1957 ANNUAL REPORT

VOCATIONAL AGRICULTURE FARM MANAGEMENT PROGRAM

MANKATO AREA OF SOUTHERN MINNESOTA

UNIVERSITY OF MINNESOTA
INSTITUTE OF AGRICULTURE

and

MINNESOTA DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION

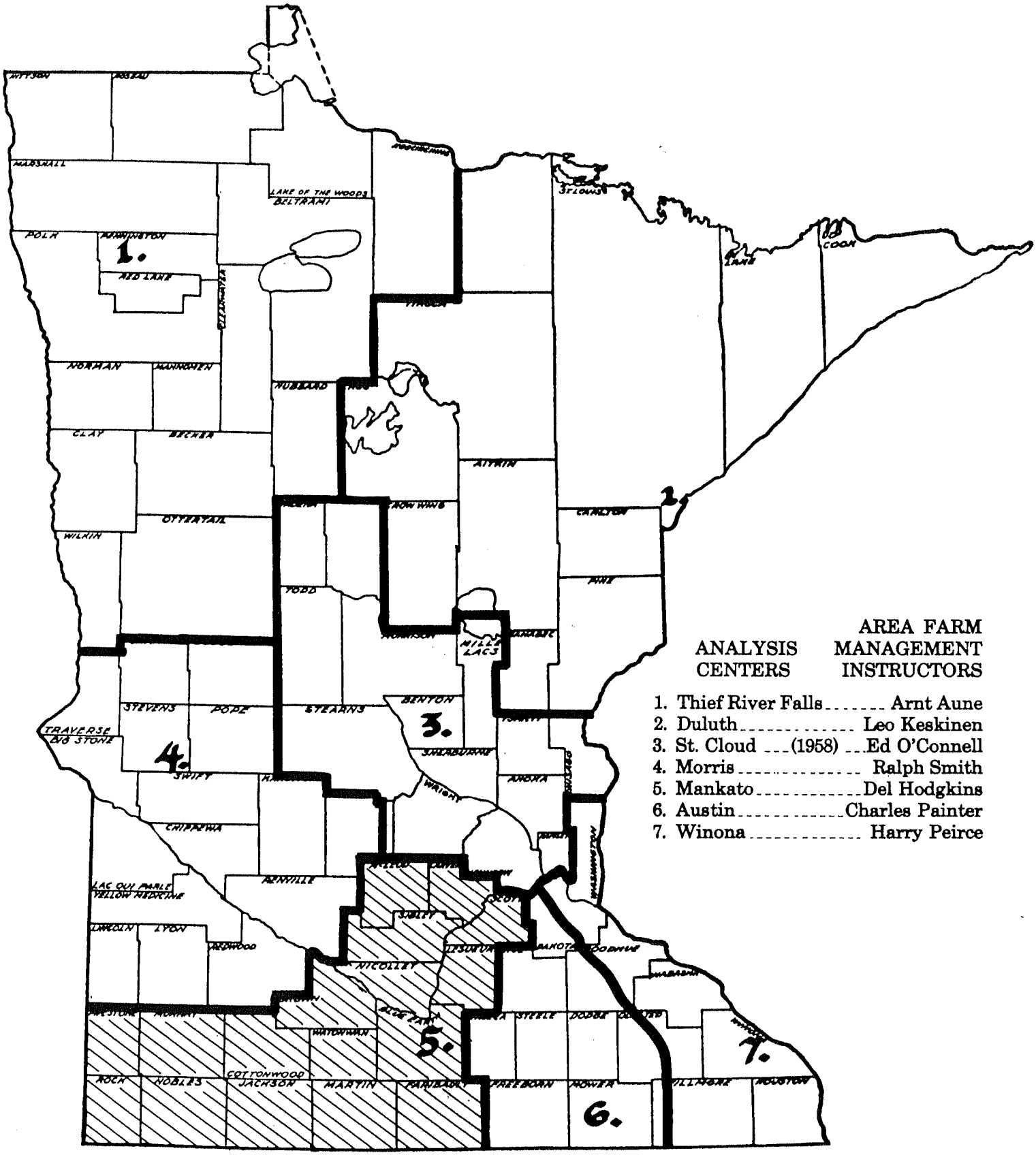
and

AREA VOCATIONAL TECHNICAL SCHOOL
MANKATO, MINNESOTA

Co-operating

APRIL 1958

VO-AG FARM MANAGEMENT AREAS



ANALYSIS CENTERS	AREA FARM MANAGEMENT INSTRUCTORS
1. Thief River Falls	Arnt Aune
2. Duluth	Leo Keskinen
3. St. Cloud (1958)	Ed O'Connell
4. Morris	Ralph Smith
5. Mankato	Del Hodgkins
6. Austin	Charles Painter
7. Winona	Harry Peirce

* Shaded Area Served By The Mankato Analysis Center

1957 Report of the Vocational Agriculture Farm Management Program in the Mankato Area of Southern Minnesota

Del Hodgkins

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INTRODUCTION

The University of Minnesota, the Mankato Area Vocational-Technical School in cooperation with the Vocational Division, Minnesota Department of Education and with assistance from the Department of Agriculture Economics, and the Agriculture Extension Division of the University, operate and maintain the Vocational Agriculture Farm Management Program in the Mankato area of Southern Minnesota. This program was initiated in 1955 and is available to farmers who are enrolled in Vocational Agriculture, Adult, Young Farmer, and Veterans classes in the Public schools. The area served by the Mankato analysis center is indicated on the map inside the front cover.

The purpose of the Program as far as the area school is concerned is: (1) to give assistance to the instructors in the mechanics of keeping farm records, (2) to aid in the analysis of the farm business through the use of records as a basis for vocational guidence. Enrollment is on a voluntary basis insofar as the number of schools participating and the number of farmers enrolled in the program.

The analysis of the records and the preparation of the report for the Mankato Area are done under the direction of Delbert Hodgkins, Vocational Agriculture Adult Instructor at the Mankato School. Clerical assistants for this project were Mrs. Joan Turtle, Mrs. LaVonne Prail, and Mrs. Jean Stronsky. Mrs. Marjorie Tomlinson, office secretary, assisted with the program throughout the year.

The Farm Management Program is supervised locally by Erling O. Johnson, Superintendent of Schools, and F. G. Kalin, Director of Vocational and Adult Education. Lauren Granger, through a grant of funds from the Hill Family Foundation, is employed as co-ordinator for the program in the state. Other cooperating agencies are represented as follows: G. R. Cochran and S. K. Wick represent the State Department of Education, the University of Minnesota Department of Agriculture Education is represented by Milo Peterson, the Department of Agriculture Economics by George Pond and Truman Nodland, and the Agriculture Extension Service is represented by E. H. Hartmens and H. G. Routhe.

