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Department of Agriculture

and

Vocational Division
Minnesota Department of Education

Cooperating

ANNUAL REPORT

of the

FARM MANAGEMENT SERVICE for VETERANS

TAKING ON-THE-FARM TRAINING

in

NORTHEASTERN MINNESOTA

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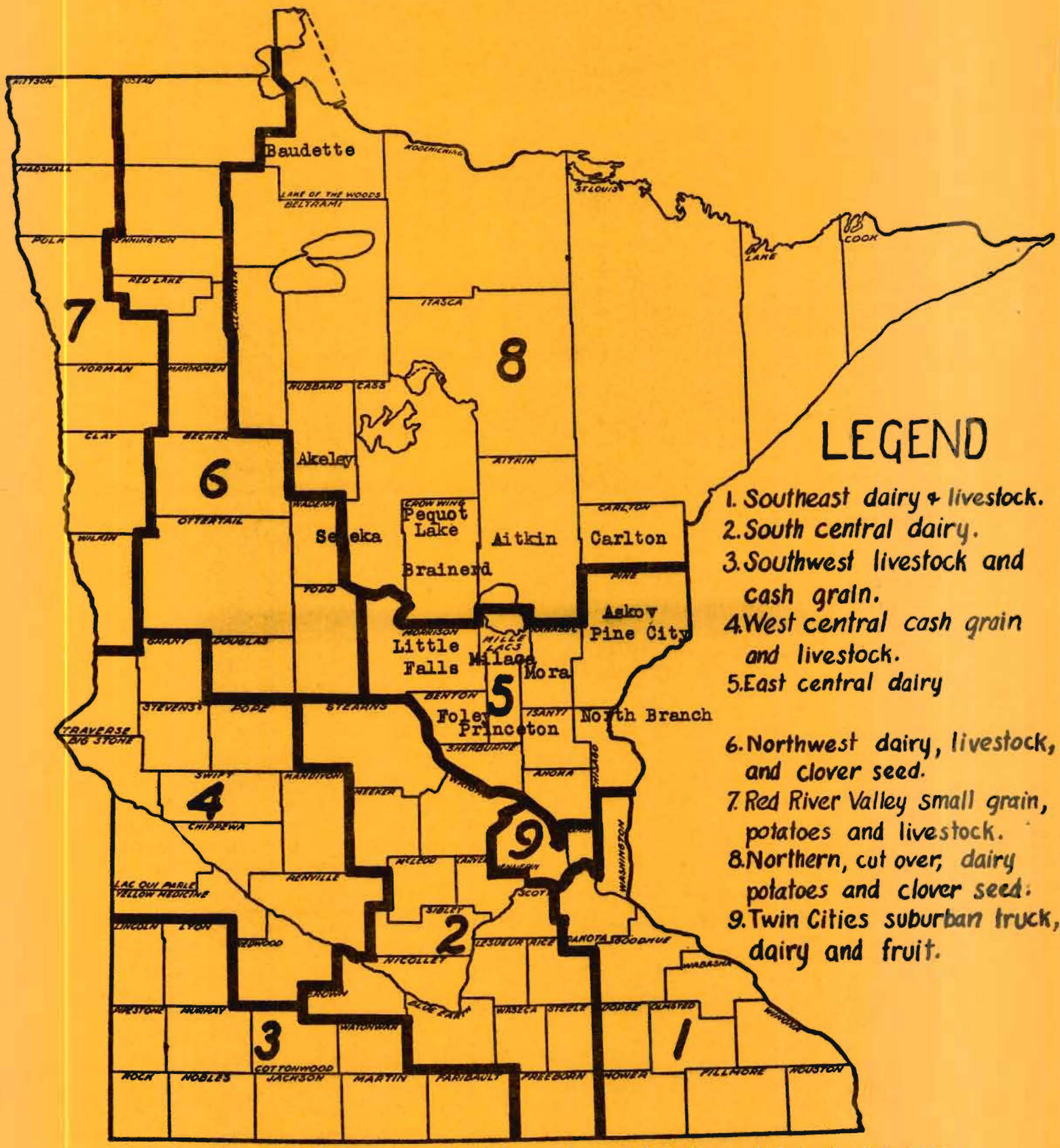

Fig. 1. Type-of-Farming Areas in Minnesota and Location of Schools Submitting Farm Records for this Report.

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

T. R. Nodland, G. A. Pond and B. F. Stanton

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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 StateDepartment of Education was represented by G.R. Cochran.

This report deals with the veterans enrolled by fifteen schools located in northeastern Minnesota (Type-of-Farming Areas 5 and 8)[1]. The map on the inside front cover shows the location of the schools. The following tabulation shows by schools the number of farm records submitted in 1948:

Askov	5	Carlton	3	North Branch	10
Aitkin	3	Foley	3	Pequot Lakes	2
Akeley	8	Little Falls	12	Pine City	2
Baudette	15	Milaca	7	Princeton	15
Brainerd	2	Mora	39	Sebeka	5
				Total	131

The subsequent pages in this report show the data for 124 farms. Seven farms were omitted from all the averages in the tables becausethe records did not include a full year or they were otherwise too incomplete 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 $2769 to $28716. The average investment for all farms 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 63 out of the 124 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.

