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1972
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

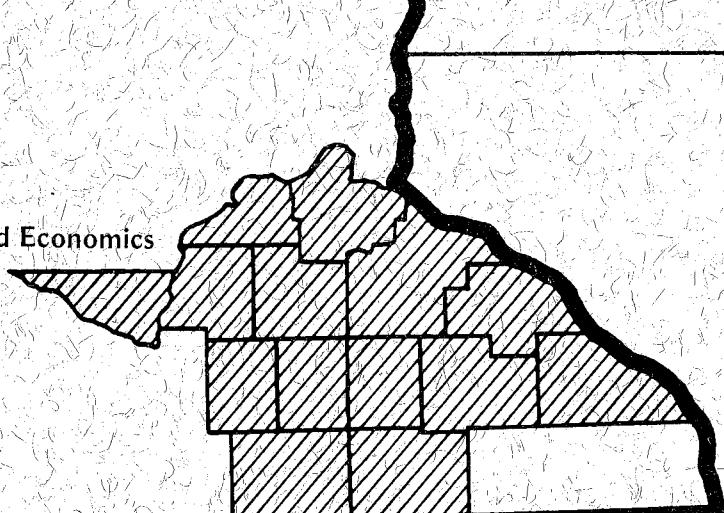
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Department of Agricultural and Applied Economics

Institute of Agriculture

St. Paul, Minnesota 55101

May 1973



1972 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, 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 Barbara Miller, Dorothy Spreck and Eileen Miley for their assistance in the preparation of this report.

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, 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 1972.

County	No. of records	Association Officers	County Agricultural Extension Agent
Dakota	7	Walter Klaus, Director	Warren N. Sifferath
Dodge	11	Glen Johnson, Director	David H. Hanson
Freeborn	16	Duane Steele, Director	Eldon H. Senske
Goodhue	26	Dale Hayward, Director	Richard C. Walter
Le Sueur	9	Donald Meyer, Vice-President	Robert Leary
Mower	3	R. L. Zimmerman, Director	Harlan L. Johnsrud
Nicollet	6	Tom Hanson, Director	Henry C. Bollum
Olmsted	14	Franklin Till, Director	Donald Untiedt
Rice	6	John Holmes, Director	Warren Liebenstein
Scott	11	Arnie Schoenbauer, Sec.-Treas.	David Hart
		John Woestehoff, Director	
Steele	11	Glen Schuelke, President	J. R. Gute
Wabasha	8	Kenneth Steffen, Director	Matthias Metz
Waseca	2		Roger Wilkowske
Winona	10	Norman Luehmann, Director	Harry B. Burcalow
Total	140		

The data for 114 farms are shown in the tables on succeeding pages. Twenty-six 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, 1972*

Item	Average of 114 farms	
	Jan. 1	Dec. 31
Size of farm (acres)		338
Size of business (work units)**		446
Dairy cows	\$ 6698	\$ 7304
Other dairy cattle	4717	5349
Beef cattle (incl. feeders)	3576	3819
Hogs	3848	5072
Sheep (incl. feeders)	72	76
Poultry (incl. turkeys)	32	8
Productive livestock total	\$18943	\$21628
Horses	\$ 6	\$ 7
Crop, seed and feed	\$16150	\$19672
Auto and truck (farm share)	\$ 2017	\$ 2039
Tractors and crop machinery	14127	16131
Livestock equipment	3438	3622
Machinery and equipment total	\$19582	\$21792
Land***	\$51844	\$51844
Buildings, fences, etc.***	25759	27450
Total farm capital managed	\$132284	\$142393

Item	23 most profitable		23 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	456		280	
Size of business (work units)	647		298	
Dairy cows	\$ 8152	\$ 8913	\$ 4432	\$ 4413
Other dairy cattle	5376	6525	3319	3544
Beef cattle (incl. feeders)	4283	4952	2302	2975
Hogs	13044	17442	886	1008
Sheep (incl. feeders)	42	51	174	168
Poultry (incl. turkeys)	-	-	33	31
Productive livestock total	\$30897	\$37883	\$11146	\$12139
Horses	\$ -	\$ -	\$ 9	\$ 9
Crop, seed and feed	\$26265	\$34527	\$11540	\$11539
Auto and truck (farm share)	\$ 2972	\$ 2709	\$ 1426	\$ 1510
Tractors and crop machinery	17043	20700	11939	12652
Livestock equipment	4496	5430	1978	1859
Machinery and equipment total	\$24511	\$28839	\$15343	\$16021
Land	\$75864	\$75864	\$35622	\$35622
Buildings, fences, etc.	34704	41948	16981	16702
Total farm capital managed	\$192241	\$219061	\$90641	\$92032

