THE CHANGING SCALE OF COMMERCIAL AGRICULTURAL LAND BASE IN DEUEL COUNTY, NEBRASKA

by

LARRY G. FLOHR

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THE CHANGING SCALE OF COMMERCIAL AGRICULTURAL LAND BASE, IN DEUEL COUNTY. NEBRASKA

ABSTRACT: The main concern of this paper is to study the changes that have occurred in the structure of the agricultural land base during the last twenty-two years. Deuel County, Nebraska, was chosen as the problem area being representative of the national trends. It was found that the main means of accumulation of property for the formation of larger farm units in Deuel County was by ownership, followed by renting, farming partnerships, corporations, and to a lesser degree custom farming. Indications from the study suggest that the formation of farm corporations, although new to the agricultural scene, may be increased in the future.

I. INTRODUCTION

During the past several decades in the United States continued urbanization corresponding with advancements in mechanization and technology has led to vast changes in agriculture. The most noticeable developments are in the decreasing number of farms, the increasing size of the average farm operation, and in more recent years, the increasing number of extremely large farm businesses. This suggests a trend towards large-scale agriculture, thus posing a threat to the continued existence of the smaller, family-owned farms that have dominated the rural agricultural scene in America since the pioneering period.

Modern mechanized farming procedures have allowed farm operations to increase to large-scale economic units, forcing the

inefficient operator to withdraw from the scene. This movement allows for the development of even larger units, since the small-farm operator is now available for inclusion into even larger farm units. Recent concerns deal with the problem of whether the trends to larger farms will eventually lead to the formation of relatively few giant farm enterprises controlling agricultural production. An even greater concern deals with the ability of the traditional family-scale farm operation to compete with the entry of non farm capital into agricultural farming which is known as agri-business.

Statement of Problem

The technological revolution has encouraged the entrance of large scale, "Agri-business" operations which forced the traditional family-scale farm operation to increase the size of their operating unit. Because of the growing concern over the survival of the family-farm in American agriculture, it is important to look at the various changes in the methods of accumulation and consolidation of land into economically competitive units. The changes in agriculture over the last several decades have also had an effect on the method in which farm operations are managed and also in their formation.

Purpose of Study

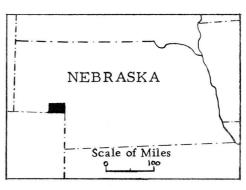
It is the objective of this study to determine the present methods of accumulation and consolidation of land into a farm operation, and

additionally to determine if a change has occurred in the method used in the last several decades.

II. AREA OF STUDY AND METHODOLOGY

Area of Study

The agricultural area studied in this paper was limited to Deuel County, Nebraska. Deuel County is located in the panhandle of western Nebraska, in the heart of the nation's winter wheat



LOCATION OF DEUEL COUNTY

producing area. (See map for location.) The county contains approximately 278, 720 acres, with 314, 234 acres in farmland in 1969. (Note, the excess farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located even though part of the farm may be situated in an adjoining county.) In 1950 there were 269, 996 acres in farmland. Deuel County is representative of the national trend of decreasing number of farms with 427 in 1950 and 324 in 1969. During the same period, the average size of the farms increased from 632.2 acres to 969.8 acres.

Methodology

To determine the method of farm expansion since 1950 in Deuel County, a questionnaire was developed to survey the farm operations in the county. (See Appendix I.) A random sampling of the 324 farm operators was determined with the assistance of the Deuel County

division of the United States Agricultural, Stabilization and Conservation Service. (U.S.A.S.C.) A list of the present farmers that had operations in the county since 1950 limited the number to approximately 160. The mail questionnaire, which was sent to 104 farmers, provided information on the change during the 22 year period in the amount of land owned, rented, operated in partnership, custom farmed, and in a farm corporation. (Refer to Appendix I for mail questionnaire.) Seventy-two questionnaires were completed for a 69.2 percent return and a total sampling of 22.2 percent of the total number of operations in the county.

