UNIVERSITY OF MINNESOTA
Department of Agriculture
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
and the
County Extension Services of
Brown, Cottonwood, Faribault, Jackson, Lincoln, Lyon, Martin,
Murray, Nobles, Pipestone, Redwood, Rock and Watonwan Counties
and the
Southwest Minnesota Farm Management Association
Cooperating

---O---

Annual Report of the Southwestern Minnesota Farm Management Service 1941

---O---

Cooperator: _____

Mimeographed Report No. 129
Division of Agricultural Economics
University Farm
St. Paul, Minnesota
April 1942

800 4-42

Second Annual Report of the Southwest Minnesota Farm Management Service of Brown, Cottonwood, Faribault, Jackson, Lincoln, Lyon, Martin, Murray, Nobles, Pipestone, Redwood, Rock, and Watonwan Counties for the Year 1941

Prepared by T. R. Nodland, G. E. Toben, and G. A. Pond

INDEX

INTRODUCTION

The Division of Agricultural Economics and the Division of Agricultural Extension of the University of Minnesota, the Bureau of Agricultural Economics of the United States Department of Agriculture and the county extension services of several southwestern Minnesota counties are cooperating with the Southwest Minnesota Farm Management Association in maintaining a farm management service. The Association was organized in the fall of 1939 by farmers in that part of the state for the purpose of studying the farm business thru farm records. Each farmer pays an annual fee which covers a part of the cost. The balance of the cost is defrayed by the University of Minnesota.

Note: Assistance in the preparation of this material was furnished by workers supplied on N.Y.A. Student Work Project No. 350-70. Sponsor: University of Minnesota.

The analysis of the records and the preparation of the reports are handled by the Division of Agricultural Economics under the direction of G. A. Pond, T. R. Nodland, and G. E. Toben. Field organization is handled by the Extension Division with S. B. Cleland and J. B. McNulty in charge of this work. Ross Huntsinger has been fieldman since the organization of the project. At the end of the year Max Hinds and Don Sandager of the Division of Agricultural Economics aided in closing the records. County agricultural extension agents who cooperate in this project include Paul Kunkel, E. C. Rogers, C. G. Gaylord, L. S. Orfield, T. G. Fuller, F. J. Meade, C. G. Powell, A. B. Hagen, C. E. Stower, C. C. Chase, J. I. Swedberg, J. Kenneth King, and Lester Justice.

The officers for the Southwest Farm Management Association for 1941 were:

President, Porter Olstad, Hanska, Brown County
Vice-President, Milford Davis, Reading, Nobles County
Secretary-Treasurer, Arthur Foster, Garvin, Murray County

The board of directors include these officers and also the following: Wm. Golly, Cottonwood county; Stanley Hanks, Faribault county; George Rentschler, Jackson county; Joe Boulton, Lincoln county; W. E. Jones, Lyon county, W. I. Boyce, Martin county; Paul Cunningham, Pipestone county; Frank Sheffield, Redwood county; L. J. Moeller, Rock county; and Duane Drake, Watonwan county.

The following tabulation shows by counties the numbers of members who completed records in 1941:

Brown	10	Lincoln	8	Nobles	19
Cottonwood	12	Lyon	12	Pipestone	7
Faribault	20	Martin	14	Redwood	24
Jackson	17	Murray	12	Rock	8
				Watonwan	10
				Total	173

The tables on page 4 and succeeding pages show 166 farms. Seven farms have been omitted from all of the averages in the tables because they differed so widely in type from the others or were not sufficiently complete for a full analysis.

TYPE OF FARMING*

The farms in this area have a wide diversity of enterprises. All classes of livestock are important although livestock kept for meat production tends to predominate. The sale of crops constitutes an important source of income. The principal feed crops grown are corn, oats, barley, and hay. In addition wheat, sweet corn, canning peas, and flax are grown to a limited extent as cash crops.

TOPOGRAPHY, SOILS, AND WEATHER

The soils range from dark brown to heavy black loam. The major part of the area is undulating to gently rolling land interspersed with almost level tracts. In the western part of the area the surface ranges from undulating to sharply rolling. Nearly all of the land is tillable and well drained.

Weather conditions in 1941 were unfavorable for early spring work; seeding of small grains was seriously delayed. A considerable acreage of small grain was not seeded until early May. A low rainfall, relatively high temperatures, and strong winds in May dried out the tilled soil and resulted in uneven germination of corn, soybeans and sorghums. Excessive moisture in June hindered corn cultivating and haying. Hot, dry weather during July and August damaged small grains and pastures,

*For a more complete description of the area see Engene, S. A., and Pond, G. A., "Agricultural Production and Types of Farming in Minnesota," Minn. Bul. 347, May, 1940.

especially in the western counties. Beginning about July first, a series of hail-storms devastated portions of the area. Frequent rains in late September and October delayed late threshing and other fall work. Killing frosts occurred in late October.

Table 1. Monthly and Annual Precipitation

	Worthington		Fairmont		New Ulm		Redwood Falls	
	Precip-itation	Depar-ture from normal	Precip-itation	Depar-ture from normal	Precip-itation	Depar-ture from normal	Precip-itation	Depar-ture from normal
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
January	0.61	-0.02	0.86	+0.06	0.77	-0.36	0.72	-0.01
February	0.78	+0.01	0.73	-0.24	1.47	+0.41	0.72	-0.15
March	1.14	-0.12	1.24	-0.17	1.46	-0.15	0.72	-0.53
April	4.08	+2.00	3.51	+1.28	3.57	+1.38	2.93	+1.00
May	0.61	-3.33	2.28	-1.77	4.93	+1.36	2.13	-0.73
June	5.72	+1.43	6.18	+1.84	6.25	+1.60	5.55	+1.06
July	2.69	-0.70	2.42	-1.14	4.41	+0.73	5.48	+2.44
August	2.07	-1.69	2.03	-1.71	0.53	-3.02	0.40	-2.58
September	5.05	+1.51	4.88	+1.25	3.91	+0.32	2.52	-0.34
October	2.91	+1.22	6.27	+4.42	5.90	+3.74	3.62	+1.95
November	1.69	+0.52	1.88	+0.37	0.90	-0.41	0.50	-0.71
December	0.87	+0.26	0.64	-0.26	0.84	-0.06	0.78	-0.30
1941 Total	28.22	+1.09	32.92	+3.93	34.94	+5.54	26.07	+1.10
1940 Total	22.50	-4.63	28.72	-0.27	36.90	+7.50	25.95	+0.98
1939 Total	24.27	-2.86	21.92	-7.07	23.04	-6.36	18.52	-6.45
1938 Total	40.50	+13.37	39.99	+11.00	29.98	+0.58	26.84	+1.87
Normal Annual Prec.	27.13		28.99		29.40		24.97	

RECORDS KEPT

The records kept by the cooperators included inventories at the beginning and end of the year, cash receipts and expenses, a report of feed fed to the various classes of livestock, and a record of farm produce used by the farm family. Supplementary information was also secured during the year regarding crop and livestock production and practices.

The cooperators were assisted and supervised in keeping their records by the field agent, Ross Huntsinger, who visited each farm in the thirteen counties several times during the year. In addition to securing the supplementary information, the field agent's duties included numerous services, viz., securing a monthly list of prices of farm products prevailing in the area, helping the farmer place uniform values on real estate and equipment, checking the cash and feed records, and answering any questions that might arise as to how the entries should be made in the account book. The supervision resulted in uniformity in the type of records secured, in the inventory valuations and in the prices at which feed and farm produce were charged.

At the end of the year, the books were taken to the central office at University Farm, where they were summarized. For the purpose of comparison, the earnings as shown in this report are computed as if each farm was owned by its operator; however, each tenant is supplied a statement of his earnings on the basis of the rental system under which he is operating.

Table 2. Summary of Farm Inventories (Beginning of Year), 1941

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
Size of farm (acres)	_____	295	446	249
Size of business (work units)*	_____	631	957	458
Horses	$_____	$ 369	$ 445	$ 340
Productive livestock (total)	_____	4,567	9,558	2,739
Dairy and dual-purpose cows	_____	642	723	521
Other dairy & dual-purpose cattle	_____	363	347	353
Beef cattle (including feeders)	_____	2,169	5,553	1,105
Hogs	_____	709	1,207	480
Sheep (including feeders)	_____	558	1,582	178
Poultry (including turkeys)	_____	126	146	102
Crop, seed, and feed	_____	4,126	6,692	3,096
Mach. & equipment (total)	_____	2,943	4,517	2,145
Power mach. (f. share)	_____	1,122	1,703	866
Crop & gen. mach. (f. share)	_____	1,419	2,211	956
Livestock equip. & supplies	_____	402	603	323
Buildings, fences, etc.	_____	7,487	10,580	6,599
Land	_____	15,812	25,341	12,789
Total farm capital	$_____	$35,304	$57,133	$27,708

*Explanation of term: "Work units."

The total "work units" for any one farm is a measure of size of that farm business. It is the accomplishment of a farm worker in a ten-hour day working on crops and productive livestock at average efficiency.