Each farmer pays an annual fee which covers a portion of the cost of the record analysis. This fee covers the clerical costs of the analysis and the cost of publishing the report.

We are indebted to Truman Nodland for his assistance and advice in setting up this program and for many years of service rendered to vocational agriculture. Dr. Nodland and his associates in the Agriculture Economics Department have been most cooperative in this and other programs.

This report deals with farmers enrolled in 12 schools in the Mankato area. The following tabulation shows the number of 1957 records submitted and the name of the instructor:

SCHOOL	NO. OF RECORDS	INSTRUCTOR
Amboy	1	Robert Potosnak
Howard Lake	2	Leslie Hanson
Lake Crystal	1	Ernest Freier
Madelia	8	Malcomb Brandt
Mankato	23	
Mapelton	1	Carl Ziebarth
New Ulm	19	Winfield Forsberg
		Kermit Kleene
		George Whalin
Nicollet	1	Howard Streege
Sherburn	2	Leo Ardolf
St. Peter	1	C. W. Dowling
Waconia	2	Vernon Bruhn
Watertown	3	Vernon Richter
Total	64	

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 operators liabilities and assets other than farm capital.

FARM INVENTORIES

The Capital investment per farm varied from $22,144 to $108,810. The average investment for all farms included in this report and for the high 20% and the low 20% in labor earnings is shown in Table 1.

FARM EARNINGS

Labor earnings is a measure of the relative financial success of a farm as compared with other farms and represents the returns above all farm expenses and a charge for the use of farm capital.

There are two methods of conputing 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 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 available to the operator for living expenses, payment on endebtedness and savings. These figures are found in Table 5.

Table 1. Summary of Farm Inventories, 1957

Items	Your Farm Jan. 1	Your Farm Dec. 31	Ave. of All Farms Jan. 1	Ave. of All Farms Dec. 31
Size of farm (acres)	———	———	203	
Size of business (work units)*	———	———	349	
Dairy Cattle	———	———	1748	1753
Other dairy cattle	———	———	656	853
Beef cattle (incl. feeders)	———	———	1870	2523
Hogs	———	———	1436	1882
Sheep (incl. feeders)	———	———	121	140
Poultry (incl. turkeys)	———	———	149	160
Productive Livestock (Total)	———	———	5980	7311
Crop, seed and feed	———	———	5387	5623
Auto & truck (farm share)	———	———	1153	1158
Tractors & motors	———	———	2040	2060
Crop and gen. mach.	———	———	3347	3660
Livestock equipment	———	———	549	571
Machinery & equip. (Total)	———	———	7089	7449
Miscellaneous	———	———	--	--
Land	———	———	25400	25400
Buildings, fences, etc.	———	———	7786	7792
TOTAL FARM CAPITAL	———	———	51642	53575

Items	20% of most profitable farms Jan. 1	20% of most profitable farms Dec. 31	20% of least profitable Jan. 1	20% of least profitable Dec. 31
Size of farm (acres)	244		188	
Size of business (work units)*	451		333	
Dairy cattle	1805	1992	2043	1941
Other dairy cattle	918	1009	671	1352
Beef cattle (incl. feeders)	3747	5474	2048	2713
Hogs	2281	3131	883	1149
Sheep (incl. feeders)	57	79	105	124
Poultry (incl. turkeys)	53	36	239	216
Productive livestock (total)	8861	11721	5989	7495
Crop, seed, and feed	7105	8162	5051	3855
Auto & truck (farm share)	1149	1292	1554	1353
Tractors & motors	2606	2915	1934	1791
Crop & gen. machinery	3841	4260	3643	4269
Livestock equipment	723	757	814	858
Machinery & equipment (total)	8319	9224	7945	8271
Miscellaneous	--	--	--	--
Land	28335	28335	22886	22886
Buildings, fences, etc.	8050	8024	9036	8823
TOTAL FARM CAPITAL	60670	65466	50907	51330

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

Table 2. Summary of Farm Earnings (Cash Statement) 1957

Items	Your farm	Average of all farms	20% most profitable farms	20% least profitable farms
FARM RECEIPTS				
Dairy cattle	____	678	906	545
Dairy products	____	2757	3100	3011
Beef cattle (incl. feeders)	____	2634	7503	1882
Hogs	____	4791	6557	3212
Sheep and wool	____	156	33	174
Poultry (incl. turkeys)	____	738	3427	102
Eggs	____	602	139	836
Corn	____	1967	3481	1609
Small grain	____	254	506	56
Other crops	____	2049	2185	949
Mach. & equip. sold & gas tax refunds	____	195	161	124
Income from work off the farm	____	273	110	261
Miscellaneous	____	112	120	69
(1) Total farm sales	____	17206	28228	12830
(2) Increase in farm capital	____	1933	4796	423
(3) Family living from the farm	____	271	401	329
(4) Total farm receipts (1)&(2)&(3)	____	19410	33425	13582
FARM EXPENSES				
Dairy cattle bought	____	250	383	337
Beef cattle bought (incl. feeders)	____	1452	4403	1306
Hogs bought	____	248	704	150
Sheep bought	____	16	--	46
Poultry bought (incl. turkeys)	____	220	673	106
Misc. livestock expense	____	361	665	286
Feed bought	____	2774	5035	1716
Fertilizer	____	539	674	344
Other crop expense	____	480	651	397
Custom work hired	____	500	720	517
Gas, oil, grease bought (farm share(	____	781	912	736
Rep. for tractors,trucks,& autos f.share	____	346	395	375
Rep. and upkeep of crop & gen. mach.	____	247	348	233
Rep. and upkeep of farm real estate	____	178	145	167
Rep. and upkeep of livestock equip.	____	91	82	72
Wages of hired labor	____	299	426	265
Electricity expense	____	158	184	173
Pers. prop. & real estate taxes	____	490	660	451
Telephone and general farm expense	____	200	225	241
(5) Total cash opr. expense	____	9630	17285	7918
(6) Mech. power bought (farm share)	____	691	1324	315
(7) Crop and gen. machinery bought	____	924	1079	1308
(8) Livestock equip. bought	____	171	105	505
(9) New real estate improvements	____	514	567	133
(10) Total farm purchases (5) to (9)	____	11930	20360	10179
(11) Interest on farm capital	____	2630	3153	2556
(12) Unpaid family labor	____	174	67	268
(13) Board furnished hired labor	____	59	85	37
(14) Total farm expense (10) to (14)	____	14793	23665	13040
(15) Labor earnings (4) - (15)	____	4617	9760	542