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[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 Jan. 1	Your farm Dec. 31	Average of 124 farms Jan. 1	Average of 124 farms Dec. 31
Size of farm (acres)			162	
Size of business (work units)**			299	
Dairy and dual purpose cows			$1069	$1152
Other dairy & dual purpose cattle			442	544
Beef cattle			17	25
Hogs			116	162
Sheep			54	49
Poultry			67	70
Productive livestock (total)			1765	2002
Horses			76	70
Crop, seed, and feed			815	979
Power mach. (farm share)			869	1108
Crop & general mach. (farm share)			574	767
Livestock equipment & supplies			144	180
Mach. & equipment (total)			1587	2055
Misc.			-	1
Buildings, fences, etc.			3019	3097
Land			2817	2818
Total farm capital			10079	11022

Items	25 most profitable farms Jan. 1	25 most profitable farms Dec. 31	25 least profitable farms Jan. 1	25 least profitable farms Dec. 31
Size of farm (acres)	177		160	
Size of business (work units)**	373		273	
Dairy & dual purpose cows	$1206	$1396	$1060	$1090
Other dairy & dual purpose cattle	572	788	449	530
Beef cattle	-	-	11	17
Hogs	109	296	195	126
Sheep	13	16	109	91
Poultry	115	132	42	30
Productive livestock (total)	2015	2628	1866	1884
Horses	54	56	86	78
Crop, seed, and feed	1184	1501	892	940
Power mach. (farm share)	1204	1618	847	1161
Crop & general mach.	849	1143	573	728
Livestock equipment & supplies	200	239	148	197
Mach. & equipment (total	2253	3000	1568	2086
Misc.	1	-	1	5
Buildings, fences, etc.	3803	3857	3089	3096
Land	4514	4514	2544	2548
Total farm capital	13824	15556	10046	10637

*For the purpose of comparison, all the data shown in this report with the exception of Tables 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 124 farms	25 most profitable farms	25 least profitable farms
FARM RECEIPTS				
Dairy and dual-purpose cows		$308	$364	$245
Dairy products		1934	2504	1690
Other dairy & dual-purpose cattle		327	375	334
Beef cattle		1	-	-
Hogs		275	421	268
Sheep and wool		54	21	63
Poultry (including turkeys)		109	385	32
Eggs		245	496	112
Horses		14	12	28
Small grain		264	577	109
Other crops		233	510	54
Machinery & equip. sold		168	195	192
Agricultural adjustment payments		38	49	29
Income from work off the farm		40	39	9
Miscellaneous		17	9	49
(1) Total farm sales		4027	5957	3214
(2) Increase in farm capital		943	1732	591
(3) Family living from the farm		422	489	369
(4) Total farm receipts (1)+(2)+(3)		5392	8178	4174
FARM EXPENSES				
Dairy and dual-purpose cows bought	$	$169	$237	$181
Other diary and dual-pur. cattle bot		84	169	57
Beef cattle bought		6	-	-
Hogs bought		43	89	40
Sheep bought		5	1	-
Poultry bought (including turkeys)		41	77	13
Horses bought		13	18	23
Misc. livestock expense		44	61	41
Misc. crop expenses		196	254	160
Feed bought		560	746	429
Custom work hired		191	268	164
Mech. power mach. (farm share)(new)		526	800	588
Mech. power mach. (farm share)(upkp.)		138	178	126
Mech. power (F. share)(gas, oil, etc.)		327	421	312
Crop and general mach. (new)		306	446	302
Crop and general mach. (upkeep)		69	86	77
Livestock equipment (new)		67	75	81
Livestock equipment (upkeep)		12	18	9
Buildings and fencing (new)		222	223	172
Buildings and fencing (upkeep)		84	65	132
Hired labor		97	110	79
Taxes		123	162	112
General farm and insurance		45	54	45
(5) Total farm purchases		3368	4558	3143
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		528	734	517
(8) Unpaid family labor		325	425	410
(9) Board furnished hired labor		25	25	30
(10) Total farm exp. (sum of (5) to (8)		4246	5742	4100
(11) Oper. labor earnings (4) - (10)		1146	2436	74

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

Items	Your farm	Average of 124 farms	25 most profitable farms	25 least profitable farms
RETURNS AND NET INCREASES				
Dairy and dual purpose cows	_____	$2166	$2825	$1832
Other dairy & dual pur. cattle	_____	559	702	493
Beef cattle	_____	5	-	6
Hogs	_____	331	571	216
Sheep - farm flock	_____	44	23	46
Poultry (including turkeys)	_____	361	883	149
All productive livestock	_____	3466	5004	2742
Crops, seed and feed	_____	-72	376	-321
Agricultural conservation payments	_____	38	49	29
Income from labor off the farm	_____	30	18	8
Miscellaneous	_____	94	108	94
(1) Total returns & net increases	_____	3556	5555	2552
EXPENSES AND NET DECREASES				
Horses	_____	$ 54	$ 35	$ 79
Tractor	_____	286	409	258
Truck	_____	37	80	19
Auto (farm share)	_____	237	248	256
Gas engine and elect. exp.(f.shr.)	_____	38	59	24
Hired power	_____	95	123	86
Total power	_____	747	954	722
Crop and general machinery	_____	196	272	218
Livestock equipment	_____	41	51	39
Buildings, fencing and tiling	_____	178	184	220
Misc. productive livestock exp.	_____	43	61	38
Labor	_____	509	647	567
Real estate taxes	_____	95	126	87
Personal property tax	_____	28	36	25
Insurance	_____	24	23	26
General farm	_____	21	31	19
Interest on farm capital	_____	528	734	517
(2) Total expenses & net decreases	_____	2410	3119	2478
(3) Oper. labor earnings (1) - (2)	_____	1146	2436	74

*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 record of both farm income and personal expense.

The value of the family living as shown in Table 4 amounts to 8 per cent of the total farm receipts on these farms. The values assigned are a conservative market price on the farm. If these products had been purchased, the amount paid out would have been considerably higher.

The rental value of the dwelling is calculated by taking 10 per cent of the average inventory value of the dwelling.

