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1966
annual report

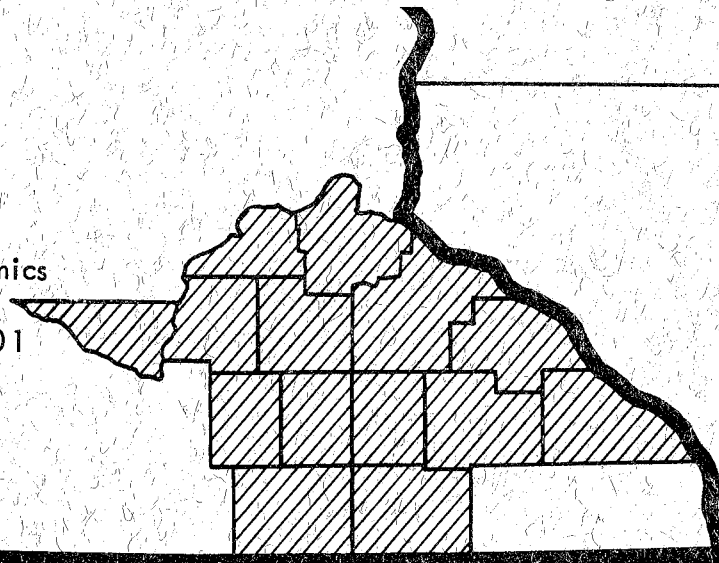
Southeastern Minnesota Farm Management Association

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

REPORT NUMBER 290

Department of Agricultural Economics
Institute of Agriculture
St. Paul, Minnesota 55101
June 1967



1966 ANNUAL REPORT OF THE SOUTHEASTERN MINNESOTA FARM MANAGEMENT ASSOCIATION

Prepared by T. R. Nodland*

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INTRODUCTION

The Department of Agricultural 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 operation 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 author is indebted to Janet Otis, 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 Economics under the direction of T. R. Nodland. Extension work in connection with the service is handled by Paul Hasbargen and Kenneth Thomas. Harvey Bjerke was the field agent for this project. At the end of the year, Herbert Walch and Carl Pherson of the Department of Agricultural Economics aided in closing the records.

The following tabulation shows by counties the number of records submitted, the officers of the Association, and the county agricultural extension agents who cooperated in 1966.

County	No. of records	Association Officers	County Agricultural Extension Agent
Dakota	9	Arthur Ackerman, Director	Clarence O. Quie
Dodge	15	John Chapin, Director	David H. Hanson
Freeborn	12	Arthur Ulland, Director	Eldon H. Senske
Goodhue	27	John Schwartau, Secretary	G. J. Kunau
Le Sueur	6	Lauris Krenik, Director	Robert Leary
Mower	5	Howard Brownell, Director	Don Hasbargen
Nicollet	10	Adolph Lokensgard, Director	F. E. Wetherill
Olmsted	13	Clarence Carpenter, Director	Richard Radway
Rice	11	Lloyde Little, Director	Warren Liebenstein
Scott	8	Dallas Bohnsack, Director	James Rabehl
Steele	15	Arnold Abbe, Vice President	J. R. Gute
Wabasha	10	Francis Kottschade, President	Matthias Metz
Waseca	6	Harold Trahms, Director	Roger Wilkowske
Winona	12	Edmund Luehmann, Director	Oliver Strand
Total	159		

The data for 147 farms are shown in the tables on succeeding pages. Twelve 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, nevertheless, 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, 1966*

Items	Your farm		Average of 147 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			273	
Size of business (work units)**			577	
Dairy cows	\$	\$	\$4209	\$4320
Other dairy cattle			2756	2853
Beef cattle (incl. feeders)			1445	1982
Hogs			3085	2682
Sheep (incl. feeders)			86	87
Poultry (incl. turkeys)			267	238
Miscellaneous livestock			14	28
Productive livestock (total)	\$	\$	11862	12190
Horses			17	14
Crop, seed and feed			8814	11658
Auto and truck (farm share)			1267	1516
Tractors and crop machinery			7614	9017
Livestock equipment			2241	2366
Machinery and equipment (total)	\$	\$	11122	12899
Land			23331	23331
Buildings, fences, etc.			16682	16742
Total farm capital managed	\$	\$	\$71828	\$76834

Items	29 most profitable		29 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	380		211	
Size of business (work units)**	809		453	
Dairy cows	\$4474	\$4592	\$3665	\$3911
Other dairy cattle	3182	3275	2496	2610
Beef cattle (incl. feeders)	1587	1383	228	423
Hogs	7691	7013	1402	1415
Sheep (incl. feeders)	33	52	118	104
Poultry (incl. turkeys)	678	543	177	164
Productive livestock (total)	17645	16858	8086	8627
Horses	16	14	34	20
Crop, seed and feed	14576	20262	5718	7071
Auto and truck (farm share)	1576	2079	1044	1250
Tractors and crop machinery	10382	12638	5260	6748
Livestock equipment	3552	3619	1456	1551
Machinery and equipment (total)	15510	18336	7760	9549
Land	38180	38180	17096	17096
Buildings, fences, etc.	23858	24893	11522	11168
Total farm capital managed	109785	118543	50216	53531

* 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 were included in the records from rented farms.

