

1951 ANNUAL REPORT
VETERANS
FARM MANAGEMENT SERVICE
NORTHERN MINNESOTA

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UNIVERSITY OF MINNESOTA

Department of Agriculture

and

Vocational Division

MINNESOTA DEPARTMENT OF EDUCATION

Cooperating

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Report No. 201

Division of Agricultural Economics

University Farm

St. Paul 1, Minnesota

August, 1952

REPORT OF THE FARM MANAGEMENT SERVICE FOR VETERANS TAKING ON-THE-FARM
TRAINING IN NORTHERN MINNESOTA, 1951

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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 numbers 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. At the end of the year, B.F. Stanton, R.M. Dennistoun and H.G. Routhe of the Division of Agricultural Economics aided in closing the records.

This report deals with the veterans enrolled by twenty schools located in northern Minnesota (Type-of-Farming Areas 5, 6 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 1951:

<u>Type-of-Farming Area 5</u>		<u>Type-of-Farming Area 6</u>		<u>Type-of-Farming Area 8</u>			
Cambridge	6	Alexandria	9	Akeley	4	Cromwell	3
Foley	5	Frazee	3	Bagley	6	Little Fork	2
Little Falls	11	Long Prairie	5	Baudette	3	McGregor	1
Princeton	4	Perham	6	Brainerd	4	Pequot Lakes	3
		Staples	10	Carlton	3	Pine River	6
						Williams	4
Total	<u>26</u>	Total	<u>33</u>			Total	<u>39</u>

The subsequent pages in this report show the data for 95 farms. Three farms were omitted from all the averages in the tables because the 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 \$3136 to \$45872. 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 47 out of the 95 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 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 "Agricultural Production and Types of Farming in Minnesota". Minn. Agri. Expt. Sta. Bul. 347, May 1940.

Table 1. Summary of Farm Inventories, 1951*

Items	Your farm		Average of 95 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			178	
Size of business (work units)**			258	
Dairy and dual purpose cows			\$ 1383	\$ 1642
Other dairy & dual purpose cattle			596	837
Beef cattle			74	137
Hogs			200	264
Sheep			32	45
Poultry			80	72
Productive livestock (total)			2365	2997
Horses			52	41
Crop, seed, and feed			853	1061
Power mach. (farm share)			1382	1558
Crop & general mach. (farm share)			889	1164
Livestock equipment & supplies			204	247
Mach. & equipment (total)			2475	2969
Misc.			2	2
Buildings, fences, etc.			3844	3864
Land			3726	3726
Total farm capital			13317	14660

Items	19 most profitable farms		19 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	186		149	
Size of business (work units)**	316		206	
Dairy & dual purpose cows	\$ 1727	\$ 2135	\$ 1245	\$ 1600
Other dairy & dual purpose cattle	730	1302	594	674
Beef cattle	18	86	-	10
Hogs	220	345	127	134
Sheep	4	9	35	56
Poultry	119	109	46	41
Productive livestock (total)	2818	3986	2047	2515
Horses	64	68	53	38
Crop, seed, and feed	1151	1331	571	688
Power mach. (farm share)	1789	1885	1258	1530
Crop & general mach.	1123	1460	759	869
Livestock equipment & supplies	271	291	156	177
Mach. & equipment (total)	3183	3636	2173	2576
Misc.	-	-	-	-
Buildings, fences, etc.	5057	4916	3480	3503
Land	5677	5677	2346	2346
Total farm capital	17950	19614	10670	11666

* 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), 1951

Items	Your farm	Average of 95 farms	19 most profitable farms	19 least profitable farms
FARM RECEIPTS				
Dairy and dual-purpose cows		\$ 352	\$ 466	\$ 202
Dairy products		1745	2269	1546
Other dairy & dual-purpose cattle		394	494	394
Beef cattle		56	16	-
Hogs		647	1044	285
Sheep and wool		37	3	50
Poultry (including turkeys)		125	83	31
Eggs		343	476	149
Horses		12	5	10
Corn		63	174	-
Small grain		252	601	23
Other crops		200	383	90
Machinery & equip. sold		167	191	147
Agricultural adjustment payments		29	26	21
Income from work off the farm		159	168	68
Miscellaneous		14	5	37
(1) Total farm sales		4595	6404	3053
(2) Increase in farm capital		1343	1664	996
(3) Family living from the farm		468	492	380
(4) Total farm receipts (1)+(2)+(3)		6406	8560	4429
FARM EXPENSES				
Dairy and dual-purpose cows bought	\$	\$ 242	\$ 224	\$ 327
Other dairy and dual-pur. cattle bot.		98	179	62
Beef cattle bought		22	1	-
Hogs bought		52	106	26
Sheep bought		3	2	7
Poultry bought (including turkeys)		41	58	21
Horses bought		8	14	-
Misc. livestock expense		47	63	34
Misc. crop expenses		219	278	174
Feed bought		678	792	487
Custom work hired		236	321	162
Mech. power mach.(farm share)(new)		535	440	642
Mech. power mach.(farm share)(upkp.)		107	114	123
Mech. power (f. share)(gas,oil,etc.)		390	459	353
Crop and general mach. (new)		447	597	233
Crop and general mach. (upkeep)		65	95	54
Livestock equipment (new)		77	55	50
Livestock equipment (upkeep)		17	22	16
Buildings and fencing (new)		221	69	175
Buildings and fencing (upkeep)		66	73	94
Hired labor		53	80	37
Taxes		176	255	110
General farm and insurance		48	47	41
(5) Total farm purchases		3848	4344	3228
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		699	939	558
(8) Unpaid family labor		351	365	473
(9) Board furnished hired labor		12	31	6
(10) Total farm exp. (sum of (5) to (9))		4910	5679	4265
(11) Oper. labor earnings (4) - (10)		1496	2881	164

