

LET'S LOOK AT THE RECORD

1963 Annual Report

VOCATIONAL AGRICULTURE FARM MANAGEMENT PROGRAM

NORTHWESTERN MINNESOTA

REPORT NO. 9

AREA VOCATIONAL TECHNICAL SCHOOL

THIEF RIVER FALLS, MINNESOTA

In Cooperation With

**VOCATIONAL DIVISION, MINNESOTA DEPARTMENT OF
EDUCATION AND AGRICULTURAL EDUCATION DEPT.**

UNIVERSITY OF MINNESOTA

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1963 REPORT OF THE FARM MANAGEMENT PROGRAM FOR VOCATIONAL
AGRICULTURE IN NORTHWESTERN MINNESOTA

HERE'S WHERE YOU'LL FIND THE INFORMATION

Introduction	1
A Nutshell of 1963	3
Summary of Farm Inventories	4
Summary of Farm Earnings (Cash Statement)	5
Summary of Farm Earnings (Enterprise Statement)	6
Family Living From the Farm	7
Household and Personal Expenses and Receipts	8
Net Worth	9
Range in Earnings	10
Measures in Farm Organization & Management Efficiency	11
Thermometer Chart	12
Distribution of Acres in Farm	13
Crop Yields	14
Power and Machinery Expenses	14
Amount of Livestock	14
Total Feed Costs & Returns from Livestock Enterprises	15
Dairy Cattle	16
Sheep	19
Turkeys	20
Feeder Cattle	21
Beef Cattle	21
Hogs	22
Chickens	23
Average Prices Used	24
Explanation of "Work Units"	24
Labor Earnings Correlated With Excelled Factors	25
Summary of Farm Earnings by Years	26
Crop Summary	27
Returns from Crops and Livestock	29

LET'S GET ACQUAINTED

The Thief River Falls Area Vocational-Technical School in cooperation with the Minnesota Department of Education and the Agricultural Education Department of the University of Minnesota is conducting a farm management program. The program was initiated in 1955 and is available to farmers who are enrolled in adult or young farmer classes in the public schools of a twelve county area. This is the only farm management program in Northwestern Minnesota which stresses farm records as a basis for evaluating the farming operation.

This report is published annually to provide agriculture teachers and farmers with farm record analysis information which will be helpful to them in studying farming operations. The report is set up to show each cooperating farmer individual figures for his farm, as well as averages for all farms, the top twenty per cent and the bottom twenty per cent in earnings. The report presents each farmer with figures showing his earnings, increase or decrease in net worth, financial standing and a number of efficiency factors on his various enterprises.

The analysis of the records and the preparation of the reports for Northwestern Minnesota are done under the direction of Pete Probasco of the Area Vocational-Technical School at Thief River Falls.

The Farm Management Program is supervised locally by Marshall Hankerson, Superintendent of Education and Arnt Aune, Director of the Area Vocational-Technical School, Thief River Falls, Minnesota. Mr. G. R. Cochran of the State Department of Education, Dr. Milo Peterson of the University Department of Agricultural Education, and Dr. T. R. Nodland of the Agricultural Economics Department have been available as consultants.

This report deals with farmers enrolled in fifteen schools in Northwestern Minnesota and one in North Dakota. The following tabulation shows the number of farmers submitting 1963 farm records for analysis, the schools cooperating and the names of the Vo-Ag instructors from these schools.

<u>School</u>	<u>No. of Records</u>	<u>Instructor</u>
Ada	4	Lowell Gunderson
Fertile	12	Erman Ueland
Fisher	4	Myles Sedenquist
Fosston	1	Dean Syverson
Frazee	2	Lambert Schilling
Goodridge	7	Wally Shodean
Greenbush	11	Bernard Nelson
Hitterdahl	1	Ray Grundmeier
Karlstad	6	Dean McNelly
Lancaster	5	Wendell Francis
Middle River	2	Mervin Milsten
Plummer	2	Thomas Hassett
Roseau	34	Joe Freeman
Thief River Falls	35	C. E. Sisler
Warren	2	Harold Johnson
Minto, North Dakota	1	Verne Spengler
<u>Areas not served by Vo-Ag depts.</u>		Peter Probasco
Crookston	3	Vo-Ag Coordinator
East Grand Forks	1	
Oklee	5	

The records kept included farm inventories, cash receipts and expenses, feed consumed by the various classes of livestock, family living secured from the farm, household and personal expenses and receipts and the operator's liabilities and assets other than farm capital.

INVESTMENT IN FARMING

The capital investment per farm varied from \$3044 to \$306,363. The average investment for all farms included in this report and for the twenty-six high and the twenty-six low in operator's labor earnings is shown on Table 1.

FARM EARNINGS

Operator's 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.

There are two methods of computing operator's earnings. Table 2 shows the earnings statement on a cash basis and Table 3 shows the earnings on an enterprise or accrual basis. The principle difference in the two statements is 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.

RETURNS TO CAPITAL

The return to capital and family labor represents the amount the farmer and his family earned with their labor and capital investment. This figure is found in Table 5.

WHY KEEP FARM RECORDS?

Systematic use of records seems to raise the managerial level of the farmers. Once a farmer starts using records to check up on his performance, it is likely that he will continue for some years to improve his position above that of his less systematic neighbor.¹

¹Britannica Research Service

A NUTSHELL OF 1963

	1962	1963
Return to Capital & Family Labor	\$ _____	\$ _____
Net Worth	_____	_____
Ratio of Assets to Liabilities	_____	_____
Expenses per Dollar Income	_____	_____
Return per Dollar Invested	_____	_____

Source of Income

Income From Livestock	\$ _____	\$ _____
Income From Crops	_____	_____
Miscellaneous Income	_____	_____
Farm Income	\$ _____	\$ _____

Size

Work Units--(One work unit equals one ten hour day)	_____	_____
--	-------	-------

WHAT IS THE CAPITAL INVESTMENT PICTURE IN OUR FARM BUSINESS?

Table 1. Summary of Farm Inventories, 1963

Items	Your farm		Average of 137 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			574	
Size of business (work units)*			453	
Dairy and dual purpose cows			\$ 2186	\$ 2224
Other dairy and dual purpose cattle			1274	1505
Beef cattle (incl. feeders)			3090	4268
Hogs			356	377
Sheep (including feeders)			481	449
Poultry (including turkeys)			256	226
Productive livestock (total)			7643	9049
Horses, etc.			26	114
Honey			--	--
Crop, seed, and feed			3118	4265
Auto & truck (farm share)			889	888
Tractors and motors			1570	1587
Crop and general machinery			2856	2928
Livestock equipment			910	959
Machinery and equipment (total)			6225	6362
Land			14996	15916
Buildings, fences, etc.			5258	5478
Total farm capital			37266	41184

Items	26 most profitable farms		26 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	655		447	
Size of business (work units)*	588		326	
Dairy & dual purpose cows	\$ 1705	\$ 1790	\$ 1330	\$ 1335
Other dairy & dual purp. cattle	1049	1509	974	847
Beef cattle (incl. feeders)	5728	7728	2080	3481
Hogs	496	408	619	613
Sheep (including feeders)	443	462	603	521
Poultry (including turkeys)	484	493	12	--
Productive livestock (total)	9905	12390	5618	6797
Horses, etc.	5	410	24	31
Crop, seed, and feed	5623	8687	1872	1969
Auto & truck, farm share	1070	1083	612	573
Tractors and motors	2188	2209	1041	852
Crop & general machinery	4173	4119	1814	1911
Livestock equipment	1679	1607	393	382
Machinery & equipment (total)	9110	9018	3860	3718
Land	26692	28538	11051	11782
Buildings, fences, etc.	6426	6463	3846	4208
Total farm capital	57761	65506	26271	28505

* See page 24 for an explanation of "work units".