*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), 1972

Item	Average of 114 farms	23 most profitable farms	23 least profitable farms
FARM RECEIPTS			
Dairy cattle sold	\$ 4694	\$ 5103	\$ 3179
Dairy products sold	17262	20556	9816
Beef cattle sold (incl. feeders)	5319	7054	2778
Hogs sold	12515	39849	2689
Sheep and wool sold	111	38	239
Horses sold	2	-	-
Poultry sold (incl. turkeys)	8	-	4
Eggs sold	90	-	75
Corn sold	5255	4844	5948
Soybeans sold	4464	8060	2535
Small grain sold	259	137	333
Other crops sold	4023	5046	3177
Machinery & equipment sold & gas tax refund	348	442	283
Income from work off the farm	864	728	882
Miscellaneous farm income	1128	1132	540
Total farm sales	\$56342	\$92989	\$32478
Increase in farm capital	10109	26820	1392
Family living from the farm	380	511	323
Total farm receipts	\$66831	\$120320	\$34193
FARM EXPENSES			
Dairy cattle bought	\$ 363	\$ 282	\$ 43
Beef cattle bought (incl. feeders)	2536	3692	1517
Hogs bought	751	607	649
Sheep bought	11	12	10
Horses bought	-	-	-
Poultry bought (incl. turkeys)	9	-	37
Miscellaneous livestock expense	1662	2570	1121
Feed bought	5975	12666	2169
Fertilizers bought	2940	4652	2088
Other crop expenses	3341	5232	2361
Custom work hired	1908	2272	1157
Gas, oil and grease bought (farm share)	1401	1883	1173
Repair of truck and auto (farm share)	583	682	524
Repair and upkeep of farm real estate	684	964	392
Repair and upkeep of tractors & crop mach.	1660	2395	1249
Repair and upkeep of livestock equipment	440	766	222
Wages of hired labor	1895	3078	1080
Electricity expense (farm share)	610	845	448
Real estate taxes	2129	3131	1580
Telephone and general farm expense	901	1135	753
Total cash operating expenses	\$29799	\$46864	\$18573
Trucks and autos bought (farm share)	594	467	576
Crop and power machinery bought	5840	9402	3361
Livestock equipment bought	954	2296	282
New real estate and improvements	3909	10927	1028
Total farm purchases	\$41096	\$69956	\$23820
Decrease in farm capital	-	-	-
Interest on farm capital at 6%	8240	12339	5480
Unpaid family labor	1532	3020	984
Board furnished hired labor	45	69	87
Total farm expenses	\$50913	\$85384	\$30371
Labor earnings	\$15918	\$34936	\$ 3822
Net cash income	\$15246	\$23033	\$ 8658

Table 3. Summary of Farm Earnings (Enterprise Statement), 1972*

Item	Average of 114 farms	23 most profitable farms	23 least profitable farms
<u>RETURNS AND NET INCREASES</u>			
Dairy cows	\$17795	\$21243	\$10162
Other dairy cattle	5599	6678	3302
Beef breeding herd	244	32	308
Feeder cattle	2689	3882	1745
Hogs	13031	43746	2189
Sheep - farm flock	105	36	225
Sheep - feeders	-	-	-
Chickens and turkeys	70	-	43
All productive livestock	\$39533	\$75617	\$17974
Value of feed fed to livestock	17262	30769	9029
Return over feed from livestock	\$22271	\$44848	\$ 8945
Value added by crops	22390	34455	14267
Income from labor off the farm	484	335	311
Miscellaneous farm income	1128	1132	540
Total returns and net increases	\$46273	\$80770	\$24063
<u>EXPENSES AND NET DECREASES</u>			
Horses	\$ -1	\$ -	\$ -
Truck	654	861	635
Auto (farm share)	752	919	675
Electricity (farm share)	610	845	448
Hired power	1270	1519	751
Tractors and crop machinery	5932	8856	3925
Livestock equipment	1201	2128	619
Buildings, fencing, and tiling	2895	4611	1698
Miscellaneous livestock expense	1662	2570	1121
Labor	4110	6920	2556
Real estate taxes	2129	3131	1580
General farm expense and telephone	901	1135	753
Interest on farm capital at 6%**	8240	12339	5480
Total expenses and net decreases	\$30355	\$45834	\$20241
Labor earnings	\$15918	\$34936	\$ 3822

* 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.

** Interest calculated on the "book" value of capital managed. If current market prices were applied to real estate, about \$3000 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, 1972 (Operator's Share)

Item	18 Owners	
	Jan. 1	Dec. 31
Total acres in farm	292	
Acres owned	292	
Acres rented	-	
Total farm capital - operator's	\$ 98178	\$ 107212
Stocks and bonds	\$ 21045	\$ 24178
Life insurance cash value	3740	3695
Notes and accounts receivable	3996	3897
Shares in cooperative organizations	1673	1776
Outside real estate	12450	14321
Cash on hand and in bank	4699	6028
Household furnishings and clothing	3980	4246
Personal share of auto and truck	796	1216
Farm dwelling	4550	5036
Total non-farm assets - operator's	\$ 56929	\$ 64393
Total assets	\$ 155107	\$ 171605
Mortgages on farm operated	\$ 26966	\$ 26918
Mortgages on other real estate	7661	8708
Chattel mortgages	15571	14469
Notes payable	3434	5647
Accounts payable	3504	3588
Total liabilities - operator's	\$ 57136	\$ 59330
Farmer's net worth	\$ 97971	\$ 112275
Change in net worth		\$ 14304