Table 3 Summary of Farm Earnings (Enterprise Statement) 1957

Items	Your farm	Average of all farms	20% of most profitable farms	20% of most profitable farms
RETURNS AND NET INCREASES				
Dairy cows	____	$ 2711	$ 3276	$ 2628
Other dairy cattle	____	732	857	741
Beef breeding herd	____	224	84	785
Feeder cattle	____	1761	4878	1030
Hogs	____	5048	6803	3389
Sheep - farm flock	____	163	55	147
Turkeys	____	551	2756	--
Chickens	____	653	128	865
All productive livestock	____	11843	18837	9585
Value of feed fed to livestock	____	7137	11339	5785
Return over feed from livestock	____	4706	7498	3800
Crop, seed, and feed	____	7779	12135	4814
Income from labor off the farm	____	140	31	116
Agricultural conservation payments	____	26	7	2
Miscellaneous	____	86	113	67
(1) Total returns & net increases	____	12737	19784	8799
EXPENSES AND NET DECREASES				
Truck	____	197	218	252
Auto (farm share)	____	433	451	554
Tractor	____	885	1257	766
Elec. & gas engin exp. (Farm share)	____	153	169	167
Hired power	____	237	349	249
Total power	____	1905	2444	1988
Crop and general machinery	____	903	1154	938
Livestock equipment	____	238	153	533
Buildings, fences and tiling	____	686	733	512
Misc. productive livestock expense	____	361	665	286
Labor	____	707	837	752
Real estate taxes	____	390	550	351
Personal property tax	____	100	110	100
Insurance	____	81	92	113
General farm expense	____	119	133	128
Interest on farm capital	____	2630	3153	2556
(2) Total expenses & net decreases	____	8120	10024	8257
(3) Labor earnings (1) - (2)	____	4617	9760	542

* 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 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 expense 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 is shown in Table 4. The values assigned are a conservative market price on the farm. If these products had been purchases, the amount paid out would have been considerably higher.

Table 4. Family Living from the Farm, 1957

Items	Your farm	Average of all farms	Your farm	Average of all farms
Adult equivalent - family	____	2.9		
Whole milk	____	646 qts.	____	$ 75
Skim milk	____	31 qts.	____	2
Cream	____	3 pts.	____	1
Beef	____	390 lbs.	____	71
Hogs	____	380 lbs.	____	68
Lamb and mutton	____	6 lbs.	____	1
Poultry	____	53 lbs.	____	10
Eggs	____	60 doz.	____	17
Potatoes	____	2 bu.	____	2
Vegetables & fruit	____	---	____	11
Farm fuel	____	----	____	13
TOTAL			____	$271

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 and average of $250 per month for family living in addition to the food, fuel, and housing furnished by the farm.

Table 5. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1957

Items	Your farm	Average of all farms	Most profitable farms	Least profitable farms
Number of persons - family	____	4	5.2	3.2
Number of adult equiv. - family	____	2.9	3.6	2.4
Food and meals bought	____	764	1078	533
Operating and supplies	____	233	304	246
Furnishings and equipment	____	238	458	107
Clothing and clothing materials	____	218	417	164
Personal care, personal spending	____	85	201	50
Education, recreation & development	____	170	210	209
Gifts and special events	____	94	123	48
Medical care and health insurance	____	282	287	385
Church, welfare	____	182	338	131
Personal share of auto & truck exp.	____	127	81	193
Operator's share of upkeep on dwel.	____	100	46	127
Household share of elec. & tel. exp.	____	83	90	68
Total cash living expense	____	2576	3633	2261
H.H. & pers. share of new auto	____	130	236	77
New dwelling	____	---	---	---
Taxes and other deductions	____	25	15	2
Life insurance	____	159	158	230
Other savings and investments	____	106	7	4
Total household & pers. cash exp.	____	2996	4049	2574
Total family living from the farm	____	271	401	329
Total cash exp. & perquisites	____	3267	4450	2903
Return to capital & family labor	____	5027	8378	2537

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 on a tenure basis 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.

Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1957 (Operator's Share, Tenure Basis)

Items	Your Farm		11 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total Farm Capital (1)	$	$	$48179	$48753
Stocks and Bonds			180	114
Life Insurance			847	1006
Shares in Marketing			79	86
Outside real estate			424	424
Cash on Hand & in Bank			1525	773
Household goods			2500	2646
Pers. share of Auto			386	387
Farm Dwelling			3150	3582
Miscellaneous			49	37
Total Non-farm Assets (2)			9140	9055
TOTAL ASSETS (1) & (2) = (3)			57319	57808
Fed. Land Bank mortgages			2000	1970
F.H.A. Real Estate Mortgages			2363	1909
Other Mortgages			6545	6000
Loans on Real Estate			1838	1620
Production Credit Assoc. loans			9	309
F.H.A. Chattel Mortgages			--	127
Other Chattel Mortgages			991	1577
Crop Loans (sealed)			--	---
Notes Payable			2338	1200
Accounts Payable			155	939
Total Liabilities (4)			16239	15651
FARMER'S NET WORTH =(3) - (4)			41080	42157
Change in Net Worth				1077

Items	11 Part-Owners		18 Renters	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total Farm Capital (1)	$28761	$31367	$ 16476	$18039
Stocks and Bonds	980	927	1207	1365
Life Insurance	1545	1769	385	439
Shares in Marketing	258	272	45	41
Outside real estate	236	236	--	11
Cash on Hand & in Bank	1603	1584	1140	1222
Household goods	1422	1472	2142	2345
Pers. share of Auto	233	189	402	388
Farm Dwelling	534	499	626	589
Miscellaneous	--	--	--	--
Total non-farm Assets (2)	6811	6948	5947	6400
TOTAL ASSETS (1) & (2) = (3)	35572	38315	22423	24440
Fed. Land Bank mortgages	84	63	--	--
F.H.A. Real Estate Mortgages	3218	3218	--	--
Other Mortgages	2228	2090	--	--
Loans on Real Estate	--	--	--	--
Production Credit Assoc. loans	318	709	649	911
F.H.A.Chattel Mortgages			--	--
Other Chattel Mortgages	101	696	148	649
Crop Loans (sealed)	524	462	--	--
Notes Payable	1193	1206	3351	1805
Accounts Payable	380	503	372	376
Total Liabilities (4)	8046	8947	4520	3741
FARMER'S NET WORTH (3) - (4)	27526	29368	17903	20699
Change in Net Worth		1842		2796

RANGE IN EARNINGS

Every study of farm earnings shows a wide variation in earnings among farmers in a given year (figure 1). The average labor earnings of those farmers ranking in the upper 20 per cent of the range according to earnings was $9760 and of those in the lower 20 per cent was $542. This is a range of $9218 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:

1. Crop Yields
2. Choice of Crops
3. Return from Livestock
4. Amount of Livestock
5. Size of Business
6. Work Units per Worker
7. Control over Expenses

(These factors vary from year to year in their relative influence on earnings.) 1/

