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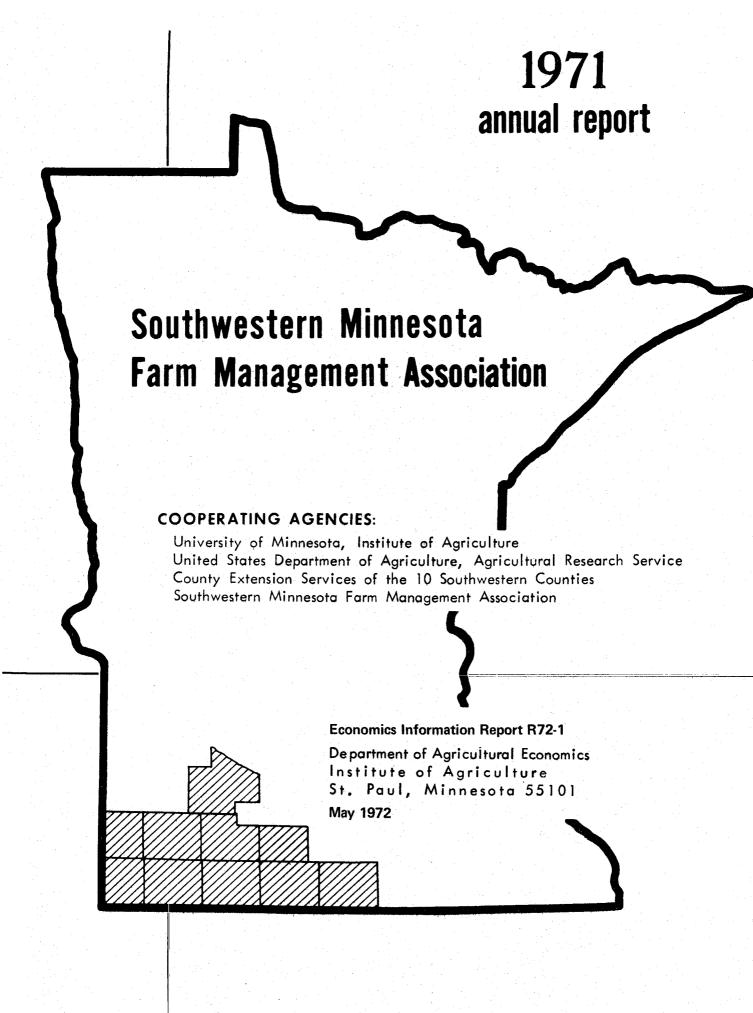
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1971 ANNUAL REPORT OF THE SOUTHWESTERN MINNESOTA FARM MANAGEMENT ASSOCIATION

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

TABLE OF CONTENTS

							rage
Introduction						•	1
Summary of Farm Inventories							3
Summary of Farm Earnings (Cash Statement)							
Summary of Farm Earnings (Enterprise Statement)							
Net Worth Statement							
Summary of Farm Earnings by Tenure							
Household and Personal Expenses							8
Family Living from the Farm							9
Cumulative Effect of Excelling in a Number of Managemen	t F	act	ors	•			9
Measures of Farm Organization and Management Efficiency							10
Thermometer Chart		•		•	•	•	11
Distribution of Acres in Farm		•	• •	•	•	•	12
Crop Yields per Acre		•	. ·	•	•	•	13
Average Price of Feeds					•	•	13
Return above Listed Costs per Acre of Crops		•	• • •		•		14
Explanation of "Work Units" and "Animal Units"		•		•	•	•	15
Feed Costs and Returns from Dairy Cattle		•		• .	•	•	16
Feed Costs and Returns from Hogs							18
Feed Costs and Returns from Beef Breeding Herd		•		•	•		19
Feed Costs and Returns from Feeder Cattle		•			•	٠	20
Feed Costs and Returns from a Farm Flock of Sheep							21
Feed Costs and Returns from Chickens			•	•	•		22
Summary by Years, 1945-1971							23

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 southwestern Minnesota counties are cooperating with the Southwestern Minnesota Farm Management Association in maintaining a farm management service. The Association was organized in the fall of 1939 by farmers in that part of the state for the purpose of studying the farm business through farm records. 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 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 this project is handled by Duane Wilson. Erlin Weness is the field agent for this project.

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

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
Cottonwood	26	John Regier, President William Janzen, Director	Paul Sandager
Faribault	13	John C. Stewart, Jr., Director Wayne Weber, Director	Gene Williams
Jackson	17	Loren Ulbricht, Director Norman Pohlman, Director	Ray Palmby
Martin	9	Willard Peters, Director	Floyd Bellin, Jr.
Murray	24	Dennis Miller, Director Carl Peterson, Director	Reuben Boxrud
Nobles	29	Rodney Langseth, Director Milton Fellows, Secretary-Treasurer Donald Gingerich, Director Henry J. Petersen, Vice-President Gary Hibma, Director	Robert Koehler Eugene Bromenshenkle
Pipestone	17	John Blankers, Director Virgil Schuld, Director	Kenneth Rose
Redwood	20	Harold Deal, Director Dennis Fultz, Director	Ernest Johnson
Watonwan	_11	Owen Francis, Director	John Ankeny
Total	166		

