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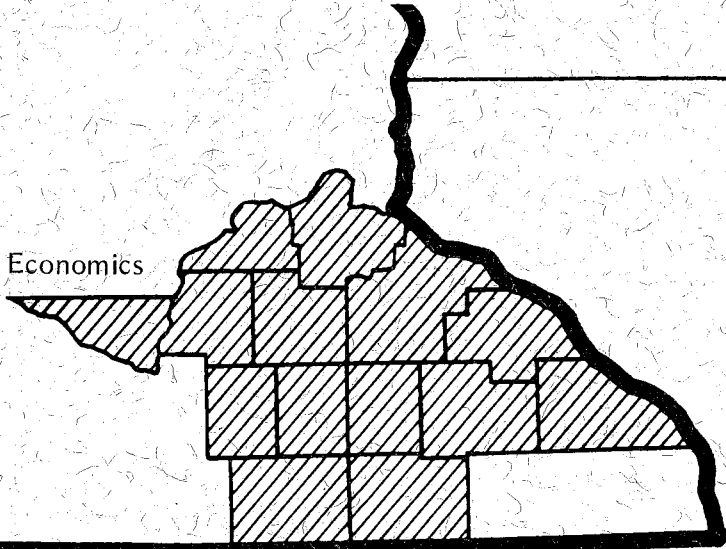
1973
annual report



**Southeastern Minnesota
Farm Management Association**

COOPERATING AGENCIES:

University of Minnesota, Institute of Agriculture
County Extension Services of the 14 Southeastern Counties
Southeastern Minnesota Farm Management Association



Economic Report R 74-4
Department of Agricultural and Applied Economics
Institute of Agriculture
St. Paul, Minnesota 55108
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1973 ANNUAL REPORT OF THE SOUTHEASTERN MINNESOTA FARM MANAGEMENT ASSOCIATION

Prepared by Janet B. Otis, Barbara B. Miller, and Truman R. Nodland*

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INTRODUCTION

The Department of Agricultural and Applied Economics and the Agricultural Extension Service of the University of Minnesota, and the county extension services of several southeastern Minnesota counties are cooperating with the Southeastern Minnesota Farm Management Association in maintaining a farm management service. The Southeast Minnesota Farm Management Service was organized in 1927 and began operations on January 1, 1928. The Southeastern Minnesota Farm Management Association was organized in 1939 by the farmers and now represents the farmers in determining policies and maintaining the field organization and membership. Each farmer pays an annual fee which covers a part of the cost. The balance of the cost is defrayed by the University of Minnesota.

* The authors are indebted to Dorothy Spreck and Eileen Miley for their assistance in the preparation of this report.

700/5/74

The analysis of the records and the preparation of the report are handled by the Department of Agricultural and Applied Economics under the direction of T. R. Nodland. Extension work in connection with the supervision of the project is handled by Ed Becker. Harvey Bjerke was the field agent for this project. At the end of the year, Kenneth Thomas, Department of Agricultural and Applied Economics, Mervin Freeman, Area Farm Management Agent at Rochester, Minnesota, and Michael Bjerke, a student in Agricultural Economics, aided in closing the records.

The following tabulation shows by counties the number of records submitted, the officers of the Association, and the county agricultural extension agents who cooperated in 1973.

County	No. of records	Association Officers	County Agricultural Extension Agent
Dakota	8	Walter Klaus, Director	Warren N. Sifferath
Dodge	13	Glen Johnson, Director	David H. Hanson
Freeborn	15	Duane Steele, Vice-President	Eldon H. Senske
Goodhue	24	Dale Hayward, Director	Richard C. Walter
Le Sueur	9	Donald Meyer, President	Robert Leary
Mower	1	Donald Zimmerman, Director	Harlan L. Johnsrud
Nicollet	5	Tom Hanson, Director	Gregory D. Luehr
Olmsted	13	Luverne Hammel	Donald Untiedt
Rice	6	John Holmes, Director	Warren Liebenstein
Scott	12	Arnie Schoenbauer, Sec. Treas. John Woestehoff, Director	David Hart
Steele	12	Glen Schuelke, Director	J. R. Gute
Wabasha	7	Lewellen Sprenger, Director	Matthias Metz
Waseca	2		Roger Wilkowske
Winona	9	Ellsworth Simon, Director	Harry B. Burcalow
Total	136		

The data for 118 farms are shown in the tables on succeeding pages. Eighteen farms were omitted from all averages in the tables because the records were not sufficiently complete for a full summarization or the records were not returned for summarization following completion of income tax schedules.

Because the farmers included in this study are, in general, above the average in managerial ability and operate larger and more productive farms, they have returns materially higher than the average for this section of the state. There were, however, wide variations in the methods and practices followed by these men. It is reasonable to assume that similar variations occur among all farmers in the area. To the extent that this is true, this report would be of value to all farmers and to others interested in agriculture in that it illustrates how farm records may be used as a basis for making an analysis of a farm business and for improving the management of a farm.

Table 1. Summary of Farm Inventories, 1973*

Item	Average of 118 farms	
	Jan. 1	Dec. 31
Size of farm (acres)	345	
Size of business (work units)**	482	
Dairy cows	\$ 7325	\$ 8313
Other dairy cattle	5391	6605
Beef cattle (incl. feeders)	4578	6311
Hogs	6344	10489
Sheep (incl. feeders)	78	83
Poultry (incl. turkeys)	10	21
Productive livestock total	<u>\$23726</u>	<u>\$31822</u>
Horses	\$ 8	\$ 13
Crop, seed and feed	\$22616	\$43793
Auto and truck (farm share)	\$ 2110	\$ 2665
Tractors and crop machinery	16798	19192
Livestock equipment	4062	4549
Machinery and equipment total	<u>\$22970</u>	<u>\$26406</u>
Land***	\$59526	\$59526
Buildings, fences, etc.	<u>\$28310</u>	<u>\$29419</u>
Total farm capital managed	\$157156	\$190979