Table 3. Summary of Farm Earnings (Enterprise Statement) 1951*

Items	Your farm	Average of 95 farms	19 most profitable farms	19 least profitable farms
RETURNS AND NET INCREASES				
Dairy and dual purpose cows	_____	\$ 2077	\$ 2714	\$ 1736
Other dairy & dual pur. cattle	_____	896	1463	725
Beef cattle	_____	90	42	-
Hogs	_____	719	1148	327
Sheep	_____	47	7	64
Poultry	_____	464	535	178
All productive livestock	_____	4293	5909	3030
Crops, seed, and feed	_____	-259	122	-512
Agricultural conservation payments	_____	29	26	21
Income from labor off the farm	_____	104	84	42
Miscellaneous	_____	117	140	127
(1) Total returns & net increases	_____	4284	6281	2708
EXPENSES AND NET DECREASES				
Horses	_____	\$ 32	\$ 31	\$ 32
Tractor	_____	330	386	307
Truck	_____	89	129	137
Auto (farm share)	_____	220	195	195
Gas engine and elect. exp. (f. share)	_____	54	59	60
Hired power	_____	101	145	69
Total power	_____	826	945	800
Crop and general machinery	_____	241	304	198
Livestock equipment	_____	48	54	40
Buildings, fencing, and tiling	_____	213	213	197
Misc. productive livestock exp.	_____	47	63	34
Labor	_____	490	580	566
Real estate taxes	_____	135	206	78
Personal property tax	_____	41	49	32
Insurance	_____	26	18	25
General farm	_____	22	29	16
Interest on farm capital	_____	699	939	558
(2) Total exp. & net decreases	_____	2788	3400	2544
(3) Oper. labor earnings (1) - (2)	_____	1496	2881	164

*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 7 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, 1951

Items	Average		Average	
	Your farm	of 95 farms	Your farm	of 95 farms
Adult equiv. - family	_____	2.5	_____	
- others	_____	.2	_____	
Whole milk	_____	695 qts.	_____	\$ 63.54
Skim milk	_____	70 qts.	_____	1.76
Cream	_____	91 pts.	_____	23.20
Farm made butter	_____	3 lbs.	_____	1.90
Beef	_____	200 lbs.	_____	41.95
Hogs	_____	260 lbs.	_____	55.24
Poultry	_____	78 lbs.	_____	18.98
Eggs	_____	70 doz.	_____	27.26
Potatoes	_____	9 bu.	_____	11.83
Vegetables & fruits	_____		_____	26.51
Farm fuel	_____	8 cds.	_____	39.17
Rental value of house	_____		_____	<u>156.21</u>
Total	_____		_____	<u>467.55</u>

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 \$123 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, 1951

Items	Your farm	Average of 77 farms	15 most profitable farms	15 least profitable farms
Number of persons in family	_____	3.4	3.6	2.6
Number of adult equivalents in family	_____	2.5	2.5	2.1
Number of other adult equivalents*	_____	.2	.2	.5
EXPENSES				
Food and meals bought	\$ _____	\$ 516	\$ 529	\$ 416
Operating and supplies	_____	142	211	86
Clothing and clothing materials	_____	147	181	71
Personal care, personal spending	_____	76	84	41
Furnishings and equipment	_____	138	130	145
Education, recreation and development	_____	56	54	25
Medical care and health insurance	_____	135	155	126
Church, welfare, gifts	_____	71	103	48
Personal share of auto expense	_____	75	66	71
Household share of elec. & gas eng. exp.	_____	34	40	31
H.H. & per. shr. of new auto & motors bot.	_____	88	98	116
Total cash living expense	_____	1478	1651	1176
State and federal income tax	_____	4	1	1
Insurance	_____	42	66	52
Total household and pers. cash exp.	_____	1524	1718	1229
Food furnished by the farm	_____	283	263	202
Fuel furnished by the farm	_____	41	23	22
House rental	_____	154	191	119
Total cash expenses and perquisites	_____	2002	2195	1572
Purchase of stocks, bonds, and other invest.	_____	7	23	-
RECEIPTS				
Sale of investments	_____	16	-	83
Income from outside investments	_____	18	34	9
Veterans compensation	_____	1112	1149	992
Misc. income	_____	52	57	29

*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, 1951 (Operator's Share)

	Your farm		49 owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			152	
Owned			152	
Rented			-	
Total farm capital			\$11310	\$12429
Accounts Receivable			59	29
Stocks and bonds			39	46
Life insurance			118	112
Outside real estate			6	25
Other outside investments			13	20
Total outside investments			176	203
Cash on hand and in bank			129	166
Other household & personal assets			1238	1368
Total cash, household & personal assets			1367	1534
TOTAL ASSETS			12912	14195
Federal Land Bank Mortgage			50	50
Other mortgages on land operated			2599	2515
Crop loans			23	20
Other Chattel Mortgages			609	600
Notes payable			632	700
Accounts payable			181	114
TOTAL LIABILITIES			4094	3999
Farmer's net worth			8818	10196
Gain in net worth				+1378

	21 part owners		19 renters*	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	215		217	
Owned	129		-	
Partner's share or rented	86		217	
Total farm capital	\$10008	\$11380	\$6232	\$7397
Accounts receivable	13	-	-	13
Stocks and bonds	6	2	203	125
Life insurance	34	57	48	55
Other outside investments	1	1	17	18
Total outside investments	41	60	268	198
Cash on hand and in bank	102	120	118	174
Other household and personal assets	943	1087	937	1108
Total cash, household & personal assets	1045	1207	1055	1282
TOTAL ASSETS	11107	12647	7555	8890
Federal Land Bank Mortgage	-	105	-	-
Other mortgages on land operated	2216	2279	-	-
Crop loans	-	67	-	-
Other Chattel mortgages	833	741	1087	867
Notes payable	475	411	642	560
Accounts payable	286	327	147	135
TOTAL LIABILITIES	3810	3930	1876	1562
Farmer's net worth	7297	8717	5679	7328
Gain in net worth		+1420		+1649

* Six rented for cash, five cash and crop share and five livestock and crop share and three crop share.