Table 4. Family Living from the Farm, 1948

Items	Your farm	Average 124 farms	25 most profitable farms	25 least profitable farms	Your farm	Average 124 farms	25 most profitable farms	25 least profitable farms
Adult equiv.- family	____	2.4	2.3	2.2				
- others	____	.6	.6	.7				
Whole milk	____	787 qts.	831	718	____	$68.35	$64.31	$61.34
Skim milk	____	87 qts.	84	5	____	2.93	3.78	.22
Cream	____	84 pts.	96	71	____	20.47	21.46	16.68
Farm made butter	____	6 lbs.	3	9	____	4.92	2.21	7.51
Beef	____	206 lbs.	245	179	____	35.81	46.68	34.17
Hogs	____	238 lbs.	255	255	____	53.06	52.13	57.43
Sheep	____	5 lbs.	-	-	____	.57	-	-
Poultry	____	52 lbs.	70	38	____	13.18	14.93	9.87
Eggs	____	75 doz.	114	43	____	31.48	47.17	19.34
Potatoes	____	11 bu.	14	11	____	14.95	19.72	11.48
Vegetables & fruits					____	19.20	31.05	11.94
Farm fuel	____	7 cds.	5	4	____	31.43	34.36	21.87
Rental vl. of house					____	125.73	150.73	117.00
Misc.					____	.07	-	.36
Total					____	$422.15	$488.53	$369.21

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 $109 per month for family living in addition to the food, fuel and housing furnished by the farm.

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

Items	Your farm	Average of 112 farms	23 most profitable farms	23 least profitable farms
Number of persons in family	_____	3.2	3.0	2.7
Number of adult equivalents in family	_____	2.4	2.2	2.0
Number of other adult equivalents*	_____	.2	.3	.3
EXPENSES				
Food and meals bought	$_____	$483	$490	$411
Operating and supplies	_____	102	122	81
Clothing and clothing materials	_____	129	155	112
Personal care, personal spending	_____	86	75	84
Furnishings and equipment	_____	125	235	73
Education, recreation and development	_____	55	79	44
Medical care and health insurance	_____	105	139	94
Church, welfare, gifts	_____	55	81	45
Personal share of auto expense	_____	68	77	59
Household share of elect.& gas eg. exp.	_____	14	19	8
H.H. & pers. shr. of new auto & motors bot.	_____	83	144	76
Total	_____	1305	1607	1087
State and federal income tax	_____	1	-	4
Insurance	_____	27	31	26
Total household and pers. cash exp.	_____	1333	1638	1117
Food furnished by the farm	_____	251	265	229
Fuel furnished by the farm	_____	31	34	24
House rental	_____	122	155	111
Total cash expenses and perquisites	_____	1737	2092	1481
Investments	_____	$ 59	-	$214
RECEIPTS				
Sale of investments	_____	$ 37	$ 45	$ 48
Income from outside investments	_____	7	11	8
Veterans compensation	_____	1157	1124	1143
Misc. income	_____	7	17	3

*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, part-owners and renters 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		61 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	———		137.3	
Owned	———		137.3	
Rented	———			
Total farm capital	———	———	$8249	$9155
Accounts receivable	———	———	22	28
Stocks and bonds	———	———	86	60
Life insurance	———	———	38	45
Outside real estate	———	———	5	15
Other outside investments	———	———	8	10
Total outside investments	———	———	137	130
Cash on hand and in bank	———	———	127	146
Other household & personal assets	———	———	888	977
Total cash, household & personal assets	———	———	1015	1123
TOTAL ASSETS	———	———	9423	10436
Federal Land Bank Mortgage	———	———	124	120
Other mortgages on land operated	———	———	2064	1946
Mortgages on other real estate	———	———	-	6
Chattel mortgages	———	———	779	666
Notes payable	———	———	587	480
Accounts payable	———	———	78	166
TOTAL LIABILITIES	———	———	3632	3384
Farmer's net worth	———	———	5791	7052
Gain in net worth		———		+1261

	28 part owners		14 renters	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	169.5		161.0	
Owned	100.5		-	
Partner's share or rented	69.0		161.0	
Total farm capital	$8435	$9620	$3029	$4395
Accounts receivable	40	29	157	91
Stocks and bonds	107	99	339	199
Life insurance	36	50	112	194
Outside real estate	-	-	-	695
Other outside investments	13	18	13	13
Total outside investments	156	167	464	1101
Cash on hand and in bank	223	277	328	313
Other household and personal assets	851	990	842	1084
Total cash, household & personal assets	1074	1267	1170	1397
TOTAL ASSETS	9705	11083	4820	6984
Federal Land Bank Mortgage	69	64	-	-
Other mortgages on land operated	1249	1162	-	-
Mortgages on other real estate	-	-	-	250
Chattel mortgages	611	511	585	517
Notes payable	292	251	179	307
Accounts payable	100	140	103	99
TOTAL LIABILITIES	2321	2128	867	1173
Farmer's net worth	7384	8955	3953	5811
Gain in net worth		+1571		+1858