Item	23 most profitable		23 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	553		237	
Size of business (work units)	630		390	
Dairy cows	\$ 2526	\$ 2087	\$ 7742	\$ 8562
Other dairy cattle	2363	3547	4727	5362
Beef cattle (incl. feeders)	7578	11582	1818	2356
Hogs	20707	35328	1734	1832
Sheep (incl. feeders)	119	146	18	19
Poultry (incl. turkeys)	-	-	31	30
Productive livestock	<u>\$33293</u>	<u>\$52690</u>	<u>\$16070</u>	<u>\$18161</u>
Horses	\$ -	\$ -	\$ 9	\$ 36
Crop, seed and feed	\$47967	\$103098	\$10899	\$16120
Auto and truck (farm share)	\$ 2790	\$ 3684	\$ 1703	\$ 2118
Tractors and crop machinery	26824	32693	11843	12744
Livestock equipment	5640	6654	3185	3356
Machinery and equipment total	<u>\$35254</u>	<u>\$43031</u>	<u>\$16731</u>	<u>\$18218</u>
Land	\$121336	\$121336	\$37969	\$37969
Buildings, fences, etc.	<u>\$ 43768</u>	<u>\$ 47433</u>	<u>\$20411</u>	<u>\$20997</u>
Total farm capital managed	\$281618	\$367588	\$102089	\$111501

* For the purpose of comparison, all of the data shown in this report, with the exception of tables 4 and 5, are presented on a full-owner basis. The assets, expenses, and receipts of the landlord are included in the records from rented farms.

** See page 15 for an explanation of "work units."

*** Real estate values are based on cost and thus do not reflect current market prices.

Table 2. Summary of Farm Earnings (Cash Statement), 1973

Item	Average of 118 farms	23 most profitable farms	23 least profitable farms
<u>FARM RECEIPTS</u>			
Dairy cattle sold	\$ 5855	\$ 4028	\$ 6035
Dairy products sold	20694	7143	23662
Beef cattle sold (incl. feeders)	6310	11747	1735
Hogs sold	22993	68920	6336
Sheep and wool sold	118	146	25
Horses sold	1	7	-
Poultry sold (incl. turkeys)	13	-	39
Eggs sold	85	-	131
Corn sold	11136	27363	3371
Soybeans sold	7991	21488	3291
Small grain sold	494	300	671
Other crops sold	2568	4794	1524
Machinery & equipment sold & gas tax refunds	397	571	319
Income from work off the farm	889	1525	275
Miscellaneous farm income	1768	2613	642
Total farm sales	\$81312	\$150645	\$48056
Increase in farm capital	33823	85970	9412
Family living from the farm	528	506	501
Total farm receipts	\$115663	\$237121	\$57969
<u>FARM EXPENSES</u>			
Dairy cattle bought	\$ 527	\$ 258	\$ 457
Beef cattle bought (incl. feeders)	3768	8291	492
Hogs bought	1523	1332	1357
Sheep bought	4	1	-
Horses bought	7	11	27
Poultry bought (incl. turkeys)	24	-	26
Miscellaneous livestock expense	1978	2294	1809
Feed bought	10372	24208	4240
Fertilizers bought	4286	8235	2476
Other crop expenses	4869	9747	2416
Custom work hired	2023	2412	1668
Gas, oil and grease bought (farm share)	1858	2891	1348
Repair of truck and auto (farm share)	684	1033	537
Repair and upkeep of farm real estate	994	1598	742
Repair and upkeep of tractors & crop machinery	2204	3471	1763
Repair and upkeep of livestock equipment	649	1073	476
Wages of hired labor	2335	4508	1371
Electricity expense (farm share)	698	1002	574
Real estate taxes	2287	3765	1572
Telephone and general farm expense	1069	1694	763
Total cash operating expenses	\$42159	\$77824	\$24114
Trucks and autos bought (farm share)	1336	1987	1032
Crop and power machinery bought	7760	15140	4751
Livestock equipment bought	1544	2659	954
New real estate and improvements	3648	7521	2158
Total farm purchases	\$56447	\$105131	\$33009
Decrease in farm capital	-	-	-
Interest on farm capital at 6%	10444	19476	6408
Family labor above one operator*	8186	20300	3733
Board furnished hired labor	55	68	9
Total farm expenses	\$75132	\$144975	\$43159
Labor and management earnings	\$40531	\$ 92146	\$14810
Net cash income	\$24865	\$ 45514	\$15047

* Includes labor earnings for partners above one full-time individual.

Table 3. Summary of Farm Earnings (Enterprise Statement), 1973*

Item	Average of 118 farms	23 most profitable farms	23 least profitable farms
<u>RETURNS AND NET INCREASES</u>			
Dairy cows	\$21870	\$ 7596	\$24747
Other dairy cattle	7143	4262	6624
Beef breeding herd	452	280	830
Feeder cattle	3646	7353	977
Hogs	25693	82361	5111
Sheep - farm flock	120	175	26
Sheep - feeders	-	-	-
Chickens and turkeys	88	-	142
All productive livestock	\$59012	\$102027	\$38457
Value of feed fed to livestock	28910	45265	19611
Return over feed from livestock	\$30102	\$ 56762	\$18846
Value added by crops	52584	112130	24326
Income from labor off the farm	472	1046	169
Miscellaneous farm income	1768	2613	642
Total returns and net increases	\$84926	\$172551	\$43983
<u>EXPENSES AND NET DECREASES</u>			
Horses	\$ 2	\$ 4	\$ 2
Truck	934	1519	713
Auto (farm share)	857	1122	683
Electricity (farm share)	698	1002	574
Hired power	1329	1577	1087
Tractors and crop machinery	8312	14112	6295
Livestock equipment	1697	2690	1258
Buildings, fencing, and tiling	3518	5439	2315
Miscellaneous livestock expense	1978	2294	1809
Labor**	11270	25711	5694
Real estate taxes	2287	3765	1572
General farm expense and telephone	1069	1694	763
Interest on farm capital at 6%***	10444	19476	6408
Total expenses and net decreases	\$44395	\$80405	\$29173
Labor and management earnings	\$40531	\$92146	\$14810

* Earnings statements, as shown in table 2, stress purchases and sales; inventory adjustments are entered as one item--either as an increase or as a decrease in farm capital. Likewise, family living from the farm is entered as a single item of income. On the enterprise basis, the value of livestock and livestock products produced includes sales, value used in the home, changes in inventories, and accounts for transfers between enterprises. Purchases of livestock are subtracted so the data represents value of livestock and livestock products added by the enterprise.

