

EXPANDING THE SIZE OF FARM BUSINESSES IN RICE COUNTY,  
KANSAS BY THE PRODUCTION OF CATTLE AND HOGS

by

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## INTRODUCTION AND BACKGROUND

Technological progress in American agriculture has permitted increasingly fewer farmers to till the limited amount of land resource of the nation. Especially is this true in nearly all areas of Kansas. Many farmers in Kansas are finding it difficult to acquire enough land, either by ownership or renting, to provide a farm business large enough to return an income sufficient for them to continue farming operations. At the same time, restrictions on wheat acreage have forced farmers to increase the acreage of other crops.

During recent years the production of feed grains, especially grain sorghums, in south central and western Kansas has greatly increased. While many farmers in these areas would prefer to grow more wheat, it is still a possibility that the local utilization of grain sorghums in the production of cattle and hogs will be a partial solution to the farm business expansion problem faced by farmers in these areas.

While the increase in grain sorghum production took place, livestock production in much of these Kansas areas remained about the same or increased by only a small amount and in some areas it even decreased. Rice County, Kansas is an example. Table 1 shows the change in feed grain production and livestock inventories of that county.

Much of the grain sorghums produced in Kansas was shipped out of the state for feeding in other areas. In view of the increased feed grain production in Kansas, it would seem economically

Table 1. Changes in feed grain production and livestock inventories, Rice County.

	: Yearly av.:	: Yearly av.:	: % change
	: 1952-56	: 1957-61	: 1952-56 to
			: 1957-61
Annual production (bu.)			
Grain sorghums	467,820	2,343,960	+ 401
Total feed grains	619,946	2,607,880	+ 321
County inventory Jan. 1			
Cattle (other than dairy)	31,160	30,720	- 1
Milk cows	3,860	2,880	- 25
Hogs	6,464	7,480	+ 16
Sheep and lambs	4,820	6,448	+ 34
Chickens	98,180	68,600	- 30

Source: Kansas State Board of Agriculture

feasible to produce livestock to consume large amounts of grain in the south central and western parts of Kansas near the source of feed grain supply. The finished animal products, rather than the grain, could then be shipped to areas of final consumption.

#### OBJECTIVE AND PURPOSES OF THE STUDY

The general objective of this study was to provide a basis from which recommendations and educational programs could be prepared regarding the expansion of farm businesses by the production of cattle and hogs in Rice County, Kansas. Although much of the study pertained specifically to the Rice County area, the findings are believed to be applicable also to almost all other south central Kansas counties.

Two specific purposes of the study were to:

1. Determine the feasibility of expanding the size of farm businesses in Rice County by the production of cattle and hogs.
2. Determine the problems Rice County farmers would have in expanding their farm businesses by the feeding of cattle and hogs.

It was believed that the utilization of the primary production of a farm to produce a secondary product would increase the income of the farm, and that farm income can be increased by a substitution of labor and capital for land.

Two hypotheses were advanced:

1. South central Kansas farmers can increase their farm incomes by feeding their grain sorghums to cattle and hogs.
2. The variability of expected profits is the main problem Rice County farmers would have in starting or expanding their cattle and hog feeding programs.

#### PROCEDURE

##### Feasibility of Expanding Rice County, Kansas Farms by the Production of Cattle and Hogs

To study the feasibility of expanding Rice County farms by the production of cattle and hogs, Kansas Farm Management Association Number Two records for the five-year period 1957-61 were one source of insights. Farms in the association were grouped

according to certain uniformities. Type-of-farm organization is based primarily upon labor requirements for the acreage in cash crops or numbers of livestock. (Figure 1 indicates the location of Rice County and the Farm Management Association.)

Cash crop-beef, beef, cash crop-hog and hog farms were compared with cash crop farms on the basis of annual labor-management return to farm operators, labor-management return per man day worked, crop acres operated, total acres operated and total investment managed. (See Appendix A for standards and method used by the association to type farms, and Appendix B for terminology used.) Annual statistics for each group of farms were computed for each of the years 1957-61.

Most of the data referring specifically to Rice County farms and farmers were obtained from the South Central Kansas Rural Economic Development Project survey which was conducted in Rice County during the spring of 1960. (Figure 2 indicates the location of Rice County and the south central Kansas Rural Economic Development area.) At the inauguration of the project, the eleven counties were individually compared to the mean average of the area on the basis of ten criteria.<sup>1</sup> (See Appendix C for criteria and method used to select Rice County as a representative south central Kansas county.)

Two groups of farmers were interviewed in the survey: A group of general farmers consisting of 209 Rice County farmers

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<sup>1</sup> Rural Economic Development Material. Kansas State University. Unpublished Criteria, Kansas State University, Manhattan, Kansas, 1960.

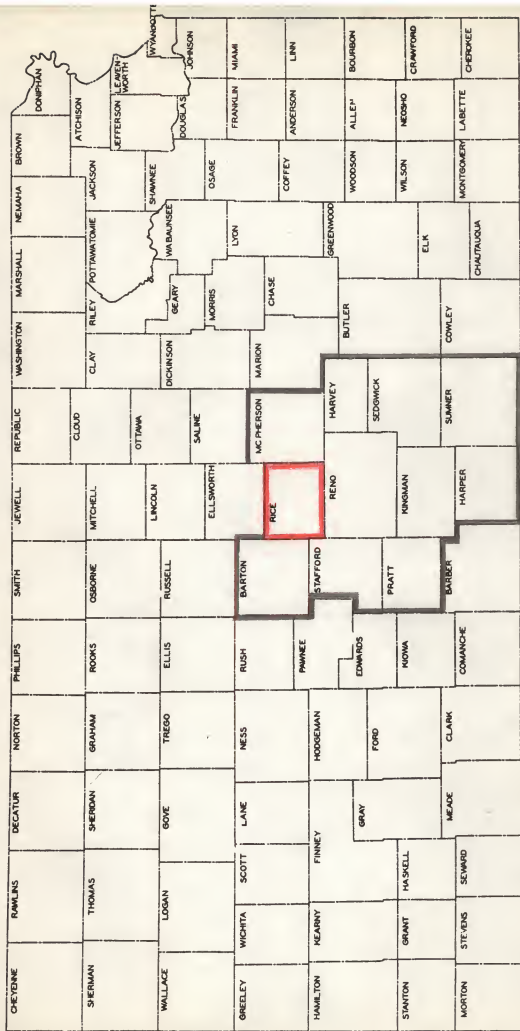


Fig. 1. The location of Rice County and the Kansas Farm Management Association Number Two area. (Rice County is outlined in red and the Farm Management area in bold black.)



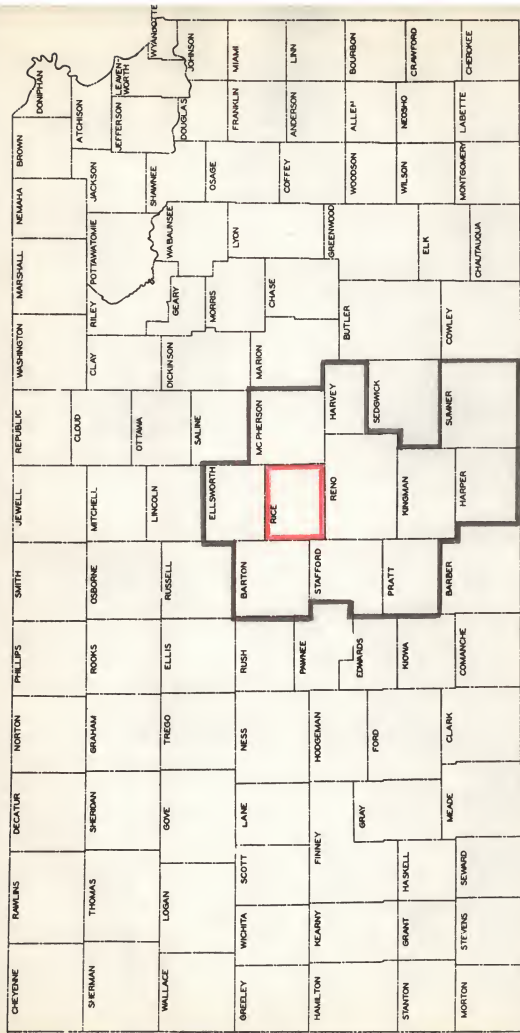


Fig. 2. The location of Rice County and the south central Kansas Rural Economic Development area. (Rice County is outlined in red and the south central area in bold black.)

drawn at random from a population of all farmers in the county, and a group of 42 selected Rice County farmers herein referred to as leading farmers. The outstanding farmers were selected by local agricultural leaders on the basis of how closely they approximated the standards set by a list of eight criteria. These criteria were aimed at designating those farm operators who have adapted modern techniques, good management practices, and were generally successful in their farming endeavors.<sup>2</sup> Personal interviews were conducted with the farmers. (See Appendix D for criteria used and method of selecting leading farmers, and Appendix E for the questionnaire used to interview the leading and general farmers.)

Problems Rice County Farmers Believe They Would  
Encounter in Starting or Expanding Their  
Cattle and Hog Feeding Programs

The problems that the farmers believed they would encounter were determined by asking two select groups of them what problems they believed they would have. To determine whether or not the difference in the percentage of general and leading farmers believing certain factors to be problems was expressed in the actual cattle and hog programs of the two groups, the livestock programs of the two groups were compared. Comparisons were made for the years 1955, 1957 and 1959. The comparisons of cattle and hog

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<sup>2</sup> Paul W. Barkley, Area Development, The Changing Role of Some Communities in South-Central, Kansas. Topeka: State Printing Office, January 1962.

units on the farms were made in relation to the crop acres and total acres operated by the farmers. Since the farms of the leading farmers were considerably larger, it was believed this method of comparison would best show the relative importance of cattle and hog programs for the two groups of farmers.

