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1951 ANNUAL REPORT
VETERANS
FARM MANAGEMENT SERVICE
SOUTHEASTERN 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. 202

Division of Agricultural Economics

University Farm

St. Paul 1, Minnesota

September, 1952

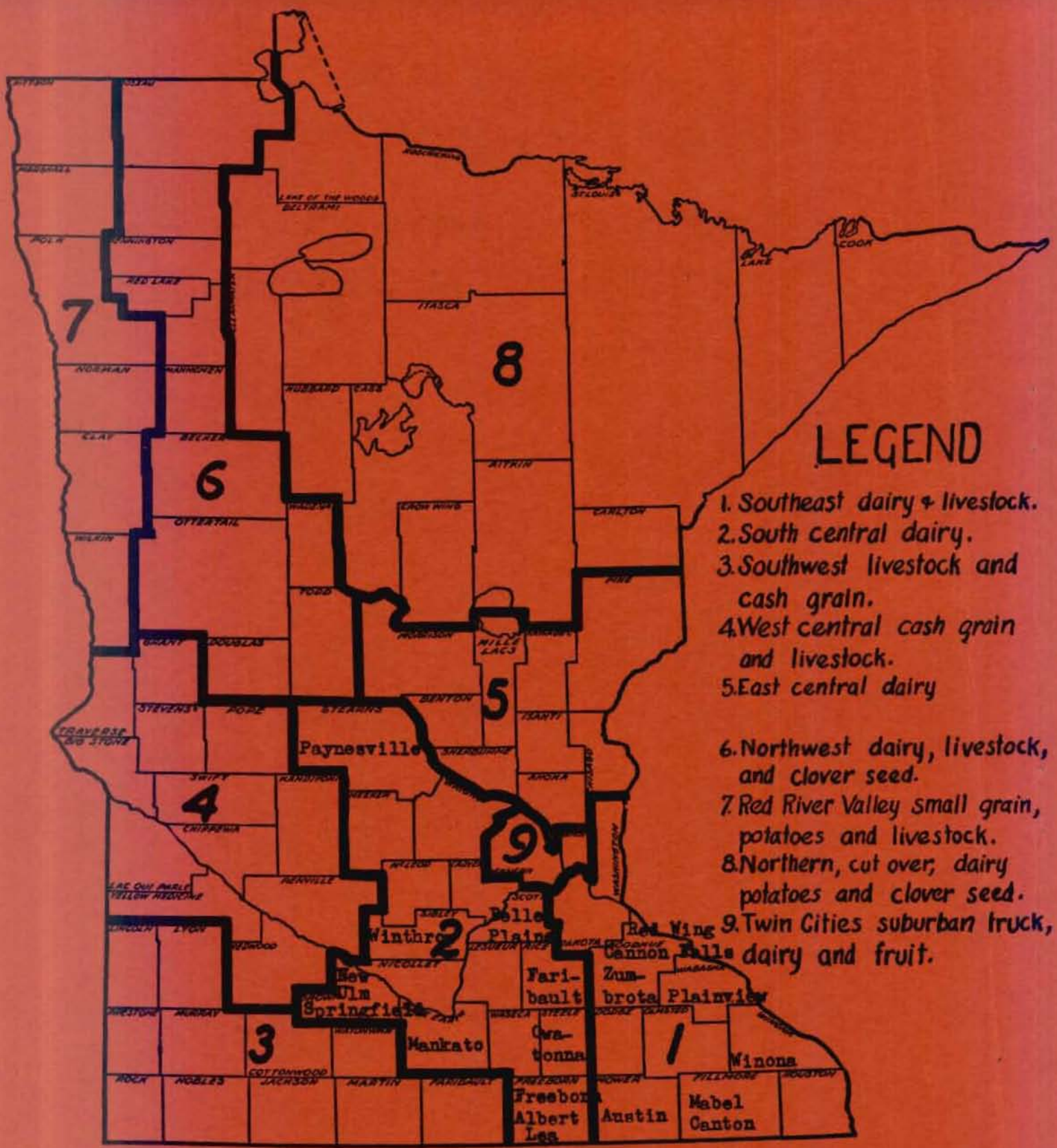


Figure 1. Type of Farming Areas in Minnesota and Location of Schools Submitting Farm Records for this Report

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

T. R. Nodland, H. W. Swanson and G. A. Pond

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INTRODUCTION

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

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

The analysis of the records and the preparation of the reports are handled by the Division of Agricultural Economics under the direction of G. A. Pond and T. R. Nodland. The State Department of Education was represented by G. R. Cochran, State Supervisor of Agricultural Education. At the end of the year, B. F. Stanton, R. M. Dennistoun, and H. G. Routhé of the Division of Agricultural Economics aided in closing the records.

This report deals with the veterans enrolled by 18 schools located in Southeastern Minnesota (Type-of-Farming Areas 1 and 2)^{1/}. The map on the inside front cover of this report shows the location of the schools. The following tabulation shows by schools the number of farm records submitted in 1951:

Albert Lea	30	Freeborn	6	Plainview	2
Austin	9	Mabel	2	Red Wing	7
Belle Plaine	3	Mankato	4	Springfield	4
Cannon Falls	2	New Ulm	4	Winona	2
Canton	3	Owatonna	2	Winthrop	3
Faribault	6	Paynesville	4	Zumbrota	2
				TOTAL	96

The subsequent pages in this report show the data for 91 farms. Five farms were omitted from all the averages in the tables because the records were not sufficiently complete for a full analysis.

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

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

FARM INVENTORIES

The capital investment per farm varied from \$7938 to \$64097. 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 66 out of the 91 cases included in this report. The landlord's investment has been included in Table 1 in order to show the total amount used per farm.

FARM EARNINGS

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

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

^{1/} For a description of the area, see "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 91 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			169	
Size of business (work units)**			361	
Dairy and dual purpose cows			\$ 1554	\$ 1614
Other dairy & dual purpose cattle			706	874
Beef cattle			521	827
Hogs			1357	1339
Sheep			55	132
Poultry			186	204
Productive livestock (total)			4379	4990
Horses			34	34
Crop, seed, and feed			2266	2303
Power mach. (farm share)			1938	2255
Crop & general mach.			1913	2328
Livestock equipment & supplies			339	380
Mach. and equipment (total)			4190	4963
Misc.			-	-
Buildings, fences, etc.			8144	7934
Land			9727	9727
Total farm capital			28740	29951

Items	18 most profitable farms		18 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	209		130	
Size of business (work units)**	447		258	
Dairy and dual purpose cows	\$1625	\$1579	\$1046	\$1208
Other dairy & dual purpose cattle	795	1103	382	574
Beef cattle	1000	1622	18	-
Hogs	1562	1733	1120	887
Sheep	207	299	4	234
Poultry	175	242	147	197
Productive livestock (total)	5364	6578	2717	3100
Horses	32	38	28	30
Crop, seed, and feed	2535	2914	1410	1080
Power mach. (farm share)	2249	2545	1704	1963
Crop and general mach.	1979	2644	1523	1778
Livestock equipment & supplies	393	416	242	232
Mach. & equipment (total)	4621	5605	3469	3973
Buildings, fences, etc.	7821	7550	6517	6386
Land	12817	12817	5964	5964
Total farm capital	33190	35502	20105	20533