Item	28 Part-owners	
	Jan. 1	Dec. 31
Total acres in farm	395	
Acres owned	249	
Acres rented	146	
Total farm capital - operator's	\$ 115124	\$ 127757
Stocks and bonds	\$ 5132	\$ 6144
Life insurance cash value	4150	4479
Notes and accounts receivable	2376	1961
Shares in cooperative organizations	2592	3022
Outside real estate	780	1901
Cash on hand and in bank	7111	9035
Household furnishings and clothing	3296	3281
Personal share of auto and truck	743	744
Farm dwelling	9008	8891
Total non-farm assets - operator's	\$ 35188	\$ 39458
Total assets	\$ 150312	\$ 167215
Mortgages on farm operated	29647	30510
Mortgages on other real estate	-	982
Chattel mortgages	20099	22252
Notes payable	5837	7695
Accounts payable	1795	2249
Total liabilities - operator's	\$ 57378	\$ 63688
Farmer's net worth	\$ 92934	\$ 103527
Change in net worth		\$ 10593

Table 5. Summary of Farm Earnings by Tenure, 1972 (Operator's Share)

Item	51 owners	46 Part- owners	8 Renters
FARM RECEIPTS			
Dairy cattle sold	\$ 4085	\$ 5300	\$ 4701
Dairy products sold	15170	19471	17594
Beef cattle sold (incl. feeders)	3204	6971	-
Hogs sold	11286	9821	8105
Sheep and wool sold	164	93	-
Horses sold	-	3	-
Poultry sold (incl. turkeys)	-	17	-
Eggs sold	103	72	-
Corn sold	4602	5490	2960
Soybeans sold	2813	4562	4627
Small grain sold	218	190	175
Other crops sold	3379	4409	3648
Machinery and equipment sold & gas tax refund	318	379	222
Income from work off the farm	975	830	117
Miscellaneous farm income	<u>1272</u>	<u>1068</u>	<u>610</u>
(1) Total farm sales	<u>\$47589</u>	<u>\$58676</u>	<u>\$42759</u>
(2) Increase in farm capital	<u>11170</u>	<u>13356</u>	<u>9465</u>
(3) Family living from the farm	<u>328</u>	<u>400</u>	<u>333</u>
(4) Total farm receipts (1)+(2)+(3)	<u>\$59087</u>	<u>\$72432</u>	<u>\$52557</u>
FARM EXPENSES			
Dairy cattle bought	\$ 387	\$ 238	\$ 231
Beef cattle bought (incl. feeders)	1733	2670	-
Hogs bought	783	849	62
Sheep bought	4	22	-
Horses bought	-	-	-
Poultry bought (incl. turkeys)	1	1	-
Miscellaneous livestock expense	1452	1616	1517
Feed bought	5634	5709	3406
Fertilizers bought	2155	3213	2918
Other crop expenses	2672	3754	2351
Custom work hired	1477	2426	1266
Gas, oil and grease bought (farm share)	1266	1410	1238
Repair and upkeep of power & crop machinery	2012	2337	2163
Repair and upkeep of real estate	710	719	402
Repair and upkeep of livestock equipment	437	380	289
Wages of hired labor	1493	2584	1228
Electricity expense (farm share)	526	626	565
Real estate taxes	1608	1544	-
Cash rent	27	2064	5944
General farm expense & telephone	828	962	667
Interest paid	<u>2595</u>	<u>3599</u>	<u>904</u>
Total cash operating expense	<u>\$27800</u>	<u>\$36723</u>	<u>\$25151</u>
Trucks and autos bought (farm share)	843	450	324
Crop and power machinery bought	4720	6595	3640
Livestock equipment bought	574	789	4078
Farm purchase and real estate improvements	<u>6735</u>	<u>6969</u>	<u>1493</u>
(5) Total farm purchases	<u>\$40672</u>	<u>\$51526</u>	<u>\$34686</u>
(6) Decrease in farm capital	-	-	-
(7) Interest on operator's farm capital	3318	3933	2540
(8) Unpaid family labor	540	597	862
(9) Board furnished hired labor	46	56	20
(10) Total farm expenses (5)+(6)+(7)+(8)+(9)	<u>\$44576</u>	<u>\$56112</u>	<u>\$38108</u>
(11) Labor earnings (4)-(10)	<u>\$14511</u>	<u>\$16320</u>	<u>\$14449</u>
(12) Return to capital & family labor (7)+(8)+(11)	<u>\$18369</u>	<u>\$20850</u>	<u>\$17851</u>

Table 6. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1972

Item	Average of 47 farms	9 high in return to cap. and fam. labor	9 low in return to cap. and fam. labor
Number of persons - family	4.6	4.2	4.1
Number of adult equivalent - family - others*	3.9 .2	3.9 .2	3.1 .3
EXPENSES			
Feed and meals bought	\$ 1760	\$ 1957	\$ 1266
Operating and supplies	474	528	447
Furnishings and equipment	437	430	362
Clothing and clothing materials	805	826	612
Personal care and spending	321	276	311
Education	479	388	256
Recreation	375	661	294
Gifts and special events	485	924	269
Medical and hospital expenses	992	811	780
Church and welfare	526	707	220
Personal share of auto expense	409	484	311
Upkeep on dwelling	129	293	64
Personal share of tel. & elec. expense	<u>216</u>	<u>220</u>	<u>204</u>
Total cash living expense	\$ 7408	\$ 8505	\$ 5396
Personal share of new auto	343	237	302
New dwelling	512	55	1195
Taxes**	685	2011	110
Life insurance	976	1479	725
Other savings and investments	<u>1674</u>	<u>7583</u>	<u>461</u>
Total household and personal cash expense	\$11598	\$19870	\$ 8189
Family living from the farm	<u>365</u>	<u>461</u>	<u>177</u>
Total cash expenses and perquisites	\$11963	\$20331	\$ 8366
RECEIPTS			
Return to capital and family labor	\$22286	\$45706	\$ 7234
Income from outside investments	1033	2626	722
Other personal income	785	92	1620

* Hired help or others boarded.