The data for 146 farms are shown in the tables on succeeding pages. Twenty farms were omitted from all of the averages in the tables because the records were not sufficiently complete for a full analysis or the records were not returned for analysis 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 was, nevertheless, wide variation in the methods and practices followed by these men. It is reasonable to assume that similar variation occurs 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 Jan. 1	146 farms Dec. 31
Size of farm (acres)		والمرافقة	445 444	
Size of business (work units)** Dairy cows			\$ 2230 1391	\$ 2364 1721
Other dairy cattle Beef cattle (incl. feeders) Hogs			17127 3692	23215 5087
Sheep (incl. feeders) Poultry (incl. turkeys)			128 280	108 344
Productive livestock total Horses			\$24848 \$ 10	\$32839 \$ 10
Crop, seed and feed Autos and trucks (farm share) Tractors and crop machinery Livestock equipment			\$22121 \$ 2301 16875 2767	\$21810 \$ 2487 18030 2972
Machinery and equipment total Land			\$21943 \$84129	\$23489 \$84129 22302
Buildings, fences, etc. Total farm capital managed			21875 \$174926	\$184579
Item	29 most r Jan. 1	Dec. 31	29 least p Jan. l	rofitable Dec. 31
Size of farm (acres) Size of business (work units)**	564 603	2000 01	421 385	
Dairy cows Other dairy cattle Beef cattle (incl. feeders) Hogs	\$ 2768 1428 36256 3672	\$ 3148 1895 48181 5459	\$ 1808 1000 7385 4665	\$ 1764 1228 10127 5640
Sheep (incl. feeders) Poultry (incl. turkeys) Productive livestock total	<u>264</u> \$44388	613 \$59296	248 <u>554</u> \$15660	232 418 \$19409
Horses Crop, seed and feed	\$ 15 \$31095	\$ 17 \$3 22 08	\$ 3 \$19023	\$ 3 \$15562
Autos and trucks (farm share) Tractors and crop machinery Livestock equipment Machinery and equipment total	\$ 2123 19916 <u>2661</u> \$24700	\$ 2632 23138 3101 \$28871	\$ 2637 17636 3061 \$23334	\$ 2681 17993 <u>2887</u> \$23561
Land Buildings, fences, etc.	\$123872 23683	\$123872 24316	\$70060 23172	\$70060 23453
Total farm capital managed	\$247753	\$268580	\$151252	\$152048

^{*} 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

	Average	29 most	29 l e ast
Item	of 146	profitable	profitable
	farms	farms	farms
FARM RECEIPTS	101110	+ Q1 III 3	1011113
Dairy cattle sold	c 1000	ф 1300	¢ 005
	\$ 1203	\$ 1189	\$ 925
Dairy products sold	5191	7051	3646
Beef cattle sold (incl. feeders)	35988	82749	8976
Hogs sold	10786	10798	12870
Sheep and wool sold (incl. feeders)	116	_	187
Horses sold	_		-
Poultry sold (incl. turkeys)	714	1237	190
Eggs sold	737	9	1792
Corn sold	9482	8977	16217
Soybeans sold	7284	9454	4149
Small grain sold	506		
		483	893
Other crops sold	3249	3580	3298
Machinery & equipment sold and gas tax refund	410	402	497
Income from work off the farm	907	1055	834
Miscellaneous farm income	<u>848</u>	1052	<u>653</u>
Total farm sales	\$77421	\$128036	\$55127
Increase in farm capital	9653	20827	796
Family living from the farm	291	347	222
Total farm receipts	\$87365	\$149210	\$56145
FARM EXPENSES	Ψ07303	ΨI - 7210	400140
Dairy cattle bought	Ф 20 5	¢ 106	t 024
•	\$ 385	\$ 126	\$ 234
Beef cattle bought (incl. feeders)	23785	53250	6760
Hogs bought	959	762	1256
Sheep bought (incl. feeders)	5	-	3
Horses bought	1	3	-
Poultry bought (incl. turkeys)	272	166	122
Miscellaneous livestock expense	1148	1778	869
Feed bought	9100	12053	8329
Fertilizers bought	4129	5625	4538
Other crop expenses	4371	5959	4627
Custom work hired	1689	1836	1340
Gas, oil, and grease (farm share)			
	1662	1788	1717
Repair truck and auto (farm share)	640	578	818
Repair and upkeep of farm real estate	619	650	554
Repair & upkeep of tractors & crop machinery	1774	2128	187 7
Repair & upkeep of livestock equipment	368	563	366
Wages of hired labor	2073	3062	2136
Electricity expense (farm share)	4 52	515	530
Real estate taxes	2715	3397	2683
Telephone & general farm expense	807	844	776
Total cash operating expense	\$56954	\$95083	\$39535
Trucks and autos bought (farm share)	839	1039	
			718
Crop and power machinery bought	4992	8054	4460
Livestock equipment bought	778	1106	483
New real estate and improvements	2298	2738	2160
Total farm purchases	\$65861	\$108020	\$47356
Decrease in farm capital	-	* ***	_
Interest on farm capital @ 6.0 percent	10785	15490	9099
Unpaid family labor	1133	1883	1257
Board furnished hired labor	129	178	107
Total farm expenses	\$77908	\$125571	\$57819
Labor earnings			
rapor earitings	\$ 9457	\$ 23639	\$-1674

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

Item	Average of 146 farms	29 most profitable farms	29 least profitable farms
RETURNS AND NET INCREASES			
Dairy cows	\$ 5233	\$ 7184	\$ 3669
Other dairy cattle	1530	1956	1091
Beef breeding herd	805	1093	796
Feeder cattle	17491	40521	4087
Hogs	11263	11848	12656
Sheep - farm flock	91	· · · · · · · · · · · ·	170
Sheep - feeders	•	-	-
Chickens	601	-7	1642
Turkeys	650	1443	107
All livestock	\$37664	\$64038	\$24218
Value of feed fed to livestock	23165	36748	16379
Return over feed from livestock	\$14499	\$27290	\$ 7839
Crops, seed and feed	25724	36666	19947
Income from labor off the farm	426	395	392
Miscellaneous farm income	848	1052	<u>653</u>
Total returns and net increases	\$41497	\$65403	\$28831
EXPENSES AND NET DECREASES			
Horses	. \$ 2	\$ 3	\$ -
Truck	753	831	809
Auto (farm share)	835	605	1036
Electricity (farm share)	452	515	530
Hired power	1155	1248	920
Tractors and crop machinery	6114	7365	6480
Livestock equipment	924	1222	954
Buildings, fencing and tiling	2480	2755	2428
Miscellaneous livestock expense	1148	1778	869
Labor	3870	5711	3921
Real estate taxes	2715	3397	2683
General farm expense and telephone	807	844	776
Interest on farm capital at 6.0 percent	10785	15490	9099
Total expenses and net decreases	\$32040	\$41764	\$30505
Labor earnings	\$ 9457	\$23639	\$-1674