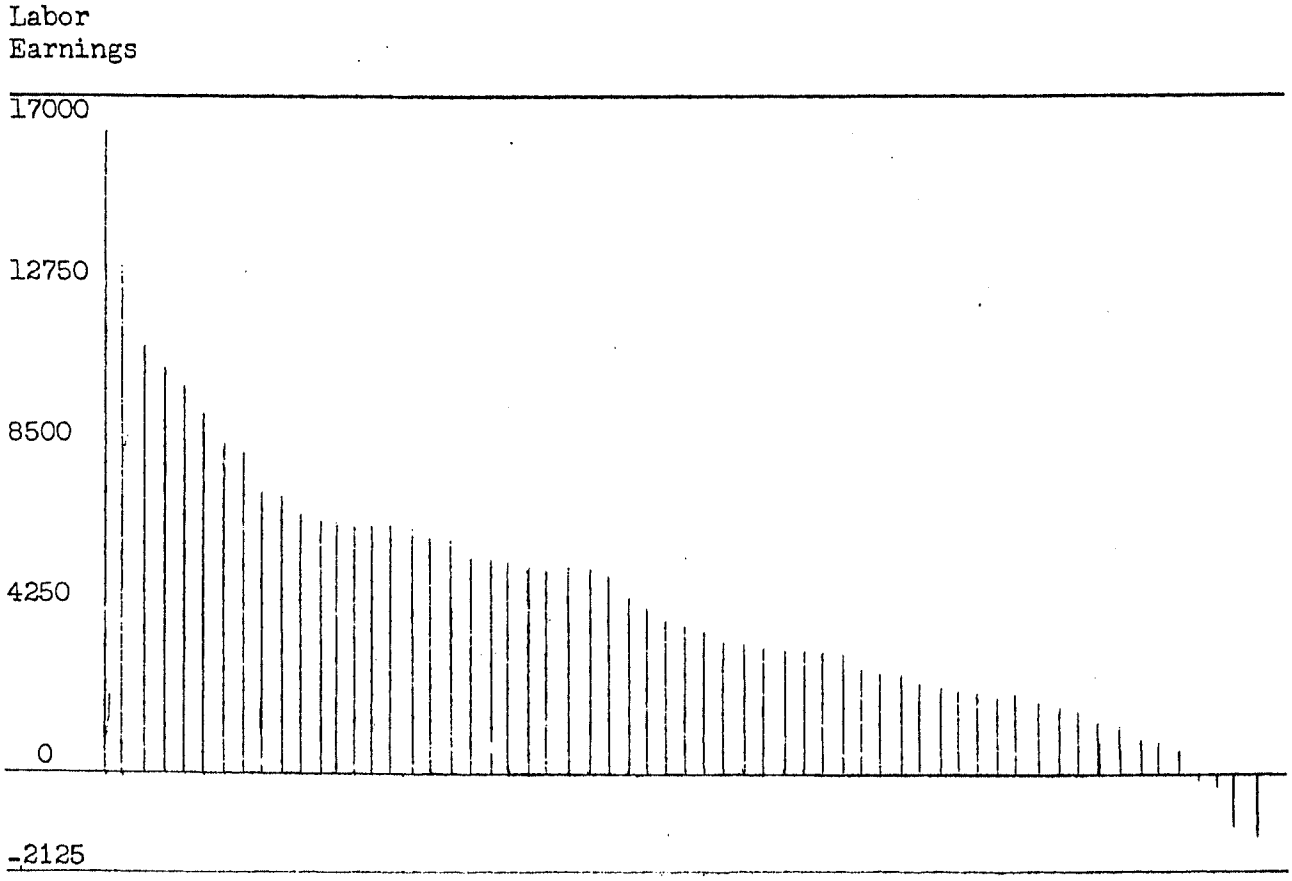

Fig. 1. - Range in Labor Earnings
Each line represents the earnings of 1 farmer.

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, 1957.

Measures used in chart on page 11	Your Farm	Average of All Farms	20% most Profitable Farms	20% Least Profitable Farms
Labor earnings	_____	$4617	$9760	$542
(1) Crop yields*	_____	100	106	105
(2) Per cent tillable land in high return crops**	_____	60.1	66.8	60.0
(3) Return for $100 feed to productive livestock***	_____	100	104	96
(4) Prod. Livestock units per 100 Acres****	_____	28.6	31.1	30.0
(5) Size of business-work units	_____	349	451	333
(6) Work units per worker	_____	268	321	252
(7) Power, Mach., equip., and build. exp. per work unit	_____	11.49	11.25	12.17
Items related to some of the above measures:				
(3) Index of ret. for $100 feed from:				
Dairy cattle (see p. 16 & 17)	_____	100	93	86
Beef breeding herd (see P.18)	_____	100	---	---
Feeder cattle (see p. 18)	_____	100	105	---
Hogs (see page 15)	_____	100	100	89
Sheep - farm flock (see p. 19)	_____	100	---	88
Chickens (see p. 20)	_____	100	---	120
Turkeys (see p. 21)	_____	100	---	---
(4) Number of animal units	_____	51.0	67.9	47.2
(5) Work units on crops	_____	97	134	83
Work units on prod. livestock	_____	238	314	238
Work units from other prod. wk.	_____	14	3	12
(6) Number of family workers	_____	1.2	1.3	1.3
Number of hired workers	_____	.1	.3	.1
Total No. of Workers	_____	1.3	1.6	1.4
(7) Power expense per work unit	_____	5.97	6.17	6.19
Crop mach exp. per wk. unit	_____	2.86	2.89	3.05
Livestock equip. exp. per w.u.	_____	.60	.30	1.17
Bldgs. & fences exp. per w.u.	_____	2.06	1.89	1.76

* Given as percentage of the average.

** Crops are marked in table 9 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.

THERMOMETOR CHART

Using your figures from page 10, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 60 farms included in this summary are located between the solid lines across the center of this page.