Interviews with local farmers and staff of the U.S. A.S.C. office were used to provide background information for the formation of the questionnaire. The data from the questionnaire was computed on the change in the percentage of the acres of the total operation for the last twenty-two year period, 1950-1972. (Refer to Appendix II for complete results of the questionnaires.)

III. COMPARISON OF THE TOTAL FARM OPERATIONS, 1950-1972

The survey indicated a 55.8 percent increase in the total acreage of the seventy-two farms, during the twenty-two year period. Tables 1 and 2 indicate that ownership of property remained the dominant means of accumulation of agricultural land, although showing only a slight increase of 2.5 percent of the total operation. Actual acreage owned in 1972 increased by 65.3 percent. The accumulation of property by means of renting land showed a remarkable decrease of 13.8 percent of the total operation while only a slight increase occurred in the actual acreage rented with 4.8 percent.

Partnerships declined as a means of acquiring land, making up

1.3 percent less of the total operation today. However a gain did

occur in the actual acreage by 42.4 percent.

Custom farm operations increased very little, 1.4 percent of the total operation, but also posted an increase in total acreage with 141.8 percent.

The most dramatic increase came from the formation of farm corporations, non existent in 1950, claiming 11.2 percent of the total acreage in 1972. This means of ownership now controls 14,000 out of more than 125,000 acres surveyed.

TABLE 1--Comparison of Deuel County Agricultural Land Base (in Acres) (of Farms Surveyed) 1950-1972

Date	Acres farmed	Acres owned	Acres rented	Acres in partnership	Acres custom farmed	Acres in corporation
1972	125, 161	52, 177	35, 642	18, 022	5, 320	14, 000
1950	80, 365	31,530	33, 985	12, 650	2, 200	
			-		-	-
Acres gained	44, 796	20, 587	1, 657	5, 372	3, 120	14, 000
% gain or loss	55.8%	65.3%	4.8%	42. 4%	141.8%	

TABLE 2--Percent of Total Operation (of Farms Surveyed) 1950-1972

Date	Owned	Rented	Partnership	Custom farm	Corporation
1950	39. 2%	42.3%	15.7%	2.8%	
1972	41.0%	2 8.5%	14.4%	4. 2%	11. 2%
					-
% gain or loss	2. 5%	-13.8%	-1.3%	1.4%	11. 2%

Ownership

Tables 1 and 2 indicate the most dominant means of acquiring land for farm operations is by out-right purchase, providing sole ownership of property. Perhaps the reason for its dominance is because the farmer receives the greatest amount of profit and also exercises the greatest amount of individual authority through this system. There was a 65.3 percent increase in the amount of acres owned in Deuel County during the survey period of twenty-two years.

The average amount of land owned in Deuel County increased by 28.3 percent from 700.7 acres in 1950 to 899.5 acres in 1972. Similar increases occurred in the number of farm operations which owned land with an increase of 28.9 percent. Table 3 indicates that in both periods, 1950 and 1972, approximately one out of every six farm operations surveyed owned 100 percent of their land. The questionnaire revealed that during the two decades forty-two farms increased their operations by purchasing land at an average of 419.5 acres per farm.

Renting

The survey revealed a slight increase, 4.8 percent, in the total acres that were rented during the survey period, but a decrease in the actual number of farms which rented land, from 49 to 47. (Refer to Table 4.) Most of the farms, 20 out of 47, that rented based from 50-74 percent of their operation on rented land. Today only a very

TABLE 3--Number of Farms Owning Land by % of Total Operation (of Farms Surveyed)

% of total operation	1950	1972
1 - 24%	8	9
25-49%	12	1 5
50 - 74%	11	1 7
75-99%	2	6
100%	11	11

TABLE 4--Number of Farms Renting Land by % of Total Operation (of Farms Surveyed)

% of total operation	1950	1972
1 - 24%	3	11
25-49%	12	7
50 - 74%	13	20
75-99%	6	7
100%	15	2

small amount of farm operations base 100 percent of their operation on rented property, perhaps because of the insecurity of continued operation. It may also indicate that in 1950 most of these farmers were not established and renting offered the main means of entering the farm business. Today the high cost of machinery would force a more secure means of accumulation as a base of the initial entry into farming.