^{*} Earnings statements, as shown in table 2, stress purchases and sales; inventory adjustments are entered as one item--either an increase or 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 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 (Operator's Share), 1971

Item	29 0	wners
	Jan. 1	Dec. 3
Total acres in farm	323	
Owned	323	
Rented	-	
Total farm capital - operator's	\$129804	\$135993
Stocks and bonds	3346	3330
Life insurance cash value	3708	4049
Notes and accounts receivable	6192	628
Shares in cooperative organizations	2460	259
Outside real estate	5157	450:
Cash on hand and in bank	4263	3918
Household furnishings and clothing	4743	4829
Personal share of auto and truck	728	919
Farm dwelling	7854	778
Total non-farm assets - operator's	\$ 38451	\$ 3820
Total assets - operator's	\$168255	\$174200
Mortgages on farm operated	31486	31355
Mortgages on other real estate	1255	694
Chattel mortgages	19633	21525
Notes payable	9726	9562
Accounts payable	1666	1708
Total liabilities - operator's	\$ 63766	\$ 6484
Net worth	\$104489	\$109356
Change in net worth	\$10 44 63	\$ 4867
Shange in het worth		
Item 59 Part-owners		enters
Jan. 1 Dec. 31	Jan. l	Dec. 31
Total acres in farm 446	4 4	
Out and	451	
	· <u>-</u>	
Rented 202	<u>-</u> 451	.
Rented 202 Total farm capital - operator's \$131341 \$142895	- 451 \$ 63694	
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632	451 \$ 63694 1048	1374
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139	451 \$ 63694 1048 4081	1374 4444
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520	451 \$ 63694 1048 4081 197	1374 4444 253
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520 Shares in cooperative organizations 1393 1488	451 \$ 63694 1048 4081	1374 4444 253 769
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520 Shares in cooperative organizations 1393 1488 Outside real estate 3145 2958	451 \$ 63694 1048 4081 197 691	1374 4444 253 769 312
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520 Shares in cooperative organizations 1393 1488 Outside real estate 3145 2958 Cash on hand and in bank 3285 3845	451 \$ 63694 1048 4081 197 691	1374 4444 253 769 312 2018
Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520 Shares in cooperative organizations 1393 1488 Outside real estate 3145 2958 Cash on hand and in bank 3285 3845 Household furnishings and clothing 4189 4261	451 \$ 63694 1048 4081 197 691 - 2043 3774	1374 4444 253 769 312 2018 3863
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Rented 202 Total farm capital - operator's \$131341 \$142895 Stocks and bonds 3948 4632 Life insurance cash value 3923 4139 Notes and accounts receivable 1259 1520 Shares in cooperative organizations 1393 1488 Outside real estate 3145 2958 Cash on hand and in bank 3285 3845 Household furnishings and clothing 4189 4261 Personal share of auto 853 961 Farm dwelling 7130 6821	451 \$ 63694 1048 4081 197 691 - 2043 3774	1374 4444 253 769 312 2018 3861 1088
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Rented 202	451 \$ 63694 1048 4081 197 691 2043 3774 828 1244 \$ 13906 77600	1374 4444 253 769 312 2018 3861 1088 1216 \$ 15335 85984
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Table 5. Summary of Farm Earnings by Tenure (Operator's Share) 1971

Teem
FARM RECEIPTS Dairy cattle sold \$ 913 \$ 1282 \$ 1605 Dairy products sold 2861 5419 6741 Beef cattle sold (incl. feeders) 31826 36796 23080 Hogs sold 10131 10770 8399 Sheep and wool sold (incl. feeders) 109 115 189 Horses sold - - - - Poultry sold (incl. turkeys) 1285 103 2665 Eggs sold 15 1290 - Corn sold 8294 7492 8822 Soybeans sold 5258 6166 5475 Small grain sold 525 439 324 Other crops sold 2362 3132 2768 Machinery and equipment sold 311 394 399 Income from work off the farm 520 958 815 Miscellaneous farm income 905 873 761 (1) Total farm sales \$65315 \$75229 \$62043
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Other crops sold 2362 3132 2768 Machinery and equipment sold 311 394 399 Income from work off the farm 520 958 815 Miscellaneous farm income 905 873 761 (1) Total farm sales \$65315 \$75229 \$62043 (2) Increase in farm capital 8469 13576 7547 (3) Family living from the farm 220 286 350
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(1) Total farm sales \$65315 \$75229 \$62043 (2) Increase in farm capital 8469 13576 7547 (3) Family living from the farm 220 286 350
(2) Increase in farm capital 8469 13576 7547 (3) Family living from the farm 220 286 350
(3) Family living from the farm <u>220</u> <u>286</u> <u>350</u>
- $/$ 4
(4) Total farm receipts $(1)+(2)+(3)$ \$74004 \$89091 \$69940
FARM EXPENSES
Dairy cattle bought \$ 462 \$ 413 \$ 308
Beef cattle bought (incl. feeders) 22175 25514 13506
Hogs bought 572 1050 770
Sheep bought (incl. feeders) 1 7 4
Horses bought - 2 - Poultry bought (incl. turkeys) 171 300 460
Custom work hired 1751 1655 1577 Gas, oil and grease bought (farm share) 1404 1744 1519
Repair and upkeep of power & crop machinery 1908 2568 2231
Repair and upkeep of real estate 706 645 336
Repair and upkeep of livestock equipment 217 405 424
Wages of hired labor 1539 2303 2032
Electricity expense (farm share) 412 464 434
Real estate taxes 2125 1541 91
Cash rent 8 2560 5970
Telephone and general farm expense 773 851 567
Interest paid 3912 4699 2830
Total cash operating expense \$54773 \$65210 \$50802
Trucks and autos bought (farm share) 771 925 619
Crop and power machinery bought 2892 4637 6215
Livestock equipment bought 566 854 1056
Farm purchases and real estate improvements 2461 4868 836
(5) Total farm purchases \$61463 \$76494 \$59528
(6) Decrease in farm capital
(7) Interest on operator's farm capital (6%) 4023 3481 1497
(8) Unpaid family labor 400 407 352
(9) Board furnished hired labor 89 141 119
(10) Total farm expense $(5)+(6)+(7)+(8)+(9)$ \$65975 \$80523 \$61496
(11) Labor earnings (4)-(10) \$8029 \$8568 \$8444
(12) Ret. to cap. & family labor (7)+(8)+(11) \$12452 \$12456 \$10293