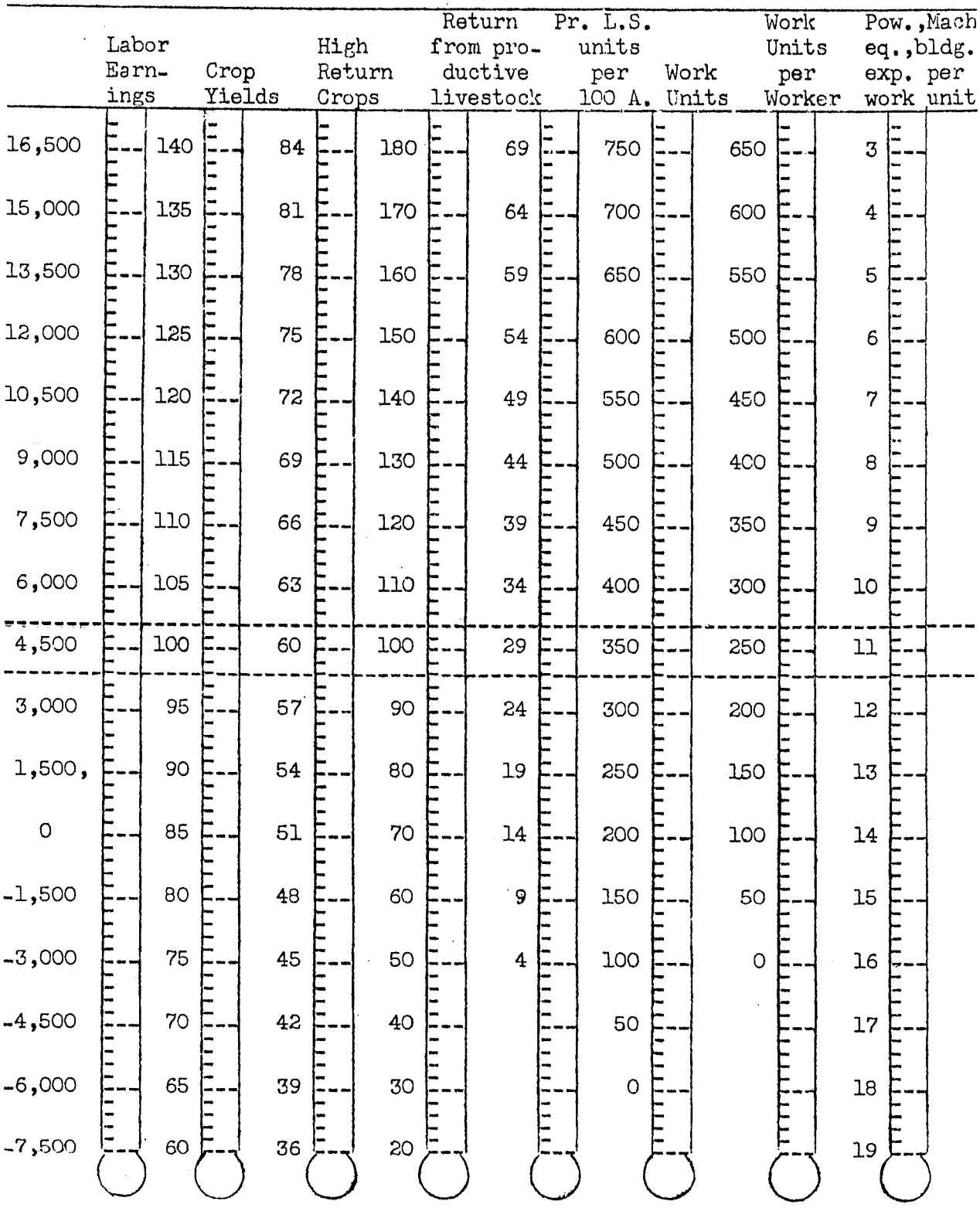

TABLE 8 DISTRIBUTION OF ACRES AND YIELD, 1957

Crop	Crop rating	Number growing	Acres your farm	Average acres of all farms	Your yield	Average of farms growing each crop
Canning peas	B	7	____	1.9	____	$ 62.62
Flax	C	1	____	.3	____	11.8 bu.
Wheat	C	4	____	1.3	____	24.8 bu.
Oats for silage	C	4	____	.8	____	8.3 Tons
Oats & Mix. for grain	D	50	____	23.7	____	53.8 bu.
Rye	D	2	____	.7	____	35.5 bu.
Total small grain and peas				28.7		
Sug.B.pot.tc.cr.hy.sd.c.	A	1	____	.0	____	----
Corn, grain	A	50	____	66.8	____	75.7 bu.
Sweet corn	B	5	____	1.7	____	$ 49.47
Soybeans for grain	B	42	____	33.9	____	27.2 bu.
Corn & cane silage	B	19	____	3.6	____	10,8 Tons
Total cultivated crops				106.0		
Alf. & alf. mix. hay	B	48	____	21.6	____	3.1 Tons
Other leg. & leg. mix	C	1	____	.2	____	1.9 Tons
Legumes for seed	D	1	____	.2	____	214.5 lbs.
Other annual hay	D	3	____	.6	____	2.0 Tons
Total tillable land in hay				22.6		
Alf. & Alf. brome past.	B	12	____	2.1		
Other leg. & mix.	C	--	____	--		
Sudan & rape pasture	D	3	____	.4		
Other tillable pasture	D	10	____	3.9		
Total tillable land in pasture				6.4		
Soil bank	A	-	____	--		
Till. land not cropped	D	1	____	.1		
Total tillable land				163.8		
Wild hay (non-till.)		9	____	2.4		
Non-till. pasture		31	____	18.6		
Timber (not pasture)		9	____	4.0		
Roads & waste		45	____	8.0		
Farmstead		48	____	6.2		
TOTAL ACRES IN FARM				203.0		

Per cent land tillable	79%
Per cent tillable land in high return crops	60%

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 9.

Table 9. Number of Work Units for Each Class of Livestock & Each Acre of Crop

Item	No. of Work Units	Item	No. of Work Units
Dairy Cattle	10.0 per cow	Peas, sm.grain	.5 per A.
Other dairy cattle	3.5 per an. unit*	Hybr. seed c.	2.0 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*	Sweet corn	.7 per A.
Sheep - feeders	.3 per 100 lbs.	Soybean grain	.5 per A.
Hogs	.2 per 100 lbs.	Alfalfa hay	.6 per A.
Hens	20.0 per 100 hens	Other hay & seed	.4 per A.
Turkeys	.5 per 100 lbs.	Grass silage	.4 per A.

* One animal unit represents one dairy cow or bull, two other dairy cattle, 1¼ beef cows or bull, 1 feeder steer or heifer, 3 1/3 other beef cattle, 7 sheep, 14 lambs, 2 ½ hogs, 5 pigs, 50 hens, or 1,100 lbs. of turkeys produced.

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 expenses are high on 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 10. Power and Machinery Expenses Per Crop Acre, 1957

Items	Your farm	Ave. of all farms	20% most profitable	20% least profitable
Crop acres per farm	____	156	205	125
Tractor expense per crop acre	____	$ 5.88	$ 6.03	$ 6.71
Crop & gen. mach. exp. per crop acre	____	5.82	5.42	6.82

AMOUNT OF LIVESTOCK

The farmers cooperating in this study are predominatly livestock farmers. 70% of these farmers maintained dairy cattle, 58% kept poultry, 22% raised sheep, 37% kept beef cattle and 90% raised hogs.