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

	Your farm	61 Owners	28 part-owners	14 renters
FARM RECEIPTS				
Dairy and dual purpose cows		$ 293	$ 252	$ 299
Dairy products		1762	1764	1844
Other dairy and dual purpose cattle		278	397	256
Beef cattle		-	6	-
Hogs		281	230	67
Sheep and wool		77	4	36
Poultry		52	304	60
Eggs		224	309	194
Horses		15	17	5
Small grain		162	256	81
Other crops		222	153	90
Machinery & equipment sold		159	108	136
Agricultural adjustment payments		37	37	22
Income from work off the farm		41	39	8
Misc.		24	6	25
(1) Total farm sales		3627	3882	3123
(2) Increase in farm capital		906	1185	1366
(3) Family living from the farm		393	417	438
(4) Total farm rec. (1)+(2)+(3)		4926	5484	4927
FARM EXPENSES				
Dairy and dual purpose cows bot		158	135	325
Other dairy & dual pur. cattle bot		75	84	129
Beef cattle bot.(including feeders)		1	9	-
Hogs bot		43	63	14
Sheep bot (including feeders)		4	-	1
Poultry bot (including turkeys)		38	52	21
Horses bot		15	7	4
Misc. livestock expenses		43	48	44
Misc. crop expenses		169	233	132
Feed bot		530	682	450
Custom work hired		192	185	134
Mech. power mach.(farm share)(new)		429	460	780
Mech. power mach.(farm share)(upkeep)		123	157	134
Mech. power (farm share)(gas,oil,etc.)		281	352	318
Crop and general mach. (new)		296	343	131
Crop and general mach. (upkeep)		62	70	49
Livestock equipment (new)		86	62	20
Livestock equipment (upkeep)		11	9	12
Land, buildings & fencing (upkeep)		380	333	155
Buildings and fencing (upkeep)		93	71	38
Hired labor		108	78	83
Taxes (real estate & pers. property)		107	94	29
General farm and insurance		49	43	24
Cash rent		-	70	216
Interest paid		123	85	21
(5) Total farm purchases		3416	3725	3264
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		312	366	165
(8) Unpaid family labor		178	258	243
(9) Board furnished hired labor		26	28	14
(10) Total farm exp.(Sum of (5) to (9)		3932	4377	3686
(11) Operator's labor earn. (4) - (10)		994	1107	1241
(12) Ret. cap.& family lab.(7)+(8)+(11)		1484	1731	1649

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 61 owners, 28 part-owners and 14 renters is shown in Table 7. The partnerships represent operators who own real estate and working capital in partnership with other individuals. In all cases they are working partnerships in which two or more partners are working together. 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.

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 $2436 and of those in the lower 20 per cent was $74. This is a range of $2362 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.[1]

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		No. of	Average operator's
Range	Average	farms	labor earnings
Below 70	59	21	$ 870
70 - 124	97	80	1053
125 and above	147	23	1722

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.

[1] See Pond, G. A. "Why Farm Earnings Vary." Minn. Agri. Expt. Sta. Bul. 386, June, 1945.

Table 9. Relation of Choice of Crops to Farm Earnings

Percent of tillable land in high return crops		No. of farms	Average operator's labor earnings
Range	Average		
Below 12.0	6.4	26	$873
12.0 - 32.9	22.3	74	1100
33.0 and above	45.3	24	1583

Return from Livestock. This is a measure of feeding efficiency. All of these farmers maintain dairy cattle. In addition to the dairy herd some farmers maintain a few hogs, chickens and sheep. 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 improvements in feeding efficiency results in a higher earnings.

Table 10. Relation of Returns From Productive Livestock to Farm Earninings

Index of returns for $100 feed consumed by productive livestock*		No. of farms**	Average operator's labor earnings
Range	Average		
Below 78	66	25	$724
78 - 129	99	77	1243
130 and above	148	21	1255

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

**One farmer did not maintain 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 this area where hay and pasture are the predominant crops. They provide employment throughout the year and aid in maintaining or building up the fertility of the land.

Table 11. Relation of Amount of Livestock to Farm Earnings

Livestock units per 100 acres		No. of farms	Average operator's labor earnings
Range	Average		
Below 8.0	5.5	25	$871
8.0 - 17.9	12.4	75	1059
18.0 and above	22.5	24	1704

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 12. 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 12. Relation of Size of Business to Farm Earnings

Work units		No. of	Average operator's
Range	Average	farms	labor earnings
Below 225	183	25	$620
225 - 359	285	74	1176
360 and above	458	25	1584

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.

Table 13. Relation of Work Accomplished Per Worker to Farm Earnings

Work units per worker		No. of	Average operator's
Range	Average	farms	labor earnings
Below 165	147	20	$546
165 - 284	224	82	1186
285 and above	353	22	1543

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.

Table 14. Relation of Expenses to Farm Earnings

Expenses per work unit		No. of	Average operator's
Range	Average	farms	labor earnings
$5.10 and above	$6.02	25	$966
$3.05 - $5.09	3.87	70	1180
Below $3.05	2.40	29	1219

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 can not be determined. The combined or cumulative influence of the seven management factors on earnings is shown in Table 15. 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 15. 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
0 or 1	11	____	xxxxx	$294
2 or 3	68	____	xxxxxxxxxxxxxxxx	1027
4 or 5	36	____	xxxxxxxxxxxxxxxxxxxxxxx	1425
6 or 7	9	____	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	1972

The array in Table 15 suggests that it may be well worth while for each cooperator to study carefully his ranking on pages 14 and 15, and learn his standing in respect to each of the seven factors as indicators of elements of strength and weakness in his farm business.

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 16.

Table 16. 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	18.0 per cow	Small grain	1.2 per acre
Other dairy&du.pur.cattle	5.5 per an. unit*	Potatoes	4.5 per acre
Beef breeding herd	4.8 per an. unit*	Corn, husked	2.0 per acre
Sheep - farm flock	2.8 per an. unit*	Corn, shredded	3.0 per acre
Hogs	.5 per 100 lbs.	Corn silage	2.0 per acre
Turkeys	1.0 per 100 lbs.	Corn fodder	1.4 per acre
Hens	26.0 per 100 hens	Alfalfa hay	1.4 per acre
Canning peas	2.0 per acre	Other hay crops	.8 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 17. Measures of Farm Organization and Management Efficiency, 1948