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

Item	Average of 64 farms	13 high in return to cap. and fam. labor	13 low in return to cap. and fam. labor
Number of persons - family	4.8	6.1	3.6
Number of adult equivalents - family - other*	4.1 .2	5.1	3.0 .1
EXPENSES			
Food and meals bought Operating expense and supplies Furnishings and equipment Clothing and clothing materials Personal care and spending Education Recreation Gifts and special events Medical and hospital insurance Church and welfare Personal share of auto expense Upkeep on dwelling Pers. share of tel. & elec. expense	\$ 1535 497 513 648 214 291 253 267 801 572 407 139 165	\$ 1659 548 521 795 282 384 268 243 812 727 316 188 208	\$ 1330 480 173 477 185 101 189 297 679 577 443 131
Total cash living expense Personal share of new autos New dwelling Taxes Life insurance Other savings and investments	\$ 6302 384 - 1158 916 524	\$ 6951 452 - 1883 901 148	\$ 5219 120 - 504 720
Total household & personal cash exp. Family living from the farm	\$ 9284 304	\$10335 <u>359</u>	\$ 6563 250
Total cash expense & perquisites	\$ 9588	\$10694	\$ 6813
RECEIPTS			
Return to capital and family labor Income from outside investments Other personal income	\$13066 266 1337	\$29064 130 1000	\$ 615 83 1631

^{*} Hired help or others boarded.

Table 7. Family Living from the Farm, 1971

Item	Average of 146 farms	Average of 146 farms
Number of adult equivalents - family - other*	3.9 •2	
Whole milk Cream Cattle Hogs Sheep Poultry Eggs	377 qt. 6 pt. 735 lbs. 239 lbs. 1 lb. 176 lbs. 16 doz.	\$ 36 2 204 40 - 6 4
		\$291

^{*} 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 of 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	Number of farms	Your farm	The length of the shaded lines is in proportion to the average operator's labor earnings	Average labor earnings
	1.4			
None or 1	15		XXXXX	\$ 3058
2	36		XXXXXXX	4779
3	27		XXXXXXXXXXXXX	8366
1	32		XXXXXXXXXXXXXXXX	10042
5	22	************	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	15653
6 or 7	14		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	19368

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 Orgainzation and Management Efficiency, 1971

Measures used in chart on page ll	Average of 146 farms	29 most profit- able farms	29 least profit- able farms
Labor earnings	\$ 9457	\$23639	\$-1674
Crop yields*	100	107	94
Percent tillable land in high return crops**	72.3	73.2	76.3
Return for \$100 feed to productive livestock***	100	108	92
Productive livestock units per 100 acres****	36.1	48.9	26.8
Size of business - work units	444	603	385
Work units per worker	261	317	226
All pow., mach., equip., & bldg. exp. per work unit	\$31.20	\$27.08	\$36.97
Items related to some of the above measures:			
Index of return for \$100 feed from: Dairy cattle (see pages 16 and 17) Beef cattle - breeding herd (see page 19) Beef cattle - feeders (see page 20) Hogs (see page 18)	100 100 100 100	111 99 109 100	86 70 93 101
Sheep - farm flock (see page 21) Sheep - feeders Turkeys Chickens (see page 22)	100 - 100 100		63 - -
Number of animal units	144.0	237.2	94.3
Work units on crops Work units on productive livestock Other work units	196 231 17	259 328 16	185 184 16
Number of family workers Number of hired workers	1.2 .5	1.3 .6	1.2 .5
Total number of workers Power and crop machinery expense per work unit	1.7 \$23.22	1.9 \$19.98	1.7 \$27.87
Livestock equipment expense per work unit Building and fencing expense per work unit	2.00 5.98	2.10 5.00	2.22 6.88
Crop acres per farm Tractor and crop machinery expense per crop acre	348 \$17.93	452 \$17.09	330 \$20.15
Rate earned on capital managed (\$8000 deducted for operator's labor)	6.8	12.1	0

^{*} Given as a percentage of the average.

^{**} Crops are marked in Table 10 as A, B, C, and D. All the acres of A crops, one-half of the acres in B crops, and one-fourth of the 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 146 farms included in this summary are located between the dotted lines across the center of this page.