Table 7. Summary of Farm Earnings by Tenure, 1951 (Operator's Share)

	Your farm	49 owners	21 part- owners	19 renters
FARM RECEIPTS				
Dairy and dual purpose cows		\$ 285	\$ 232	\$ 406
Dairy products		1556	1442	1751
Other dairy and dual purpose cattle		417	289	368
Beef cattle		6	14	54
Hogs		575	429	956
Sheep and wool		37	35	42
Poultry (including turkeys)		55	329	73
Eggs		327	244	330
Horses		12	15	5
Corn		38	49	12
Small grain		181	305	129
Other crops		149	166	65
Machinery & equipment sold		176	125	170
Agricultural adjustment payments		32	27	17
Income from work off the farm		157	236	103
Misc.		11	26	13
(1) Total farm sales		4014	3963	4494
(2) Increase in farm capital		1119	1372	1165
(3) Family living from the farm		478	410	461
(4) Total farm rec. (1)+(2)+(3)		5611	5745	6120
FARM EXPENSES				
Dairy and dual purpose cows bot		\$ 246	\$ 278	\$ 230
Other dairy & dual pur. cattle bot		68	107	152
Beef cattle bot. (including feeders)		-	12	3
Hogs bot		34	72	80
Sheep bot (including feeders)		2	2	7
Poultry bot (including turkeys)		35	62	22
Horses bot		9	12	6
Misc. livestock expenses		50	37	44
Misc. crop expenses		206	236	186
Feed bot		648	621	660
Custom work hired		197	216	261
Mech. power mach. (farm share)(new)		509	470	580
Mech. power mach. (farm share)(upkp.)		134	102	137
Mech. power (farm share)(gas, oil, etc.)		336	408	394
Crop and general mach. (new)		326	443	329
Crop and general mach. (upkeep)		54	64	79
Livestock equipment (new)		102	63	66
Livestock equipment (upkeep)		16	5	22
Land, buildings & fencing (new)		231	79	24
Buildings and fencing (upkp.)		75	52	44
Hired labor		53	38	70
Taxes (real estate & pers. property)		129	124	54
General farm and insurance		58	33	40
Cash rent		-	25	280
Interest paid		122	127	58
(5) Total farm purchases		3640	3688	3828
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		471	408	283
(8) Unpaid family labor		177	144	311
(9) Board furnished hired labor		8	8	30
(10) Total farm exp. (Sum of (5) to (9))		4296	4248	4452
(11) Operator's labor earn.(4) - (10)		1315	1497	1668
(12) Ret. cap. & family lab.(7)+(8)+(11)		1963	2049	2262

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 49 owners, 21 part-owners and 19 renters is shown in Table 7. The statements include only the veterans share of the earnings in each case. 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 \$2881 and of those in the lower 20 per cent was \$164. This is a range of \$2717 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 in each of the three type-of-farming areas 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 77	65	20	\$1319
77 - 109	94	37	1596
110 and above	131	22	1762

* The records from 16 farms with less than 20 per cent of the work units on crops were omitted from this table.

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 24.0	13.8	17	\$ 1016
24.0 - 49.9	35.1	59	1563
50.0 and above	60.3	19	1716

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

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 Earnings

Index of returns for \$100 feed consumed by productive livestock*	No. of farms	Average operator's labor earnings
Range	Average	
Below 83	73	\$1238
83 - 119	99	1533
120 and above	136	1636

*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 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 10.0	7.8	\$1458
10.0 - 19.9	13.9	1488
20.0 and above	24.2	1561

*The records from 4 farms with more than 45 per cent of the work units on work off the farm were omitted from the table.

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 farms	Average operator's labor earnings
Range	Average	
Below 170	137	\$ 833
170 - 325	245	1565
325 and above	399	1932

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 reduced 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 farms	Average operator's labor earnings
Range	Average		
Below 145	122	18	\$ 849
145 - 255	198	59	1508
255 & above	307	18	2101

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 farms	Average operator's labor earnings
Range	Average		
\$6.50 & above	\$8.19	19	\$ 863
\$4.00 - 6.49	5.17	57	1595
Below \$4.00	3.42	19	1831

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 on earnings is shown in Figure 2. 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.







No. of factors in which farmers excelled	No. of farms	Average Operator's Labor Earnings			
		\$600	\$1200	\$1800	\$2400
0 or 1	11				\$ 787
2	24				1168
3	18				1253
4	18				1817
5	18				1877
6	6				2728

Fig. 2. Average operator's labor earnings on farms grouped according to number of management factors in which the farmer was above average.

The array in Figure 2 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 live-stock 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 15.

Table 15. 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	5.0 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

* An animal unit represents one dairy cow or bull, 2 head of other dairy cattle, 1 $\frac{1}{4}$ beef cows or bull, 1 feeder steer or heifer, 3 $\frac{1}{3}$ other beef cattle, 7 sheep, 14 lambs, 2 $\frac{1}{2}$ hogs, 5 pigs, 50 hens or 1100 pounds of turkeys produced.