#### Interrelation of Feasibility and Problems-- Educational Programs Recommended

An interrelation study was made of the feasibility of expanding the size of farm businesses by the production of cattle and hogs, and the problems Rice County farmers would have in starting or expanding their cattle and hog feeding programs. The findings of the study were then used as a basis for recommending training programs for the farmers.

#### COMPARISONS OF VARIOUS TYPE FARMS

The feasibility of producing livestock could be determined by the background of individual farmers, their management ability and many other factors. There are also many measurements which could be employed to determine the feasibility of producing livestock. Measures employed in this study were: farm operator's total annual labor-management return, farm operator's labor-management return per man day worked, crop acres operated, total acres operated and total investment managed. The experiences of farmers in the area were used to evaluate the effects of farm organizational changes from cash crop farm organizations to cash crop-beef, beef, cash crop-hog, and hog organizations.

Crop acres and total acres managed were used as measurements because land is a resource, the amount of which is limited. It was assumed that all land which could profitably be used for agricultural production was either being utilized for production or was restricted from production by government controls. Therefore, it was believed that the type farms which provided the greatest returns using the smallest amount of land would, on the basis of one measurement, be most feasible.

Total investment managed was used as a measure because it was a better indication of the total stock of resources employed than any other one measure that might have been selected.

Returns for labor and management gave an indication of returns to the operator after a charge was made for all resources other than operator labor used on the farm. Since a charge was made for all other resources, to some extent returns from various types of farms with their respective resource combinations are on a more comparable basis than would result from the use of other measures. Because the organizations including livestock would be more labor intensive, the measure "labor-management return per man day" was employed to indicate comparisons relative to a unit of labor (man day worked).

Table 2 shows the effects on returns, acres managed and investment required, of the various organizations relative to cash crop farms for cash crop-beef, beef, cash crop-hog and hog farms. (For further details of the comparisons see Appendix F.)

Table 2. Comparisons for select types of farms relative to cash crop farms, Farm Management Association Number Two farms, averages for 1957-61.

	: Farm operator's : : labor-management : : return per : : man day worked :	: Farm operator's : : total annual : : labor-manage- : : ment return :	: Crop : : acres : : operated :	: Total : : acres : : operated :	: Total : : investment : : managed :
Cash crop farms*	\$10.53	\$3,206	588	722	\$124,441
Cash crop-beef farms	- 1.78	+ 437	+ 21	+ 207	+ 13,846
Beef farms	- 5.14	- 569	- 158	+ 64	+ 17,337
Cash crop-hog farms	+ 1.10	+ 1,117	- 35	- 74	- 11,950
Hog farms	- 1.31	- 27	- 307	- 332	- 43,685

Source: Kansas Farm Management Association Summary and Analysis Reports

\* Cash crop farms are used as a basis.  
Statistics for other type farms are relative to this basis.

### Cash Crop-Beef vs Cash Crop

The cash crop-beef farmers managed a \$13,846 larger total investment, 21 more crop acres and 207 more total acres than did the cash crop farmers. Also they earned a \$437 larger total annual labor-management return. However, the labor-management return per man day worked was \$1.78 less than the cash crop farmers.

Because the cash crop-beef farms were larger, it is somewhat difficult to isolate the differences in return due to the beef organization from the differences due to size of farm, even though offsetting charges were made for the operator's equity. However, in the case of land, most of the difference apparently was due to differences in acreage of pasture. The labor-management return implies a charge for the additional resources. The slightly larger residual for the cash crop-beef farms indicated favorable experiences of these farmers relative to cash crop farmers during the 1957-61 period.

### Beef vs Cash Crop

A comparison of beef farms with cash crop farms showed that the beef farmers managed a \$17,337 larger investment, 158 less crop acres and 64 more total acres than did the cash crop farmers. Although the beef farmers managed a generally larger business, the total annual labor-management return for the beef farmers was \$589 less and labor-management return per man day worked \$5.14 less than the cash crop farmers.

While the results from the cash crop-beef farms compared favorably with those from cash crop farms, the returns from the beef farms, especially per man day worked, did not show an advantage to a beef organization. It is presumed that there is some advantage to cash crops as part of the organization both from the direct standpoint of profits from them as well as other advantages such as more even distribution of labor needs of a cash crop-beef farm than of a farm with more concentration upon beef.

#### Cash Crop-Hog vs Cash Crop

All comparisons of cash crop-hog farms with cash crop farms showed cash crop-hog farms to be more feasible. The cash crop-hog farmers managed an \$11,950 smaller total investment, 35 less crop acres and 74 less total acres than the cash crop farmers. However, the cash crop-hog farmers earned a \$1,117 larger total annual labor-management return and a \$1.10 greater labor-management return per man day worked than did the cash crop farmers.

The experience on the cash crop-hog farms during the period 1957-61 is an example of larger returns from intensifying production. The cash crop-hog farmers substituted labor and management for capital, especially land, and were able to produce a larger total and also a larger per man day worked labor-management return.

### Hog vs Cash Crop

The hog farmers managed a \$43,685 smaller total investment, 307 less crop acres and 332 less total acres than did the cash crop farmers. Also the total annual labor-management return was \$27 less and the labor-management return per man day worked was \$1.31 less on the hog farms.

Although the hog farms had essentially the same total annual return for labor and management, they produced the return with considerably less capital, especially land. This is an example of the substitution of factors of production when compared with the cash crop farms.

For the particular time period, the hog farms, with fewer resources, compared well with cash crop farms. The cash crop-hog farms, although using more resources than the hog farms, experienced greater total and per man day returns for labor and management. Again, there is some evidence of advantage for an organization including both cash crops and livestock over an organization concentrating on one or the other.

### Summary of Type of Farm Comparisons

The comparisons suggested that those farmers with beef cattle or hogs as part of a farm organization including cash crops had favorable experiences relative to cash crop farms as indicated by returns to labor and management. The findings thus serve as evidence that some other farmers with cash crop organizations might profitably increase the number of their beef cattle and hogs.



The comparisons did imply that an over concentration upon these livestock enterprises might not be as favorable as a combination of cash crop and livestock enterprises.

A number of difficulties make it necessary to qualify, to some extent, the results of the comparisons. The word "beef" in the typing does not enable a distinction between farms with cowherds and those with beef-purchased cattle systems.

Costs of 6 per cent and 4 per cent were charged for the operator's equity in working capital and real estate, respectively. If the real productivity of these resources is markedly different from these percentages, then of course the resulting labor and management return measures will be in error.

It is not known whether farms in the different types represent farmers with different degrees of managerial ability. It was assumed that the abilities of the farmers were not different among the types of farms studied. It is recognized that some farmers with experience with a cash crop farm and with abilities to manage this type of farm will not acquire the same abilities to manage a farm with livestock and may not realize the returns from such a farm as were experienced by other farmers in the area.

#### A Rice County Farm Programmed for Maximum Returns

Linear programming, a rather new method of developing most profitable farm organizations, was used by agricultural economists at Kansas State University in 1961 to develop a most profitable farm organization for a 960 crop acre, dry land farm in Rice County.

It is not intended that the returns from the programmed farm be compared directly with the results from the farm management farms in this study, because different procedures were used in computing them.

A summary of the programmed farm showed:

1. Most profitable organization was one of cattle and hog production combined with crop production, with a net return of \$7,539.
2. An alternative plan, without hogs, was with a net return of \$6,757.
3. A further alternative plan, with no livestock was a net return of \$3,750.<sup>3</sup>

For the net returns of the programmed farm, nothing representing fixed costs such as interest on operator's equity, taxes etc. was subtracted, while the costs were subtracted in deriving the return measures for the farm management farms. Yields, rate of gain etc. were those believed consistent with good management. The 960-acre farm was larger than most of the farm management association farms.

While the results of the programming analyses are in some ways not completely comparable, they are consistent with the results from those from the farm management farms and provide more evidence to substantiate the hypothesis that beef cattle and hogs can be profitably produced in the Rice County area.

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<sup>3</sup> Dale A. Knight and others. Area Development, Agriculture Manual. Unpublished Manual, Kansas State University, Manhattan, Kansas, 1961.

GENERAL OPINIONS OF LEADING RICE COUNTY FARMERS  
TOWARD FEEDING IN THE AREA

In general, the leading farmers believed the feeding of cattle and hogs in Rice County was feasible. Nearly all of them believed a farmer should have a good livestock program in conjunction with his crop operations, but only about one-half of them thought that they presently had the best livestock program for their farm. The most needed changes that they thought they should make were toward more livestock feeding and expansion of present feeding programs.

When the leading farmers were asked "For what livestock programs is the Rice County area best suited?", the majority of the answers centered around feeding programs. Their opinions are indicated in Table 3.

Table 3. Livestock programs for which leading farmers believe Rice County to be best suited, Rice County leading farmers, 1960.

Type program	: Per cent of farmers believing : it best suited for the program
Full feeding	47.6
Cattle	40.5
Hogs	28.6
Deferred feeding	14.3

Farmers, N = 40

Sixty-nine per cent of the leading farmers thought Rice County had an advantage over many other areas in the feeding of

livestock because of the plentiful local grain production. Fourteen per cent thought the county had an advantage because of irrigation water.

PROBLEMS ENCOUNTERED BY RICE COUNTY FARMERS IN STARTING  
AND EXPANDING CATTLE AND HOG FEEDING PROGRAMS

Cattle

The variability of profits which could be expected from the feeding of cattle was the main problem the farmers said that they thought they would have in starting and expanding cattle feeding programs. As indicated in Table 4, all their major problems were either directly or indirectly associated with the general problem of profit variability.

Table 4. Problems encountered by Rice County farmers in entering or expanding in the cattle feeding industry, leading and general farmers, Rice County, 1960.