Table 2. Summary of Farm Earnings (Cash Statement), 1963

Items	Your farm	Average of 137 farms	26 most prof. farms	26 least prof. farms
FARM RECEIPTS Here's where the money came from.				
Dairy and dual-purpose cattle	\$	\$ 1045	\$ 1064	\$ 689
Dairy products		3631	2950	2085
Beef cattle (including feeders)		1744	3738	489
Hogs		750	1087	1245
Sheep and wool (including feeders)		640	438	722
Horses		6	--	19
Honey		7	28	--
Poultry (including turkeys)		1651	5168	10
Eggs		682	852	4
Soil bank		163	95	15
Small grain		4511	8103	2856
Other crops, Incl. corn		1166	3924	257
Mach., equip. sold & gas tax refund		316	233	139
Income from work off the farm		346	530	282
Miscellaneous		399	767	197
(1) Total farm sales		17057	28977	9009
(2) Increase in farm capital		3918	7745	2234
(3) Family living from the farm		304	233	271
(4) Total farm receipts (1)+(2)+(3)		21279	36955	11514
FARM EXPENSES Here's where the money went.				
Dairy & dual-purpose cattle bought	\$	\$ 235	\$ 256	\$ 81
Beef cattle bought (incl. feeders)		1266	3098	778
Hogs bought		69	90	114
Sheep bought		135	12	184
Horses bought		8	112	24
Bees bought		24	1	--
Poultry bought (including turkeys)		310	753	1
Misc. livestock expense		413	687	224
Feed bought		2609	4796	1113
Fertilizers		614	957	485
Other Crop expense		880	1285	635
Custom work hired		550	497	539
Gas, oil & grease bought (farm share)		1061	1321	904
Rep. of mechanical power (farm share)		525	705	404
Repair and upkeep of real estate		128	187	136
Repair and upkeep of crop & gen. mach.		432	791	258
Repair and upkeep of livestock equip.		82	107	65
Wages of hired labor		707	1738	284
Electricity expense (farm share)		267	268	239
Real estate & pers. prop. taxes		636	857	487
Tel. & general farm expense		230	301	193
(5) Total cash operating expense		11181	18819	7148
(6) Cap. purchases-mech. power (f.s.)		636	933	240
(7) Cap. purchases-crop & gen. mach.		745	910	615
(8) Cap. purchases-livestock equip.		240	243	62
(9) Cap. purchases-bldgs. & fencing		1645	2436	1424
(10) Total farm purchases (5) to (9)		14447	23341	9490
(11) Decrease in farm capital		--	--	--
(12) Interest on farm capital		1961	3082	1369
(13) Unpaid family labor		83	64	58
(14) Board furnished hired labor		122	190	73
(15) Total farm expenses (10) to (14)		16614	26677	10989
(16) Labor earnings (4) - (15)		4630	10278	525

WHAT IS THE VALUE PRODUCED BY EACH ENTERPRISE?

Table 3. Summary of Farm Earnings (Enterprise Statement), 1963*

Items	Your farm	Average of 137 farms	26 most prof. farms	26 least prof. farms
<u>RETURNS AND NET INCREASES</u>				
Dairy and dual-purpose cows	\$ _____	\$3674	\$3068	\$2046
Other dairy & dual-purpose cattle	_____	1329	1378	790
Beef breeding herd	_____	869	1202	596
Feeder cattle	_____	755	1508	437
Hogs	_____	723	915	1155
Sheep-farm flock	_____	413	448	353
Sheep-feeders	_____	62	--	105
Turkeys	_____	1393	4467	--
Chickens	_____	623	822	6
All productive livestock	_____	9841	13808	5488
Value of feed fed to livestock	_____	5915	8775	3879
Return over feed from livestock	_____	3926	5033	1609
Crops, seed and feed	_____	8803	16922	4921
Income from labor off the farm	_____	192	309	111
Agricultural conservation payments	_____	180	302	61
Bees	_____	68	320	--
Miscellaneous	_____	203	419	135
(1) Total returns & net increases	_____	13372	23305	6837
<u>EXPENSES AND NET DECREASES</u>				
Horses	\$ _____	\$ --	\$ --	\$ -1
Truck	_____	400	606	237
Auto (farm share)	_____	381	392	315
Tractor	_____	1116	1417	1064
Elec. & gas engine exp. (farm share)	_____	233	249	174
Hired power	_____	276	255	268
Total power	_____	2406	2919	2057
Crop and general machinery	_____	1159	1897	789
Livestock equipment	_____	255	375	129
Buildings, fencing, and tiling	_____	564	740	467
Misc. productive livestock expense	_____	413	686	224
Labor	_____	1110	2171	597
Real estate taxes	_____	447	653	332
Personal property tax	_____	189	204	155
Insurance	_____	92	109	80
General farm	_____	146	191	113
Interest on farm capital	_____	1961	3082	1369
(2) Total expenses & net decreases	_____	8742	13027	6312
(3) Operator's earnings (1)-(2)	_____	4630	10278	525

*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 earnings are the same as those on page 5.

WHAT IS THE VALUE OF FARM PRODUCTS USED IN THE HOUSE?

The family living from the farm is the estimated value of the farm products 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 1.4 per cent of the total farm receipts on these farms. The values used are shown in Table 26. If these products had been purchased, the amount paid out would have been considerably higher as the figures used were conservative.

Table 4. Family living from the farm, 1963

Items	Your farm	Average of 137 farms	Your farm	Average of 137 farms
Number of persons in family	_____	4.4		
Adult equivalent-family	_____	3.1		
Whole milk	_____	940 qts.	\$ _____	\$ 71
Skim milk	_____	14 qts.	_____	1
Cream	_____	27 pts.	_____	6
Beef	_____	736 lbs.	_____	149
Hogs	_____	134 lbs.	_____	22
Lamb & mutton	_____	11 lbs.	_____	2
Poultry	_____	30 lbs.	_____	6
Eggs	_____	33 doz.	_____	8
Vegetables, fruits, potatoes, & fuel	_____		_____	54
Total			\$ _____	\$319

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 \$268 per month for family living in addition to the food, fuel, and housing furnished by the farm.

HOW MUCH DID WE SPEND FOR LIVING?