The decrease in the number of farms and the increase in the total acres resulted in an increase in the average amount of land rented per farm from 693.6 acres in 1952 to 758.3 acres in 1972.

Partnerships

A partnership is generally defined as an association of two or more persons to carry on as co-owners. ⁷ Generally, the partnerships formed in Deuel County were of a father-son relationship with a brother combination as a minor form.

The acreage of farm operations managed through a partnership increased during the period by 42.4 percent. However the percentage of land held in partnerships of the total acreage in Deuel County decreased by 1.3 percent. The average size of all the partnerships increased immensely from 973.1 acres in 1950 to 1820 acres in 1972.

According to Table 5, almost all the partnerships contain 100 percent of the total farm operation. It is interesting to note that only four partnerships continued to exist through the entire period of the

survey, and seven new partnerships were formed while nine were dissolved. The turnover rate is rather high, mainly because most partnerships were formed to gradually transfer property from a father to his son. The partnership ends, of course with the death or withdrawal of one partner.

TABLE 5--Number of Farms in Partnerships by % of Total Operation (of Farms Surveyed)

% of total operation	1950	1972
1 - 24 %	1	1
25-49%	1	
50-74%	1	1
75-99%		
100%	10	9

Custom Farming

Custom farming is when a farm operator is hired to provide the labor and machinery to perform the necessary farm operation for another landowner. The operator's only source of income is derived from the actual labor costs and expenses incurred through use of the necessary machinery. Therefore the amount of profit is somewhat controlled and limited in comparison to the other systems of operation discussed. Accordingly custom farming makes up only a small percentage of the total operational methods, 4.2 percent today as compared with 2.8 percent in 1950. However,

the percentage increase in actual acreage custom farmed has increased a remarkable 141.8 percent.

Table 6 provides evidence that almost all custom operations are only a small percentage of the total farm operation. None of the farm operations rely entirely on custom farming as a means of support. This of course is justified by the small amount of profit involved compared with the other more desirable means of accumulating land. The average size of custom operation performed by each farm did increase from 314.3 acres to 443.3 acres, probably reflecting the increase in efficiency through large-scale mechanization.

TABLE 6--Number of Farm Operations Custom Farming by % of Total Operation (of Farms Surveyed)

% of total operation	1950	1972
1 - 24%	4	7
25-49 %	1	3
50-74%	2	2
75-99%		
100%		

Farm Corporation

Farm corporations are very new to the agricultural scene, showing an increase during the past decade. ⁸ There are two major types of corporations being formed, the regular corporation and the sub-chapter "S" corporation. The regular corporation is a separate,

artificial entity or "person" which has its own rights and obligations. The sub-chapter "S" corporation is taxed like a partnership; it pays no tax with the shareholders declaring their income. Most farm corporations are of the type also known as "closely held" or "family farm corporations" limiting the number of shareholders to ten.

Dr. Neil Harl, an economics professor at Iowa State University noted for his extensive work in farm organization, feels that as family farms become larger with more assets managed, shifts toward the corporate form of business organization will increase. He also states the desire to continue the farm organization and the advantages of avoiding estate taxes form the major reasons why farmers incorporate. ¹⁰

Table 7 certainly points out that the new form of farm organization has been established in Deuel County, with four of the seventy-two farms surveyed now under this system. The four corporations now total 14,000 acres with an average of 3,500 acres each. Corporations now control 11.2 percent of the acres of all the operations in the county.

The entry of corporate farming has definitely affected the percentages of the systems of accumulation since 1950. It is interesting to note that three out of the four corporations in the county have included all of their operations in the business.

