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**1971
annual report**

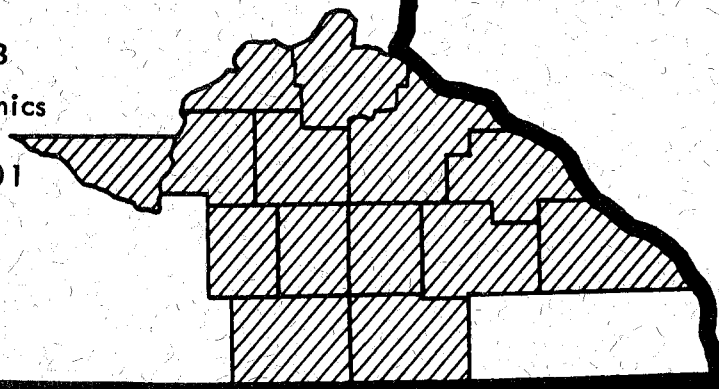
Southeastern Minnesota Farm Management Association

COOPERATING AGENCIES:

University of Minnesota, Institute of Agriculture
United States Department of Agriculture, Agricultural Research Service
County Extension Services of the 14 Southeastern Counties
Southeastern Minnesota Farm Management Association

Economic Information Report R-72-3

Department of Agricultural Economics
Institute of Agriculture
St. Paul, Minnesota 55101
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1971 ANNUAL REPORT OF THE SOUTHEASTERN MINNESOTA FARM MANAGEMENT ASSOCIATION

Prepared by T. R. Nodland and Janet B. Otis*

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INTRODUCTION

The Department of Agricultural and Applied Economics and the Agricultural Extension Service of the University of Minnesota, the Agricultural Research Service of the United States Department of Agriculture, 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 and the United States Department of Agriculture.

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

1000/6/72

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, S. A. Engene, Department of Agricultural and Applied Economics, and Mervin Freeman, Area Farm Management Agent at Rochester, Minnesota, 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 1971.

County	No. of records	Association Officers	County Agricultural Extension Agent
Dakota	9	John Harkness, Director	Clarence O. Quie
Dodge	14	Lowell Wright, Director	David H. Hanson
Freeborn	13	Duane Steele, Director	Eldon H. Senske
Goodhue	22	Dale Hayward, Director	Richard C. Walter
Le Sueur	7	Donald Meyer, Vice-President	Robert Leary
Mower	4	R. L. Zimmerman, Director	Harlan L. Johnsrud
Nicollet	6	Tom Hanson, Director	F. E. Wetherill
Olmsted	13	Franklin Till, Director	Don Untiedt
Rice	8	John Holmes, Director	Warren Liebenstein
Scott	11	Arnie Schoenbauer, Sec.-Treas.	David Hart
		Lester Ruehling, Director	
Steele	12	Glen Schuelke, President	J. R. Gute
Wabasha	10	Kenneth Steffen, Director	Matthias Metz
Waseca	2	Edwin Ewert, Director	Roger Wilkowske
Winona	9	Norman Luehmann, Director	Harry B. Burcalow
Total	140		

The data for 113 farms are shown in the tables on succeeding pages. Twenty-seven 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, 1971*

Item	Average of 113 farms	
	Jan. 1	Dec. 31
Size of farm (acres)	324	
Size of business (work units)**	443	
Dairy cows	\$ 6210	\$ 6541
Other dairy cattle	4248	4841
Beef cattle (incl. feeders)	2759	3206
Hogs	2359	3129
Sheep (incl. feeders)	70	70
Poultry (incl. turkeys)	44	33
Productive livestock total	<u>\$15690</u>	<u>\$17820</u>
Horses	\$ 4	\$ 5
Crop, seed and feed	15126	16313
Auto and truck (farm share)	\$ 1970	\$ 1959
Tractors and crop machinery	13039	14212
Livestock equipment	3133	3587
Machinery and equipment total	<u>\$18142</u>	<u>\$19758</u>
Land	\$44542	\$44542
Buildings, fences, etc.	<u>24158</u>	<u>24922</u>
Total farm capital managed	<u>\$117662</u>	<u>\$123360</u>

Item	23 most profitable		23 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	393		311	
Size of business (work units)	619		338	
Dairy cows	\$ 8904	\$ 9925	\$ 4263	\$ 4591
Other dairy cattle	6726	7474	2399	2986
Beef cattle (incl. feeders)	3183	4735	1778	1998
Hogs	5408	7642	1259	1621
Sheep (incl. feeders)	16	27	14	16
Poultry (incl. turkeys)	-	-	134	138
Productive livestock total	<u>\$24237</u>	<u>\$29803</u>	<u>\$ 9847</u>	<u>\$11350</u>
Horses	3	9	3	3
Crop, seed and feed	18919	22039	18198	16716
Auto and truck (farm share)	2243	2408	2102	1708
Tractors and crop machinery	13598	14910	13736	13975
Livestock equipment	3649	4959	2730	3099
Machinery and equipment total	<u>\$19490</u>	<u>\$22277</u>	<u>\$18570</u>	<u>\$18782</u>
Land	\$55781	\$55781	\$41827	\$31827
Buildings, fences, etc.	<u>31908</u>	<u>32982</u>	<u>23858</u>	<u>25397</u>
Total farm capital managed	<u>\$150338</u>	<u>\$162891</u>	<u>\$112303</u>	<u>\$114075</u>

* For the purpose of comparison, all 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."