Costs of operating each service enterprise (auto and trucks, tractors and crop machinery, etc.) are calculated in a similar manner. Credit is given to crops for feed raised on the farm and consumed by livestock. Thus, while earnings statements on the enterprise basis do not show purchases and sales, such a statement more truly shows the value produced for the productive enterprises and net expenses for each of the service enterprises.

** Includes labor earnings for partners above one full-time individual.

*** Interest calculated on the "book" value of capital managed. If current market prices were applied to real estate, about \$3200 would be added to the interest on average capital managed.

Table 4. Net Worth Statement for Those Farmers Who Kept A Complete Record of All Assets and Liabilities, 1973 (Operator's Share)

Item	18 Owners	
	Jan. 1	Dec. 31
Total acres in farm	270	
Acres owned	270	
Acres rented	-	
Total farm capital - operator's	\$ 97337	\$114413
Stocks and bonds	\$ 24600	\$ 21817
Life insurance cash value	3757	3896
Notes and accounts receivable	2607	5591
Shares in cooperative organizations	2026	2205
Outside real estate	15047	18532
Cash on hand and in bank	4875	6684
Household furnishings and clothing	3419	3590
Personal share of auto and truck	820	964
Farm dwelling	4602	4409
Total non-farm assets - operator's	\$ 61753	\$ 67688
Total assets	\$159090	\$182101
Mortgages on farm operated	\$ 20125	\$ 18908
Mortgages on other real estate	9359	13191
Chattel mortgages	12601	13151
Notes payable	2797	2866
Accounts payable	3721	1651
Total liabilities - operator's	\$ 48603	\$ 49767
Farmer's net worth	\$110487	\$132334
Change in net worth		\$ 21847
Item	30 Part-owners	
	Jan. 1	Dec. 31
Total acres in farm	405	
Acres owned	252	
Acres rented	153	
Total farm capital - operator's	\$142792	\$180606
Stocks and bonds	\$ 4706	\$ 6169
Life insurance cash value	5114	5557
Notes and accounts receivable	1118	2816
Shares in cooperative organizations	1638	1894
Outside real estate	3361	7841
Cash on hand and in bank	8063	8740
Household furnishings and clothing	4294	4787
Personal share of auto and truck	824	900
Farm dwelling	9412	9388
Total non-farm assets - operator's	\$ 38530	\$ 48092
Total assets	\$181322	\$228698
Mortgages on farm operated	35862	33744
Mortgages on other real estate	767	2933
Chattel mortgages	26788	25791
Notes payable	10442	10858
Accounts payable	3782	1998
Total liabilities - operator's	\$ 77641	\$ 75324
Farmer's net worth	\$103681	\$153374
Change in net worth		\$ 49693

Table 5. Summary of Farm Earnings by Tenure, 1973 (Operator's Share)

Item	46 Owners	52 Part- Owners	5 Renters
<u>FARM RECEIPTS</u>			
Dairy cattle sold	\$ 4867	\$ 5395	\$ 5549
Dairy products sold	18226	20498	14808
Beef cattle sold (incl. feeders)	3368	7045	-
Hogs sold	17504	19929	32966
Sheep and wool sold	246	49	-
Horses sold	3	-	-
Poultry sold (incl. turkeys)	13	16	-
Eggs sold	153	-	-
Corn sold	6001	15095	3719
Soybeans sold	4707	8587	3008
Small grain sold	573	395	47
Other crops sold	1951	2604	2040
Machinery and equipment sold & gas tax refund	307	390	1329
Income from work off the farm	777	1166	561
Miscellaneous farm income	1999	1477	363
(1) Total farm sales	<u>\$60695</u>	<u>\$82646</u>	<u>\$64390</u>
(2) Increase in farm capital	19232	39575	32541
(3) Family living from the farm	436	546	475
(4) Total farm receipts (1)+(2)+(3)	<u>\$80363</u>	<u>\$122767</u>	<u>\$97406</u>
<u>FARM EXPENSES</u>			
Dairy cattle bought	\$ 391	\$ 591	\$ -
Beef cattle bought (incl. feeders)	1058	5424	-
Hogs bought	1200	1125	8878
Sheep bought	8	2	-
Horses bought	6	-	-
Poultry bought (incl. turkeys)	49	2	-
Miscellaneous livestock expense	1412	2064	2723
Feed bought	8970	9319	15070
Fertilizers bought	2944	4379	3700
Other crop expenses	3286	5303	3329
Custom work hired	1733	2279	1317
Gas, oil and grease bought (farm share)	1609	1902	1371
Repair and upkeep of power & crop machinery	2329	3129	2593
Repair and upkeep of real estate	824	1053	666
Repair and upkeep of livestock equipment	539	651	777
Wages of hired labor	2221	2618	1831
Electricity expense (farm share)	546	734	463
Real estate taxes	1547	1617	156
Cash rent	84	2576	5352
General farm expense & telephone	948	1135	1050
Interest paid	2820	4316	2363
Total cash operating expense	<u>\$34524</u>	<u>\$50219</u>	<u>\$51639</u>
Trucks and autos bought (farm share)	1125	1447	2115
Crop and power machinery bought	4804	8594	10726
Livestock equipment bought	1046	1804	810
Farm purchase and real estate improvements	1980	5004	1873
(5) Total farm purchases	<u>\$43479</u>	<u>\$67068</u>	<u>\$67163</u>
(6) Decrease in farm capital	-	-	-
(7) Interest on operator's farm capital	3551	5484	2340
(8) Unpaid family labor	571	749	630
(9) Board furnished hired labor	48	82	-
(10) Total farm expenses (5)+(6)+(7)+(8)+(9)	<u>\$47649</u>	<u>\$73383</u>	<u>\$70133</u>
(11) Labor earnings (4)-(10)	<u>\$32714</u>	<u>\$49384</u>	<u>\$27273</u>
(12) Return to capital & family labor (7)+(8)+(11)	<u>\$36836</u>	<u>\$55617</u>	<u>\$30243</u>