TABLE 7--Number of Farms in Farm Corporations by % of Total Operation (of Farms Surveyed)

% of total operation	1950	1972
1 - 24%		1
25-49%		
50-74%		
75-99%		
100%		3

IV. SUMMARY

In an attempt to reach maximum farm efficiency and remain competitive, farm operators in the United States have attempted to increase their land base to accommodate increased mechanization.

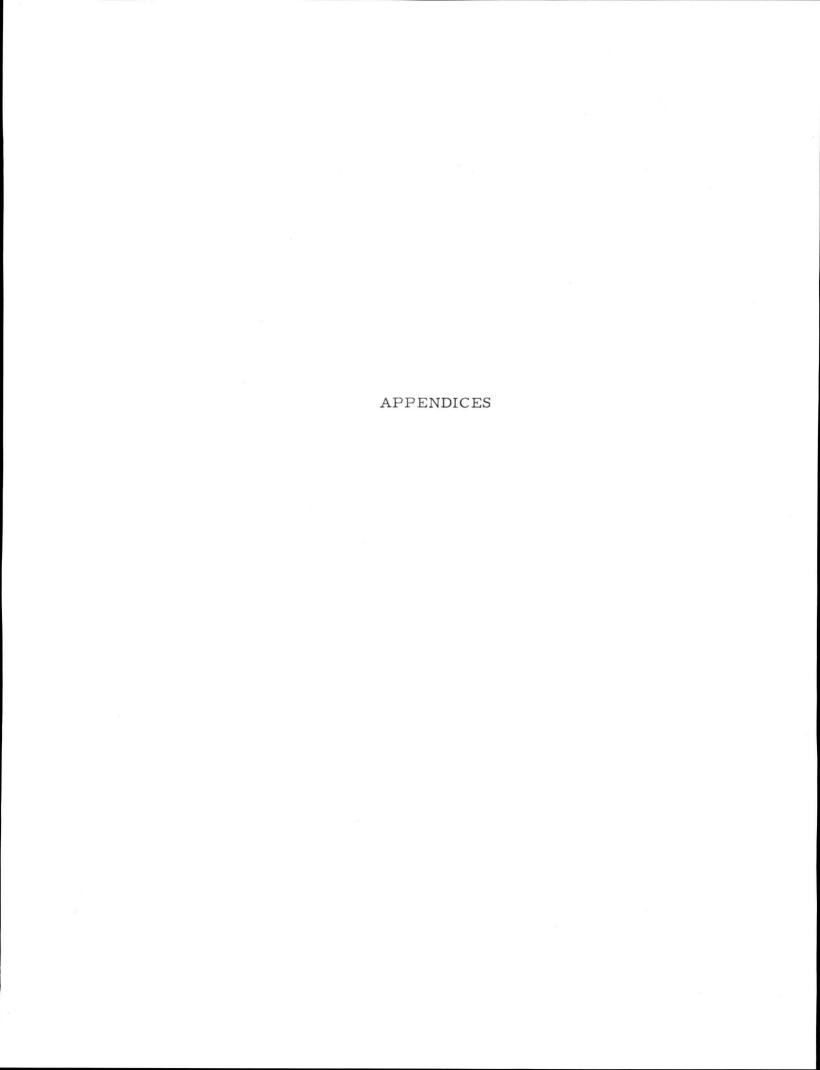
The national trend in agriculture seems to be larger farm operations with fewer of them. Deuel County, Nebraska proves to be no exception. The survey points out that the number of farms decreased and the average acreage per farm operation increased, mainly through ownership, followed by renting, partnerships, corporations and custom farming. The most notable change over the last twenty-two year period came from the invasion of the farm corporation, a form of expansion undeveloped in agriculture in 1950. Perhaps this is an indication of future trends in the structure of agricultural land base.