Table 5. Household and Personal Expenses for Those Farms which kept Complete Accounts of These Expenses, 1963

Items	Your farm	Average of 58 farms	26 most prof. farms	26 least prof. farms
Number of persons-family		4.4	4.2	4.6
Number of adult equivalent-family		3.1	2.9	3.2
Food and meals bought	\$	\$ 945	\$1086	\$ 793
Operating and supplies		188	278	128
Furnishings and equipment		157	163	151
Clothing and clothing material		298	422	180
Personal care, personal spending		94	104	74
Education, recreation and development		130	186	67
Gifts and special events		81	82	68
Medical care and health insurance		360	463	336
Church, welfare		127	236	107
Personal share of auto & truck expense		165	161	94
Operator's share of upkeep on dwelling		67	152	89
Household share of elec. & tel. expense		93	97	58
Total cash living expense	\$	\$2705	\$3430	\$2145
H.H. & Personal share of new auto		75	29	81
New dwelling		199	352	298
Taxes and other deductions		10	1	8
Life insurance		170	230	110
Other savings and investments		54	4	6
Total H.H. & personal cash expense	\$	\$3213	\$4046	\$2648
Total family living from the farm		358	409	237
Total cash expense & perquisites	\$	\$3571	\$4455	\$2885
Receipts:				
Return to capital and family labor	\$	\$5290	\$10788	\$ 376
Income from investments		63	38	--
Sale of outside investments		11	--	12
Other personal income		236	329	248

NET WORTH

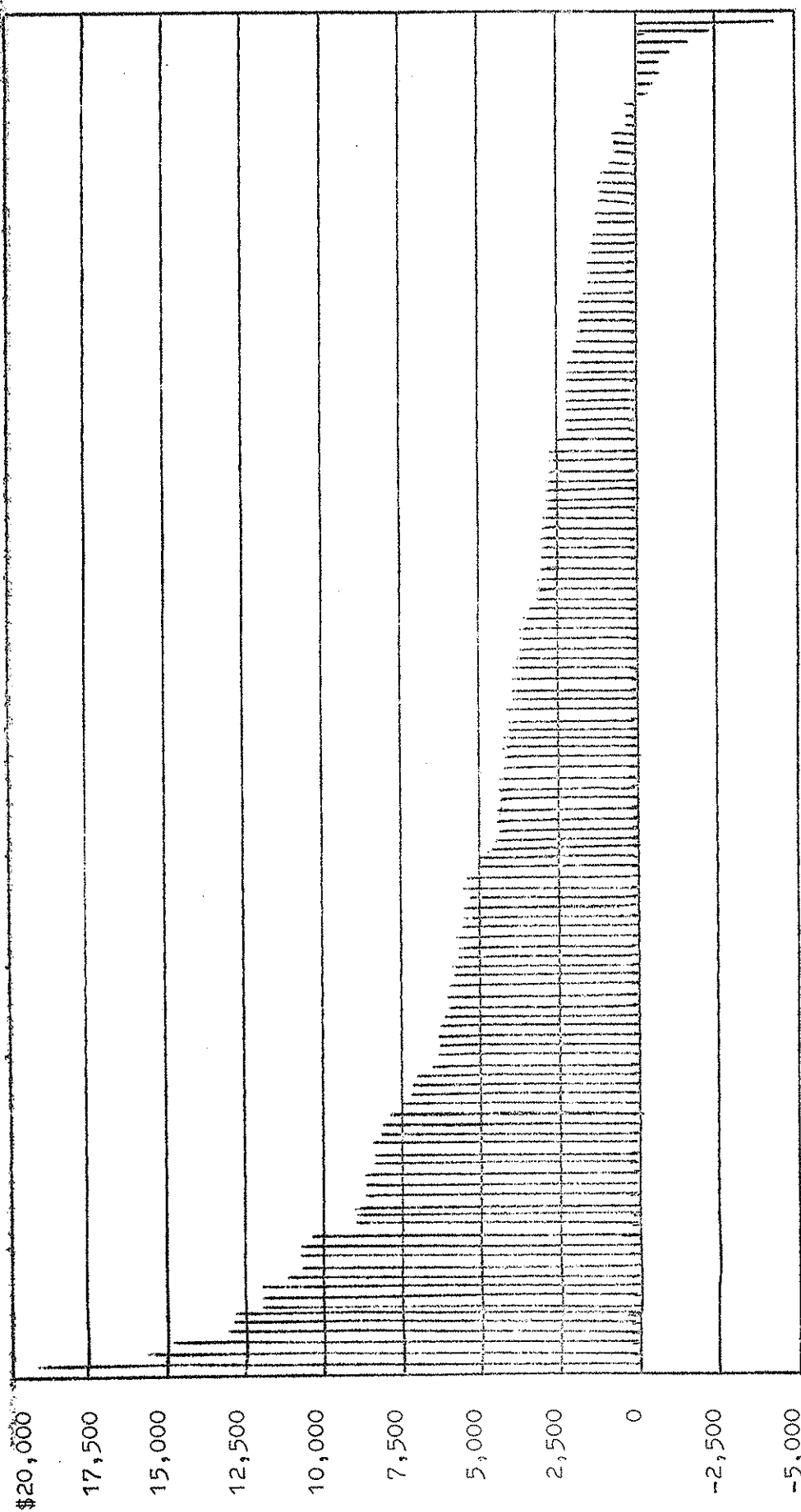
A net worth statement includes a listing of all the assets and liabilities as of a given date. The difference between the farmer's total assets and his liabilities is his net worth. A net worth statement is presented in Table 6. Both the farm and personal assets and liabilities are included.

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.

HOW MUCH DID WE SAVE OF WHAT WE EARNED?

Table 6. Net Worth Statement for Those Farmers Who Kept a complete Record of All Assets and Liabilities, 1963

Items	Your farm		112 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			574	
Total farm capital	\$	\$	\$34772	\$38624
Stocks and bonds			381	421
Life insurance			369	419
Accounts receivable			37	9
Shares in marketing org.			322	347
Outside real estate			29	150
Cash on hand and in bank			698	796
Household goods and clothing			1148	1195
Personal share auto & truck			261	274
Dwelling			2561	2749
Investment credit			40	97
Total non-farm assets			5846	6458
TOTAL ASSETS			40618	45082
Federal Land Bank mortgage			1170	1193
FHA real estate mortgage			853	1653
Other mortgage on land oper.			4228	4875
Loans on other real estate			1804	2226
Production Credit Association			900	872
FHA chattel mortgage			26	17
Other chattel mortgages			2448	2765
Notes payable			1521	1427
Accounts payable			1020	1126
TOTAL LIABILITIES			13970	16154
Farmer's Net Worth			26648	28928
Gain or decrease in net worth				2280



EVERY STUDY OF FARM EARNINGS SHOWS A WIDE VARIATION IN EARNINGS AMONG FARMERS IN A GIVEN YEAR (FIGURE 1). THE AVERAGE OPERATOR'S EARNINGS OF THOSE FARMERS RANKING IN THE UPPER 20 PER CENT OF THE RANGE ACCORDING TO EARNINGS WAS \$10,278 AND OF THOSE IN THE LOWER 20 PER CENT WAS \$525. THIS IS A RANGE OF \$9753 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 ARE AS FOLLOWS: THESE FACTORS VARY FROM YEAR TO YEAR IN THEIR RELATIVE INFLUENCE ON EARNINGS, 1/ 1) CROP YIELDS, 2) CHOICE OF CROPS, 3) RETURNS FROM LIVESTOCK, 4) AMOUNT OF LIVESTOCK, 5) SIZE OF BUSINESS, 6) WORK UNITS PER WORKER, 7) CONTROL OVER EXPENSES.

FIG. 1 RANGE IN OPERATOR'S EARNINGS. EACH LINE REPRESENTS THE EARNINGS OF ONE FARMER.