	Taba		119 41.	Return			Work	
	Labor earn-	Crop	High return	from prod.	units per	Work	unit per	
	ings	yield		livesto		units	work	
					T		1	
\$21500		140	88.0	140	68.0	810	425	\$15.00
20000		135	86.0	135	64.0	765	405	17.00
1850		130	84.0	130	60.0	720	385	19.00
17000		125	82.0	125	56.0	675	365	21.00
15500		120	80.0	120	52.0	630	345	23.00
14000		115	78.0	115	48.0	585	325	25.00
12500		110	76.0	110	44.0	540	305	27.00
11000		105	74.0	105	40.0	495	285	29.00
9500		100	72.0	100	36.0	450	265	31.00
8000		95	70.0	95	32.0	405	245	33.00
6500		90	68.0	90	28.0	360	225	35.00
5000		85	66.0	85 —	24.0	315	205	37.00
3500		80	64.0	80	20.0	270	185	39.00
2000		75	62.0	75	16.0	225	165	41.00
500		70	60.0	70	12.0	180	145	43.00
-1000		65	58.0	65	8.0	135	125	45.00
-2500)	60	56.0	60	4.0	90	105	47.00

Table 10. Distribution of Acres in Farm, 1971

Item	Crop ratings*	Number growing this crop	Average of 146 farms	Ave. per farm raising each crop
Canning peas Wheat Oats for silage Oats for grain Flax Other small grain Total small grain and peas	B C C D C	2 5 12 82 2 9 92	.4 .3 1.5 16.2 .7 1.9 21.0	31.5 9.2 18.3 28.9 47.3 31.0
Corn grain Soybeans for grain Sweet corn Corn silage Other cultivated crops Total cultivated crops	A B B D	146 124 3 97 2 146	204.2 78.7 .6 17.8 <u>1.8</u> 303.1	204.2 92.7 28.0 26.9 132.0 303.1
Alfalfa hay Other legume hay Other tame hay Annual hay Total tillable land in hay	B C D	117 - - 6 118	21.0 - - - 5 21.5	26.2 - - 12.7 26.6
Alfalfa pasture Other tillable pasture Total tillable land in pasture	B D	28 14 40	2.9 .6 3.5	14.8 6.4 12.6
Feed grain program (diverted acres Tillable land not cropped Total tillable land) B D	137 9 146	39.9 1.0 390.0	42.6 15.3 390.0
Wild hay Non-tillable pasture Timber not pastured Roads and waste Farmstead Total acres in farm		41 73 14	2.6 22.6 .9 16.7 11.9 444.7	
Percent land tillable Percent tillable land in high retu	rn crops		87 . 8 72. 3	

^{*} 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 Wheat, bu. Oats for silage, tons	\$71.40 30.0 6.9
Oats for grain, bu. Flax, bu. Corn grain, bu.	70.4 13.2 90.6
Soybeans, bu. Sweet corn, tons Corn silage, tons	29.0 3.7 15.9
Alfalfa hay, tons Other legume hay, tons Annual hay, tons	3.8 - 2.3
Feed grain program, dollars Wild hay, tons	\$66.67 1.5

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. Returns Above Listed Costs per Acre of Crops, 1971

Item	Corn grain	Corn silage	Soy- b e ans
Number of farms reporting	140	92	117
Yield per acre Price per unit	90.2 \$1.00	15.9 \$7.25	29.0 \$2.90
Total return	\$90.24	\$114.97	\$84.23
Fertilizer Seeds, herbicides, etc. Total listed costs	\$16.50 14.86 \$31.36	\$16.46 <u>14.69</u> \$31.15	\$.55 <u>8.46</u> \$ 9.01
Return above listed costs	\$58.88	\$83.82	\$75.22
Item	Wheat	Alfalfa hay	Oats
Number of farms reporting	5	95	71
Yield per acre Price per unit	29.9 \$1.40	3.9 \$20.00	70.0 \$.62
Total return	\$41.92	\$78.82	\$43.38
Fertilizer Seeds, herbicides, etc. Total listed costs	\$ 5.39 4.27 \$ 9.66	\$ 4.77 7.34 \$12.11	\$ 3.92 3.87 \$ 7.79
Return above listed costs	\$32.26	\$66.71	\$35.59

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 - feeder	.3 per 100 lbs.	Corn fodder	1.0 per acre
Hogs	.12 per 100 lbs.	Alfalfa hay	.6 per acre
Turkeys	.l 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 bulls, 1 feeder steer or heifer, 3 1/3 other beef cattle, 7 sheep, 14 lambs, $2\frac{1}{2}$ hogs, 5 pigs, 50 hens, or 1100 pounds of turkeys produced.

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

Item	Average of 32 farms	<pre>16 farms highest in butterfat per cow</pre>	16 farms lowest in butterfat per cow
Pounds of milk per cow	11544	12815	10273
Percent of butterfat in milk	3.5	3.6	3.5
Pounds of butterfat per cow	403	451	356
Price received per pound of butterfat sol	d \$1.44	\$1.46	\$1.42
Price received per cwt. of milk sold	5.07	5.17	4.97
Value of produce per cow:			
Dairy product sales	\$568.11	\$644.11	\$492.11
Dairy produce used in home	4.99	4.94	5.03
Milk fed to livestock	7.63	8.03	7.23
Net increase in value of cows	-3.49	-3.74	-3.23
TOTAL VALUE PRODUCED	\$577.24	\$653.34	\$501.14
Feed cost per cow:			
Concentrates	\$150.41	\$163. 08	\$137.74
Roughages	95.15	99.67	90.63
Pasture	6.79	5.54	8.04
TOTAL FEED COST	\$252.35	\$268.29	\$236.41
RETURNS ABOVE FEED COST PER COW	\$324.8 9	\$385.05	\$264.73
RETURNS FOR \$100 OF FEED	\$238	\$252	\$225
Feeds per cow, lbs.:			
Corn	4141	4706	3576
Small grain	797	977	617
Commercial feeds	869	724	1015
Total concentrates	5807	6407	5208
Total hay	5192	5624	4760
Silage	12015	12139	11892
Feed cost per pound of butterfat	\$.63	\$ •59	\$.66
Feed cost per cwt. of milk produced	2.20	2.10	2.31
Number of cows*	40.6	41.2	40.1

^{*} 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. There is some variation in the number of months of dry period per cow; however, this variation is small for the majority of farms.

