculture.

APPENDIX

Table I—Percentage of Total Crop Land in Principal Crops in Jackson, Garvin and Pittsburg Counties, 1909, 1919 and 1924
(Estimated from the Agricultural Census)

County and census year	Cotton	Corn	Oats	Wheat	Grain sorghums	Alfalfa, other hay and forage crops	Other crops	Total
	Per Cent	Per Cent	Per Cent	Per Cent				
Jackson								
1909 -----	47	27	6	3	10	6	1	100
1919 -----	40	5	4	32	13	5	1	100
1924 -----	71	3	2	8	9	5	2	100
Garvin								
1909 -----	29	61	2	0*	0*	4	4	100
1919 -----	38	22	8	6	0*	12	14	100
1924 -----	40	23	5	10	1	11	10**	100
Pittsburg								
1909 -----	30	52	2	0*	0*	15	1	100
1919 -----	34	30	18	3	0*	13	2	100
1924 -----	43	33	11	0*	1	12	0*	100

*Less than ½ of 1 per cent.

**Including about 4 per cent broomcorn

APPENDIX

Table II—Relation of Short-term Credit to Working Capital by Tenure, in Jackson, Garvin and Pittsburg Counties*

County and tenure	CREDIT AND WORKING CAPITAL OF FARMERS WHO USED CREDIT			
	Average credit used**	Average working capital including credit	Relation of credit to working capital including credit	Relation of credit to working capital of all farmers in the district
	Dollars	Dollars	Per Cent	Per Cent
Jackson				
All farmers -----	567	1802	31.5	23.3
Owners -----	746	2374	31.4	21.1
Tenants -----	460	1457	31.6	26.0
Garvin				
All Farmers -----	540	2123	25.4	16.6
Owners -----	887	3756	23.6	14.2
Tenants -----	342	1190	28.7	22.2
Pittsburg				
All Farmers -----	442	1356	32.6	25.5
Owners -----	716	2201	32.5	19.3
Tenants -----	386	1182	32.6	29.1

*"Working capital" as here used includes all assets at the beginning of the year except land and buildings, but the value of household goods was not obtained in the Jackson and Pittsburg surveys. Inclusion of this item would slightly lower the percentages in Jackson and Pittsburg counties.

**In this and the following appendix table, some schedules were included which had to be omitted elsewhere as exceptional in calculating the average credit. Hence these averages do not agree with those of Table 3, and they should not be used except to relate to working capital.

APPENDIX

Table III—Relation of Short-term Credit to Working Capital, by Size of Farm, for All Farmers in Jackson, Garvin and Pittsburg Counties

County and crop acreage groups	CREDIT AND WORKING CAPITAL OF FARMERS WHO USED CREDIT			
	Average credit used	Average working capital including credit	Relation of credit to working capital including credit	Relation of credit to working capital all farmers in the district
	Dollars	Dollars	Per Cent	Per Cent
Jackson				
1-49 acres -----	364	1021	36	27
50-74 acres -----	435	1594	27	21
Over 74 acres -----	733	2227	33	24
Garvin				
1-55 acres -----	264	947	28	22
56-85 acres -----	345	1600	22	10
Over 85 acres -----	979	3696	26	20
Pittsburg				
1-49 acres -----	251	807	31	26
50-74 acres -----	397	1194	33	27
Over 74 acres -----	810	2460	33	25

APPENDIX

Table IV—Working Assets of Oklahoma Cotton Growers in Jackson, Garvin, and Pittsburg Counties, on January 1, 1926, by Tenure

County and tenure	Average value per farm of all working assets (1)	DISTRIBUTION OF WORKING ASSETS, AVERAGE VALUE PER FARM							
		Crops (2)	Livestock	Equip-ment	Car	House-hold goods (3)	Cash	Invest-ments (4)	Other assets (5)
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All Farmers									
Jackson -----	1313	144	542	204	262		141	3	17
Garvin -----	2271	207	575	233	128	166	537	253	172
Pittsburg -----	1111	177	430	138	60	---	131	5	170
Owners									
Jackson -----	1638	188	667	261	297	---	208	6	11
Garvin -----	4031	329	868	354	192	235	1011	625	417
Pittsburg -----	2188	304	662	238	121	---	199	24	640
Tenants									
Jackson -----	1044	107	439	158	233	---	85	0	22
Garvin -----	1074	124	376	150	85	118	215	0	6
Pittsburg -----	840	145	371	113	45	---	114	0	52

(1) "Working assets" includes the items listed in the table. This average is a total of the several listed averages.