* 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 91 farms	18 most profitable farms	18 least profitable farms
FARM RECEIPTS				
Dairy and dual-purpose cows	\$ 620	\$ 620	\$ 881	\$ 373
Dairy products	1721	1721	1912	1131
Other dairy & dual-purpose cattle	536	536	563	320
Beef cattle	472	472	1031	26
Hogs	3885	3885	5253	3022
Sheep and wool	68	68	259	24
Poultry	136	136	169	76
Eggs	779	779	812	699
Horses	6	6	2	7
Corn	375	375	743	103
Small grain	308	308	357	213
Other crops	537	537	673	318
Mach. and equipment sold	457	457	603	214
Agricultural adjustment payments	29	29	30	13
Income from work off the farm	122	122	177	108
Miscellaneous	10	10	25	4
(1) Total farm sales	10061	10061	13490	6651
(2) Net increase in farm capital	1211	1211	2312	428
(3) Family living from the farm	504	504	481	478
(4) Total farm receipts (1)+(2)+(3)	11776	11776	16283	7557
FARM EXPENSES				
Dairy and dual-purpose cows bought \$	\$140	\$140	\$ 76	\$234
Other dairy and dual-pur. cattle bot	182	182	118	181
Beef cattle bought	406	406	820	-
Hogs bought	230	230	298	304
Sheep bought	68	68	43	234
Poultry bought (including turkeys)	90	90	130	75
Horses bought	8	8	10	13
Misc. livestock expense	128	128	154	77
Misc. crop expenses	408	408	462	338
Feed bought	1522	1522	1875	1251
Custom work hired	340	340	443	220
Mech. power mach. (farm share) (new)	1003	1003	1123	765
Mech. power mach. (farm share)(upkp)	203	203	222	163
Mech. power(f.share)(gas,oil,etc.)	662	662	747	523
Crop and general mach. (new)	870	870	1180	568
Crop and general mach. (upkeep)	134	134	127	92
Livestock equipment (new)	128	128	95	58
Livestock equipment (upkeep)	43	43	39	24
Buildings and fencing (new)	209	209	80	265
Buildings and fencing (upkeep)	106	106	52	163
Hired labor	123	123	155	141
Taxes	341	341	414	228
General farm and insurance	82	82	74	84
(5) Total farm purchases	7426	7426	8737	6001
(6) Decrease in farm capital	-	-	-	-
(7) Interest on farm capital	1467	1467	1717	1016
(8) Unpaid family labor	535	535	632	365
(9) Board furnished hired labor	37	37	42	42
(10) Total farm exp. (sum of (5) to (9))	9465	9465	11128	7424
(11) Oper. labor earnings (4) - (10)	2311	2311	5155	133

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

Items	Your farm	Average of 91 farms	18 most profitable farms	18 least profitable farms
RETURNS AND NET INCREASES				
Dairy and dual purpose cows	_____	\$2077	\$2444	\$1326
Other dairy & dual pur. cattle	_____	1010	1348	613
Beef breeding herd	_____	178	303	-
Feeder cattle	_____	188	494	8
Hogs	_____	3701	5188	2555
Sheep - farm flock	_____	76	309	20
Chickens	_____	892	970	802
All productive livestock	_____	8122	11056	5324
Crops, seed and feed	_____	-811	-351	-1343
Agric. Conservation payments	_____	29	30	13
Income from labor off the farm	_____	60	65	63
Miscellaneous	_____	180	178	168
(1) Tot. returns & net increases	_____	7580	10978	4225
EXPENSES AND NET DECREASES				
Horses	_____	\$26	\$32	\$12
Tractor	_____	608	701	498
Truck	_____	152	105	159
Auto (farm share)	_____	319	376	288
Gas engine and elect. exp. (f. shr.)	_____	101	111	60
Hired power	_____	138	189	85
Total power	_____	1344	1514	1102
Crop and general machinery	_____	554	555	410
Livestock equipment	_____	118	106	86
Buildings, fencing & tiling	_____	439	327	478
Misc. productive livestock exp.	_____	128	154	77
Labor	_____	796	962	611
Real estate taxes	_____	281	342	190
Personal property tax	_____	60	72	38
Insurance	_____	34	22	39
General farm	_____	48	52	45
Interest on farm capital	_____	1467	1717	1016
(2) Total expenses & net decreases	_____	5269	5823	4092
(3) Oper. labor earnings (1) - (2)	_____	2311	5155	133

* 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 4.3 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 ten per cent of the average inventory value of the dwelling.

Table 4. Family Living from the Farm, 1951

Items	Your farm	Average 91 farms	Your farm	Average 91 farms
Adult equiv. - family	_____	2.5	_____	
- others	_____	.2	_____	
Whole milk	_____	598 qts.	_____	\$52.15
Skim milk	_____	50 qts.	_____	1.53
Cream	_____	69 pts.	_____	17.92
Farm made butter	_____	4 lbs.	_____	2.66
Beef	_____	208 lbs.	_____	41.21
Hogs	_____	335 lbs.	_____	63.65
Poultry	_____	56 lbs.	_____	14.08
Eggs	_____	106 doz.	_____	34.89
Potatoes	_____	3 bu.	_____	2.61
Vegetables & fruit	_____		_____	12.53
Farm fuel	_____	1 cd.	_____	5.43
Rental vl. of house	_____		_____	255.43
Total	_____		_____	504.09

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 \$151 per month for family living in addition to the food, fuel and housing furnished by the farm. Most of the personal receipts were in the form of veterans' compensation payments.