Factor	: Per cent of farmers : considering the factor : to be a problem	
	: Leading : farmers	: General : farmers
Profits from beef cattle are highly variable year to year	19.0	35.5
There can be years of large losses	21.4	34.8
Feed supplies are highly variable	14.3	28.8
Am reluctant to borrow money for purchasing beef cattle	19.0	19.9

Leading farmers, N = 42  
General farmers, N = 209

The period studied was a period which showed beef farms to be at a disadvantage on the basis of annual labor-management returns to the farm operators. An analysis of the farm management records shows that considerable variation did exist in the cash crop-beef and beef farms' returns during 1957-61. (See Tables 5 and 6.) However, the cash crop farms' annual labor-management returns during the five-year period varied more than the cash crop-beef farms. Table 5 shows that the returns from cash crop farms varied more than any other type farms except beef farms. The evidence for the income variability comparisons must be regarded as limited--the time period is not lengthy, and the data being in the form of averages, annual variations in returns on a per-farm basis are eclipsed. Within these limitations, there is not evidence that the variability of returns on farms with beef or hogs is generally greater than on cash crop farms. It is believed the factor-product price relationships and technical production relationships during the period studied were generally favorable for all types of farms.

Table 5. Annual labor and management return, by type of farm, for Farm Management Association farms, 1957-61.

Type farm	: 1961	: 1960	: 1959	: 1958	: 1957
Cash crop	\$6,738	\$2,979	\$1,806	\$4,320	\$ 189
Cash crop-beef	5,673	4,420	364	6,245	1,516
Beef	3,098	2,178	(-1,733)	9,079	467
Cash crop-hog	6,122	3,572	2,633	5,931	3,360
Hog	4,557	2,767	no data	no data	2,501

Source: Kansas Farm Management Association Summary and Analysis Reports

Table 6. Labor and management return per man day, by type of farm, Farm Management Association farms, 1957-61.

Type farm	: 1961	: 1960	: 1959	: 1958	: 1957
Cash crop	\$22.81	\$8.74	\$5.90	\$14.50	\$ 0.69
Cash crop-beef	15.25	9.40	0.82	14.37	3.88
Beef	10.09	4.73	(-2.65)	13.69	1.07
Cash crop-hog	16.73	9.14	6.88	14.40	10.98
Hog	14.42	7.30	no data	no data	6.60

Source: Kansas Farm Management Association Summary and Analysis Reports

The leading farmers as a group mentioned the same problems as the general farmers; however, a larger percentage of the general farmers thought each of the factors to be a problem. The difference in the number of general and leading farmers believing each factor to be problems is undoubtedly due in part to the general background of the two groups. It is believed the leading farmers would have a tendency to keep abreast of markets and new technology to a greater degree than would the general farmers.

The problems envisioned by the farmers were no doubt a result of their having observed past profit-making probabilities which existed in the cattle feeding industry. When they believe certain factors to be problems in the cattle feeding business, they have probably in some way compared cattle feeding with the production of cash crops.

The production of many cash crops takes place with a guaranteed selling price for the units of production. Price supports have given farmers a known lowest possible price for which they may have to sell their production. The variable costs in producing cash crops normally do not widely fluctuate, so the main uncertainties involved in the production of cash crops are the various agronomic factors such as rainfall, crop diseases, etc.

When advanced sales contracts are not utilized, cattle feeding would seem to be a more speculative business than the production of cash crops. It is suspected the majority of the farmers did not sell their cattle on advanced contracts. Cattle feeding involves an uncertain selling price for the units of production, and also the price of unhedged production input units necessary for cattle feeding widely fluctuate. It is suspected most of the farmers do not hedge their feed inventories.

The variability of feed production which the farmers believed to be a major problem seems closely related to the general problem of variability of cattle feeding profit probabilities. The production of feed on dry land farms in the Rice County area is variable. Moisture is usually the limiting factor in producing crops on these farms. If the demand for feed remains relatively constant and a relatively short supply was produced, a higher price results, especially if feed prices are on a ship-in basis. This is evidently the situation the farmers envisioned for years of comparatively short supplies of feed crops.

The reluctance of the farmers to borrow money for cattle feeding was also one of the main problems they believed they would

encounter in cattle feeding. This problem also seems closely associated to the variability of the cattle feeding profits they expect.

### Hogs

Most of the economic problems that the farmers said they thought they would have in starting and expanding their hog feeding programs centered around the low profit and variability of the profit probabilities they expected from the feeding of hogs. The major problems they believe they would have are shown in Table 7.

Table 7. Problems encountered by Rice County farmers in entering or expanding in the hog feeding industry, leading and general farms, Rice County, 1960.

Factor	: Per cent of farmers : considering the factor : to be a problem	
	: Leading : farmers	: General : farmers
Lack of hog equipment	28.6	35.4
Profits from hogs highly variable	19.0	26.7
Do not like hogs	28.6	23.9
Profits from hogs are low	16.7	23.4

Leading farmers, N = 32

General farmers, N = 139

The main problem given by both groups was the lack of hog equipment. It would seem this, by itself, would not constitute a problem. Probably the farmers reasoned that the profits were



so low from feeding hogs that they were unwilling to invest in equipment. A preceding section of this study showed hog farmers produce comparable total annual labor-management returns and return per man day worked when compared with cash crop farmers.

"Do not like hogs" the farmers said, was also a major problem. If farmers have sufficient technical knowledge to produce and market hogs and anticipate profits from them, some can be expected to produce them. Others may not because they do not want to be tied down, operate rented farms without facilities, or other reasons.

It is believed many Rice County farmers would rather produce several other classes of livestock than hogs. However, it would seem that if the probable profits from hog feeding were great enough, the farmers would produce them.

Generally a larger percentage of the general farmers indicated each of the factors to be problems than the leading farmers. The leading farmers probably keep more abreast of markets and new technology in agriculture than the general farmers. This was also believed to be the reason for the difference in the percentage of general versus leading farmers considering each of several factors to be problems in the feeding of cattle.

This study indicates that the main economic problems the farmers of Rice County believe they would have in starting or expanding their cattle feeding programs mainly center around the variability of the profits they expect from the feeding of cattle. It is also indicated that the main problems they believe they

would encounter in starting or expanding their hog feeding programs are generally associated with the variability of the profits they expect from feeding hogs and the small size of the profits. Therefore, the original hypothesis: the variability of expected profits is the main problem Rice County farmers believe they would have in starting or expanding their cattle and hog feeding programs is accepted.

#### Comparisons of Leading and General Farmers' Livestock Programs

It was observed that the general farmers and leading farmers considered the same factors to be problems in the feeding of cattle and hogs. It was also observed that a larger percentage of general farmers than leading farmers considered each of several factors to be problems in the starting and expanding of their cattle and hog feeding programs.

Persons in the profession of extension education are generally in agreement regarding the process by which new practices are adopted by the farmers in a given locale. Some farmers, commonly referred to as "innovators" usually put the new practices into effect on their farms before any other farmers. A group of farmers called "early adopters" are the next group to employ the practices. Eventually the practices are employed by all or nearly all farmers in the area.

It was believed that many of the leading farmers were the innovators and early adopters in the Rice County area insofar as

the local utilization of the recently created resource, feed grains, was concerned.

It was believed since the farm management records showed cattle and hog production generally to be a feasible method of expanding the size of farm businesses and many of the leading farmers were believed to be innovators and early adopters in the Rice County area, cattle and hog programs would have a greater relative importance in the farm organizations of the leading farmers than those of the general farmers. This seemed especially probable since a larger percentage of general farmers than leading farmers considered each of several factors to be problems in the feeding of cattle and hogs.

It was believed that part of the knowledge possessed by the leading farmers regarding cattle and hog production could be imparted to the general farmers of the area by the inclusion of the leading farmers in future educational programs. Meriting emphasis would be more insights into methods that the leading farmers used to meet the problem of income variability.

All years studied showed the leading farmers produced more beef animals (excluding beef cows) and hogs in relation to the crop acres and total acres they operated than did the general farmers. Tables 8, 9, 10 and 11 indicate the animal units and acres operated. (See also Appendix G for a more detailed description of the farms.)

Knowledge is necessary to utilize factors of production to produce a product. It seems the leading farmers probably through

Table 8. Comparison of livestock numbers, and crop and total acres operated, leading and general farmers, Rice County, for the average of three years, 1959, 1957 and 1955.

	Average number		Difference*	
	of units		Number	Per cent
	Leading farmers	General farmers	units	
Beef calves	61.9	14.5	- 47.4	- 76.6
Sows	4.6	1.4	- 3.2	- 69.6
Dairy cows	5.7	3.0	- 2.7	- 47.4
Ewes	1.1	5.3	+ 4.2	+ 381.8
Hens	130.0	62.7	- 67.3	- 51.8
Beef cows	22.9	17.1	- 5.8	- 25.3
Crop acres operated	718.9	417.7	- 301.2	- 41.9
Total acres operated	928.7	544.5	- 384.2	- 41.4

\* Figures are based on leading farmers' animal units and acres.

Leading farmers, N = 39

General farmers, N = 189

Table 9. Comparison of livestock numbers, and crop and total acres operated, leading and general farmers, Rice County, for the year 1959.

	Average number		Difference*	
	of units		Number	Per cent
	Leading farmers	General farmers	units	
Beef calves	75.4	16.7	- 58.7	- 77.9
Sows	4.9	1.7	- 3.2	- 65.3
Dairy cows	6.4	3.1	- 3.3	- 51.6
Ewes	1.4	6.0	+ 4.6	+ 328.6
Hens	143.0	55.0	- 88.0	- 61.5
Beef cows	23.4	17.0	- 6.4	- 27.4
Crop acres operated	813.8	446.1	- 367.7	- 45.2
Total acres operated	1,056.9	586.1	- 470.8	- 44.5

\* Figures are based on leading farmers' animal units and acres.

Leading farmers, N = 41

General farmers, N = 200

Table 10. Comparison of livestock numbers, and crop and total acres operated, leading and general farmers, Rice County, for the year 1957.

