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Southeastern South Dakota Farm Record Summary 1948 Sixth Annual Report

R. O. Olson

1948

SIXTH ANNUAL REPORT

SOUTHEASTERN SOUTH DAKOTA FARM RECORD SUMMARY

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SIXTH ANNUAL REPORT OF THE SOUTHEASTERN SOUTH DAKOTA FARM RECORD PROJECT, 1948

Prepared by R. O. Olson

Introduction

This is the sixth annual report of the farm record project started in Southeastern South Dakota in 1943. A similar study has been conducted in the North Central area of the state. Results of that study are published in a seperate report.

The analysis of the records and preparation of this report was carried out under the direction of R. O. Olson of the Agricultural Experiment Station. Educational work in connection with the project was handled by Lyle Bender and A. W. Anderson of the Agricultural Extension service. Kenneth Monson served as fieldman for the project, visiting cooperating farmers during the year and assisting them in closing out their record books at the end of the year. Following is a list of the counties covered in the study and county agents who cooperated in the project:

County	Agent
Moody	C. M. Culhane
Minnehaha	Glen Schrader
Lincoln	Kenneth Ostroot
Clay	Raymond Venard
Union	Harmon Boyd

The farmers who cooperated in the project kept records of cash receipts and expenses, beginning and end of year inventories, crop records, livestock records, and records of farm produce used in the household. Many of the farmers also kept records of quantities of feed fed each class of livestock. Information was also obtained on crop and livestock practices followed and crop varieties used.

An attempt was made to visit each farm several times during the year. The fieldman assisted the cooperating farmers with bookkeeping problems, checked the records for accuracy and completeness, and obtained useful supplementary information by interviewing the farmers.

Except when otherwise stated the summaries have been prepared as though each operator was a full owner. This was necessary in order to compare all farms on a more nearly equal basis. However, each cooperator received an earnings statement on the basis of his actual tenure status. In table 17 a comparison is made between owners, part owners, and renters for earnings and various organization and management efficiency factors.

Average earnings for the group of farmers cooperating in this study were slightly higher than in 1947. While prices of grain crops declined from a year ago good yields as well as continued high livestock prices kept earnings high. Costs continued high and in most cases increased. The largest increases were noted in power and machinery costs.

Weather in 1948

Aside from an unusually dry May, weather was excellent for crop production in most of the Southeastern area of the state. Small grain crops had good yields. Frequent rains in July interferred some with small grain harvesting. A hot humid summer with dry weather the latter part of August and most of September produced a bumper corn crop.

Table 1. Monthly and Annual Precipitation and Departure from Normal: Flandreau, Sioux Falls, Vermillion and Wentworth Weather Stations, 1948

Month	Flandreau		Sioux Falls		Vermillion		Wentworth	
	1948	Departure	1948	Departure	1948	Departure	1948	Departure
January	.13	- .37	.12	- .54	.13	- .43	.08	- .45
February	1.60	+ 1.04	1.28	+ .53	1.42	+ .62	1.68	+ 1.15
March	.24	- .81	.14	- .84	.30	- .91	.32	- .74
April	3.78	+ 1.47	2.61	+ .02	2.43	- .08	3.34	+ 1.08
May	2.96	- .15	2.56	- 1.27	2.13	- 1.43	3.51	+ .03
June	4.80	+ .67	5.68	+ 1.34	6.08	+ 2.03	4.89	+ .73
July	6.30	+ 3.60	7.79	+ 4.64	4.59	+ 1.43	5.67	+ 2.66
August	2.14	- .81	.83	- 2.42	2.16	- .82	1.61	- 1.53
September	3.78	+ 1.38	2.97	+ .40	.78	- 2.38	3.00	+ .47
October	2.04	+ .61	1.64	+ .15	2.47	+ .93	1.64	+ .13
November	.97	+ .02	1.54	+ .50	2.64	+ 1.60	1.33	+ .57
December	.02	- .55	.12	- .63	1.04	+ .37	.04	- .50
1948 Total	28.76	+ 5.30	27.58	+ 1.88	26.17	+ .93	27.11	+ 3.60
1947 Total	24.71	+ 1.75	25.61	- .09	22.79	- 2.45	25.39	+ 1.88
1946 Total	27.27	+ 4.31	26.26	+ .56	24.09	- 1.15	32.00	+ 8.49
1945 Total	26.71	+ 3.75	25.37	- .33	22.73	- 2.51	23.33	- .18
1944 Total	29.19	+ 6.23	32.21	+ 6.51	37.81	+12.57	33.16	+ 9.65
1943 Total	28.63	+ 5.67	23.45	- 2.25	25.53	+ .29	28.69	+ 5.18

Definition of Terms and Measures Used

1. Operator's labor earnings - is the measure of financial success used in this report. It is a measure of the relative financial success of a farmer and represents the returns for his year's work (including family living from the farm) above all farm expenses, and a deduction for the value of unpaid family labor and an interest charge for the use of farm capital.