The number of work units for each animal and each acre of crops used in this report are listed as follows:

Item	Per	No. of work units	Item	Per	No. of work units
Dairy and dual-purpose cows	cow	13.5	Small grain	acre	.7
Other dairy & dual-purpose cattle	animal	4.0	Soybeans for grain	"	.9
Beef breeding herd	unit*	4.0	Sugar beets	"	3.0
Sheep - farm flock		1.6	Sweet corn	"	2.5
Hens	100 hens	26.0	Corn, husked	"	1.3
Feeder cattle		.35	Corn, hogged	"	.8
Feeder sheep	100 lbs.	.4	Corn, shredded	"	2.5
Hogs	produced	.25	Corn silage	"	1.9
Turkeys		.7	Corn fodder	"	1.3
Canning peas	acre	2.0	Alfalfa hay	"	1.0
			Soybean hay	"	1.4
			Other hay crops	"	.6

*Animal unit represents one cow, one bull, one feeder steer or heifer, two head of other cattle, seven head of sheep, fourteen lambs, five hogs, ten pigs, 100 hens, or 1,400 lbs. turkeys produced.

Table 3. Summary of Farm Inventories (End of Year), 1941

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
Horses	$_____	$ 347	$ 425	$ 321
Productive livestock (total)	_____	6,283	13,613	3,398
Dairy & dual-purpose cows	_____	692	769	560
Other dairy & dual-purpose cattle	_____	424	437	333
Beef cattle (including feeders)	_____	2,764	7,524	1,166
Hogs	_____	1,510	2,707	881
Sheep (including feeders)	_____	731	2,008	296
Poultry (including turkeys)	_____	162	168	162
Crop, seeds, and feed	_____	4,521	7,919	3,012
Mach. & equipment (total)	_____	3,292	5,066	2,171
Power machinery (farm share)	_____	1,229	1,923	842
Crop and gen. machinery	_____	1,595	2,491	984
Livestock equipment & supplies	_____	468	652	345
Buildings, fences, etc.	_____	7,667	10,808	6,729
Land	_____	15,812	25,341	12,789
Total farm capital	$_____	$37,922	$63,172	$28,420

Table 4. Summary of Amount of Livestock

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
No. of horses	_____	4.2	5.3	4.2
No. of colts	_____	1.0	1.5	.7
No. of dairy & dual-purpose cows	_____	9.1	8.9	7.7
Head of other dairy & dual-purpose cattle	_____	10.0	8.4	8.9
Head of cattle kept in beef breeding herd	_____	9.4	9.2	8.3
Pounds of beef cattle produced	_____	14,087	44,678	5,388
Pounds of feeder sheep produced	_____	2,292	8,863	417
Litters of pigs	_____	16.9	27.5	11.3
Pounds of hogs produced	_____	27,550	48,136	15,434
Head of sheep (2 lambs = 1 head)(farm flock)	_____	20.8	22.5	14.5
No. of hens	_____	173	181	134
Total no. of prod. livestock animal units	_____	66.8	137.4	41.4
% of total that are:				
Dairy and dual-purpose cows	_____	19.7	11.9	22.8
Other dairy and dual-purpose cattle	_____	12.0	6.3	14.5
In beef breeding herd	_____	11.6	8.0	12.8
Feeder cattle	_____	20.0	35.2	17.5
Sheep - farm flock	_____	4.8	3.3	4.1
Sheep - feeders	_____	3.6	9.7	.7
Hogs	_____	22.9	21.8	20.9
Turkeys	_____	1.5	1.4	2.3
Hens	_____	3.9	2.4	4.4
Number of farms with tractors		160	32	30

Table 5. Summary of Farm Earnings (Cash Statement), 1941

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
FARM EXPENSES				
Horses bought	$_____	$ 32	$ 24	$ 20
Dairy and dual-purpose cows bought	_____	80	52	15
Other dairy & dual-purpose cattle bought	_____	58	64	40
Beef cattle bought (including feeders)	_____	1,766	4,993	732
Hogs bought	_____	209	348	132
Sheep bought (including feeders)	_____	686	2,407	161
Poultry bought (including turkeys)	_____	96	154	81
Misc. crop expenses	_____	303	503	243
Feed bought	_____	1,718	4,509	826
Power mach. (farm share) (new)	_____	446	776	175
Power mach. (farm share) (upkeep)	_____	497	740	403
Custom work hired	_____	140	134	144
Crop and general mach. (new)	_____	416	706	146
Crop and general mach. (upkeep)	_____	84	144	70
Livestock equipment (new)	_____	123	122	64
Livestock equipment (upkeep)	_____	32	54	29
Misc. livestock expense	_____	109	167	85
Buildings and fencing (new)	_____	434	533	346
Buildings and fencing (upkeep)	_____	141	254	126
Hired labor	_____	561	967	451
Taxes	_____	337	566	269
Insurance	_____	32	35	36
General farm	_____	55	68	53
(1) Total farm purchases	$_____	$8,355	$18,320	$4,647
(2) Decrease in farm capital	_____	-	-	-
(3) Board furnished hired labor	_____	171	298	127
(4) Interest on farm capital	_____	1,831	3,008	1,403
(5) Unpaid family labor	_____	288	431	231
(6) Total farm expenses (Sum of (1) to (5)	$_____	$10,645	$22,057	$6,408
FARM RECEIPTS				
Horses	$_____	$ 41	$ 22	$ 28
Dairy and dual-purpose cows	_____	184	181	146
Dairy products	_____	758	889	599
Other dairy and dual-purpose cattle	_____	208	206	243
Beef cattle (including feeders)	_____	3,399	9,279	1,634
Hogs	_____	2,306	3,917	1,339
Sheep and wool (including feeders)	_____	1,032	3,504	192
Poultry (including turkeys)	_____	396	718	317
Eggs	_____	334	360	250
Corn	_____	477	375	371
Small grain	_____	1,133	2,053	631
Other crops	_____	283	495	220
Power machinery sold	_____	204	326	92
Crop and gen. mach. sold	_____	74	148	16
Misc.	_____	176	321	82
Income from work off the farm	_____	196	226	93
Agricultural Adjustment payments	_____	503	784	379
(7) Total farm sales	$_____	$11,704	$23,804	$6,632
(8) Increase in farm capital	_____	2,618	6,039	712
(9) Family living from farm	_____	538	702	445
(10) Total farm receipts (7) + (8) + (9)	$_____	$14,860	$30,545	$7,789
(6) Total farm expenses	_____	10,645	22,057	6,408
(11) Operator's labor earnings (10) - (6)	_____	4,215	8,488	1,381

Table 6. Summary of farm Earnings (Enterprise Statement), 1941 (A)

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
EXPENSES AND NET DECREASES				
Total power	$_____	$ 823	$1,207	$ 713
Horses	_____	169	253	154
Tractor	_____	287	414	257
Truck	_____	104	220	63
Auto (farm share)	_____	154	204	126
Gas engine (farm share)	_____	3	3	5
Elec. plant or current (farm share)	_____	37	42	36
Hired power	_____	69	71	72
Crop and general machinery	_____	256	403	198
Livestock equipment	_____	83	122	59
Buildings, fencing and tiling	_____	266	406	231
Misc. productive livestock expense	_____	105	163	80
Labor	_____	1,048	1,725	836
Real estate taxes	_____	275	451	228
Personal property tax	_____	62	115	41
Insurance	_____	32	35	36
General farm	_____	55	68	53
Interest on farm capital	_____	1,831	3,008	1,403
(1) Total expenses & net decreases	_____	4,836	7,703	3,878
RETURNS AND NET INCREASES				
All productive livestock	$_____	$7,767	$15,508	$4,507
Dairy and dual-purpose cows	_____	924	1,056	786
Other dairy & dual-purpose cattle	_____	411	442	326
Beef breeding herd	_____	392	453	293
Feeder cattle	_____	1,855	5,894	723
Hogs	_____	2,946	5,134	1,640
Sheep - farm flock	_____	164	157	86
Sheep - feeders	_____	356	1,366	65
Turkeys	_____	236	493	192
Chickens	_____	483	513	396
Crops, seed and feed	_____	376	656	146
Income from work off the farm	_____	196	226	93
Agricultural Conservation payments	_____	503	784	379
Miscellaneous	_____	209	329	134
(2) Total returns & net increases	_____	9,051	16,191	5,259
(1) Total expenses & net decreases	_____	4,836	7,703	3,878
(3) Oper. labor earnings (2) minus (1)	_____	4,215	8,488	1,381

(A) Cash receipts and expenses are adjusted for changes in inventory for each enterprise and for each item of expense in order to show total receipts and net increases, and total expenses and net decreases. The operator's labor earnings are the same as those in Table 5.

ANALYSIS OF THE REASONS FOR DIFFERENCES IN OPERATOR'S EARNINGS

The operator's labor earnings varied widely among the farmers included in this study. The average labor earnings of those farmers ranking in the upper 20 per cent in the range according to earnings was $8,488 and of those in the lower 20 per cent was $1,381. This is a range of $7,107 between the average earnings of these two groups. Some of the causes for these differences in earnings may be beyond the control of the farmer. However, all of these farmers could make some changes in their farming operations which would increase earnings. A farmer can secure some ideas as to changes that could profitably be made on his farm by studying the facts about his business as presented in this report and comparing his accomplishments with other farmers following the same general type of farming. The more important management factors affecting earnings and their relationships with earnings are presented in the following tables.