Table 5. Household and Personal Expenses and Receipts for Those Farmers Who Kept Complete Accounts of These Items, 1951

Items	Your farm	Average of 73 farms	15 most profitable farms	15 least profitable farms
Number of persons in family	_____	3.6	3.6	4.1
Number of adult equivalents in family	_____	2.5	2.6	2.7
Number of other adult equivalents*	_____	.2	.1	.1
EXPENSES				
Food and meals bought	\$ _____	\$626	\$661	\$657
Operating and supplies	_____	193	206	166
Clothing and clothing materials	_____	211	228	156
Personal care, personal spending	_____	89	115	123
Furnishings and equipment	_____	156	117	113
Education, recreation and development	_____	64	106	40
Medical care and health insurance	_____	141	159	88
Church, welfare, gifts	_____	90	128	68
Personal share of auto expense	_____	75	99	67
Household share of elect. & gas eng. exp.	_____	52	60	48
H.H.&pers.shr.of new auto& motors bot.	_____	119	119	59
Total	_____	1816	1998	1585
State and federal income tax	_____	10	6	2
Insurance	_____	101	67	64
Total H.H. and pers. cash expense	_____	1927	2071	1651
Food furnished by the farm	_____	239	221	230
Fuel furnished by the farm	_____	6	2	12
House rental	_____	254	205	248
Total cash expenses and perquisites	_____	2426	2499	2141
Investments	_____	35	162	-
RECEIPTS				
Sale of investments	_____	4	-	-
Income from outside investments	_____	29	92	17
Veterans compensation	_____	1072	1079	1100
Other personal income	_____	59	163	71

*Hired help or others boarded

NET WORTH

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

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

Table 6. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1951 (Operator's Share)

	Your farm		26 owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			130	
Total farm capital			\$21772	\$23292
Accounts receivable			67	9
Stocks and bonds			232	221
Life insurance			215	241
Real estate other than farm operated			182	165
Other outside investments			12	12
Total outside investments			641	639
Cash on hand and in bank			436	319
Other household & personal assets			1980	2090
Total cash, household & personal assets			2416	2409
TOTAL ASSETS			24896	26349
Fed. Land Bank mortgage			185	172
Other mortgage on land operated			6313	6468
Production Credit Assn. mortgage			-	-
Crop loans			177	-
Chattel mortgages			891	935
Notes payable			1108	1094
Accounts payable			455	403
TOTAL LIABILITIES			9129	9072
Farmer's net worth			15767	17277
Gain in net worth				+1510
			23 cash & crop share renters*	21 livestock and crop share renters
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	164		189	
Total farm capital	\$9045	\$10676	\$7624	\$8869
Accounts receivable	257	217	-	7
Stocks and bonds	85	304	24	104
Life insurance	90	102	94	125
Real estate	-	-	-	-
Other outside investment	1	1	7	25
Total outside investments	176	407	125	254
Cash on hand and in bank	441	277	371	301
Other household and personal assets	1337	1376	1941	2096
Total cash, household & personal assets	1778	1653	2312	2397
TOTAL ASSETS	11256	12953	10061	11527
Mortg. on land not operated	-	-	-	-
Production Credit Assn. Mortgage	-	-	266	-
Crop loans	72	-	34	-
Other chattel mortgages	1452	1188	1096	1414
Notes payable	628	820	1968	1797
Accounts payable	228	350	362	479
TOTAL LIABILITIES	2380	2358	3726	3690
Farmers's net worth	8876	10595	6335	7837
Gain in net worth		+1719		+1502

* 13 rented for cash, and 10 rented for cash and crop share.

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

	Your farm	26 owners	23 cash & cr. shr. renters	21 livestock & cr. share renters
FARM RECEIPTS				
Dairy and dual purpose cows		\$ 435	\$ 368	\$ 338
Dairy products		1518	1026	1113
Other dairy & dual purpose cattle		357	433	347
Beef cattle		18	260	592
Hogs		3555	2758	2008
Sheep and wool		17	40	78
Poultry		135	76	122
Eggs		689	571	692
Horses		7	7	-
Corn		199	218	177
Small grain		135	169	144
Other crops		403	490	190
Machinery & equipment sold		292	453	593
Agricultural adjustment payments		52	8	11
Income from work off the farm		207	102	34
Misc.		9	8	7
(1) Total farm sales		8028	6987	6446
(2) Increase in farm capital		1520	1631	1245
(3) Family living from the farm		496	461	486
(4) Total farm rec. (1)+(2)+(3)		10044	9079	8177
FARM EXPENSES				
Dairy and dual purpose cows bot.		195	157	52
Other dairy & dual pur. cattle bot.		193	222	59
Beef cattle bot (including feeders)		192	334	285
Hogs bot		166	184	163
Sheep bot		79	-	-
Poultry bot (including turkeys)		70	61	112
Horses bot		17	-	6
Miscellaneous livestock expenses		121	99	76
Misc. crop expenses		445	257	225
Feed bot.		1353	1012	769
Custom work hired		271	231	257
Mech. power mach. (farm share) (new)		698	1209	962
Mech. power mach. (farm share) (upkp)		171	208	196
Mech. power (farm share) (gas, oil, etc.)		602	593	557
Crop and general mach. (new)		700	692	1092
Crop and general mach. (upkeep)		144	123	101
Livestock equipment (new)		178	94	127
Livestock equipment (upkeep)		45	46	32
Land, buildings & fencing (new)		988	65	-
Buildings & fencing (upkeep)		205	13	26
Hired labor		94	77	111
Taxes (real estate & pers. property)		256	43	58
General farm and insurance		112	45	55
Cash rent		-	687	11
Interest paid		300	102	128
(5) Total farm purchases		7595	6554	5460
(6) Decrease in farm capital		-	-	-
(7) Interest on farm capital		827	391	284
(8) Unpaid family labor		333	412	344
(9) Board furnished hired labor		21	21	53
(10) Tot. farm exp. (sum of (5) to (9))		8776	7378	6141
(11) Operator's lab. earn (4) - (10)		1268	1701	2036
(12) Ret. cap. & fam. lab. (7)+(8)+(11)		2428	2504	2664

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 26 owners, 23 cash and crop share renters and 21 livestock and crop share renters is shown in Table 7. The statement includes only the veterans share of the earnings of the partnership. The earnings as shown in Table 7 are on an actual basis as compared to the full-owner basis in Tables 2 and 3.

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 \$5155 and of those in the lower 20 per cent was \$133. This is a range of \$5022 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	farms	labor earnings
Below 85	20	\$1339
85 - 114	51	2367
115 and above	20	3140

^{1/} See Pond, G. A. "Why Farm Earnings Vary". Minn. Agri. Expt. Sta. Bul. 386, June, 1945.

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. Choice of crops as computed in this study showed no definite relationship to earnings in 1951. In computing the percentage of land in high return crops corn is given the highest rating and normally merits it. However the yield of corn was so low and the quality so poor that it had little advantage over competing crops in 1951.

Return from livestock. This is a measure of feeding efficiency. The majority of these farmers maintain some cattle, hogs and poultry. Most of the crops raised and some additional purchased feed are fed to livestock. Since feed is the major item of cash in livestock production, an increase in feeding efficiency results in a higher earnings.

Table 9. 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 85	73.6	19	\$1860
85 - 111	97.3	54	2060
112 and above	129.1	18	3425

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

Amount of Livestock. This factor measures the importance of livestock in the farm business. It is the amount of livestock units per 100 acres in the farm other than land in timber, roads, waste and farmstead. Livestock are important in that they add to the size of business. They provide employment throughout the year and aid in maintaining or building up the fertility of the land.