Measures used in chart on page 15	Your farm	Average of 124 farms	25 most profitable farms	25 least profitable farms
Operator's labor earnings	$____	$1146	$2436	$74
(1) Crop yields*	____	100	117	91
(2) % of tillable land in high ret. crops**	____	23.4	30.5	19.5
(3) Ret. for $100 feed to prod. livestock***	____	100	102	83
(4) Prod. livestock units per 100 acres****	____	13.0	14.7	12.6
(5) Size of business - work units	____	299	373	273
(6) Work units per worker	____	230	249	210
(7) Pow., mach., equip., & bldg.exp. per work unit	____	$3.96	$3.96	$4.52
Items related to some of the above measures:				
(3) Index of return for $100 feed from				
Dairy cattle (See pages 20 and 21)	____	100	102	84
Beef cattle - breeding herd	____	100	---	--
Beef cattle - feeders	____	100	---	--
Hogs (See page 24)	____	100	93	101
Sheep - farm flock (See page 25)	____	100	---	--
Chickens (See page 23)	____	100	101	111
(4) Number of animal units	____	15.0	18.4	14.0
(5) Work units on crops	____	93	119	86
Work units on productive livestock	____	201	251	186
Other work units	____	5	3	1
(6) Number of family workers	____	1.2	1.4	1.2
Number of hired workers	____	.1	.1	.1
Total number of workers	____	1.3	1.5	1.3
(7) Power expense per work unit	$____	$2.59	$2.61	$2.84
Crop machinery expense per work unit	____	.62	.74	.72
Livestock equip. expense per work unit	____	.14	.13	.14
Bldgs. & fencing exp. per work unit	____	.61	.48	.82

*Given as a percentage of the average.

**Crops are marked in Table 18 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 14, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 124 farms included in this summary are located between the dotted lines across the center of this page.

Oper. labor earnings	Crop yields	High return crops	Return from productive livestock	Pr. L.S. units per 100 A.	Work units	Work units per worker	Pow., mach., eq., & bldgs. exp. per work unit
$3150	156	47.5	148	23.4	460	350	$1.55
2900	149	44.5	142	22.1	440	335	1.85
2650	142	41.5	136	20.8	420	320	2.15
2400	135	38.5	130	19.5	400	305	2.45
2150	128	35.5	124	18.2	380	290	2.75
1900	121	32.5	118	16.9	360	275	3.05
1650	114	29.5	112	15.6	340	260	3.35
1400	107	26.5	106	14.3	320	245	3.65
1150	100	23.5	100	13.0	300	230	3.95
900	93	20.5	94	11.7	280	215	4.25
650	86	17.5	88	10.4	260	200	4.55
400	79	14.5	82	9.1	240	185	4.85
150	72	11.5	76	7.8	220	170	5.15
-100	65	8.5	70	6.5	200	155	5.45
-350	58	5.5	64	5.2	180	140	5.75
-600	51	2.5	58	3.9	160	125	6.05

Table 13. 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 124 farms	25 most profitable farms	25 least profitable farms
Flax	(B)	18		4.0	7.5	1.8
Barley	(B)	12		.5	1.0	.2
Oats	(C)	103		15.5	20.1	18.6
Wheat	(D)	11		.8	.4	.1
Rye, peas, millet, buckwheat and soybeans	(D)	12		1.1	.8	2.5
Total small grain and peas		106		21.9	29.8	23.2
Garden and rutabagas	*	10		.1	.1	.1
Potatoes	(B)	20		.2	.3	.1
Corn silage	(C)	57		4.5	5.0	3.9
Corn grain	(D)	77		7.6	12.7	6.4
Corn fodder	(D)	31		1.1	.7	.9
Total cultivated crops		106		13.5	18.8	11.4
Alfalfa hay	(A)	52		5.8	11.2	4.0
Alfalfa seed	(B)	7		1.1	2.9	.6
Red or alsike clover hay	(B)	16		1.4	2.5	.8
Red or alsike clover seed	(B)	11		1.1	3.0	.5
Mixed legumes & non-legumes	(C)	44		9.7	3.0	11.1
Timothy and/or brome hay	(D)	29		4.1	5.5	6.8
Wild hay on tillable land	(D)	19		3.3	1.8	1.4
Annual hay	(D)	36		2.9	.6	4.9
Total tillable land in hay		119		29.4	30.5	30.1
Legumes and mixtures	**	12		.7	1.0	.4
Other tillable pasture	(D)	28		3.0	1.3	2.4
Total tillable land in pasture		36		3.7	2.3	2.8
Tillable land not cropped	(D)	32		2.7	3.3	2.3
Total tillable land		124		71.2	84.7	69.8
Wild hay (non-tillable)		50		6.9	4.3	5.4
Non-tillable pasture		118		52.5	47.5	51.8
Timber (not pastured)		46		14.6	23.1	19.0
Roads and waste		---		13.4	12.5	10.9
Farmstead				3.6	4.8	2.7
Total acres in farm				162.2	176.9	159.6
Per cent land tillable				43.9	47.9	43.7
Per cent tillable land in high ret. crops				23.4	30.5	19.5

*Gardens were rated as an A crop and rutabagas B.

**Alfalfa pasture was rated as an A crop and other legumes and mixtures for pasture a C crop.

Table 19. Crop Yields Per Acres, 1948

Crop	Your farm	Average of 124 farms	25 most profitable farms	25 least profitable farms
Flax, bu.	_____	9.5	10.0	9.4
Barley, bu.	_____	28.5	32.3	-
Oats, bu.	_____	32.7	42.2	28.9
Wheat, bu.	_____	15.4	23.1	-
Rye, bu.	_____	10.9	-	8.1
Potatoes, bu.	_____	102	133	97
Corn silage, tons	_____	6.5	7.4	6.5
Corn, grain, bu.	_____	40.8	49.6	43.0
Corn fodder, tons	_____	2.2	2.3	2.4
Alfalfa hay, tons	_____	1.7	1.9	1.1
Alfalfa seed, lbs.	_____	112	143	-
Red or alsike clover hay, tons	_____	1.4	1.4	1.2
Red or alsike clover seed, lbs.	_____	59	86	-
Other leg.& leg.mix.for hay, tons	_____	1.0	1.3	.7
Brome or timothy hay, tons	_____	1.1	1.2	1.3
Wild hay on tillable land, tons	_____	1.0	.7	1.3
Annual hay, tons	_____	1.2	1.2	1.2
Wild hay on non-tillable land, tons	_____	.7	1.0	.6

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 10 to 222 with an average of 72 (Table 20). 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 20. Power and Machinery Expenses Per Crop Acre, 1948

Items	Your farm	Average of 124 farms	25 most profitable farms	25 least profitable farms
Crop acres per farm	_____	71.7	83.4	70.1
Tractor and horse exp. per crop acre	_____	$5.39	$5.45	$5.50
Crop & gen. mach. exp.per crop acre	_____	2.86	3.51	3.03

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 21. Forty-one farmers did not maintain horses.