Table 7. Relation of Crop Yields to Farm Earnings

Per cent crop yields were of the average for all 166 farms		No. of farms	Average operator's labor earnings
Group	Average		
Below 86	71	38	$2,541
86-113	102	83	4,684
114 and above	123	45	4,763

High production per acre, up to certain limits, tends to lower the cost per bushel of grain or per ton of hay. Any possible method of management that will increase crop yields and therefore lower cost of production more than the extra expense incurred in securing the higher yields should be given consideration.

Table 8. Relation of Choice of Crops to Farm Earnings

Per cent of tillable land in high return crops*		No. of farms	Average operator's labor earnings
Group	Average		
Below 31.0	27.0	36	$3,908
31.0-39.9	36.1	89	3,955
40.0 & above	45.9	41	5,048

*Crops are marked on page 14 as (A), (B), (C), and (D). All of acres in (A) crops, one-half of acres in (B) crops, and one-fourth of acres in (C) crops are used in calculating per cent of tillable land in high return crops.

Farmers' earnings are affected by the choice of crops as well as by the yields of crops. As a rule, on these farms, such crops as alfalfa, clover, canning crops, sugar beets, corn, and flax bring a higher net return per acre than other crops usually grown. Additions can be made to earnings by putting as high a percentage as possible of the tillable land into these higher return crops.

Table 9. Relation of Returns from Productive Livestock to Farm Earnings

Index of returns for $100 feed fed to productive livestock* Group	Average	No. of farms**	Average operator's labor earnings
Below 84	74	30	$3,397
84-117	98	105	4,384
118 and above	131	30	4,446

*The index is weighted by the number of animal units.
**One farmer did not raise livestock.

The majority of these farms are livestock farms. A large proportion of the crops raised are fed on the farm and some additional feed is purchased. Feed is the major item of cost in livestock production and livestock constitutes an important source of income on these farms. Hence there is a marked relationship between returns for $100 of feed and operator's labor earnings on these farms. There are a number of reasons for differences among farms in livestock returns. High productivity per animal and economy in the use of feed and labor are important. Other factors of considerable importance are kind of feed used, quality of pastures, balance of ration, degree of sanitation, and kind of shelter and equipment.

Table 10. Relation of Amount of Productive Livestock to Farm Earnings

Productive livestock units per 100 acres* Group	Average	No. of farms	Average operator's labor earnings
Below 16.0	11.6	45	$3,239
16.0-29.9	22.6	77	4,271
30.0 and above	42.6	43	5,158

*Acres in timber not pastured, roads, waste and farmstead were not included.

On some farms the returns from livestock are so low that they do not cover feed and other costs. Such livestock is unprofitable, especially if there is more than enough to utilize what would otherwise be waste feed. If the livestock is yielding a net return, an increased amount of livestock adds to size of business and the opportunity to increase the farm earnings. Livestock produces manure and aids in keeping up the fertility of the land, and utilizes waste products on the farm. Livestock also helps to provide productive employment throughout the year. Any method that aids in utilizing the available resources to full and efficient capacity should add to the farm income.

Table 11. Relation of Size of Business (Work Units) to Farm Earnings

No. of work units Group	Average	No. of farms	Average operator's labor earnings
Below 400	339	31	$2,175
400-699	551	89	3,846
700 and above	982	46	6,304

The size of the farming operations is one of the important factors affecting the earnings of farmers. On the average, the farmers with a large business had larger earnings than the farmers with a small business. The size of the farm business is here measured in terms of the number of work units. For farmers operating their farms at a loss, the larger the volume of business, the larger will be the loss; but a farmer who is making a profit could make a larger profit if he increased his size of business, providing that in so doing he does not lower materially the efficiency in some one or more important branches of his business. Those farmers who have large businesses usually have more flexibility of their organization than does the man with a small business, and can utilize more efficiently and to better advantage available labor, power, machinery and buildings. The size of the farm business may be increased by farming more land, by keeping more livestock, or by keeping livestock or growing crops of a more intensive type.

Table 12. Relation of Amount of Work Accomplished per Worker to Farm Earnings

Work units per worker Group	Average	No. of farms	Average operator's labor earnings
Below 215	185	40	$3,195
215-299	254	82	4,122
300 and above	355	44	5,315

Farmers' earnings are generally higher on those farms on which a large amount of work is accomplished per worker. More days of productive work accomplished per worker reduces the labor charge per unit of business. Higher labor accomplishment can be secured in several ways. In the first place, the business must be large enough so that there will be at least sufficient work available for the family labor. The farm should be so organized that the labor requirements are well distributed throughout the year. Handling pastures in such a way that as large a proportion as possible of the year's feed for livestock may be obtained from them helps to reduce labor requirements. Proper planning of the farm work and economical use of labor-saving machinery help to increase the work accomplished per worker.

Table 13. Relation of Power, Machinery, Equipment and Building Expense to Farm Earnings*

Expense per work unit Group	Average	No. of farms	Average operator's labor earnings
$2.65 and above	$3.28	43	$3,830
$1.60-$2.64	2.13	96	4,340
Below $1.60	1.40	27	4,381

*Includes building, fencing, all crop machinery and livestock equipment, horse feed, and miscellaneous horse expense.

The expense factor does not show as high relationship with earnings when prices are high as when they are low. Some farms are under-equipped. On a few farms, excessive expenses constitute the main factor causing earnings to be very low.

Some of the cash expenses can be kept down by careful management. Oftentimes necessary repairs and improvements can be made by using the available farm labor rather than by hiring extra help. Repairs and overhauling should be done before spring work begins insofar as possible; or on rainy days or in other spare time during the summer. Reducing the number of horses to the minimum required for efficient operation of the farm helps reduce the power expense. In some cases, farmers can offset some or all of the power and machinery expense by using their equipment for outside work.

EFFECT OF WELL-BALANCED EFFICIENCY ON FARM PROFITS

It is quite evident from this report that few farmers have a monopoly on efficiency. Quite often farm operators show efficient management in one part of the farm business, which is offset by poor results in other phases. These farmers get medium returns while those who fall down all along the line get the lowest returns, and on the other hand those few who can manage to attain high efficiency in all parts of their organization receive returns well above the average. This is well illustrated in Table 14.

Table 14. Relation of Operator's Labor Earnings to the Number of Factors in which the Farmer Is Above Average

No. of factors in which farm excels	No. of farms	Your farm	The length of the shaded lines are in proportion to the average operator's labor earnings	Average operator's labor earnings
None	4	_____	xxxxxxx	$1,696
One	20	_____	xxxxxxxxxxx	2,657
Two	24	_____	xxxxxxxxxxxxx	3,353
Three	44	_____	xxxxxxxxxxxxx	3,297
Four	33	_____	xxxxxxxxxxxxxxxxxxxx	4,991
Five	27	_____	xxxxxxxxxxxxxxxxxxxxx	5,230
Six	11	_____	xxxxxxxxxxxxxxxxxxxxxxxxxxxxx	7,321
Seven	3	_____	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	9,251

The array in Table 14 indicates that it will be worth-while for each cooperator to study carefully his ranking on pages 12 and 13, and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

Table 15. Measures of Farm Organization and Management Efficiency, 1941

Measures used in chart on page 13		Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
Operator's labor earnings	$		$4,215	$8,488	$1,381
(1) Crop yields*			100	111	88
(2) % of tillable land in high return crops**			36.5	37.1	34.8
(3) Ret. for $100 feed to productive livestock***			100	105	90
(4) Productive livestock units per 100 acres****			24.7	33.3	19.7
(5) Size of business - work units			631	957	458
(6) Work units per worker			264	293	227
(7) Pow.,mach.,equip.,& bldg.exp.per work unit	$		$2.30	$2.23	$2.66
Measures and items related to some of the above measures:					
(3) Index of return for $100 feed from -					
Dairy cattle			100	103	91
Dual-purpose cattle			100	97	99
Beef cattle - breeding herd			100	114	94
Beef cattle - feeders			100	105	81
Hogs			100	104	93
Sheep - farm flock			100	103	75
Sheep - feeders			100	109	76
Turkeys			100	98	124
Chickens			100	90	97
(5) Work units on crops			225	351	183
Work units on productive livestock			357	550	252
Other work units			49	56	23
(6) Total number of workers			2.4	3.3	2.1
Number of family workers			1.4	1.7	1.3
Number of hired workers			1.0	1.6	.8
(7) Power expense per work unit	$		$1.34	$1.24	$1.59
Crop machinery expense per work unit			.41	.41	.44
Livestock equip. expense per work unit			.13	.13	.14
Bldgs. and fencing exp. per work unit			.42	.45	.49

*Given as a percentage of the average.

**Crops are marked in Table 16 as (A), (B), (C) and (D). All of acres in (A) crops, one-half of acres in (B) crops, and one-fourth of acres in (C) crops are used in calculating per cent of tillable land in high return crops.

