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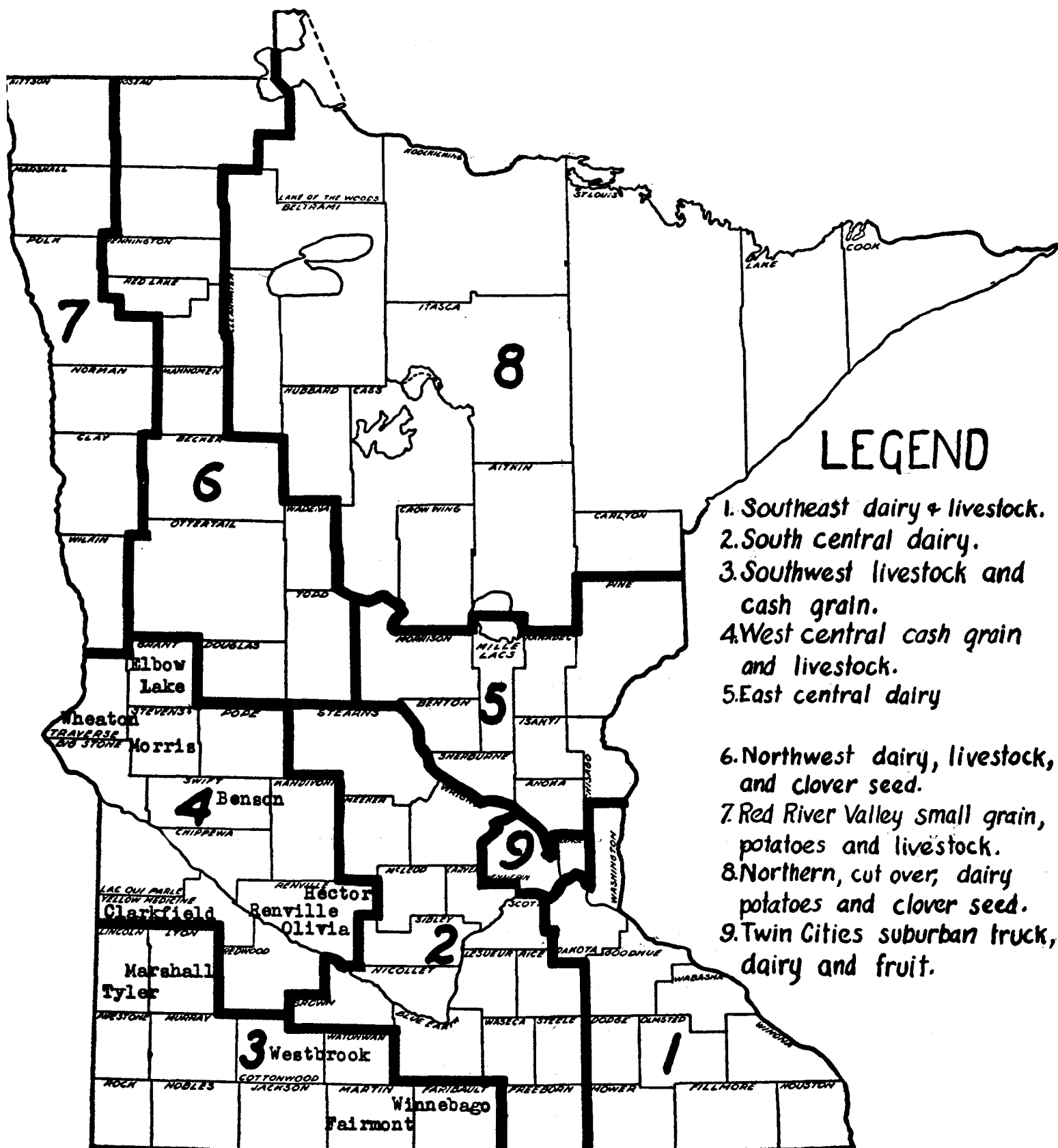
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Vocational Division
Minnesota Department of Education
Cooperating

ANNUAL REPORT
of the
FARM MANAGEMENT SERVICE for VETERANS
TAKING ON-THE-FARM TRAINING
in
SOUTHWESTERN MINNESOTA
1948

Cooperator: _____

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St. Paul 1, Minnesota
August, 1949



Type of Farming Areas in Minnesota and Location of Schools Submitting Farm Records for this Report

REPORT OF THE FARM MANAGEMENT SERVICE FOR VETERANS TAKING ON-THE-FARM
TRAINING IN SOUTHWESTERN MINNESOTA, 1948

T. R. Nodland and G. A. Pond

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INTRODUCTION

In the fall of 1946, the Vocational Division of the Minnesota Department of Education asked the University of Minnesota to set up a farm management service for veterans taking on-the-farm training in the public schools throughout the state. The service was initiated on January 1, 1947. The cooperating agencies are the Division of Agricultural Economics, University of Minnesota, and the Vocational Division, Minnesota Department of Education representing the public schools.

The purpose of the project as far as the schools are concerned is (1) to give assistance to the instructors in the mechanics of keeping farm records, and (2) to aid in the analysis of the farm business through the use of records as a basis for vocational guidance. Schools with an on-the-farm training program can enroll their students in the farm management service. The enrollment is on a voluntary basis insofar as the number of schools participating and the number of veterans enrolled in the service are concerned.

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 and T. R. Nodland. The State Department of Education was represented by G. R. Cochran, State Supervisor of Agricultural Education.

This report deals with the veterans enrolled by thirteen schools located in southwestern Minnesota (Type-of-Farming Area 3 and 4)¹. The map on the inside front cover of this report shows the location of the schools. The following tabulation shows by schools the number of farm records submitted in 1948:

Benson	9	Olivia	3
Clarkfield	3	Renville	3
Elbow Lake	12	Tyler	9
Fairmont	4	Westbrook	4
Hector	4	Wheaton	12
Marshall	1	Winnebago	1
Morris	11		<u>76</u>

The subsequent pages in this report show the data for 72 farms. Four farms were omitted from all the averages in the tables because the records were not sufficiently complete for a full analysis.

The records kept by the enrollees included farm inventories at the beginning and at the end of the year, cash farm receipts and expenses, feed consumed by the various classes of livestock, family living received from the farm, liabilities and assets other than the farm capital and household and personal cash expenses and receipts.

Only records from actual farm operators are included in this report. All types of tenure arrangements from full owners to partnerships in which the operator furnishes little or no capital are represented.

FARM INVENTORIES

The capital investment per farm varied from \$9750 to \$49250. The average investment for all farm included in this report and for the one-fifth high and the one-fifth low in operator's labor earnings is shown in Table 1.

Landlords or partners supplied some capital in 58 out of the 72 cases included in this report. The landlord's investment has been included in Table 1 in order to show the total amount used per farm.

FARM EARNINGS

Operator's labor earnings is a measure of the relative financial success of a farmer as compared with other farmers and represents the returns above all farm expenses and a charge for the use of farm capital. For purposes of comparison, the earnings are presented on a full-owner basis.

There are two methods of computing operator's labor earnings. Table 2 shows the earnings statement on a cash basis and Table 3 shows the earnings on an enterprise or accrual basis. The principal difference in the two statements is in the method of handling the net increase or decrease in the value of farm capital. In the cash statement the net increase or decrease in farm capital is entered as one item. In the enterprise statement the net change in the inventory has been included in each enterprise in order to compute "total returns and net increases", or "total expenses and net decreases" by enterprises.

1. For a description of the area, see Engene, S. A. and Pond, G. A. "Agricultural Production and Types of Farming in Minnesota." Minn. Agri. Expt. Sta. Bul. 347 May, 1940.