Table 21. Feed Costs For Horses, 1948

Items	Your farm	Average of 33 farms
Feed per horse, lbs.:		
Grain	_____	184
Hay	_____	4538
Fodder and stover	_____	205
Feed cost per horse:		
Grain	_____	$5.66
Roughage	_____	26.99
Pasture	_____	5.25
Total feed cost	_____	$37.90
Number of work horses	_____	2.0
Number of colts	_____	-

AMOUNT OF LIVESTOCK

All the farmers maintained some dairy cattle. The average number of dairy cows per farm was approximately eight head (Table 22). One-half of the farmers kept some poultry and raised a few hogs.

Table 22. Amount of Livestock, 1948

	Your farm	Average of 124 farms	25 most profitable farms	25 least profitable farms
Number of milk cows	_____	8.4	9.8	8.2
Number of other dairy cattle	_____	8.6	11.1	7.9
Number of sheep*	_____	4.0	1.5	5.5
Number of hens	_____	55	99	31
Number of litters of pigs raised	_____	1.1	1.6	.7
Pounds of hogs produced	_____	1546	2753	1037
Number of horses	_____	1.4	1.1	1.4
Number of colts	_____	-	-	-

*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 24. 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 24. Total Feed Costs and Returns From Your Livestock Enterprises, 1948

	Dairy or dual purpose cattle			Beef breeding herd	Feeder cattle
	Cows	Other	All		
Total returns					
Total feed cost					
Total return over feed					

	Hogs	Farm flock of sheep	Turkeys	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 25, 26 and 27. The return over feed cost per cow varied from -$8.52 to $264.67 among the 123 herds covered by this study. Some of the important factors that affected the return over feed were:

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

Table 25. Factors of Cost and Returns from Dairy Cows, 1948

Items	Your farm	Average of 123 farms	25 farms highest in butterfat per cow	25 farms lowest in butterfat per cow
Pounds of butterfat per cow		242	321	165
% butterfat in milk		3.8	3.8	3.9
Price rec. per lb. B.F. sold (cents)		99.6	99.2	99.1
As cream (cents)		86.6	85.5	86.8
Other (cents)		106.2	107.8	106.0
Feeds per cow, lbs.				
Corn		386	604	209
Small grain		665	985	477
Commercial feeds		621	893	350
Legume hay		2659	3073	2218
Other hay		3014	2857	4066
Fodder and stover		738	586	755
Total concentrates		1672	2482	1036
Total hay and fodder		6411	6516	7039
Silage		3054	4076	735
Total digestible nutrients*		4801	5642	4244
T.D.N. per lb. B.F.		19.8	17.6	25.7
% T.D.N. that is protein		11.9	12.9	10.3
Feed cost per cow:				
Concentrates	$	$50.27	$75.00	$29.33
Roughages		49.46	57.75	42.34
Pasture		5.84	6.47	4.96
TOTAL FEED COSTS	$	$105.57	$139.22	$76.63
Value of produce per cow:				
B.F. sales	$	$222.95	$294.32	$147.83
Dairy produce used in house		13.68	16.26	13.77
Milk to livestock		10.99	13.12	7.16
Net increases in value of cows		4.87	3.96	9.05
TOTAL VALUE PRODUCED	$	$252.49	$327.66	$177.81
RETURNS ABOVE FEED COST PER COW	$	$146.92	$188.44	$101.18
RETURNS FOR $100 OF FEED	$	$261	$243	$261
Feed cost per lb. B.F. (cents)		43.6	43.4	46.4
% fall freshening		32	40	18
Number of cows**		8.4	8.2	8.6

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

Items	Your farm	Average of 119 dairy herds	24 farms highest in butterfat per cow	24 farms lowest in butterfat per cow
Feeds per head, lbs.:				
Concentrates	_____	258	306	120
Hay and fodder	_____	2182	2170	2733
Silage	_____	815	1156	244
Skim milk	_____	509	475	121
Whole milk	_____	198	205	80
Feed cost per head:				
Concentrates	$_____	$8.16	$9.95	$3.73
Roughages	_____	15.25	17.65	15.44
Milk	_____	9.58	10.30	4.25
Pasture	_____	2.22	2.48	1.80
TOTAL FEED COSTS PER HEAD	$_____	$35.21	$40.38	$25.22
Net inc. in value of other dairy cattle	_____	$69.50	$75.47	$64.14
RETURNS ABOVE FEED COST PER HEAD	_____	$34.29	$35.09	$38.92
RETURNS FOR $100 OF FEED	_____	$260	$219	$319
Number of head of other dairy cattle	_____	8.9	9.0	9.6