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

Table 7. Family Living from the Farm, 1972

Item	Average of 114 farms	Average of 114 farms
Number of adult equivalents - family	3.9	
- other*	.1	
Whole milk	915 qts.	\$108
Cream	16 pts.	6
Cattle	720 lbs.	218
Hogs	168 lbs.	43
Sheep	3 lbs.	1
Poultry	4 lbs.	2
Eggs	10 doz.	2
Total		\$380

* 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	_____	XXXXXXXX	\$ 7580
2	22	_____	XXXXXXXXXX	9636
3	31	_____	XXXXXXXXXXXX	13412
4	19	_____	XXXXXXXXXXXXXXXXXXXX	18584
5	21	_____	XXXXXXXXXXXXXXXXXXXXXX	22276
6 or 7	9	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	30566

The array in table 8 indicates that it will be worthwhile for each operator 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, 1972

Measures used in chart on page 11	Average of 114 farms	23 most profitable farms	23 least profitable farms
Labor earnings	\$15918	\$34936	\$ 3822
Crop yields*	100	105	90
Percent tillable land in high return crops**	64.8	69.3	65.0
Return for \$100 of feed to prod. livestock***	100	112	87
Productive livestock units per 100 acres****	33.1	48.6	22.8
Size of business - work units	446	647	298
Work units per worker	262	308	199
All power, machinery, equipment, building expense per work unit	\$31.75	\$31.23	\$35.32

Items related to some of the above measures:

Index of return for \$100 of feed from:

Dairy cattle (see pages 16 and 17)	100	111	87
Beef cattle - breeding herd (see page 19)	100	-	-
Beef cattle - feeders (see page 20)	100	149	-
Hogs (see page 18)	100	109	92
Sheep - farm flock (see page 21)	100	-	-
Chickens (see page 22)	100	-	-

Number of animal units	90.1	171.0	50.1
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Work units on crops	135	192	105
Work units on productive livestock	292	442	181
Other work units	19	13	12

Number of family workers	1.3	1.5	1.2
Number of hired workers	.4	.6	.3
Total number of workers	1.7	2.1	1.5

Power & crop machinery expense per work unit	\$22.60	\$21.10	\$26.44
Livestock equipment expense per work unit	2.46	3.19	1.89
Building & fencing expense per work unit	6.69	6.94	6.99

Number of crop acres per farm	242	343	187
Tractor & crop machinery expense per crop acre	\$25.66	\$29.91	\$21.80

Rate earned on capital managed (\$8000 is deducted for operator's labor)	11.8%	19.1%	1.4%
--	-------	-------	------

* 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 114 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
\$32000	132	81.0	140	65.0	765	420	\$16
30000	128	79.0	135	61.0	725	400	18
28000	124	77.0	130	57.0	685	380	20
26000	120	75.0	125	53.0	645	360	22
24000	116	73.0	120	49.0	605	340	24
22000	112	71.0	115	45.0	565	320	26
20000	108	69.0	110	41.0	525	300	28
18000	104	67.0	105	37.0	485	280	30
.....
16000	100	65.0	100	33.0	445	260	32
.....
14000	96	63.0	95	29.0	405	240	34
12000	92	61.0	90	25.0	365	220	36
10000	88	59.0	85	21.0	325	200	38
8000	84	57.0	80	17.0	285	180	40
6000	80	55.0	75	13.0	245	160	42
4000	76	53.0	70	9.0	205	140	44
2000	72	51.0	65	5.0	165	120	46
0	68	49.0	60	1.0	125	100	48

Table 10. Distribution of Acres in Farm, 1972

Item	Crop ratings	Number growing this crop	Average of 114 farms	Ave. per farm raising each crop
Canning peas	B	14	4.1	33.6
Wheat	C	12	1.3	12.1
Oats for silage	C	10	2.3	26.3
Oats for grain	D	72	14.6	23.2
Barley	D	5	.9	20.7
Other small grain	D or C	1	.2	19.8
Total small grains and peas		91	23.4	29.3
Corn grain	A	113	110.6	111.5
Soybeans for grain	B	67	46.4	79.0
Sweet corn	B	14	8.3	67.8
Corn silage	B	70	10.4	17.0
Total cultivated crops		114	175.7	175.8
Alfalfa hay	B	91	39.9	50.0
Other legume hay	C	-	-	-
Annual hay	D	5	1.4	31.4
Total tillable land in hay		93	41.3	50.6
Alfalfa pasture	B	45	8.2	20.6
Other tillable pasture	D	7	.4	7.2
Total tillable land in pasture		48	8.6	20.4
Feed grain program (diverted acres)	B	97	37.5	44.1
Tillable land not cropped	D	6	.2	4.4
Total tillable land		114	286.7	286.7
Wild hay		11	1.1	11.4
Non-tillable pasture		61	17.5	32.6
Timber not pastured		45	10.9	27.6
Roads and waste			13.7	
Farmstead			8.3	
Total acres in farm			338.2	
Percent land tillable			84.8	
Percent tillable land in high return crops			64.8	