Table 1. Summary of Farm Inventories, 1948*

Items	Your farm		Average of 72 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			216	
Size of business (work units)**			314	
Dairy and dual purpose cows			\$ 648	\$ 722
Other dairy & dual purpose cattle			327	497
Beef cattle			327	600
Hogs			820	861
Sheep			139	102
Poultry			172	191
Productive livestock (total)			2433	2973
Horses			46	50
Crop, seed, and feed			2180	2624
Power mach. (farm share)			1484	1704
Crop & general mach. (farm share)			1162	1791
Livestock equip. (total)			259	299
Mach. and equipment (total)			2905	3794
Misc.			1	-
Buildings, fences, etc.			5213	5268
Land			8900	8900
Total farm capital			21678	23609

Items	14 most profitable farms		14 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	283		181	
Size of business (work units)**	374		257	
Dairy & dual purpose cows	\$ 670	\$ 559	\$ 578	\$ 662
Other dairy & dual purpose cattle	271	341	327	671
Beef cattle	711	992	126	210
Hogs	1272	986	516	438
Sheep	95	71	528	313
Poultry	153	241	156	136
Productive livestock (total)	3177	3190	2231	2430
Horses	54	51	50	49
Crop, seed, and feed	2953	3858	1504	1670
Power mach. (farm share)	1688	2117	1308	1614
Crop & general mach.	1576	2639	905	1357
Livestock equipment & supplies	264	292	260	332
Mach & equipment (total)	3528	5048	2473	3303
Miscellaneous	-	-	7	1
Buildings, fences, etc.	6098	6404	4682	4631
Land	9584	9584	7407	7407
Total farm capital	25394	28135	18354	19491

* For the purpose of comparison, all the data shown in this report with the exception of Table 6 and 7 are presented on a full-owner basis. The assets, expenses and receipts of the landlord were included in the records from rented farms.

** See page 13 for an explanation of "work units."

Table 2. Summary of Farm Earnings (Cash Statement), 1948

Items	Your farm	Average of 72 farms	14 most profitable farms	14 least profitable farms
FARM RECEIPTS				
Dairy and dual-purpose cows		\$ 304	\$ 398	\$ 285
Dairy products		800	860	665
Other dairy & dual-purpose cattle		317	207	145
Beef cattle		459	1694	269
Hogs		2101	2769	1456
Sheep and wool		127	116	362
Poultry		181	205	154
Eggs		783	972	676
Horses		8	-	8
Corn		910	1351	518
Small grain		1954	3868	881
Other crops		367	473	320
Machinery & equip. sold		297	193	433
Agricultural adjustment payments		41	81	38
Income from work off the farm		147	337	115
Miscellaneous		26	51	26
(1) Total farm sales		8822	13575	6351
(2) Increase in farm capital		1931	2741	1137
(3) Family living from the farm		437	485	427
(4) Total farm receipts (1)+(2)+(3)		11190	16801	7915

FARM EXPENSES

Dairy and dual-purpose cows bought		\$ 212	\$ 85	\$ 220
Other dairy and dual-par. cattle bot.		122	158	127
Beef cattle bought		426	787	270
Hogs bought		170	134	145
Sheep bought		36	11	91
Poultry bought		93	129	65
Horses bought		15	-	6
Misc. livestock expense		94	115	104
Misc. crop expenses		546	740	454
Feed bought		834	993	766
Custom work hired		312	402	283
Mech. power mach. (farm share)(new)		664	790	871
Mech. power mach. (farm share)(upkcp.)		235	322	175
Mech. power (f.share)(gas, oil, etc.)		653	866	545
Crop and general mach. (new)		906	1389	652
Crop and general mach. (upkeep)		157	262	113
Livestock equipment (new)		93	65	127
Livestock equipment (upkeep)		41	70	26
Buildings and fencing (new)		304	540	224
Buildings and fencing (upkeep)		150	218	177
Hired labor		229	476	85
Taxes		282	315	238
General farm and insurance		65	57	46
(5) Total farm purchases		6639	8924	5810
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		1132	1338	946
(8) Unpaid family labor		539	698	580
(9) Board furnished hired labor		93	167	43
(10) Total farm exp.(sum of (5) to (9))		8403	11127	7379
(11) Oper. labor earnings (4) - (10)		2787	5674	536

Table 3. Summary of Farm Earnings (Enterprise Statement) 1948*

Items	Your farm	Average of 72 farms	14 most profitable farms	14 least profitable farms
RETURNS AND NET INCREASES				
Dairy and dual purpose cows	_____	\$1032	\$1104	\$ 935
Other dairy & dual pur. cattle	_____	442	305	489
Beef breeding herd	_____	108	236	9
Feeder cattle	_____	262	914	74
Hogs	_____	2051	2410	1271
Sheep - farm flock	_____	56	92	56
Chickens	_____	938	1179	790
All productive livestock	_____	4889	6240	3624
Crops, seed and feed	_____	2246	4873	629
Agricultural conservation payments	_____	41	81	38
Income from labor off the farm	_____	64	134	67
Miscellaneous	_____	137	171	136
(1) Total returns & net increases	_____	7377	11499	4494
EXPENSES AND NET DECREASES				
Horses	_____	\$ 46	\$ 69	\$ 56
Tractor	_____	608	759	438
Truck	_____	48	99	72
Auto (farm share)	_____	353	384	315
Gas engine and elect. exp.(f.shr.)	_____	48	63	33
Hired power	_____	110	157	91
Total power	_____	1213	1531	1005
Crop and general machinery	_____	439	565	364
Livestock equipment	_____	91	105	80
Buildings, fencing, and tiling	_____	322	339	387
Misc. productive livestock exp.	_____	92	115	96
Labor	_____	954	1460	796
Real estate taxes	_____	247	276	210
Personal property tax	_____	35	39	28
Insurance	_____	31	27	25
General farm	_____	34	30	21
Interest on farm capital	_____	1132	1338	946
(2) Total expenses & net decreases	_____	4590	5825	3958
(3) Oper. labor earnings(1)-(2)	_____	2787	5674	536

* 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 on page 4.

FAMILY LIVING FROM THE FARM

The family living from the farm is the estimated value of the farm produce used in the house and shelter furnished the farmer and his family by the farm. It is a part of the income of the farm and a part of the expenses of operating the household even though cash transactions are not involved. The omission of the farm produce used in the home results in an incomplete records of both farm income and personal expense.

The value of the family living as shown in Table 4 amounts to four per cent of the total farm receipts on these farms. The values assigned are a conservative market price on the farm. If these products has been purchased, the amount paid out would have been considerably higher.

The rental value of the dwelling is calculated by taking ten per cent of the average inventory value of the dwelling.