FOOTNOTES

- 1. U. S. Department of Agriculture. 1969 Census of Agriculture. Statistics for Counties: Nebraska, Deuel County. Washington, D. C. 1969. pp. 201.
- 2. U. S. Department of Agriculture. 1950 and 1954 Census of Agriculture, Statistics for Counties: Nebraska, Deuel County. Washington, D. C. 1954. pp. 46.
- 3. U.S.D.A. 1950 and 1954 Census of Agriculture, op. cit. pp. 46.
- 4. U.S.D.A. 1969 Census of Agriculture, op. cit., pp. 201.
- 5. U.S.D.A. 1950 and 1954 Census of Agriculture, op. cit., pp. 46.
- 6. U.S.D.A. 1969 Census of Agriculture, op. cit., pp. 201.
- 7. Neil E. Harl, <u>Farm Estate and Business Planning</u>, Agri-Business Publications. (Glenview, Illinois, 1973), pp. 42.
- 8. Harl, op. cit., pp. 46.
- 9. "Ways to Reorganize Your Farm Business." <u>Successful</u> Farming (March, 1973), pp. 23.
- 10. Harl, op. cit., pp. 46.

BIBLIOGRAPHY

- 1. Harl, Neil E. Farm Estate and Business Planning, Agri-Business Publications, Glenview, Illinois, 1973.
- 2. U. S. Department of Agriculture. 1950 and 1954 Census of Agriculture, Statistics for Counties: Nebraska, Deuel County. Washington, D. C. 1954.
- 3. U. S. Department of Agriculture. 1969 Census of Agriculture, Statistics for Counties: Nebraska, Deuel County. Washington, D. C. 1969.
- 4. "Ways to Reorganize Your Farm Business." <u>Successful Farming</u>. (March, 1973), pp. 23.



APPENDIA
NAME
ADDRESS
Questionnaire on Changing Scale of Land Base in Deuel County, Nebraska
Number of years you have been farming under your own business
Number of acres you presently farm
Number of acres you presently own
Number of acres you presently rent
Number of acres you presently share in partnership
Number of acres you presently custom farm
Number of acres you presently have in a farm corporation
Number of acres you farmed in 1950
Number of acres you owned in 1950
Number of acres you rented in 1950
Number of acres you shared in partnership in 1950
Number of acres you custom farmed in 1950
Number of acres you had in farm corporation in 1950

Please return this questionnaire in the enclosed addressed envelope.

APPENDIX 2

CHANGING SCALE OF LAND BASE OF DEUEL COUNTY, NEBRASKA (of farms surveyed) by Farm Operation

Farm and Year			Farm Size % Change		ned	Re	nted	Pa	rt.	stom arm	Со	rp.
1.												-
	1950	160				160	100%			 		
	1972	800	400%	160	20%	640	80%			 		
2.												
	1950	880		320	36%	560	64%			 		
	1972	640	-27%	320	50%	320	50%			 		
3.												
	1950	640		320	50%	320	50%			 		
	1972	640	0%	320	50%	320	50%			 		
4.												
	1950	480		480	100%					 		
	1972	800	67%	800	100%	****				 		
5.												
•	1950	1760		1280	73%	480	27%			 		
,	1972	1720	-2%	1400	81%	320	19%			 -,-		
ó.	1950	1 28 0		480	37%	800	63%			 		
	1972	960	-25%	800	83%	160	17%			 		

APPENDIX 2 (Continued)

CHANGING SCALE OF LAND BASE OF DEUEL COUNTY, NEBRASKA (of farms surveyed) by Farm Operation

Farm and Year	50-00 SOURCE SOURCE				Ren	Rented Par		Part.		stom irm	С	orp.	
7.													_
1950	1040			0%			1040	100%					
1972	1040		160	15%	880	85%							
8.													
1950	1040		160	15%	560	54%	320	31%					
1972	1200	15%	1200	100%									
9.													
1950	1440		800	56%	640	44%							
1972	2080	44%	1440	69%	640	31%							
10.													
1950	160				160	100%							
1972	1280	700%					1280	100%					
11.													
1950	320		160	50%	160	50%							
1972	800	150%	160	20%	640	80%							
12.													
1950	4800		800	1 7%	4000	83%							_
1972	3360	-30%	480	14%	2240	67%					640	19%	0.7