Table 11. Amount of Livestock, 1957

Items	Your farm	Ave. of all farms	20% most profitable	20% least profitable
Number of milk cows	____	8.5	9.2	9.1
Number of other dairy cattle	____	7.6	7.4	8.2
Number of beef cattle (incl. feeders)	____	15.0	31.7	13.9
Number of ewes	____	8.9	2.5	7.5
Number of hens	____	155.5	45.3	238.2
Pounds of hogs produced	____	27,061.0	37,883.0	18,818.0
Pounds of beef produced	____	6812.0	16802.0	5236.0

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 5. The value of milk consumed by calves is included in the total returns from dairy cows and in the total feed cost for other dairy cattle. The value of milk consumed by calves is not included in the total returns or the feed cost of "all dairy" 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 and Returns From Your Livestock Enterprises, 1957

	Dairy 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 food.

HOGS

Raising hogs is a major enterprise on most farms in Southern Minnesota. 90% of the farmers cooperating in this analysis raised hogs for market. Hog sales amounted to 28% of the total farm sales. 43% of the returns from productive livestock was from hogs. Table 14 below summarizes the results of the hog enterprise analysis.

Table 14. Feed Costs and Returns from Hogs, 1957

Items	Your farm	Average of all farms raising hogs	20% of farms highest in returns above feed	20% of farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	____	332.8	262.5	374.9
Small grain	____	55.1	59.6	38.1
Commercial feeds	____	58.7	42.3	66.0
Total concentrates	____	446.6	394.4	479.0
Silage	____	.4	---	---
Skim milk, buttermilk & whey	____	.2	.2	---
Alfalfa hay	____	9.1	11.7	6.0
Feed cost per cwt. hogs produced:				
Concentrates	$____	$ 10.57	$ 9.08	$ 11.76
Skim milk, butter milk and whey	____	---	.01	---
Pasture	____	.05	.05	.05
Alfalfa hay	____	.10	.11	.06
Silage	$____	.4	---	---
TOTAL FEED COST	$____	$ 10.72	$ 9.25	$ 11.87
Net increase in value per cwt. hogs prod.	$____	$ 18.60	$ 20.67	$ 16.23
RETURNS ABOVE FEED COST PER CWT. HOGS PRODUCED	$____	$ 7.88	$ 11.42	$ 4.36
RETURNS FOR $100 OF FEED	$____	$180.00	$230.00	$139.00
Price received per cwt. hogs sold	$____	$ 18.00	$ 19.49	$ 16.96
No. of spring litters raised	____	14.	18.	13.
No. of fall litters raised	____	9.	13.	7.
Total no. of litters raised	____	23	31	20
No. of pigs born per litter	____	9.	8.	9.
No. of pigs weaned per litter	____	7.	7.	7.
Pounds of hogs produced	____	35572	42771	35839

DAIRY CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Table 14, 15, and 16. The return over feed cost per cow varied from -$6.74 to $300.61 among the 27 herds covered by this report. 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
4. Quality of ration
5. Economy of ration (feed cost per pound butterfat)

Table 14. Factors of Cost and Returns from Dairy Cows, 1957

Items	Your farm	Average of 27 farms	6 farms highest in butterfat per cow	6 farms lowest in butterfat per cow
Pounds of butterfat per cow	____	314.3	390.6	250.3
Price rec. per lb. B.F. sold (cts.)	____	.92	.99	.90
Feed per cow, lbs.:				
Corn	____	1994.9	2061.5	2286.3
Small grain	____	663.0	707.9	896.3
Commercial feed	____	478.8	557.7	399.5
Legume hay	____	5636.1	4943.5	7135.7
Other hay	____	25.1	----	----
Total concentrates	____	3136.7	3327.1	3582.1
Total dry roughages	____	5661.2	4943.5	7135.7
Silage	____	7263.2	8925.1	5264.3
Feed cost per cow:				
Concentrates	____	$ 70.15	$ 79.04	$ 78.67
Roughages	____	71.05	63.69	74.48
Pasture	____	9.42	12.09	8.60
TOTAL FEED COSTS	____	$150.62	$154.82	$ 161.75
Value of produce per cow:				
B.F. sales	____	$269.43	$349.42	$ 221.04
Dairy produce used in house	____	6.47	10.56	4.41
Milk fed to livestock	____	5.77	12.11	1.98
Net increases in value of cows	____	-12.69	-19.49	-9.89
TOTAL VALUE PRODUCED	____	$268.98	$352.60	$ 217.54
RETURNS ABOVE FEED COST PER COW	____	$118.36	$197.78	$ 55.79
RETURNS FOR $100 OF FEED	____	$187.00	$237.00	$ 138.00
Feed cost per lb. B.F. (cents)	____	.51	.40	.65
Number of cows	____	18.7	21.6	16.8

Table 15. Feed Costs and Returns from Other Dairy Cattle, 1957

Items	Your farm	Average of all farms	20% of Farms highest in butterfat per cow	20% of farms lowest in butterfat per cow
Feed per head, lbs.:				
Concentrates	____	745.6	911.1	719.8
Hay and fodder	____	2817.7	1895.2	5432.1
Silage	____	1661.0	1655.5	499.9
Whole Milk	____	213.8	282.2	130.0
Skim Milk	____	39.5	---	---
Feed cost per head:				
Concentrates	$____	$ 18.55	$ 22.01	$ 16.40
Roughages	____	23.80	23.43	21.56
Milk	____	6.78	8.47	3.90
Pasture	____	3.11	4.96	2.51
TOTAL FEED COSTS PER HEAD	____	$ 52.24	$ 58.87	$ 44.37
Net inc. in value of other cattle	____	$ 83.11	$ 75.19	$ 72.29
RETURNS ABOVE FEED COST PER HEAD	____	$ 30.87	$ 16.32	$ 27.92
RETURNS FOR $100 OF FEED	____	$200.00	$132.00	$214.00
Number of head of other cattle	____	15.9	24.5	12.8

Table 16. Feed Costs and Returns from all Dairy Cattle, 1957

Items	Your farm	Average of all farms	20% of farms highest in butterfat per cow	20% of farms lowest in butterfat per cow
Feed per animal unit, lbs.:				
Concentrates	____	2801.0	2794.1	3016.3
Hay and fodder	____	6053.6	3839.8	8995.4
Silage	____	6028.9	6703.9	4259.3
TOTAL FEED COSTS PER ANIMAL UNIT	____	$ 138.76	$ 135.96	$ 143.04
Value of produce per animal unit:				
Dairy products	____	$ 206.52	$ 236.35	$ 163.44
Net inc. in val. of dairy cattle	____	35.44	43.21	30.79
TOTAL VALUE PRODUCED	____	$ 241.96	$ 279.56	$ 194.23
RETURNS ABOVE FEED PER ANIMAL UNIT	____	$ 103.20	$ 143.60	$ 51.19
RETURNS PER $100 OF FEED	____	$ 180.00	$ 207.00	$ 138.00
Animal units of cattle	____	26.7	33.9	23.2