Table 2. Summary of Farm Earnings (Cash Statement), 1971

Item	Average of 113 farms	23 most profitable farms	23 least profitable farms
<u>FARM RECEIPTS</u>			
Dairy cattle sold	\$ 3952	\$ 5678	\$ 2782
Dairy products sold	17478	26163	9476
Beef cattle sold (incl. feeders)	4555	7366	2569
Hogs sold	6932	14397	4470
Sheep and wool sold	96	45	22
Horses sold	-	-	2
Poultry sold (incl. turkeys)	14	-	19
Eggs sold	130	-	329
Corn sold	4822	5427	5704
Soybeans sold	2936	2557	4669
Small grain sold	356	285	431
Other crops sold	2600	3395	2839
Machinery & equipment sold & gas tax refund	430	463	516
Income from work off the farm	669	963	914
Miscellaneous farm income	777	898	646
Total farm sales	\$45747	\$67637	\$35388
Increase in farm capital	5698	12553	1772
Family living from the farm	341	382	307
Total farm receipts	\$51786	\$80572	\$37467
<u>FARM EXPENSES</u>			
Dairy cattle bought	\$ 544	\$ 640	\$ 1248
Beef cattle bought (incl. feeders)	2228	4816	1463
Hogs bought	534	768	650
Sheep bought	10	14	2
Horses bought	1	5	-
Poultry bought (incl. turkeys)	50	-	153
Miscellaneous livestock expense	1468	2215	881
Feed bought	4539	6533	2963
Fertilizers bought	2686	3024	2991
Other crop expenses	2966	3793	3399
Custom work hired	1868	2796	1678
Gas, oil and grease bought (farm share)	1405	1734	1425
Repair of truck and auto (farm share)	561	784	555
Repair and upkeep of farm real estate	621	837	641
Repair and upkeep of tractors & crop mach.	1471	1705	1596
Repair and upkeep of livestock equipment	380	514	299
Wages of hired labor	1838	3211	1334
Electricity expense (farm share)	533	711	498
Real estate taxes	2384	2789	2522
Telephone and general farm expense	786	917	696
Total cash operating expenses	\$26873	\$37806	\$24994
Trucks and autos bought (farm share)	522	845	174
Crop and power machinery bought	4380	4858	3588
Livestock equipment bought	1154	2426	977
New real estate and improvements	2801	3726	3759
Total farm purchases	\$35730	\$49661	\$33492
Decrease in farm capital	-	-	-
Interest on farm capital @ 6%	7231	9397	6791
Unpaid family labor	1405	2022	1295
Board furnished hired labor	64	69	105
Total farm expenses	\$44430	\$61149	\$41683
Labor earnings	\$ 7356	\$19423	\$-4216

Table 3. Summary of Farm Earnings (Enterprise Statement), 1971*

Item	Average of 113 farms	23 most profitable farms	23 least profitable farms
RETURNS AND NET INCREASES			
Dairy cows	\$17730	\$26738	\$ 9317
Other dairy cattle	4702	7338	2873
Beef breeding herd	247	-	218
Feeder cattle	2298	3468	1156
Hogs	7202	15920	4214
Sheep - farm flock	86	41	23
Sheep - feeders	-	-	-
Chickens and turkeys	89	-	215
All productive livestock	\$32354	\$53505	\$18016
Value of feed fed to livestock	16019	24098	11262
Return over feed from livestock	\$16335	\$29407	\$ 6754
Crop, seed and feed	17641	25388	14032
Income from labor off the farm	346	534	494
Miscellaneous farm income	777	898	646
Total returns and net increases	\$35099	\$56227	\$21926
EXPENSES AND NET DECREASES			
Horses	\$ 3	\$ -	\$ 14
Truck	683	953	774
Auto (farm share)	696	783	650
Electricity (farm share)	533	711	498
Hired power	1254	1874	1167
Tractors and crop machinery	5091	5843	5298
Livestock equipment	1073	1620	908
Buildings, fencing, and tiling	2620	3477	2698
Miscellaneous productive livestock expense	1468	2215	881
Labor	3921	6225	3245
Real estate taxes	2384	2789	2522
General farm expense and telephone	786	917	696
Interest on farm capital @ 6%	7231	9397	6791
Total expenses and net decreases	\$27743	\$36804	\$26142
Labor earnings	\$ 7356	\$19423	\$-4216

* Earnings statements, as shown in table 2, stress purchases and sales; inventory adjustments are entered as one item--either an increase or 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.

Table 4. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1971 (Operator's Share)

Item	17 Owners	
	Jan. 1	Dec. 31
Total acres in farm	273	
Acres owned	273	
Acres rented	-	
Total farm capital - operator's	\$ 90834	\$ 97387
Stocks and bonds	15562	19109
Life insurance cash value	2835	2781
Notes and accounts receivable	7012	7851
Shares in cooperative organizations	1717	1773
Outside real estate	906	1094
Cash on hand and in bank	6888	6628
Household furnishings and clothing	3767	4034
Personal share of auto and truck	843	830
Farm dwelling	6683	6745
Total non-farm assets - operator's	\$ 46213	\$ 50845
Total assets	137047	148232
Mortgages on farm operated	28758	27650
Mortgages on other real estate	-	-
Chattel mortgages	14191	17703
Notes payable	4653	6515
Accounts payable	4203	2823
Total liabilities - operator's	\$ 51805	\$ 54691
Farmer's net worth	\$ 85242	\$ 93541
Change in net worth		\$ 8299