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

Livestock units per 100 acres		No. of farms	Average operator's labor earnings
Range	Average		
Below 17.0	12.0	20	\$2005
17.0 - 31.9	24.1	48	2207
32.0 and above	39.8	23	2795

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

Table 11. Relation of Size of Business to Farm Earnings

Work Units Range	Average	No. of farms	Average Operator's Labor Earnings
Below 265	210	23	\$1070
265 - 459	357	47	2232
460 and above	537	21	3847

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 12. Relation of Work Accomplished Per Worker to Farm Earnings.

Work units per worker Range	Average	No. of farms	Average operator's labor earnings
Below 185	155	19	\$1420
185 - 314	252	54	2134
315 and above	361	18	3785

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 those items may constitute an important factor limiting earnings.

Table 13. Relation of Expenses to Farm Earnings

Expenses per work unit Range	Average	No. of farms	Average operator's labor earnings
\$8.75 and above	\$10.74	20	\$1182
\$4.90-\$8.74	6.98	50	2222
Below 4.90	4.42	21	3600

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 those 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 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			
		\$1200	\$2400	\$3600	\$4800
0 or 1	13	[REDACTED]			\$778
2 or 3	40	[REDACTED]			1910
4 or 5	28	[REDACTED]			2632
6 or 7	10	[REDACTED]			5010

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 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 14.

Table 14. 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 & dual 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 1/4 beef cows or bull, 1 feeder steer or heifer, 3 1/3 other beef cattle, 7 sheep, 14 lambs, 2 1/2 hogs, 5 pigs, 50 hens or 1100 pounds of turkeys produced.

Table 15. Measures of Farm Organization and Management Efficiency, 1951

Measures used in chart on page 15	Your farm	Average of 91 farms	18 most profit- able farms	18 least profit- able farms
Operator's labor earnings	\$ _____	\$2311	\$5155	\$ 133
(1) Crop yields*	_____	100	105	80
(2) % of tillable land in high return crops**	_____	55.0	54.2	57.7
(3) Ret. for \$100 feed to prod. livestock***	_____	100	106	97
(4) Prod. livestock units per 100 acres****	_____	25.0	26.9	24.4
(5) Size of business - work units	_____	361	447	258
(6) Work units per worker	_____	241	298	184
(7) Pow., mach., equip., & bldg. exp. per work unit	\$ _____	\$7.16	\$5.66	\$8.38
Items related to some of the above measures:				
(3) Index of return for \$100 feed from Dairy cattle (See pages 20 and 21)	_____	100	106	102
Beef breeding herd (See page 22)	_____	100	-	-
Beef cattle - feeders (See page 23)	_____	100	-	-
Hogs (See page 19)	_____	100	109	100
Sheep - farm flock (See page 26)	_____	100	150	-
Chickens (See page 24)	_____	100	98	93
(4) Number of animal units	_____	35.6	48.5	23.8
(5) Work units on crops	_____	106	131	77
Work units on productive livestock	_____	247	307	172
Other work units	_____	8	9	9
(6) Number of family workers	_____	1.4	1.4	1.3
Number of hired workers	_____	.1	.1	.1
Total number of workers	_____	1.5	1.5	1.4
(7) Power expense per work unit	\$ _____	\$3.96	\$3.48	\$4.55
Crop machinery expense per work unit	_____	1.58	1.25	1.64
Livestock equip. expense per work unit	_____	.32	.23	.32
Bldgs. & fencing exp. per work unit	_____	1.30	.70	1.87

* Given as a percentage of the average.

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

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

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

Thermometer Chart

Using your figures from page 14, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 91 farms included in this summary are located between the dotted lines across the center of this page.