** See page 20 for an explanation of "work units."

Table 2. Summary of Farm Earnings (Cash Statement), 1966

Items	Your farm	Average of 147 farms	29 most profitable farms	29 least profitable farms
FARM RECEIPTS				
Dairy cattle sold	\$ _____	\$3114	\$3311	\$2844
Dairy products sold	_____	10455	11388	8066
Beef cattle (incl. feeders) sold	_____	1780	2381	119
Hogs sold	_____	8568	22268	3159
Sheep and wool sold	_____	98	38	204
Horses sold	_____	5	-	17
Poultry (incl. turkeys) sold	_____	181	426	53
Eggs sold	_____	1316	3803	846
Corn sold	_____	1926	3201	1192
Soybeans sold	_____	1660	3742	625
Small grain sold	_____	371	344	299
Other crops sold	_____	2272	3656	958
Machinery and equipment sold	_____	223	360	215
Income from work off the farm	_____	690	409	497
Miscellaneous farm income	_____	476	493	340
Total farm sales	\$ _____	\$33135	\$55820	\$19434
Increase in farm capital	_____	5006	8758	3315
Family living from the farm	_____	321	321	298
Total farm receipts	\$ _____	\$38462	\$64899	\$23047
FARM EXPENSES				
Dairy cattle bought	\$ _____	\$ 225	\$ 88	\$ 362
Beef cattle bought (incl. feeders)	_____	933	844	126
Hogs bought	_____	377	473	690
Sheep bought	_____	5	-	-
Horses bought	_____	1	-	-
Poultry bought (incl. turkeys)	_____	186	360	134
Miscellaneous livestock expense	_____	855	1080	630
Feed bought	_____	4812	9405	3165
Fertilizers bought	_____	1787	3214	1015
Other crop expenses	_____	1665	2882	875
Custom work hired	_____	1083	1312	734
Gas, oil and grease bought (farm share)	_____	1096	1417	868
Repair truck and auto (farm share)	_____	362	465	298
Repair and upkeep of farm real estate	_____	428	569	369
Repair and upkeep of tract. & cr. mach.	_____	865	1260	631
Repair and upkeep of livestock equip.	_____	201	297	149
Wages of hired labor	_____	1079	1592	638
Electricity expense (farm share)	_____	396	531	288
Pers. prop. and real estate taxes	_____	1611	2099	1223
Telephone and general farm expense	_____	506	722	408
Total cash operating expenses	\$ _____	\$18473	\$28610	\$12603
Trucks and autos bought (farm share)	_____	594	1032	525
Crop and power machinery bought	_____	3221	5162	2713
Livestock equipment bought	_____	544	669	343
New real estate and improvements	_____	1256	2817	517
Total farm purchases	\$ _____	\$24088	\$38290	\$16701
Decrease in farm capital	_____	-	-	-
Interest on farm capital	_____	3717	5708	2594
Unpaid family labor	_____	836	1288	994
Board furnished hired labor	_____	71	57	101
Total farm expenses	\$ _____	\$28712	\$45343	\$20390
Labor earnings	\$ _____	\$ 9750	\$19556	\$ 2657