Table 16. Measures of Farm Organization and Management Efficiency, 1951

Measures used in chart on page 15	Your farm	Average of 95 farms	19 most profit- able farms	19 least profit- able farms
Operator's labor earnings	\$ _____	\$1496	\$2881	\$ 164
(1) Crop yields*	_____	100	105	90
(2) % of tillable land in high ret. crops**	_____	36.3	42.5	36.5
(3) Ret. for \$100 feed to prod. livestock***	_____	100	105	97
(4) Prod. livestock units per 100 acres****	_____	15.2	15.6	16.3
(5) Size of business - work units	_____	258	316	206
(6) Work units per worker	_____	215	243	158
(7) Pow., mach., equip., & bldg. exp. per work unit	_____	\$5.42	\$4.87	\$6.48
Items related to some of the above measures:				
(2) % of tillable land in high ret. crops				
Type-of-farming area 5	_____	30.1	36.2	26.9
Type-of-farming area 6	_____	40.8	45.8	32.8
Type-of-farming area 8	_____	36.8	53.0	42.5
(3) Index of return for \$100 feed from				
Dairy cattle (See pages 20 and 21)	_____	100	107	91
Beef cattle (See pages 20 and 21)	_____	100	-	-
Beef cattle - breeding herd	_____	100	-	-
Hogs (See page 23)	_____	100	92	132
Sheep - farm flock (See page 24)	_____	100	-	-
Chickens (See page 22)	_____	100	100	84
(4) Number of animal units	_____	19.1	22.7	15.9
(5) Work units on crops	_____	75	100	51
Work units on productive livestock	_____	168	204	149
Other work units	_____	15	12	6
(6) Number of family workers	_____	1.2	1.2	1.3
Number of hired workers	_____	-	.1	-
Total number of workers	_____	1.2	1.3	1.3
(7) Power expense per work unit	\$ _____	\$3.39	\$3.01	\$4.30
Crop machinery expense per work unit	_____	.97	1.00	1.01
Livestock equip. expense per work unit	_____	.19	.18	.19
Bldgs. & fencing exp. per work unit	_____	.87	.68	.98

*Given as a percentage of the average

**Crops are marked in Table 17 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 95 farms included in this summary are located between the dotted lines across the center of this page.