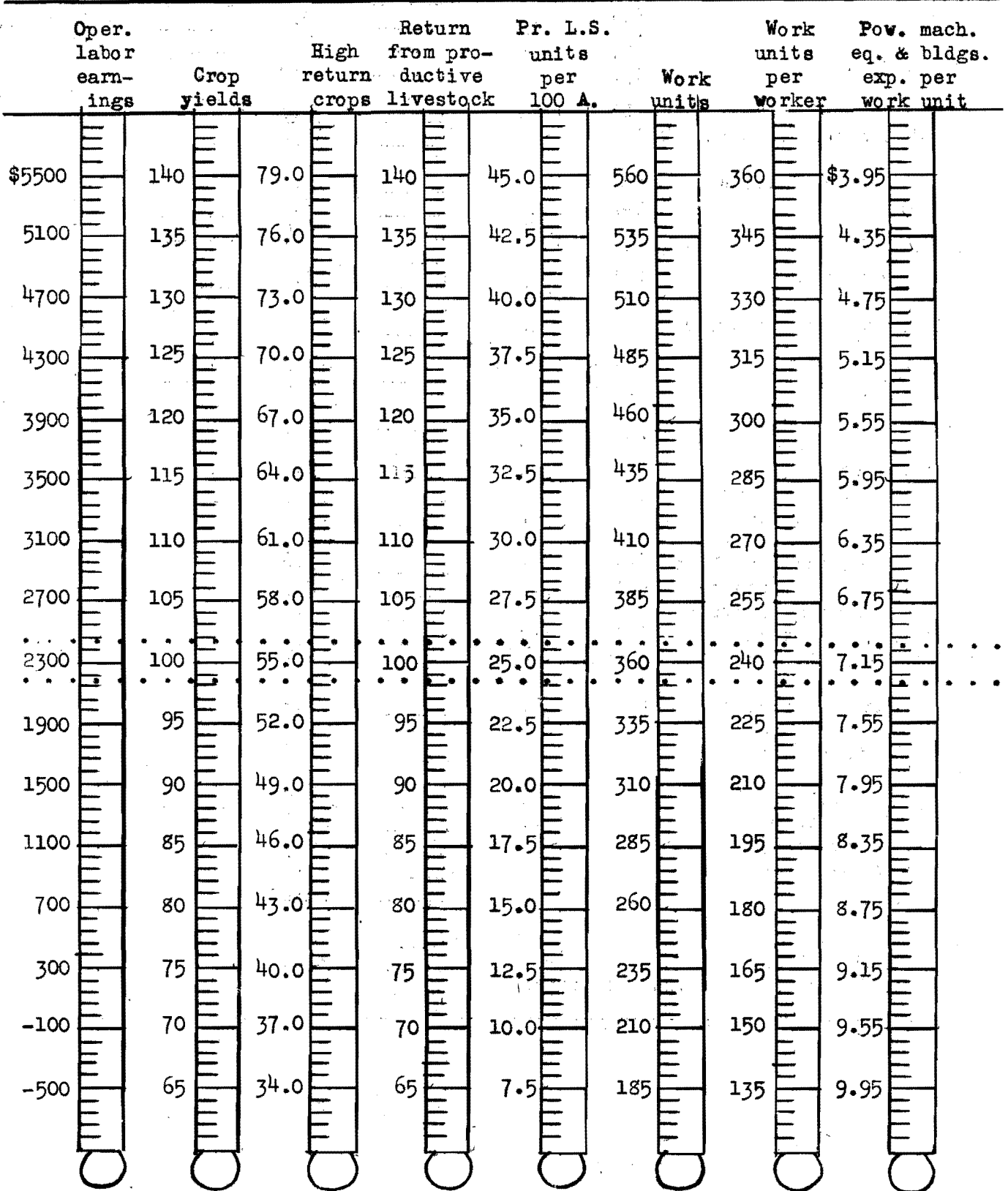


Table 16. Distribution of Acres in Farm and Yield of Crop, 1951

Crop: (A), (B), (C), and (D) refer to ranking used in calculating % of tillable land in High Return Crops (see page 14)	No. growing this crop	Acres in farm		Yield per acre	
		Your farm	Average of 91 farms	Your farm	Average of farms growing each crop
Canning peas (A)	3	_____	.4	_____	\$41.02
Flax (C)	7	_____	1.5	_____	10.9 bu.
Barley (D)	18	_____	2.9	_____	27.2 bu.
Oats (D)	85	_____	30.7	_____	43.4 bu.
Oats and wheat (D)	3	_____	.3	_____	26.4 bu.
Wheat (D)	8	_____	.8	_____	17.3 bu.
Rye (D)	2	_____	.8	_____	
Total small grain and peas	88	_____	37.4	_____	
Potatoes and truck crops (A)	2	_____	.3	_____	
Corn grain (A)	90	_____	38.9	_____	42.9 bu.
Corn silage (B)	49	_____	5.0	_____	7.5 tons
Sweet corn (B)	1	_____	.2	_____	
Soybeans for grain (C)	43	_____	10.2	_____	16.6 bu.
Corn fodder (D)	4	_____	.1	_____	2.0 tons
Total cultivated crops	91	_____	54.7	_____	
Alfalfa hay (A)	72	_____	13.5	_____	2.6 tons
Red clover hay (B)	20	_____	4.4	_____	2.2 tons
Soybean hay (C)	1	_____	.1	_____	
Mixed legumes & non-legumes (C)	6	_____	.6	_____	2.0 tons
Legumes for seed (C)	2	_____	.2	_____	
Timothy and/or brome hay (D)	2	_____	.2	_____	
Total tillable land in hay	87	_____	19.0	_____	
Alfalfa and mixtures incl. alf (A)	21	_____	2.6	_____	
Other legumes and mixtures (C)	11	_____	2.7	_____	
Sudan grass or rape pasture (C)	12	_____	.6	_____	
Other tillable pasture (D)	10	_____	1.8	_____	
Total tillable land in pasture	44	_____	7.7	_____	
Tillable land not cropped (D)	12	_____	1.4	_____	
Total tillable land	91	_____	120.2	_____	
Wild hay (non-tillable)	28	_____	4.9	_____	.5 tons
Non-tillable pasture	70	_____	26.2	_____	
Timber (not pastured)	30	_____	5.3	_____	
Roads and waste		_____	7.0	_____	
Farmstead		_____	5.0	_____	
Total acres in farm		_____	168.6	_____	
Per cent land tillable		_____	71.3	_____	
Per cent tillable land in high ret. crops		_____	55.0	_____	

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 28 to 265 with an average of 116 (Table 17). 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 17. Power and Machinery Expenses Per Crop Acre, 1951

Items	Your farm	Average of 91 farms	18 most profitable farms	18 least profitable farms
Crop acres per farm	_____	116.0	146.5	82.3
Tractor and horse exp. per crop acre	_____	\$5.74	\$5.21	\$6.57
Crop & gen. mach. exp. per crop acre	_____	4.93	3.89	5.20

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 18. Sixty-seven farmers did not maintain horses.

Table 18. Feed Costs for Horses, 1951

Items	Your farm	Average of 24 farms
Feed per horse, lbs.:		
Grain	_____	366
Hay	_____	3187
Fodder and stover	_____	83
Feed cost per horse:		
Grain	_____	\$8.44
Roughage	_____	22.94
Pasture	_____	6.10
Total feed cost	_____	37.48
Number of work horses	_____	2.5
Number of colts	_____	.1

AMOUNT OF LIVESTOCK

A large proportion of the farmers maintained some dairy or dual purpose cattle and hogs (Table 19). Seventy-four per cent of the farmers kept poultry.

Table 19. Amount of Livestock, 1951

	Your farm	Average of 91 farms	18 most profitable farms	18 least profitable farms
Number of milk cows	_____	8.9	10.5	6.4
Number of other dairy cattle	_____	9.8	12.3	5.9
Number of beef cattle (incl. feeders)	_____	3.8	7.9	.1
Number of sheep*	_____	4.2	13.8	3.2
Number of hens	_____	150	149	135
Pounds of hogs produced	_____	19281	27236	13198
Number of horses	_____	.7	.7	.4

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

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

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

HOGS

The return over feed cost per 100 pounds of hogs produced varied from \$9.11 for those farmers ranking in the upper one-fifth in feeding efficiency to a return of \$-.96 for those in the lowest one-fifth. Some of the important factors that affected return over feed were:

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

Table 21. Feed Costs and Returns from Hogs, 1951

Items	Your farm	Average of 85 farms	17 farms highest in returns above feed	17 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	366	290	484
Small grain	_____	126	78	190
Commercial feeds	_____	37	41	40
Total concentrates	_____	529	409	714
Skim milk and buttermilk	_____	122	105	158
Feed cost per cwt. hogs produced:				
Concentrates	\$ _____	\$13.80	\$10.91	\$18.95
Skim milk and buttermilk	_____	.47	.42	.56
Pasture	_____	.21	.26	.18
TOTAL FEED COSTS	\$ _____	14.48	11.59	19.69
Net increase in val. per cwt. hogs prod.	_____	\$19.06	\$20.70	\$18.73
RETURNS ABOVE FEED COST PER CWT. HOGS PRODUCED	\$ _____	\$ 4.58	\$ 9.11	\$ -.96
RETURNS FOR \$100 OF FEED	\$ _____	\$138	\$182	\$ 98
Price received per cwt. hogs sold	\$ _____	\$19.81	\$20.31	\$19.66
No. of spring litters raised	_____	8.5	11.0	8.2
No. of fall litters raised	_____	5.9	8.2	6.8
Total no. of litters raised	_____	14.4	19.2	15.0
No. of pigs born per litter	_____	7.9	8.1	7.3
No. of pigs weaned per litter	_____	6.2	6.5	5.8
Pounds of hogs produced	_____	20549	30843	16560

DAIRY AND DUAL PURPOSE CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 22, 23, and 24. The statements include four herds which were classified as dual purpose cattle.

The return over feed cost per cow varied from \$-110.46 to \$316.59 among the 78 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)
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 13 herds which ranked below the average of the whole group in all of these factors showed a return over feed of \$27 per cow. On the other hand, the 7 herds which ranked above the average of the whole group in four or five factors had a return over feed per cow of \$168. These data suggest that dairy returns could be very materially increased by more attention to these five management factors.