Item	25 Part-owners	
	Jan. 1	Dec. 31
Total acres in farm	386	
Acres owned	234	
Acres rented	152	
Total farm capital - operator's	\$106887	\$114170
Stocks and bonds	5348	5346
Life insurance cash value	4566	4903
Notes and accounts receivable	4602	5118
Shares in cooperative organizations	1649	1859
Outside real estate	890	873
Cash on hand and in bank	6156	7279
Household furnishings and clothing	3575	3703
Personal share of auto and truck	1022	919
Farm dwelling	8289	8223
Total non-farm assets - operator's	\$ 36097	\$ 38223
Total assets	\$142984	\$152393
Mortgages on farm operated	26127	25926
Mortgages on other real estate	-	-
Chattel mortgages	11929	14670
Notes payable	5186	6131
Accounts payable	2096	2617
Total liabilities - operator's	\$ 45338	\$ 49344
Farmer's net worth	\$ 97646	\$103049
Change in net worth		\$ 5403

Table 5. Summary of Farm Earnings by Tenure, 1971 (Operator's Share)

Item	52 Owners	43 Part- owners	7 Renters
<u>FARM RECEIPTS</u>			
Dairy cattle sold	\$ 3357	\$ 4600	\$ 3387
Dairy products sold	15389	18742	11597
Beef cattle sold (incl. feeders)	2334	7743	4858
Hogs sold	7432	5179	7597
Sheep and wool sold	158	62	-
Horses sold	1	-	-
Poultry sold (incl. turkeys)	7	9	64
Eggs sold	104	167	-
Corn sold	3583	6116	3599
Soybeans sold	2707	3174	2747
Small grain sold	286	322	630
Other crops sold	2290	2693	3084
Machinery & equipment sold & gas tax refund	331	590	266
Income from work off the farm	500	861	802
Miscellaneous farm income	772	793	473
(1) Total farm sales	\$39251	\$51051	\$39104
(2) Increase in farm capital	4600	9013	11595
(3) Family living from the farm	297	398	301
(4) Total farm receipts (1)+(2)+(3)	\$44148	\$60462	\$51000
<u>FARM EXPENSES</u>			
Dairy cattle bought	\$ 374	\$ 599	\$ 1704
Beef cattle bought (incl. feeders)	756	4078	3285
Hogs bought	521	568	947
Sheep bought	15	8	-
Horses bought	-	3	-
Poultry bought (incl. turkeys)	38	66	12
Miscellaneous livestock expense	1151	1627	1035
Feed bought	4392	4594	3482
Fertilizers bought	2151	3106	3123
Other crop expenses	2655	3304	2904
Custom work hired	1540	2251	1976
Gas, oil and grease bought (farm share)	1287	1460	1380
Repair and upkeep of power & crop machinery	1803	2252	1877
Repair and upkeep of real estate	554	675	623
Repair and upkeep of livestock equipment	342	346	335
Wages of hired labor	1155	2903	1064
Electricity expense (farm share)	458	558	460
Real estate taxes	1880	1685	-
Cash rent	38	2667	6112
General farm expense & telephone	760	779	620
Interest paid	2189	3107	1210
Total cash operating expense	\$24059	\$36636	\$32149
Trucks and autos bought (farm share)	234	838	496
Crop and power machinery bought	3653	5651	3806
Livestock equipment bought	957	1399	2049
Farm purchase and real estate improvements	3639	4498	1031
(5) Total farm purchases	\$32542	\$49022	\$39531
(6) Decrease in farm capital	-	-	-
(7) Interest on operator's farm capital	3283	3503	1828
(8) Unpaid family labor	496	541	750
(9) Board furnished hired labor	44	96	-
(10) Total farm expenses (5)+(6)+(7)+(8)+(9)	\$36365	\$53162	\$42109
(11) Labor earnings (4)-(10)	\$ 7783	\$ 7300	\$ 8891
(12) Return to capital & family labor (7)+(8)+(11)	\$11562	\$11344	\$11469

Table 6. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1971

Item	Average of 43 farms	11 high in return to cap. and fam. labor	11 low in return to cap. and fam. labor
Number of persons - family	4.5	5.0	4.1
Number of adult equivalent - family	4.0	4.5	3.5
- other*	.1	.2	.2
EXPENSES			
Food and meals bought	\$1584	\$1850	\$1599
Operating and supplies	449	452	395
Furnishings and equipment	486	885	271
Clothing and clothing materials	616	688	604
Personal care and spending	240	300	230
Education	469	431	454
Recreation	351	753	358
Gifts and special events	392	648	454
Medical and hospital expenses	985	934	1011
Church and welfare	481	690	313
Personal share of auto expense	350	450	245
Upkeep on dwelling	60	61	14
Personal share of tel. & elec. expense	<u>188</u>	<u>252</u>	<u>156</u>
Total cash living expense	\$6651	\$8394	\$6104
Personal share of new auto	245	305	-
New dwelling	83	-	176
Taxes	1680	3851	874
Life insurance	933	1639	472
Other savings and investments	<u>620</u>	<u>1613</u>	<u>277</u>
Total household and pers. cash expense	\$10212	\$15802	\$ 7903
Family living from the farm	<u>345</u>	<u>326</u>	<u>221</u>
Total cash expenses and perquisites	\$10557	\$16128	\$ 8124
RECEIPTS			
Return to capital and family labor	\$13063	\$28271	\$ 839
Income from outside investments	1159	2207	1109
Other personal income	946	170	1709

* Hired help or others boarded.