Table 27. Feed Costs and Returns from All Dairy and Dual Purpose Cattle, 1948

Items	Your farm	Average of 123 dairy herds	25 farms highest in butterfat per cow	25 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	1259	1813	741
Hay and fodder	_____	5626	5754	6177
Silage	_____	2516	3408	617
Feed cost per animal unit:				
Concentrates	$_____	$38.01	$55.49	$21.19
Roughages	_____	42.27	49.32	36.68
Pasture	_____	5.40	6.12	4.39
TOTAL FEED COST	$_____	$85.68	$110.93	$62.26
Value of produce per animal unit:				
Dairy products	$_____	$159.14	$207.66	$105.65
Net increase in val. of dairy cattle	_____	45.23	49.14	44.88
TOTAL VALUE	$_____	$204.37	$256.80	$150.53
RETURNS ABOVE FEED PER ANIMAL UNIT	$_____	$118.69	$145.87	$ 88.27
RETURNS PER $100 OF FEED	$_____	$256	$236	$261
Animal units of dairy cattle	_____	13.1	12.8	13.6

The herds which ranked low in these factors had low returns over feed. As indicated in Table 28, the 3 herds which ranked below the average of the whole group in all of these factors showed a return over feed of $72.16 per cow. On the other hand, the 6 herds which ranked above the average of the whole group in each of these five factors had three times as high a return over feed per cow, $214.46. These data suggest that dairy returns could be very materially increased by more attention to these five management factors.

Table 28. Relation of Return Over Feed per Dairy Cow 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 cow	Average return over feed
0	3	xxxxxxx	$ 72.16
1	24	xxxxxxxxxxx	109.76
2	31	xxxxxxxxxxxxx	125.40
3	29	xxxxxxxxxxxxxxx	153.09
4	30	xxxxxxxxxxxxxxxxxxx	186.88
5	6	xxxxxxxxxxxxxxxxxxxxx	214.46

Table 29. Feed Costs and Returns from Chickens, 1948

Items	Your farm	Average of 55 farms	14 farms highest in returns above feed	14 farms lowest in returns above feed
Feed per hen, lbs.:				
Grain	_____	61	59	81
Commercial feeds	_____	50	48	60
Total concentrates	_____	111	107	141
Skim milk and buttermilk	_____	8	18	2
TOTAL FEED COST PER HEN	$_____	$3.91	$3.69	$4.92
Value of produce per hen:				
Eggs sold and used in house	$_____	$4.87	$6.69	$3.68
Net increase in value of chickens	_____	.64	.92	.57
TOTAL VALUE PRODUCED	$_____	$5.51	$7.61	$4.25
RETURNS ABOVE FEED COST PER HEN	$_____	$1.60	$3.92	$-.67
RETURNS FOR $100 OF FEED	$_____	$169	$247	$87
Price rec'd per doz. eggs sold (cents)	_____	42.6	42.8	43.3
Eggs laid per hen	_____	137	187	104
Ave. no. of hens on farm during the yr.	_____	113	127	112
% of hens that are pullets	_____	60	69	70
% of death loss of hens	_____	14	14	13
Number of chicks put on feed	_____	114	159	125
Price paid per 100 chicks purchased	$_____	$28.62	$31.14	$31.07
Pounds of poultry produced	_____	322	393	423

Table 30. Feed Costs and Returns from Hogs, 1948

Items	Your farm	Average of 58 farms	15 farms highest in returns above feed	15 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	268	185	374
Small grain	_____	161	210	206
Commercial feeds	_____	71	62	96
Total concentrates	_____	500	457	676
Skim milk and buttermilk	_____	353	506	419
Feed cost per cwt. hogs produced:				
Concentrates	$_____	$13.15	$11.46	$18.07
Skim milk and buttermilk	_____	1.43	2.01	1.67
Pasture	_____	.09	.12	.07
TOTAL FEED COSTS	$_____	$14.67	$13.59	$19.81
Net increase in val.per cwt.hogs prod.	$_____	$23.32	$29.74	$20.98
RETURNS ABOVE FEED COST PER CWT.HOGS PROD.	$_____	$ 8.65	$16.15	$ 1.17
RETURNS FOR $100 OF FEED	$_____	$175	$239	$111
Ave. weight per hog sold, lbs.	_____	180	142	157
Price received per cwt. hogs sold	$_____	$27.16	$30.35	$28.20
No. of spring litters raised	_____	1.8	1.3	1.1
No. of fall litters raised	_____	.5	.9	.3
Total no. of litters raised	_____	2.3	2.1	1.4
No. of pigs born per litter	_____	8.7	7.4	7.1
No. of pigs weaned per litter	_____	7.3	6.9	7.6
Pounds of hogs produced	_____	2945	2064	1901

Table 31. Feed Costs and Returns from a Farm Flock of Sheep, 1948

Items	Your farm	Average of 11 farms
Feeds per head,* lbs.:		
Concentrates	_____	61
Legume hay	_____	371
Other hay	_____	241
Fodder and stover	_____	52
Silage	_____	35
Feed cost per head:		
Concentrates	$_____	$1.90
Roughages	_____	3.83
Pasture	_____	.90
TOTAL FEED COSTS	$_____	$6.63
Value of produce per head:		
Wool	$_____	$2.72
Net increase in value of sheep	_____	9.76
TOTAL VALUE PRODUCED	$_____	$12.48
RETURNS ABOVE FEED COST PER HEAD	$_____	$5.85
RETURNS FOR $100 OF FEED	$_____	$226
Price per cwt. of lambs sold	$_____	$23.41
Price per lb. wool sold (cts.)	_____	48.5
Pounds of wool per sheep sheared	_____	6.7
Number of ewes kept for lambing	_____	31
% lamb crop**	_____	107
% death loss**	_____	10.2
Pounds of sheep produced	_____	2136
No. of head of sheep*	_____	43.8

*Two lambs under six months of age considered as one head.
**Lambs which die during month of birth are not included.