***An index weighted by the animal units of livestock.

****Acres in timber not pastured, roads, waste and farmstead were not included.

Thermometer Chart

Using your figures from page 12 locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 166 farms included in this summary are located between the dotted lines across the center of this page.

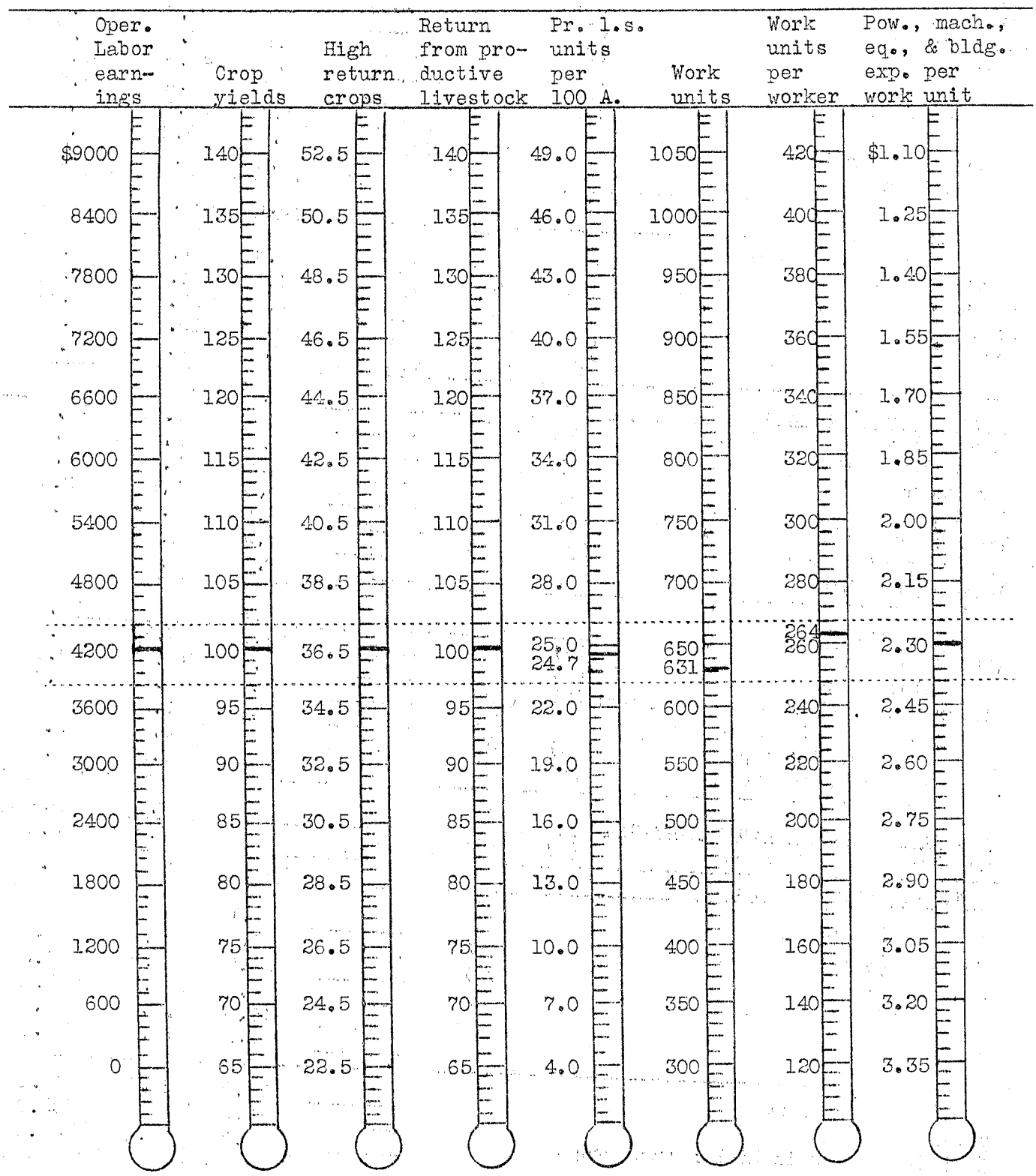

Table 16. Distribution of Acres in Farm, 1941

Crop: (A) (B) (C) and (D) refer to ranking used in calculating % of tillable land in High Return Crops (see page 12)		No. growing this crop	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
Canning peas	(A)	11		1.5	2.5	3.7
Flax	(B)	147		33.6	55.7	22.3
Barley	(C)	99		21.0	34.1	16.6
Barley and oats	(C)	17		4.8	12.3	1.8
Winter wheat	(C)	4		.2	.2	.0
Spring wheat	(D)	53		3.9	2.6	6.3
Oats	(D)	144		39.0	47.3	32.8
Oats and wheat	(D)	5		.7	.4	1.0
Rye	(D)	11		1.0	.7	1.9
Soybeans for grain	(D)	46		4.4	9.3	1.7
Miscellaneous	(D)	8		.4	.0	.6
Total Small Grain and Peas				110.5	165.1	88.7
Sugar beets, hybrid seed corn, potatoes and truck crops	(A)	81		1.7	1.3	1.4
Sweet corn	(B)	10		1.1	1.7	1.7
Corn grain	(B)	166		63.2	97.0	47.6
Corn silage	(C)	98		7.7	15.8	4.9
Corn fodder	(D)	57		2.1	3.0	3.6
Total cultivated crops				75.8	118.8	59.2
Alfalfa hay	(A)	147		17.3	27.9	12.9
Sweet clover hay	(B)	35		4.4	8.0	6.1
Soybean hay	(C)	55		2.2	2.5	2.9
Mixed legumes & non-legumes	(C)	38		3.5	2.5	2.0
Legumes for seed	(C)	6		.5	.1	1.8
Timothy and/or brome	(D)	28		1.4	2.5	.8
Other annual hay	(D)	39		2.2	5.7	1.4
Total tillable land in hay				31.5	49.2	27.9
Alfalfa pasture	(A)	49		1.5	2.2	1.4
Sweet clover pasture	(B)	76		8.4	13.9	4.7
Mixture incl. alf., sweet clov., brome	(B)	49		3.9	4.1	2.4
Other legumes and mixtures	(C)	22		2.2	2.8	.2
Sudan grass and/or rape	(C)	53		2.5	2.3	2.7
Other tillable pasture	(D)	86		8.4	11.8	8.7
Total tillable land in pasture				26.9	37.1	20.1
Tillable land not cropped	(D)	59		3.3	4.9	2.1
Total tillable land				248.0	375.1	198.0
Phalaris hay (non-tillable)		3		.1	.0	.2
Wild hay (non-tillable)		57		4.8	4.8	8.1
Non-tillable pasture		105		21.8	35.7	24.3
Timber (not pastured)		31		.7	.8	1.5
Roads and waste				10.3	15.6	7.4
Farmstead				9.5	13.9	9.0
Total acres in farm				295.2	445.9	248.5
% land tillable				88.3	86.2	82.0
% tillable land in high return crops				36.5	37.1	34.8

Table 17. Crop Yields per Acre, 1941

Crop	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
Canning peas, value above seed cost	$_____	$21.06	$30.19	$21.92
Flax, bu.	_____	12.0	12.8	10.8
Barley, bu.	_____	29.6	33.3	24.6
Barley and oats, bu.	_____	29.4	39.2	28.5
Winter wheat, bu.	_____	4.2	-	-
Spring wheat, bu.	_____	11.7	11.8	9.9
Oats, bu.	_____	26.4	30.9	21.4
Oats and wheat, bu.	_____	29.5	-	-
Rye, bu.	_____	12.4	-	-
Soybeans for grain, bu.	_____	14.4	15.6	14.2
Sweet corn, tons	_____	3.1	3.0	2.2
Corn, grain, bu.	_____	55.9	60.4	49.4
Corn silage, tons	_____	9.5	9.5	9.5
Corn fodder, tons	_____	3.3	3.7	2.5
Alfalfa hay, tons	_____	2.0	2.0	2.1
Sweet clover hay, tons	_____	1.2	1.5	1.1
Soybean hay, tons	_____	1.6	1.8	1.5
Mixed legume & non-legume hay, tons	_____	1.8	2.5	1.4
Legumes for seed, lbs.	_____	208	-	-
Timothy and/or brome hay, tons	_____	1.2	1.4	.9
Other annual hay, tons	_____	1.5	1.4	1.6
Phalaris hay on non-tillable land, tons	_____	.9	- -	.8
Wild hay, tons	_____	.9	1.0	.8