Table 6. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1973

Item	Average of 38 farms	8 high in return to cap. and fam. labor	8 low in return to cap. and fam. labor
Number of persons - family	4.5	4.5	4.4
Number of adult equivalent - family	3.9	4.1	4.0
- others*	-	.1	-
<u>EXPENSES</u>			
Food and meals bought	\$ 2029	\$ 2285	\$ 2012
Operating and supplies	551	603	430
Furnishings and equipment	758	933	590
Clothing and clothing materials	863	981	594
Personal care and spending	409	538	132
Education	310	540	70
Recreation	474	831	375
Gifts and special events	528	941	189
Medical and hospital expenses	1125	752	1121
Church and welfare	555	881	364
Personal share of auto expense	462	599	325
Upkeep on dwelling	59	70	13
Personal share of tel. & elec. expense	<u>224</u>	<u>254</u>	<u>197</u>
Total cash living expense	\$ 8347	\$10208	\$ 6412
Personal share of new auto	480	511	72
New dwelling	145	584	-
Taxes**	1454	2661	1023
Life insurance	1100	1727	530
Other savings and investments	<u>1369</u>	<u>4538</u>	<u>1912</u>
Total household and personal cash expense	\$12895	\$20229	\$ 9949
Family living from the farm	<u>485</u>	<u>439</u>	<u>556</u>
Total cash expenses and perquisites	\$13380	\$20668	\$10505
<u>RECEIPTS</u>			
Return to capital and family labor	\$53107	\$108082	\$19637
Income from outside investments	1018	2480	924
Other personal income	828	566	1005

* Hired help or others boarded.

** All farmers did not report amount of state and federal income taxes.

Table 7. Family Living from the Farm, 1973

Item	Average of 38 farms	Average of 38 farms
Number of adult equivalents - family	4.0	
- other*	.1	
Whole milk	943 qts.	\$ 132
Cream	6 pts.	2
Cattle	839 lbs.	311
Hogs	198 lbs.	78
Sheep	3 lbs.	1
Poultry	4 lbs.	1
Eggs	5 doz.	1
Total		\$ 526

* Hired help or others boarded.

CULULATIVE EFFECT OF EXCELLING IN A NUMBER OF MANAGEMENT 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 8. The farmer's earnings are determined to a considerable extent by his accomplishments in these seven factors.

Table 8. Relation of Labor Earnings to the Number of Factors in Which the Farmer Excels

Number of factors in which farmer excels	No. of farms	Your farm	The length of the shaded lines is in proportion to the average operator's labor earnings	Average labor earnings
0 or 1	16	_____	XXXXXXXXXXXXXXXXXX	\$ 25183
2 or 3	54	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	37282
4 or 5	31	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	40966
6 or 7	17	_____	XX	65091

The array in table 8 indicates that it will be worthwhile for each cooperator to study carefully his ranking on pages 10 and 11, and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

Table 9. Measures of Farm Organization and Management Efficiency, 1973

Measures used in chart on page 11	Average of 118 farms	23 most profitable farms	23 least profitable farms
Labor and management earnings	\$40531	\$92146	\$14810
Crop yields*	100	106	94
Percent tillable land in high return crops**	65.3	71.4	59.6
Return for \$100 of feed to prod. livestock***	100	109	97
Productive livestock units per 100 acres****	36.9	44.4	30.5
Size of business - work units	482	630	390
Work units per worker	284	315	229
All power, machinery, equipment, building expense per work unit	\$38.89	\$47.22	\$34.82
Items related to some of the above measures:			
Index of return for \$100 of feed from:			
Dairy cattle (see pages 16 and 17)	100	105	97
Beef cattle - breeding herd (see page 19)	100	-	-
Beef cattle - feeders (see page 20)	100	-	118
Hogs (see page 18)	100	108	98
Sheep - farm flock (see page 21)	100	95	-
Chickens (see page 22)	100	-	-
Number of animal units	102.0	169.6	65.0
Work units on crops	157	270	99
Work units on productive livestock	306	318	284
Other work units	19	42	7
Number of family workers	1.3	1.3	1.4
Number of hired workers	.4	.7	.3
Total number of workers	1.7	2.0	1.7
Power & crop machinery expense per work unit	\$27.91	\$34.58	\$25.53
Livestock equipment expense per work unit	3.49	3.49	3.14
Building & fencing expense per work unit	7.49	9.15	6.15
Number of crop acres per farm	282	492	180
Tractor & crop machinery expense per crop acre	\$31.19	\$32.13	\$32.21
Rate earned on capital managed (\$9600 is deducted for operator's labor)	23.8%	31.4%	10.9%

* Given as a percentage of the average.

** Crops are marked in table 10 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 percent 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.

Using your figures from page 10, locate your standing with respect to the various measures of farm organization and management efficiency. The average for the 118 farms included in this summary are located between the dotted lines across the center of this page.

Labor earnings	Crop yields	High return crops	Return from prod. livestock	Pr. L.S. units per 100 A.	Work units	Work units per worker	Pow., mach. eq. & bldg. exp. per work unit
\$80,000	132	81.0	140	69.0	800	445	\$15
75,000	128	79.0	135	65.0	760	425	18
70,000	124	77.0	130	61.0	720	405	21
65,000	120	75.0	125	57.0	680	385	24
60,000	116	73.0	120	53.0	640	365	27
55,000	112	71.0	115	49.0	600	345	30
50,000	108	69.0	110	45.0	560	325	33
45,000	104	67.0	105	41.0	520	305	36
.....
40,000	100	65.0	100	37.0	480	285	39
.....
35,000	96	63.0	95	33.0	440	265	42
30,000	92	61.0	90	29.0	400	245	45
25,000	88	59.0	85	25.0	360	225	48
20,000	84	57.0	80	21.0	320	205	51
15,000	80	55.0	75	17.0	280	185	54
10,000	76	53.0	70	13.0	240	165	57
5,000	72	51.0	65	9.0	200	145	60
0	68	49.0	60	5.0	160	125	63