2. Productive man work units - is a measure of size of business used in this report. A work unit represents the amount of work that a farm worker can do in a 10-hour day working at average efficiency. For example, it requires about 10 hours of man labor to produce an acre of corn and 140 hours to care for a milk cow for a year. Thus an acre of corn would represent 1.0 work units and a milk cow 14.0 work units.

The work unit standards used in this report are shown in the following tables:

Crops			Livestock		
Item	Per	No. of work units	Item	Per	No. of work units
Corn, grain	Acre	1.0	Milk cows	cow	14.0
Corn, hogged off	"	.6	Other dairy cattle	animal unit	4.0
Corn and cane silage	"	1.5	Beef cows	cow	4.0
Sorghum	"	1.0	Other beef cattle	animal unit	4.0
Soybeans	"	1.0	Bulls	head	4.0
Potatoes	"	4.0	Litter	litter	4.0
Small grain	"	.7	Other hogs	head	.5
Alfalfa hay	"	1.0	Ewes	head	.5
Other tame hay	"	.7	Other sheep	head	.2
Wild hay	"	.5	Hens	100	20.0
Annual pasture	"	.3	Chickens raised	100	4.0

3. Work unit per worker - is a measure of the efficient use of labor on a farm.

4. Livestock increase - is the value of gross livestock sales less purchases and plus or minus changes in inventory values of livestock from the beginning to the end of the year.

5. Crop yield index - is a comparison of the yield per acre of all crops on a given farm or group of farms with the average yield of all crops for the entire group of farms studied. For example, a farm with a crop yield index of 105 means that the average yield for this farm is 5 percent greater than the average.

6. Crop selection index - is a measure of the success of a farmer or group of farmers in choosing high value crops. Crops were rated A, B, C, and D. All of the acres in A crops, one-half of acres in B crops and one-fourth of acres in C crops were used in calculating the percent of cropland in high return crops. The group average was then considered 100 with variations compared to this average. The following crops were rated as A crops: alfalfa, alfalfa and grass mixtures, and corn. The following were rated as B crops: silage, soybeans, flax, barley, and oats. C crops were wheat, annual hay and pasture, and sweet clover and mixed legume hay and pasture.

7. Livestock returns per $100 feed fed - is a measure of the efficiency in converting feed into livestock products. It is obtained by dividing the value of the net livestock increase by the value of feed fed to all productive livestock during the year. This figure is multiplied by 100.

8. Part-owner - is a farmer who owns part of the land he operates and rents the rest.

Table 2. Summary of Farm Inventories, 1948*

Item	Your Farm	Average of 32 farms	8 most Profitable farms	8 least Profitable farms
		Beginning of Year		
Horses and mules	$_____	$ 124	$ 177	$ 97
Productive livestock (total)	$_____	$10,196	$11,752	$ 6,854
Cattle	_____	5,536	6,109	2,497
Hogs	_____	3,453	5,336	2,708
Sheep	_____	1,025	157	1,476
Poultry	_____	182	150	173
Feed and Seed	$_____	$ 6,193	$10,991	$ 3,468
Mach. and equipment (total)	$_____	$ 4,079	$ 4,874	$ 3,616
Power machinery	_____	1,559	1,793	1,231
Crop and gen. mach.	_____	2,103	2,789	1,914
Livestock equip.	_____	417	292	471
Improvements (farm)**	$_____	$ 5,188	$ 5,863	$ 5,007
Land	$_____	$20,908	$28,540	$18,575
Total Farm Capital	$_____	$46,688	$62,197	$37,617
		End of Year		
Horses and mules	$_____	$ 109	$ 210	$ 59
Productive livestock (total)	$_____	$11,836	$14,800	$ 5,428
Cattle	_____	8,032	9,963	2,976
Hogs	_____	2,106	3,208	2,046
Sheep	_____	1,518	1,475	248
Poultry	_____	180	154	158
Feed and seed	$_____	$ 6,875	$11,977	$ 4,248
Mach. and equipment (total)	$_____	$ 5,969	$ 7,406	$ 5,324
Power machinery	_____	2,608	2,945	2,478
Crop and gen. mach.	_____	2,930	4,083	2,371
Livestock equipment	_____	431	378	475
Improvements (farm)**	$_____	$ 5,070	$ 5,827	$ 4,858
Land	$_____	$20,908	$28,540	$18,575
Total Farm Capital	$_____	$50,767	$68,760	$38,492

*These include value of both owner's and operator's share of farm capital.