Table 4. Family Living From the Farm, 1948

Items	Your farm	14 most 14 least			Your farm	14 most 14 least		
		Average 72 farms	profit-able farms	profit-able farms		Average 72 farms	profit-able farms	profit-able farms
Adult equiv.- family	—	2.3	2.0	2.5	—			
- others	—	.2	.3	.1	—			
Whole milk	—	403 qts.	349	347	—	\$ 45.51	\$ 39.82	\$36.80
Skim milk	—	90 qts.	214	139	—	4.13	11.49	4.40
Cream	—	96 pts.	84	119	—	26.07	25.38	33.60
Farm made butter	—	8 lbs.	-	9	—	6.54	.10	8.60
Beef	—	165 lbs.	107	200	—	28.92	19.47	33.37
Hogs	—	278 lbs.	306	178	—	57.68	61.87	38.91
Poultry	—	75 lbs.	105	52	—	17.15	16.73	10.83
Eggs	—	86 doz.	110	86	—	32.55	42.24	34.04
Potatoes	—	5 bu.	6	8	—	8.56	8.52	12.76
Vegetables & fruits	—				—	15.45	26.11	15.98
Farm fuel	—				—	2.97	1.07	8.48
Rental vl. of house	—				—	190.74	232.26	187.45
Misc.	—				—	.29	-	1.48
Total	—				—	436.56	485.06	426.70

HOUSEHOLD AND PERSONAL EXPENSES AND RECEIPTS

Household and personal accounts are important if the family is to manage its financial affairs wisely. The household and personal expenses and receipts are presented in Table 5. These farmers spent an average of \$159 per month for family living in addition to the food, fuel and housing furnished by the farm. Most of the personal receipts were in the form of veterans' compensation payments.

Table 5. Household and Personal Expenses and Receipts for Those Farmers Who Kept Complete Accounts of These Items, 1948

Items	Your farm	Average of 71 farms*	14 most profitable farms	13 least profitable farms*
Number of persons in family	_____	3.2	2.7	3.3
Number of adult equivalents in family	_____	2.3	2.0	2.4
Number of other adult equivalents**	_____	.2	.3	.2
<u>EXPENSES</u>				
Food and meals bought	\$ _____	\$571	\$617	\$559
Operating and supplies	_____	238	349	158
Clothing and clothing materials	_____	228	223	192
Personal care, personal spending	_____	114	159	83
Furnishings and equipment	_____	270	264	232
Education, recreation and development	_____	80	92	50
Medical care and health insurance	_____	131	142	90
Church, welfare, gifts	_____	120	146	65
Personal share of auto expense	_____	86	102	75
Household share of elect.&gas exp.	_____	22	17	40
H.H. & pers.shr.of new auto&motors bot.	_____	51	94	34
Total	_____	1911	2205	1578
State and federal income tax	_____	56	116	5
Insurance	_____	81	45	92
Total household and pers. cash exp.	_____	2048	2366	1675
Food furnished by the farm	_____	239	252	213
Fuel furnished by the farm	_____	5	1	14
House rental	_____	190	232	187
Total cash expenses and perquisites	_____	2482	2851	2089
Investments	_____	39	1	44
<u>RECEIPTS</u>				
Sale of investments	_____	26	-	-
Income from outside investments	_____	18	-	2
Veterans compensation	_____	1167	1210	1088
Misc. income	_____	12	28	-

* One farm operator did not keep a record of household and personal expenses.

** Hired help or others boarded.

NET WORTH

A net worth statement includes a listing of all the assets and liabilities as of a given date. The difference between the farmer's total assets and his liabilities is his net worth. A net worth statement for owners, cash and crop shared renters and livestock share partnerships is presented in Table 6. Both the farm and personal assets and liabilities are included.

The difference between the operator's net worth at the beginning and at the end of the year shows the gain in net worth. It represents the financial progress that has been made during the year.

Table 6. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1948 (Operator's Share)

	Your farm		13 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			208.5	
Owned			208.5	
Rented				
Total farm capital			\$21470	\$22344
Accounts receivable			10	6
Stocks and bonds			109	111
Life insurance			67	70
Other real estate			154	223
Other outside investments			4	19
Total outside investments			334	423
Cash on hand and in bank			459	262
Other household & personal assets			1530	1634
Total cash, household & personal assets			1939	1896
TOTAL ASSETS			23803	24669
Mortg. on land operated			7697	6956
Mortg. on outside real estate			-	-
Chattel mortgages			1813	1572
Notes payable			509	605
Accounts payable			150	94
TOTAL LIABILITIES			10169	9227
Farmer's net worth			13634	15442
Gain in net worth				+1808
36 cash & crop share renters				
	Jan. 1	Dec. 31		
Total acres in farm	229.0			
Owned	-			
Rented	229.0			
Total farm capital	\$6095		\$7955	
Accounts receivable	27		78	
Stocks and bonds	114		93	
Life insurance	70		92	
Other outside investments	13		11	
Total outside investments	197		196	
Cash on hand and in bank	240		426	
Other household and personal assets	1275		1456	
Total cash, household & personal assets	1515		1882	
TOTAL ASSETS	7834		10111	
Chattel mortgages	1169		950	
Notes payable	368		604	
Accounts payable	61		79	
TOTAL LIABILITIES	1598		1633	
Farmer's net worth	6236		8478	
Gain in net worth			+2242	

RETURNS TO CAPITAL AND FAMILY LABOR

The return to capital and family labor represents the amount available to the operator for living expenses, payment on indebtedness, and savings. The landlord's expenses and receipts are not included.

The average return to capital and family labor for 13 owners and 36 cash and crop share renters is shown in Table 7. The statement includes only the veterans share of the earnings of the partnership. The earnings as shown in Table 7 are on an actual basis as compared to the full-owner basis in Tables 2 and 3.

Table 7. Summary of Farm Earnings by Tenure, 1948 (Operator's Share)

	Your farm	13 owners	36 cash & cr. shr. renters
FARM RECEIPTS			
Dairy and dual purpose cows		\$ 430	\$ 111
Dairy products		902	587
Other dairy and dual purpose cattle		252	190
Beef cattle		761	80
Hogs		2382	1618
Sheep and wool		206	165
Poultry		155	193
Eggs		642	695
Horses		6	5
Corn		655	550
Small grain		1767	1422
Other crops		552	187
Machinery & equipment sold		402	301
Agricultural adjustment payments		50	37
Income from work off the farm		97	152
Misc.		8	25
(1) Total farm sales		9267	6318
(2) Increase in farm capital		874	1860
(3) Family living from the farm		466	412
(4) Total farm rec. (1)+(2)+(3)		10607	8590
FARM EXPENSES			
Dairy and dual purpose cows bot		\$ 297	\$ 142
Other dairy & dual.pur.cattle bot		148	78
Beef cattle bot.(including feeders)		419	129
Hogs bot		81	156
Sheep bot (including feeders)		14	49
Poultry bot (including turkeys)		64	79
Horses bot		12	14
Misc. livestock expenses		117	71
Misc. crop expenses		658	475
Feed bot		740	729
Custom work hired		457	265
Mech. power mach.(farm share)(new)		823	638
Mech. power mach.(farm share)(upkeep)		258	250
Mech. power (farm share)(gas,oil,etc.)		648	660
Crop and general mach. (new)		773	945
Crop and general mach. (upkeep)		154	179
Livestock equipment (new)		97	94
Livestock equipment (upkeep)		75	37
Land, buildings & fencing (new)		342	142
Buildings and fencing (upkeep)		251	60
Hired labor		380	167
Taxes (real estate & pers.property)		277	24
General farm and insurance		96	53
Cash rent		-	153
Interest paid		346	85
(5) Total farm purchases		7527	5674
(6) Decrease in farm capital		-	-
(7) Interest on farm capital		749	266
(8) Unpaid family labor		375	458
(9) Board furnished hired labor		136	68
(10) Total farm exp.(sum of (5) to (9))		8787	6466
(11) Operator's labor earn.(4) - (10)		1820	2124
(12) Ret.cap. & family lab.(7)+(8)+(11)		2944	2848

MANAGEMENT FACTORS AND THEIR RELATION TO EARNINGS

Every study of farm earnings shows a wide variation in earnings among farmers in a given year. The average labor earnings of those farmers ranking in the upper 20 per cent of the range according to earnings was \$5674 and of those in the lower 20 per cent was \$536. This is a range of \$5138 between the average earnings of these two groups. Some of the causes for these differences in earnings, such as weather, may be beyond the control of the individual farmer. Other factors are within his control. The more important management factors affecting earnings and their relationships with earnings are presented in the following tables. These factors vary from year to year in their relative influence on earnings.