1/ SEE POND, G. A. "WHY FARM EARNINGS VARY", MINN. AGRI. EXPT. STA. BUL 386, JUNE 1945

NODLAND, T. R. AND POND, G. A. "SOME FACTORS AFFECTING THE EARNINGS OF FARMERS IN SOUTHWESTERN MINNESOTA". UNIV. OF MINN.; DEPT. OF AG. ECON.; REPORT NO. 219, NOVEMBER, 1954

Table 7. Measures of Farm Organization and Management Efficiency, 1963

Measures used in chart on page 12	Your farm	Average of 137 farmers	26 most prof. farmers	26 least prof. farmers
Operator's earnings	\$ _____	\$4630	\$10278	\$ 525
(1) Crop yields*	_____	100	117	86
(2) Per cent tillable land in high return crops**	_____	47.2	49.5	48.9
(3) Return for \$100 feed to productive livestock***	_____	100	111	89
(4) Productive livestock units per 100 acres****	_____	12.7	13.0	10.4
(5) Size of business-work units	_____	453	588	326
(6) Work units per worker	_____	370	346	285
(7) Power, machinery, equipment and building expense per work unit	\$ _____	\$9.68	\$10.09	\$10.57

Items related to some of the above measures:

Number of animal units (4)	_____	59.5	80.0	39.5
Work units on crops (5)	_____	204	331	165
Work units on productive livestock (5)	_____	260	291	161
Work units on other productive work (5)	_____	2	9	--
Number of family workers (6)	_____	1.1	1.1	1.0
Number of hired workers (6)	_____	.1	.6	.1
Total number of workers (6)	_____	1.2	1.7	1.1
Power expenses per work unit (7)	\$ _____	\$5.31	\$4.96	\$6.32
Crop Mach. expense per work unit (7)	\$ _____	2.56	3.23	2.42
Livestock equipment expense per work unit (7)	\$ _____	.56	.64	.40
Buildings and fencing expense per work unit (7)	\$ _____	1.25	1.26	1.43
Index of return for \$100 feed from: (3)				
Dairy cattle (see pages 16, 17, & 18)	_____	100	108	90
Beef cattle-breeding herd (page 21)	_____	100	117	97
Feeder cattle (see page 21)	_____	100	63	74
Hogs	_____	100	170	97
Sheep-farm flock (see page 19)	_____	100	111	88
Feeder Lambs (see page 19)	_____	100	--	27
Turkeys (see page 20)	_____	100	118	--
Chickens (see page 23)	_____	100	142	--

* Given as percentage of the average.

** Crops are marked in Table 8 as (A), (B), (C), and (D). All of the acres in (A) crops, one half of acres in (B) crops, and one-fourth of the 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 11, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 137 farmers included in this summary are located between the dotted lines across the center of this page.

Labor earn- ings	Crop yields	High return crops	Ret. fr. prod. livest'k	Pr. L.S. units per 100 A.		Work units worker	Pow., Mach., eq., & bldgs exp. per work unit		Net per acre crops*
\$13,500	163	75	163	39	900	590			\$33
12,500	156	71	156	36	850	565	\$.00		31
11,500	149	68	149	33	800	540	1.25		29
10,500	142	65	142	30	750	515	2.50		27
9,500	135	62	135	27	700	490	3.75		25
8,500	128	59	128	24	650	465	5.00		23
7,500	121	56	121	21	600	440	6.75		21
6,500	114	53	114	18	550	415	7.50		19
5,500	107	50	107	15	500	390	8.75		17
4,500	100	47	100	12	450	365	10.00		15
3,500	93	44	93	9	400	340	11.25		13
2,500	86	41	86	6	350	315	12.50		11
1,500	79	38	79	3	300	290	13.75		9
500	72	35	72	0	250	265	15.00		7
-500	65	32	65		200	240	16.25		5
-1,500	58	29	58		150	215	17.50		3
-2,500	51	26	51		100	190	18.75		1
-3,500	44	23	44		50	165	20.00		-1
-4,500	37	20	37		0	140	21.25		-3

* New factor, not included in Table 7 and Table 28.

Table 8. Distribution of Acres in Farm, 1963

Crop	Crop ratings*	Your farm	Average of 137 farms
Flax	B	_____	31.9
Barley	B	_____	36.0
Wheat	A	_____	30.7
Oats & Oats Mixtures	B	_____	119.5
Rye	C	_____	4.3
Peas or Beans	A	_____	.4
Buckwheat	D	_____	.1
Mustard	B	_____	2.8
Total Small Grain		_____	225.7
Sugar Beets	A	_____	2.6
Corn Fodder & Pasture	C	_____	.2
Sunflowers	B	_____	4.8
Potatoes	A	_____	1.7
Corn Grain	B	_____	7.5
Corn Silage	B	_____	14.2
Soybeans	C	_____	1.1
Total Cultivated Crops		_____	32.1
Alfalfa and alfalfa mixture	B	_____	53.9
Alfalfa seed	B	_____	--
Red or alside clover hay	B	_____	2.3
Red or alsike clover seed	B	_____	.5
Sweet clover hay	C	_____	.5
Sweet clover seed	C	_____	6.6
Other legumes and legume mixture hay	C	_____	12.7
Brome or timothy hay	C	_____	5.9
Brome or timothy grass seed	C	_____	3.7
Wild hay (Includes soil bank hay)	D	_____	3.6
Annual hay	D	_____	.6
Oats and grass silage	B	_____	1.7
Misc. grass & Legume Seeds	C	_____	1.0
Total tillable land in hay		_____	93.0
Alfalfa pasture	B	_____	12.1
Other legumes and mixtures (including oats)	B	_____	21.1
Soil bank or diverted acres	B	_____	36.3
Other tillable pasture	D	_____	9.3
Total tillable land in pasture		_____	78.8
Tillable land not cropped	D	_____	29.9
Total tillable land		_____	459.5
Wild hay		_____	5.4
Non-tillable pasture		_____	40.5
Timber (not pastured)		_____	26.8
Roads and waste		_____	28.5
Farmstead		_____	12.9
Total acres in farm		_____	573.6
Percent land tillable		_____	80.0
Percent tillable land in high return crops		_____	47.2

*The crops are classified as A, B, C, or D crops on the basis of their average net returns per acre. Alfalfa was dropped to a B crop in this area in 1960 because of its low net return per acre over the past years as determined on page 27 of this summary. As a result, the percent tillable land in high return crops is somewhat lower than in previous years.

Table 9. Crop Yields Per Acre, 1963

Crop	No. of cases	Your farm	1963 ave. yield	1960 ave. yield
Flax, bu.	65	_____	9.7	10.8
Barley, bu.	74	_____	38.2	31.1
Wheat, bu.	109	_____	22.1	29.3
Oats, bu.	120	_____	55.2	53.8
Rye, bu.	15	_____	23.2	12.5
Buckwheat, lbs.	1	_____	250.0	---
Peas, Beans and Oats & Peas, lbs.	2	_____	1353.3	25.0
Mustard, lbs.	6	_____	586.9	---
Potatoes, bu.	6	_____	230.4	---
Sugar Beets, tons	4	_____	11.2	---
Corn grain, bu.	28	_____	61.2	54.2
Corn Fodder, tons	2	_____	8.0	---
Corn silage, tons	65	_____	9.1	6.6
Sunflowers, lbs.	7	_____	1256.8	---
Soybeans, bu.	2	_____	26.7	---
Alfalfa hay, tons	100	_____	1.7	1.6
Alfalfa seed, lbs.	1	_____	100.0	60.2
Red or alsike clover hay, tons	7	_____	1.2	1.3
Red or alsike clover seed, lbs.	3	_____	235.4	141.2
Sweet clover hay, tons	1	_____	1.7	---
Sweet clover seed, lbs.	12	_____	317.9	251.4
Other leg. & leg. mix, hay, ton	17	_____	1.0	1.2
Brome or timothy hay, tons	11	_____	1.3	1.1
Brome or timothy seed, lbs.	11	_____	161.3	167.3
Wild hay, ton	11	_____	.6	.8
Annual hay, tons	5	_____	1.3	1.4
Oats and oats mix., grass sil., T.	10	_____	5.0	3.7
Misc. grass & Leg. seeds, lbs.	8	_____	297.8	---

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 65 to 3614 with an average of 396, Table 10. 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, mach., and labor combined.