Table 32. Summary of Farm Inventories by Years

	1947	1948
Number of farms	76	124
Dairy and dual purpose cows	$991	$1111
Other dairy & dual purpose cattle	441	493
Beef cattle (inc. feeders)	8	21
Hogs	76	139
Sheep	7	52
Poultry	60	68
Productive livestock (total)	1583	1884
Horses	75	73
Crop, seed, & feed	693	897
Power mach. (farm share)	824	989
Crop & general mach. (farm share)	529	670
Livestock equipment & supplies	142	162
Mach. & equipment (total)	1495	1821
Miscellaneous	2	1
Buildings, fences, etc.	3174	3058
Land	2598	2817
Total farm capital	9620	10551

Table 33. Summary of Farm Earnings by Years

	1947	1948
Monthly charge for unpaid family labor	$ 95	$ 123
Monthly charge for board to hired labor	29	36
FARM RECEIPTS		
Dairy and dual-purpose cows	$ 270	$ 308
Dairy products	1508	1934
Other dairy & dual-purpose cattle	230	327
Beef cattle	2	1
Hogs	141	275
Sheep and wool	15	54
Poultry	51	109
Eggs	279	245
Horses	16	14
Small grain	132	264
Other crops	215	233
Machinery & equip. sold	132	168
Agricultural adjustment payments	33	38
Income from work off the farm	92	40
Miscellaneous	19	17
(1) Total farm sales	3135	4027
(2) Increase in farm capital	1046	943
(3) Family living from the farm	419	422
(4) Total farm receipts (1)+(2)+(3)	4600	5392
FARM EXPENSES		
Dairy and dual purpose cows bought	$ 217	$ 169
Other dairy and dual-pur. cattle bought	51	84
Beef cattle bought	-	6
Hogs bought	26	43
Sheep bought	5	5
Poultry bought	30	41
Horses bought	19	13
Misc. livestock expense	39	44
Misc. crop expenses	148	196
Feed bought	534	560
Custom work hired	146	191
Mech.power mach. (farm share) (new)	553	526
Mech.power mach. (farm share) (upkp.)	117	138
Mech.power (f.share) (gas, oil, etc.)	252	327
Crop and general mach. (new)	183	306
Crop and general mach. (upkeep)	55	69
Livestock equipment (new)	61	67
Livestock equipment (upkeep)	9	12
Buildings and fencing (new)	209	222
Buildings and fencing (upkeep)	73	84
Hired labor	90	97
Taxes	86	123
General farm and insurance	42	45
(5) Total farm purchases	2945	3368
(6) Decrease in farm capital	-	-
(7) Interest on farm capital	481	528
(8) Unpaid family labor	315	325
(9) Board furnished hired labor	15	25
(10) Total farm exp. (sum of (5) to (8)	3756	4246
(11) Oper. labor earnings (4) - (10)	844	1146

Table 34. Summary of Acres and Crop Yields Per Farm by Years

	1947	1948
ACRES PER FARM		
Flax	3.3	4.0
Barley	.8	.5
Oats	10.7	15.5
Wheat	.9	.8
Other small grains	.4	1.1
Total small grains and beans	16.1	21.9
Corn	7.2	13.2
Other cultivated crops	.8	.3
Total cultivated crops	8.0	13.5
Alfalfa for hay or seed	7.2	6.9
Clover for hay or seed	2.5	2.5
Other hay and seed crops	20.7	20.0
Total tillable land in hay	30.4	29.4
Total tillable land in pasture	3.8	3.7
Tillable land not cropped	1.7	2.7
Total tillable land	60.0	71.2
Wild hay (non-tillable)	5.7	6.9
Non-tillable pasture	51.7	52.5
Timber, roads, waste, and farmstead	32.8	31.6
Total land in farm	150.2	162.2
CROP YIELDS PER ACRE		
Flax, bu.	6.0	9.5
Barley, bu.	14.2	28.5
Oats, bu.	31.2	32.7
Wheat, bu.	11.5	15.4
Potatoes, bu.	83.0	102.0
Corn for grain, bu.	26.9	40.8
Corn for silage, tons	5.0	6.5
Corn fodder, tons	2.5	2.2
Alfalfa hay, tons	1.7	1.7
Red or alsike clover hay, tons	1.4	1.4
Brome or timothy hay, tons	1.3	1.1
Wild hay on non-tillable land, tons	.8	.7

Table 35. Summary of Miscellaneous Items by Years

	1947	1948
MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY		
% high return crops	24.9	23.4
A.U. livestock per 100 A.	12.9	13.0
No. of work units	286	299
Work units per worker	204	230
Expenses per work unit	$3.59	$3.96
AMOUNT OF LIVESTOCK		
No. of milk cows	8.7	8.4
No. of other dairy cattle	8.3	8.6
No. head of sheep	1.2	4.0
No. of hens	54	55
Lbs. hogs produced	810	1546
No. litters of hogs raised	.8	1.1
No. of horses	1.5	1.4
PRODUCTION PER UNIT OF LIVESTOCK		
Lbs. B.F. per dairy cow	219	242
Pigs weaned per litter	6.8	7.3
No. eggs laid per hen	154	137
Lbs. wool per sheep sheared	6.8	6.7
% lamb crop	109	107
PRICE RECEIVED PER		
Lb. B.F. sold (cts.)	88.7	99.6
Cwt. hogs sold	$27.75	$27.16
Cwt. lambs sold	22.02	23.41
Lb. wool sold (cts.)	37.6	48.5
Doz. eggs sold (cts.)	41.3	42.6
RETURN ABOVE FEED COST PER		
Dairy cow	$106.88	$146.92
Cwt. hogs produced	11.03	8.65
Head of sheep	10.39	5.85
Hen	1.28	1.60
FEED COST PER		
Dairy cow	$91.35	$105.57
Cwt. hogs produced	16.16	14.67
Head of sheep	3.22	6.63
Hen	3.99	3.91
Horse	34.40	37.90