Table 18. Factors of Cost and Returns from Dairy Cows, 1941

Items	Your farm	Average of 70 farms	14 farms highest in butterfat per cow	14 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	254	332	163
Feeds per cow, lbs.:				
Corn	_____	998	1,077	815
Small grain	_____	1,380	1,807	1,111
Com. feeds - under 25% protein	_____	63	71	6
Com. feeds - over 25% protein	_____	102	198	69
Legume hay	_____	3,274	3,548	2,703
Other hay	_____	364	176	641
Fodder and stover	_____	365	207	176
Total concentrates	_____	2,543	3,153	2,001
Total dry roughages	_____	4,003	3,931	3,520
Silage	_____	5,502	6,727	5,229
Total digestible nutrients*	_____	5,039	5,518	4,219
T.D.N. per lb. B.F.	_____	20.2	16.6	27.6
% T.D.N. that is protein	_____	14.0	14.5	13.4
Feed cost per cow:				
Concentrates	$_____	$24.87	$32.12	$19.03
Roughages	_____	21.98	23.99	19.29
Pasture	_____	6.26	6.14	6.20
TOTAL FEED COSTS	$_____	$53.11	$62.25	$44.52
Value of produce per cow:				
B.F. sales	$_____	$85.82	$116.42	$48.46
Dairy produce used in house	_____	6.98	6.08	8.32
Milk to livestock	_____	12.97	12.49	9.66
Net increases in value of cows	_____	4.23	13.88	-.10
TOTAL VALUE PRODUCED	$_____	$110.00	$148.87	$66.34
RETURNS ABOVE FEED COST PER COW	$_____	$56.89	$86.62	$21.82
RETURNS FOR $100 OF FEED	$_____	$210	$234	$167
Price received per lb. B.F. sold				
As manufacturing cream (cents)	_____	36.8	37.3	36.9
As mkt. mk. & cm. & mk. for cheese(cts.)	_____	49.4	49.7	-
Feed cost per lb. B.F. (cents)	_____	22.0	18.7	29.3
% fall freshening	_____	48.0	45.0	34.0
Number of dairy cows**	_____	13.8	17.7	14.3

*Not including nutrients received from pasture.

**All dairy cows which have at some time in the past freshened are included in the dairy herd, and affect the average number of cows used in computing this table. There is some variation in the number of months of dry period per cow; however, this variation is small for the majority of farms.

Table 19. Feed Costs and Returns from Other Dairy Cattle, 1941

Items	Your farm	Average of 66 farms*	14 farms highest in butterfat per cow	13 farms lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates	_____	733	762	862
Hay and fodder	_____	1,248	1,300	1,023
Silage	_____	1,578	2,153	1,660
Whole milk	_____	524	369	558
Skim milk	_____	1,346	1,118	1,617
Feed cost per head:				
Concentrates	$_____	$ 6.98	$ 7.55	$ 7.89
Roughages	_____	6.54	7.73	5.27
Milk	_____	10.06	7.29	11.22
Pasture	_____	2.03	1.75	2.29
TOTAL FEED COSTS	$_____	$25.61	$24.32	$26.67
Net inc. in value of other dairy cattle	$_____	$45.59	$39.00	$49.05
RETURNS ABOVE FEED COST PER HEAD	$_____	$19.98	$14.68	$22.38
RETURNS FOR $100 OF FEED	$_____	$185	$162	$183
Number of head of other dairy cattle	_____	15.0	20.0	15.1

Table 20. Feed Costs and Returns from All Dairy Cattle

Items	Your farm	Average of 70 farms	14 farms highest in butterfat per cow	14 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	2,139	2,532	1,853
Hay and fodder	_____	3,401	3,259	2,973
Silage	_____	4,647	5,842	4,629
Feed cost per animal unit:				
Concentrates	$_____	$20.81	$25.61	$17.49
Roughages	_____	18.49	20.10	16.18
Pasture	_____	5.44	5.10	5.51
TOTAL FEED COSTS	$_____	$44.74	$50.81	$39.18
Value of produce per animal unit:				
Dairy products	$_____	$65.38	$81.05	$40.11
Net increase in value of dairy cattle	_____	27.67	32.86	24.27
TOTAL VALUE PRODUCED	$_____	$93.05	$113.91	$64.38
RETURNS ABOVE FEED PER ANIMAL UNIT	$_____	$48.31	$63.10	$25.20
RETURNS FOR $100 OF FEED	$_____	$213	$230	$179
Animal units of dairy cattle	_____	21.3	28.2	21.8

*Several farmers having both a dairy and a beef herd used a beef bull and included all the young stock in the beef herd.

Table 21. Factors of Cost and Returns from Dual-Purpose Cows, 1941

Items	Your farm	Average of 53 farms	11 farms highest in butterfat per cow	11 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	190	255	128
Feeds per cow, lbs.:				
Corn	_____	841	1,207	552
Small grain	_____	1,125	1,491	1,010
Com. feeds - under 25% protein	_____	8	2	5
Com. feeds - over 25% protein	_____	32	76	13
Legume hay	_____	2,996	3,008	2,424
Other hay	_____	494	394	770
Fodder and stover	_____	483	330	58
Total concentrates	_____	2,006	2,776	1,580
Total dry roughages	_____	3,973	3,732	3,252
Silage	_____	3,548	5,261	4,152
Total digestible nutrients*	_____	4,106	4,859	3,507
T.D.N. per lb. B.F.	_____	22.4	19.2	28.0
% T.D.N. that is protein	_____	14.0	13.7	13.3
Feed cost per cow:				
Concentrates	$_____	$18.95	$26.61	$15.15
Roughages	_____	19.03	20.56	17.49
Pasture	_____	6.21	6.62	6.83
TOTAL FEED COSTS	$_____	$44.19	$53.79	$39.47
Value of produce per cow:				
B.F. sales	$_____	$53.39	$75.82	$31.90
Dairy produce used in house	_____	10.09	11.38	10.97
Milk to livestock	_____	13.41	17.05	8.63
Net increases in value of cows	_____	6.43	5.14	7.56
TOTAL VALUE PRODUCED	$_____	$83.32	$109.39	$59.06
RETURNS ABOVE FEED COST PER COW	$_____	$39.13	$55.60	$19.59
RETURNS FOR $100 OF FEED	$_____	$196	$211	$163
Price received per lb. B.F. sold As manufacturing cream (cents)	_____	36.2	36.9	36.4
Feed cost per lb. B.F. (cents)	_____	24.1	21.2	31.4
% fall freshening	_____	46.0	53.0	41.0
Number of dual-purpose cows	_____	9.8	7.2	9.9

*Not including nutrients received from pasture.

Table 22. Feed Costs and Returns from Other Dual-Purpose Cattle, 1941

Items	Your farm	Average of 47 farms*	9 farms highest in returns above feed	9 farms lowest in returns above feed
Feeds per head, lbs.:				
Concentrates	_____	764	640	840
Hay and fodder	_____	1,235	798	1,568
Silage	_____	1,140	804	1,001
Whole milk	_____	383	644	522
Skim milk	_____	1,196	1,722	1,013
Feed cost per head:				
Concentrates	$_____	$7.32	$6.05	$7.86
Roughages	_____	5.66	3.94	6.32
Milk	_____	7.80	12.47	9.45
Pasture	_____	2.33	1.73	2.25
TOTAL FEED COSTS	$_____	$23.11	$24.19	$25.88
Net increase in value	$_____	$43.28	$61.72	$27.80
RETURNS ABOVE FEED COST PER HEAD	$_____	$20.17	$37.53	$1.92
RETURNS FOR $100 OF FEED	$_____	$200	$287	$106
No. of head of other dual-purpose cattle	_____	13.9	11.4	15.3

Table 23. Feed Costs and Returns from All Dual-Purpose Cattle

Items	Your farm	Average of 53 farms	11 farms highest in returns above feed	11 farms lowest in returns above feed
Feeds per animal unit, lbs.:				
Concentrates	_____	1,801	1,948	1,879
Hay and fodder	_____	3,322	3,290	4,199
Silage	_____	2,901	3,110	2,256
Feed cost per animal unit:				
Concentrates	$_____	$17.08	$18.37	$17.89
Roughages	_____	15.61	15.83	17.57
Pasture	_____	5.52	5.53	5.52
TOTAL FEED COSTS	$_____	$38.21	$39.73	$40.98
Value of produce per animal unit:				
Dairy products	$_____	$42.86	$52.41	$31.02
Net increase in value	_____	33.97	48.63	25.16
TOTAL VALUE PRODUCED	$_____	$76.83	$101.04	$56.18
RETURNS ABOVE FEED PER ANIMAL UNIT	$_____	$38.62	$61.31	$15.20
RETURNS FOR $100 OF FEED	$_____	$208	$264	$140
Animal units of dual-purpose cattle	_____	16.4	14.9	13.8

*Several farmers having both a dual-purpose and a beef herd used a beef bull and included all the young stock in the beef herd.