Table 7. Family Living from the Farm, 1971

Item	Average of 113 farms	Average of 113 farms
Number of adult equivalents - family	4.1	
- other*	.1	
Whole milk	1036 qts.	\$101
Cream	19 pts.	7
Cattle	782 lbs.	193
Hogs	195 lbs.	35
Sheep	1 lb.	-
Poultry	12 lbs.	2
Eggs	15 doz.	3
Total		\$341

* Hired help or others boarded.

CUMULATIVE 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	12	_____	XXXX	\$ 1841
2	23	_____	XXX	1560
3	23	_____	XXXXXXXXXX	4824
4	22	_____	XXXXXXXXXXXXXXXXXX	8353
5	18	_____	XXXXXXXXXXXXXXXXXXXXXXXXXX	11662
6 or 7	15	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	17904

The array in table 8 indicates that it will be worth while 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, 1971

Measures used in chart on page 11	Average of 113 farms	23 most profitable farms	23 least profitable farms
Labor earnings	\$ 7356	\$19423	\$-4216
Crop yields*	100	112	93
Percent tillable land in high return crops**	66.1	67.1	70.0
Return for \$100 feed to prod. livestock***	100	118	85
Productive livestock units per 100 acres****	32.9	43.1	22.1
Size of business - work units	443	619	338
Work units per worker	261	310	211
All power, machinery, equipment, building expense per work unit	\$29.72	\$25.25	\$39.98
Items related to some of the above measures:			
Index of return for \$100 feed from:			
Dairy cattle (see pages 16 and 17)	100	116	84
Beef cattle - breeding herd (see page 19)	100	-	-
Beef cattle - feeders (see page 20)	100	102	-
Hogs (see page 18)	100	108	94
Sheep - farm flock (see page 21)	100	-	-
Chickens (see page 22)	100	-	99
Number of animal units	84.4	137.0	53.1
Work units on crops	137	170	135
Work units on productive livestock	292	428	183
Other work units	14	21	20
Number of family workers	1.3	1.3	1.3
Number of hired workers	.4	.7	.3
Total number of workers	1.7	2.0	1.6
Power & crop machinery expense/work unit	\$21.15	\$17.50	\$28.03
Livestock equipment expense per work unit	2.25	2.27	2.51
Building & fencing expense per work unit	6.32	5.48	9.44
Number of crop acres per farm	244	302	239
Tractor & crop machinery expense/crop acre	\$22.06	\$20.31	\$23.02
Rate earned on capital managed (\$8000 is deducted for operator's labor)	5.5%	13.3%	-4.8%

* 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.

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 113 farms included in this summary are located between the dotted lines across the center of this page.

Labor earn- ings	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
\$23500	132	82.0	140	65.0	765	420	\$14
21500	128	80.0	135	61.0	725	400	16
19500	124	78.0	130	57.0	685	380	18
17500	120	76.0	125	53.0	645	360	20
15500	116	74.0	120	49.0	605	340	22
13500	112	72.0	115	45.0	565	320	24
11500	108	70.0	110	41.0	525	300	26
9500	104	68.0	105	37.0	485	280	28
.....
7500	100	66.0	100	33.0	445	260	30
.....
5500	96	64.0	95	29.0	405	240	32
3500	92	62.0	90	25.0	365	220	34
1500	88	60.0	85	21.0	325	200	36
-500	84	58.0	80	17.0	285	180	38
-2500	80	56.0	75	13.0	245	160	40
-4500	76	54.0	70	9.0	205	140	42
-6500	72	52.0	65	5.0	165	120	44
-8500	68	50.0	60	1.0	125	100	46

Table 10. Distribution of Acres in Farm, 1971

Item	Crop ratings	Number growing this crop	Average of 113 farms	Ave. per farm raising each crop
Canning peas	B	13	3.2	28.0
Wheat	C	11	1.7	17.9
Oats for silage	C	11	2.0	20.2
Oats for grain	D	78	17.4	25.3
Barley	D	8	1.4	19.1
Other small grain	D or C	1	.1	15.0
Total small grains and peas		92	25.8	31.8
Corn grain	A	113	118.1	118.1
Soybeans for grain	B	57	36.2	71.8
Sweet corn	B	11	4.6	47.4
Corn silage	B	73	11.4	17.6
Total cultivated crops		113	170.3	170.3
Alfalfa hay	B	99	45.6	52.1
Other legume hay	C	1	.1	11.9
Annual hay	D	5	.8	18.8
Total tillable land in hay		99	46.5	53.2
Alfalfa pasture	B	42	9.4	25.2
Other tillable pasture	D	13	1.1	9.5
Total tillable land in pasture		49	10.5	24.1
Feed grain program (diverted acres)	B	91	21.6	26.8
Tillable land not cropped	D	5	.8	16.9
Total tillable land		113	275.5	275.5
Wild hay		10	.9	10.1
Non-tillable pasture		58	16.8	33.0
Timber not pastured		43	9.7	25.5
Roads and waste			12.8	
Farmstead			8.2	
Total acres in farm			323.9	
Percent land tillable			85.1	
Percent tillable land in high return crops			66.1	

* A, B, C, and D refer to ranking used in calculating percent of tillable land in high return crops.