Crop Yields. The measure of crop yields used is the crop yield index. It is a comparison of the yield per acre of all crops on a given farm with the average yields for all farms included in the study. High crop yields make their maximum contribution to earnings if they are the result of good crop selection, the use of adapted varieties, skill and timeliness in performing the operations.

Table 8. Relation of Crop Yields to Farm Earnings

Index of crop yields Range	Average	No. of farms	Average operator's labor earnings
Below 78	68	13	\$2453
78 - 123	98	46	2442
124 and above	137	13	4343

Choice of Crops. Over a period of years certain crops have a definite advantage over others. The crops are classified on page 16 as A, B, C or D crops on the basis of their average net returns per acre. The relation of choice of crops to earnings is shown in Table 9.

Table 9. Relation of Choice of Crops to Farm Earnings

Percent of tillable land in high return crops Range	Average	No. of farms*	Average operator's labor earnings
Below 31.0	23.3	13	\$2630
31.0 - 54.9	41.9	43	2659
55.0 and above	60.9	10	2812

*The records from 6 farms with less than 30 per cent of the work on crops were omitted from this table.

Return from Livestock. This is a measure of feeding efficiency. The majority of these farmers maintain some cattle, hogs and poultry. Six farmers did not keep any livestock. Most of the crops raised and some additional purchased feed are fed to livestock. Since feed is the major item of cash in livestock production, an increase in feeding efficiency results in higher earnings.

Table 10. Relation of Returns from Productive Livestock to Farm Earnings

Index of returns for \$100 feed consumed by productive livestock* Range	Average	No. of farms	Average operator's labor earnings
Below 72	59	13	\$2331
72 - 119	94	43	2750
120 and above	153	16	3255

*The index is weighted by the number of animal units of each class of livestock.

Amount of Livestock. This factor measures the importance of livestock in the farm business. It is the amount of livestock units per 100 acres in the farm other than land in timber, roads, waste and farmstead. Livestock

are important in that they add to the size of business. They provide employment throughout the year and aid in maintaining or building up the fertility of the land.

Size of Business. Productive man work units are a measure of size of business. The relationship of size of business to farm earnings is shown in Table 11. Average farm earnings tend to increase with an increase in size of business, if size is accompanied by good management. For farmers operating their farms at a loss, the larger the volume of business, the larger will be the loss. Normally a large business has an advantage over a small business because they utilize more efficiently and to better advantage available labor, power, machinery, equipment and buildings.

Table 11. Relation of Size of Business to Farm Earnings

Work units Range	Average	No. of farms	Average operator's labor earnings
Below 210	167	11	\$1535
210 - 424	297	50	2708
425 and above	537	11	4399

Work Accomplished Per Worker. The work accomplished per worker is determined by dividing the total man work units by the number of workers on the farm during the year. An increase in the productive work accomplished per worker reduces the labor charge per unit of business. Planning of the farm work and economical use of labor-saving machinery help to increase the output of work per worker.

Control Over Expenses. The depreciation and cash cost of upkeep for power, machinery, equipment and buildings per unit of work is used as a measure of the efficiency of their use on a farm. Some farmers lack power, machinery and buildings for satisfactory operation. In case of others, an excessive investment in these items may constitute an important factor limiting earnings.

CUMULATIVE EFFECT OF EXCELLING IN A NUMBER OF MANAGEMENT FACTORS

The relation of several management factors to operator's labor earnings has been shown in the preceding section. Because of the large number of inter-relationships between these factors the exact relationship between one factor and earnings cannot be determined. The combined or cumulative influence of the seven management factors on earnings is shown in Table 12. Insofar as these factors are within the farmer's control, he may be well paid for his efforts to improve his efficiency as measured by them.

Table 12. Relation of Operator's Labor Earnings to the Number of Factors in Which the Farmer Excels

No. of factors in which farmer excels	No. of farms	Your farm	The length of the lines is in proportion to the average operator's labor earnings	Average operator's labor earnings
None, 1 or 2	25	—	xxxxxxxxxxxxxxxxxxxx	\$2416
3 or 4	32	—	xxxxxxxxxxxxxxxxxxxx	2768
5, 6 or 7	15	—	xxxxxxxxxxxxxxxxxxxx	3447

The array in Table 12 suggests that it may be well 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 seven factors as indicators of elements of strength and weakness in his farm business.

Table 13. Measures of Farm Organization and Management Efficiency, 1948

Measures used in chart on page 13	Your farm	Average of 72 farms	14 most profit- able farms	14 least profit- able farms
Operator's labor earnings	\$ _____	\$2787	\$5674	\$536
(1) Crop yields*	_____	100	106	91
(2) % of tillable land in high ret. crops**	_____	41.1	38.3	38.0
(3) Ret. for \$100 feed to prod. livestock***	_____	100	101	94
(4) Prod. livestock units per 100 acres****	_____	9.8	9.2	10.7
(5) Size of business - work units	_____	314	374	251
(6) Work units per worker	_____	209	208	179
(7) Pow., mach., equip., & bldg. exp. per work unit	\$ _____	\$7.09	\$7.15	\$7.98

Items related to some of the above measures:

(3) Index of return for \$100 feed from				
Dairy cattle (See pages 18 and 19)	_____	100	102	86
Dual purpose cattle (See pages 18 and 19)	_____	100	83	87
Beef breeding herd (See page 23)	_____	100	90	-
Beef cattle - feeders (See page 22)	_____	100	136	93
Hogs (See page 20)	_____	100	111	96
Sheep - farm flock (See page 24)	_____	100	107	67
Chickens (See page 21)	_____	100	103	122
(4) Number of animal units	_____	17.2	20.6	15.7
(5) Work units on crops	_____	143	191	104
Work units on productive livestock	_____	158	156	133
Other work units	_____	13	27	14
(6) Number of family workers	_____	1.4	1.5	1.4
Number of hired workers	_____	.1	.3	-
Total number of workers	_____	1.5	1.8	1.4
(7) Power expense per work unit	\$ _____	\$4.15	\$4.31	\$4.28
Crop machinery expense per work unit	_____	1.49	1.58	1.54
Livestock equip. expense per work unit	_____	.30	.31	.35
Bldgs. & fencing exp. per work unit	_____	1.15	.95	1.81

*Given as a percentage of the average.

**Crops are marked in Table 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.

***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 72 farms included in this summary are located between the dotted lines across the center of this page.