Table 10. Power and Machinery Expenses Per Crop Acre, 1963

Items	Your farm	Average of 137 farms	26 most prof. farms	26 least prof. farms
Crop acres per farm	_____	396	516	292
Tractor expense per crop acre	\$ _____	\$3.17	\$2.95	\$3.65
Crop & gen. mach. exp. per crop acre	_____	3.29	3.68	2.70

AMOUNT OF LIVESTOCK

The farmers cooperating in this study are predominantly livestock farmers. 60% of these farmers maintained dairy cattle, 22% poultry, 24% raised sheep, 41% kept beef cattle, 27% raised one or more hogs, 22% raised feeder cattle, and 6% raised turkeys.

Table 11. Amount of Livestock, 1963

	Your farm	Average of 137 farmers	26 most prof. farmers	26 least prof. farmers
Number of milk cows	_____	12.4	8.8	8.1
Number of other dairy cattle	_____	16.6	11.5	12.3
Number of beef cattle (inc. feeders)	_____	25.8	39.9	16.0
Number of ewes	_____	23.6	24.8	29.1
Number of hens	_____	136.6	5.1	1.9
Litters of pigs raised	_____	4.2	2.1	8.7
Pounds of hogs produced	_____	1568	2071	3119

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 12. 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 6. 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 12. Total Feed Costs & Returns from Your Livestock Enterprises, 1963

	Dairy or Dual Purpose Cattle			Beef
	Cows	Other	All	Breeding
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 considerable between classes of livestock. Feed makes up approximately 45 per cent of the total cost 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 13, 15, & 16. The return over feed cost per cow varied from \$15.21 to \$395.87 among the 73 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 from butterfat
3. Feeding efficiency
4. Quality of ration
5. Economy of ration (Feed cost per pound butterfat)

Table 13. Factors of Cost and Returns from Dairy Cows, 1963

Items	Your farm	Average of 73 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	334	417	236
Pounds of milk per cow	_____	9225	11731	6108
Price rec'd per lb. B.F. (cream)	_____	\$.62	\$ --	\$.63
Price rec'd per lb. B.F. (milk)	_____	.91	.93	.78
Feed per cow, lbs.:				
Corn	_____	394	533	290
Small grain	_____	2524	3098	1681
Commercial feeds	_____	590	1067	428
Legume hay	_____	5821	7875	5820
Other hay	_____	1592	467	2105
Fodder & stover	_____	19	--	--
Total concentrates	_____	3507	4698	2399
Total dry roughages	_____	7432	8342	7925
Silage	_____	5002	4650	4109
Feed cost per cow:				
Concentrates	\$ _____	\$ 73.40	\$103.99	\$ 46.59
Roughages	_____	61.37	62.90	60.19
Pasture	_____	7.10	6.94	7.79
TOTAL FEED COSTS	\$ _____	\$141.87	\$173.83	\$114.57
Value of produce per cow:				
Butterfat sales	\$ _____	\$293.66	\$377.24	178.06
Dairy produce used in home	_____	5.94	6.37	5.45
Milk to livestock	_____	4.62	4.71	6.86
Net increase in value of cows	_____	-6.02	8.49	-5.38
TOTAL VALUE PRODUCED	\$ _____	\$298.20	\$396.81	\$184.99
RETURNS ABOVE FEED COST PER COW	_____	156.33	222.98	70.42
Returns for \$100 of feed	\$ _____	\$ 210	\$ 228	\$ 161
Feed Cost per lb. B.F. (cents)	_____	.42	.42	.49
Number of cows	_____	21.7	21.7	15.9

DAIRY AND DUAL PURPOSE CATTLE

In Table 13 the costs and returns are compared on the basis of level of production. Table 14 shows the same dairy herds compared on the basis of how the product is marketed.

Table 14. Factors of Cost and Returns from Dairy Cows, 1963

Items	Your farm	Grade A Average of 24 farms	Grade B Average of 45 farms	Cream Average of 3 farms
Pounds of butter fat per cow	_____	364	308	243
Pounds of milk produced per cow	_____	10479	8337	--
Price rec. per lb. B.F. sold	_____	\$ 1.01	\$.82	\$.62
Feed per cow, lbs.:				
Corn	_____	563	196	106
Small grain	_____	2744	2332	2909
Commercial feeds	_____	796	425	202
Legume hay	_____	5879	5592	5984
Other hay	_____	1273	1955	945
Total Concentrates	_____	4103	2953	3217
Total dry roughages	_____	7153	7547	6929
Silage	_____	7342	3352	1312
Feed cost per cow:				
Concentrates	\$ _____	\$ 90.94	\$ 56.87	\$ 59.64
Roughages	_____	66.96	56.80	47.72
Pasture	_____	7.03	7.17	7.38
TOTAL FEED COST	\$ _____	\$164.93	\$120.84	\$114.74
Value of produce per cow:				
Butter fat sales	\$ _____	\$357.70	\$241.22	\$144.54
Dairy produce used in home	_____	5.04	6.87	6.25
Milk fed to livestock	_____	4.39	3.81	29.75
Net increase in value of cows	_____	-5.57	-7.06	-1.23
TOTAL VALUE PRODUCED	\$ _____	\$361.56	\$244.84	\$179.31
RETURNS ABOVE FEED COST PER COW	\$ _____	\$196.63	\$124.00	\$ 64.57
Returns for \$100 of feed	\$ _____	\$ 219	\$ 203	\$ 156
Feed cost per lb. B.F. (cents)	_____	.45	.39	.47
Number of cows	_____	29.2	18.1	12.7

Table 15. Feed Costs & Returns from Other Dairy & Dual Purpose Cattle, 1963

Items	Your farm	Average of 73 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Feeds per head, lbs.:				
Concentrates	_____	546	568	298
Hay and fodder	_____	3121	3213	2995
Silage	_____	1375	894	1232
Skim milk	_____	34	--	222
Whole milk	_____	87	115	61
Feed cost per head:				
Concentrates	\$ _____	\$12.77	\$14.42	\$ 7.15
Roughages	_____	21.64	22.13	19.81
Milk	_____	3.20	3.69	3.68
Pasture	_____	2.82	2.86	2.97
TOTAL FEED COSTS PER HEAD	_____	\$40.43	\$43.10	\$33.61
Net inc. in value of other cattle	_____	\$80.34	\$85.52	\$64.87
RETURNS ABOVE FEED COST PER HEAD	_____	\$39.91	\$42.42	\$31.26
Return for \$100 of feed	\$ _____	\$ 199	\$ 198	\$ 193
Number of head of other cattle	_____	29.1	27.7	20.2

Table 16. Feed Costs and Returns from All Dairy & Dual Purpose Cattle, 1963

Items	Your farm	Average of 73 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Feeds per animal unit, lbs:				
Concentrates	_____	2543	3312	1699
Hay and fodder	_____	6964	7599	7173
Silage	_____	4105	3537	3470
TOTAL FEED COSTS PER AN. UNIT	\$ _____	\$114.99	\$136.88	\$ 93.31
Value of produce per an. unit:				
Dairy products	\$ _____	\$179.69	\$234.29	\$112.16
Net inc. in value of dairy cattle	\$ _____	\$ 60.92	\$ 71.84	\$ 47.17
TOTAL VALUE PRODUCED	\$ _____	\$240.61	\$306.13	\$159.33
RETURNS ABOVE FEED PER AN. UNIT	_____	\$125.62	\$169.25	\$ 66.02
Returns for \$100 of Feed	\$ _____	\$ 209	\$ 224	\$ 171
Animal units of cattle	_____	36.2	35.5	26.0