Table 3. Summary of Farm Earnings (Enterprise Statement), 1966

Items	Your farm	Average of 147 farms	29 most profitable farms	29 least profitable farms
RETURNS AND NET INCREASES				
Dairy cows	\$ _____	\$10693	\$11516	\$8255
Other dairy cattle	_____	3285	3698	2971
Beef breeding herd	_____	245	95	54
Feeder cattle	_____	1049	1164	120
Hogs	_____	7835	21190	2512
Sheep, farm flock	_____	94	57	191
Sheep, feeders	_____	-	-	-
Chickens	_____	1304	3743	803
All productive livestock	\$ _____	24505	41463	14906
Value of feed fed to livestock	_____	13868	22536	9376
Return over feed from livestock	\$ _____	10637	18927	5530
Crop, seed and feed	_____	14593	23587	8661
Income from labor off the farm	_____	362	215	182
Miscellaneous farm income	_____	476	493	340
Total returns and net increases	\$ _____	26068	43222	14713
EXPENSES AND NET DECREASES				
Horses	\$ _____	\$ 2	\$ 3	\$ -2
Truck	_____	367	562	262
Auto (farm share)	_____	524	671	492
Electricity (farm share)	_____	396	531	288
Hired power	_____	737	889	488
Tractors and crop machinery	_____	3074	4812	2111
Livestock equipment	_____	601	879	389
Buildings, fencing, and tiling	_____	1612	2350	1195
Miscellaneous productive livestock exp.	_____	840	1080	630
Labor	_____	2331	3360	1978
Real estate taxes	_____	1354	1782	1020
Personal property taxes	_____	257	317	203
General farm expense and telephone	_____	506	722	408
Interest on farm capital	_____	3717	5708	2594
Total expenses and net decreases	\$ _____	16318	23666	12056
Labor earnings	\$ _____	9750	19556	2657

* Cash receipts and expenses are adjusted for changes in inventory for each enterprise and for each item of expense in order to show total receipts and net increases, and total expenses and net decreases. The labor earnings are the same as those on page 4.

Table 4. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1966 (Operator's Share)

Items	Your farm		23 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			216	
Acres owned			216	
Acres rented				
Total farm capital	\$	\$	\$59389	\$63892
Stocks and bonds			2749	3415
Life insurance cash value			3124	3405
Notes and accounts receivable			1361	1756
Shares in cooperative organizations			949	1092
Outside real estate			57	662
Cash on hand and in bank			3892	3092
Household furnishing and clothing			2636	2754
Personal share of auto and truck			509	659
Farm dwelling			4796	4999
Total non-farm assets	\$	\$	20073	21834
Total assets	\$	\$	79462	85726
Mortgages on farm operated			18031	17968
Mortgages on other real estate			20	212
Chattel mortgages			3966	5164
Notes payable			5914	5603
Accounts payable			484	288
Total liabilities	\$	\$	28415	29235
Farmer's net worth	\$	\$	51047	56491
Change in net worth				+5444

Items	14 part-owners	
	Jan. 1	Dec. 31
Total acres in farm	345	
Acres owned	199	
Acres rented	146	
Total farm capital	\$67055	\$73198
Stocks and bonds	5994	6016
Life insurance cash value	2856	3179
Notes and accounts receivable	714	705
Shares in marketing organizations	1482	1602
Outside real estate	906	964
Cash on hand and in bank	2916	3005
Household furnishings and clothing	3502	3610
Personal share of auto and truck	725	604
Farm dwelling	3472	3378
Total non-farm assets	22567	23063
Total assets	89622	96261
Mortgages on farm operated	17825	16990
Mortgages on other real estate	354	354
Chattel mortgages	7814	6955
Notes payable	8321	9243
Accounts payable	749	735
Total liabilities	35063	34277
Farmer's net worth	54559	61984
Change in net worth		+7425

Table 5. Summary of Farm Earnings by Tenure, 1966 (Operator's Share)

Items	Your farm	36 owners	22 part owners
FARM RECEIPTS			
Dairy cattle sold	\$ _____	\$2607	\$3997
Dairy products sold	_____	9804	12860
Beef cattle sold (including feeders)	_____	1538	1688
Hogs sold	_____	8366	5496
Sheep and wool sold (including feeders)	_____	74	83
Horses sold	_____	12	-
Poultry sold (including turkeys)	_____	223	46
Eggs sold	_____	2188	587
Corn sold	_____	948	3640
Soybeans sold	_____	843	2367
Small grain sold	_____	221	391
Other crops sold	_____	1949	2553
Machinery and equipment sold	_____	217	236
Income from work off the farm	_____	517	708
Miscellaneous farm income	_____	414	643
(1) Total farm sales	\$ _____	29921	35299
(2) Increase in farm capital	_____	3969	6491
(3) Family living from the farm	_____	315	307
(4) Total farm receipts (1)+(2)+(3)	\$ _____	34205	42097
FARM EXPENSES			
Dairy cattle bought	\$ _____	\$ 165	\$ 289
Beef cattle bought (including feeders)	_____	1069	655
Hogs bought	_____	384	89
Sheep bought (including feeders)	_____	5	8
Horses bought	_____	1	-
Poultry bought (including turkeys)	_____	250	142
Miscellaneous livestock expense	_____	765	965
Feed bought	_____	4726	4576
Fertilizers bought	_____	1455	2109
Other crop expenses	_____	1330	1799
Custom work hired	_____	973	1325
Gas, oil and grease bought (farm share)	_____	972	1198
Repair and upkeep power and crop machinery	_____	1173	1312
Repair and upkeep real estate	_____	385	387
Repair and upkeep livestock equipment	_____	203	210
Wages of hired labor	_____	797	1593
Electricity expense (farm share)	_____	367	429
Real estate and personal property taxes	_____	1329	1248
Cash rent	_____	-	2128
General farm expense	_____	479	510
Interest paid	_____	1238	1701
Total cash operating expense	\$ _____	18066	22673
Trucks and autos bought (farm share)	_____	535	814
Crop and power machinery bought	_____	2271	3966
Livestock equipment bought	_____	568	566
Farm purchase and real estate improvements	_____	1460	1819
(5) Total farm purchases	\$ _____	22900	29838
(6) Decrease in farm capital	_____	-	-
(7) Interest on operator's farm capital	_____	1775	1803
(8) Unpaid family labor	_____	385	317
(9) Board furnished hired labor	_____	88	71
(10) Total farm expenses (5)+(6)+(7)+(8)+(9)	\$ _____	25148	32029
(11) Labor earnings (4)-(10)	\$ _____	9057	10068
(12) Return to capital & family labor (7)+(8)+(11)	\$ _____	11217	12188