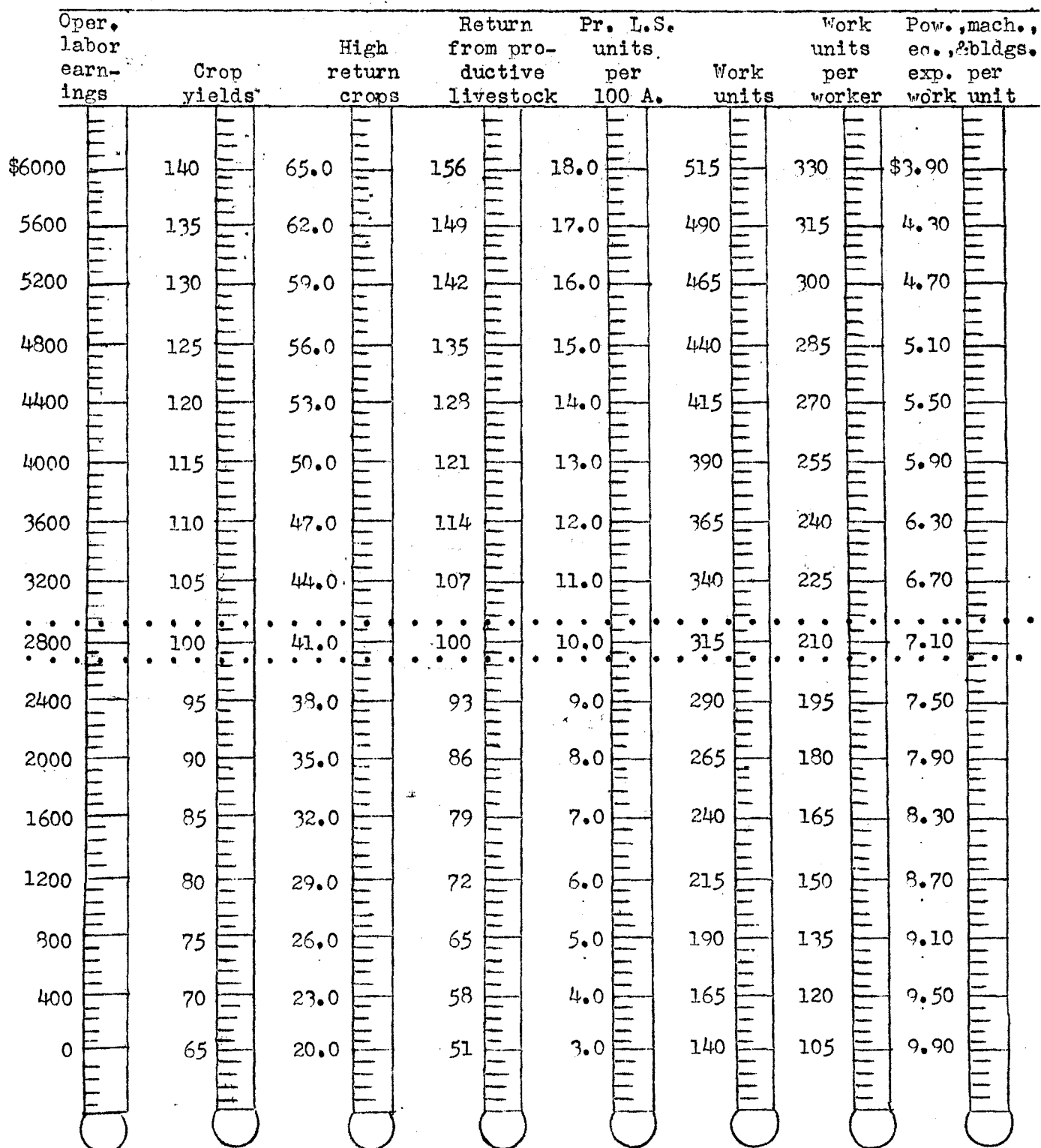


Table 14. Distribution of Acres in Farm, 1948.

Crop: (A), (B), (C) and (D) refer to ranking used in calculating % of tillable land in High Return Crops (see page 10)	No. growing this crop	Your farm	Average of 72 farms	12 most profitable farms	12 least profitable farms
Canning peas (A)	2	—	.5	—	1.1
Soybeans (B)	30	—	7.2	6.9	8.9
Flax (C)	44	—	16.4	29.9	7.4
Barley (D)	50	—	15.1	25.9	10.0
Oats (D)	71	—	43.3	51.5	36.9
Wheat (D)	31	—	10.3	23.7	3.2
Rye, Millet and buckwheat (D)	26	—	4.6	9.4	2.1
Total small grain and soybeans	72	—	97.4	147.3	69.6
Garden and truck crops (A)	4	—	—	—	—
Corn grain (A)	72	—	47.8	61.1	32.0
Corn silage (B)	29	—	3.1	2.4	3.9
Sweet corn (B)	2	—	.2	—	—
Corn fodder (D)	7	—	.6	.2	.3
Total cultivated crops	72	—	51.7	63.7	36.2
Alfalfa hay (A)	45	—	6.5	8.3	3.3
Other hay and seed crops *	33	—	4.0	5.6	5.7
Total tillable land in hay	58	—	10.5	13.9	9.0
Total tillable land in pasture**	25	—	5.6	9.7	2.9
Tillable land not cropped (D)	6	—	.8	1.4	.7
Total tillable land	72	—	166.0	236.0	118.4
Wild hay (non-tillable)	32	—	6.8	8.3	9.4
Non-tillable pasture	57	—	21.0	18.1	27.2
Timber (not pastured)	8	—	1.2	.2	5.3
Roads and waste	—	—	15.1	14.9	13.7
Farmstead	—	—	6.4	6.0	6.6
Total acres in farm	—	—	216.5	283.5	180.6
Per cent land tillable	—	—	76.7	83.2	65.6
Per cent tillable land in high ret. crops	—	—	41.0	38.3	38.0

* Soybean hay and clover and timothy hay were given a rating of C, and timothy or brome hay and annual hay, D.

** Alfalfa for pasture was given a rating of A and clover and timothy for pasture, C.

Table 15. Crop Yields Per Acre, 1948

Crop	Your farm	Average of 72 farms	14 most profitable farms	14 least profitable farms
Soybeans, bu.	_____	17.5	15.9	16.5
Flax, bu.	_____	12.5	13.6	11.3
Barley, bu.	_____	25.1	25.8	19.5
Oats, bu.	_____	36.0	42.1	28.7
Wheat, bu.	_____	14.5	16.7	12.5
Rye, bu.	_____	17.2	20.0	-
Millet, bu.	_____	17.9	-	-
Corn grain, bu.	_____	46.2	44.7	44.3
Corn silage, tons	_____	8.2	10.3	9.5
Corn fodder, tons	_____	2.5	-	-
Alfalfa hay, tons	_____	2.3	2.4	2.7
Other leg. & leg. mix. for hay, tons	_____	1.2	-	-
Legume seed, lbs.	_____	103	-	-
Brome or timothy hay, tons	_____	1.4	-	2.0
Annual hay, tons	_____	1.5	-	1.9
Wild hay on non-tillable land, tons	_____	.7	.9	.8

POWER AND MACHINERY EXPENSES

Power and machinery expense per crop acre is an indication of the economy with which capital is invested in these items. The crop acres per farm ranged from 45 to 354 with an average of 162 (Table 16). The expenses are high on the farms with a small acreage. In some cases, low expenses for labor might be offset by high power and equipment costs. The farmer is interested in operating at the lowest cost for power, machinery and labor combined.

Table 16. Power and Machinery Expenses Per Crop Acre, 1948

Items	Your farm	Average of 72 farms	14 most profitable farms	14 least profitable farms
Crop acres per farm	_____	166.4	233.2	124.3
Tractor and horse exp. per crop acre	_____	\$4.28	\$3.66	\$4.52
Crop & gen. mach. exp. per crop acre	_____	2.88	2.54	3.18

The feed cost for horses is a part of the cost of power on those farms maintaining horses. The annual feed cost per horse is shown in Table 17. Thirty-two farmers did not maintain horses.