Table 16. Feed Costs and Returns from Other Dairy Cattle, 1971

Item	Average of 32 farms	<pre>16 farms highest in butterfat per cow</pre>	16 farms lowest in butterfat per cow
NET INCREASE IN VALUE OF OTHER DAIRY CATTL	E \$150.80	\$167.65	\$133.97
TOTAL FEED COST PER HEAD	77.76	81.70	73.83
RETURNS ABOVE FEED COST PER HEAD	73.04	85.95	60.14
RETURNS FOR \$100 OF FEED	\$202	\$205	\$200
Feed per head, lbs.: Concentrates Hay Silage Whole milk	1398 1872 3825 153	1635 1890 3796 137	1162 1853 3854 169
Number of head of other dairy	48.0	51.1	44.8

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

Item	Average of 32 farms	16 farms highest in butterfat per cow	16 farms lowest in butterfat per cow
Value of produce per cow: Dairy products Net increase in value of dairy cattle TOTAL VALUE PRODUCED	\$573.10 <u>173.61</u> \$746.71	\$649.06 214.81 \$863.87	\$497.14 132.40 \$629.54
TOTAL FEED COST PER COW	\$340.55	\$372.96	\$308.14
RETURNS ABOVE FEED COST PER COW	\$406.16	\$490.91	\$321.40
RETURNS FOR \$100 OF FEED	\$226	\$239	\$213
Feed per cow, lbs.: Concentrates Hay Silage	7634 7292 16916	8733 7943 17901	6534 6641 15931
Miscellaneous expenses per cow	\$43.73	\$45.69	\$41.61

Table 18. Feed Costs and Returns from Hogs, 1971

		88 f a	arms with bree	ding stock	
Item	Average of 102 farms	Average of 88 farms	18 farms highest in returns above feed	18 farms lowest in returns above feed	14 farms with purchased feeder pigs
Pounds of hogs produced	83030	87502	97312	51655	54915
NET INCREASE IN VALUE PER CWT. PRODUCED	\$18.96	\$19.42	\$20.95	\$17.78	\$16.09
FEED COST PER CWT. PRODUCED	13.52	13.74	11.68	17.45	12.14
RETURN ABOVE FEED COST PER CWT. PRODUCED	\$ 5.44	\$ 5.68	\$ 9.27	\$.33	\$ 3.95
RETURNS FOR \$100 OF FEED	\$147	\$147	\$182	\$105	\$148
Price received per cwt. sold	\$17.90	\$17.93	\$18.86	\$17.33	\$17.73
Weight per hog sold	232	232	221	236	233
Miscellaneous costs per cwt. produced	•57	•59	•49	.66	•24
Feed per cwt. hogs produced, lbs.: Corn Small grain Commercial feeds* Total concentrates	303	304	270	384	297
	29	32	25	40	10
	<u>113</u>	<u>116</u>	<u>96</u>	<u>143</u>	<u>89</u>
	445	452	391	567	396
Total number of litters raised	45	52	63	32	3
Number of pigs born per litter	8.8	8.9	9•4	8.2	7.9
Number of pigs weaned per litter	7.1	7.1	7•7	5.8	6.7
Number of feeder pigs bought	59	26	0 -	44	268
Total weight of feeders purchased	2256	954		1720	10443
Price paid per feeder pig	\$14•22	\$13.32		\$13.95	\$15.30

^{*} This includes purchased complete hog 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 22 farms
TOTAL VALUE PRODUCED PER COW	\$147.35
Feed cost per cow: Concentrates Roughages Pasture TOTAL FEED COST	\$ 17.20 55.00 27.09 \$ 99.29
RETURNS ABOVE FEED COST PER COW	\$ 48.06
RETURNS FOR \$100 OF FEED	\$168
Miscellaneous costs per cow	\$8.06
Feed per cow, lbs.: Concentrates Hay Silage	612 4050 4080
Pounds of beef produced	18040
Number of cows Number of other beef cattle	43.8 28.3

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

Item	Average of 86 farms
Pounds of beef produced	89769
NET INCREASE IN VALUE OF FEEDERS	\$35.63
Feed cost per cwt. of beef produced: Concentrates Roughages Pasture TOTAL FEED COSTS	\$18.35 4.51 .12 \$22.98
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$12.65
RETURNS FOR \$100 OF FEED	\$160
Miscellaneous costs per cwt. of beef produced	\$.71
Feeds per cwt. beef produced, lbs.: Corn Small grain Commercial feeds	700 11 60
Total concentrates Total hay Silage	771 198 705
Price paid per cwt. for beef bought Price received for feeder cattle sold	\$35.76 31.49
Number of animal units	133.4

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

Item	Average of 8 farms
Value of produce per ewe: Wool Net incre se in value of sheep TOTAL VALUE PRODUCED	\$ 7.24 <u>26.46</u> \$33.70
Feed costs per ewe: Concentrates Roughages Pasture TOTAL FEED COSTS	\$ 9.72 8.09 4.26 \$22.07
RETURNS ABOVE FEED COST PER EWE	\$11.63
RETURNS FOR \$100 OF FEED	\$176
Miscellaneous expenses per ewe	\$1.06
Feeds per ewe, lbs.: Concentrates Hay Silage Price per cwt. of lambs sold	351 784 69 \$25.59
Price per pound of wool sold Pounds of wool per sheep sheared	\$.53 10.7
Percent lamb crop* Percent death loss*	99 2•9
Pounds of sheep produced	4880
Number of head of ewes	45