Table 24. Feed Costs and Returns from Beef Cattle, 1941

Items	Your farm	Average of all farms	Farms highest in returns above feed	Farms lowest in returns above feed
Beef breeding herd: no. of farms:		39	10	10
Feeds per animal unit, lbs.:				
Concentrates		1,425	1,686	1,501
Legume hay		1,987	1,843	2,367
Other hay		398	332	295
Fodder and stover		453	659	414
Silage		2,885	2,320	3,344
Skim milk*		58	134	85
Whole milk*		13	26	9
Feed cost per animal unit:				
Concentrates	$	$13.40	$15.91	$13.93
Roughages		13.29	12.02	14.74
Milk*		.28	.63	.28
Pasture		6.60	6.37	6.97
TOTAL FEED COSTS	$	$33.57	$34.93	$35.92
Value of produce per animal unit:				
Dairy products	$	$ 8.71	$11.43	$ 5.15
Net increase in value of animals		49.92	81.12	26.99
TOTAL VALUE PRODUCED	$	$58.63	$92.55	$32.14
RETURNS ABOVE FEED COST PER ANIMAL UNIT	$	$25.06	$57.62	$-3.78
RETURNS FOR $100 OF FEED	$	$183	$272	$93
Number of cows and herd bulls		17.1	11.2	15.1
Number of animal units in the herd		28.5	23.7	23.5
Feeder cattle: no. of farms:		80	16	16
Feeds per cwt. beef produced, lbs.:				
Corn		659	541	872
Small grain		119	49	172
Com. feeds - under 25% protein		7	7	13
Com. feeds - over 25% protein		25	20	29
Legume hay		182	131	228
Other hay		48	69	62
Fodder and stover		56	25	25
Total concentrates		810	617	1,086
Total dry roughages		286	225	315
Silage		325	341	535
Feed cost per cwt. beef produced:				
Concentrates	$	$ 7.63	$ 5.88	$10.17
Roughages		1.34	1.13	1.72
Pasture		.24	.35	.12
TOTAL FEED COSTS	$	$ 9.21	$ 7.36	$12.01
Net increase in value of feeders	$	$13.20	$15.20	$11.68
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.	$	$ 3.99	$ 7.84	$ -.33
RETURNS FOR $100 OF FEED	$	$153	$217	$100
Price received per 100 lbs. beef sold	$	$10.13	$10.23	$ 9.66
Price received per 100 lbs. bought in 1941	$	9.82	9.46	9.74
No. of animal units		42.7	26.3	28.7
Pounds of beef produced		29,191	15,258	16,712

*Several farmers had both dairy or dual-purpose cows and beef cows and fed considerable amounts of milk produced by the dairy herd to beef calves.

Table 25. Feed Costs and Returns from Sheep, 1941

Items	Your farm	Average of all farms	Farms highest in returns above feed	Farms lowest in returns above feed
Farm flock: No. of farms:		60	12	12
Feeds per head,* lbs.:				
Concentrates	_____	92	110	75
Legume hay	_____	169	146	203
Other hay	_____	32	12	27
Fodder and stover	_____	39	0	51
Silage	_____	104	74	62
Feed cost per head:				
Concentrates	$_____	$ .85	$ .99	$ .68
Roughages	_____	.95	.76	1.02
Pasture	_____	.96	.93	.94
TOTAL FEED COSTS	$_____	$ 2.76	$ 2.68	$ 2.64
Value of produce per head:				
Wool	$_____	$ 2.69	$ 2.56	$ 3.17
Net increase in value of sheep	_____	6.03	10.64	.68
TOTAL VALUE PRODUCED	$_____	$ 8.72	$13.20	$ 3.85
RETURNS ABOVE FEED COST PER HEAD	$_____	$ 5.96	$10.52	$ 1.21
RETURNS FOR $100 OF FEED	$_____	$340	$563	$158
Price per 100 lbs. of lambs sold	$_____	$10.35	$10.24	$ 9.61
Price per lb. wool sold (cts.).	_____	38.2	38.4	38.1
Pounds of wool per sheep sheared	_____	8.9	9.0	8.5
Number of ewes kept for lambing	_____	32.0	21.0	31.0
% lamb crop	_____	110.0	112.0	86.0
% death loss	_____	17.3	15.2	19.6
No. of head of sheep* (farm flock)	_____	54.9	31.4	54.8
Feeder sheep: No. of farms		23	8	8
Feeds per cwt. sheep produced, lbs.:				
Concentrates	_____	665	566	830
Legume hay	_____	201	125	264
Other hay	_____	25	9	26
Fodder and stover	_____	110	28	221
Silage	_____	404	378	727
Feed cost per head:				
Concentrates	$_____	$ 6.30	$ 5.30	$ 8.13
Roughages	_____	1.55	1.06	2.38
Pasture	_____	.53	.30	.64
TOTAL FEED COSTS	$_____	$ 8.38	$ 6.66	$11.15
Net increase in value of sheep	$_____	$16.39	$20.01	$13.92
RETURNS ABOVE FEED COST PER CWT. PRODUCED	$_____	$ 8.01	$13.35	$ 2.77
RETURNS FOR $100 OF FEED	$_____	$225	$316	$139
Price per cwt. sheep sold	$_____	$10.08	$10.22	$10.11
Price per cwt. for sheep bought in 1941	_____	10.43	10.24	10.72
% death loss	_____	2.8	2.2	2.7
Pounds of sheep produced	_____	16,487	6,630	10,726

*Two lambs under 6 months of age considered as one head.

Table 26. Feed Costs and Returns from Hogs, 1941

Items	Your farm	Average of 159 farms	32 farms highest in return above feed	32 farms lowest in return above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	367	261	542
Small grain	_____	134	102	232
Com. feeds - under 25% protein	_____	3	3	4
Com. feeds - over 25% protein	_____	15	14	18
Total concentrates	_____	519	380	796
Skim milk and buttermilk	_____	114	102	165
Feed cost per cwt. hogs produced:				
Concentrates	$_____	$ 5.14	$ 3.86	$ 7.71
Skim milk and buttermilk	_____	.20	.18	.30
Pasture	_____	.21	.20	.29
TOTAL FEED COSTS	$_____	$ 5.55	$ 4.24	$ 8.30
Net incr. in value per cwt. hogs prod.	$_____	$10.70	$11.80	$10.29
RET. ABOVE FEED COST PER CWT. HOGS PROD.	$_____	$ 5.15	$ 7.56	$ 1.99
RETURNS FOR $100 OF FEED	$_____	$214	$291	$150
Price received per cwt. hogs sold	$_____	$ 9.07	$10.04	$ 8.71
Total no. of litters raised	_____	18.1	16.0	16.9
No. of pigs weaned per litter	_____	6.4	6.5	6.0
% of two-litter systems	_____	34.0	25.0	36.0
Pounds of hogs produced	_____	28,740	26,873	23,158

The extent to which proper sanitation methods are followed is one of the important reasons for variations among farmers in the returns secured from hogs. (Table 27) Raising young pigs on clean ground away from the old hog lots is one of the important elements in a program of hog sanitation. The farmers who raised their young pigs on clean ground at least during a large portion of the growing period, away from the old hog lots, produced hogs with less feed and received a higher return than those farmers who allowed the young pigs access to the old hog lots.

Table 27. Sanitation in Hog Production and Return from Hogs

	No. of farms	Return over feed	Lbs. concentrates per 100# hogs	Lbs. skim milk per 100# hogs	Pigs weaned per litter	No. litters raised	Lbs. hogs produced
Pigs raised on clean ground away from old lots during most or all of the growing period	90	$5.55	480	105	6.5	20	31,410
Pigs not raised on clean ground	61	4.60	592	121	6.4	18	26,418

Table 28. Feed Costs and Returns from Chickens, 1941

Items	Your farm	Average of 143 farms	29 farms highest in return over feed	29 farms lowest in return over feed
Feed per hen, lbs.:				
Grain	_____	97	113	94
Commercial feeds	_____	19	28	15
Total concentrates	_____	116	141	109
Skim milk and buttermilk	_____	23	27	13
Feed cost per hen:				
Concentrates	$_____	$1.46	$1.87	$1.30
Skim milk	_____	.04	.05	.02
TOTAL FEED COST	$_____	$1.50	$1.92	$1.32
Value of produce per hen:				
Eggs sold and used in house	$_____	$2.04	$2.65	$1.33
Net increase in value of chickens	_____	.81	1.80	.25
TOTAL VALUE PRODUCED	$_____	$2.85	$4.45	$1.58
RETURNS ABOVE FEED COST PER HEN	$_____	$1.35	$2.53	$ .26
RETURNS FOR $100 OF FEED	$_____	$199	$252	$120
Price rec'd per doz. eggs sold	_____	20.8	21.4	19.9
Eggs laid per hen	_____	117	148	80
No. of hens	_____	199	179	221
% of hens that are pullets	_____	70	50	72

Farmers who raise their chicks on clean ground and away from the old hens receive greater returns from their poultry than those who raise their chicks on the same ground year after year (Table 29). Farmsteads and old poultry lots very soon become infested with diseases and parasites which the young chicks are unable to withstand.

Table 29. Sanitation in Raising Chicks and Return from Poultry

	No. of farms	Return over feed per hen	Return for $100 of feed	Average no. of hens
Chicks raised on clean ground	78	$1.55	$203	210
Chicks not raised on clean ground	55	1.16	197	179

The number of times hens are culled is an important factor affecting the return secured from poultry (Table 30). Culling out the poor layers saves feed and leaves more room for the good producers.