Table 17. Feed Costs and Returns from Beef Cattle, 1957

Items	Your Farm	5 Mankato Farms	5 Mankato, 3 Austin & 3 Winona farms
Feeds per animal unit, lbs.:			
Concentrates	____	913.2	1048.9
Legume	____	6094.1	4768.4
Other hay	____	403.2	183.8
Silage	____	8569.8	4973.0
Feed Cost per animal unit:			
Concentrates	$____	$ 20.21	$ 21.07
Roughages	____	81.12	56.51
Pasture	____	16.09	17.40
TOTAL FEED COST	$____	$117.42	$ 94.98
Value of produce per animal unit			
Dairy products	$____	$ .77	$ .35
Net increase in value of animal	____	132.16	107.80
TOTAL VALUE PRODUCED	$____	$132.93	$108.15
RETURNS ABOVE FEED COST PER ANIMAL UNITS	$____	$ 15.51	$ 13.17
RETURNS FOR $100 OF FEED	$____	$135.80	$125.45
Number of cows and herd bulls	____	22.9	25.2
Number of animal units in the herd	____	22.1	25.7
Feeder Cattle: No. of farms		16 Farms	
Feeds per cwt. beef produced, lbs.:			
Corn	____		445.9
Small Grain	____		20.1
Commercial feeds	____		60.0
Legume hay	____		331.2
Other hay	____		6.0
Total concentrates	____		526.0
Total hay and fodder	____		337.2
Silage	____		406.5
Feed cost per cwt. beef produced			
Concentrates	$____		$ 11.00
Roughages	____		4.34
Pasture	____		.96
TOTAL FEED COSTS	$____		$ 16.30
Net increase in value of feeders	$____		$ 28.17
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.	$____		$ 11.87
RETURNS FOR $100 OF FEED	$____		$184.00
Price paid per cwt. beef bot.	$____		$ 19.82
Price red'd. for feeder cattle sold	$____		$ 19.56
Number of animal units	____		44.2
Pounds of beef produced	____		24148.9

Table 18. Feed Costs and Returns from Farm Flock of Sheep, 1957

Items	Your farm	10 Mankato Farms	10 Mankato, 2 Austin, 2 Winona farms
Feeds per head, *lbs.			
Concentrates	____	158.7	246.9
Legume hay	____	597.5	615.4
Other hay	____	110.6	83.4
Silage	____	209.5	196.3
Feed cost per head:			
Concentrates	$____	$ 3.27	$ 4.95
Roughages	____	6.80	6.48
Pasture	____	1.73	2.12
TOTAL FEED COSTS	$____	$ 11.80	$ 13.55
Value of produce per head:			
Wool	$____	$ 4.44	$ 4.66
Value of Mutton	____	12.59	12.86
TOTAL VALUE PRODUCED	$____	$ 17.03	$ 17.52
RETURNS ABOVE FEED COST PER HEAD	$____	$ 5.23	$ 3.97
RETURNS FOR $100 OF FEED	$____	$150.00	$143.00
Price per cwt. of lambs sold	$____	$ 17.95	$ 17.27
Price per lb. wool sold (cts)	$____	$ .59	$ .60
Pounds of wool per sheep sheared	____	9.4	8.2
Number of ewes kept for lambing	____	33.7	35.6
Per cent lamb crop**	____	122.%	123.%
Per cent death loss**	____	9.5%	10.8%
Pounds of sheep produced	____	3411.6	2657.4
Head of Native Sheep	____	51.6	54.5

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

Table 19. Feed Costs and Returns from Feeder Lambs, 1957

Items	Your Farm
Feed per cwt. lambs produced, lbs.:	
Concentrates	____
Legume hay	____
Other hay	____
Fodder and stover	____
Silage	____
Feed cost per cwt. lambs produced	____
Net increases in value per cwt. produced	____
Return above feed cost per cwt. produced	____
RETURN FOR $100 OF FEED	____
Price paid per cwt. lambs bought	____
Price received per cwt. lambs sold	____
% death loss	____
Pounds of lambs produced	____

CHICKENS

Fifty-eight per cent of the farmers cooperating in this analysis kept some chickens. In most cases poultry is a so-called minor enterprise, providing eggs and poultry meat for family consumption plus an additional amount of cash income, which amounted to about 5% of the total return from productive livestock.

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. Percentage death loss of hens

Table 20. Feed Costs and Returns from Chickens, 1957*

Items	Your Farm	Average of 22 Farms	5 Farms Highest in Return Above Feed	5 Farms Lowest in Return Above Feed
Feed per hen, lbs.:				
Grain	_____	82.5	74.9	101.7
Commercial feed	_____	34.8	29.5	23.7
Total Concentrates	_____	117.3	104.4	125.4
TOTAL FEED COST PER HEN	$_____	$ 3.42	$ 2.90	$ 3.20
Value of produce per hen:				
Eggs sold and used in Home	$_____	$ 4.54	$ 4.64	$ 3.73
Net Inc. in value of chickens	_____	- .01	.57	- .40
TOTAL VALUE PRODUCED	$_____	$ 4.53	$ 5.21	$ 3.33
RETURNS ABOVE FEED COST PER HEN	$_____	$ 1.11	$ 2.31	$ .13
RETURNS FOR $100 OF FEED	$_____	$136.00	$181.00	$106.00
Price rec'd per dz. eggs sold(¢)	_____	28.4¢	29.4¢	26.4¢
Eggs laid per hen	_____	194.0	189.0	154.0
Ave. no. hens on farm during year	_____	303.1	233.0	274.5
Per cent death loss of hens	_____	12.4%	11.6%	19.4%
Per cent of laying flock that are pullets	_____	72.6%	98.1%	66.2%
Number of Pullets started	_____	290.9	235.0	185.0
Straight Run	_____	31.8	30.0	-----
Cockerels	_____	48.5	107.6	20.0

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

Turkeys were produced on only one farm in the Mankato area. To get a better picture of the turkey enterprise, there are two farms from the Austin area included in Table 21.

Table 21. Feed Costs and Returns for Turkeys. 1957

Items	Your farm	Average of 3 farms *
Feed per cwt. turkeys produced, lbs. :		
Grain	_____	227.6
Commercial Feed	_____	204.0
Total concentrates	_____	431.6
Feed cost per cwt. turkeys produced	$_____	$ 14.01
Net increase in value per cwt. turkeys produced	_____	18.65
RETURNS ABOVE FEED COST PER CWT. PRODUCED	_____	4.64
RETURNS PER $100 OF FEED	_____	134.00
No. of poults put on feed	_____	10780
Price paid per poult purchased	_____	.65
Per cent death loss	_____	6.1%
Price received per lb. turkeys sold (cts)	_____	23.9¢
Weight per bird sold (lbs)	_____	13.8
Pounds of turkey produced	_____	122, 857

* Includes farms from Austin area.