**Does not include value of dwelling.

Table 3. Crop Acreage Summary, 1948

Item	Your Farm	Average of 32 farms	8 most profitable farms	8 least profitable farms
Corn for grain	_____	103.0	155.5	84.1
Sorghum forage	_____	.4	1.7	---
Corn and cane silage	_____	7.1	6.3	4.2
Soybeans	_____	3.9	---	3.7
Miscellaneous		.1	---	.2
Total Row Crops		114.5	163.5	92.2
Wheat	_____	5.7	4.2	1.2
Oats	_____	65.6	82.3	61.2
Barley	_____	11.4	17.5	9.3
Rye-grain	_____	3.9	7.5	5.6
Flax		15.5	55.5	1.8
Total Small Grain		102.1	167.0	79.1
Alfalfa hay	_____	17.1	17.6	11.5
Other tame hay		4.2	4.4	3.8
Total Tame Hay		21.3	22.0	15.3
Rotation Pasture		15.0	20.0	16.7
Total Tame Hay & Past.		36.6	42.0	32.0
Idle and Fallow		.7	.2	1.6
Total Tillable Land		253.6	372.7	204.9
Native hay	_____	4.9	4.2	3.8
Native pasture	_____	29.6	19.8	26.2
Farmsteads, roads, etc.		18.8	24.1	20.3
Total Acres Operated		306.9	420.8	255.2
% of farm in cropland	_____	83.0	89.5	82.2
% of cropland in row crops	_____	45.3	43.7	43.5
% of cropland in sm. grain	_____	39.2	44.6	37.8
% of cropland in hay & past.	_____	15.0	11.5	17.4

Table 4. Crop Yield Summary, 1948

Item	Your Farm	Average of 32 farms	8 most profitable farms	8 least profitable farms
Corn for grain	_____	53.9	60.4	56.6
Soybeans	_____	18.9	---	19.2
Wheat	_____	15.1	12.0	23.2
Oats	_____	44.4	50.9	40.2
Barley	_____	27.0	36.8	15.0
Rye	_____	19.7	30.0	4.8
Flax	_____	13.3	13.4	14.0
Alfalfa hay	_____	2.0	1.8	2.0
Other tame hay	_____	2.0	2.1	---
Corn & cane fodder	_____	5.0	5.0	---
Silage	_____	8.0	6.4	8.3
Native hay	_____	---	---	---

Table 5. Livestock Summary, 1948

Item	Your Farm	Average of 32 farms	8 most profitable farms	8 least profitable farms
Horses	_____	2.4	3.4	1.9
Beef cows	_____	2.2	.3	2.0
Other beef cattle	_____	17.1	19.4	5.5
Milk cows	_____	6.6	5.0	5.5
Other dairy cattle	_____	12.1	10.5	11.2
Bulls	_____	.6	.7	.4
Ewes	_____	27.5	23.6	20.3
Other sheep	_____	6.7	8.2	11.5
Litters of pigs	_____	14.3	13.8	15.0
Hens and pullets	_____	127.6	90.1	125.5
Total units prod. livestock*	_____	43.5	44.1	32.8

* A unit of productive livestock is equal to one mature cow, 2 yearlings, 7 sheep, 14 lambs, 5 sows, 10 pigs and 100 hens.

Table 6. Farm Produce and Fuel Furnished to Household, 1948

Item	Quantity				Value			
	Your Farm	Average of 32 farms	8 most profit. farms	8 least profit. farms	Your Farm	Average of 32 farms	8 most profit. farms	8 least profit. farms
Whole milk, qts.	_____	1,419	1,566	1,220	$_____	241.21	266.30	207.40
Cream, qts.	_____	173	151	149	_____	133.14	116.08	114.72
Farm made butter, lbs.	_____	6	9	12	_____	4.91	7.80	11.85
Eggs, doz.	_____	225	138	236	_____	83.33	51.20	87.32
Poultry, lbs.	_____	51	26	64	_____	11.62	6.04	14.75
Cattle, lbs.	_____	528	625	475	_____	119.72	141.25	108.25
Hogs, lbs.	_____	455	562	381	_____	94.80	128.79	50.10
Sheep, lbs.	_____	55	47	30	_____	20.41	10.78	40.27
Potatoes, bu.	_____	12	10	11	_____	25.71	20.70	23.93
Vegetables					_____	68.91	65.62	79.38
Fruits					_____	3.13	5.63	6.88
Farm Fuel					_____	1.56	---	6.25
Total value					_____	808.45	820.19	751.10