Table 17. Feed Costs and Returns from Farm Flock of Sheep, 1963

Items	Your farm	Average of 29 farms	Ave. of 6 high in ret. ab. feed cost	Ave. of 6 low in ret. ab. feed cost
Feeds per Ewe,* lbs.:				
Concentrates	_____	154	154	174
Legume hay	_____	753	848	958
Other hay	_____	187	38	28
Silage	_____	219	--	176
Feed cost per ewe:				
Concentrates	\$ _____	\$ 3.37	\$ 3.01	\$ 3.66
Roughages	_____	6.14	5.64	7.01
Pasture	_____	1.95	2.09	1.58
TOTAL FEED COSTS	\$ _____	\$11.46	\$10.74	\$12.25
Value of produce per ewe:				
Wool	\$ _____	\$ 6.43	\$ 6.99	\$ 5.26
Net increase in value of sheep	_____	14.61	22.02	6.74
TOTAL VALUE PRODUCED	\$ _____	\$21.04	\$29.01	\$12.00
RETURNS ABOVE FEED COST PER EWE	\$ _____	\$ 9.58	\$18.27	\$ -.25
Returns for \$100 of feed	\$ _____	\$ 184	\$ 270	\$ 98
Price per cwt. of lambs sold	\$ _____	\$18.46	\$19.05	\$19.36
Price per lb. of wool sold (cents)	_____	73.2	76.0	70.5
Pounds of wool per sheep sheared	_____	8.1	8.7	7.1
Number of ewes kept for lambing	_____	84	97	83
Per cent lamb crop**	_____	114	145	81
Per cent death loss**	_____	12.4	9.8	22.0

* Average number of sheep minus rams.

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

Table 18. Feed Costs and Returns from Feeder Lambs, 1963

Items	Your farm	Average of 3 farms
Feed per Cwt. lambs, lbs.		
Concentrates	_____	438
Legume hay	_____	174
Silage	_____	401
Feed cost per Cwt. lambs		
Concentrates	\$ _____	\$10.43
Roughages	_____	2.04
TOTAL FEED COSTS	\$ _____	\$12.47
Gross returns per Cwt. lambs	\$ _____	\$16.26
RETURNS ABOVE FEED COST PER CWT. LAMBS	\$ _____	\$ 3.79
Returns for \$100 of feed	\$ _____	\$ 130
Price per cwt. of lambs bought	\$ _____	\$18.08
Price per cwt. of lambs sold	\$ _____	\$21.43
Per cent death loss	_____	3.3
Pounds of lambs produced	_____	15,632

Table 19. Feed Costs and Returns from Turkey Breeder Hens, 1963

Items	Your farm	Average of 4 farms
Feed per hen, lbs.:		
Grain	_____	72
Commercial feeds	_____	97
Total concentrates	_____	169
TOTAL FEED COST PER HEN	\$ _____	\$ 5.95
Value of produce per hen:		
Eggs sold	\$ _____	\$13.78
Net inc. in value of breeder hens	\$ _____	-.81
TOTAL VALUE PRODUCED	\$ _____	\$12.97
RETURNS ABOVE FEED COST PER HEN	\$ _____	\$ 7.02
Returns for \$100 of Feed	\$ _____	\$ 218
Price per egg	\$ _____	\$.25
Eggs per hen	_____	55
Ave. no. of hens on farm during year		874

Table 20. Feed Costs and Returns from Turkey Poults, 1963

Items	Your farm	Average of 7 farms
Feed per cwt.		
Grain	_____	144
Commercial feeds	_____	273
Total concentrates	_____	417
TOTAL FEED COST PER CWT.	\$ _____	\$13.49
Net Inc. in value of turkeys per cwt.	\$ _____	\$19.57
Return above feed cost per cwt.	\$ _____	\$ 6.08
Return for \$100 of feed	\$ _____	\$ 145
Number poults put on feed	_____	9954
% death loss	_____	9.6%
Price per pound sold	\$ _____	22.6
Weight per bird sold	_____	18.6
Pounds turkey produced	_____	147,647

Table 21. Feed Costs and Returns from Feeder Cattle, 1963

Items	Your farm	Average of 24 farms	5 most prof. farms	5 least prof. farms
Feed per cwt. beef produced, lbs.:				
Corn	_____	111	87	449
Small grain	_____	154	139	145
Commercial feeds	_____	40	42	71
Legume hay	_____	391	354	933
Other hay	_____	96	4	48
Fodder & stover	_____	25	42	--
Milk	_____	8	26	--
Total concentrates	_____	305	268	665
Total hay and fodder	_____	512	400	981
Silage	_____	980	1142	631
Feed cost per cwt. beef produced:				
Concentrates	\$ _____	\$ 6.58	\$ 5.24	\$13.21
Roughages	\$ _____	6.10	5.91	8.57
Pasture	\$ _____	.44	.05	1.48
Milk	\$ _____	.06	.20	--
TOTAL FEED COSTS	\$ _____	\$13.18	\$11.40	\$23.26
Net increase in value of feeders	\$ _____	\$15.08	\$19.92	\$13.72
Returns above feed per cwt. beef prod.	_____	1.90	8.52	\$-9.54
Returns for \$100 feed	\$ _____	\$ 114	\$ 175	\$ 59
Price paid per cwt. beef bot.	\$ _____	\$23.13	\$21.34	\$20.52
Price rec'd for feeders sold	\$ _____	\$21.31	\$22.52	\$17.51
Number of animal units	_____	59.2	97.1	22.3
Pounds of beef produced	_____	33,830	52,730	10,073

Table 22. Feed costs and Returns from Beef Cattle, 1963

Items	Your farm	Average of 30 farms	6 most prof. farms	6 least prof. farms
Feed per cow, lbs.:				
Concentrates	_____	1067 446	2896 462	783
Legume hay	_____	3659	5394	5215
Other hay	_____	3260	3143	1823
Fodder & Stover	_____	--	--	--
Silage	_____	3363	--	6415
Skim milk	_____	--	--	--
Feed cost per cow:				
Concentrates	\$ _____	\$10.59	\$11.51	\$16.90
Roughages	_____	46.73	40.80	61.95
Pasture	_____	7.59	10.10	6.30
Milk	_____	--	--	--
TOTAL FEED COSTS	\$ _____	\$64.91	\$62.41	\$85.15
Value of produce per cow:				
Dairy products	\$ _____	\$ 2.46	\$ 6.83	--
Net increase in value of animals	_____	96.32	120.35	\$70.86
TOTAL VALUE PRODUCED	\$ _____	\$98.78	127.18	\$70.86
RETURNS ABOVE FEED COST PER COW	\$ _____	\$33.87	\$64.77	\$14.29
Returns for \$100 of feed	\$ _____	\$ 152	\$ 204	\$ 83
Number of cows in the herd		37.0	42.0	22.0