Table 22. Factors of Cost and Returns from Dairy and Dual Purpose Cows,* 1951

Items	Your farm	Average of 78 farms	16 farms highest in butterfat per cow	16 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	248	348	164
Ave. test of butterfat	_____	3.7	3.6	3.7
Price rec. per lb. B.F. sold(cents)	_____	83.7	90.7	81.2
As cream (cents)	_____	78.0	78.5	78.1
Other (cents)	_____	96.9	98.8	100.0
Feeds per cow, lbs:				
Corn	_____	1459	2130	1281
Small grain	_____	829	978	629
Commercial feeds	_____	323	431	438
Legume hay	_____	4426	5165	3447
Other hay	_____	545	219	537
Fodder and stover	_____	19	-	48
Total concentrates	_____	2611	3539	2348
Total dry roughage	_____	4990	5384	4032
Silage	_____	5787	4946	4849
Total digestible nutrients**	_____	5486	6311	4519
T.D.N. per lb. B.F.	_____	22.1	18.1	27.5
% T.D.N. that is protein	_____	14.4	14.5	14.2
Feed cost per cow:				
Concentrates	\$ _____	\$65.69	\$88.60	\$50.70
Roughages	_____	60.28	61.21	54.25
Pasture	_____	6.70	6.36	6.40
TOTAL FEED COSTS	\$ _____	\$132.67	\$156.17	\$111.35
Value of produce per cow:				
B.F. sales	\$ _____	\$191.66	\$288.48	\$119.24
Dairy produce used in house	_____	9.97	11.79	7.40
Milk to livestock	_____	23.57	27.23	16.25
Net increases in value of cows	_____	9.16	15.04	16.80
TOTAL VALUE PRODUCED	\$ _____	\$234.36	\$342.54	\$159.69
RETURNS ABOVE FEED COST PER COW	\$ _____	\$101.69	\$186.37	\$48.34
RETURNS FOR \$100 OF FEED	\$ _____	\$196	\$234	\$184
Feed cost per lb. B.F. (cents)	_____	53.5	44.9	67.9
% fall freshening	_____	46	46	45
Number of cows***	_____	10.3	10.3	12.6

* Four herds were classified as dual purpose cattle.

** 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 23. Feed Costs and Returns from Other Dairy and Dual Purpose Cattle, 1951

Items	Your farm	Average of 76 farms*	16 farms highest in butterfat per cow	14 farms lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates	_____	632	719	378
Hay and fodder	_____	2082	2076	1204
Silage	_____	1742	1571	1743
Skim milk	_____	797	539	582
Whole milk	_____	344	491	293
Feed cost per head:				
Concentrates	\$ _____	\$16.61	\$19.23	\$10.03
Roughages	_____	21.83	22.59	14.01
Milk	_____	13.78	17.06	9.19
Pasture	_____	2.67	2.27	2.64
TOTAL FEED COSTS PER HEAD	_____	54.89	61.15	35.87
Net inc. in value of other cattle	_____	110.19	106.20	109.47
RETURNS ABOVE FEED COST PER HEAD	_____	55.30	45.05	73.60
RETURNS FOR \$100 OF FEED	\$ _____	\$235	\$189	\$313
Number of head of other cattle	_____	11.6	11.7	15.6

*Two farmers having both a milking herd and a beef herd, used a beef bull, and included all the young stock in the beef herd.

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

Items	Your farm	Average of 78 farms	16 farms highest in butterfat per cow	16 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	2146	2775	1990
Hay and fodder	_____	4533	4882	3339
Silage	_____	4846	4269	4244
Feed cost per animal unit:				
Concentrates	_____	\$53.58	\$70.53	\$40.55
Roughages	_____	53.13	54.94	45.20
Pasture	_____	6.22	5.70	6.09
TOTAL FEED COSTS PER ANIMAL UNIT	\$ _____	112.93	131.17	91.84
Value of produce per animal unit:				
Dairy products	_____	\$138.35	\$200.40	\$90.57
Net increase in val. of dairy cattle	_____	76.60	81.84	77.21
TOTAL VALUE PRODUCED	_____	214.95	282.24	167.78
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	102.02	151.07	75.94
RETURNS PER \$100 OF FEED	\$ _____	\$210	\$229	\$224
Animal units of cattle	_____	16.1	16.2	19.6

No. of factors in which farmers excelled	No. of herds	Average Return Over Feed Per Cow			
		\$40	\$80	\$120	\$160
0	13				\$ 27
1	11				38
2	14				81
3	16				126
4 or 5	24				168

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

Table 25. Feed Costs and Returns from Beef Breeding Herds, 1951

Items	Your farm	Average of 7 farms
Feed per animal unit, lbs.:		
Concentrates		812
Legume hay		2561
Other hay		966
Fodder and stover		-
Silage		3860
Feed cost per animal unit:		
Concentrates	\$	\$18.83
Roughages		42.59
Pasture		11.80
Total feed cost		73.22
Value of produce per animal unit:		
Dairy products	\$	\$.83
Net increase in value of animals		151.33
Total value produced		152.16
Return over feed cost per animal unit		\$78.94
Return for \$100 of feed	\$	\$215
Number of cows and herd bulls		15.3
Number of animal units		17.8
Pounds of beef produced		8703

Table 26. Feed Costs and Returns From Feeder Cattle, 1951

Items	Your farm	Average of 6 farms
Feeds per cwt. beef produced, lbs.:		
Corn	_____	779
Small grain	_____	38
Commercial feeds	_____	18
Legume hay	_____	733
Other hay	_____	114
Fodder and stover	_____	--
Total concentrates	_____	835
Total hay and fodder	_____	847
Silage	_____	865
Feed cost per cwt. beef produced:		
Concentrates	\$ _____	\$20.56
Roughages	_____	8.50
Pasture	_____	.51
TOTAL FEED COSTS	\$ _____	\$29.57
Net increase in value of feeders	\$ _____	57.06
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	_____	\$27.49
RETURNS FOR \$100 OF FEED	\$ _____	\$205
Price rec'd per cwt. beef sold in 1950	\$ _____	\$31.75
Price paid per cwt. beef bought	_____	39.73
No. of animal units	_____	17.1
Pounds of beef produced	_____	6111

CHICKENS

Nine out of the 67 farmers raising chickens failed to receive a return large enough to cover the cost of feed. The average return over feed from the 67 flocks included in this report was \$1.62 per hen (Table 27.)