* 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, 1972

Item	Average of farms growing each crop
Canning peas, dollars	\$97.60
Wheat, bu.	33.1
Oats for silage, tons	6.1
Oats for grain, bu.	66.6
Barley, bu.	53.4
Corn grain, bu.	101.1
Soybeans, bu.	30.9
Sweet corn, tons	5.4
Corn silage, tons	18.1
Alfalfa hay, tons	3.6
Annual hay, tons	3.2
Feed grain program, dollars	\$68.79

Table 12. Average Price of Feeds, 1972

Item	Value	Item	Value
Ear corn, per bu.	\$1.08	Alfalfa hay, per ton	\$21.00
Oats, per bu.	.65	Timothy hay, per ton	11.60
Barley, per bu.	.92	Wild hay, per ton	10.00
Soybean meal, per cwt.	6.35	Corn silage, per ton	7.25
		Pasture, per month per cow	4.00

Table 13. Return Above Listed Costs per Acre of Crops, 1972

Item	Corn grain	Corn silage	Soy- beans
Number of farmers reporting	104	65	61
Yield per acre	101.1 bu.	18.1 tons	30.9 bu.
Price per unit	\$ 1.20	\$ 8.25	\$ 3.80
Total return	\$121.32	\$149.32	\$117.42
Fertilizer	\$ 17.90	\$ 17.26	\$ 2.16
Seeds, herbicides, etc.	<u>17.75</u>	<u>16.76</u>	<u>10.55</u>
Total listed costs	\$ 35.65	\$ 34.02	\$ 12.71
Return above listed costs	\$ 85.67	\$115.30	\$104.71
Item	Alfalfa hay	Oats	Wheat
Number of farmers reporting	80	58	7
Yield per acre	3.6 tons	66.6 bu.	33.1 bu.
Price per unit	\$ 24.00	\$.80	\$ 2.16
Total return	\$ 86.40	\$ 53.28	\$ 71.50
Fertilizer	\$ 4.57	\$ 3.30	\$ 2.70
Seeds, herbicides, etc.	<u>8.50</u>	<u>5.60</u>	<u>6.35</u>
Total listed costs	\$ 13.07	\$ 8.90	\$ 9.05
Return above listed costs	\$ 73.33	\$ 44.38	\$ 62.45

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, 1972

Item	Average of 74 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Pounds of milk per cow	12182	14781	8586
Percent butterfat in milk	3.8	3.8	4.0
Pounds of butterfat per cow	461	559	334
Price received per pound of BF sold	\$1.43	\$1.44	\$1.38
Price received per cwt. milk sold	5.47	5.45	5.45
Value of produce per cow:			
Dairy product sales	\$652.32	\$795.16	\$448.21
Dairy produce used in home	4.80	4.15	5.18
Milk fed to livestock	6.44	6.40	7.79
Net increase in value of cows	<u>11.71</u>	<u>3.62</u>	<u>14.62</u>
TOTAL VALUE PRODUCED	\$675.27	\$809.33	\$475.80
Feed cost per cow:			
Concentrates	\$149.88	\$168.98	\$115.54
Roughages	100.16	97.09	90.97
Pasture	<u>7.55</u>	<u>9.56</u>	<u>12.45</u>
TOTAL FEED COST	\$257.59	\$275.63	\$218.96
RETURN ABOVE FEED COST PER COW	\$417.68	\$533.70	\$256.84
RETURNS FOR \$100 OF FEED	\$270	\$303	\$233
Feeds per cow, lbs.:			
Corn	4847	5544	4910
Small grain	496	526	498
Commercial feeds	625	692	402
Total concentrates	5968	6762	5810
Total hay	6953	7264	7176
Silage	7547	5876	4344
Feed cost per pound of butterfat	\$.57	\$.49	\$.66
Feed cost per cwt. of milk	2.17	1.86	2.60
Number of cows*	39.5	43.8	27.0

* 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, 1972

Item	Average of 74 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
NET INCREASE IN VALUE OF OTHER DAIRY CATTLE	\$164.78	\$190.20	\$134.10
TOTAL FEED COST PER HEAD	\$ 82.59	\$ 84.05	\$ 78.49
RETURNS ABOVE FEED COST PER HEAD	\$ 82.19	\$106.15	\$ 55.61
RETURNS FOR \$100 OF FEED	\$223	\$241	\$212
Feed per head, lbs.:			
Concentrates	1438	1536	1451
Hay	2559	2261	3031
Silage	2402	1944	1117
Whole milk	89	91	108
Number of head of other dairy cattle	53.1	58.9	39.7