Table 17. Feed Costs for Horses, 1948

Items	Your farm	Average of 40 farms
Feed per horse, lbs.:		
Grain	_____	355
Hay	_____	2594
Fodder and stover	_____	311
Feed cost per horse:		
Grain	_____	\$9.96
Roughage	_____	15.51
Pasture	_____	7.65
Total feed cost	_____	\$33.12
Number of work horses	_____	2.2
Number of colts	_____	-

AMOUNT OF LIVESTOCK

Nearly all the farmers maintained some dairy or dual purpose cattle. However, the average number of milk cows per farm was small (Table 18). Eight-seven per cent of the farmers kept hogs and eight-nine per cent raised poultry.

Table 18. Amount of Livestock, 1948

	Your farm	Average of 72 farms	14 most profitable farms	14 least profitable farms
Number of milk cows	_____	4.9	4.7	4.3
Number of other dairy cattle	_____	6.4	4.4	7.4
Number beef cows	_____	.5	.9	-
Number of sheep*	_____	7.6	6.9	21.4
Number of hens	_____	157	182	134
Number of litters of pigs raised	_____	6.4	7.5	4.3
Pounds feeder cattle produced	_____	775	2351	216
Pounds of hogs produced	_____	9865	11700	6370
Number of horses	_____	1.2	1.4	1.3

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

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 19. This differs from the "return over feed" shown in the enterprise statement in that it is the total for each class of livestock instead of a return "per head" "per unit" or "per 100 pounds". These data indicate the relative importance of different classes of livestock as a source of income and as a market for feed. The total return is the same as the returns and net increases shown on page 5. The value of milk consumed by calves is included in the total returns from dairy or dual purpose cows and in the total feed cost for other dairy or other dual purpose cattle. The value of milk consumed by calves is not included in either the total returns or the feed cost of "all dairy" or "all dual purpose" cattle. The return over feed is not a net return,

but rather the amount available from the gross income, after paying the feed bill, to cover the outlay for hired labor, power, equipment, taxes, insurance, interest and veterinary bills and to provide a return for the use of family labor and capital.

Table 19. Total Feed Costs and Returns From Your Livestock Enterprises, 1948

	Dairy or dual purpose cattle			Beef
	Cows	Other	All	breeding herd
Total returns	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____
	Feeder cattle	Hogs	Farm flock of sheep	Chickens
Total returns	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____

Feed is the largest single item of cost for all classes of livestock. However, the proportion of the total cost represented by feed varies considerably between classes of livestock. Feed makes up approximately 45 per cent of the total costs of maintaining dairy cattle and poultry, 50 per cent in the case of a farm flock of sheep and 75 to 90 per cent for hogs, feeder cattle and feeder lambs. Consequently, it is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock enterprises in order to be able to cover all the costs other than feed.

DAIRY CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 20, 21, and 22. Thirty-four herds were classified as dairy cattle and 22 herds were classified as dual purpose cattle. The return over feed cost per dairy cow varied from -\$18.10 to \$262.68 among the 34 dairy herds. The return over feed per dual purpose cow ranged from a low of -\$19.17 to a high of \$180.29. Some of the important factors that affected the return over feed were:

1. Rate of production (pounds of butterfat per cow).
2. Price received for butterfat.
3. Feeding efficiency (pounds T.D.N. fed per pound of butterfat).
4. Quality of ration (percentage of protein in T.D.N.).
5. Economy of ration (feed cost per pound butterfat).

Table 20. Factors of Cost and Returns from Dairy and Dual Purpose Cows, 1948

Items	Your farm	Average of 34 dairy herds	Average of 22 dual purpose herds
Pounds of butterfat per cow		212	157
Price rec. per lb. B.F. sold (cents)		90.4	83.9
As manufacturing cream (cents)		89.1	83.9
Other (cents)		110.3	-
Feeds per cow, lbs:			
Corn		933	955
Small grain		849	1000
Commercial feeds		272	79
Legume hay		2911	1963
Other hay		1676	2574
Fodder and stover		489	148
Total concentrates		2054	2034
Total hay and fodder		5076	4685
Silage		4036	5564
Total digestible nutrients*		4566	4777
T.D.N. per lb. B.F.		21.5	30.4
% T.D.N. that is protein		13.3	11.8
Feed cost per cow:			
Concentrates	\$	\$60.57	\$60.64
Roughages		50.34	40.50
Pasture		7.11	7.45
TOTAL FEED COSTS	\$	\$118.02	\$108.59
Value of produce per cow:			
B.F. sales	\$	\$175.77	\$117.10
Dairy produce used in house		15.52	23.99
Milk to livestock		23.10	22.92
Net increases in value of cows		8.51	14.49
TOTAL VALUE PRODUCED	\$	\$222.90	\$178.50
RETURNS ABOVE FEED COST PER COW	\$	\$104.88	\$69.91
RETURNS FOR \$100 OF FEED	\$	\$222	\$191
Feed cost per lb. B.F. (cents)		55.7	69.2
% fall freshening.		44	38
Number of cows**		6.6	5.1

*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 21. Feed Costs and Returns from Other Dairy and Dual Purpose Cattle, 1948

Items	Your farm	Average of 34 dairy herds	Average of 21 dual purpose herds
Feeds per head, lbs.:			
Concentrates	_____	558	460
Hay and fodder	_____	1620	1378
Silage	_____	1243	1190
Skim milk	_____	1077	910
Whole milk	_____	131	136
Feed cost per head:			
Concentrates	\$ _____	\$14.68	\$13.58
Roughages	_____	14.79	10.49
Milk	_____	11.39	10.15
Pasture	_____	2.51	3.02
TOTAL FEED COSTS PER HEAD	\$ _____	\$43.37	\$37.24
Net inc. in value of other dairy cattle	_____	\$72.60	\$67.07
RETURNS ABOVE FEED COST PER HEAD	_____	29.23	29.82
RETURNS FOR \$100 OF FEED	_____	205.00	207.00
Number of head of other dairy cattle	_____	7.4	9.1

Table 22. Feed Costs and Returns From All Dairy and Dual Purpose Cattle, 1948

Items	Your farm	Average of 34 dairy herds	Average of 21 dual purpose herds
Feeds per animal unit, lbs.:			
Concentrates	_____	1723	1483
Hay and fodder	_____	4301	3843
Silage	_____	3502	3984
Feed cost per animal unit:			
Concentrates	\$ _____	\$48.91	\$44.29
Roughages	_____	42.28	32.24
Pasture	_____	6.26	7.00
TOTAL FEED COST	\$ _____	\$97.45	\$83.53
Value of produce per animal unit:			
Dairy products	\$ _____	\$129.48	\$ 85.29
Net increase in val. of dairy cattle	_____	52.77	65.56
TOTAL VALUE	\$ _____	\$182.25	\$150.85
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$ 84.80	\$ 67.32
RETURNS PER \$100 OF FEED	\$ _____	\$213.00	\$206.00
Animal units of dairy cattle	_____	10.4	9.6

HOGS

The return over feed cost per 100 pounds of hogs produced varied from \$13.15 for those farmers ranking in the upper fifth in feeding efficiency to a return of \$4.33 less than the feed cost for those in the lowest one-fifth. Some of the important factors that affected return over feed were:

1. Quantity of feed required to produce 100 pounds of hogs.
2. Price received.
3. Number of pigs born per litter.
4. Number of pigs weaned per litter.