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

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

Table 27. Feed Costs and Returns from Chickens, 1951

Items	Your farm	Average of 67 farms	17 farms	17 farms
			highest in returns above feed	lowest in returns above feed
Feed per hen, lbs.:				
Grain	_____	95	90	117
Commercial feeds	_____	40	40	43
Total concentrates	_____	135	130	160
Skim milk and buttermilk	_____	9	19	-
TOTAL FEED COST PER HEN	\$ _____	\$4.30	\$4.12	\$5.08
Value of produce per hen:				
Eggs sold and used in house	\$ _____	\$5.37	\$6.98	\$4.29
Net increase in value of chickens	_____	.55	.86	.29
TOTAL VALUE PRODUCED	_____	5.92	7.84	4.58
RETURNS ABOVE FEED COST PER HEN	_____	1.62	3.72	-.50
RETURNS FOR \$100 OF FEED	\$ _____	\$148	\$200	\$94
Price rec'd per doz. eggs sold (cents)	_____	42.2	42.9	41.4
Eggs laid per hen	_____	156	198	125
Ave. no. of hens on farm during year	_____	196	215	177
% of hens that are pullets	_____	79	89	76
% of death loss of hens	_____	13	10	15
Number of chicks started:				
Pullets	_____	219	265	203
Straight run	_____	61	81	32
Cockerels	_____	8	17	13
Pounds of poultry produced	_____	842	1159	694

Table 28. Feed Costs and Returns From Chicks, 1951

Items	Your farm	Average of 13 flocks
Feed per 100 chicks raised, lbs.:		
Grain	_____	1426
Commercial feeds	_____	1175
Total concentrates	_____	2601
Skim milk	_____	---
Total feed cost per 100 chicks raised	_____	\$94.46
Net increase in val. per 100 chicks	_____	72.33
Return over feed cost per 100 chicks	_____	-22.13
Return for \$100 of feed	_____	\$77
Number of chicks bought:		
Pullets	_____	335
Straight run	_____	50
Cockerels	_____	8
Price paid per 100 chicks bought:		
Pullets	_____	\$40.99
Straight run	_____	---
Cockerels	_____	---
Per cent death loss	_____	9
Number chicks raised	_____	358
Price rec'd per pound sold (cents)	_____	20.3
Pounds of poultry produced	_____	1513

Table 29. Feed Cost and Returns from Laying Hens, 1951

Items	Your farm	Average of 20 flocks
Feed per hen, lbs.:		
Grain	_____	70
Commercial feeds	_____	30
Total concentrates	_____	100
Skim milk	_____	4
Total feed cost per hen	_____	\$2.97
Value of produce per hen:		
Eggs sold and used in home	_____	\$5.53
Less depreciation and death loss	_____	-.65
Total value produced	_____	4.88
Return above feed cost per hen	_____	1.91
Return for \$100 of feed	_____	164
Eggs laid per hen	_____	165
Price rec'd per doz. eggs sold (cents)	_____	42.3
Ave. no. hens on farm during year	_____	252
No. of hens on hand beginning of year	_____	277
% death loss	_____	14
% of hens that are pullets	_____	75

Table 30. Feed Costs and Returns from a Farm Flock of Sheep, 1951

Items	Your farm	Average of 7 farms
Feed per head,* lbs.:		
Concentrates	_____	169
Legume hay	_____	426
Other hay	_____	44
Fodder and stover	_____	48
Silage	_____	32
Feed cost per head:		
Concentrates	_____	\$4.00
Roughages	_____	4.45
Pasture	_____	1.34
TOTAL FEED COSTS	_____	9.79
Value of produce per head:		
Wool	\$ _____	\$7.01
Net increase in value of sheep	_____	9.93
TOTAL VALUE PRODUCED	_____	16.94
RETURNS ABOVE FEED COST PER HEAD	_____	\$7.15
Returns for \$100 of feed	\$ _____	\$194
Price per cwt. of lambs sold	\$ _____	\$29.60
Price per lb. wool sold (cents)	_____	106.5
Pounds of wool per sheep sheared	_____	8.7
Number of ewes kept for lambing	_____	31
% lamb crop**	_____	96
% death loss**	_____	7.1
Pounds of sheep produced	_____	2815
No. of head of sheep*	_____	46.0

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

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

SOME COMPARISONS WITH ESTABLISHED FARMERS

As a rule, beginning farmers have lower earnings than well established farmers. The data in Table 31 shows a comparison between the earnings of veterans taking on-the-farm training in southeastern Minnesota and those of members of the Southeast Minnesota Farm Management Service. The latter are, in general, older and more experienced operators who have been in business for a number of years. For purposes of comparison, the earnings are presented on a full-owner basis.

Some of the reasons for the lower earnings received by the veterans are shown in Table 32 and the succeeding tables. The beginning farmers are on smaller farms and they have a smaller capital investment in the farming business. They maintain a smaller amount of livestock per farm and the level of production of livestock, particularly milk cows, is materially lower. The accumulation of the necessary livestock, machinery and equipment with which to operate a farm at full capacity is a costly process and one that generally involves a considerable period of time.

Table 31. Summary of Farm Earnings for On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service, 1947 - 1951

Items	On-The-Farm Trainees					S. E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
Monthly charge for unpd. fam. lab.	\$102	\$125	\$123	\$119	\$126	\$125	\$125	\$125	\$125	\$125
Monthly charge for bd. hired lab.	40	39	35	38	37	36	36	36	36	36
FARM RECEIPTS										
Dairy cattle sales	\$691	\$806	\$976	\$928	\$1156	\$1480	\$1754	\$1799	\$2147	\$2225
Dairy products	1923	2335	2012	1750	1721	4129	4811	3866	4005	4500
Beef cattle	178	205	260	308	472	628	686	803	697	1326
Hogs	2035	2106	2488	2895	3885	4362	4222	3971	3926	4646
Sheep and wool	44	60	57	37	68	224	299	143	160	177
Poultry and eggs	801	1012	1015	899	915	2019	1998	1763	1485	1881
Horses	10	15	11	13	6	23	15	17	19	10
Crops	1140	1249	921	929	1220	2339	2491	1759	1868	1644
Power, mach. & equip. sales	244	208	283	321	457	291	360	308	505	539
Income work off farm	84	118	114	78	122	302	386	279	351	370
Miscellaneous	58	51	40	44	39	150	166	105	190	175
(1) Total farm sales	7208	8165	8177	8202	10061	15947	17188	14813	15353	17493
(2) Increase in farm capital	1907	1572	616	1535	1211	3542	1520	527	3457	3064
(3) Fam. living from farm	490	516	475	458	504	741	791	700	702	816
(4) Total farm receipts	9605	10253	9268	10195	11776	20230	19499	16040	19512	21373

Table 31. Summary of Farm Earnings for On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service 1947 - 1951 (Continued)