Table 6. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1966

Items	Your farm	Average of 63 farms	13 high in return to cap. and fam. labor	13 low in return to cap. and fam. labor
Number of persons - family	_____	5.0	5.5	4.2
Number of adult equivalent - family	_____	4.2	4.6	3.5
other*	_____	.2	.2	.2
EXPENSES				
Food and meals bought	\$ _____	\$1316	\$1488	\$1207
Operating and supplies	_____	400	538	385
Furnishings and equipment	_____	428	801	174
Clothing and clothing materials	_____	493	558	334
Personal care and spending	_____	127	192	121
Education	_____	382	483	245
Recreation	_____	107	214	46
Gifts and special events	_____	218	405	126
Medical and hospital expenses	_____	677	792	526
Church and welfare	_____	274	514	159
Personal share of auto expense	_____	216	270	199
Upkeep on dwelling	_____	74	75	66
Pers. share of tel. & elec. expense	_____	160	164	138
Total cash living expense	\$ _____	4872	6494	3726
Personal share of new autos	_____	217	538	163
New dwelling	_____	108	342	76
Taxes	_____	648	1948	244
Life insurance	_____	514	648	355
Other savings and investments	_____	1078	2764	193
Total household and pers. cash expense	\$ _____	7437	12734	4757
Family living from the farm	_____	334	314	291
Total cash expenses and perquisites	\$ _____	7771	13048	5048
RECEIPTS				
Return to capital and family labor	\$ _____	\$12230	\$22169	\$5035
Income from outside investments	_____	308	626	199
Other personal income	_____	373	415	422

* Hired help or others boarded.

Table 7. Family Living from the Farm, 1966

Items	Your farm	Average of 147 farms	Your farm	Average of 147 farms
No. of adult equivalents:				
Family	_____	4.0		
Other*	_____	.1		
Whole milk	_____	1195 qts	\$ _____	\$ 98
Cream	_____	5 pts	_____	1
Cattle	_____	747 lbs	_____	152
Hogs	_____	216 lbs	_____	47
Sheep	_____	2 lbs	_____	-
Poultry	_____	32 lbs	_____	6
Eggs	_____	54 doz	_____	17
			\$ _____	\$321

* 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.¹ 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	17	_____	XXXXXXXXXX	\$4809
2	26	_____	XXXXXXXXXXXXXXXXXXXX	8599
3	38	_____	XXXXXXXXXXXXXXXXXXXX	8637
4	35	_____	XXXXXXXXXXXXXXXXXXXX	9268
5	16	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	13067
6 or 7	15	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	17749

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.

¹Pond, G.A. and Nodland, T.R., "Some Factors Affecting Earnings of Farmers in Southeastern Minnesota, 1950-1959." University of Minnesota Department of Agricultural Economics Report No. 261, December 1961.