Table 10. Distribution of Acres in Farm, 1973

Item	Crop ratings	Number growing this crop	Average of 118 farms	Ave. per farm raising each crop
Canning peas	B	10	1.9	22.9
Wheat	C	16	2.5	18.4
Oats for silage	C	15	2.2	17.4
Oats for grain	D	79	16.6	24.8
Barley	D	5	1.1	25.0
Other small grain	D or C	1	-	6.0
Total small grains and peas		98	24.3	29.3
Corn grain	A	118	122.0	122.0
Soybeans for grain	B	77	75.6	115.9
Sweet corn	B	14	5.2	43.5
Corn silage	B	73	12.5	20.2
Total cultivated crops		118	215.3	215.3
Alfalfa hay	B	98	40.6	48.9
Other legume hay	C	-	-	-
Annual hay	D	5	.8	17.5
Total tillable land in hay		100	41.4	48.8
Alfalfa pasture	B	43	8.1	22.2
Other tillable pasture	D	6	.5	10.2
Total tillable land in pasture		47	8.6	21.6
Feed grain program (diverted acres)	B	59	7.2	14.4
Tillable land not cropped	D	12	1.0	10.3
Total tillable land		118	297.8	297.8
Wild hay		12	1.0	9.3
Non-tillable pasture		66	17.4	31.1
Timber not pastured		45	8.7	22.9
Roads and waste			11.8	
Farmstead			8.2	
Total acres in farm			344.9	
Percent land tillable			85.7	
Percent tillable land in high return crops			65.3	

Table 11. Crop Yields per Acre, 1973

Item	Average of farms growing each crop
Canning peas	\$84.72
Wheat, bu.	37.9
Oats for silage, tons	4.1
Oats for grain, bu.	61.0
Barley, bu.	54.8
Corn grain, bu.	109.3
Soybeans, bu.	33.0
Sweet corn, tons	5.8
Corn silage, tons	16.7
Alfalfa hay, tons	3.6
Annual hay, tons	2.8

Table 12. Average Price of Feeds, 1973

Item	Value	Item	Value
Ear corn, per bu.	\$1.70	Alfalfa hay, per ton	\$30.00
Oats, per bu.	.90	Timothy hay, per ton	18.70
Barley, per bu.	1.55	Wild hay, per ton	15.00
Soybean meal, per cwt.	13.50	Corn silage, per ton	10.00
		Pasture, per month per cow	5.00

Table 13. Return Above Listed Costs per Acre of Crops, 1973

Item	Corn grain	Corn silage	Soybeans
Number of farmers reporting	104	66	69
Yield per acre	109.3 bu.	16.7	33.0 bu.
Price per unit	\$ 2.20	\$ 13.00	\$ 5.50
Total return	\$240.46	\$217.10	\$181.50
Fertilizer	\$ 20.36	\$ 20.49	\$ 2.46
Seeds, herbicides, etc.	<u>20.77</u>	<u>20.48</u>	<u>13.52</u>
Total listed costs	\$ 41.13	\$ 40.97	\$ 15.98
Return above listed costs	\$199.33	\$176.13	\$165.52

Item	Alfalfa hay	Oats	Wheat
Number of farmers reporting	76	54	8
Yield per acre	3.6 tons	61.0 bu.	37.9 bu.
Price per unit	\$ 40.00	\$ 1.10	\$ 4.00
Total return	\$144.00	\$ 67.10	\$151.60
Fertilizer	\$ 8.30	\$ 3.29	\$ 6.95
Seeds, herbicides, etc.	<u>9.84</u>	<u>4.82</u>	<u>12.23</u>
Total listed costs	\$ 18.14	\$ 8.11	\$ 19.18
Return above listed costs	\$125.86	\$ 58.99	\$132.42

EXPLANATION OF "WORK UNITS" AND "ANIMAL UNITS"

The total "work units" for any one farm is a measure of the size of that farm business. A work unit, as used in this report, is the average accomplishment of a farm worker, in a ten-hour day, working on crops and productive livestock at average efficiency, or ten hours of work off the farm for pay. The number of work units for each class of livestock and each acre of crop are presented in table 14.

Table 14. Number of Work Units for Each Class of Livestock and Each Acre of Crop

	Number of work units		Number of work units
Dairy cows	7.0 per cow	Small grain	.3 per acre
Other dairy cattle	1.2 per head	Sugar beets	1.8 per acre
Beef breeding herd	1.5 per cow	Sweet corn	.7 per acre
Feeder cattle	.12 per 100 lbs.	Corn husked	.6 per acre
Sheep, farm flock	.6 per ewe	Corn silage	.8 per acre
Sheep, feeders	.3 per 100 lbs.	Potatoes	4.0 per acre
Hogs	.12 per 100 lbs.	Alfalfa hay	.6 per acre
Turkeys	.1 per 100 lbs.	Soybean hay	.6 per acre
Hens	5.0 per 100 hens	Other hay crops	.4 per acre
Canning peas	.3 per acre	Labor off the farm	1.0 per \$25
Soybeans for grain	.5 per acre		

Table 15. Factors of Costs and Returns from Dairy Cows, 1973

Item	Average of 75 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Pounds of milk per cow	12228	14535	8949
Percent butterfat in milk	3.7	3.8	3.9
Pounds of butterfat per cow	457	548	345
Price received per pound of BF sold	\$ 1.73	\$ 1.72	\$ 1.66
Price received per cwt. of milk sold	6.50	6.51	6.51
Value of produce per cow:			
Dairy product sales	\$779.23	\$930.30	\$564.35
Dairy produce used in home	5.65	4.88	6.66
Milk fed to livestock	7.27	7.50	6.32
Net increase in value of cows	<u>35.42</u>	<u>65.04</u>	<u>16.40</u>
TOTAL VALUE PRODUCED	\$827.57	\$1007.72	\$593.73
Feed cost per cow:			
Concentrates	\$226.73	\$250.97	\$161.15
Roughages	144.99	153.61	131.11
Pasture	<u>10.00</u>	<u>10.10</u>	<u>16.04</u>
TOTAL FEED COST	\$381.72	\$414.68	\$308.30
RETURN ABOVE FEED COST PER COW	\$445.85	\$593.04	\$285.43
RETURNS FOR \$100 OF FEED	\$222	\$249	\$201
Feeds per cow, lbs.:			
Corn	5239	5835	3928
Small grain	528	509	296
Commercial feeds	527	564	354
Total concentrates	6294	6908	4578
Total hay	7018	7901	6600
Silage	7987	7028	6465
Feed cost per pound of butterfat	\$.84	\$.76	\$.89
Feed cost per cwt. of milk	3.17	2.87	3.53
Number of cows*	40.5	44.6	30.0

* All dairy cows which have at some time in the past freshened are included in the dairy herd and affect the average number of cows used in computing this table.