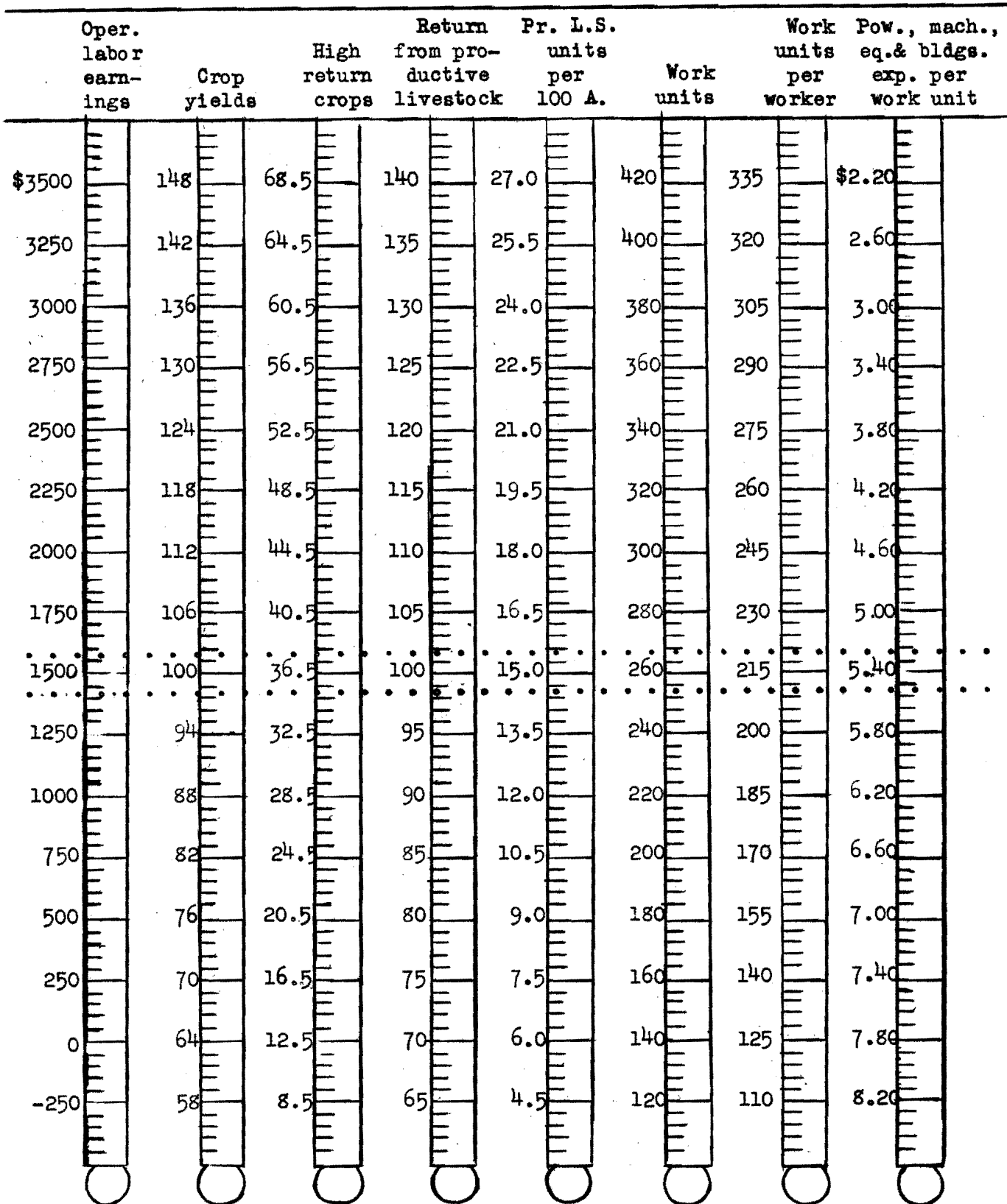


Table 17. Distribution of Acres in Farm, 1951

Crop	Crop ratings for type-of-farming area*			Your farm	Average of farms in type-of-farming area		
	5	6	8		5	6	8
Flax	C	B	B	_____	.6	.6	5.2
Barley	D	B	C	_____	.4	3.2	3.8
Oats	C	C	C	_____	24.7	29.2	14.0
Wheat	D	C	D	_____	.4	3.8	1.6
Rye	C	D	D	_____	4.2	.7	.2
Misc.	D	D	D	_____	-	1.5	.3
Total small grain				_____	30.3	39.0	25.1
Garden and seed potatoes	A	A	A	_____	-	-	.2
Potatoes	B	B	B	_____	.1	.1	.1
Corn silage	C	C	C	_____	9.1	6.8	3.2
Corn grain	C	C	D	_____	13.8	11.8	2.3
Corn fodder	D	D	D	_____	2.0	2.2	.2
Soybeans for grain	D	D	D	_____	.5	.4	-
Total cultivated crops				_____	25.5	21.3	6.0
Alfalfa hay	A	A	A	_____	7.8	19.7	11.4
Alfalfa seed	B	B	B	_____	-	1.0	-
Red or alsike clover hay	B	B	B	_____	2.8	3.4	5.2
Red or alsike clover seed	B	B	B	_____	.2	.6	3.1
Mixed legumes & non-legumes	C	C	C	_____	2.3	1.8	7.1
Timothy and/or brome hay	D	D	D	_____	1.0	1.6	3.4
Wild hay on tillable land	D	D	D	_____	2.5	1.7	1.4
Annual hay and misc.	D	D	D	_____	.4	.1	1.9
Total tillable land in hay				_____	17.0	29.9	33.5
Legumes and mixtures	**	**	**	_____	.9	.8	.9
Other tillable pasture	D	D	D	_____	4.5	1.4	4.6
Total tillable land in pasture				_____	5.4	2.2	5.5
Tillable land not cropped	D	D	D	_____	1.1	3.8	5.1
Total tillable land				_____	79.3	96.2	75.2
Wild hay (non-tillable)				_____	13.7	11.0	4.0
Non-tillable pasture				_____	37.8	51.4	45.9
Timber (not pastured)				_____	12.3	15.2	27.7
Roads and waste				_____	7.0	17.0	24.5
Farmstead				_____	3.4	4.2	4.3
Total acres in farm				_____	153.5	195.0	181.6
Per cent land tillable				_____	51.7	49.3	41.4
Per cent tillable land in high ret. crops				_____	30.1	40.8	36.8

* A, B, C, and D refer to ranking used in calculating per cent of tillable land in high return crops, see page 10.

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

Table 18. Crop Yields Per Acre, 1951

Crop	Your farm	Average of farms growing each crop in type-of-farming area		
		5	6	8
Flax, bu.	_____	-	-	8.9
Barley, bu.	_____	-	25.4	15.9
Oats, bu.	_____	44.1	44.6	29.9
Wheat, bu.	_____	-	16.5	12.8
Buckwheat, bu.	_____	-	10.7	-
Rye, bu.	_____	13.7	-	-
Potatoes, bu.	_____	-	65	64
Corn silage, tons	_____	5.4	5.7	4.8
Corn, grain, bu.	_____	35.7	35.9	35.7
Corn fodder, tons	_____	2.1	3.2	-
Alfalfa hay, tons	_____	1.7	1.9	1.7
Red or alsike clover hay, tons	_____	1.1	1.3	1.2
Red or alsike clover seed, lbs.	_____	-	-	120
Other leg. & leg. mix. for hay, tons	_____	1.6	1.6	1.2
Brome or timothy hay, tons	_____	1.2	1.0	.9
Wild hay on tillable land, tons	_____	.7	1.2	1.0
Annual hay, tons	_____	.3	-	1.0
Wild hay on non-tillable land, tons	_____	.5	.5	.7

POWER AND MACHINERY EXPENSE

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 14 to 210 with an average of 84 (Table 19). 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 19. Power and Machinery Expenses Per Crop Acre, 1951

Items	Your farm	Average of 95 farms	19 most	19 least
			profitable farms	profitable farms
Crop acres per farm	_____	84.5	110.6	58.2
Tractor and horse exp. per crop acre	_____	\$5.20	\$4.08	\$7.37
Crop & gen. mach. exp. per crop acre	_____	3.20	3.06	4.05

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 20. Fifty farmers did not maintain horses.

Table 20. Feed Costs for Horses, 1951

Items	Your farm	Average of 45 farms
Feed per horse, lbs.:		
Grain	_____	129
Hay	_____	3010
Fodder and stover	_____	207
Feed cost per horse:		
Grain	_____	\$ 3.29
Roughage	_____	15.44
Pasture	_____	6.79
Total feed cost	_____	25.52
Number of work horses	_____	2.0
Number of colts	_____	.8

AMOUNT OF LIVESTOCK

Nearly all the farmers maintained some dairy cattle. The average number of dairy cows per farm was approximately nine head (Table 21). Sixty-three per cent of the farmers kept some hogs and forty-five percent kept a few hens.

Table 21. Amount of Livestock, 1951

	Your farm	Average of 95 farms	19 most profitable farms	19 least profitable farms
Number of milk cows	_____	8.7	10.2	8.5
Number of other dairy cattle	_____	9.5	12.3	9.2
Number of beef cattle	_____	1.0	.3	-
Number of sheep*	_____	2.1	.3	2.3
Number of hens	_____	66	82	31
Number of litters of pigs raised	_____	4.1	5.2	2.2
Pounds of hogs produced	_____	3567	5886	1493
Number of horses	_____	1.0	1.2	1.2

*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 22. 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 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 22. Total Feed Costs and Returns From Your Livestock Enterprises, 1951

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

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 23, 24, and 25. Eighty-nine herds were classified as dairy cattle and 3 herds were classified as dual purpose cattle. The return over feed cost per cow varied from \$-15.37 to \$292.34 among the 92 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).

The herds which ranked low in these factors had low returns over feed. As indicated in Figure 3, the 12 herds which ranked below the average of the whole group in all of these factors showed a return over feed of \$81 per cow. On the other hand, the 7 herds which ranked above the average of the whole group in five factors had a return over feed per cow of \$225.