Table 7. Summary of Farm Earnings, 1948

Item	Your Farm	Average of 32 farms	8 most profitable farms	8 least profitable farms
FARM RECEIPTS				
Hogs	_____	6,737	9,622	4,870
Cattle	_____	7,892	10,458	1,689
Dairy Products	_____	943	451	830
Eggs	_____	706	435	664
Poultry (includes turkeys)	_____	208	115	232
Sheep and wool	_____	2,206	2,039	1,750
Horses	_____	13	15	29
Crops	_____	5,326	11,863	2,115
Machinery & equipment	_____	140	265	138
Farm program payments	_____	113	66	296
Income from work off farm	_____	160	230	346
Miscellaneous	_____	227	328	213
(1) TOTAL FARM SALES	_____	24,671	35,877	13,172
(2) Increase in inventories	_____	4,081	6,565	871
(3) Family living from farm	_____	808	820	751
(4) TOTAL FARM RECEIPTS (sum 1-3)	_____	29,560	43,262	14,794
FARM EXPENSES				
Auto (farm share)	_____	255	247	269
Power, mach., & equip. (upkeep)	_____	1,175	1,350	1,077
Power, mach., & equip. (new)	_____	2,727	3,728	2,202
Farm improvements (upkeep)	_____	332	379	244
Farm improvements (new)	_____	262	316	346
Hired labor	_____	986	1,065	592
Crop expenses	_____	1,052	1,595	825
Feed bought	_____	2,935	3,425	1,889
Livestock bought	_____	7,521	11,485	1,259
Other livestock expenses	_____	251	277	232
Taxes	_____	349	487	224
Insurance	_____	172	93	136
Miscellaneous farm expenses	_____	245	212	227
(5) TOTAL FARM PURCHASES	_____	18,262	24,659	9,522
(6) Decrease in inventories	_____	---	---	---
(7) Board furnished hired labor	_____	94	155	78
(8) Unpaid family labor ($150 per mo.)	_____	1,147	787	1,087
(9) Interest on farm capital (5%)	_____	2,397	3,147	1,901
(10) TOTAL FARM EXPENSES (sum 5-9)	_____	21,900	28,748	12,588
(11) OPERATOR'S LABOR EARNINGS (4)-(10)	_____	7,660	14,514	2,206
(12) RETURNS TO CAPITAL & FAMILY LABOR (sum 8+9+11)	_____	11,204	18,448	5,194

FACTORS CAUSING VARIATIONS IN EARNINGS

The most successfull farmers in this group had operator's labor earnings exceeding $23000 while one operator had earnings of less than $100. The eight most successful farmers had earnings averaging $14,514 whereas, the eight least successful farm operator's obtained earnings of only $2,206. The wide differences in earnings can be accounted for largely by differences in the organization of the farm business and the management practices followed. Some of the more important factors which affect earnings are discussed below.

Size of Business

The size of the business unit, as measured in terms of total work units, is one of the more important factors influencing earnings. Earnings are affected not only by the greater volume of business but also by the greater efficiencies of production which usually accompany the larger scale of operation. On a large farm it is possible to make more efficient use of labor, equipment and power.

Table 8 illustrates the influence of size of business on farm earnings. Operator's labor earnings averaged only $4,334 on the 8 farms having less than 330 work units as compared with earnings of $10,390 for the 8 farms having over 575 work units.

Table 8. Relation of Size of Business to Farm Earnings

Number of work units Range	Average	No. of farms	Average operator's labor earnings
Under 330	252	8	$ 4,334
330 - 575	436	16	$ 7,396
575 & over	755	8	$10,390

Labor Efficiency

Labor is an important item of cost in farm production. A farmer can normally increase his earnings by using labor more efficiently - that is by accomplishing more with each worker. The amount of work accomplished per worker may usually be increased by increasing the size of business, by distributing the work peaks throughtout the season, by planning the work carefully, and by the use of labor saving equipment and methods. Efficient use of labor in itself will not insure high earnings. Table 9 shows that the 8 farmers having the highest work accomplishment per worker had somewhat lower earnings than those who used their labor inefficiently. This may be explained in part on the basis that certain of the livestock enterprises which provide a good distribution of the work load, and therefore contribute to high labor efficiency, were not as profitable last year as some of the enterprises which provided less stable employment of labor.

Table 9. Relation of Amount of Work Performed Per Worker to Earnings

Work units per worker Range	Average	No. of farms	Average operator's labor earnings
Under 190	158	8	$7,555
190 - 305	249	16	$8,083
305 & over	373	8	$6,693

Crop Yields

Crop yields have an important influence on earnings. Yields in the area showed considerable variation. These variations were closely associated with variations in earnings. The seven farmers having lowest yields had crop yields which were only 74 percent of the average. Their earnings were only $3,211 as compared with $10,439 for the seven farmers with highest yields, whose yields were 34 percent above average. (See table 10). Yields are largely dependent upon weather. Within the area, however, little of the variation in yields could be attributed to weather. Variations within the area are influenced to a very large extent by management practices. High yields are dependent upon the use of adapted seed varieties and recommended cropping practice.

Table 10. Relation of Crop Yields to Farm Earnings

Percent crop yields were of average of all 32 farms		No. of	Average operator's
Range	Average	farms	labor earnings
Under 95	74	7	$ 3,211
95 - 107	89	18	$ 7,836
Over 107	134	7	$10,439

Amount of Livestock

The farms producing a large amount of livestock will normally have higher earnings than those selling cash crops. In this area much of the crops produced can be marketed most efficiently through livestock. Table 11 shows a close relationship between the amount of productive livestock raised and operator's labor earnings. Livestock enterprises tend to distribute the labor load throughout the year and make use of products which have no other good market outlet. The managerial ability of the farm operator and the resources available are important in determing the amount and kinds of livestock which should be kept.