Table 16. Feed Costs and Returns from Other Dairy Cattle, 1973

Item	Average of 75 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
NET INCREASE IN VALUE OF OTHER DAIRY CATTLE	\$198.63	\$235.08	\$154.86
TOTAL FEED COST PER HEAD	\$111.61	\$104.90	\$100.04
RETURNS ABOVE FEED COST PER HEAD	\$ 87.02	\$130.18	\$ 54.82
RETURNS FOR \$100 OF FEED	\$191	\$232	\$180
Feed per head, lbs.:			
Concentrates	1466	1282	1202
Hay	2251	2017	2239
Silage	2849	2608	2917
Whole milk	84	98	74
Number of head of other dairy cattle	55.3	62.1	42.3

Table 17. Feed Costs and Returns from All Dairy Cattle, 1973

Item	Average of 75 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Value of produce per cow:			
Dairy products	\$784.87	\$935.18	\$571.02
Net increase in value of dairy cattle	<u>317.76</u>	<u>399.35</u>	<u>237.17</u>
TOTAL VALUE PRODUCED	\$1102.63	\$1334.53	\$808.19
TOTAL FEED COSTS PER COW	\$532.21	\$555.11	\$446.51
RETURNS ABOVE FEED COST PER COW	\$570.42	\$779.42	\$361.68
RETURNS FOR \$100 OF FEED	\$ 212	\$ 245	\$ 191
Feed per cow, lbs.:			
Concentrates	8490	8881	6394
Hay	10161	10777	9807
Silage	11911	10489	10880
Miscellaneous costs per cow	\$50.81	\$73.19	\$34.81

Table 18. Feed Costs and Returns from Hogs, 1973

Item	Average of 51 farms	Farms with breeding stock		11 farms with purchased feeder pigs	
		Average of 40 farms	8 farms highest in returns above feed		8 farms lowest in returns above feed
Pounds of hogs produced	130788	151835	146712	80179	54250
Net increase in value per cwt. produced	\$42.26	\$44.13	\$51.22	\$39.96	\$35.50
Feed cost per cwt. produced	<u>20.77</u>	<u>21.34</u>	<u>19.25</u>	<u>27.34</u>	<u>18.75</u>
Return above feed cost per cwt. produced	\$21.49	\$22.79	\$31.97	\$12.62	\$16.75
RETURNS FOR \$100 OF FEED	\$213	\$215	\$267	\$151	\$203
Price received per cwt. sold	\$41.28	\$41.30	\$46.22	\$39.08	\$41.19
Weight per hog sold	233	235	217	245	224
Miscellaneous costs per cwt. produced	\$.58	\$.61	\$.73	\$.54	\$.36
Feed per cwt. hogs produced, lbs.:					
Corn	385	397	388	542	342
Small grain	19	20	16	26	14
Commercial feeds*	<u>72</u>	<u>75</u>	<u>72</u>	<u>84</u>	<u>61</u>
Total concentrates	476	492	476	652	417
Total number of litters raised	72	92	90	52	1
Number of pigs born per litter	8.7	8.8	9.0	7.6	6.0
Number of pigs weaned per litter	7.2	7.2	7.1	6.3	5.6
Number of feeder pigs purchased	72	19	-	-	265
Total weight of feeders purchased	2991	812	-	-	10916
Price paid per feeder pig	\$31.93	\$30.06	-	-	\$32.31

* This includes purchased complete feeds which have not been divided between corn, small grain and protein feeds.

Table 19. Feed Costs and Returns from Beef Breeding Herd, 1973

Item	Average of 7 farms
TOTAL VALUE PRODUCED PER COW	\$208.89
Feed cost per cow:	
Concentrates	\$ 44.17
Roughages	72.79
Pasture	30.66
TOTAL FEED COST	<u>\$147.62</u>
RETURNS ABOVE FEED COST PER COW	\$ 61.27
RETURNS FOR \$100 OF FEED	\$154
Miscellaneous costs per cow	\$ 5.46
Feed per cow, lbs.:	
Concentrates	1310
Hay	4060
Silage	2378
Pounds of beef produced	16281
Number of cows	33.7
Number of other beef cattle	31.8

Table 20. Feed Costs and Returns from Feeder Cattle, 1973

Item	Average of 18 farms
Pounds of beef produced	55355
NET INCREASE IN VALUE OF FEEDERS PER CWT. OF BEEF PRODUCED	\$50.29
Feed cost per cwt. beef produced:	
Concentrates	\$26.56
Roughages	8.89
Pasture	.78
TOTAL FEED COST	\$36.23
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$14.06
RETURNS FOR \$100 OF FEED	\$143
Miscellaneous costs per cwt. of beef produced	\$.82
Feed per cwt. beef produced, lbs.:	
Corn	732
Small grain	6
Commercial feeds	46
Total concentrates	784
Total hay	333
Silage	781
Price paid per cwt. of beef bought	\$51.04
Price received per cwt. of feeder cattle sold	\$43.58
Number of animal units	88.7