Table 23. Feed Costs and Return from Market Hogs, 1963

Items	Your farm	Average of 16 farms
Feed per cwt. of hogs produced, lbs.:		
Corn	_____	114
Small grain	_____	198
Commercial feeds	_____	101
Total concentrates	_____	413
Skim milk	_____	--
Alfalfa	_____	5
Feed cost per cwt. hogs produced:		
Alfalfa	\$ _____	\$.04
Concentrates	\$ _____	10.33
Skim milk	\$ _____	--
Pasture	\$ _____	.12
TOTAL FEED COST	\$ _____	\$10.49
Net increase in val. per cwt. hogs produced	\$ _____	\$14.41
RETURNS ABOVE FEED COST PER CWT HOGS PRODUCED	\$ _____	\$ 3.92
Returns for \$100 feed	\$ _____	\$ 137
Price received per cwt. hogs sold	\$ _____	\$15.80
Pounds of hogs produced	_____	13,735

Table 24. Feed Costs and Returns from Feeder Pig Production, 1963

Items	Your farm	Average of 25 farms	5 most prof. farms	5 least prof. farms
Feed per litter, lbs.:				
Corn	_____	301	64	442
Small grain	_____	2031	1959	2397
Commercial feeds	_____	589	386	619
Milk	_____	6	--	--
Total concentrates	_____	2927	2409	3458
Silage	_____	158	30	9
Alfalfa	_____	271	--	242
Feed cost per litter:				
Concentrates	\$ _____	\$76.98	\$51.02	\$106.19
Roughages	\$ _____	2.09	.09	2.20
Pasture	\$ _____	1.61	2.89	1.60
TOTAL FEED COST	\$ _____	\$80.68	\$54.00	\$109.99
Net increase in value per litter	\$ _____	\$92.54	\$119.65	\$ 81.98
RETURNS ABOVE FEED COST PER LITTER	\$ _____	\$11.86	\$ 65.65	\$-28.01
Returns for \$100 feed	\$ _____	\$ 115	\$ 221	\$ 74
Total no. of litters raised	_____	25.4	13.2	44.6
No. of pigs born per litter	_____	9.4	9.1	9.3
No. of pigs weaned per litter	_____	7.8	7.5	7.0

Table 25. Feed Costs and Returns from Chickens, 1963

Items	Your farm	Ave. of 4 farms over/350 birds	Ave. of 14 farms under/350 birds
Feed per hen, lbs.:			
Grain	_____	46	57
Commercial feeds	_____	34	26
Total concentrates	_____	80	83
TOTAL FEED COST PER HEN	\$ _____	\$2.20	\$1.92
Value of produce per hen:			
Eggs sold and used in house	\$ _____	\$3.82	\$2.90
Net inc. in value of chickens	\$ _____	-.51	-.08
TOTAL VALUE PRODUCED	\$ _____	\$3.31	\$2.82
RETURNS ABOVE FEED COST PER HEN	\$ _____	\$1.11	\$.90
Returns for \$100 of Feed	\$ _____	\$ 150	\$ 147
Price rec'd per doz. eggs sold (¢)	_____¢	29.2¢	25.4¢
Eggs laid per hen	_____	157	134
Ave. no. of hens on farm during yr.	_____	3778	126
Per cent death loss of hens	_____%	5%	13.4%

* Includes feeds and returns from laying flock and rearing flock.

Table 26. Average Prices of Feed, and Produce used in Home, 1963

Feed Prices			
<u>Farm Grown Grains</u>		<u>Hay</u>	
Oats	\$.57	Alfalfa-Brome	\$14.00 per ton
Barley	.90	Red Clover	10.00 per ton
Wheat	2.00	Wild Hay	6.00 per ton
Wheat & Oats	1.20	Sweet Clover	9.00 per ton
Rye	1.25	Brome	8.00 per ton
Corn	1.10		
Oats & Peas	.74		
<u>Other Roughages</u>		<u>Milk for Feed</u>	
Corn silage	\$6.00 per ton	Whole milk-Gr. A	\$3.50 per cwt.
Grass silage	5.00 per ton	Whole milk-Gr. B	3.00 per cwt.
Oats & oats mix silage	5.00 per ton	Skim milk	.76 per cwt.
<u>Pasture</u>		<u>Home Produce</u>	
\$1.75 an animal unit per month		Milk	7¢ per quart
		Cream	20¢ per pint
<u>Unpaid family labor</u>	\$5.00 per day	Poultry (live)	9¢ per pound
		Beef (live)	22¢ per pound
<u>Board for hired labor</u>	2.50 per day	Hogs (live)	15¢ per pound
unless otherwise specified		Eggs	30¢ per dozen

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 an average efficiency. The number of work units for each class of livestock and each acre of crop are presented in Table 25. Days of work off the farm for pay are not included in work unit computations in this report.

Table 27. Number of Work Units for each Class of Lvstk. & Acre of Crop

Item	No. of work units	Item	No. of work units
Dairy & dual-purpose cows	10.0 per cow	Bees	3.3 per hive
Other dairy & du.-pur. cat.	3.5 per an. unit*	Small grain	.5 per A.
Beef Breeding herd	3.5 per an. unit*	Corn husked	.7 per A.
Feeder cattle	.25 per 100 lbs.	Corn silage	1.0 per A.
Sheep, farm flock	1.5 per an. unit*	Corn fodder	1.0 per A.
Sheep, feeders	.3 per 100 lbs.	Alfalfa hay	.6 per A.
Hogs	.2 per 100 lbs.	Other hay crops	.4 per A.
Feeder Pigs (over 20 lit.)	1.5 per litter	Legume seed	1.0 per A.
Feeder Pigs (under 20 lit.)	2.0 per litter	Grass silage	.6 per A.
Hens	20.0 per 100 hens	Potatoes	2.0 per A.
Turkeys	.3 per 100 lbs.	Sugar beets	2.0 per A.
Turkeys, breeder hens	45.0 per 100 hens	Fallow	.5 per A.

*Animal unit represents one dairy cow or bull, two other dairy cattle, 1 1/4 beef cows or bulls, 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# turkeys produced.

LABOR EARNINGS CORRELATED WITH EXCELLED FACTORS

Studies of earnings of farmers in this area show that there are seven major management factors causing variations in earnings among farmers within a given year. These seven factors are (1) crop yields, (2) choice of crops, (3) returns from livestock, (4) amount of livestock, (5) size of business, (6) work accomplishments per worker, and (7) control over expenses. The combined or cumulative influence of these seven management factors on earnings is shown in Table 28. The farmer's earnings are determined to a considerable extent by his accomplishments in these seven factors.

Table 28.

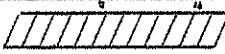

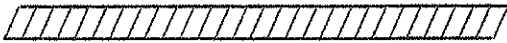

No. of factors in which farmers excelled	No. of farms	0	1000	2000	3000	4000	5000	6000	7000	8000
0 or 1	8									2267
2 or 3	54									4501
4 or 5	50									5295
6 or 7	12									7911

Table 28 indicates that it will be worth while for each co-operator to study carefully his ranking on pages 11 and 12 and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

Table 30. Continued

Crop	Yield per Acre	Price	Gross Inc. per Acre	Power, Mach. Exp. Per Acre	Other Exp. Per Acre	Tax	Total Exp. Per Acre	Net Per Acre
Sugar Beets	11.2	\$13.68	\$153.64	\$27.51	\$40.86	\$.99	\$69.36	\$84.28
Pota- toes	200.0	\$.61	\$121.75	\$69.69	\$39.75	\$.99	\$110.43	\$11.32
*Sweet Clover Seed	363.7	\$.08	\$ 29.06	*	*	*	*	*
*Red Clover Seed	235.4	\$.21	\$ 49.37	*	*	*	*	*
*Grass Seed	153.5	\$.21	\$ 31.71	*	*	*	*	*
Oats or Grass Silage	4.6	\$ 4.08	\$ 18.85	\$11.00	\$ 3.25	\$.99	\$ 15.24	\$ 3.61
Oats Mixture	65.1	\$.92	\$ 59.97	\$ 9.17	\$ 7.54	\$.99	\$ 17.70	\$42.27
Sunflo- wers	1275.2	\$.05	\$ 62.65	\$12.83	\$ 6.11	\$.99	\$ 19.93	\$42.72
Mustard	544.7	\$.04	\$ 24.31	\$ 9.17	\$ 4.49	\$.99	\$ 14.65	\$ 9.66
Beans	1353.3	\$.05	\$ 65.84	\$ 9.17	\$11.11	\$.99	\$ 21.27	\$44.57

* Power and machine costs were computed on the basis of one work unit per acre which is unrealistic. This was discovered too late in the analysis procedure to change; therefore, cost and net per acre figures were not included in the averages.