Table 9. Measures of Farm Organization and Management Efficiency, 1966

Measures used in chart on page 11	Your farm	Average of 147 farms	29 most profitable farms	29 least profitable farms
Labor earnings	\$ _____	\$9750	\$19556	\$2657
Crop yields*	_____	100	105	88
Percent till. land in high ret. crops**	_____	58.9	63.1	54.4
Ret. for \$100 feed to prod. livestock***	_____	100	109	89
Prod. livestock units per 100 acres****	_____	38.5	52.6	32.8
Size of business - work units	_____	577	809	453
Work units per worker	_____	361	426	302
Power, mach., equip., & bldg. expense per work unit	\$ _____	\$13.76	\$14.77	\$13.23
Items related to some of the above measures:				
Index of return for \$100 feed from:				
Dairy cattle (see pages 16 and 17)	_____	100	106	88
Beef cattle - breed. herd (see p. 18)	_____	100	104	-
Beef cattle - feeders (see p. 18)	_____	100	89	-
Hogs (see page 15)	_____	100	106	85
Sheep - farm flock (see page 19)	_____	100	-	95
Chickens (see page 20)	_____	100	108	96
Number of animal units	_____	78.5	124.8	54.9
Work units on crops	_____	120	176	87
Work units on productive livestock	_____	426	614	349
Other work units	_____	31	19	17
Number of family workers	_____	1.3	1.4	1.3
Number of hired workers	_____	.3	.5	.2
Total number of workers	_____	1.6	1.9	1.5
Power & crop mach. exp. per work unit	\$ _____	\$9.76	\$10.57	\$9.24
Livestock equip. exp. per work unit	_____	.99	1.02	.85
Bldg. & fencing exp. per work unit	_____	3.01	3.18	3.14

* 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 147 farms included in the summary are located between the dotted lines across the center of the page.