Table 30. Number of Cullings and Returns from Poultry

Number of cullings	No. of farms	Return over feed per hen	Eggs per hen	No. of hens
None or one	30	$ .97	97	177
Two or three	80	1.43	123	205
Four or more	31	1.60	125	210

Table 31. Feed Costs and Returns for Turkeys, 1941

Items	Your farm	Average of 10 farms	5 farms highest in returns above feed	5 farms lowest in returns above feed
Feed per cwt. turkeys produced, lbs.:				
Grain	_____	295	313	277
Com. feeds - under 25% protein	_____	51	40	62
Com. feeds - over 25% protein	_____	145	95	195
Total concentrates	_____	491	448	534
Skim milk	_____	1	3	0
Feed cost per cwt. turkeys produced	$_____	$8.26	$6.95	$9.57
Value of produce per cwt. turkeys prod.				
Eggs and poults	$_____	$ 0	$ 0	$ 0
Net increases in turkeys	_____	17.89	19.00	16.78
TOTAL VALUE PRODUCED	$_____	$17.89	$19.00	$16.78
RETURNS ABOVE FEED COST PER CWT. TURKEYS PRODUCED	$_____	$9.63	$12.05	$7.21
RETURNS FOR $100 OF FEED	$_____	$232	$288	$177
Price rec'd per lb. turkey sold (cts.)	_____	18.4	17.1	19.6
Pounds of turkeys produced	_____	22,455	6,601	38,309

Table 32. Feed Costs for Horses and Misc. Power and Machinery Expense, 1941

Items	Your farm	Average of 160 farms*	31 most profitable farms*	33 least profitable farms
Feed per horse,** lbs.:				
Grain	_____	1,989	2,311	1,965
Hay	_____	2,621	2,965	2,445
Fodder and stover	_____	202	101	407
Feed costs per horse:				
Grain	$_____	$19.12	$22.65	$18.74
Roughage	_____	8.53	9.49	7.89
Pasture	_____	4.15	3.94	4.32
TOTAL FEED COSTS	$_____	$31.80	$36.08	$30.95
Number of work horses	_____	4.2	5.3	4.2
Number of colts	_____	1.0	1.5	.7
Crop acres per farm	_____	222.7	337.8	184.1
Tractor and horse exp. per crop acre	$_____	$ 2.16	$ 2.09	$ 2.29
Crop and general mach. exp. per crop acre	$_____	1.22	1.42	1.14

*Six farms did not have horses. The number of horses, crop acres and expenses per crop acres are averages of 166 farms.

**Two colts equal one horse.

Table 33. Family Living from the Farm, 1941

Items	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms	Your farm	Average of 166 farms	33 most profitable farms	33 least profitable farms
No. of persons (Family	____	3.5	4.0	3.2				
adult equiv. (Other*	____	.7	1.3	.5				
Whole milk	____	1168 qts.	1700	878	$____	$38.40	$56.29	$27.69
Skim milk	____	432 qts.	716	318	____	1.64	2.63	1.23
Cream	____	288 pts.	364	256	____	31.20	38.79	27.65
Farm made butter	____	14 lbs.	29	8	____	4.80	10.07	2.99
Eggs	____	186 doz.	241	144	____	35.76	45.47	28.16
Cattle	____	445 lbs.	801	329	____	39.33	75.47	29.07
Hogs	____	555 lbs.	763	402	____	47.43	66.41	33.00
Sheep	____	17 lbs.	20	31	____	1.11	.85	2.10
Poultry	____	108 lbs.	120	108	____	13.64	15.50	13.97
Potatoes	____	16 bu.	22	14	____	10.71	13.93	9.07
Vegetables & fruits		-	-	-	____	41.95	53.70	28.13
Farm fuel		-	-	-	____	20.92	19.08	24.88
Rental value of house					____	251.31	303.60	217.21
Total					$____	$538.20	$701.79	$445.15

Table 34. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1941

Items	Your farm	Average of 127 farms	25 most profitable farms	25 least profitable farms
Number of persons - family	____	4.5	5.1	4.0
Number of persons, (Family	____	3.6	4.0	3.1
adult equivalent (Other*	____	.7	1.0	.7
Food and meals bought	$____	$361	$453	$330
Operating and supplies	____	122	194	101
Clothing and clothing materials	____	190	277	156
Personal care, personal spending	____	71	101	52
Furnishings and equipment	____	133	171	83
Education, recreation and development	____	105	161	60
Medical care and health insurance	____	106	136	104
Church, welfare, and gifts	____	112	210	85
Personal share of auto expense	____	118	152	91
Household share of elect. & gas eng. expenses	____	38	44	34
H.H. & pers.shr.of new auto, gas eng.& motors bot	____	78	101	51
Life insurance and other investments	____	197	225	108
Total household and personal cash expenses	$____	$1,631	$2,225	$1,255
Food furnished by the farm	$____	$ 263	$ 336	$ 218
Fuel furnished by the farm	____	24	24	28
House rental	____	255	311	213
Total household and personal expenses	$____	$2,173	$2,896	$1,714

*Hired help or others boarded.

Table 35. Summary of Farm Earnings - Averaged by Counties, 1941

	Brown & Watonwan	Cotton-wood	Fari-bault	Jackson	Lincoln & Lyon	Martin	Murray	Nobles	Pipestone & Rock	Redwood
FARM EXPENSES										
Cattle bought	$ 1,044	$ 2,609	$ 1,908	$ 1,993	$ 428	$ 1,116	$ 805	$ 4,451	$ 1,038	$ 2,877
Hogs bought	184	231	324	241	88	264	305	190	167	175
Sheep bought	38	233	634	270	43	3	435	2,343	2,916	8
Poultry bought	65	91	68	76	55	38	42	330	108	52
Feed	783	1,655	1,458	1,212	595	957	889	3,973	2,150	2,694
Other livestock expense	103	60	69	129	93	156	57	160	182	83
Crop expense	248	244	272	254	285	312	281	340	278	438
Power machinery & equipment	1,382	1,747	1,540	1,729	1,422	1,457	1,336	1,756	1,712	2,017
Custom work hired	113	89	142	129	139	142	147	183	132	156
Buildings	484	275	772	1,079	584	880	304	506	267	469
Hired labor	453	420	503	498	560	519	554	976	400	595
Taxes, insurance, & misc.	325	438	372	350	432	338	428	565	383	542
(1) Total purchases	$ 5,222	$ 8,092	$ 8,062	$ 7,960	$ 4,724	$ 6,182	$ 5,583	$15,773	$ 9,733	$10,106
(2) Decrease in cap.	-	-	-	-	-	-	-	-	-	-
(3) Board to hired labor	177	88	127	131	132	229	183	246	171	202
(4) Unpaid family labor	321	267	306	319	279	213	137	173	430	348
(5) Int. on farm cap.	1,699	1,629	1,831	1,636	1,520	1,633	1,468	2,484	1,877	2,134
(6) Total expenses	$ 7,419	$10,076	$10,326	$10,046	$ 6,655	$ 8,257	$ 7,371	$18,676	$12,211	$12,790
FARM RECEIPTS										
Cattle sales	$ 2,256	$ 4,856	$ 4,128	$ 3,533	$ 1,466	$ 2,645	$ 2,103	$ 6,346	$ 3,197	$ 6,113
Dairy products	871	613	645	958	842	918	390	904	791	559
Hogs	1,986	1,628	2,309	2,048	1,538	2,837	1,900	2,501	2,342	3,408
Sheep	232	123	725	531	176	208	939	3,329	3,768	283
Poultry & eggs	617	762	467	586	460	450	407	2,186	900	371
Crop	1,748	1,955	1,566	2,058	1,883	1,232	1,880	2,163	1,101	2,746
AAA payment	468	420	508	437	417	445	470	728	469	566
Miscellaneous cash receipts	624	488	628	930	629	570	922	614	727	747
(7) Total farm sales	$ 8,802	$10,845	$10,976	$11,081	$ 7,411	$ 9,305	$ 9,011	$18,771	$13,295	$14,793
(8) Increase in cap.	1,361	2,838	3,227	2,492	1,473	2,074	1,696	5,775	2,369	2,433
(9) Family living from farm	616	453	593	524	484	512	421	553	538	578
(10) Total receipts	$10,779	$14,136	$14,796	$14,097	$ 9,368	$11,891	$11,128	$25,099	$16,202	$17,804
(6) Total expenses	7,419	10,076	10,326	10,046	6,655	8,257	7,371	18,676	12,211	12,790
(11) Oper. labor earnings	3,360	4,060	4,470	4,051	2,713	3,634	3,757	6,423	3,991	5,014