Table 11. Crop Yields per Acre, 1971

Item	Average of farms growing each crop
Canning peas, dollars	\$83.08
Wheat, bu.	35.5
Oats for silage, tons	4.6
Oats for grain, bu.	61.4
Barley, bu.	38.6
Corn grain, bu.	96.2
Soybeans, bu.	25.7
Sweet corn, tons	4.9
Corn silage, tons	15.4
Alfalfa hay, tons	3.6
Annual hay, tons	2.0
Feed grain program, dollars	\$68.91

Table 12. Average Price of Feeds, 1971

Item	Value	Item	Value
Ear corn, per bu.	\$1.17	Alfalfa hay, per ton	\$20.00
Oats, per bu.	.62	Timothy hay, per ton	11.60
Barley, per bu.	.90	Wild hay, per ton	10.00
Wheat, per bu.	1.60	Corn silage, per ton	7.25
Soybean meal, per cwt.	5.00	Pasture, per month per cow	4.00

Table 13. Return Above Listed Costs per Acre of Crops, 1971

Item	Corn grain	Corn silage	Soy- beans
Number of farmers reporting	99	65	51
Yield per acre	95.7 bu.	15.2 tons	25.4 bu.
Price per unit	\$1.00	\$7.25	\$2.90
Total return	\$95.71	\$110.42	\$73.80
Fertilizer	\$16.37	\$15.46	\$ 1.46
Seeds, herbicides, etc.	15.59	15.44	8.60
Total listed costs	\$31.96	\$30.90	\$10.06
Return above listed costs	\$63.75	\$79.52	\$63.74
Item	Alfalfa hay	Oats	Wheat
Number of farmers reporting	82	58	8
Yield per acre	3.7 tons	59.7 bu.	37.3 bu.
Price per unit	\$20.00	\$.62	\$1.40
Total return	\$73.88	\$37.00	\$52.16
Fertilizer	3.64	2.80	2.56
Seeds, herbicides, etc.	5.71	5.20	8.97
Total listed costs	\$ 9.35	\$ 8.00	\$11.53
Return above listed costs	\$64.53	\$29.00	\$40.63

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

Item	Number of work units	Item	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		

An animal unit represents one dairy cow or bull, two other dairy cattle, $1\frac{1}{4}$ beef cows or bull, 1 feeder steer or heifer, $3\frac{1}{3}$ other beef cattle, 7 sheep, 14 lambs, $2\frac{1}{2}$ hogs, 5 pigs, 50 hens or 1,100 pounds of turkeys produced.

Table 15. Factors of Costs and Returns from Dairy Cows, 1971

Item	Average of 76 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Pounds of milk per cow	12136	14623	8762
Percent butterfat in milk	3.8	3.8	3.9
Pounds of butterfat per cow	453	551	336
Price received per pound of BF sold	\$1.40	\$1.41	\$1.35
Price received per cwt. milk sold	5.27	5.34	5.25
Value of produce per cow:			
Dairy product sales	\$627.78	\$769.03	\$444.18
Dairy produce used in home	4.42	2.94	5.82
Milk fed to livestock	3.73	4.46	3.54
Net increase in value of cows	1.41	8.29	-6.12
TOTAL VALUE PRODUCED	\$637.34	\$784.72	\$447.42
Feed cost per cow:			
Concentrates	\$149.45	\$161.96	\$122.02
Roughages	96.39	100.15	89.48
Pasture	7.89	7.95	11.33
TOTAL FEED COST	\$253.73	\$270.06	\$222.83
RETURN ABOVE FEED COST PER COW	\$383.61	\$514.66	\$224.59
RETURNS FOR \$100 OF FEED	\$259	\$299	\$214
Feeds per cow, lbs.:			
Corn	4597	5007	4118
Small grain	621	554	480
Commercial feeds	619	702	436
Total concentrates	5837	6263	5034
Total hay	6835	7974	6699
Silage	7811	5676	6395
Feed cost per pound of butterfat	\$.56	\$.49	\$.67
Feed cost per cwt. of milk	2.09	1.85	2.54
Number of cows*	40.4	43.6	29.5

* 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, 1971

Item	Average of 76 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
NET INCREASE IN VALUE OF OTHER DAIRY CATTLE	\$132.55	\$154.11	\$106.82
TOTAL FEED COST PER HEAD	\$ 79.58	\$ 86.60	\$ 71.21
RETURNS ABOVE FEED COST PER HEAD	\$ 52.97	\$ 67.51	\$ 35.61
RETURNS FOR \$100 OF FEED	\$179	\$192	\$167
Feed per head, lbs.:			
Concentrates	1267	1360	1020
Hay	2828	3402	2724
Silage	2534	1935	2545
Whole milk	72	81	87
Number of head of other dairy cattle	52.2	58.9	35.9

Table 17. Feed Costs and Returns from All Dairy Cattle, 1971

Item	Average of 76 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Value of produce per cow:			
Dairy products	\$632.19	\$771.95	\$450.00
Net increase in value of dairy cattle	183.35	225.44	124.78
TOTAL VALUE PRODUCED	\$815.54	\$997.39	\$574.78
TOTAL FEED COSTS PER COW	\$358.49	\$388.09	\$307.86
RETURNS ABOVE FEED COST PER COW	\$457.05	\$609.30	\$266.92
RETURNS FOR \$100 OF FEED	\$232	\$265	\$195
Feed per cow, lbs.:			
Concentrates	7641	8219	6349
Hay	10667	12909	10166
Silage	11104	8146	9512
Miscellaneous costs per cow	\$42.01	\$60.87	\$29.05