Table 11. Relation of Amount of Productive Livestock to Earnings

Total animal units		No. of	Average operator's
Range	Average	farms	labor earnings
Under 25	17.9	9	$ 5,474
25 to 56	39.9	14	$ 7,759
56 & over	73.9	9	$10,390

Livestock Feeding Efficiency

Over 70 percent of the receipts of farmers in this area are from livestock and livestock products. Most of the crop produced are marketed through livestock. It is therefore important that livestock be managed efficiently to get the maximum returns from the feed fed. Returns per $100 worth of feed fed to livestock varied widely among the farmers in this group. As table 12 shows, the eight farmers having the least success with livestock obtained an average of only $104 for each $100 worth of feed fed. Their earnings average only $5,887. The most successful 8 farmers averaged $269 in return for each $100 feed fed and had operator's labor earnings averaging $8,360.

Table 12. Relation of Livestock Feeding Efficiency to Farm Earnings

Livestock returns per $100 feed fed to productive livestock		No. of	Average operator's
Range	Average	farms	labor earnings
Under 123	104	8	$5,887
123 - 220	165	15	$7,889
220 & over	269	8	$8,360

Cumulative Effect of Efficiency Factors

Farmers who are above average in several of the management and efficiency factors usually have considerably better earnings than those who rank low in most of these factors. Some farmers show good management efficiency in some parts of their farm business which are offset by poor results in other parts of the business. Table 13 illustrates the importance of a well organized and efficiently managed farm business. The farmers who excelled in 4 or 5 of the factors had earnings averaging over 4 times as high as those who excelled in one or less of the factors.

Table 13. Relation of Number of Factors Above Average to Farm Earnings

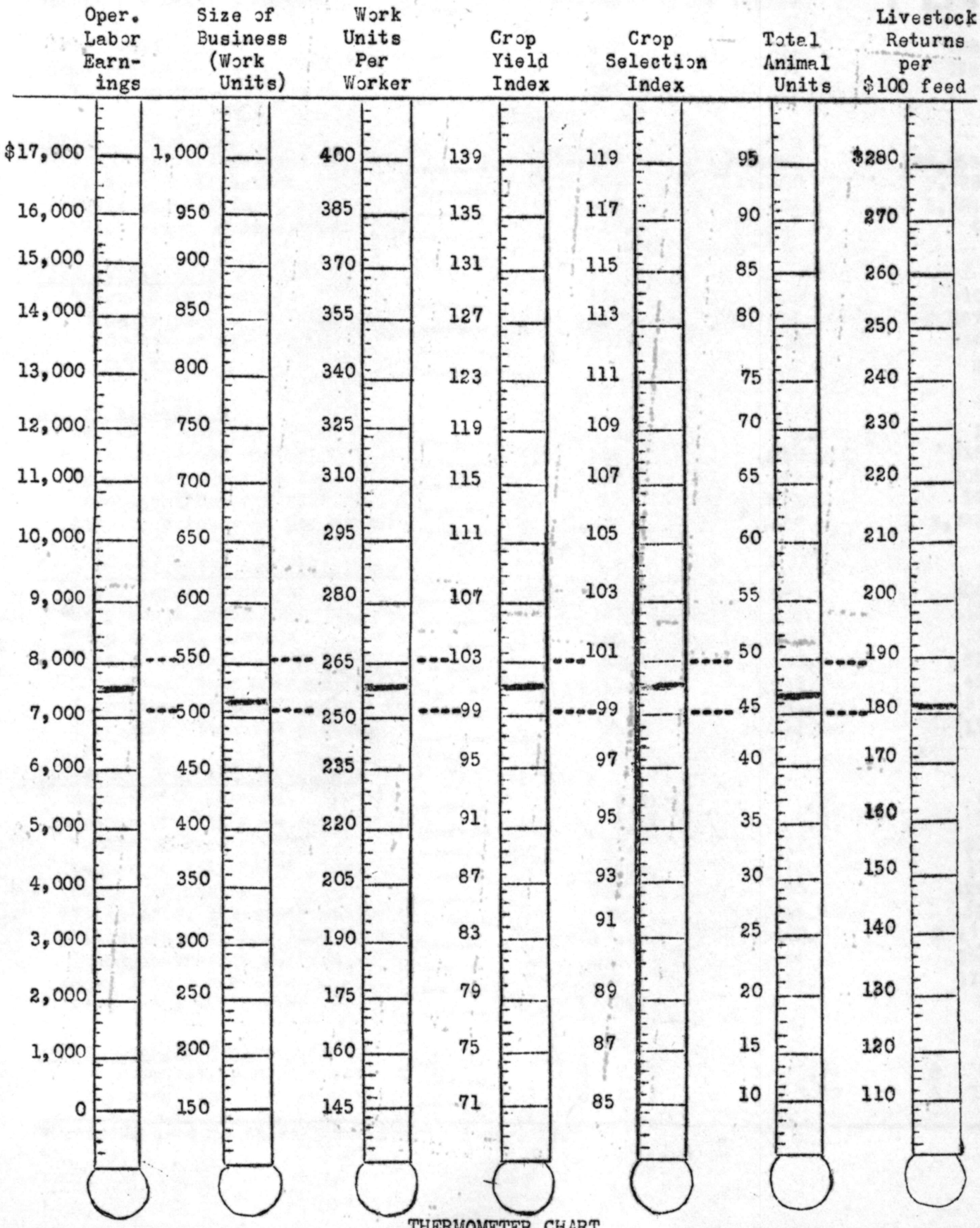
No. of factors above average	No. of farms	Your farm	Average operator's labor earnings
0 - 1	5	$_____	$ 2,409
2	11	$_____	$ 6,730
3	5	$_____	$ 5,065
4 - 5	11	$_____	$10,082