RETURNS FROM CROPS AND LIVESTOCK

ENTERPRISE _____

Crops Grown and Returns from Crops

Crop	Amount	Yield	Acres	Net	Hours	Acres/
Total			A.	B.	C.	
Net/Acre ($B \div A$)			XXX		XXX	
Net/Hour ($B \div C$)			XXX	XXX		

Kind of Livestock

Size of Enterprise

Item	Total	Per	Average/Unit
Value Produced			
Feed Cost			
Misc. Costs (P. 20-21)			
Repair, Upkeep (P. 43-45)			
Dep. Bldgs & Equip.			
Real & Pers. Prop. Taxes			
Expenses (P. 38)			
Electricity			
Total Costs			
Returns-Livestock			
Labor-Livestock			
Return/Hour Livestock		XXXXXXXXXXXXXX	

Returns* Crops + Livestock (The complete Enterprise)

Item	Total	Per	Average/Unit
Net-crops+livestock			
Labor-crops+livestock			
Return/hour		XXXXXXXXXXXXXX	
% of total work load		XXXXXXXXXXXXXX	

Table 29. Summary of Farm Earnings by Years

Years	1959	1960	1961	1962	1963
Number of Farms	53	57	54	85	137
FARM RECEIPTS					
Dairy and dual-purpose cattle	\$1265	\$ 986	\$1460	\$1214	\$1045
Dairy products	2603	2962	3531	4204	3631
Beef cattle (including feeders)	1033	1770	1876	5320	1744
Hogs	713	483	364	789	750
Sheep and wool (including feeders)	528	786	1064	552	640
Horses	8	4	10	5	7
Poultry (including turkeys)	1095	1047	680	1041	6
Eggs	408	511	353	802	1651
Honey sold	159	137	101	142	682
Corn (includes soil bank)	207	276	274	304	255
Small grain	2859	3134	3298	3899	4511
Other crops	223	163	193	932	1074
Mach. & equip. sold & gas tax refund	277	335	579	197	316
Income from work off the farm	254	373	345	431	346
Miscellaneous	321	241	281	322	399
(1) Total farm sales	11951	13208	14409	20154	17057
(2) Increase in farm capital	1979	1704	--	--	3918
(3) Family living from the farm	314	337	287	309	304
(4) Total farm receipts (1)+(2)+(3)	14244	15249	14696	20463	21279
FARM EXPENSES					
Dairy and Dual-purpose cattle bought	394	325	355	322	235
Beef cattle bought (incl. feeders)	575	988	928	1448	1266
Hogs bought	46	38	49	130	69
Sheep bought (including feeders)	173	222	20	69	135
Horses bought	44	8	10	9	8
Bees bought	35	51	37	34	24
Poultry bought (including turkeys)	214	210	178	278	310
Misc. livestock expense	226	304	371	441	413
Feed bought	1619	1460	1626	2660	2609
Fertilizers	472	504	807	885	614
Other crop expense	604	694	728	828	880
Custom work hired	372	431	526	630	550
Gas, oil and grease bought (farm share)	828	1058	1014	1118	1061
Rep. of mechanical power (farm share)	388	447	476	611	525
Repair and upkeep of real estate	112	118	115	156	128
Repair and upkeep of crop & gen. mach.	214	287	297	388	432
Rep. and upkeep of livestock equip.	60	67	69	88	82
Wages of hired labor	392	437	454	921	707
Electricity expense (farm share)	174	191	215	279	267
Real estate & pers. property taxes	435	519	547	641	636
General farm expense	132	173	192	253	230
(5) Total cash operating expense	7509	8532	9014	12189	11181
(6) Cap. purchases-mech. power (f.s.)	616	456	745	509	636
(7) Cap. purchases-crop & gen. mach.	530	575	451	951	745
(8) Cap. purchases-livestock equip.	133	122	188	235	240
(9) Cap. purchases-bldgs. & fencing	1323	894	493	1284	1645
(10) Total farm purchases (5) to (9)	10111	10579	10891	15168	14447
(11) Decrease in farm capital	--	--	--	387	--
(12) Interest on farm capital	1287	1500	1517	2149	1961
(13) Unpaid family labor	222	409	345	158	83
(14) Board furnished hired labor	109	130	147	155	122
(15) Total farm expenses (10) to (14)	11729	12618	12900	18017	16614
(16) Labor earnings (4) - (15)	2515	2631	1796	2446	4630
(17) Net cash income (1) - (10)	\$1840	\$2629	\$3518	\$4986	\$2610

WHICH ARE MY HIGH RETURN CROPS

The following summary is an attempt to show net return per acre from each crop. The costs charged against each crop are based on: (1) The power and machinery costs, and (2) the other costs as listed in the farm account book. Power and machinery costs include gas, oil, repairs, custom work hired and depreciation. Other costs include such items as purchased seed, fertilizer, chemicals, twine, seed treatment etc. The net per acre represents return to land and labor.

Table 30. Costs and Returns to Crops

Crop	Yield per Acre	Price	Gross Inc. per Acre	Power, Mach. Exp. Per Acre	Other Exp. Per Acre	Tax	Total Exp. Per Acre	Net Per Acre
Oats	55.3	\$.55	\$30.32	\$9.17	\$5.60	\$.99	\$15.76	\$14.56
Barley	38.6	\$.90	\$35.37	\$9.17	\$7.66	\$.99	\$17.82	\$17.55
Flax	9.7	\$2.85	\$27.70	\$9.17	\$4.33	\$.99	\$14.49	\$13.21
Wheat	23.7	\$1.99	\$47.26	\$9.17	\$9.67	\$.99	\$19.83	\$27.43
Rye	21.7	\$1.09	\$23.84	\$9.17	\$2.74	\$.99	\$12.90	\$10.94
Alfalfa Hay	1.7	\$13.15	\$21.93	\$11.00	\$3.66	\$.99	\$15.65	\$ 6.28
Leg. Mix Hay	1.2	\$10.39	\$12.43	\$ 7.34	\$2.37	\$.99	\$10.70	\$ 1.73
Grass Hay	1.2	\$ 8.04	\$ 9.36	\$ 7.34	\$1.54	\$.99	\$ 9.87	\$ -.51
Wild Hay	.5	\$ 8.40	\$ 4.34	\$ 7.34	\$.20	\$.99	\$ 8.53	\$-4.19
Corn Sil.	9.1	\$ 5.35	\$48.52	\$18.34	\$15.36	\$.99	\$34.69	\$13.83
Corn Grain	61.2	\$ 1.06	\$64.58	\$12.83	\$ 7.90	\$.99	\$21.72	\$42.86