Items	On-The-Farm Trainees					S. E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
FARM EXPENSES										
Dairy cattle bought	\$341	\$286	\$347	\$382	\$322	\$296	\$344	\$283	\$321	\$390
Beef cattle bought	40	129	48	46	406	140	302	353	486	881
Hogs bought	175	177	197	165	230	226	199	217	179	219
Sheep bought	12	28	8	12	68	65	45	18	10	54
Poultry bought	125	78	97	97	90	149	145	182	148	145
Horses bought	21	12	4	4	8	11	11	12	9	5
Misc. livestock expense	77	85	109	125	128	250	257	268	315	327
Misc. crop expense	348	427	381	373	408	780	933	780	819	876
Feed bought	905	925	961	1132	1522	2224	2090	1773	1972	2299
Custom work hired	248	336	352	318	340	400	507	461	446	522
Mech. pow. (new)	540	582	775	806	1003	527	1021	1000	1063	1007
Mech. pow. (F. sh., upkp, gas, etc.)	655	755	737	759	865	988	1157	1128	1123	1187
Crop and gen. mach. (new)	434	715	576	659	870	726	1244	861	1116	1224
Crop and gen. mach. (upkeep)	94	119	104	98	134	212	229	193	205	236
Livestock equip. (new)	139	121	145	139	128	97	128	129	135	156
Livestock equip. (upkeep)	28	44	46	51	43	91	89	97	99	110
Bldgs. and fencing (new)	347	547	496	458	209	897	1205	1109	1139	1218
Bldgs. and fencing (upkeep)	81	155	113	127	106	354	383	403	409	359
Hired labor	167	177	220	151	123	893	957	990	891	885
Taxes	234	271	295	323	341	362	465	503	559	583
General farm and insurance	49	70	68	69	82	157	164	187	213	216
(5) Total farm purchases	5060	6039	6079	6294	7426	9845	11875	10947	11657	12899
(6) Interest on farm capital	1004	1147	1202	1328	1467	1559	1694	1765	1888	2117
(7) Unpaid family labor	584	627	492	480	535	582	544	483	462	505
(8) Board furnished hired labor	74	63	73	54	37	201	209	203	205	189
(9) Total farm exp.	6722	7876	7846	8156	9465	12187	14322	13398	14212	15710
(10) Operator's lab. earnings	2883	2377	1422	2039	2311	8043	5177	2642	5300	5663

Table 32. Capital Invested in the Farm Business Operated by On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service, January 1

Items	On-The-Farm Trainees					S.E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
Acres in farm	179	168	161	158	169	223	225	223	222	222
Productive livestock	\$2807	\$3271	\$3656	\$3415	\$4684	\$4802	\$5419	\$5428	\$5986	\$7649
Horses	99	93	74	61	34	178	142	113	86	71
Crops, seed, and feed	1710	2477	2319	2122	2285	4005	5754	4759	4693	5198
Machinery and equipment	2243	2726	3307	3682	4577	3414	3981	5634	6630	7477
Buildings, fences, etc.	5584	6306	7111	7760	8039	7551	8270	9678	10653	11799
Land	6687	7280	7264	8756	9727	9462	9547	9688	9720	10139
Total farm capital	19130	22153	23731	25796	29346	29412	33113	35300	37768	42333

Table 33. Livestock Production of Farms Operated by On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service

Items	On-The-Farm Trainees					S.E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
No. of milk cows	10.5	10.5	10.7	10.0	8.9	16.9	16.7	17.4	17.2	16.6
Lbs. of B.F. per cow	218	232	262	252	248	272	284	305	312	307
Litters of pigs raised	6.6	7.0	10.0	12.3	13.5	11.0	12.4	13.7	14.0	15.5
Lbs. of hogs produced	8822	10097	14053	16560	19281	17686	19215	21438	21593	23957
No. pigs weaned per litter	6.2	7.0	6.6	6.4	6.2	6.2	6.4	6.7	6.6	6.5
No. of hens	133	149	158	173	150	239	230	220	219	224
Eggs per hen	147	159	169	170	156	177	179	191	198	193

A comparison of farm organization and management factors for farms operated by on-the-farm trainees and the members of the Southeast Minnesota Farm Management Service is presented in Tables 34, 35 and 36. The well-established farmers lead in all seven of the primary organization and management factors affecting earnings. Since the established farmers have been in business longer and have more experience and knowledge of farming, they have a large proportion of their tillable land in high return crops, more livestock, larger business, a higher work accomplishment per worker, lower overhead expenses per unit of business, higher crop yields and produce livestock and livestock products more efficiently.

Table 34. Comparison of Farm Organization and Management Factors for Farms Operated by On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service

Items	On-The-Farm Trainees					S.E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
	% high return crop	42.0	44.4	47.7	49.6	55.0	50.2	51.0	56.0	55.9
Lstk. units per 100 A.	16.5	17.2	18.8	19.1	25.0	22.6	22.2	22.7	22.7	29.6
Work units per farm	337	345	358	359	361	573	577	577	588	594
Work units per worker	199	216	239	239	241	287	288	288	294	313
Exp. per work unit	\$5.38	\$5.96	\$6.13	\$6.60	\$7.16	\$4.74	\$5.62	\$5.97	\$5.95	\$6.54

Table 35. Crop Yields Per Acre On Farms Operated by On-The-Farm Trainees and Members Of the Southeastern Minnesota Farm Management Service

Crop	On-The-Farm Trainees					S.E. Minn. Farm Mangement Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
	Flax, bu.	10.5	11.5	11.9	13.5	10.9	13.1	12.5	12.2	13.1
Soybeans, bu.	15.4	19.0	19.1	14.8	16.6	14.6	18.5	20.0	16.2	
Barley, bu.	24.1	32.2	26.4	28.6	27.2	29.4	32.6	28.2	34.6	
Oats, bu.	36.0	48.0	40.9	44.0	43.4	47.5	55.0	47.2	45.7	
Corn grain, bu.	38.9	54.2	48.1	45.3	42.9	41.6	60.3	51.3	52.0	
Corn silage, tons	7.0	8.6	8.6	8.3	7.5	7.8	9.3	9.3	9.1	
Alfalfa hay, tons	2.5	2.3	2.1	2.1	2.6	2.4	2.3	2.2	2.2	

Table 36. Livestock Feeding Efficiency on Farms Operated by On-The-Farm Trainees and Members of the Southeastern Minnesota Farm Management Service

Items	On-The-Farm Trainees					S.E. Minn. Farm Management Service				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
	T.D.N. per lb. B.F.	21.2	20.5	19.9	19.6	22.1	18.5	19.2	19.1	17.7
Feed cost per lb. B. F.	56.6	50.2	43.1	46.7	53.5	51.1	50.0	42.7	43.9	47.1
Lbs. per cwt. hogs prod.	607	505	466	481	529	542	491	478	491	473

Beginning farmers can look to the records of the well-established farmers for some goals which they should achieve in a few years provided they study their business records and continually look for improvements in their farming operations. There are no sensational short-cuts to a well organized and well managed farming business. It is only by a continual study of the business that one can find the points of weakness which need improvement. Farm records are the best possible guide to improved farm organization and increased farm earnings. Members of the S.E. Farm Management Service have had records as a guide to managements - some for as long as twenty five years - and the results are reflected in their earnings.