Table 13. Farm Organization and Management Efficiency Factors, 1948

Item	Your Farm	Average of 32 farms	8 most profitable farms	8 least profitable farms
Operator's Labor Earnings	$ _____	$ 7,660	$ 14,514	$ 2,206
Acres owned	_____	152	181	128
Acres rented	_____	156	241	128
Total operated	_____	308	422	256
Capital Investment				
Total capital managed	$ _____	$48,727	$65,480	$38,055
Productive livestock	$ _____	$11,836	$14,800	$ 5,428
Power and machinery	$ _____	$ 5,968	$ 7,406	$ 5,324
Rate earned on investment	_____	17.6	25.8	6.3
Size of Business				
*Work units (total)	_____	516	536	416
On crops	_____	210	294	167
On livestock	_____	304	239	246
Off farm	_____	2	2	4
Labor Utilization				
Number of workers	_____	2.0	2.2	1.9
*Work units per worker	_____	258	250	215
Crop acres per worker	_____	127	177	105
Animal units per worker	_____	22	21	17
Livestock increase per worker	_____	2,504	5,407	3,783
Crop Organization and Efficiency				
Total acres in crops	_____	255	374	206
*Crop yield index	_____	103	111	90
*Crop selection index	_____	100	100	97
% cropland is of farm	_____	83.0	89.5	82.2
% cropland in row crops	_____	45.3	43.7	43.5
% cropland in small grain	_____	39.2	44.6	37.8
% cropland in hay & pasture	_____	15.0	11.5	17.4
Livestock Org. and Efficiency				
Number of beef cows	_____	2.2	.3	2.0
Number of milk cows	_____	6.6	5.0	5.5
Number of ewes	_____	27.5	23.6	20.3
Number of litters of pigs	_____	14.3	13.8	15.0
Number of hens	_____	127.6	90.1	125.5
*Total prod. livestock units	_____	43.5	44.1	32.8
*Livestock ret. per $100 feed	$ _____	$181.00	$ 132.0	$ 171.0
Pounds butterfat per cow	_____	213	186	250
Eggs laid per hen	_____	189	129	177
Pigs saved per litter	_____	5.7	6.5	5.0
Power, Mach. & Equip.				
Power invest. per crop acre	$ _____	$ 7.04	$ 5.74	$ 8.6
Crop mach. inv. per crop acre	$ _____	$ 7.42	$ 7.88	$ 11.9

*Measures used on thermometer chart on page 12.

Compare your standing in regards to the measures of farm organization and efficiency with the average for the group shown between the dotted lines. The figures from the bottom to the top of the seven efficiency bars show the range from the least efficient to the most efficient farms.



THERMOMETER CHART

Table 14. Tenure Related to Earnings, Farm Organization and Efficiency Factors, 1948

Item	Your Farm	Tenants	Part-Owners	Owners
Operator's Labor Earnings*	$ _____	$ 7,191	$ 6,099	$ 4,696
Number of farms	_____	11	15	6
Acres owned	_____	---	229	235
Acres rented	_____	260	143	---
Total operated	_____	260	372	235
Capital Investment				
Total capital owned**	$ _____	$ 24,842	$ 50,022	$ 36,986
Productive livestock	$ _____	$ 8,354	$ 15,983	$ 7,852
Power and Machinery	$ _____	$ 5,925	$ 6,880	$ 3,771
Rate earned on investment	_____	30.4	12.9	13.2
Size of Business				
Work units (total)	_____	411	591	515
On crops	_____	172	256	163
On livestock	_____	237	334	352
Off farm	_____	2.0	1.7	.3
Labor Utilization				
Number of workers	_____	2.0	2.1	1.7
Work units per worker	_____	210	274	304
Crop acres per worker	_____	112	143	114
Animal units per worker	_____	19	23	25
Livestock increase per worker	$ _____	$ 5,828	$ 5,185	$ 4,647
Crop Organization & Efficiency				
Total acres in crops	_____	227	299	197
Crop yield index	_____	102	103	106
Crop selection index	_____	102	99	101
% cropland is of farm	_____	85.8	81.0	84.0
% cropland in row crops	_____	44.6	44.8	48.1
% cropland in small grain	_____	39.8	41.5	32.2
% cropland in hay & past.	_____	15.6	13.6	17.7
Livestock Org. & Efficiency				
Number of beef cows	_____	2	4	4
Number of milk cows	_____	7	10	9
Number of ewes	_____	22	9	26
Number of litters of pigs	_____	16	12	17
Number of hens	_____	125	130	135
Total prod. livestock units	_____	38	52	44
Livestock ret. per $100 feed	$ _____	$ 230	$ 165	$ 160
Pounds butterfat per cow	_____	218	217	211
Eggs laid per hen	_____	147	172	189
Pigs saved per litter	_____	6.6	5.2	5.4
Power, Mach. & Equip.				
Power invest. per crop acre	$ _____	$ 9.80	$ 8.01	$ 8.53
Crop mach. inv. per crop acre	$ _____	$ 12.10	$ 8.87	$ 10.42