Table 17. Feed Costs and Returns from All Dairy Cattle, 1972

Item	Average of 74 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Value of produce per cow:			
Dairy products	\$657.12	\$799.30	\$453.39
Net increase in value of dairy cattle	236.37	267.94	200.28
TOTAL VALUE PRODUCED	\$893.49	\$1067.24	\$653.67
TOTAL FEED COSTS PER COW	\$361.74	\$386.11	\$321.59
RETURNS ABOVE FEED COST PER COW	\$531.75	\$681.13	\$332.08
RETURNS FOR \$100 OF FEED	\$253	\$283	\$218
Feed per cow, lbs.:			
Concentrates	7959	9006	7057
Hay	10299	10372	11306
Silage	10678	8325	6013
Miscellaneous costs per cow	\$45.64	\$59.03	\$29.70

Table 18. Feed Costs and Returns from Hogs, 1972

Item	Average of 51 farms	43 farms with breeding stock			8 farms with purchased feeder pigs
	Average of 43 farms	9 farms highest in returns above feed	9 farms lowest in returns above feed		
Pounds of hogs produced	105054	114862	123726	99224	52335
Net increase in value per cwt. produced	\$27.05	\$28.13	\$31.14	\$26.52	\$21.26
Feed cost per cwt. produced	<u>12.88</u>	<u>12.90</u>	<u>11.76</u>	<u>16.02</u>	<u>12.80</u>
Return above feed cost per cwt. produced	\$14.17	\$15.23	\$19.38	\$10.50	\$ 8.46
RETURNS FOR \$100 OF FEED	\$218	\$225	\$269	\$173	\$177
Price received per cwt. sold	\$26.13	\$26.06	\$26.15	\$26.07	\$26.51
Weight per hog sold	239	243	242	245	219
Miscellaneous costs per cwt. produced	\$.52	\$.53	\$.71	\$.51	\$.41
Feed per cwt. hogs produced, lbs.:					
Corn	361	358	312	463	377
Small grain	20	22	32	25	12
Commercial feeds*	<u>70</u>	<u>72</u>	<u>70</u>	<u>79</u>	<u>60</u>
Total concentrates	<u>451</u>	<u>452</u>	<u>414</u>	<u>567</u>	<u>449</u>
Total number of litters raised	54	64	70	50	-
Number of pigs born per litter	9.1	9.1	9.7	8.8	-
Number of pigs weaned per litter	7.2	7.2	7.6	7.0	-
Number of feeder pigs purchased	55	13	-	56	285
Total weight of feeders purchased	2135	531	-	2379	10753
Price paid per feeder pig	\$21.98	\$21.45	-	\$21.75	\$22.37

* 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, 1972

Item	Average of 6 farms
TOTAL VALUE PRODUCED PER COW	\$151.79
Feed cost per cow:	
Concentrates	\$ 23.35
Roughages	58.74
Pasture	<u>39.01</u>
TOTAL FEED COST	\$121.10
RETURNS ABOVE FEED COST PER COW	\$ 30.69
RETURNS FOR \$100 OF FEED	\$135
Miscellaneous costs per cow	\$ 2.22
Feed per cow, lbs.:	
Concentrates	1036
Hay	4406
Silage	3466
Pounds of beef produced	15509
Number of cows	28.3
Number of other beef cattle	24.7

Table 20. Feed Costs and Returns from Feeder Cattle, 1972

Item	Average of 15 farms
Pounds of beef produced	49053
NET INCREASE IN VALUE OF FEEDERS PER CWT. OF BEEF PRODUCED	\$39.92
Feed cost per cwt. beef produced:	
Concentrates	\$14.23
Roughages	6.89
Pasture	.98
TOTAL FEED COST	\$22.10
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$17.82
RETURNS FOR \$100 OF FEED	\$ 218
Miscellaneous costs per cwt. of beef produced	\$.87
Feed per cwt. beef produced, lbs.:	
Corn	586
Small grain	5
Commercial feeds	47
Total concentrates	638
Total hay	376
Silage	811
Price paid per cwt. of beef bought	\$39.68
Price received per cwt. of feeder cattle sold	33.48
Number of animal units	91.9

Table 21. Feed Costs and Returns from a Farm Flock of Sheep, 1972

Item	Average of 8 farms
Value of produce per ewe:	
Wool	\$ 9.21
Net increase in value of sheep	32.12
TOTAL VALUE PRODUCED	\$41.33
Feed cost per ewe:	
Concentrates	\$ 9.98
Roughages	10.31
Pasture	4.29
TOTAL FEED COSTS	\$24.58
RETURNS ABOVE FEED COST PER EWE	\$16.75
RETURNS FOR \$100 OF FEED	\$187
Miscellaneous costs per ewe	\$ 4.73
Feeds per ewe, lbs.:	
Concentrates	388
Hay	937
Silage	132
Price received per cwt. of lambs sold	\$32.54
Price received per pound of wool sold	.86
Pounds of wool per sheep sheared	10.2
Percent lamb crop*	111
Percent death loss*	6.6
Pounds of sheep produced	3509
Number of ewes	31

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

Table 22. Feed Costs and Returns from Chickens, 1972

Item	Average of 4 farms
Value of produce per hen:	
Eggs sold and used in house	\$4.05
Net increase in value of chickens	<u>-1.13</u>
TOTAL VALUE PRODUCED	\$2.92
TOTAL FEED COST PER HEN	\$2.78
RETURNS ABOVE FEED COST PER HEN	\$.14
RETURNS FOR \$100 OF FEED	\$106
Miscellaneous costs per hen	\$.08
Feed per hen, lbs.:	
Grain	71
Commercial feeds	22
Total concentrates	<u>93</u>
Price received per dozen eggs sold	\$.25
Eggs laid per hen	198
Feed costs per dozen eggs produced	\$.17
Average number of hens on farm during year	654
Percent death loss of hens	10.6
Number of chicks bought	156
Number of hens bought	119