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

Table 22. Feed Costs and Returns from Chickens, 1971*

Item	Average of 10 farms
Value of produce per hen: Eggs sold and used in home Net increase in value of chickens TOTAL VALUE PRODUCED	\$3.82 79 \$3.03
TOTAL FEED COST PER HEN	\$3.33
RETURNS ABOVE FEED COST PER HEN	\$30
RETURNS FOR \$100 OF FEED	\$ 93
Miscellaneous expenses per hen	\$.10
Feed per hen, lbs.: Grain Commercial feed Total concentrates	60 <u>33</u> 93
Price received per dozen of eggs sold Eggs laid per hen Feed costs per dozen eggs produced	\$.21 220 \$.18
Average number of hens on farm during the year Percent death loss of hens	2381 6.3
Number of chicks bought Number of hens bought	1112 1152

^{*} Includes feeds and returns from laying and rearing flock.

Table 23. Summary by Years

Item	Average 1945-49	Average 1950-54	Average 1955 - 59	Average 1960-64	Average 1965-69	1970	1971
Number of farms	140	138	135	135	145	140	146
Total farm capital managed	\$40590	\$57692	\$75246	\$99907	\$138418	\$174828	\$179752
Monthly charge for:	Ψ-100 20	407072	Ψ/ 0 2-10	Ψ	Ψ100 110	41.102 6	42.7.4
Unpaid family labor*	118	130	134	147	160	250	300
Second operator*	118	130	134	167	295	500	600
Board for hired labor*	33	36	38	40	45	60	60
FARM EXPENSES							
Dairy cattle bought	\$ 175	\$ 215	\$ 151	\$ 146	\$ 157	\$ 162	\$ 385
Beef cattle bought	2027	4097	7619	11153	13576	18358	23785
Hogs bought	447	448	473	723	901	1025	959
Sheep bought (incl. feeders)	365	599	517	69	51	16	5
Poultry bought (incl. turkeys)	165	190	225	244	186	263	272
Horses bought	11	6	5	3	2	5	1
Miscellaneous livestock expense	248	378	525	592	778	1030	1148
Fertilizer	2-10	- -	906	1223	2566	3458	4129
Miscellaneous crop expenses	869 *)	+ 1234 *		1184	2602	3916	4371
Feed bought	3191	4323	5503	7225	8589	9639	9100
Custom work hired	356	438	694	874	1221	1648	1689
Power & crop machinery (new)	1669	1864	1891	2057	4431	5767	5831
Power & crop machinery (upkeep)	1365	1735	2200	2718	3587	4490	4528
Livestock equipment (new)	99	164	327	415	590	573	778
Livestock equipment (upkeep)	111	135	194	207	254	404	368
Buildings and fencing (new)	676	881	832	1018	1670	2067	2298
Buildings and fencing (upkeep)	319	312	320	338	434	684	619
Hired labor	794	883	993	1092	1436	2072	2073
Taxes	403	622	910	1449	1898	2352	2715
General farm expense	174	260	364	430	594	876	807
Total farm purchases	\$13464	\$18784	\$25557	\$33160	\$45523	\$58805	\$65861
Decrease in farm capital	-			-			_
Interest on farm capital***	2030	2885	3762	4991	7372	10490	10785
Unpaid family labor	377	358	379	500	652	788	1133
Board furnished hired labor	107	91	92	82	84	131	129
Total farm expense	\$15978	\$22118	\$29790	\$38733	\$53631	\$70214	\$77908

^{*} These adjustments should be considered in comparing 1971 with previous years.

^{**} 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 1970-1971.

Table 23. Summary by Years (continued)

Item	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	Average 1965-69	1970	1971
FARM RECEIPTS							
Dairy cattle	\$ 573	\$ 695	\$ 585	\$ 563	\$ 790	\$ 1035	\$ 1203
Dairy products	988	1085	1450	1888	3244	4950	5191
Beef cattle	4246	7918	13025	20180	23994	36585	35988
Hogs	6775	7455	7 1 58	8431	12206	12673	10786
Sheep and wool	651	978	981	263	182	89	116
Poultry (incl. turkeys)	525	526	530	505	388	409	714
Eggs	1035	965	1013	1074	871	1146	737
Horses	23	8	5	4	1	1	_
Corn	1138	1855	3149	3401	5585	8561	9482
Soybeans	· <u>-</u>	_	•	-	4217	7060	7284
Small grain	2055	1236	807	882	575	596	506
Other crops*	879	1023	1759	3855	3681	3669	3249
Machinery and equipment sold	364	367	266	373	431	4 99	410
Agricultural adjustment payment	65	64	44	43	7	-	-
Income from work off the farm	313	349	398	396	742	1108	907
Miscellaneous farm income	78	137	306	386	813	<u>1048</u>	848
Total farm sales	\$19708	\$24661	\$31476	\$42244	\$57727	\$79429	\$77421
Increase in farm capital	2395	1845	1157	1205	6390	737	9653
Family living from the farm	666	553	278	288	293	351	291
Total farm receipts	\$22769	\$27059	\$32911	\$43737	\$64410	\$80517	\$87365
Total farm expenses	15978	22118	2 9790	38733	53631	70214	77908
Labor earnings	\$ 6791	\$ 4941	\$ 3121	\$ 5004	\$10779	\$10303	\$ 9457
MEASURES OF FARM ORGANIZATION AND MANAGEM	MENT .						
Percent high return crops**	56.4	59.7	63.4	68.1	67.2	68.4	72.3
Livestock units per 100 acres***	20.3	30.3	39.4	43.0	36.5	38.9	36.1
Work units***	501	470	46 9	533	4 98	445	444
Work units per worker***	285	283	279	318	303	264	261
Expenses per work unit****	\$6.23	\$9.49	\$12.81	\$13.42	\$20.31	\$29.60	\$31.20