	Average number		Difference*	
	of units		Number	
	Leading	General	Number	Per cent
	farmers	farmers	units	
Beef calves	61.0	13.6	- 47.4	- 77.7
Sows	5.3	1.1	- 4.2	- 79.2
Dairy cows	5.2	3.1	- 2.1	- 40.4
Ewes	1.0	5.5	+ 4.5	+ 450.0
Hens	120.0	62.0	- 58.0	- 48.3
Beef cows	22.0	15.1	- 6.9	- 31.4
Crop acres operated	700.2	412.3	- 287.9	- 41.1
Total acres operated	913.1	531.0	- 382.1	- 41.8

\* Figures are based on leading farmers' animal units and acres.

Leading farmers, N = 40

General farmers, N = 192

Table 11. Comparison of livestock numbers, and crop and total acres operated, leading and general farmers, Rice County, for the year 1955.

	Average number		Difference*	
	of units		Number	
	Leading	General	Number	Per cent
	farmers	farmers	units	
Beef calves	49.4	13.2	- 36.2	- 73.3
Sows	3.6	1.3	- 2.3	- 63.9
Dairy cows	5.4	2.9	- 2.5	- 46.3
Ewes	0.9	4.3	+ 3.4	+ 377.8
Hens	127.0	71.0	- 56.0	- 44.1
Beef cows	23.2	19.1	- 4.1	- 17.7
Crop acres operated	642.6	394.6	- 248.0	- 38.6
Total acres operated	816.0	516.4	- 299.6	- 36.7

\* Figures are based on leading farmers' animal units and acres.

Leading farmers, N = 37

General farmers, N = 174

their greater knowledge have developed the livestock feeding potential by the utilization of feed grains to a greater degree than have the general farmers. It would seem the leading farmers have in effect capitalized on the newly created resource, feed grains, more than the general farmers.

It would seem logical to assume part of the reason for the difference in the cattle and hog units produced by the two groups is due to the general ability of the leading farmers to respond more adequately to the factors considered by the farmers to be problems in the feeding of cattle and hogs.

#### Farmers' Expectations

The farmers generally expect to have more units of cattle and hogs in 1970 than they did in 1960. Numbers of animal units they expect to have in the future are shown in Tables 12 and 13. Possible reasons for the expected increase in the number of units may be - they expect to solve some of the problems they would now have in cattle and hog feeding, they expect greater stability in cattle feeding profits, or they may expect the probability of greater hog feeding profits to exist by 1970. Many of them, unable to buy or rent land, may wish to expand their volume of business by this means. Another reason could be a general optimism regarding the future with no factual basis for the optimism.

The expected expansion of cattle and hog programs on individual farms may or may not increase the total cattle and hog units produced in the county. If smaller farm operations are incorporated into larger operations, not much net change in total

Table 12. Livestock numbers expected for 1970, leading farmers, Rice County, 1960.

System, number of head	:Average number livestock:		Difference*	
	: On farms : in 1959	: Expected to : : have in 1970:	Number	Per cent
Beef calf system	75.4	93.9	+ 18.5	+ 24.5
Sows	4.9	8.1	+ 3.2	+ 65.3
Dairy cows	6.4	7.2	+ 0.8	+ 12.5
Ewes	1.4	--	- 1.4	- 100.0
Hens	143.0	270.0	+ 127.0	+ 88.8
Beef cows	23.4	58.2	+ 34.8	+ 148.7

\* Figures are based on animal units on farms in 1959.

Farmers, N = 39

Table 13. Livestock numbers expected for 1970, general farmers, Rice County, 1960.

System, number of head	:Average number livestock:		Difference*	
	: On farms : in 1959	: Expected to : : have in 1970:	Number	Per cent
Beef calf system	16.7	45.5	+ 28.8	+ 172.5
Sows	1.7	3.1	+ 1.4	+ 82.4
Dairy cows	3.1	3.7	+ 0.6	+ 19.4
Ewes	6.0	17.1	+ 11.1	+ 185.0
Hens	55.0	660.0	+ 605.0	+1100.0
Beef cows	17.0	43.4	+ 26.4	+ 155.3

\* Figures are based on animal units on farms in 1959.

Farmers, N = 201

animal units in the county may result. But, if the farmers in general increase their cattle and hog units without an appreciable amount of incorporation of smaller farms, the net result, of course, would be an increased number of cattle and hog units produced in the county.

## A FURTHER ANALYSIS OF PROBLEMS INVOLVED IN THE FEEDING OF LIVESTOCK IN RICE COUNTY

It was determined that the major problems Rice County farmers believed they would have in starting or expanding cattle feeding centered around the general problem of variability of probable profits. It was also determined that the main problem they thought they would have in the feeding of hogs was the low profit probabilities they expected in the feeding of hogs, and the variability of the profits.

It is believed that there are also other factors which are either directly or indirectly problems involved in the feeding of livestock in the Rice County area. Some of them were in part referred to by the farmers.

### Stability of Feed Production

A continuous supply of inputs is a necessity for the successful long-run production of any product, and the production of cattle and hogs depends on a constant supply of feed.

Rice County, during the period 1957-61, had an average annual precipitation of 32.31 inches of water. The long time average rainfall for Rice County is 26 inches.<sup>4</sup> The above normal rainfall during the five-year period is believed to have been somewhat instrumental in producing the large quantities of feed grains in Rice County during that period as compared with

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<sup>4</sup> Dean L. Bark, Reinfall Patterns in Kansas, Kansas Agricultural Situation Reprint No. 9, Agricultural Experiment Station, Kansas State University, May 1961.



preceding periods.

Along with the above normal rainfall, the relatively recent technological progress which has been made in the hybridization of grain sorghums and the recent increase of grain sorghum acreage are also factors explaining the large output during recent years. The increase in acres of feed grains is shown in Table 14.

Table 14. Acreages harvested, grain sorghums and all feed grains, by years, Rice County, 1941-61.

	: Grain sorghums	: All feed grains
	: (acres)	
1961	53,000	61,800
1960	78,000	87,000
1959	72,000	80,490
1958	62,000	71,200
1957	73,000	85,500
1956	31,100	42,610
1955	33,200	47,460
1954	40,200	53,100
1953	39,300	50,830
1952	27,700	37,640
1951	37,320	46,480
1950	31,920	42,980
1949	13,900	27,380
1948	20,240	35,440
1947	6,430	21,460
1946	7,800	20,360
1945	21,730	34,420
1944	26,300	58,310
1943	17,240	83,630
1942	12,950	64,320
1941	5,790	39,560

Source: Kansas State Board of Agriculture

Although considerable variation exists in the annual rainfall of Rice County, certain measures could be used to level out

the annual production of feed. Probably the main method of doing this would be irrigation. Kansas State University irrigation engineers estimate 50,000 acres of Rice County land could be economically irrigated. The present number of acres being irrigated is approximately 3,000. Also the storage of local feed could be used as insurance for years of short feed production.

#### Proportion of Tenant Operated Land

Establishment of feeding facilities and the utilization of landlord shares of feed grains to feed livestock would seem to be more difficult to accomplish on land owned by a landlord and operated by a tenant operator than on operator owned land. A large portion of the Rice County farm land is farmed under landlord-tenant arrangements. Table 15 indicates that in 1959 approximately two-thirds of the acres farmed in Rice County were farmed in this manner.

#### Background of Farmers

The knowledge, experience and general background of an entrepreneur for a certain type of production would in part determine the confidence and ability he would have in producing a product. The general farming background of Rice County farmers is agronomic. Table 16 indicates that a large portion of the farmers started farming on cash crop and cash crop-cow herd farms.

It would be expected, since many of the farmers started farming on cash crop farms and not until recent years have the

Table 15. Land owned and rented, acres and percentage, cropland, pasture, and total, leading and general farmers, Rice County, 1960.

	Cropland			Pasture land			Total land					
	: Owned by : operator	: Rented	: Acres : per : % of : farm : total :	: Owned by : operator	: Rented	: Acres : per : % of : farm : total :	: Owned by : operator	: Rented	: Acres : per : % of : farm : total :			
Leading farmers	272	33.5	541	66.5	87	35.8	156	64.2	359	34.0	697	66.0
General farmers	149	33.4	297	66.6	68	48.6	72	51.4	217	37.0	369	63.0

Leading farmers, N = 41  
General farmers, N = 200

Table 16. Type of farms on which careers were started, leading and general farmers, Rice County, 1960.

Type farm <sup>a</sup>	: Leading farmers		: General farmers		: Both groups	
	: No. :	: % :	: No. :	: % :	: No. :	: % :
Cash crop	15	35.7	78	37.3	93	37.0
Cash crop-cow herd	7	16.7	65	31.1	72	28.7
Cash crop-beef feeding	5	11.9	19	9.1	24	9.6
General	3	7.1	22	10.5	25	10.0
Cow herd	3	7.1	4	1.9	7	2.8
General, dairy	--	--	1	0.5	1	0.4
Cash crop, cow herd, beef feeding	8	19.0	1	0.5	9	3.6
Cash crop, cattle, hogs	--	--	1	0.5	1	0.4
Cash crop, dairy	--	--	7	3.3	7	2.8
Cash crop, cow herd, dairy	--	--	2	1.0	2	0.8
Other	1	2.4	2	1.0	3	1.2
No answer	--	--	7	3.3	7	2.8

<sup>a</sup> Farmers' own classification - no standard criteria used in typing of the farms.

Leading farmers, N = 42

General farmers, N = 209

relatively large quantities of feed grains been produced in the county, the farmers are generally in a period of adjustment. The adjustment is from a basically agronomic type agriculture to an agriculture which includes the potential of profitable feeding of livestock.

## SUMMARY AND CONCLUSIONS

Farmers in areas such as Rice County, Kansas are interested in ways of increasing the volume of their business. Much of the south central and western Kansas farm land which used to produce wheat is now producing large quantities of grain sorghums following restrictions placed upon the acreage of wheat.

While the increase in grain sorghum production took place, livestock production in much of the Kansas areas remained about the same or increased by only a small amount, and in some areas it even decreased. Much of the grain sorghums produced in Kansas was shipped out of the state for feeding in other areas.