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

Table 23. Summary by Years

Item	Average	Average	Average	Average	Average	1968	1969	1970	1971	1972
	1945-49	1950-54	1955-59	1960-64	1965-69					
Number of farms	169	162	165	158	134	132	111	113	113	114
Acres in farm	223	226	235	256	284	294	304	307	324	338
Crop acres in farm	148	155	162	178	204	214	218	225	244	242
Total farm capital managed	\$31402	\$42663	\$49342	\$60988	\$84088	\$92339	\$102858	\$107724	\$120511	\$137338
FARM EXPENSES										
Cattle bought	\$ 485	\$ 902	\$ 1148	\$ 1450	\$ 1189	\$ 1403	\$ 1442	\$ 1429	\$ 2772	\$ 2899
Hogs bought	194	202	258	386	504	701	535	616	534	751
Sheep bought	64	35	143	88	7	3	7	7	10	11
Poultry bought	176	154	124	154	110	17	54	73	50	9
Horses bought	14	6	6	2	1	-	3	-	1	-
Miscellaneous livestock expense	228	359	530	731	947	1016	1114	1347	1468	1662
Commercial fertilizers bought	-	-	877	1085	1978	2179	2066	2250	2686	2940
Miscellaneous crop expenses	701*	1010*	651	926	1878	2070	2511	2593	2966	3341
Feed bought	1954	2241	2747	3735	4279	4125	4236	5001	4539	5975
Custom work hired	401	552	745	857	1295	1429	1649	1744	1868	1908
Power, mach. & equip. (new & upkp)	2687	3609	4261	4764	7133	7660	8451	9633	10406	12082
Buildings (new)	778	983	982	1229	1930	2035	1896	2948	2801	3909
Buildings (upkeep)	323	368	320	344	436	464	483	573	621	684
Hired labor	849	857	878	922	1123	1172	1290	1730	1838	1895
Taxes	392	633	861	1301	1589	1368	1713	1921	2384	2129
General farm expense	150	239	316	409	555	586	686	769	786	901
Total farm purchases	\$ 9396	\$12150	\$14847	\$18383	\$24954	\$26228	\$28136	\$32634	\$35730	\$41096
Decrease in farm capital	-	-	-	-	-	-	-	-	-	-
Board to hired labor	174	166	134	101	64	56	52	55	64	45
Interest on farm capital	1570	2133	2467	3049	4482	5079	5657	6463	7231	8240
Unpaid family labor	511	496	540	629	815	812	790	1171	1405	1532
Total farm expense	\$11651	\$14945	\$17988	\$22162	\$30315	\$32175	\$34635	\$40323	\$44430	\$50913

* Includes fertilizer.

Table 23. Summary by Years (continued)

Item	Average					1968	1969	1970	1971	1972
	1945-49	1950-54	1955-59	1960-64	1965-69					
FARM RECEIPTS										
Cattle sold	\$ 2022	\$ 2981	\$ 3532	\$ 4749	\$ 5394	\$ 5522	\$ 6482	\$ 6706	\$ 8507	\$ 10013
Dairy products sold	4080	4702	6032	8105	11631	12492	13777	16686	17478	17262
Hogs sold	3598	4253	4653	5961	7973	8166	9114	9069	6932	12516
Sheep and wool sold	232	171	272	222	95	108	81	82	96	111
Poultry sold	672	354	212	88	82	17	18	19	14	8
Eggs sold	1319	1297	1075	1015	732	353	260	225	130	90
Horses sold	20	14	8	4	1	-	-	-	-	1
Corn sold	335	766	1926	1594	2467	2492	3587	4844	4822	5255
Soybeans sold*	-	-	-	-	1689	2069	2406	2762	2936	4464
Small grain sold	659	495	481	624	492	494	541	421	356	259
Other crops sold*	819	853	1334	2181	2582	2592	3144	2208	2600	4023
Income from labor off the farm	178	182	269	239	432	542	503	399	346	484
Miscellaneous farm income	528	684	729	882	1401	1760	1748	1893	1530	1856
Total farm sales	\$14462	\$16752	\$20523	\$25664	\$34971	\$36607	\$41661	\$45314	\$45747	\$56342
Increase in farm capital	1411	1905	941	601	3516	3582	2885	3814	5698	10109
Family living from the farm	715	620	304	307	321	302	373	373	341	380
Total farm receipts	\$16588	\$19277	\$21768	\$26572	\$38808	\$40491	\$44919	\$49501	\$51786	\$66831
Total farm expenses	11651	14945	17988	22162	30515	32175	34635	40323	44430	50913
Labor earnings	\$ 4937	\$ 4332	\$ 3780	\$ 4410	\$ 8293	\$ 8316	\$ 10284	\$ 9178	\$ 7356	\$ 15918
MISCELLANEOUS ITEMS										
Yield per acre:										
Corn (bu.)	47.6	59.8	73.1	72.4	86.8	88.7	98.2	96.7	96.2	101.1
Barley (bu.)	30.8	29.1	41.4	44.9	51.4	52.7	47.1	48.4	38.6	53.4
Oats (bu.)	48.2	32.8	58.3	58.3	62.4	62.7	58.4	55.6	61.4	66.6
Alfalfa (tons)	2.3	2.7	2.9	3.0	3.2	3.3	3.4	3.6	3.6	3.6
Soybeans (bu.)	16.4	19.6	24.8	23.6	24.4	26.8	25.1	29.5	25.7	30.9
% till. land in high return crops	50.9	62.8	62.7	60.1	60.5	61.2	62.2	63.6	66.1	64.8
Animal units of 1vstk. per 100 A.	22.8	28.9	33.7	36.4	34.3	32.7	32.5	34.3	32.9	33.1
Number of work units	601	535	486	548	505	466	466	431	443	446
Work units per worker	300	284	274	318	305	274	274	254	261	262
Expense per work unit	\$4.69	\$8.18	\$10.81	\$11.61	\$17.99	\$20.81	\$23.67	\$27.86	\$29.72	\$31.75
Number of milk cows	17.0	17.7	19.8	22.2	24.2	23.9	25.0	26.7	27.2	25.7