Table 18. Feed Costs and Returns from Hogs, 1971

Item	Average of 52 farms	40 farms with breeding stock			12 farms with purchased feeder pigs
		Average of 40 farms	13 farms highest in returns above feed	13 farms lowest in returns above feed	
Pounds of hogs produced	81081	93816	144762	64942	38629
Net increase in value per cwt. produced	\$18.65	\$19.36	\$20.11	\$18.16	\$16.28
Feed cost per cwt. produced	<u>12.60</u>	<u>12.42</u>	<u>10.58</u>	<u>13.75</u>	<u>13.19</u>
Return above feed cost per cwt. produced	\$ 6.05	\$ 6.94	\$ 9.53	\$ 4.41	\$ 3.09
RETURNS FOR \$100 OF FEED	\$152	\$159	\$191	\$134	\$128
Price received per cwt. sold	\$18.02	\$17.87	\$18.33	\$17.18	\$18.51
Weight per hog sold	238	242	244	244	227
Miscellaneous costs per cwt. produced	\$.39	\$.42	\$.41	\$.60	\$.25
Feed per cwt. hogs produced, lbs.:					
Corn	354	339	293	370	404
Small grain	26	29	18	25	17
Commercial feeds*	<u>65</u>	<u>66</u>	<u>63</u>	<u>69</u>	<u>62</u>
Total concentrates	445	434	374	464	483
Total number of litters raised	40	52	85	31	0
Number of pigs born per litter	9.2	9.2	9.1	9.4	-
Number of pigs weaned per litter	7.2	7.2	7.2	7.4	-
Number of feeder pigs purchased	66	15	0	31	233
Total weight of feeders purchased	2621	641	-	1361	9220
Price paid per feeder pig	\$14.40	\$14.57	-	\$15.15	\$14.31

* 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, 1971

Item	Average of 7 farms
TOTAL VALUE PRODUCED PER COW	\$147.40
Feed cost per cow:	
Concentrates	\$ 17.54
Roughages	42.42
Pasture	39.15
TOTAL FEED COST	\$ 99.11
RETURNS ABOVE FEED COST PER COW	\$ 48.29
RETURNS FOR \$100 OF FEED	\$145
Feed per cow, lbs.:	
Concentrates	719
Hay	3703
Silage	1507
Pounds of beef produced	14528
Number of cows	27.2
Number of other beef cattle	22.5

Table 20. Feed Costs and Returns from Feeder Cattle, 1971

Item	Average of 15 farms
Pounds of beef produced	52834
NET INCREASE IN VALUE OF FEEDERS PER CWT. OF BEEF PRODUCED	\$31.70
Feed cost per cwt. beef produced:	
Concentrates	\$15.68
Roughages	6.13
Pasture	.27
TOTAL FEED COST	\$22.08
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$ 9.62
RETURNS FOR \$100 OF FEED	\$154
Miscellaneous costs per cwt. of beef produced	\$.85
Feed per cwt. beef produced, lbs.:	
Corn	614
Small grain	7
Commercial feeds	48
Total concentrates	669
Total hay	357
Silage	707
Price paid per cwt. of beef bought	\$31.79
Price received per cwt. of feeder cattle sold	\$28.57
Number of animal units	74.8

Table 21. Feed Costs and Returns from a Farm Flock of Sheep, 1971

Item	Average of 7 farms
Value of produce per ewe:	
Wool	\$ 6.95
Net increase in value of sheep	27.03
TOTAL VALUE PRODUCED	\$33.98
Feed cost per ewe:	
Concentrates	\$ 6.27
Roughages	11.23
Pasture	5.66
TOTAL FEED COSTS	\$23.16
RETURNS ABOVE FEED COST PER EWE	\$10.82
RETURNS FOR \$100 OF FEED	\$155
Feeds per ewe, lbs.:	
Concentrates	243
Hay	1061
Silage	171
Price received per cwt. of lambs sold	\$31.49
Price received per pound of wool sold	\$.62
Pounds of wool per sheep sheared	9.3
Percent lamb crop*	120
Percent death loss*	5.6
Pounds of sheep produced	3929
Number of ewes	36

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

Table 22. Feed Costs and Returns from Chickens, 1971

Item	Average of 6 farms
Value of produce per hen:	
Eggs sold and used in house	\$ 3.90
Net increase in value of chickens	<u>-1.44</u>
TOTAL VALUE PRODUCED	\$ 2.46
TOTAL FEED COST PER HEN	\$ 3.00
RETURNS ABOVE FEED COST PER HEN	\$ -.54
RETURNS FOR \$100 OF FEED	\$85
Miscellaneous costs per hen	\$.12
Feed per hen, lbs.:	
Grain	65
Commercial feeds	<u>25</u>
Total concentrates	90
Price received per dozen eggs sold	\$.25
Eggs laid per hen	197
Feed costs per dozen eggs produced	\$.18
Average number of hens on farm during year	601
Percent death loss of hens	12.0
Number of chicks bought	233
Number of hens bought	503