This study was concerned with the feasibility of expanding the size of farm businesses in the Rice County area by utilizing the locally grown grain sorghums to feed cattle and hogs, and to determine the problems that the farmers of that area would have in starting or expanding their cattle and hog feeding programs.

Kansas Farm Management Association records for the period 1957-61 indicated the expansion of farm businesses in south central Kansas by the production of cattle and hogs during this period was generally a feasible method of expansion. Farm comparisons suggested that those farmers with beef cattle or hogs as part of a farm organization including cash crops had favorable experiences relative to cash crop farms as indicated by returns to labor and management. The findings thus serve as evidence that some other farmers with cash crop organizations might profitably add or increase their beef cattle and hog numbers.

The comparisons did imply that an over-concentration upon these livestock enterprises might not be as favorable as a combination of cash crop and livestock enterprises.

A slightly larger residual of annual labor-management return for the cash crop-beef farmers indicated favorable experiences of the farmers having cash crop-beef farms relative to cash crop farmers during the 1957-61 period. While the results from the cash crop-beef farms compared favorably with those from cash crop farms, the returns from the beef farms, especially per man day worked, did not show an advantage to a beef organization. It is presumed that there is some advantage to cash crops as part of the organization both from the direct standpoint of profits from them, as well as other advantages such as more even distribution of labor needs of a cash crop-beef farm than of a farm with more concentration upon beef.

All comparisons of cash crop-hog farms with cash crop farms showed the cash crop-hog farms to be more feasible during the period 1957-61. The cash crop-hog farmers, by substituting labor and management for capital, especially land, were able to produce a larger total annual return for their labor and management and also a larger labor-management return per man day worked than the cash crop farmers. The experience on the cash crop-hog farms when compared with the cash crop farms during the period 1957-61 is an example of larger returns from intensified production. For the particular time period, the hog farms, with fewer resources, compared well with cash crop farms. The cash crop-hog farms,

although using more resources than the hog farms, experienced greater total and per man day returns for labor and management. Again, there is some evidence of advantage for an organization including both cash crops and livestock over an organization concentrating on one or the other.

The hog farmers managed a \$43,685 smaller total investment than the cash crop farmers, and they managed considerably fewer crop acres and total acres. However, the hog farmers' total annual labor-management return was only slightly less than for the cash crop farmers. The hog farms, compared to the cash crop farms, were an example of substituting labor and management for capital to increase farm income. The labor-management return per man day worked was less on the hog farms. The original hypothesis was accepted: South central Kansas farmers can increase their incomes by feeding their grain sorghums to cattle and hogs.

Rice County farmers in general regard the county as a favorable area for the feeding of cattle and hogs. The abundance of feed grains in the area was the main reason for this belief. They expect to be producing more cattle and hogs by 1970 than they were in 1960.

The main problems Rice County farmers believed they would have in starting or expanding their cattle feeding programs centered in general around the variability of the profits they expected from the feeding of cattle. The main economic problems they believed they would encounter in starting or expanding their

hog feeding programs were generally associated with the small profits they expected from the feeding of hogs and the variability of the profits. The original hypothesis was accepted: The variability of expected profits is the main problem Rice County farmers believe they would have in starting or expanding their cattle and hog feeding programs. It was believed that some responded adequately to the problem of the variability of profits from the production of cattle and hogs.

The evidence from the farm management records for the income variability comparisons was regarded as limited. The time period was not long, and the data being in the form of averages, annual variations in returns on a per farm basis were eclipsed. Within these limitations, there was not evidence that the variability of returns on farms with beef or hogs is generally greater than on cash crop farms. The records showed that the cash crop-hog and hog farms, when compared with the cash crop farms, returned comparable labor-management returns to the operators. It was believed that the farmers were not generally thinking of large volume production of hogs when they believed the profits from hogs to be small.

The problems of a selected group of Rice County farmers, selected because of their general success in the farming business, were compared to a group of farmers chosen at random from all Rice County farmers. It was found that the problems of both groups were nearly the same. However, a larger percentage of the general farmers considered each of several factors to be



problems than did the selected group. It was believed that the selected group would tend to keep abreast of markets and new technology to a greater degree than the group of general farmers. This was believed to be the main reason for the larger percentage of general farmers considering each of the factors to be problems.

Cattle and hog programs were found to be of relatively greater importance on the farms of the selected group of farmers than the general farmers. In all the years during the period 1955-59, the selected group had more beef animals (excluding beef cows) and hogs in relation to crop acres and total acres operated than did the group of general farmers.

It seemed there were also other factors which would either directly or indirectly be problems involved in the feeding of livestock in the Rice County area. Some of them were in part referred to by the farmers. The factors were: stability of feed production, a large proportion of tenant-operated land, and the basic agronomic background of the farmers.

The limiting factor in the production of feed in Rice County is usually moisture. The annual precipitation in the area fluctuates considerably from year to year.

The establishment of feeding facilities and the utilization of landlord shares of feed grains to feed livestock would seem to be more difficult to accomplish on land owned by a landlord and operated by a tenant, than on operator-owned land. A large portion of the Rice County farm land is farmed under landlord-tenant arrangements.

The general farming background of Rice County farmers is agronomic. The majority of the farmers, it is believed, have yet to learn how to utilize best the recently created local resource, grain sorghums.

#### RECOMMENDATIONS

This study indicates the expansion of south central Kansas farm businesses by the production of cattle and hogs to be a feasible method of expansion. However, there are several problems Rice County farmers in general would seem to have in increasing their cattle and hog feeding programs.

On the basis of this study, educational programs embracing the following subjects are recommended for the farmers of the Rice County area:

1. Livestock marketing--particularly the use of advance purchase and sales contracts.
2. Grain and feed marketing--with special reference to the procedure involved in the hedging of grain and feed inventories.
3. Production economics--especially the volume production of hogs.

The participation of some of the leading farmers interviewed in the south central Kansas rural area development-survey would seem to be a feasible inclusion in future educational programs.

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## APPENDICES

## APPENDIX A

The Kansas Farm Management Association Number Two, in typing farms, requires that one-third of the man work days be devoted to an enterprise before considering the enterprise in the farm type. Type of farm may then be determined by the proportion of man work days applied to an enterprise or enterprises.

The man work days represented in a farm business is multiplied by the number of acres or number of livestock handled by the standard days shown in Table 1. A man work day is the amount of work a man should be able to do in a ten-hour day. A year's work is considered to be 300 work days per man.

Table 1. Standards for man work days.

Crop	: Man work : :standards/ : : unit : :(Days/acre):	Livestock systems	: : : : : Days : :required
Wheat or winter barley	0.4	Beef cow - stocker calf	1.0
Oats and spring barley	0.4	Beef cow - creep fed	2.0
Corn for grain	0.7	Deferred fed steer	0.8
Grain sorghum	0.5	Deferred fed heifer	0.6
Soybeans	0.6	Wintering and grazing calf	0.5
		Wintering calf	0.4
		Wintering yearlings	0.4
		Summer grazing	0.1
		Cattle full fed (per month)	0.1
		Litter to market weights	3.0
		Litter (farrowing to weaning)	1.5
		Feeder pigs to market	0.2

Source: Kansas Farm Management Association account book

## APPENDIX B



Cash crop farm - A farm on which less than one-third of the man work days are devoted to the production of livestock.

Cash crop-beef farm - A farm which is basically used to produce cash crops but has more than one-third of the man work days devoted to the production of beef.

Beef farm - A farm on which more than one-third of the man work days are devoted to the production of beef and which has at least five acres of grass for each acre of crop land.

Cash crop-hog farm - A farm which is basically used to produce cash crops, but that has more than one-third of the man work days devoted to the production of hogs.

Hog farm - A farm on which the primary source of income is from hogs, but the farm may be producing a large amount of crops also.

Farm operator - The entrepreneur. He provides the management for the farm and in most cases does much of the labor.

Farm operator's total annual labor-management return - The gross farm income for one year, minus farm expenses, minus 6 per cent of the farm operator's equity in the working capital of the farm business, minus 4 per cent of the farm operator's equity in fixed capital of the farm business.

Man work day - Approximately ten hours.

Farm operator's labor-management return per man day worked - A farm operator's total annual labor-management return divided by the calculated number of man days worked.

**Crop acres operated** - The number of crop acres, owned or rented or a combination of both, which are managed by a farm operator.

**Total acres operated** - The number of total acres: crop, pasture and other, owned or rented or a combination of both, which are managed by a farm operator.

**Total investment managed** - The total market value of all farm business resources managed by a farm operator.

**General farmers** - A group of farmers chosen at random from a population of all Rice County, Kansas farmers.

**Leading farmers** - A group of 42 Rice County, Kansas farmers who were selected by a group of local agricultural leaders. The selections were made on the basis of how closely they approximated the standards set by a list of eight criteria aimed at designating those farm operators who have adopted modern techniques, good management practices, and were generally successful in their farming endeavors.

## APPENDIX C

At the inauguration of the rural economic development project in 1960, the 11 counties in the south central Kansas area were individually compared to the mean average of the south central Kansas area on the basis of the following criteria:

1. Livestock sold as a per cent of all farm products sold in the county.
2. Per cent of county acreage in wheat.
3. Per cent of county acreage in corn.
4. Farm income deviation from the mean.
5. Per cent of males over 14 employed in agriculture.
6. Per cent of persons employed in manufacturing.
7. Per cent of increase in population in towns under 1,000.
8. Level of living index.
9. Population density per square mile.
10. Dairy products sold as a per cent of total county agricultural products.

The counties within 10 per cent plus or minus of the mean of each category were considered representative of the area within each category. Based upon this set of criteria, Rice County was rated as being one of the two most representative counties illustrating the average type of conditions characteristic of the south central Kansas area.