*Operator's labor earnings are the actural figures for these farms and have not been adjusted to a full owner basis for tenants and part-owners.

**Includes only the operator's share of farm capital.

Table 15. Summary of Farm Organization and Management Efficiency Factors by Years

Item	1943	1944	1945	1946	1947	1948
No. of farms	33	32	26	24	59	32
Operator's Labor Earnings	$ 4,334	$ 5,121	$ 4,242	$ 7,051	$ 6,929	$ 7,660
Acres owned	101	118	168	175	157	152
Acres rented	178	176	117	137	141	156
Total operated	279	294	285	312	298	308
Capital Investment						
Total capital managed	$ 25,694	$ 28,928	$ 32,932	$ 37,175	$ 45,504	$ 48,727
Productive livestock	4,569	4,963	6,610	7,328	9,046	11,836
Power and Machinery	2,359	2,744	3,392	3,738	4,275	5,968
Rate earned on investment	18.8	20.3	14.4	21.2	16.3	17.6
Size of Business						
Work units (total)	536	571	556	578	499	516
Crop Organization & Efficiency						
% cropland is of farm	83	80	81.1	81.9	81.5	83.0
% cropland in row crops	41	46	45.1	49.2	47.6	45.3
% cropland in small grain	42	40	38.7	37.0	39.3	39.2
% cropland in hay & past.	16	13	15.9	13.8	13.5	15.0
Crop Yield Per Acre						
Corn for grain	39.8	52.0	35.5	39.3	35.3	53.9
Wheat	12.2	15.4	10.5	15.3	20.1	15.1
Oats	35.9	36.9	46.4	27.9	38.8	44.4
Barley	19.5	14.1	24.7	23.0	36.7	27.0
Rye	18.9	14.5	20.1	31.0	19.9	19.7
Flax	11.5	7.7	13.5	8.4	13.7	13.3
Alfalfa Hay	2.4	2.5	2.2	1.7	2.3	2.0
Livestock Efficiency						
Pound butterfat per cow	1/	218	239	248	247	213
Eggs laid per hen	1/	123	156	160	158	189
Pigs saved per litter	6.0	5.5	5.8	6.3	5.7	5.7
Power, Mach., & Equip.						
Power invest. per crop acre	$ 4.61	$ 5.49	$ 6.79	$ 5.63	$ 7.21	$ 8.72
Crop mach. inv. per crop acre	5.65	6.04	7.57	8.54	9.24	7.42

1/ Information not available for 1943.

SUMMARY OF FEED COSTS ND RETURNS FROM PRODUCTIVE LIVESTOCK

Some of the farmers cooperating in this project kept detailed feed records showing the amount and value of feed that was fed to various classes of livestock during the year. These records have been summarized for some classes of livestock to provide a basis for comparing individual enterprises on the farms. Comparisons were made between the most successful and the least successful producers for those classes of livestock for which sufficient records were kept.

Feed is the largest single item of cost for all classes of livestock. The proportion of the total cost of production which goes for feed varies considerably, however, among the various kinds of livestock. Feed makes up about 40 to 50 percent of the total cost of maintaining dairy cows and poultry, and from 75 to 90 percent of the cost of producing fat cattle and hogs. Consequently, if all costs other than feed are to be met, it is necessary to obtain higher returns above feed cost from dairy cows and chickens than from other livestock enterprises.