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

Table 23. Summary by Years

Item	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1967	1968	1969	1970	1971
Number of farms	177	169	162	165	158	134	130	132	111	113	113
Acres in farm	227	223	226	235	256	284	280	294	304	307	324
Crop acres in farm	148	148	155	162	178	204	207	214	218	225	276
Farm inventory	\$25912	\$31402	\$42663	\$49342	\$60988	\$84088	\$82474	\$92339	\$102858	\$107724	\$120511
FARM EXPENSES											
Cattle bought	\$ 441	\$ 485	\$ 902	\$ 1148	\$ 1450	\$ 1189	\$ 1088	\$ 1403	\$ 1442	\$ 1429	\$ 2772
Hogs bought	154	194	202	258	386	504	526	701	535	616	534
Sheep bought	64	64	35	143	88	7	18	3	7	7	10
Poultry bought	142	176	154	124	154	110	189	17	54	73	50
Horses bought	32	14	6	6	2	1	1	-	3	-	1
Miscellaneous livestock expense	124	228	359	530	731	947	943	1016	1114	1347	1468
Commercial fertilizers bought	-	-	-	877	1085	1978	2388	2179	2066	2250	2686
Miscellaneous crop expense	301*	701*	1010*	651	926	1878	1764	2070	2511	2593	2966
Feed bought	1273	1954	2241	2747	3735	4279	4266	4125	4236	5001	4539
Custom work hired	165	401	552	745	857	1295	1354	1429	1649	1744	1868
Pow,mach & equip (new & upkp)	1253	2687	3609	4261	4764	7133	7513	7660	8451	9633	10406
Buildings (new)	331	778	983	982	1229	1930	2989	2035	1896	2948	2801
Buildings (upkeep)	188	323	368	320	344	436	424	464	483	573	621
Hired labor	585	849	857	878	922	1123	1075	1172	1290	1730	1838
Taxes	271	392	633	861	1301	1589	1740	1368	1713	1921	2384
General farm expense	84	150	239	316	409	555	525	586	686	769	786
Total farm purchases	\$ 5408	\$ 9396	\$12150	\$14847	\$18383	\$24954	\$26803	\$26228	\$28136	\$32634	\$35730
Decrease in farm capital	-	-	-	-	-	-	-	-	-	-	-
Board to hired labor	158	174	166	134	101	64	56	56	52	55	64
Interest on farm capital	1296	1570	2133	2467	3049	4482	4536	5079	5657	6463	7231
Unpaid family labor	326	511	496	540	629	815	799	812	790	1171	1405
Total farm expense	\$ 7188	\$11651	\$14945	\$17988	\$22162	\$30315	\$32194	\$32175	\$34635	\$40323	\$44430

* Includes fertilizer.

Table 23. Summary by Years (continued)

Item	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1967	1968	1969	1970	1971
FARM RECEIPTS											
Cattle	\$ 1335	\$ 2022	\$ 2981	\$ 3532	\$ 4749	\$ 5394	\$ 5403	\$ 5522	\$ 6482	\$ 6706	\$ 8507
Dairy products	2138	4080	4702	6032	8105	11631	11847	12492	13777	16686	17478
Hogs	2517	3598	4253	4653	5961	7973	7658	8166	9114	9069	6932
Sheep and wool	186	232	171	272	222	95	98	108	81	82	96
Poultry	629	672	354	212	88	82	61	17	18	19	14
Eggs	751	1319	1297	1075	1015	732	828	353	260	225	130
Horses	34	20	14	8	4	1	1	-	-	-	-
Corn	121	335	766	1926	1594	2467	2681	2492	3587	4844	4822
Soybeans*	-	-	-	-	-	1689	2309	2069	2406	2762	2936
Small grain	278	659	495	481	624	492	608	494	541	421	356
Other crops*	455	819	853	1334	2181	2582	1483	2592	3144	2208	2600
Income from labor off the farm	141	178	182	269	239	432	411	542	503	399	346
Miscellaneous farm income	536	528	684	729	882	1401	1463	1760	1748	1893	1530
Total farm sales	\$ 9121	\$14462	\$16752	\$20523	\$25664	\$34971	\$34851	\$36607	\$41661	\$45314	\$45747
Increase in farm capital	921	1411	1905	941	601	3516	2501	3582	2885	3814	5698
Family living from the farm	566	715	620	304	307	321	318	302	373	373	341
Total farm receipts	\$10608	\$16588	\$19277	\$21768	\$26572	\$38808	\$37670	\$40491	\$44919	\$49501	\$51786
Total farm expenses	7188	11651	14945	17988	22162	30515	32194	32175	34635	40323	44430
Labor earnings	\$ 3420	\$ 4937	\$ 4332	\$ 3780	\$ 4410	\$ 8293	\$ 5476	\$ 8316	\$10284	\$ 9178	\$ 7356
MISCELLANEOUS ITEMS											
Yield per acre:											
Corn (bu.)	55.7	47.6	59.8	73.1	72.4	86.8	83.8	88.7	98.3	96.7	96.2
Barley (bu.)	24.8	30.8	29.1	41.4	44.9	51.4	58.3	52.7	47.1	48.4	38.6
Oats (bu.)	44.2	48.2	32.8	58.3	58.3	62.4	59.7	62.7	58.4	55.6	61.4
Alfalfa (tons)	2.4	2.3	2.7	2.9	3.0	3.2	3.3	3.3	3.4	3.6	3.6
Soybeans (bu.)	13.4	16.4	19.6	24.8	23.6	24.4	23.1	26.8	25.1	29.5	25.7
% till land in high ret crops	43.3	50.9	62.8	62.7	60.1	60.5	61.6	61.2	62.2	63.6	66.1
An. units of lvstk. per 100 A.	24.5	22.8	28.9	33.7	36.4	34.3	34.3	32.7	32.5	34.3	32.9
Number of work units	670	601	535	486	548	505	457	466	466	431	443
Work units per worker	305	300	284	274	318	305	286	274	274	254	261
Expense per work unit	\$2.35	\$4.69	\$8.18	\$10.81	\$11.61	\$17.99	\$18.77	\$20.81	\$23.67	\$27.86	\$29.72
Number of milk cows	17.6	17.0	17.7	19.8	22.2	24.2	24.5	23.9	25.0	26.7	27.2

* "Other crops" include soybeans 1935 through 1965.