Table 23. Factors of Cost and Returns from Dairy and Dual Purpose Cows, 1951

Items	Your farm	Average of 92 herds	18 farms highest in butterfat per cow	18 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	252	333	176
Per cent of butterfat in milk	_____	3.8	3.8	4.0
Price rec. per lb. B.F. sold(cents)	_____	85.1	89.1	80.6
As cream (cents)	_____	78.0	78.5	77.6
Other (cents)	_____	95.5	96.4	95.2
Feed per cow, lb.				
Corn	_____	276	336	42
Small grain	_____	605	896	242
Commercial feeds	_____	497	674	337
Legume hay	_____	3778	4629	2970
Other hay	_____	2108	1661	2909
Fodder and stover	_____	565	625	1246
Total concentrates	_____	1378	1906	621
Total hay and fodder	_____	6451	6915	7125
Silage	_____	3991	4275	1740
Total digestible nutrients*	_____	4891	5540	4282
T.D.N. per lb. B.F.	_____	19.4	16.6	24.3
% T.D.N. that is protein	_____	13.9	14.6	12.5
Feed cost per cow:				
Concentrates	\$ _____	\$38.56	\$ 54.27	\$ 18.42
Roughages	_____	51.72	59.35	48.33
Pasture	_____	6.61	6.41	6.71
TOTAL FEED COSTS	\$ _____	96.89	120.03	73.46
Value of produce per cow:				
Dairy product sales	\$ _____	\$195.04	\$268.03	\$123.69
Dairy produce used in home	_____	12.98	10.78	14.62
Milk to livestock	_____	22.16	26.34	18.41
Net increase in value of cows	_____	4.17	13.34	6.49
TOTAL VALUE PRODUCED	\$ _____	\$234.35	\$318.49	\$163.21
RETURNS ABOVE FEED COST PER COW	\$ _____	\$137.46	\$198.46	\$ 89.75
RETURNS FOR \$100 OF FEED	\$ _____	\$ 257	\$ 276	\$ 252
Feed cost per lb. B.F. (cents)	_____	38.4	36.0	41.7
Number of cows**	_____	9.0	8.9	8.3

*Not including nutrients received from pasture.

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

Table 24. Feed Costs and Returns from Other Dairy and Dual Purpose Cattle, 1951

Items	Your farm	Average of 91 herds	18 herds highest in butterfat per cow	17 herds lowest in butterfat per cow
Feeds per head, lbs.:				
Concentrates	_____	221	312	187
Hay and fodder	_____	2048	2142	2515
Silage	_____	1093	1088	498
Skim milk	_____	1089	994	1110
Whole milk	_____	324	543	320
Feed cost per head:				
Concentrates	\$ _____	\$ 6.98	\$ 8.96	\$ 5.57
Roughages	_____	15.66	16.68	16.46
Milk	_____	15.44	20.72	15.53
Pasture	_____	2.83	2.68	2.92
TOTAL FEED COSTS PER HEAD	\$ _____	\$ 40.91	\$ 49.04	\$ 40.48
Net inc. in value of other dairy cattle	_____	\$102.97	\$107.61	\$ 96.87
RETURNS ABOVE FEED COST PER HEAD	_____	\$ 62.06	\$ 58.87	\$ 56.39
RETURNS FOR \$100 OF FEED	_____	\$ 284	\$ 264	\$ 270
Number of head of other dairy cattle	_____	9.9	9.3	9.1

*One record which included only a small number of veal calves was omitted from the averages.

Table 25. Feed Costs and Returns from All Dairy and Dual Purpose Cattle, 1951

Items	Your farm	Average of 92 herds	18 herds highest in butterfat per cow	18 herds lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	1045	1458	539
Hay and fodder	_____	5523	5895	6333
Silage	_____	3301	3500	1445
Feed cost per animal unit:				
Concentrates	\$ _____	\$ 29.84	\$ 41.58	\$ 16.05
Roughages	_____	43.87	49.65	42.45
Pasture	_____	6.25	6.00	6.42
TOTAL FEED COST	\$ _____	\$ 79.96	\$ 97.23	\$ 64.92
Value of produce per animal unit:				
Dairy products	\$ _____	\$140.43	\$186.62	\$ 97.67
Net increase in val. of dairy cattle	_____	69.20	78.19	63.26
TOTAL VALUE	\$ _____	\$209.63	\$264.81	\$160.93
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$129.67	\$167.58	\$ 96.01
RETURNS PER \$100 OF FEED	\$ _____	\$ 276	\$ 282	\$ 275
Animal units of dairy cattle	_____	14.1	13.7	12.8

No. of factors in which farmers excelled	No. of herds	Average Return Over Feed Per Cow			
		\$50	\$100	\$150	\$200
0	12	[Redacted]			\$ 81
1	11	[Redacted]			100
2	24	[Redacted]			120
3	24	[Redacted]			152
4	14	[Redacted]			177
5	7	[Redacted]			225

Fig. 3. Average Return over Feed Cost per Dairy Cow Grouped According to Number of Selected Factors in which Farmers Excelled.

Table 26. Feed Costs and Returns from Chickens, 1951

Items	Your farm	Average of 43 farms	14 farms highest in returns above feed	14 farms lowest in returns above feed
Feed per hen, lbs.:				
Grain	_____	75	76	85
Commercial feeds	_____	56	53	58
Total concentrates	_____	131	129	143
Skim milk and buttermilk	_____	7	11	9
TOTAL FEED COST PER HEN	\$ _____	\$4.24	\$4.02	\$4.57
Value of produce per hen:				
Eggs sold and used in house	\$ _____	\$5.85	\$6.78	\$4.86
Net increase in value of chickens	_____	.49	.89	.45
TOTAL VALUE PRODUCED	\$ _____	\$6.34	\$7.67	\$5.31
RETURNS ABOVE FEED COST PER HEN	\$ _____	\$2.10	\$3.65	\$.74
RETURNS FOR \$100 OF FEED	\$ _____	\$159	\$204	\$120
Price rec'd per doz. eggs sold (cents)	_____	42.6	44.1	41.0
Eggs laid per hen	_____	165	187	143
Ave. no. of hens on farm during the year	_____	134	143	137
% of hens that are pullets	_____	68	66	64
% of death loss of hens	_____	14	13	16
Numbers of chicks started:				
Straight run	_____	24	50	-
Pullets	_____	113	137	105
Cockerels	_____	17	8	39
Pounds of poultry produced	_____	413	544	263