(2) In Jackson and Pittsburg counties the inventory of crops is as of January 1, 1925.

(3) Not obtained in Jackson and Pittsburg counties.

(4) "Investments" includes stocks, bonds, farm mortgages, etc.

(5) Includes a small amount of town real estate.

APPENDIX

Table V—Relation Between the Proportion of Total 1926 Sales, Which Were Sales of Livestock Products, and the Use of Short-term Credit*

Percentage of total sales which were sales of livestock products	Farmers		Average credit used per farmer Dollars	Average total sales per farmer who used credit Dollars	Relation of credit to total sales Per Cent
	Number	Farmers who used credit Number Per Cent			
All Farmers ---	372	237 64	471	1,182	40
Less than					
20% -----	174	125 72	502	1,254	40
20-39% ---	98	61 62	523	1,251	42
40-100% --	100	51 51	332	924	36

*This table is based upon returns from a questionnaire mailed to farmers in different parts of the cotton belt of the state.

APPENDIX

Table VI—Self-sufficiency Ratios for Foods and Feeds Used by Garvin County Farmers Who Used Short-term Credit and Those Who Used None, by Tenure

Tenure and use of credit in Garvin county	Number of farmers	Average self-sufficiency ratio for*	
		Foods Per Cent	Feeds Per Cent
All Farmers			
Using credit -----	66	85	71
Using no credit -----	13	89	76
Owners			
Using credit -----	24	88	75
Using no credit -----	8	88	87
Tenants			
Using credit -----	42	84	69
Using no credit -----	5	91	61

*Simple averages of individual ratios.

APPENDIX

Table VII—Number of Farmers Paying Various Interest Rates for Cash Credit in Jackson, Garvin and Pittsburg Counties

County and per annum interest rate	All farmers	Owners	Tenants
	Number	Number	Number
All Counties			
Less than 10% -----	13	6	7
10% -----	130	46	84
11-15% -----	85	25	60
Over 15% -----	44	8	36
Jackson			
Less than 10% -----	3	2	1
10% -----	80	29	51
11-15% -----	14	7	7
Over 15% -----	10	2	8
Garvin			
Less than 10% -----	8	3	5*
10% -----	25	9	16
11-15% -----	23	8	15
Over 15% -----	7	2	5
Pittsburg			
Less than 10% -----	2	1	1*
10% -----	25	8	17
11-15% -----	48	10	38
Over 15% -----	27	4	23

*Including one tenant who paid no interest.

APPENDIX

Table VIII—Number of Farmers Paying Various Interest Rates for Merchant Credit in Jackson, Garvin and Pittsburg Counties

County and per annum interest rate	All farmers	Owners	Tenants
	Number	Number	Number
All Counties			
No charge -----	45	11	34
Less than 20% -----	35	9	26
20-39% -----	42	10	32
40% and over -----	50	6	44
Jackson			
No charge -----	21	6	15
Less than 20% -----	10	3	7
20-39% -----	6	4	2
40% and over -----	3	0	3
Garvin			
No charge -----	5	0	5
Less than 20% -----	5	2	3
20-39% -----	2	1	1
40% and over -----	0	0	0
Pittsburg			
No charge -----	19	5	14
Less than 20% -----	20	4	16
20-39% -----	34	5	29
40% and over -----	47	6	41

APPENDIX

Table IX—Security Given for Cash Credit in Jackson, Garvin and Pittsburg Counties