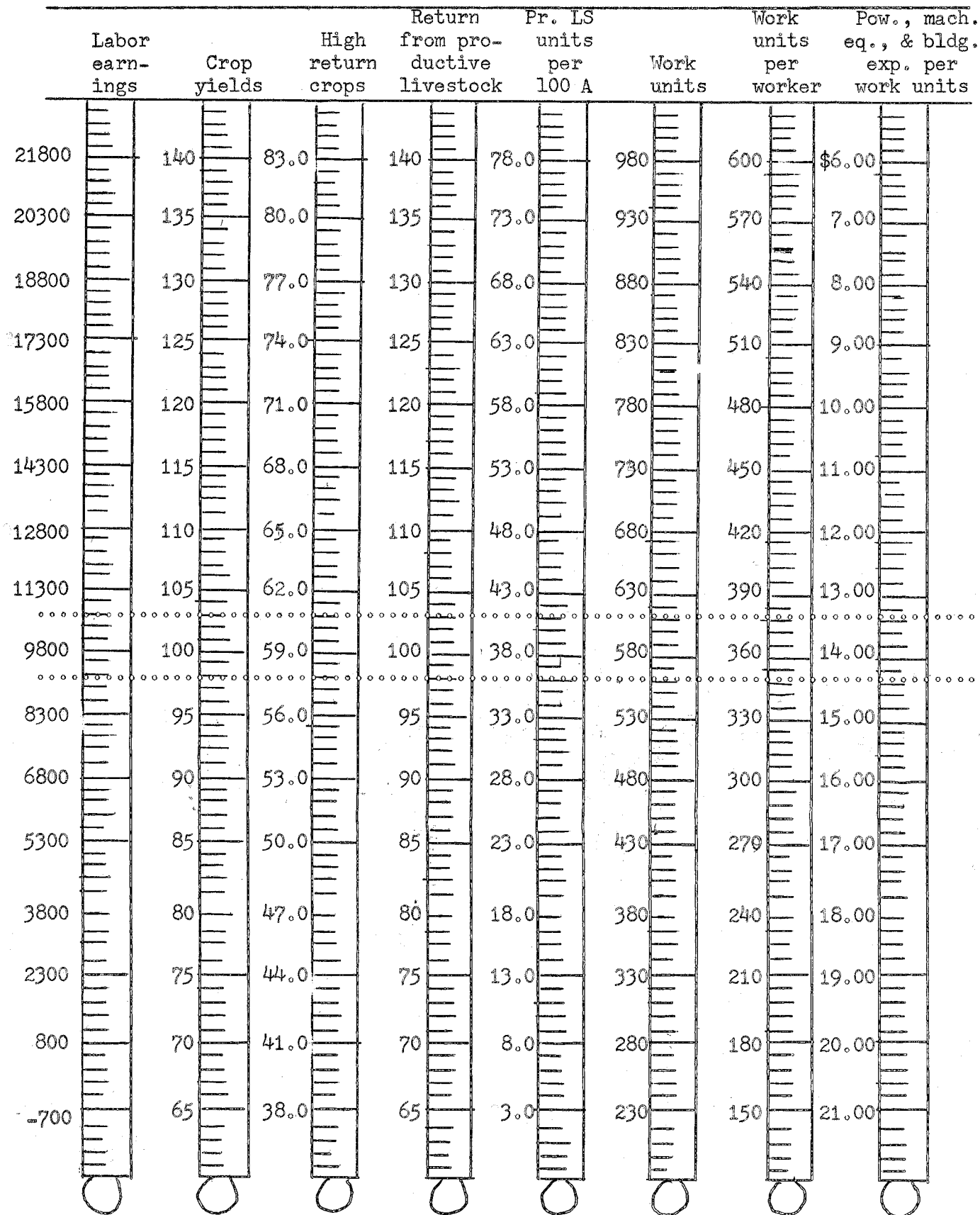


Table 10. Distribution of Acres in Farm, 1966

Items	Crop ratings*	Number growing this crop	Your farm	Average of 147 farms	Ave. per farm raising each crop
Canning peas	B	17	_____	3.8	32.7
Wheat	C	30	_____	2.7	13.2
Oats for silage	C	21	_____	2.1	15.0
Oats for grain	D	122	_____	22.0	26.5
Barley	D	11	_____	1.9	25.2
Rye or flax	D or C	2	_____	.2	28.0
Total small grains and peas		136	_____	32.7	35.4
Corn grain	A	146	_____	74.1	74.6
Soybeans for grain	B	84	_____	31.8	55.7
Sweet corn	B	14	_____	4.9	51.1
Corn silage	B	102	_____	10.3	14.9
Corn fodder		1	_____	-	6.0
Total cultivated crops		147	_____	121.1	121.1
Alfalfa hay	B	137	_____	36.8	39.4
Other legume hay	C	3	_____	.4	19.7
Other tame hay	D	2	_____	.2	11.3
Annual hay	D	14	_____	.7	7.7
Legume seed	D	2	_____	.1	10.0
Total tillable land in hay		138	_____	38.2	40.6
Alfalfa pasture	B	84	_____	12.3	21.5
Other tillable pasture	D	40	_____	2.6	9.4
Total tillable land in pasture		103	_____	14.9	21.2
Feed-grain program (diverted acres)	B	75	_____	19.2	37.5
Tillable land not cropped	D	20	_____	.8	5.9
Total tillable land		147	_____	226.9	226.9
Wild hay		9	_____	.5	8.6
Non-tillable pasture		85	_____	19.2	33.4
Timber not pastured		60	_____	8.7	21.2
Roads and waste			_____	9.7	
Farmstead			_____	7.8	
Total acres in farm			_____	272.8	
Percent land tillable			_____	83.4	
Percent tillable land in high return crops			_____	58.9	

* 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, 1966

Items	Your farm	Average of farms growing each crop
Canning peas, dollars	\$ _____	\$59.50
Wheat, bu.	_____	27.7
Oats for silage, tons	_____	9.7
Oats for grain, bu.	_____	61.7
Barley, bu.	_____	44.1
Corn grain, bu.	_____	91.0
Soybeans, bu.	_____	26.4
Sweet corn, tons	_____	5.5
Corn silage, tons	_____	15.0
Alfalfa hay, tons	_____	3.4
Other legume hay, tons	_____	2.5
Annual hay, tons	_____	2.7
Feed-grain program, dollars	\$ _____	\$58.10

Table 12. Average Price of Feeds, 1966

Items	Value	Items	Value
Ear corn, per bu.	\$1.19	Alfalfa hay, per ton	\$21.00
Oats, per bu.	.66	Timothy, per ton	12.20
Barley, per bu.	1.02	Wild hay, per ton	10.50
Wheat, per bu.	1.65	Corn silage, per ton	7.30
Soybean meal, per cwt.	5.25	Pasture, per mo. per cow	3.00

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in table 13. This differs from the "return over feed" shown in the enterprise statement in that it is the total for each class of livestock instead of a return "per head," "per unit," or "per 100 pounds." These data indicate the relative importance of different classes of livestock as a source of income and as a market for feed. The total return is the same as the return and net increases shown on page 5. The value of milk consumed by calves is included in the total returns from dairy cows and in the total feed cost for other dairy cattle. The value of milk consumed by calves is not included in either the total returns or the feed cost for "all dairy" cattle. The return over feed is not a net return, but rather the amount available from the gross income, after paying the feed bill, to cover the outlay for hired labor, power, equipment, taxes, insurance, interest, and veterinary bills, and to provide a return for the use of family labor and capital.