* "Other crops" include soybeans 1935 through 1965.

Table 23. Summary by Years (concluded)

Item	Average					1968	1969	1970	1971	1972
	1945-49	1950-54	1955-59	1960-64	1965-69					
MISCELLANEOUS ITEMS (cont)										
Number of litters of pigs	11.7	13.5	17.3	19.4	19.7	21.4	18.9	22.0	18.4	24.3
Pounds of hogs produced	18505	17579	28272	36619	36519	41717	37002	36039	35542	47090
Pounds of feeder cattle prod.	813	2118	3529	5573	4308	4430	4789	5784	7013	7211
Number of head of ewes	7	7	5	4	3	3	2	2	2	2
Number of hens	235	219	209	197	138	72	43	47	32	23
Pounds of BF per dairy cow	278	308	342	375	417	426	425	457	453	461
Pigs weaned per litter	6.5	6.7	6.9	7.1	7.3	7.4	7.2	7.3	7.2	7.2
Number of eggs laid per hen	177	194	203	205	201	218	187	187	197	198
PRICE RECEIVED PER:										
Cwt. of milk	*	*	*	\$3.48	\$4.31	\$4.59	\$4.84	\$5.09	\$5.27	\$5.47
Cwt. of hogs sold	\$19.36	\$19.54	\$15.99	15.55	20.89	18.84	23.20	21.93	18.02	26.13
Cwt. of feeder cattle sold	20.56	26.22	21.19	22.61	24.02	24.51	27.53	27.44	28.57	33.48
Pound of wool sold	.43	.58	.50	.62	.56	.59	.49	.45	.62	.86
Dozen of eggs sold	.39	.37	.31	.28	.28	.25	.34	.29	.25	.25
RETURN ABOVE FEED COST PER:										
Dairy cow	\$161.27	\$156.86	\$162.86	\$183.05	\$266.74	\$304.72	\$324.18	\$373.65	\$383.61	\$417.68
Cwt. of hogs produced	6.09	6.47	4.62	4.57	8.86	6.21	12.39	5.17	6.05	14.17
Ewe	11.16	9.47	6.18	5.40	7.52	8.17	7.84	11.29	10.82	16.75
Hen	2.11	1.60	1.39	1.27	.84	.83	1.41	.59	-.54	.14
Cwt. of feeder cattle produced	6.40	7.37	4.76	1.78	5.08	4.45	11.25	3.78	9.62	17.82
FEED COST PER:										
Dairy cow	\$123.22	\$142.59	\$147.05	\$169.62	\$215.79	\$221.87	\$227.94	\$246.53	\$253.73	\$257.59
Cwt. of hogs produced	13.23	12.95	10.65	10.65	11.90	11.54	12.19	12.06	12.60	12.88
Ewe	8.07	10.73	11.17	13.46	19.51	23.29	23.90	23.69	23.16	24.58
Hen	4.39	4.76	3.78	3.28	3.31	3.05	3.11	2.97	3.00	2.78
Cwt. of feeder cattle produced	23.08	19.46	18.83	19.10	21.60	21.17	22.16	22.08	22.08	22.10
PRICE OF FEED:										
Corn (per bu.)	\$ 1.29	\$ 1.31	\$ 1.11	\$.99	\$ 1.10	\$ 1.02	\$ 1.05	\$ 1.15	\$ 1.17	\$ 1.08
Barley (per bu.)	1.31	1.16	.92	.91	.97	.96	.85	.85	.90	.92
Oats (per bu.)	.75	.74	.59	.61	.62	.62	.56	.60	.62	.65
Oilmeal (per cwt.)	3.84	4.19	3.73	4.36	4.99	5.10	5.00	5.00	5.00	6.35
Alfalfa (per ton)	18.40	18.30	18.20	19.40	20.80	20.00	20.00	20.00	20.00	21.00

* 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 1940-1972 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	1971-72	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 1970-72.

These adjustments should be considered in comparing 1972 with previous years.