Table 22. Summary of Farm Earnings by Tenure, 1957 (Operator's Share)

Items	Your farm	17 Owners	16 part Owners	26 Renters
FARM RECEIPTS				
Dairy cattle	____	$1005	$ 309	$ 524
Dairy products	____	3805	973	2346
Beef cattle (including feeders)	____	2418	4032	1108
Hogs	____	5723	4327	3112
Sheep and wool (including feeders)	____	39	361	63
Poultry (including turkeys)	____	20	37	1638
Eggs	____	960	486	514
Corn	____	2052	1400	796
Small grain	____	214	183	95
Other crops	____	1292	2222	1143
Soil bank	____	--	--	--
Mach. and equip. sold & gas tax refunds	____	267	132	155
Income from work off the farm	____	512	133	184
Miscellaneous	____	219	61	69
(1) Total farm sales	____	$18526	$14656	$11747
(2) Increase in farm capital	____	1226	1948	1519
(3) Family living from the farm	____	314	218	213
(4) Total farm receipts (1)&(2)&(3)	____	$20066	$16822	$13479
FARM EXPENSES				
Dairy cattle bought	____	160	51	363
Beef cattle bought (including feeders)	____	1432	2004	654
Hogs bought	____	148	213	232
Sheep bought (including feeders)	____	--	6	7
Poultry bought (including turkeys)	____	58	56	398
Misc. livestock expense	____	447	202	324
Feed bought	____	2569	2241	2523
Fertilizers	____	609	640	282
Other crop expense	____	560	478	295
Custom work hired	____	539	441	327
Gas, oil and grease bought (farm share)	____	938	634	582
Rep.& op. tractor,truck,&auto (farm share)	____	371	283	297
Rep. and upkeep of real estate	____	308	210	37
Rep. and upkeep of crop. and gen. mach.	____	276	232	195
Rep. and upkeep of livestock equipment	____	78	86	93
Wages of hired labor	____	610	153	187
Electricity expense (farm share)	____	181	103	145
Real estate and pers. prop. taxes	____	656	282	111
Cash rent	____	39	385	606
Gen. farm exp. and telephone expense	____	287	168	130
Interest paid	____	488	151	194
Total cash operating expenses	____	$10734	$ 9019	$ 7982
Mech. power bought (farm share)	____	433	813	591
Crop & gen. mach. bought	____	1056	820	733
Livestock equipment bought	____	364	61	99
New real estate improvements	____	858	447	196
(5) Total farm purchases	____	$13465	$11160	$9601
(6) Interest on farm capital	____	2829	1363	779
(7) Unpaid family labor	____	264	160	87
(8) Board furnished hired labor	____	172	19	9
(9) Total farm expenses (5)&(6)&(7)&(8)	____	$16730	$12702	$10476
(10) Labor earnings (4)- (9)	____	3336	4120	3003
(11) Ret. to cap. & fam. lab.(6)&(7)&(10)	____	6429	5643	3869

Table 23. Summary of Farm Earnings by Years - Mankato Area

	1955	1956	1957
FARM RECEIPTS			
Dairy cattle	520	634	678
Dairy products	2144	2575	2757
Beef cattle (incl. feeders)	3582	2714	2634
Hogs	4359	3933	4791
Sheep and wool	373	294	156
Poultry (incl. turkeys)	210	1153	738
Eggs	968	832	602
Corn	3198	2426	1967
Small grain	174	359	254
Other crops	1025	1717	2049
Mach. equip. sold & gas tax refund	395	230	195
Income from work off the farm	129	145	273
Miscellaneous	130	158	112
(1) Total farm sales	17207	17170	17206
(2) Increase in farm capital	--	1706	1933
(3) Family living from the farm	290	258	271
(4) Total farm receipts (1)&(2)&(3)	17497	19134	19410
FARM EXPENSES			
Dairy cattle bought	126	218	250
Beef cattle bought (incl. feeders)	1855	1353	1452
Hogs bought	355	193	248
Sheep bought (including feeders)	159	17	16
Horses bought	--	3	--
Poultry bought (including feeders)	104	278	220
Misc. livestock expense	328	364	361
Feed bought	2597	2734	2774
Fertilizers	456	339	539
Other crop expense	529	473	480
Custom work hired	585	515	500
Gas, oil and grease bought (farm share)	734	740	781
Repair and operation of tractor,truck&auto	371	371	346
Repair and upkeep of real estate	181	208	178
Repair and upkeep of crop.&gen. mach.	250	274	247
Repair and upkeep of livestock equip.	86	106	91
Wages of hired labor	464	390	299
Electricity expense	178	169	158
Real estate and personal prop. tax	500	529	490
Telephone and general farm expense	237	190	200
(5) Total cash opr. expense	10095	9464	9630
(6) Mech. power bought (farm share)	920	661	691
(7) Crop and gen. machinery bought	706	777	924
(8) Livestock equip. bought	147	94	171
(9) New real estate improvements	465	490	514
(10) Total farm purchases (5) to (9)	12333	11486	11930
(11) Decrease in farm capital	630	--	--
(12) Interest on farm capital	2514	2545	2630
(13) Unpaid family labor	99	177	174
(14) Board furnished hired labor	62	69	59
(15) Total farm expense (10) to (14)	15638	14277	14793
(16) Labor earnings (4) - (15)	1859	4857	4617

AVERAGE PRICES OF FEEDS - 1957

Table 24 lists the average prices of feeds used in livestock summaries in this report. Prices paid for feeds bought were used whenever possible.

Table 24. Average Prices of Feed, 1957.

Farm Grown Grains*			
Corn	$1.02	per	bu.
Oats	.59	"	"
Barley	.88	"	"
Wheat	2.05	"	"
Rye	1.04	"	"
Soybeans	2.10	"	"
Flaxseed	3.16	"	"
Hay			
Alfalfa	$19.00	per	Ton
Red or Alsike Clover	16.00	"	"
Brome or Timothy	11.00	"	"
Wild Hay	9.00	"	"
Other Roughages			
Corn Silage	$6.00	per	Ton
Grass Silage	6.50	"	"
Pea Silage*	3.50	"	"
Sweet Corn Silage*	2.60	"	"
Pasture per Head Per Month			
Cows	$2.50		
Young Cattle	1.25		
Hogs	.16		
Pigs (under 6 mos)	.08		
Sheep	.40		
Lambs	.20		
Milk For Feed			
Whole Milk	$3.00	per	Cwt.
Skim Milk	.34	"	"
Whole milk used in home	.10	"	Qt.

* Purchase price used whenever possible.