## APPENDIX D

The group of leading farmers consisted of 42 Rice County farmers who were selected by local agricultural leaders. The selections were made on the basis of how closely they approximated the standards set by a list of eight criteria. The criteria were aimed at designating those farm operators who have adopted modern techniques, good management practices, and were generally successful in their farming endeavors. Some of the farmers were selected partly because of the livestock and other programs they had on their farms. Selection was made in this manner to insure the samples containing some of each type farm in the area. Criteria used in the selection process were:

1. They use good management methods.
2. They use the latest proven methods in farming and are right in their choices at least a majority of the time.
3. They provide their neighbors opportunity to observe their farming methods and learn better farming methods from them.
4. They have achieved one of the better types of farm organizations for the area.
5. They have not subsidized their farming and development with oil income or other types of off-farm income.
6. They rate high for their farming and management abilities and not necessarily for their community activities and memberships in organizations.
7. They have achieved a standard of living that is a goal of the average farmer.
8. They are under 60 years of age.

A formal meeting was held in the early spring of 1960 with representatives from nearly all segments of the Rice County economy in attendance. The group included members of the local chambers of commerce, the Rice County Agricultural Extension Council, Agricultural Stabilization Committee and many businesses and agricultural-related organizations and agencies.

Those in attendance were asked to vote on farmers with whom they were acquainted and who rated high according to the above listed criteria. The votes were then compiled and 42 farmers were chosen.

## APPENDIX E



## RURAL ECONOMIC DEVELOPMENT RESEARCH PROJECT, 1960

KANSAS STATE UNIVERSITY  
 Kansas Extension Service and  
 the Experiment Station

Farm Schedule 8  
 Date \_\_\_\_\_  
 Enumerator \_\_\_\_\_

Name \_\_\_\_\_ Address \_\_\_\_\_

1. Do you believe a farmer should have a good livestock program in conjunction with his crop operations? yes\_\_ no\_\_

If yes, do you believe you have the best program for your farm and operation? yes\_\_ no\_\_

If no, what program would you change to? \_\_\_\_\_

- 1A. What type of livestock program is this area best suited for at present? \_\_\_\_\_

(a) What might it be in the future? \_\_\_\_\_

- 1B. Does this area have an advantage over other areas in livestock production? yes\_\_ no\_\_

(a) If yes, what kind? \_\_\_\_\_

2. We would like some information on your beginning in farming.

(1) What year did you start farming on your own? \_\_\_\_\_

(2) Where did you start farming? \_\_\_\_\_

(3) Type of farm then (cash crop, cash crop--cow herd, cash crop--beef feeding etc.) \_\_\_\_\_

(4) Please check the methods which describe the way you started.

a. Rented land - - - - - \_\_\_\_\_

b. Inheritance - - - - - \_\_\_\_\_

c. Purchased land with considerable borrowed money - - - - - \_\_\_\_\_

d. Purchased land and rented other land - - - \_\_\_\_\_

e. Other (specify) - - - - - \_\_\_\_\_

3. We would like some information on your operations for the past five years. Please help us fill out the following table:

	1955	1956	1957	1958	1959
<u>Cropland:</u>	:	:	:	:	:
Owned, acres	:	:	:	:	:
Rented, acres	:	:	:	:	:
<u>Livestock, number of head:</u>	:	:	:	:	:
Beef cows (feeder calf)	:	:	:	:	:
Dairy cows	:	:	:	:	:
Sows	:	:	:	:	:
Beef calf system (describe)	:	:	:	:	:
No. of head	:	:	:	:	:
Ewes	:	:	:	:	:
Hens	:	:	:	:	:
Other (describe)	:	:	:	:	:
No. of head	:	:	:	:	:

3A. The following information is needed on your capital (that year's market value) structure in the past and present and what you expect it to be by 1970.

	: Start :farming :Year	Years				Future
		: 1930	: 1940	: 1950	: 1960	: 1970
		:(Use 1960 : values)				
<b>Assets:</b>	:	:	:	:	:	:
<u>Value</u>	:	:	:	:	:	:
<u>Owned land</u>	:	:	:	:	:	:
<u>Farm bldgs.</u>	:	:	:	:	:	:
<u>House</u>	:	:	:	:	:	:
<u>Machinery &amp; equipment</u>	:	:	:	:	:	:
<u>Cash on hand</u>	:	:	:	:	:	:
<u>Value stocks, bonds, other investments</u>	:	:	:	:	:	:
<u>Money owed to you</u>	:	:	:	:	:	:
<u>Other assets</u>	:	:	:	:	:	:
<b>TOTAL . . . . .</b>	:	:	:	:	:	:
<b>Debts:</b>	:	:	:	:	:	:
<u>Real estate</u>	:	:	:	:	:	:
<u>Debt against machinery or livestock</u>	:	:	:	:	:	:
<u>Other notes</u>	:	:	:	:	:	:
<b>TOTAL . . . . .</b>	:	:	:	:	:	:
<b>Net Worth . . . . .</b>	:	:	:	:	:	:

3B. The following information is needed on your farm organization in the past, present and what you expect in the future:

	: Start	Years				: Future
	: farming	1930	1940	1950	1960	1970
	: Year _____	:	:	:	:	:
LAND:	:	:	:	:	:	:
Owned	:	:	:	:	:	:
Crop acres	:	:	:	:	:	:
Pasture acres	:	:	:	:	:	:
TOTAL ACRES	:	:	:	:	:	:
Rented	:	:	:	:	:	:
Crop acres	:	:	:	:	:	:
Pasture acres	:	:	:	:	:	:
TOTAL ACRES	:	:	:	:	:	:
LIVESTOCK:	:	:	:	:	:	:
Beef	:	:	:	:	:	:
Kind of system	:	:	:	:	:	:
Number of head	:	:	:	:	:	:
Dairy cows (no.)	:	:	:	:	:	:
Sows (no. of head)	:	:	:	:	:	:
Hens (no.)	:	:	:	:	:	:
Ewes (no.)	:	:	:	:	:	:
CROPS: (acres)	:	:	:	:	:	:
Continuous wheat	:	:	:	:	:	:
Wheat after fallow	:	:	:	:	:	:
Grain sorghum	:	:	:	:	:	:
Sorghum for silage or forage	:	:	:	:	:	:
MACHINERY:	:	:	:	:	:	:
Tractors	:	:	:	:	:	:
Size (plows)	:	:	:	:	:	:
_____	:	:	:	:	:	:
_____	:	:	:	:	:	:
_____	:	:	:	:	:	:
Combines	:	:	:	:	:	:
P = pull or	:	:	:	:	:	:
S = self-prop.	:	:	:	:	:	:
& size in feet	:	:	:	:	:	:
_____	:	:	:	:	:	:
_____	:	:	:	:	:	:
LABOR:	:	:	:	:	:	:
No. men	:	:	:	:	:	:
(equivalent concept):	:	:	:	:	:	:

3B (concl.).

	: Start	:	Years				:
	: farming	:					: Future
	: Year _____	:	1930	1940	1950	1960	1970
	:	:	:	:	:	:	:
INCOME:	:	:	:	:	:	:	:
<u>Net from farming</u>	:	:	:	:	:	:	:
<u>Outside</u>	:	:	:	:	:	:	:
LIVING COSTS:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:
	:	:	:	:	:	:	:

4. We have been talking about things you have to work with. We would like for you to tell us how your farm should be organized by 1970.

(1)	(2)	(3)	(4)
	Land Operated and Machinery Purchases that you would like	Land Operated and Machinery Purchases that are likely	
	How farm should be organized	How farm should be organized	How farm will be organized
<u>Crops:</u>			
Continuous wheat, acres			
Wheat after fallow, acres			
Grain sorghum, acres			
Sorghum for silage, acres			
Other (specify), acres			
<u>Livestock, No. of head:</u>			
Beef cows (feeder calf)			
Dairy cows			
Sows			
Beef calf system (describe)			
No. of head			
Ewes			
Hens			
Other (describe)			
No. of head			
No. of head			

5. Would these be difficulties in getting a hog enterprise into your plan?

- a. No experience with hogs \_\_\_\_\_
- b. Difficult to raise enough grain \_\_\_\_\_
- c. Feed grain production highly variable from  
year to year \_\_\_\_\_
- d. Lack of an adequate market \_\_\_\_\_
- e. Lack hog equipment \_\_\_\_\_
- f. Do not like hogs \_\_\_\_\_
- g. Lack information on new developments \_\_\_\_\_  
(If checked, describe) \_\_\_\_\_

- h. Profits from hogs are low \_\_\_\_\_
- i. Profits from hogs are highly variable from  
year to year \_\_\_\_\_
- j. Lacks information on what prices to expect \_\_\_\_\_
- k. Am reluctant to borrow money for purchasing  
livestock \_\_\_\_\_
- l. Reluctance of lenders to lend money for hogs \_\_\_\_\_
- m. Other (specify) \_\_\_\_\_

6. Would these be difficulties in getting a beef feeding enterprise into your plan?

- a. Have a cow herd now and cows would be sold at a  
loss \_\_\_\_\_
- b. Have a cow herd now and prefer that system \_\_\_\_\_
- c. Do not like to go into the market to buy and  
sell animals \_\_\_\_\_
- d. There can be years of large losses \_\_\_\_\_
- e. Difficulty in producing grain \_\_\_\_\_
- f. No experience \_\_\_\_\_
- g. Inadequate market \_\_\_\_\_
- h. Lacks information on what prices to expect \_\_\_\_\_
- i. Lacks information on new developments \_\_\_\_\_  
(If checked, describe) \_\_\_\_\_

- j. Profits from beef cattle are low \_\_\_\_\_
- k. Profits from beef cattle are highly variable  
from year to year \_\_\_\_\_
- l. Inadequate feed supply \_\_\_\_\_
- m. Feed supplies highly variable from year to year \_\_\_\_\_
- n. Am reluctant to borrow money for purchasing  
livestock \_\_\_\_\_