Table 21. Feed Costs and Returns from a Farm Flock of Sheep, 1973

Item	Average of 7 farms
Value of produce per ewe:	
Wool	\$11.00
Net increase in value of sheep	<u>37.44</u>
TOTAL VALUE PRODUCED	\$48.44
Feed cost per ewe:	
Concentrates	\$12.78
Roughages	14.17
Pasture	<u>5.50</u>
TOTAL FEED COST PER EWE	\$32.45
RETURNS ABOVE FEED COST PER EWE	\$15.99
RETURNS FOR \$100 OF FEED	\$152
Miscellaneous costs per ewe	\$ 2.68
Feeds per ewe, lbs.:	
Concentrates	357
Hay	945
Silage	-
Price received per cwt. of lambs sold	\$38.59
Price received per pound of wool sold	\$ 1.08
Pounds of wool per sheep sheared	8.5
Percent lamb crop*	118
Percent death loss*	8.0
Pounds of sheep produced	3104
Number of ewes	31

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

Table 22. Summary by Years

Item	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1970	1971	1972	1973
Number of farms	169	162	165	158	134	113	113	114	118
Total farm capital managed	\$31402	\$42663	\$49342	\$60988	\$84088	\$107724	\$120511	\$137338	\$174068
Monthly charge for:									
Unpaid family labor*	113	125	133	147	160	250	300	300	350
Second operator*	113	125	133	187	295	500	600	600	**
Board for hired labor*	33	36	38	40	45	60	60	60	75
FARM EXPENSES									
Dairy cattle bought	\$ 285	\$ 314	\$ 235	\$ 265	\$ 398	\$ 521	\$ 544	\$ 363	\$ 527
Beef cattle bought	200	588	913	1185	791	908	2228	2536	3768
Hogs bought	194	202	258	386	504	616	534	751	1523
Sheep bought (incl. feeders)	64	35	143	88	7	7	10	11	4
Poultry bought (incl. turkeys)	176	154	124	154	110	73	50	9	24
Horses bought	14	6	6	2	1	-	1	-	7
Miscellaneous livestock expense	228	359	530	731	947	1347	1468	1662	1978
Fertilizers bought	-	-	877	1085	1978	2250	2686	2940	4286
Miscellaneous crop expenses	701***	1010***	651	926	1878	2593	2966	3341	4869
Feed bought	1954	2241	2747	3735	4279	5001	4539	5975	10372
Custom work hired	401	552	745	857	1295	1744	1868	1908	2023
Power & crop machinery (new)	1282	1744	1825	1803	3538	4565	4902	6434	9096
Power & crop machinery (upkeep)	1208	1550	1937	2378	2712	3737	3970	4254	5444
Livestock equipment (new)	111	202	347	412	658	986	1154	954	1544
Livestock equipment (upkeep)	86	113	152	171	225	345	380	440	649
Buildings and fencing (new)	778	983	982	1229	1930	2948	2801	3909	3648
Buildings and fencing (upkeep)	323	368	320	344	436	573	621	684	994
Hired labor	849	857	878	922	1123	1730	1838	1895	2335
Taxes	392	633	861	1301	1589	1921	2384	2129	2287
General farm expense	150	239	316	409	555	769	786	901	1069
Total farm purchases	\$ 9396	\$12150	\$14847	\$18383	\$24954	\$32634	\$35730	\$41096	\$56447
Decrease in farm capital	-	-	-	-	-	-	-	-	-
Interest on farm capital****	1570	2133	2467	3049	4482	6463	7231	8240	10444
Unpaid family labor	511	496	540	629	815	1171	1405	1532	8186
Board furnished hired labor	174	166	134	101	64	55	64	45	55
Total farm expense	\$11651	\$14945	\$17988	\$22162	\$30315	\$40323	\$44430	\$50913	\$75132

* These adjustments should be considered in comparing 1973 with previous years.

** Labor earnings was divided between the various partners.

*** Includes fertilizer.

**** Interest was calculated at the rate of 5% on capital managed from 1940 to 1966, at 5.5% from 1967 to 1969, and at 6% in 1970-73.

Table 22. Summary by Years (continued)

Item	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1970	1971	1972	1973
FARM RECEIPTS									
Dairy cattle sold	\$ 1406	\$ 1680	\$ 1641	\$ 2061	\$ 3246	\$ 3676	\$ 3952	\$ 4694	\$ 5855
Dairy products sold	4080	4702	6032	8105	11631	16686	17478	17262	20694
Beef cattle sold	616	1301	1891	2688	2148	3030	4555	5319	6310
Hogs sold	3598	4253	4653	5961	7973	9069	6932	12516	22993
Sheep and wool sold	232	171	272	222	95	82	96	111	118
Poultry (incl. turkeys) sold	672	354	212	88	82	19	14	8	13
Eggs sold	1319	1297	1075	1015	732	225	130	90	85
Horses sold	20	14	8	4	1	-	-	1	1
Corn sold	335	766	1926	1594	2467	4844	4822	5255	11136
Soybeans sold	-	-	-	-	1689	2762	2936	4464	7991
Small grain sold	659	495	481	624	492	421	356	259	494
Other crops sold*	819	853	1334	2181	2582	2208	2600	4023	2568
Mach. & equip. sold & gas tax refund	261	328	271	323	379	458	430	348	397
Income from work off the farm	178	182	269	239	432	399	346	484	889
Miscellaneous farm income	267	356	458	559	1022	1435	1100	1508	1768
Total farm sales	\$14462	\$16752	\$20523	\$25664	\$34971	\$45314	\$45747	\$56342	\$81312
Increase in farm capital	1411	1905	941	601	3516	3814	5698	10109	33825
Family living from the farm	715	620	304	307	321	373	341	380	526
Total farm receipts	\$16588	\$19277	\$21768	\$26572	\$38808	\$49501	\$51786	\$66831	\$115663
Total farm expenses	11651	14945	17988	22162	30515	40323	44430	50913	75132
Labor and management earnings	\$ 4937	\$ 4332	\$ 3780	\$ 4410	\$ 8293	\$ 9178	\$ 7356	\$15918	\$ 40531
MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY									
Percent land in high return crops**	50.9	62.8	62.7	60.1	60.5	63.6	66.1	64.8	65.3
Livestock units per 100 acres***	22.8	28.9	33.7	36.4	34.3	34.3	32.9	33.1	36.9
Work units****	601	535	486	548	505	431	443	446	482
Work units per worker****	300	284	274	318	305	254	261	262	284
Expenses per work unit****	\$4.69	\$8.18	\$10.81	\$11.61	\$17.99	\$27.86	\$29.72	\$31.75	\$38.89

* Includes soybeans 1945-1965

** The crop ratings used in calculating the percentage of the tillable land in high return crops were considerably changed in 1957.