Table 23. Summary by Years (concluded)

Item	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1967	1968	1969	1970	1971
MISCELLANEOUS ITEMS (cont.)											
Number of litters of pigs	14.4	11.7	13.5	17.3	19.4	19.7	20.3	21.4	18.9	22.0	18.4
Pounds of hogs produced	21586	18505	17579	28272	36619	36519	36108	41717	37002	36039	35542
Pounds of feeder cattle prod.	1534	813	2118	3529	5573	4308	3899	4430	4789	5784	7013
Number of head of ewes	10	7	7	5	4	3	4	3	2	2	2
Number of hens	222	235	219	209	197	138	168	72	43	47	32
Pounds of BF per dairy cow	252	278	308	342	375	417	416	426	425	457	453
Pigs weaned per litter	6.2	6.5	6.7	6.9	7.1	7.3	7.1	7.4	7.2	7.3	7.2
Number of eggs laid per hen	145	177	194	203	205	201	215	218	187	187	197
PRICE RECEIVED PER:											
Cwt. of milk	*	*	*	*	\$3.48	\$4.31	\$4.39	\$4.59	\$4.84	\$5.09	\$5.27
Cwt. of hogs sold	\$10.93	\$19.36	\$19.54	\$15.99	15.55	20.89	19.03	18.84	23.20	21.93	18.02
Cwt. of feeder cattle sold	11.55	20.56	26.22	21.19	22.61	24.02	23.60	24.51	27.53	27.44	28.57
Pound of wool sold	.39	.43	.58	.50	.62	.56	.48	.59	.49	.45	.62
Dozen of eggs sold	.27	.39	.37	.31	.28	.28	.24	.25	.34	.29	.25
RETURN ABOVE FEED COST PER:											
Dairy cow	\$81.33	\$161.27	\$156.86	\$162.86	\$183.05	\$266.74	\$275.08	\$304.72	\$324.18	\$373.65	\$383.61
Cwt. of hogs produced	3.93	6.09	6.47	4.62	4.57	8.86	5.70	6.21	12.39	5.17	6.05
Ewe	6.97	11.16	9.47	6.18	5.40	7.52	4.12	8.17	7.84	11.29	10.82
Hen	1.82	2.11	1.60	1.39	1.27	.84	.23	.83	1.41	.59	-.54
Cwt. of feeder cattle prod.	2.98	6.40	7.37	4.76	1.78	5.08	1.61	4.45	11.25	3.78	9.62
FEED COST PER:											
Dairy cow	\$63.13	\$123.22	\$142.59	\$147.05	\$169.62	\$215.79	\$212.34	\$221.87	\$227.94	\$246.53	\$253.73
Cwt. of hogs produced	7.52	13.23	12.95	10.65	10.65	11.90	11.70	11.54	12.19	12.06	12.60
Ewe	7.92	8.07	10.73	11.17	13.46	19.51	18.81	23.29	23.90	23.69	23.16
Hen	2.38	4.39	4.76	3.78	3.28	3.31	3.37	3.05	3.11	2.97	3.00
Cwt. of feeder cattle prod.	11.80	23.08	19.46	18.83	19.10	21.60	21.10	21.17	22.16	22.08	22.08
PRICE OF FEED:											
Corn (per bu.)	\$.71	\$ 1.29	\$ 1.31	\$ 1.11	\$.99	\$ 1.10	\$ 1.12	\$ 1.02	\$ 1.05	\$ 1.15	\$ 1.17
Barley (per bu.)	.59	1.31	1.16	.92	.91	.97	1.04	.96	.85	.85	.90
Oats (per bu.)	.46	.75	.74	.59	.61	.62	.64	.62	.56	.60	.62
Oilmeal (per cwt.)	2.30	3.84	4.19	3.73	4.36	4.99	5.00	5.10	5.00	5.00	5.00
Alfalfa (per ton)	9.90	18.40	18.30	18.20	19.40	20.80	20.00	20.00	20.00	20.00	20.00

* Information not available.

Footnote for pages 23, 24, 25.

The charges for unpaid family labor and board for hired labor were changed from year to year. The rates for the period 1940 to 1971 are as follows:

Year	Unpaid family labor	Charge for 2nd operator	Board for hired labor	Year	Unpaid family labor	Charge for 2nd operator	Board for hired labor
1940	\$ 45	\$ 45	\$ 18	1947-55	\$125	\$125	\$ 36
1941	50	50	20	1956-60	135	135	38
1942	60	60	25	1961-64	150	200	40
1943	75	75	25	1965	160	275	45
1944	85	85	25	1966-69	160	300	45
1945	90	90	25	1970	250	500	60
1946	100	100	30	1971	300	600	60

Several changes were made in the 1940 records. The value of the house, which had previously been omitted from the farm business, was included and a rental charge equal to 10 percent of the average value of the house was included with the farm perquisites. The standards used in the calculation of work units were changed in accordance with the new information made available. This latter change also affected the work units per worker and the factor of expenses per work unit. The acres in protected woodlots, roads, waste, and farmstead were omitted from the acreage used in the calculation of amount of livestock per 100 acres. Several new livestock statements were added. Statements for beef breeding cattle, feeder cattle, and feeder sheep were also included.

The crop ratings used in calculating the percentage of the tillable land in high return crops were changed considerably in 1944 and 1957 and the animal unit equivalents were changed in 1951.

The standards used in the calculation of work units were changed in 1953, 1967, and 1970.

In calculating labor earnings, interest on farm capital was charged at the rate of 5 percent until 1967, 5.5 percent for 1968 and 1969, and 6 percent in 1970-71.

These adjustments should be considered in comparing 1971 with previous years.