Farm and Year		Farm Size % Change		ned	Ren	ted	Pa	rt.		stom arm	C	orp.
13.		And the second s										
1950	800		`		800	100%						
1972	1040	30%	1040	100%								
14.												
1950	1760		800	45%	960	55%						
1972	3040	72%	2240	74%	640	21 %	160	5%				
15.												
1950	480		480	100%								
1972	640	33%	640	100%								
16.												
1950	1360	-0-0	440	32%	920	68%						
1972	1840	35%	400	22%	1 28 0	70%			160	8 %		
17.												
1950	640		640	100%								
1972	2280	254%	1280	56%	1000	44%	,					
18.												
1950	1120		160	14%	960	86%						
1972	1100	- 2%	380	34%	720	66%						

Farm and Year	Farm % Cha		Ow	ned	Rei	nted	P	art.		arm	Corp.	
19.												
1950	800		800	100%								
1972	1440	80%		-1-			1440	100%				
20.												
1950	1440				1440	100%						
1972	1540	7%	1440	94%	100	6 %						
21.												
1950	960		160	17%	800	83%						
1972	640	- 3 %	640	100%								
22.												
1950	960		800	83%	160	17%						
1972	1760	83%	1280	73%	320	18%			160	9 %		
23.												
1950	1440		1280	89%	160	11%						
1972	1750	22%	1750	100%								
24.												
1950	160				160	100%						
1972	800	400%	320	40%	480	60%						-1-

APPENDIX 2 (Continued)

CHANGING SCALE OF LAND BASE OF DEUEL COUNTY, NEBRASKA (of farms surveyed) by Farm Operation

					In Acre	s and %	of Total B	arm					
Farm Yea			n Size nange	Own	ned	Ren	nted	Pa	art.		stom arm	С	orp.
25.			7										
1	950	320				320	100%						
1	972	1045	226%	360	34%	685	66%						
26.													
1	950	2240		640	29%			1600	71 %				
1	972	2400	7%	640	27%			1600	67%	160	7%		
27.													
1	950	480		320	62%	160	33%						
1	972	1280	167%	480	38%	800	63%						
28.													
	950	2080		960	46%	800	39%			320	15%		
	972	2384	15%	2257	95%	127	5%				,		
29.													
	950	1560		320	21%	840	53%			400	26%		
	972	2420	55%					2420	100%				
30.													
	950	320					-1-	320	100%				
	972	1280	300%						100%				

Farm and Year		n Size nange	Ow	ned	Re	nted	P	art.	Cus Fa	t o m .rm	C	Corp.
31.												
1950	960				960	100%						
1972	880	-8%	480	54%	400	46%						
32.												
1950	1200		160	13%	1040	87%						
1972	2560	113%	1120	44%	1440	56%						
33.												
1950	5700		3200	56%	2500	44%						
1972	8160	43%									8160	100%
34.												
1950	480		160	33%	320	67%						
1972	640	33%	320	50%	320	50%						
35.												
1950	540		320	59%	220	41%						
1972	960	77%	320	33%	160	17%			480	50%		
36.												
1950	480		320	67%	160	33%						
1972	1920	300%	960	50%	960	50%						

Farm and Year	Farn % Ch	n Size ange	Own	ed	Ren	nted	P	art.		stom arm	С	orp.
37.									7			
1950	480				480	100%						
1972	880	83%	240	27%	640	73 %						
38.												
1950	1280		160	13%	1120	87%						-1-
1972	1660	30%					1660	100%				
39.												
1950	640				540	88%			80	12%		
1972	1520	138%	160	10%	1360	90%						
40.												
1950	1280				1280	100%						
1972	1120	-13%	160	14%	960	86%						
41.												
1950	940		160	17%	180	19%			600	64%		
1972	980	4%	160	16%	320	33%			500	51%	,	
42.												
1950	320				320	100%						
1972	640	100%			640	100%						