Table 27. Feed Costs and Returns from Hogs, 1951

Items	Your farm	Average of 60 farms	15 farms highest in returns above feed	15 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	208	111	281
Small grain	_____	248	210	291
Commercial feeds	_____	<u>59</u>	<u>81</u>	<u>37</u>
Total concentrates	_____	514	402	609
Skim milk and buttermilk	_____	333	202	499
Feed cost per cwt. hogs produced:				
Concentrates	\$ _____	\$12.51	\$10.68	\$14.79
Skim milk and buttermilk	_____	1.55	.76	2.45
Pasture	_____	<u>.15</u>	<u>.13</u>	<u>.16</u>
TOTAL FEED COSTS	\$ _____	14.21	11.57	17.40
Net increase in val. per cwt. hogs prod.	\$ _____	\$20.87	\$25.35	\$18.36
RETURNS ABOVE FEED COST PER CWT. HOGS PROD.	_____	\$ 6.66	\$13.78	\$.96
RETURNS FOR \$100 OF FEED	\$ _____	\$ 157	\$ 232	\$ 107
Ave. weight per hog sold, lbs.	_____	\$ 148	\$ 87	\$ 182
Price received per cwt. hogs sold	\$ _____	\$23.25	\$26.87	\$21.77
No. of spring litters raised	_____	4.2	5.4	3.9
No. of fall litters raised	_____	<u>2.2</u>	<u>3.5</u>	<u>2.1</u>
Total no. of litters raised	_____	6.4	8.9	6.0
No. of pigs born per litter	_____	8.6	9.1	8.1
No. of pigs weaned per litter	_____	7.1	7.7	6.2
Pounds of hogs produced	_____	5459	4521	6176

Table 28. Feed Costs and Returns from a Farm Flock of Sheep, 1951

Items	Your farm	Average of 7 farms
Feeds per head, *lbs.:		
Concentrates	_____	61
Legume hay	_____	551
Other hay	_____	157
Fodder and stover	_____	-
Silage	_____	137
Feed cost per head:		
Concentrates	\$ _____	\$ 1.54
Roughages	_____	5.37
Pasture	_____	1.17
TOTAL FEED COSTS	\$ _____	\$ 8.08
Value of produce per head:		
Wool	\$ _____	\$ 5.07
Net increase in value of sheep	_____	18.43
TOTAL VALUE PRODUCED	\$ _____	23.50
RETURNS ABOVE FEED COST PER HEAD	\$ _____	15.42
RETURNS FOR \$100 OF FEED	\$ _____	\$ 333
Price per cwt. of lambs sold	\$ _____	\$31.01
Price per lb. wool sold (cts.)	_____	102.5
Pounds of wool per sheep sheared	_____	6.8
Number of ewes kept for lambing	_____	18
% lamb crop**	_____	123
% death loss	_____	5.2
Pounds of sheep produced	_____	1999
No. of head of sheep*	_____	27.6

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

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

Table 29. Summary of Farm Inventories by Years

	1947	1948	1949	1950	1951
Number of farms	141	204	188	111	95
Dairy and dual purpose cows	\$1078	\$1101	\$1176	\$1256	\$1513
Other dairy & dual purpose cattle	451	511	540	583	716
Beef cattle (inc. feeders)	57	30	72	87	106
Hogs	181	199	185	174	232
Sheep	17	58	36	24	38
Poultry	96	87	76	100	76
Productive livestock (total)	1880	1986	2085	2224	2681
Horses	82	77	67	59	46
Crop, seed, & feed	977	1045	1054	831	957
Power mach. (farm share)	917	1022	1253	1209	1470
Crop & general mach. (farm share)	673	741	821	811	1026
Livestock equipment & supplies	216	193	212	203	226
Mach. & equipment (total)	1806	1956	2286	2223	2722
Miscellaneous	2	1	1	-	2
Buildings, fences, etc.	3638	3332	3208	3452	3854
Land	3809	3386	3564	2960	3726
Total farm capital	12194	11783	12265	11749	13988

Table 30. Summary of Farm Earnings by Years

	1947	1948	1949	1950	1951
Monthly charge for unpaid family labor	\$87	\$119	\$112	\$110	\$123
Monthly charge for board to hired labor	33	38	33	32	32
FARM RECEIPTS					
Dairy and dual-purpose cows	\$282	\$335	\$263	\$328	\$352
Dairy products	1546	1798	1471	1439	1745
Other dairy & dual-purpose cattle	260	357	316	427	394
Beef cattle	45	33	55	83	56
Hogs	428	436	500	515	647
Sheep and wool	19	60	39	27	37
Poultry	71	97	43	109	125
Eggs	388	328	267	324	343
Horses	14	15	12	8	12
Small grain	501	326	270	138	252
Other crops	221	218	248	131	263
Machinery & equip. sold	119	174	211	183	167
Agricultural adjustment payments	26	33	29	21	29
Income from work off the farm	78	65	108	77	159
Miscellaneous	14	15	40	22	14
(1) Total farm sales	4012	4290	3872	3832	4595
(2) Increase in farm capital	1067	936	781	831	1343
(3) Family living from the farm	453	441	417	451	468
(4) Total farm receipts (1) (2) (3)	5532	5667	5070	5114	6406
FARM EXPENSES					
Dairy and dual purpose cows bought	\$175	\$205	\$166	\$165	\$242
Other dairy and dual pur. cattle bot.	57	100	79	91	98
Beef cattle bought	8	10	24	28	22
Hogs bought	60	49	51	39	52
Sheep bought	14	6	11	11	3
Poultry bought	50	43	37	44	41
Horses bought	16	21	7	5	8
Misc. livestock expense	41	43	41	44	47
Misc. crop expenses	195	206	187	155	219
Feed bought	549	533	385	604	678
Custom work hired	164	191	205	170	236
Mech. power mach. (farm share) (new)	507	477	568	536	535
Mech. power mach. (farm share) (upkp)	151	152	111	106	107
Mech. power (f. share)(gas, oil, etc.)	313	356	376	350	390
Crop and general mach. (new)	269	333	360	330	447
Crop and general mach. (upkeep)	71	75	63	56	65
Livestock equipment (new)	73	66	76	83	77
Livestock equipment (upkeep)	13	14	15	13	17
Buildings and fencing (new)	221	243	256	325	221
Buildings and fencing (upkeep)	94	93	81	61	66
Hired labor	102	100	81	84	53
Taxes	121	134	159	163	176
General farm and insurance	40	43	39	47	48
(5) Total farm purchases	3304	3493	3378	3510	3848
(6) Decrease in farm capital	-	-	-	-	-
(7) Interest on farm capital	610	589	613	587	699
(8) Unpaid family labor	381	360	329	221	351
(9) Board furnished hired labor	29	33	24	28	12
(10) Total farm exp. (sum of 5 to 9)	4324	4475	4344	4346	4910
(11) Oper. labor earnings (4) - (10)	1208	1192	726	768	1496