- o. Reluctant to borrow money for beef cattle purchase \_\_\_\_\_  
 (If checked ask question below)  
 How much additional money would you be willing  
 to borrow for the purchase of beef cattle?  
 Now \_\_\_\_\_  
 1970 \_\_\_\_\_
- p. Reluctance of lenders to lend money for purchase  
 of beef cattle \_\_\_\_\_  
 (If checked, ask question below)  
 How much additional money would lenders be  
 willing to lend you for the purchase of  
 beef cattle  
 Now \_\_\_\_\_  
 1970 \_\_\_\_\_
- q. Other (specify) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
7. Would you say your farm will be more specialized? No \_\_\_\_\_  
 (If checked, ask questions below.)
- a. Not desirable to put all one's eggs in one  
 basket \_\_\_\_\_  
 b. Must have other enterprises besides wheat \_\_\_\_\_  
 c. Utilize labor and machinery better \_\_\_\_\_  
 d. Enables the rotating of crops \_\_\_\_\_  
 e. Other (specify) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Yes \_\_\_\_\_
- (If checked, ask questions below.)
- a. Easier to manage \_\_\_\_\_  
 b. Larger enterprises are more efficient \_\_\_\_\_  
 c. If the number of jobs is limited, you can do  
 a better job than trying to be a "jack of  
 all trades" \_\_\_\_\_  
 d. Easier to keep up with new developments \_\_\_\_\_  
 e. Farm is adapted to rather specialized  
 enterprise \_\_\_\_\_  
 f. Other (specify) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



- 7A. Should the farming in the area specialize? More \_\_\_\_\_  
or less \_\_\_\_\_
- a. What are the advantages or disadvantages? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. What is your opinion of large corporative feed lots?  
Now \_\_\_\_\_  
\_\_\_\_\_  
For the future \_\_\_\_\_  
\_\_\_\_\_
9. What is your opinion of co-op feed lots?  
Now \_\_\_\_\_  
\_\_\_\_\_  
For the future \_\_\_\_\_  
\_\_\_\_\_
10. What is your opinion of co-op cow pools?  
Now \_\_\_\_\_  
\_\_\_\_\_  
For the future \_\_\_\_\_  
\_\_\_\_\_
11. What is your opinion of integration and corporative farming?  
Now \_\_\_\_\_  
\_\_\_\_\_  
For the future \_\_\_\_\_  
\_\_\_\_\_

## APPENDIX F

Farm Operator's Labor-Management Return per Man Day Worked

(1961)

Basis	: Return: farms:	: No.:	Type farms	: Return: farms:	: No.:	Differ-: Per cent
	\$	farms:		\$	farms:	ence* : difference *
Cash crop farms	\$22.81	76	Cash crop-beef farms	\$15.25	78	- \$ 7.56 - 33.1
Cash crop farms	22.81	76	Cash crop-hog farms	16.73	8	- 6.08 - 26.7
Cash crop farms	22.81	76	Beef farms	10.09	15	- 12.72 - 55.8
Cash crop farms	22.81	76	Hog farms	14.42	6	- 8.39 - 36.8

(1960)

Cash crop farms	\$ 8.74	56	Cash crop-beef farms	\$ 9.40	65	+ \$ 0.66 + 7.6
Cash crop farms	8.74	56	Cash crop-hog farms	9.14	5	+ 0.40 + 4.6
Cash crop farms	8.74	56	Beef farms	4.73	49	- 4.01 - 45.9
Cash crop farms	8.74	56	Hog farms	7.30	7	- 1.44 - 16.5

(1959)

Cash crop farms	\$ 5.90	36	Cash crop-beef farms	\$ 0.82	57	- \$ 5.08 - 86.1
Cash crop farms	5.90	36	Cash crop-hog farms	6.88	3	+ 0.98 + 16.6
Cash crop farms	5.90	36	Beef farms	(-2.65)	19	- 8.55 - 144.9
Cash crop farms	5.90	36	Hog farms	No records available		

(1958)

Cash crop farms	\$14.50	33	Cash crop-beef farms	\$14.37	35	- \$ 0.13 - 0.9
Cash crop farms	14.50	33	Cash crop-hog farms	14.40	4	- 0.10 - 0.7
Cash crop farms	14.50	33	Beef farms	13.69	18	- 0.81 - 5.6
Cash crop farms	14.50	33	Hog farms	No records available		

(1957)

Cash crop farms	\$ 0.69	28	Cash crop-beef farms	\$ 3.88	28	+ \$ 3.19 + 462.5
Cash crop farms	0.69	28	Cash crop-hog farms	10.98	3	+ 10.29 + 1491.5
Cash crop farms	0.69	28	Beef farms	1.07	28	+ 0.38 + 55.1
Cash crop farms	0.69	28	Hog farms	6.60	5	+ 5.91 + 856.5

\* Differences are based on cash crop farms.

Farm Operator's Total Annual Labor-Management Return

Basis	: Return: farms:		: No.:		: Return: farms:		: No.:		: Differ-:	
	\$		farms		farms		farms		ence#:	Per cent
				Type farms						: difference*
(1961)										
Cash crop farms	\$ 6,738	76	Cash crop-beef farms	\$ 5,673	78	- \$1,065	-	15.8		
Cash crop farms	6,738	76	Cash crop-hog farms	6,122	8	616	-	9.1		
Cash crop farms	6,738	76	Beef farms	3,098	15	3,640	-	54.0		
Cash crop farms	6,738	76	Hog farms	4,557	6	2,181	-	32.4		
(1960)										
Cash crop farms	\$ 2,979	56	Cash crop-beef farms	\$ 4,420	65	+ \$1,441	+	48.4		
Cash crop farms	2,979	56	Cash crop-hog farms	2,572	5	593	+	20.0		
Cash crop farms	2,979	56	Beef farms	2,178	49	801	-	26.9		
Cash crop farms	2,979	56	Hog farms	2,767	7	212	-	7.1		
(1959)										
Cash crop farms	\$ 1,806	36	Cash crop-beef farms	\$ 364	57	- \$1,442	-	79.8		
Cash crop farms	1,806	36	Cash crop-hog farms	2,633	3	827	+	45.8		
Cash crop farms	1,806	36	Beef farms	(-1,733)	19	3,539	-	196.0		
Cash crop farms	1,806	36	Hog farms	No records available						
(1958)										
Cash crop farms	\$ 4,320	33	Cash crop-beef farms	\$ 6,245	35	+ \$1,925	+	44.6		
Cash crop farms	4,320	33	Cash crop-hog farms	5,931	4	1,611	+	37.3		
Cash crop farms	4,320	33	Beef farms	9,079	18	4,759	+	110.2		
Cash crop farms	4,320	33	Hog farms	No records available						
(1957)										
Cash crop farms	\$ 189	28	Cash crop-beef farms	\$ 1,516	28	+ \$1,327	+	702.1		
Cash crop farms	189	28	Cash crop-hog farms	3,560	3	3,171	+	1677.8		
Cash crop farms	189	28	Beef farms	467	28	278	+	147.1		
Cash crop farms	189	28	Hog farms	2,501	5	2,312	+	1223.3		

\* Differences are based on cash crop farms.

## Crop Acres Operated

(1961)

Basis	: Acres: farms:		: No.:		: Acres: farms:		: No.:		: Differ-: Per cent	
	:	:	:	:	:	:	:	:	:	:
Cash crop farms	627	76	Cash crop-beef farms	556	78	+	9	+	1.4	
Cash crop farms	627	76	Cash crop-hog farms	559	8	-	68	-	10.8	
Cash crop farms	627	76	Beef farms	299	15	-	328	-	52.3	
Cash crop farms	627	76	HOG farms	241	6	-	386	-	61.6	

(1960)

Cash crop farms	647	56	Cash crop-beef farms	661	65	+	14	+	2.2
Cash crop farms	647	56	Cash crop-hog farms	583	5	-	64	-	9.9
Cash crop farms	647	56	Beef farms	422	49	-	225	-	34.8
Cash crop farms	647	56	HOG farms	282	7	-	365	-	56.4

(1959)

Cash crop farms	535	36	Cash crop-beef farms	584	57	+	49	+	9.2
Cash crop farms	535	36	Cash crop-hog farms	609	3	+	74	+	13.8
Cash crop farms	535	36	Beef farms	485	19	-	50	-	9.3
Cash crop farms	535	36	Hog farms	No records available		-		-	

(1958)

Cash crop farms	545	33	Cash crop-beef farms	606	35	+	61	+	11.2
Cash crop farms	545	33	Cash crop-hog farms	567	4	+	22	+	4.0
Cash crop farms	545	33	Beef farms	515	18	-	32	-	5.9
Cash crop farms	545	33	Hog farms	No records available		-		-	

(1957)

Cash crop farms	588	28	Cash crop-beef farms	559	28	-	29	-	4.9
Cash crop farms	588	28	Cash crop-hog farms	450	3	-	138	-	23.5
Cash crop farms	588	28	Beef farms	433	28	-	155	-	26.4
Cash crop farms	588	28	Hog farms	418	5	-	170	-	28.9

\* Differences are based on cash crop farms.

Total Acres Operated

(1961)

Basis	: Acres: farms:		: No.:		: Acres: farms:	: No.:		: Differ- ence*	: Per cent : difference#
Cash crop farms	808	76	Cash crop-beef farms	974	78	+ 166	+ 20.5		
Cash crop farms	808	76	Cash crop-hog farms	635	8	- 173	- 21.4		
Cash crop farms	808	76	Beef farms	786	15	- 22	- 2.7		
Cash crop farms	808	76	Hog farms	343	6	- 465	- 57.5		

(1960)

Cash crop farms	781	56	Cash crop-beef farms	988	65	+ 207	+ 26.5
Cash crop farms	781	56	Cash crop-hog farms	720	5	- 61	- 7.8
Cash crop farms	781	56	Beef farms	688	49	- 93	- 11.9
Cash crop farms	781	56	Hog farms	441	7	- 340	- 43.5

(1959)

Cash crop farms	647	36	Cash crop-beef farms	886	57	+ 239	+ 36.9
Cash crop farms	647	36	Cash crop-hog farms	706	3	+ 59	+ 9.1
Cash crop farms	647	36	Beef farms	841	19	+ 194	+ 30.0
Cash crop farms	647	36	Hog farms	No records available			

(1958)

Cash crop farms	663	33	Cash crop-beef farms	956	35	+ 293	+ 44.2
Cash crop farms	663	33	Cash crop-hog farms	645	4	- 18	- 2.7
Cash crop farms	663	33	Beef farms	855	18	+ 192	+ 29.0
Cash crop farms	663	33	Hog farms	No records available			

(1957)

Cash crop farms	709	28	Cash crop-beef farms	840	28	+ 131	+ 18.5
Cash crop farms	709	28	Cash crop-hog farms	534	3	- 175	- 24.7
Cash crop farms	709	28	Beef farms	756	28	+ 47	+ 6.6
Cash crop farms	709	28	Hog farms	517	5	- 192	- 27.1

\* Differences are based on cash crop farms.