Table 23. Feed Costs and Returns From Hogs, 1948

Items	Your farm	Average of 63 farms	13 farms highest in returns above feed	13 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	316	208	452
Small grain	_____	156	129	241
Commercial feeds	_____	22	15	30
Total concentrates	_____	494	352	723
Skim milk and buttermilk	_____	107	115	62
Feed cost per cwt. hogs produced:				
Concentrates	\$ _____	\$14.07	\$ 9.46	\$22.20
Skim milk and buttermilk	_____	.49	.49	.31
Pasture	_____	.20	.22	.19
TOTAL FEED COSTS		\$14.76	\$10.17	\$22.70
Net increase in val. per cwt. hogs prod.	_____	\$20.99	\$23.32	\$18.37
RETURNS ABOVE FEED COST PER CWT. HOGS PROD.	_____	6.23	13.15	-4.33
RETURNS FOR \$100 OF FEED	_____	\$162.00	\$247.00	\$87.00
Price received per cwt. hogs sold	_____	22.88	24.20	21.63
No. of spring litters raised	_____	5.9	3.0	6.7
No. of fall litters raised	_____	1.3	1.6	.9
Total No. of litters raised	_____	7.2	4.6	7.6
No. of pigs born per litter	_____	7.5	7.4	6.9
No. of pigs weaned per litter	_____	6.2	6.5	5.6
Pounds of hogs produced	_____	21432	6393	11467

Table 24. Relation of Return Over Feed Per 100 Pounds of Hogs Produced to the Number of Factors in Which Farmers Excelled

No. of factors in which farmers excelled	No. of farms*	The length of the line is proportional to the average return over feed per 100 pounds of hogs produced	Average return over feed
0	6	xxxxxxxxxxxx	\$-5.62
1	12	xxxxxxxx	4.25
2	16	xxxxxxxxxxxxxxxx	7.47
3	18	xxxxxxxxxxxxxxxx	8.20
4	9	xxxxxxxxxxxxxxxx	10.03

*Two farmers purchased feeder pigs and were omitted from this table.

CHICKENS

Ten out of the 64 farmers raising chickens failed to receive a return large enough to cover the cost of feed. The average return over feed from the 64 flocks included in this report was \$1.72 per hen (Table 25).

Table 25. Feed Costs and Returns from Chickens, 1948

Items	Your farm	13 farms	
		Average of 64 farms	highest in lowest in returns above feed returns above feed
Feed per hen, lbs.:			
Grain		86	73
Commercial feeds		29	33
Total concentrates		115	106
Skim milk and buttermilk		15	9
TOTAL FEED COST PER HEN	\$	\$4.00	\$3.82
Value of produce per hen:			
Eggs sold and used in house	\$	\$5.04	\$6.18
Net increase in value of chickens		.68	1.70
TOTAL VALUE PRODUCED	\$	\$5.72	\$7.88
RETURNS ABOVE FEED COST PER HEN	\$	\$1.72	\$4.06
RETURNS FOR \$100 OF FEED	\$	\$151	\$207
Price rec'd per doz. eggs sold (cents)		40.1	40.3
Eggs laid per hen		153	184
Ave. no. of hens on farm during the yr.		174	176
% of hens that are pullets		79	88
% of death loss of hens		12	7
Number of chicks put on feed		249	335
Price paid per 100 chicks purchased	\$	\$29.35	\$26.36
Pounds of poultry produced		764	1614

Some of the important factors that affected the return over feed were:

1. Quantity of feed required per hen
2. Price received per dozen eggs sold
3. Eggs laid per hen
4. Per cent of hens that are pullets
5. Percentage death loss of hens

The data in Table 26 show that the flocks which ranked low in these factors had low returns over feed. The ten flocks which ranked below the average of the whole group in all of the factors or excelled in only one received a return above feed cost of \$0.54 per hen. The thirteen flocks which ranked above the average of the whole group in four or five factors had a return over feed per hen of \$3.06.

Table 26. Relation of Return Over Feed Per Hen to the Number of Factors in Which Farmers Excelled

No. of factors in which farmers excelled	No. of farms	The length of the line is proportional to the average return over feed per hen	Average return over feed
None or 1	10	xxxxx	\$.54
2	20	xxxxxxxxxxxxx	1.15
3	21	xxxxxxxxxxxxxxxxxxxxx	2.00
4 or 5	13	xxxxxxxxxxxxxxxxxxxxxxxxxxxxx	3.06

Table 27. Feed Costs and Returns From Feeder Cattle, 1948

Items	Your farm	Average of 8 farms
Feeds per cwt. beef produced, lbs.:		
Corn	_____	598
Small grain	_____	92
Commercial feeds	_____	81
Legume hay	_____	312
Other hay	_____	158
Total concentrates	_____	771
Total hay	_____	470
Silage	_____	505
Feed cost per cwt. beef produced:		
Concentrates	\$ _____	\$23.95
Roughages	_____	5.97
Pasture	_____	.11
TOTAL FEED COSTS	\$ _____	\$30.03
Net increase in value of feeders	\$ _____	\$38.27
RETURNS ABOVE FEED COST PER CWT.		
BEEF PRODUCED	_____	\$ 8.24
RETURNS FOR \$100 OF FEED	_____	\$144
Price rec'd per cwt. beef sold in 1948	\$ _____	\$28.64
Price paid per cwt. beef bought	\$ _____	24.07
No. of animal units	_____	14.8
Pounds of beef produced	_____	6368

Six farmers ranked below the average in the four factors. They failed to receive a return large enough to cover the cost of feed (Table 24). The nine farmers who ranked above the average of the entire group in each of the four factors received a return over feed of \$10.03 for each 100 pounds of hogs produced. These data suggest that superior management leads to high returns.

Table 28. Feed Costs and Returns from Beef Breeding Herds, 1948

Items	Your farm	Average of 6 farms
Feed per animal unit, lbs.:		
Concentrates	_____	892
Legume hay	_____	1768
Other hay	_____	936
Fodder and stover	_____	1545
Silage	_____	3495
Skim milk*	_____	50
Whole milk*	_____	10
Feed cost per animal unit:		
Concentrates	_____	\$26.37
Roughages	_____	41.26
Milk	_____	.52
Pasture	_____	7.78
Total feed cost	_____	75.93
Value of produce per animal unit:		
Dairy products	_____	\$ 8.87
Net increase in value of beef cattle	_____	145.61
Total value produced	_____	154.48
Return over feed cost per animal unit	_____	\$78.55
Return for \$100 of feed	_____	\$215.00
Number of cows and herd bulls	_____	5.3
Number of animal units	_____	10.5
Pounds of beef produced	_____	5100

* Milk from the dairy or dual purpose herd.

Table 29. Feed Costs and Returns from a Farm Flock of Sheep, 1948

Items	Your farm	Average of 9 farms
Feed per head,* lbs.:		
Concentrates	_____	68
Legume hay	_____	142
Other hay	_____	152
Fodder and stover	_____	9
Silage	_____	70
Feed cost per head:		
Concentrates	\$ _____	\$ 1.93
Roughages	_____	2.35
Pasture	_____	1.45
TOTAL FEED COSTS	\$ _____	5.73
Value of produce per head:		
Wool	_____	\$ 2.55
Net increase in value of sheep	_____	10.34
TOTAL VALUE PRODUCED	\$ _____	12.89
RETURNS ABOVE FEED COST PER HEAD	_____	\$ 7.16
RETURNS FOR \$100 OF FEED	\$ _____	\$ 223
Price per cwt. of lambs sold	\$ _____	\$22.87
Price per lb. wool sold (cents)	_____	42.8
Pounds of wool per sheep sheared	_____	7.6
Number of ewes kept for lambing	_____	40
% lamb crop**	_____	97
% death loss**	_____	11.2
No. of head of sheep*	_____	58.7

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

** Lambs which die during month of birth are not included.

EXPLANATION OF "WORK UNITS"

The total "work units" for any one farm is a measure of the size of that farm business. A work unit as used in this report is the average accomplishment of a farm worker in a ten hour day, working on crops and productive livestock at average efficiency or ten hours of work off the farm for pay. The number of work units for each class of livestock and each acre of crop are presented in Table 30.