Table 36. Miscellaneous Information - Averaged by Counties, 1941

	Brown & Watonwan	Cotton-wood	Fari-bault	Jackson	Lincoln & Lyon	Martin	Murray	Nobles	Pipestone & Rock	Redwood
FARM INVENTORIES (Beginning of year)										
Horses	$ 445	$ 289	$ 352	$ 419	$ 417	$ 360	$ 259	$ 398	$ 336	$ 332
Productive livestock	3,928	3,591	4,448	3,664	2,839	3,707	3,165	6,856	6,043	5,997
Crop, seed and feed	3,847	4,219	3,948	4,138	3,966	3,745	3,653	4,966	3,854	4,483
Mach. and equipment	2,882	2,840	2,802	2,872	2,537	2,654	2,622	3,731	3,057	3,129
Buildings	8,243	6,410	7,761	6,655	7,298	7,531	6,009	8,202	7,523	7,934
Land	13,951	13,815	15,706	13,716	12,600	13,618	12,800	22,648	15,546	19,598
Total farm capital	$33,296	$31,164	$35,017	$31,464	$29,657	$31,615	$28,508	$46,801	$36,359	$41,473
MEAS.OF FARM ORG. AND MANAGEMENT EFFIC.										
Crop yields - % of ave.	111	102	109	107	76	107	104	108	96	92
% high return crops	37.4	39.3	38.6	38.5	33.7	37.3	34.6	38.2	33.3	35.1
Index ret. from livestock	99	92	107	96	103	109	94	92	97	100
A. u. livestock per 100 A.	22.6	24.6	29.7	23.8	15.2	29.1	20.5	32.2	26.5	24.0
Work units	558	539	574	595	610	529	579	822	703	692
Work units per worker	235	266	260	245	276	233	277	280	296	271
Exp. per work unit	$2.49	$2.44	$2.27	$2.21	$2.22	$2.84	$2.41	$2.05	$1.93	$2.42
DISTRIBUTION OF ACRES IN FARM										
Small grain	80.3	112.6	88.8	90.3	126.5	70.7	114.3	127.7	108.3	157.9
Cultivated crops	62.1	71.9	74.2	65.9	69.2	59.1	65.5	96.8	80.2	95.6
Tillable hay land	27.5	27.0	24.0	25.0	33.1	21.1	32.6	39.7	38.6	39.6
Tillable pasture	25.7	22.0	26.5	24.1	27.9	26.6	25.1	45.7	26.2	17.6
Total acres in farm	243.3	277.1	249.1	235.1	348.1	196.4	284.0	345.5	302.3	389.2
% land tillable	82.4	86.4	85.6	87.2	79.7	90.1	82.8	89.8	85.4	85.5
CROP YIELDS PER ACRE										
Flax, bu.	10.1	11.5	13.1	12.5	11.3	14.4	11.9	14.1	10.7	11.1
Barley, bu.	34.7	26.2	28.8	30.9	22.1	37.8	38.2	28.0	35.8	28.5
Oats, bu.	26.2	26.1	28.7	26.7	16.9	28.4	31.3	32.8	31.3	21.3
Corn, grain, bu.	65.5	61.3	61.9	64.7	43.2	62.1	57.4	56.4	42.8	49.7
Corn silage, tons	10.8	10.5	10.4	10.9	8.1	11.0	9.2	10.4	7.0	7.8
Alfalfa hay, tons	2.8	2.3	2.9	2.0	1.4	2.6	1.4	1.5	1.4	2.2
AN. UNITS OF LIVESTOCK	49.2	53.9	65.5	50.4	46.3	52.8	48.2	115.2	74.8	87.7
% dairy and du.-pur.cattle	35.3	30.9	24.9	41.3	35.7	32.3	21.9	27.8	32.8	30.6
% in beef breeding herd	13.5	5.0	13.1	4.6	19.0	16.0	21.4	6.0	7.5	11.1
% feeder cattle	14.7	34.4	20.8	21.1	11.4	9.4	25.7	22.8	15.8	27.4
% sheep-farm flock	4.8	1.7	11.6	4.2	6.8	4.2	2.7	3.0	4.0	2.4
% sheep-feeders	1.1	1.5	3.9	3.3	.1	.0	3.8	11.4	10.9	.2
% hogs	25.6	18.6	22.8	20.7	21.8	33.5	20.0	18.3	21.9	25.4
% turkeys	.2	1.6	.0	1.8	.0	.5	.0	7.2	3.7	.0
% hens	4.8	6.3	2.9	3.0	5.2	4.1	4.5	3.5	3.4	2.9

Table 37. Summary of Farm Earnings by Years*

Items	1940	1941
No. of farms	165	166
FARM EXPENSES		
Horses bought	$ 32	$ 32
Dairy and dual-purpose cattle bought	76	138
Beef cattle bought (including feeders)	1,243	1,766
Hogs bought	103	209
Sheep bought (including feeders)	414	686
Poultry bought (including turkeys)	99	96
Miscellaneous crop expenses	243	303
Feed bought	1,007	1,718
Power machinery (farm share) (new)	379	446
Power machinery (farm share) (upkeep)	411	497
Custom work hired	150	140
Crop and general machinery (new)	319	416
Crop and general machinery (upkeep)	69	84
Livestock equipment (new)	74	123
Livestock equipment (upkeep)	20	32
Miscellaneous livestock expense	72	109
Buildings and fencing (new)	412	434
Buildings and fencing (upkeep)	88	141
Hired labor	392	561
Taxes	313	337
Insurance	15	32
General farm	59	55
(1) Total farm purchases	$5,990	$8,355
(2) Decrease in farm capital	-	-
(3) Board furnished hired labor	131	171
(4) Interest on farm capital	1,635	1,831
(5) Unpaid family labor	252	288
(6) Total farm expenses (Sum of (1) to (5)	$8,008	$10,645
FARM RECEIPTS		
Horses	$ 42	$ 41
Dairy and dual-purpose cattle	265	392
Dairy products	570	758
Beef cattle (including feeders)	2,373	3,399
Hogs	1,162	2,306
Sheep and wool (including feeders)	470	1,032
Poultry (including turkeys)	372	396
Eggs	244	334
Corn	516	477
Small grain	849	1,133
Other crops	239	283
Power machinery sold	168	204
Crop and general machinery sold	81	74
Miscellaneous	394	176
Income from work off the farm	193	196
Agricultural Adjustment payments	506	503
(7) Total farm sales	$8,444	$11,704
(8) Increase in farm capital	1,179	2,618
(9) Family living from farm	483	538
(10) Total farm receipts (7) + (8) + (9)	$10,106	$14,860
(6) Total farm expenses	8,008	10,645
(11) Operator's labor earnings (10) - (6)	2,098	4,215

*The financial statements differ in that the unpaid family labor rate was $45 per month in 1940 and $50 in 1941; and the board for hired labor was calculated at $18 per month in 1940 and $20 in 1941.

Table 38. Summary of Miscellaneous Items by Years

Items	1940	1941
Total farm capital	$32,724	$36,613
MEAS. OF FARM ORG. AND MANAGEMENT EFFICIENCY		
% tillable land in high return crops	35.9	36.5
Animal units prod. livestock per 100 A.	22.1	24.7
Work units	569	631
Work units per worker	263	264
Expenses per work unit	$2.17	$2.30
ACRES PER FARM	279	295
Crop acres per farm	213	223
CROP YIELDS PER ACRE		
Flax, bu.	13.7	12.0
Barley, bu.	42.3	29.6
Oats, bu.	60.1	26.4
Corn, grain, bu.	46.2	55.9
Corn silage, tons	8.5	9.5
Alfalfa hay, tons	2.0	2.0
RETURN ABOVE FEED COST PER:		
Dairy cow	$43.03	$56.89
Dual-purpose cow	26.49	39.13
Animal unit in beef breeding herd	18.20	25.06
100 pounds feeder cattle produced	2.92	3.99
Head of sheep in farm flock	3.27	5.96
100 pounds feeder sheep produced	2.13	8.01
100 pounds hogs produced	1.23	5.15
Hen	.96	1.35
100 pounds turkeys produced	5.74	9.63
FEED COST PER:		
Dairy cow	$46.50	$53.11
Dual-purpose cow	34.85	44.19
Animal unit in beef breeding herd	29.86	33.57
100 pounds of feeder cattle produced	8.00	9.21
Head of sheep in farm flock	2.60	2.76
100 pounds feeder sheep produced	7.16	8.38
100 pounds hogs produced	4.29	5.55
Hen	1.11	1.50
100 pounds turkeys produced	7.27	8.26
Horse	29.74	31.80
MISC. LIVESTOCK INFORMATION		
No. of work horses	4.1	4.2
No. of colts	1.0	1.0
No. of dairy or dual-purpose cows	8.6	9.1
Head of cattle in beef breeding herd	9.0	9.4
Pounds feeder cattle produced	8,678	14,087
Litters of pigs	13.6	16.9
Pounds of hogs produced	21,335	27,550
No. of hens	161	173
Pounds of butterfat per dairy cow	250	254
Pounds of butterfat per dual-purpose cow	179	190
No. of pigs per litter	6.2	6.4
% lamb crop	110	110
Eggs per hen	113	117

Table 38. Summary of Miscellaneous Items by Years (Continued)

Items	1940	1941
PRICE RECEIVED PER:		
Pound butterfat sold to creameries	$ .31	$ .37
100 pounds feeder cattle	8.81	10.13
100 pounds feeder sheep	8.74	10.08
Pound of wool	.29	.38
100 pounds of hogs	5.15	9.07
Dozen eggs	.15	.21
Pound of turkeys	.14	.18
PRICE OF FEED		
Shelled corn, bu.	$ .47	$ .54
Oats, bu.	.26	.32
Barley, bu.	.31	.39
Alfalfa hay, ton	7.50	8.50
Timothy hay, ton	4.80	5.45
Corn silage, ton	2.10	2.55
Bran, cwt.	1.20	1.50
Linseed oilmeal, cwt.	1.75	2.00
Tankage, cwt.	2.50	3.20
Meat scraps, cwt.	2.55	3.20

Suggestions for Improvements