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Table 16. Summary of Feed Costs and Returns from Chickens, 1948

Item	Your Farm	Av. of all farms	Av. of farms high in return above feed	Av. of farms low in return above feed
Number of farms	_____	17	5	5
Av. number of laying hens	_____	163	175	126
Pounds of feed fed per hen				
Grain	_____	102	94	97
Commercial feeds	_____	35	36	30
Total concentrates	_____	137	130	127
Feed Cost Per Hen		$4.68	$ 4.73	$5.10
Value of eggs produced	_____	$6.31	$ 8.37	$4.93
Increase in value of chickens	_____	$ .99	$ 1.98	$ .58
Total value produced	_____	$7.30	$10.35	$5.51
RETURN ABOVE FEED COST PER HEN	_____	$2.62	$ 5.62	$ .41
RETURN PER $100 WORTH OF FEED	_____	$ 191	$ 330	$102
Eggs laid per hen	_____	203	265	159
Price rec'd per doz. eggs sold	_____	$ .37	$ .38	$.37
Pounds of chicken produced	_____	306	109	456

Table 17 Summary of Feed Costs and Returns from Dairy Cows, 1948

Item	Your Farm	Av. of all farms	Av. of farms high in return above feed	Av. of farms low in return above feed
Number of farms	_____	16	6	6
Average number of cows per farm	_____	7	9	6
Pounds of butterfat per cow	_____	247	312	161
Feed per cow (lbs.):				
Corn	_____	1,217	1,068	1,434
Small grain	_____	1,025	770	1,497
Commercial feeds	_____	64	111	37
Total concentrates	_____	2,306	1,949	2,968
Legume hay	_____	3,962	4,114	4,070
Other hay	_____	1,136	121	2,025
Other dry roughage	_____	829	---	---
Silage	_____	3,861	3,652	2,661
Feed cost per cow:*				
Concentrates	_____	$ 70.52	$ 61.50	$ 85.99
Roughages	_____	$ 59.24	$ 54.23	$ 58.79
Total Feed Cost Per Cow	_____	$129.76	$115.73	$144.78
Returns per cow				
Value of dairy products	_____	$213.44	$288.89	$ 155.32
Increase in value	_____	$ 34.48	$ 45.84	$ 20.55
TOTAL VALUE PRODUCED	_____	$247.92	$334.73	$ 175.87
RETURN ABOVE FEED COST PER COW	_____	$118.16	$219.00	$ 31.09
RETURNS PER $100 WORTH OF FEED	_____	$223.00	$337.00	$ 139.00
Price received per pound b.f. sold	_____	.76	.79	.76
Feed cost per pound butterfat	_____	.53	.37	.90

*Pasture costs were not included because of the lack of information in the records. The cost for pasture would probably amount to about $6 to $8 per cow.

Table 18. Summary of Feed Cost and Returns from Hogs, 1948

Item	Your Farm	Av. of all farms	Av. of farms high in return above feed	Av. of farms low in return above feed
Number of farms	_____	22	5	5
Pounds of pork produced	_____	25,144	19,314	26,521
Feed fed per 100# pork prod: (lbs.)				
Corn	_____	313	155	420
Small grain	_____	209	120	359
Commercial feeds	_____	19	11	20
Total concentrates	_____	541	286	799
Feed cost per 100# pork prod:*	_____	$ 16.56	$ 8.74	$ 24.48
Net increase in value per 100# pork prod.	_____	$ 20.53	$ 20.30	$ 18.96
RETURN ABOVE FEED COST PER 100# PORK PROD.	_____	$ 3.97	$ 11.56	$(-5.52)
RETURN PER $100 WORTH OF FEED	_____	$ 145	$ 239	$ 79
Av. price rec'd per cwt. sold	_____	$ 23.03	$ 23.70	$ 22.41
Number of spring litters	_____	13	11	17
Number of fall litters	_____	2	2	5
Total number of litters raised	_____	15	13	22
Number of pigs born per litter	_____	6.9	6.9	7.8
Number of pigs weaned per litter	_____	5.2	5.9	5.3

*Does not include a charge for pasture.

Table 19. Summary of Feed Costs and Return From Fattening Cattle

Item	Your farm	Average of 5 farms
Pounds of beef prod.	———	17,553
Lbs. feed per 100# beef prod.		
Corn	———	545
Small grain	———	27
Commercial feeds	———	24
Total Concentrates	———	596
Legume hay	———	262
Other hay	———	72
Silage	———	639
Costs of feed per 100# beef prod.		
Concentrates	———	18.43
Roughages	———	5.43
Total Feed Costs	———	23.86
Net Increase in value per 100# beef prod.	———	35.00
RETURN ABOVE FEED PER 100# BEEF PROD.	———	11.14
RETURN PER $100 FEED FED	———	152.00

Table 20. Summary of Feed Costs and Returns from Native Sheep

Item	Your farm	Average of 5 farms
Head of sheep	———	46.1
Lbs. of feed per head of sheep		
Grain	———	215
Legume hay	———	158
Other hay	———	206
Feed costs per head		
Concentrates	———	6.09
Roughages	———	2.82
Total feed costs	———	8.91
Value of wool sold per head	———	1.81
Value of mutton produced per head	———	14.47
Total value produced	———	16.28
RETURN ABOVE FEED COSTS PER HEAD	———	7.37
RETURN PER $100 FEED FED	———	204.00
Price per lb. wool sold	———	.28
No. of ewes kept	———	18
Percent lamb crop	———	84
Percent death loss	———	8.3
Lb. of sheep produced	———	2996