Table 13. Total Feed Costs and Returns from Your Livestock Enterprises, 1966

Items	Dairy cattle			Beef breeding herd
	Cows	Other	All	
Total returns	\$ _____	\$ _____	\$ _____	\$ _____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____

Items	Feeder Cattle	Hogs	Farm Flock of Sheep	Chickens
Total returns	\$ _____	\$ _____	\$ _____	\$ _____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____

Feed is the largest single item of cost for all classes of livestock. However, the proportion of the total cost represented by feed varies considerably between classes of livestock. Feed makes up approximately 45 percent of the total costs of maintaining dairy cattle and poultry, 50 percent in the case of a farm flock of sheep, and 75 to 90 percent for hogs, feeder cattle and feeder lambs. Consequently, it is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock enterprises in order to be able to cover all the costs other than feed.

Table 14. Feed Costs and Returns from Hogs, 1966

Items	Your farm	Average of 84 farms	71 farms with breeding stock			13 farms with purchased feeder pigs
			Average of 71 farms	14 farms highest in returns above feed	14 farms lowest in returns above feed	
Feed per cwt. hogs produced, lbs.:						
Corn	_____	340	350	292	414	291
Small grain	_____	52	55	27	99	33
Commercial feeds	_____	73	74	68	80	70
Total concentrates	_____	465	479	387	593	394
Feed cost per cwt. produced	\$ _____	\$12.69	\$12.90	\$10.54	\$15.84	\$11.51
Net increase in value per cwt. produced	_____	20.54	21.12	22.32	20.01	17.35
Return above feed cost per cwt. prod.	_____	7.85	8.22	11.78	4.17	5.84
RETURNS FOR \$100 OF FEED	\$ _____	\$167	\$169	\$214	\$128	\$159
Price received per cwt. sold	\$ _____	\$23.06	\$22.97	\$23.44	\$22.35	\$23.62
Total number of litters raised	_____	35.6	42.1	66.4	21.4	-
Number of pigs born per litter	_____	8.9	9.0	9.4	7.9	-
Number of pigs weaned per litter	_____	7.3	7.3	7.9	6.2	-
Number of feeder pigs purchased	_____	25	4	-	-	143
Total weight of feeders purchased	_____	874	128	-	-	4949
Price paid per feeder pig	_____	\$18.75	\$17.66			\$19.15
Pounds of hogs produced	_____	64341	70968	117491	27619	28128

Table 15. Factors of Cost and Returns from Dairy Cows, 1966

Items	Your farm	Average of 109 farms	22 farms highest in butterfat per cow	22 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	401	501	295
Pounds of milk per cow*	_____	10729	13356	7585
Percent of butterfat in milk	_____	3.8	3.7	3.9
Price received per pound BF sold (¢)	_____	111.2	112.1	107.7
Price received per cwt. milk sold*	\$ _____	\$4.17	\$4.12	\$4.21
Feeds per cow, lbs.:				
Corn	_____	3124	3932	2701
Small grain	_____	757	1005	584
Commercial feeds	_____	1001	609	501
Legume hay	_____	5320	6014	3965
Other hay	_____	202	183	142
Total concentrates	_____	4882	5546	3786
Total hay	_____	5522	6197	4107
Silage	_____	8771	9502	7989
Feed cost per cow:				
Concentrates	\$ _____	\$119.34	\$134.48	\$ 94.76
Roughages	_____	88.31	97.69	71.31
Pasture	_____	8.96	7.26	10.54
TOTAL FEED COST	\$ _____	\$216.61	\$239.43	\$176.61
Value of produce per cow:				
Dairy product sales	\$ _____	\$434.93	\$537.21	\$308.10
Dairy produce used in home	_____	4.60	4.11	4.67
Milk fed to livestock	_____	3.87	4.41	4.43
Net increase in value of cows	_____	3.22	16.20	-.64
TOTAL VALUE PRODUCED	\$ _____	\$446.62	\$561.93	\$316.56
RETURNS ABOVE FEED COST PER COW	\$ _____	\$230.01	\$322.50	\$139.95
RETURNS FOR \$100 OF FEED	\$ _____	\$211	\$242	\$182
Feed cost per pound BF (cents)	_____	54.0	47.8	59.9
Number of cows**	_____	31.5	34.6	28.3

* Average for farms selling whole milk.