*** The basis for computing animal units was revised in 1951.

**** The basis for computing work units was revised in 1953 and 1967.

Table 23. Summary of Miscellaneous Items by Years.

Item	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1970	1971	1972	1973
RETURN ABOVE FEED COST PER									
Dairy cow	\$161.27	\$156.86	\$162.86	\$183.05	\$266.74	\$373.65	\$383.61	\$417.68	\$445.85
100 lbs. feeder cattle produced	6.40	7.37	4.76	1.78	5.08	3.78	9.62	17.82	14.06
Ewe	11.16	9.47	6.18	5.40	7.52	11.29	10.82	16.75	15.99
100 lbs. hogs produced	6.09	6.47	4.62	4.57	8.86	5.17	6.05	14.17	21.49
Hen	2.11	1.60	1.39	1.27	.84	.59	-.54	.14	1.67
FEED COST PER									
Dairy cow	\$123.22	\$142.59	\$147.05	\$169.62	\$215.79	\$246.53	\$253.73	\$257.59	\$381.72
100 lbs. feeder cattle produced	23.08	19.46	18.83	19.10	21.60	22.08	22.08	22.10	36.23
Ewe	8.07	10.73	11.17	13.46	19.51	23.69	23.16	24.58	32.46
100 lbs. hogs produced	13.23	12.95	10.65	10.65	11.90	12.06	12.60	12.88	20.77
Hen	4.39	4.76	3.78	3.28	3.31	2.97	3.00	2.78	4.27
MISCELLANEOUS LIVESTOCK INFORMATION									
Number of dairy cows	17.0	17.7	19.8	22.2	24.2	26.7	27.2	25.7	25.8
Pounds of feeder cattle produced	813	2118	3529	5573	4308	5784	7013	7211	8593
Litters of pigs	11.7	13.5	17.3	19.4	19.7	22.0	18.4	24.3	34.3
Pounds of hogs produced	18505	17579	28272	36619	36519	36039	35542	47090	56762
Number of hens	235	219	209	197	138	47	32	23	14
Pounds of butterfat per dairy cow	278	308	342	375	417	457	453	461	457
Pigs weaned per litter	6.5	6.7	6.9	7.1	7.3	7.3	7.2	7.2	7.2
Number of head of ewes	7	7	5	4	3	2	2	2	2
Eggs per hen	177	194	203	205	201	187	197	198	168

Table 23. Summary of Miscellaneous Items by Years (continued)

Item	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1970	1971	1972	1973
PRICE RECEIVED PER									
Pound of butterfat in milk	\$.92	\$.90	\$.90	\$.94	\$ 1.15	\$ 1.36	\$ 1.40	\$ 1.43	\$ 1.73
Cwt. of milk	*	*	*	3.48	4.31	5.09	5.27	5.47	6.50
Cwt. of hogs sold	19.36	19.54	15.99	15.55	20.89	21.93	18.02	26.13	41.28
Cwt. of feeder cattle sold	20.56	26.22	21.19	22.61	24.02	27.44	28.57	33.48	43.58
Pound of wool sold	.43	.58	.50	.62	.56	.45	.62	.86	1.08
Dozen of eggs sold	.39	.37	.31	.28	.28	.29	.25	.25	.46
PRICE OF FEED									
Corn (per bu.)	\$ 1.29	\$ 1.31	\$ 1.11	\$.99	\$ 1.10	\$ 1.15	\$ 1.17	\$ 1.08	\$ 1.70
Barley (per bu.)	1.31	1.16	.92	.91	.97	.85	.90	.92	1.55
Oats (per bu.)	.75	.74	.59	.61	.62	.60	.62	.65	.90
Oilmeal (per cwt.)	3.84	4.19	3.73	4.36	4.99	5.00	5.00	6.35	13.50
Alfalfa (per ton)	18.40	18.30	18.20	19.40	20.80	20.00	20.00	21.00	30.00
Timothy hay (per ton)	10.84	10.58	10.58	11.22	12.00	11.60	11.60	11.60	18.70
Corn silage (per ton)	5.71	6.01	6.08	6.60	7.36	7.25	7.25	7.25	10.00
ACRES PER FARM									
Small grains	57.5	48.5	36.1	34.5	30.4	28.0	25.8	23.4	24.3
Cultivated crops	56.3	65.2	90.9	103.6	132.4	152.3	170.3	175.7	215.3
Tillable land in hay	29.8	38.5	37.6	39.4	40.0	43.7	46.5	41.3	41.4
Tillable land in pasture	20.8	22.3	20.0	16.6	12.8	11.4	10.5	8.6	8.6
Tillable land not cropped**	1.7	.9	1.9	14.4	22.0	22.8	22.4	37.7	8.2
Total tillable land	166.1	175.4	186.5	208.5	237.6	258.2	275.5	286.7	297.8
Non-tillable land	57.4	50.0	48.2	47.3	46.3	48.7	48.4	51.5	47.1
Total acres per farm	223.5	225.4	234.7	255.8	283.9	306.9	323.9	338.2	344.9
YIELD PER ACRE									
Corn (bu.)	47.6	59.8	73.1	72.4	86.8	96.7	96.2	101.1	109.3
Barley (bu.)	30.8	29.1	41.4	44.9	51.4	48.4	38.6	53.4	54.8
Oats (bu.)	48.2	32.8	58.3	58.3	62.4	55.6	61.4	66.6	61.0
Alfalfa (tons)	2.3	2.7	2.9	3.0	3.2	3.6	3.6	3.6	3.6
Soybeans (bu.)	16.4	19.6	24.8	23.6	24.4	29.5	25.7	30.9	33.0

* Information not available.

** Including feed grain program.