Total Investment Managed

(1961)

Basis	Invest- : No. :		Invest- : No. :		Differ- : Per cent
	ment	: farms:	ment	: farms:	
Cash crop farms	\$139,810	76	\$159,760	78	+ \$20,950 + 15.1
Cash crop farms	139,810	76	135,192	8	- 5,618 - 4.0
Cash crop farms	139,810	76	139,791	15	+ 981 + 0.7
Cash crop farms	139,810	76	88,254	6	- 50,556 - 36.4

(1960)

Cash crop farms	\$139,358	56	\$156,666	65	+ \$18,308 + 13.2
Cash crop farms	139,358	56	156,820	5	- 1,538 - 1.1
Cash crop farms	139,358	56	129,785	49	- 8,573 - 6.2
Cash crop farms	139,358	56	84,219	7	- 54,139 - 39.1

(1959)

Cash crop farms	\$122,641	36	\$138,549	57	+ \$15,908 + 13.0
Cash crop farms	122,641	36	120,929	3	- 1,712 - 1.4
Cash crop farms	122,641	36	177,110	19	+ 54,469 + 44.4
Cash crop farms	122,641	36	No records available		

(1958)

Cash crop farms	\$114,146	33	\$128,974	35	+ \$9,828 + 8.6
Cash crop farms	114,146	33	94,208	4	- 19,938 - 17.5
Cash crop farms	114,146	33	152,780	18	+ 38,634 + 33.8
Cash crop farms	114,146	33	No records available		

(1957)

Cash crop farms	\$108,252	28	\$112,489	28	+ \$4,237 + 3.9
Cash crop farms	108,252	28	77,507	3	- 30,945 - 28.6
Cash crop farms	108,252	28	110,026	28	+ 1,774 + 1.6
Cash crop farms	108,252	28	81,590	5	- 26,362 - 24.4

\* Differences are based on cash crop farms.

## APPENDIX G



1959

	: Leading : farmers	: General : farmers
Cropland		
Owned, acres	272.3	149.0
Rented, acres	541.5	297.1
Pasture land		
Owned, acres	86.7	68.4
Rented, acres	156.4	72.1
Livestock (No. units)		
Beef cows (feeder calf)	23.4	17.0
Dairy cows	6.4	3.1
Sows	4.9	1.7
Beef calf system (total units)	75.4	16.7
Wintered steers	14.8%	25.5%
Wintered heifers	3.7%	--
Wintered and full-fed steers	14.8%	10.6%
Wintered and full-fed heifers	11.1%	2.1%
Wintered and grass steers	29.6%	21.3%
Wintered and grass heifers	--	--
Wintered, grass, and full fed	11.1%	10.6%
Creep fed	11.1%	6.4%
Cow herd	--	2.1%
Full feeding - heavy cattle	--	6.4%
Wintered feeder calves	3.7%	6.4%
Wintered and grain	--	8.5%
Ewes	1.4	6.0
Hens	143.0	55.0
Other (No. units)	11.9	4.3

1958

	: Leading : farmers	: General : farmers
Cropland		
Owned, acres	255.8	147.3
Rented, acres	510.0	281.8
Pasture land		
Owned, acres	86.0	62.9
Rented, acres	134.7	67.5
Livestock (No. units)		
Beef cows (feeder calf)	24.3	18.3
Dairy cows	6.0	3.0
Sows	5.0	1.2
Beef calf system (total units)	65.8	20.0
Wintered steers	19.2%	22.0%
Wintered heifers	--	2.0%
Wintered and full-fed steers	11.6%	8.0%
Wintered and full-fed heifers	11.6%	2.0%
Wintered and grass steers	30.8%	18.0%
Wintered and grass heifers	--	--
Wintered, grass, and full fed	11.5%	10.0%
Creep fed	11.5%	6.0%
Cow herd	--	12.0%
Full feeding - heavy cattle	--	6.0%
Wintered feeder calves	3.8%	6.0%
Wintered and grain	--	8.0%
Ewes	1.1	4.9
Hens	122.0	60.0
Other (No. units)	4.8	3.8

1957

	: Leading : farmers	: General : farmers
Cropland		
Owned, acres	249.3	139.1
Rented, acres	450.9	273.2
Pasture land		
Owned, acres	85.8	59.5
Rented, acres	127.1	59.2
Livestock (No. units)		
Beef cows (feeder calf)	22.0	15.1
Dairy cows	5.2	3.1
Sows	5.3	1.1
Beef calf system (total units)	61.0	13.6
Wintered steers	25.9%	26.2%
Wintered heifers	--	--
Wintered and full-fed steers	11.1%	7.1%
Wintered and full-fed heifers	11.1%	--
Wintered and grass steers	29.6%	21.4%
Wintered and grass heifers	--	2.4%
Wintered, grass, and full fed	11.1%	11.9%
Creep fed	11.1%	7.1%
Cow herd	--	--
Full feeding - heavy cattle	--	7.2%
Wintered feeder calves	--	7.2%
Wintered and grain	--	9.5%
Ewes	1.0	5.5
Hens	120.0	62.0
Other (No. units)	7.1	3.4

1956

	: Leading : farmers	: General : farmers
Cropland		
Owned, acres	235.8	133.7
Rented, acres	420.4	259.8
Pasture land		
Owned, acres	81.5	58.2
Rented, acres	134.4	65.1
Livestock (No. units)		
Beef cows (feeder calf)	22.8	17.4
Dairy cows	4.7	2.9
Sows	3.6	1.0
Beef calf system (total units)	42.6	13.1
Wintered steers	22.2%	30.5%
Wintered heifers	--	--
Wintered and full-fed steers	16.7%	10.3%
Wintered and full-fed heifers	11.1%	--
Wintered and grass steers	22.2%	23.2%
Wintered and grass heifers	--	2.6%
Wintered, grass, and full fed	11.1%	7.8%
Creep fed	16.7%	7.8%
Cow herd	--	--
Full feeding - heavy cattle	--	7.7%
Wintered feeder calves	--	5.2%
Wintered and grain	--	5.1%
Ewes	1.1	4.1
Hens	124.0	59.0
Other (No. units)	4.8	4.5

1955

	: Leading : farmers	: General : farmers
Cropland		
Owned, acres	228.7	134.4
Rented, acres	413.9	260.2
Pasture land		
Owned, acres	77.5	61.9
Rented, acres	95.9	59.9
Livestock (No. units)		
Beef cows (feeder calf)	23.2	19.1
Dairy cows	5.4	2.9
Sows	3.6	1.3
Beef calf system (total units)	49.4	13.2
Wintered steers	14.3%	30.6%
Wintered heifers	--	--
Wintered and full-fed steers	19.0%	8.3%
Wintered and full-fed heifers	9.5%	--
Wintered and grass steers	33.3%	25.0%
Wintered and grass heifers	--	2.8%
Wintered, grass, and full fed	9.5%	8.3%
Creep fed	14.3%	8.3%
Cow herd	--	--
Full feeding - heavy cattle	--	5.5%
Wintered feeder calves	--	5.6%
Wintered and grain	--	5.5%
Ewes	0.9	4.3
Hens	127.0	71.0
Other (No. units)	4.8	4.8

EXPANDING THE SIZE OF FARM BUSINESSES IN RICE COUNTY,  
KANSAS, BY THE PRODUCTION OF CATTLE AND HOGS

by

DONALD DEAN DAUBER

B. S., Kansas State University, 1953

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AN ABSTRACT OF A MASTER'S THESIS

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requirements for the degree

MASTER OF SCIENCE

Department of Agricultural Economics

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1963

Farmers in areas such as Rice County, Kansas are interested in ways of increasing the volume of their business. It was believed that the local utilization of grain sorghums in the production of cattle and hogs might be a partial solution to the farm business expansion problem which is faced by many farmers in south central Kansas.

The general objective of this study was to provide a basis from which recommendations and educational programs could be prepared regarding the expansion of farm businesses by the production of cattle and hogs in Rice County, Kansas.

To provide insight regarding the feasibility of expanding the size of Rice County farms by the production of cattle and hogs, Kansas Farm Management Association Number Two records for the five-year period 1957-61 were used. To determine some of the problems the farmers would have in starting or expanding cattle and hog feeding programs, data were taken from the south central Kansas rural area development survey which was conducted in Rice County during the spring of 1960.

This study indicated that the expansion of farm businesses in south central Kansas by the production of cattle and hogs during the period 1957-61 was generally a feasible method of expansion. Farm comparisons suggested that those farmers with beef cattle or hogs as part of a farm organization including cash crops had favorable experiences relative to cash crop farms as indicated by returns to labor and management. The findings thus serve as evidence that some other farmers with cash crop

organizations might profitably add or increase their beef cattle and hog numbers. The comparisons did imply that an over-concentration upon these livestock enterprises might not be so favorable as a combination of cash crop and livestock enterprises.

The main problems Rice County farmers believed they would have in starting or expanding their cattle feeding programs centered, in general, around the variability of the profits that they expected from the feeding of cattle. The main economic problems that they believed they would encounter in starting or expanding their hog feeding programs were generally associated with the small profits they expected from the feeding of hogs and the variability of the profits. While it is recognized that this is a real problem, there is evidence that some farmers had overcome some of the factors involved.