^{*} Includes soybeans 1945-1965

^{**} The crop ratings used in calculating the percentage of the tillable land in high return crops were considerably 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 24. Summary of Miscellaneous Items by Years

Item	Average 1945-49	Average 1950-54	Average 1955-59	Av e rage 1960-64	Average 1965-69	1970	1971	
RETURN ABOVE FEED COST PER								
Dairy cow	\$114.96	\$111.51	\$125.34	\$140.97	\$226.79	\$321.62	\$324.89	
Animal unit in beef herd	46.46	42.51	30.08	30.77	Ψ220•7 <i>)</i>	₩ *	*	
100 lbs. feeder cattle produced	8.87	5.26	5.88	1.94	5.74	3.28	12.65	
Ewe	-			6.80	10.24	9.24	11.63	
100 lbs. hogs produced	6.29	6.23	4.52	4.28	8.71	4.15	5.44	
Hen	2.15	1.09	1.05	•91	. 78	•64	30	
FEED COST PER								
Dairy cow	121.21	142.90	147.40	181.72	232.80	256.19	252.35	
Animal unit in beef herd	68.30	97.48	83.69	72.97	*	*	*	
100 lbs. feeder cattle produced	21.66	22.68	17.70	18.32	20.28	21.44	22.98	
Ewe	, 	· -	_	13.42	16.58	20.47	22.07	
100 lbs. hogs produced	12.70	12.95	10.48	10.65	12.31	13.27	13.52	
Hen	4.28	4.66	3.89	3.45	3.51	3.46	3.33	
MISCELLANEOUS LIVESTOCK INFORMATION								
Number of dairy cows	5.3	4.7	5.2	5.7	6.8	8.5	8.9	
Head in beef breeding herd	9.4	11.1	10.6	4.9	7.1	8.8	11.0	
Pounds of feeder cattle produced	6676	12137	27685	41929	46386	58147	58111	
Litters of pigs	19.5	21.7	24.6	28.0	28.8	32.2	32.1	
Pounds of hogs produced	34292	37265	44369	52828	55947	57118	52 956	
Number of hens	202	187	204	219	174	190	167	
Pounds of butterfat per dairy cow	257	282	311	349	387	410	403	
Pigs weaned per litter	6.3	6.7	7.2	7.0	7.4	7.2	7.1	
Percent lamb crop	109	107	111	103	111	113	99	
Eggs per hen	171	180	200	208	208	206	220	

^{*} Information not available.

Table 24. Summary of Miscellaneous Items by Years (continued)

Item	Average	Average	Average	Average	Average 1965-69	1970	1071
	1945-49	1950-54	1955 - 59	1960-64	1965-69	1970	1971
PRICE RECEIVED PER							
Pound of butterfat in milk	\$ •98	\$.94	\$.91	\$.94	\$ 1.19	\$ 1.42	\$ 1.44
100 pounds of fat cattle	21.71	26.61	22.51	22.86	25.32	28.44	31.49
Pound of wool	•41	•60	.51	. 58	.54	•66	. 53
Dozen of eggs	•37	• 35	•29	•27	• 27	• 29	.21
100 pounds of hogs sold	19.54	19.43	15.96	15.45	20.90	21.98	17.90
PRICE OF FEED				•			
Corn, bu.	1.24	1.31	1.11	•99	1.10	1.15	1.17
Oats, bu.	.74	.74	. 59	.61	.62	.60	•62
Barley, bu.	1.31	1.15	•92	. 91	• 97	• 85	. 86
Alfalfa hay, ton	18.60	18.30	18.20	19.40	20.80	20.00	20.00
Timothy hay, ton	10.86	10.60	10.58	11.22	12.00	11.60	11.60
Corn silage, ton	6.07	6.00	6.08	6.60	7.36	7.25	7.25
Soybean meal, cwt.	4.15	4.50	-	4.36	-	-	-
ACRES PER FARM							
Small grains	73.9	70.5	48.8	39.5	27.1	30.7	21.0
Cultivated crops	100.3	107.0	153.7	187.0	251.5	281.6	303.1
Tillable land in hay	19.1	28.1	34.9	31.0	27.5	23.7	21.5
Tillable land in pasture	15.2	14.8	13.2	6.8	4.5	4.4	3.5
Tillable land not cropped	2.4	1.4	2.2	<u>25.9</u> *			40.9
Total tillable land	210.9	221.8	252.8	290.2	354.7	390.1	390.0
Non-tillable land	43.1	43.4	40.5	44.6	48.5	52.2	54.7
Total acres per farm	254.0	265.2	293.3	334.8	403.2	442.3	444.7
YIELD PER ACRE							
Flax, bu.	13.7	11.5	13.0	13.6	16.4	16.7	13.2
Oats, bu.	46.3	41.4	51.7	54.8	61 . 1	59.2	70.4
Corn grain, bu.	47.8	53.7	57.1	71.3	84.3	97.4	90.6
Corn silage, tons	8.4	9.2	9.7	11.8	13.1	15.0	15.9
Soybeans, bu.	14.4	19.8	22.5	25.5	25.4	32.6	29.0
Alfalfa hay, tons	2.1	2.5	2.5	3.0	3.1	3.5	3.8

^{*} Including feed grain program.