Table 31. Summary of Acres and Crop Yields Per Farm by Years

	1947	1948	1949	1950	1951
ACRES PER FARM					
Flax	4.2	3.5	5.0	.8	2.4
Barley	3.0	1.6	1.4	1.7	2.7
Oats	18.3	20.6	19.2	19.7	22.0
Wheat	3.7	2.4	2.8	2.3	2.0
Other small grains	1.9	1.1	2.2	1.9	2.1
Total small grains	31.1	29.2	30.6	26.4	31.2
Corn	15.4	16.4	16.4	13.8	16.1
Other cultivated crops	.6	.4	.7	.5	.4
Total cultivated crops	16.0	16.8	17.1	14.3	16.5
Alfalfa for hay or seed	5.9	6.6	10.4	10.5	13.5
Clover for hay or seed	2.2	2.6	3.1	3.2	5.8
Other hay and seed crops	17.7	15.9	11.4	12.3	8.5
Total tillable land in hay	25.8	25.1	24.9	26.0	27.8
Total tillable land in pasture	3.3	3.3	3.9	8.4	4.3
Tillable land not cropped	1.3	2.0	2.2	1.5	3.6
Total tillable land	77.5	76.4	78.7	76.6	83.4
Wild hay (non-tillable)	8.0	9.0	8.3	9.1	9.0
Non-tillable pasture	46.8	49.7	51.3	54.9	45.5
Timber, roads, waste, and farmstead	31.2	28.9	47.7	45.7	40.4
Total land in farm	163.5	164.0	186.0	186.3	178.3
CROP YIELDS PER ACRE					
Flax, bu.	8.5	11.0	7.8	5.3	8.9
Barley, bu.	21.1	26.3	26.5	19.3	18.0
Oats, bu.	31.5	32.9	31.5	23.0	38.8
Wheat, bu.	14.7	15.6	11.3	12.6	13.9
Potatoes, bu.	87.3	94.8	75.5	77.5	64.7
Corn for grain, bu.	28.1	42.9	42.1	18.1	35.8
Corn for silage, tons	5.0	6.7	7.2	4.0	5.4
Corn fodder, tons	2.1	2.7	2.6	2.0	2.7
Alfalfa hay, tons	1.8	1.9	1.8	1.3	1.8
Red or alsike clover hay, tons	1.5	1.5	1.2	1.2	1.2
Brome or timothy hay, tons	1.6	1.2	1.1	.9	1.0
Wild hay on non-tillable land, tons	1.1	1.0	1.3	.9	1.0

Table 32. Summary of Miscellaneous Items by Years

	1947	1948	1949	1950	1951
MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY					
% high return crops	27.3	27.0	32.7	30.9	36.3
A.U. livestock per 100 A.*	13.3	13.1	13.6	13.1	15.2
No. of work units	288	284	293	242	258
Work units per worker	201	213	223	186	215
Expenses per work unit	\$ 4.39	\$ 4.54	\$ 4.34	\$ 5.22	\$ 5.42
AMOUNT OF LIVESTOCK					
No. of milk cows	9.0	8.3	8.6	8.3	8.7
No. of other dairy cattle	8.7	8.7	9.3	9.4	9.5
No. head of sheep	1.7	4.5	2.5	1.9	2.1
No. of hens	85	72	60	82	66
Lbs. hogs produced	2093	2348	3132	2651	3567
No. litters of hogs raised	1.5	1.7	2.6	3.0	4.1
No. of horses	1.7	1.5	1.3	1.3	1.0
PRODUCTION PER UNIT OF LIVESTOCK					
Lbs. B.F. per dairy cow	218	236	253	256	252
Pigs weaned per litter	6.7	7.4	7.3	6.7	7.1
No. eggs laid per hen	138	138	142	152	165
Lbs. wool per sheep sheared	6.9	6.7	6.5	7.1	6.8
% lamb crop	98	109	104	87	123
PRICE RECEIVED PER					
Lb. B.F. sold (cts.)	87.1	97.6	73.4	73.7	85.1
Cwt. hogs sold	\$ 25.50	\$ 25.55	\$ 20.71	\$ 21.15	\$ 23.25
Cwt. lambs sold	20.50	22.41	22.54	26.06	31.01
Lb. wool sold (cts.)	38.4	48.4	48.2	59.3	102.5
Doz. eggs sold (cts.)	40.9	41.5	39.9	31.0	42.6
RETURN ABOVE FEED COST PER					
Dairy cow	\$102.85	\$141.61	\$100.81	\$ 94.56	\$137.46
Cwt. hogs produced	8.87	7.74	6.44	8.63	6.66
Head of sheep	8.85	7.85	7.67	6.03	15.42
Hen	.76	1.40	1.81	.63	2.10
FEED COST PER					
Dairy cow	\$ 94.89	\$103.18	\$ 93.35	\$112.88	\$ 96.89
Cwt. hogs produced	16.77	15.18	10.46	12.33	14.21
Head of sheep	3.10	5.55	5.72	8.29	8.08
Hen	4.40	3.85	3.48	3.44	4.24
Horse	35.50	38.08	34.05	41.12	25.52

* The animal unit equivalents were changed in 1951