Table 30. Number of Work Units for Each Class of Livestock and Each Acre of Crop

Item	No. of work units	Item	No. of work units
Dairy and dual pur. cows	14.0 per cow	Small grain	.7 per acre
Other dairy & du.pur.cattle	4.0 per an.unit*	Corn, husked	1.1 per acre
Beef breeding herd	4.0 per an.unit*	Corn, hogged	.7 per acre
Feeder cattle	.35 per 100 lbs.	Corn, shredded	2.2 per acre
Sheep - farm flock	1.8 per an. unit*	Corn silage	1.7 per acre
Hogs	.3 per 100 lbs.	Corn fodder	1.0 per acre
Turkeys	.7 per 100 lbs.	Alfalfa hay	.9 per acre
Hens	22.0 per 100 hens	Soybean hay	1.4 per acre
Soybeans for grain	.7 per acre	Other hay crops	.6 per acre

* 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 1400 pounds of turkeys produced.

Table 31. Summary of Farm Inventories by Years

	1947	1948
Number of farms	62	72
Dairy and dual purpose cows	\$438	\$685
Other dairy & dual purpose cattle	190	412
Beef cattle (inc. feeders)	80	464
Hogs	652	840
Sheep	104	120
Poultry	122	182
Productive livestock (total)	1586	2703
Horses	40	48
Crop, seed, & feed	1452	2402
Power Mach. (farm share)	1223	1594
Crop & general mach. (farm share)	939	1477
Livestock equipment & supplies	156	279
Mach. & equipment (total)	2318	3350
Miscellaneous	1	1
Buildings, fences, etc.	4260	5240
Land	8515	8900
Total farm capital	18172	22644

Table 32. Summary of Farm Earnings by Years

	1947	1948
Monthly charge for unpaid family labor	\$ 121	\$ 129
Monthly charge for board to hired labor	35	41
FARM RECEIPTS		
Dairy and dual-purpose cows	\$ 88	\$ 304
Dairy products	434	800
Other dairy & dual-purpose cattle	131	317
Beef cattle	117	459
Hogs	1601	2101
Sheep and wool	41	127
Poultry	148	181
Eggs	441	783
Horses	6	8
Corn	1033	910
Small grain	1776	1954
Other crops	285	367
Machinery & equip. sold	139	297
Agricultural adjustment payments	16	41
Income from work off the farm	64	147
Miscellaneous	15	26
(1) Total farm sales	6335	8822
(2) Increase in farm capital	1913	1931
(3) Family living from the farm	348	437
(4) Total farm receipts (1)+(2)+(3)	8596	11190
FARM EXPENSES		
Dairy and dual purpose cows bought	\$ 112	\$ 212
Other dairy and dual-pur. cattle bought	92	122
Beef cattle bought	35	426
Hogs bought	187	170
Sheep bought	82	36
Poultry bought	71	93
Horses bought	8	15
Misc. livestock expense	59	94
Misc. crop expenses	420	546
Feed bought	635	834
Custom work hired	206	312
Mech. power mach. (farm share)(new)	535	664
Mech. power mach. (farm share)(upkp.)	218	235
Mech. power (f. share)(gas, oil, etc.)	482	653
Crop and general mach. (new)	441	906
Crop and general mach. (upkeep)	116	157
Livestock equipment (new)	79	93
Livestock equipment (upkeep)	22	41
Buildings and fencing (new)	231	304
Buildings and fencing (upkeep)	85	150
Hired labor	110	229
Taxes	235	282
General farm and insurance	37	65
(5) Total farm purchases	4498	6639
(6) Decrease in farm capital	-	-
(7) Interest on farm capital	909	1132
(8) Unpaid family labor	399	539
(9) Board furnished hired labor	31	93
(10) Total farm exp. (sum of (5) to (9))	5837	8403
(11) Oper. labor earnings (4) - (10)	2759	2787

Table 33. Summary of Acres and Crop Yields Per Farm by Years.

	1947	1948
<u>ACRES PER FARM</u>		
Soybeans	7.5	7.2
Flax	16.2	16.4
Barley	11.2	15.1
Oats	39.3	43.3
Wheat	9.6	10.3
Other small grains	4.0	5.1
Total small grains and beans	87.8	97.4
Corn for grain	47.4	47.8
Other cultivated crops	3.1	3.9
Total cultivated crops	50.5	51.7
Alfalfa hay	4.0	6.5
Other hay and seed crops	2.1	4.0
Total tillable land in hay	6.1	10.5
Total tillable land in pasture	3.9	5.6
Tillable land not cropped	5.9	.8
Total tillable land	154.2	166.0
Wild hay (non-tillable)	6.5	6.8
Non-tillable pasture	15.6	21.0
Timber, roads, waste, and farmstead	28.1	22.7
Total land in farm	204.4	216.5
<u>CROP YIELDS PER ACRE</u>		
Soybeans, bu.	13.0	17.5
Flax, bu.	10.1	12.5
Barley, bu.	19.9	25.1
Oats, bu.	26.0	36.0
Wheat, bu.	14.4	14.5
Rye, bu.	22.0	17.2
Corn for grain, bu.	27.2	46.2
Corn for silage, tons	5.6	8.2
Corn fodder, tons	1.1	2.5
Alfalfa hay, tons	1.9	2.3
Brome or timothy hay, tons	.8	.7

Table 34. Summary of Miscellaneous Items by Years

	1947	1948
<u>MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY</u>		
% high return crops	45.5	41.1
A. U. livestock per 100 A.	6.7	9.8
No. of work units	231	314
Work units per worker	165	209
Expenses per work unit	\$7.04	\$7.09
<u>AMOUNT OF LIVESTOCK</u>		
No. of milk cows	3.2	4.9
No. of other dairy cattle	3.3	6.4
No. head of sheep	6.7	7.6
No. of hens	102	157
Lbs. hogs produced	7093	9865
No. litters of hogs raised	5.2	6.4
No. of horses	.9	1.2
<u>PRODUCTION PER UNIT OF LIVESTOCK</u>		
Lbs. B.F. per dairy cow	206	212
Lbs. B.F. per dual purpose cow	205	157
Pigs weaned per litter	6.1	6.2
No. eggs laid per hen	146	153
Lbs. wool per sheep sheared	9.5	7.6
% lamb crop	129	97
<u>PRICE RECEIVED PER</u>		
Lb. B.F. sold (cts.)	80.6	87.8
Cwt. hogs sold	\$24.22	\$22.88
Cwt. beef sold	22.26	23.64
Cwt. lambs sold	21.85	22.87
Lb. wool sold (cts.)	35.4	42.8
Doz. eggs sold (cts.)	37.8	40.1
<u>RETURN ABOVE FEED COST PER</u>		
Dairy cow	\$62.51	\$104.88
Dual purpose cow	33.70	69.91
Animal unit in beef breeding herd	-	78.55
Cwt. feeder cattle produced	5.12	8.24
Cwt. hogs produced	6.97	6.23
Head of sheep	7.76	7.16
Hen	.66	1.72
<u>FEED COST PER</u>		
Dairy cow	117.53	118.02
Dual purpose cow	140.06	108.59
An. unit in beef breeding herd	-	75.93
Cwt. feeder cattle produced	18.23	30.03
Cwt. hogs produced	17.19	14.76
Head of sheep	8.15	5.73
Hen	5.18	4.00
Horse	43.67	33.12