County and tenure group	TYPE OF SECURITY						
	Plain note	Endorsed credit		Unendorsed credit			All cash credit
		With crop or chattel mortgage	Without crop or chattel mortgage	Crop lien only	Chattel mortgage only	Crop and chattel mortgage	
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
All Counties							
All farmers -----	24.3	9.3	1.8	2.8	11.3	50.5	100
Owners -----	38.3	6.8	1.4	2.8	16.3	34.4	100
Tenants -----	11.3	11.6	2.2	2.8	6.7	65.4	100
Jackson							
All farmers -----	24.8	9.4	3.0	4.9	8.7	49.2	100
Owners -----	34.8	10.8	2.3	6.1	12.9	33.1	100
Tenants -----	14.6	8.1	3.8	3.6	4.3	65.6	100
Garvin							
All farmers -----	35.4	8.4	.4	0	5.9	49.9	100
Owners -----	53.7	3.4	0	0	10.3	32.6	100
Tenants -----	11.2	15.1	.9	0	0	12.8	100
Pittsburg							
All farmers -----	14.8	9.8	1.2	2.0	19.3	52.9	100
Owners -----	26.6	3.4	1.3	0	29.7	39.0	100
Tenants -----	7.7	13.7	1.1	3.3	12.9	61.3	100

APPENDIX

Table X—Security Given for Merchant Credit in Jackson, Garvin and Pittsburg Counties

County and tenure group	TYPE OF SECURITY						
	Plain note	Endorsed credit		Unendorsed credit			All merchant credit
		With crop or chattel mortgage	Without crop or chattel mortgage	Crop lien only	Chattel mortgage only	Crop and chattel mortgage	
Per Cent	Per cent	Per cent	Per Cent	Per Cent	Per Cent	Per Cent	
All Counties							
All farmers -----	37.8	3.6	2.4	12.7	.9	42.6	100
Owners -----	77.9	0	5.4	2.7	1.0	13.0	100
Tenants -----	26.7	4.6	1.6	15.5	.8	50.8	100
Jackson							
All farmers -----	64.1	5.2		9.9	1.6	19.2	100
Owners -----	90.9	0	0	9.1	0	0	100
Tenants -----	47.1	8.6	0	10.3	2.6	31.4	100
Garvin							
All farmers -----	100	0	0	0	0	0	100
Owners -----	100	0	0	0	0	0	100
Tenants -----	100	0	0	0	0	0	100
Pittsburg							
All farmers -----	30.7	3.5	2.9	13.7	0.8	48.4	100
Owners -----	72.2	0	7.9	0.7	0	19.2	100
Tenants -----	21.7	4.2	1.8	16.6	1.0	54.7	100

APPENDIX

Table XI—The Purpose of Cash Credit in Jackson, Garvin and Pittsburg Counties

District and tenure	PURPOSE				
	Living expenses	Farm operating expenses	Purchase of land	Payment of debts	Total
	Per cent	Per cent	Per cent	Per cent	Per cent
All Counties					
All farmers -----	30	38	14	18	100
Owners -----	13	47	27	13	100
Tenants -----	48	28	0	24	100
Jackson					
All farmers -----	20	14	33	33	100
Owners -----	8	2	66	24	100
Tenants -----	33	26	0	41	100
Garvin					
All farmers -----	30	65	2	3	100
Owners -----	10	83	3	4	100
Tenants -----	60	38	0	2	100
Pittsburg					
All farmers -----	44	17	11	28	100
Owners -----	35	13	29	23	100
Tenants -----	49	20	0	31	100

APPENDIX

Table XII—The Purpose of Merchant Credit in Jackson, Garvin and Pittsburg Counties

District and tenure	PURPOSE				
	Living expenses	Farm operating expenses	Purchase of land	Payment of debts	Total
	Per cent	Per cent	Per cent	Per cent	Per cent
All Counties					
All farmers -----	93	7	0	0	100
Owners -----	90	10	0	0	100
Tenants -----	94	6	0	0	100
Jackson					
All farmers -----	87	13	0	0	100
Owners -----	84	16	0	0	100
Tenants -----	89	11	0	0	100
Garvin					
All farmers -----	82	18	0	0	100
Owners -----	67	33	0	0	100
Tenants -----	91	9	0	0	100
Pittsburg					
All farmers -----	96	4	0	0	100
Owners -----	100	0	0	0	100
Tenants -----	95	5	0	0	100