Farm and Year		n Size hange	Ow	ned	Rei	nted	Pa	art.	Cust Fa	om .rm	С	orp.
43.												
1950	320		320	100%							-1-	
1972	800	150%	800	100%								
44.												
1950	960		640	67%	320	33%						
1972	1360	42%					1360	100%				
45.												
1950	1920		1280	67%	640	33%						
1972	4640	142%	2560	55%	800	17%			1280	28%		
46.												
1950	640				320	50%			320	50%		
1972	1892	20%					1892	100%				
47.												
1950	640		640	100%								
1972	1120	75%	640	57%					480	43%		
48.												
1950	720				720	100%						
1972	960	33%	480	50%	480	50%						

APPENDIX 2 (Continued)

CHANGING SCALE OF LAND BASE OF DEUEL COUNTY, NEBRASKA (of farms surveyed) by Farm Operation

Farm and Year		n Size Change	Ow	ned	Ren	nted	P	art.	Cust Fa	om rm	С	orp.
49.												
1950	1100		1100	100%								
1972	1100		1100	100%								
50.												
1950	2240		960	43%	640	29%	320	14%	320	14%		
1972	2880	2%	1760	61%	480	1 7%			640	22%		
51.												
1950	1440						1440	100%				
1972	2720	89%	2720	100%								
52.												
1950	2180		2180	100%								
1972	2880	32%									2880	100%
53.												
1950	320		320	100%								
1972	1600	400%	1280	80%	320	20%						
54.												
1950	160				160	100%						
1972	1620	831%	640	40%	480	29%			500	31%		!

Farm and Year		n Size lange	Own	ned	Ren	nted	Pa	rt.	Cust Fa	rm	С	orp.	
55.													
1950	1280					-	1280	100%			-		
1972	1 28 0		320	25%	960	75%							
56.													
1950	800						800	100%					
1972	2530	216%					2530	100%					
57.													
1950	1920		720	38%	1200	62%							
1972	4320	125%	1680	39%	2160	50%			480	11%			
58.													
1950	800		320	40%	320	40%			160	20%			
1972	1760	120%	1280	73%	320	18%			160	9 %			
59.													
1950	1350						1350	100%					
1972	2400	77%						100%					
60.													
1950	365				365	100%							0
1972	1120	206%	320	29%	800	71 %							0

Farm and Year		n Size hange	Owned		Re	nted	P	art.	Cus Fa	tom arm	Corp.	
61.												The second second second second
1950	590		590	100%								
1972	1490	153%	1070	72%	420	28%						
62.												
1950	1280						1280	100%				
1972	1920	50%	1120	58%	800	42%						
63.												
1950	480				480	100%						
1972	990	106%	240	24%	750	76%						
64.												
1950	2420		1780	74%	640	26%						
1972	3820	58%	1780	47%	2040	53%						
65.												
1950	640		640	100%								
1972	1280	50%	640	50%	640	50%						
66.												
1950	240		80	33%	160	67%						
1972	640	167%	640	100%								7

Farm and Year		n Size hange	Ow	ned	Ren	nted	Pa	art.	Cust Far		C	orp.
67.												
1950	1500						1500		100%			
1972	2190	46%	960	44%	1 23 0	56%						
68.												
1950	320				320	100%						
1972	960	200%	480	50%	480	50%						
69.												
1950	1920		1920	100%								
1972	1920	0%	1920	100%								
70.												
1950	800						800	100%				
1972	2350	190%			1	", - - 1 ₃₀					2320	100%
71.												
1950	600						600	100%				
1972	1050	75%			1050	100%						
72.												
1950	3200		960	30%	2240	70%						
1972	3680	15%	1440	39%	1920	52%			320	9%		