** 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, 1966

Items	Your farm	Average of 109 farms	22 farms highest in butterfat per cow	22 farms lowest in butterfat per cow
Feed per head, lbs.:				
Concentrates	_____	979	1100	987
Hay	_____	1959	1921	1883
Silage	_____	2785	2861	2950
Skim milk	_____	7	-	34
Whole milk	_____	104	97	172
TOTAL FEED COSTS PER HEAD	\$ _____	\$64.53	\$66.97	\$64.74
Net increase in value of other dairy cattle	\$ _____	\$103.37	\$122.98	\$92.90
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$38.84	\$56.01	\$28.16
RETURNS FOR \$100 OF FEED	\$ _____	\$172	\$194	\$148
Number of head of other dairy cattle	_____	39.7	49.6	26.9

Table 17. Feed Costs and Returns from All Dairy Cattle, 1966

Items	Your farm	Average of 109 farms	22 farms highest in butterfat per cow	22 farms lowest in butterfat per cow
Feed per cow, lbs.:				
Concentrates	_____	6372	7611	5339
Hay	_____	8092	9222	6215
Silage	_____	12669	14754	11529
TOTAL FEED COSTS PER COW	\$ _____	\$302.38	\$350.11	\$255.18
Value of produce per cow:				
Dairy products	\$ _____	\$439.54	\$541.32	\$312.77
Net increase in value of dairy cattle	_____	146.37	225.56	118.71
TOTAL VALUE PRODUCED	\$ _____	\$585.91	\$766.88	\$431.48
RETURNS ABOVE FEED PER COW	\$ _____	\$283.53	\$416.77	\$176.30
RETURNS PER \$100 OF FEED	\$ _____	\$199	\$225	\$173

Table 18. Feed Costs and Returns from Beef Cattle, 1966

Items	Your farm	Average of all farms
Beef breeding herd: No. of farms:		8
Feed per animal units, lbs.:		
Concentrates	_____	731
Legume hay	_____	3112
Other hay	_____	-
Silage	_____	3844
Feed cost per animal unit:		
Concentrates	\$ _____	\$19.11
Roughages	_____	46.74
Pasture	_____	21.14
TOTAL FEED COST	\$ _____	\$86.99
TOTAL VALUE PRODUCED PER ANIMAL UNIT	\$ _____	\$110.40
RETURNS ABOVE FEED COST PER ANIMAL UNIT	\$ _____	\$23.41
RETURNS FOR \$100 OF FEED	\$ _____	\$132
Pounds of beef produced	_____	13751
Number of cows and herd bulls	_____	31.7
Number of other beef cattle	_____	30.2
Number of animal units in the herd	_____	34.4
Feeder cattle: No. of farms:		24
Feed per cwt. beef produced, lbs.:		
Corn	_____	603
Small grain	_____	23
Commercial feeds	_____	52
Legume hay	_____	348
Other hay	_____	7
Total concentrates	_____	678
Total hay and fodder	_____	355
Silage	_____	812
Feed cost per cwt. beef produced:		
Concentrates	\$ _____	\$16.18
Roughages	_____	6.66
Pasture	_____	.31
TOTAL FEED COST	\$ _____	\$23.15
NET INCREASE IN VALUE OF FEEDERS	\$ _____	24.18
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$ _____	\$1.03
RETURNS FOR \$100 OF FEED	\$ _____	\$110
Price paid per cwt. beef bought	\$ _____	\$25.26
Price received for feeder cattle sold	\$ _____	22.78
Number of animal units	_____	46.4
Pounds of beef produced	_____	27082

Table 19. Feed Costs and Returns from a Farm Flock of Sheep, 1966

Items	Your farm	Average of 13 farms
Feeds per ewe, lbs.:*		
Concentrates	_____	226
Legume hay	_____	589
Other hay	_____	20
Silage	_____	67
Feed cost per ewe:		
Concentrates	\$ _____	\$5.65
Roughages	_____	6.65
Pasture	_____	3.26
TOTAL FEED COSTS	\$ _____	\$15.56
Value of produce per ewe:		
Wool	\$ _____	\$7.19
Net increase in value of sheep	_____	17.01
TOTAL VALUE PRODUCED	\$ _____	\$24.20
RETURNS ABOVE FEED COST PER EWE	\$ _____	\$8.64
RETURNS FOR \$100 OF FEED	\$ _____	\$167
Price per cwt. of lambs sold	\$ _____	\$23.95
Price per pound of wool sold (cents)	_____	68.1
Pounds of wool per sheep sheared	_____	9.5
Percent lamb crop**	_____	101
Percent death loss**	_____	5.3
Pounds of sheep produced	_____	3575
Number of head of ewes	_____	42

* Includes feeds and returns from lambs.

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

Table 20. Feed Costs and Returns from Chickens, 1966*

Items	Your farm	Average of 25 farms	12 farms highest in return above feed	12 farms lowest in return above feed
Feed per hen, lbs.:				
Grain	_____	80	76	83
Commercial feeds	_____	38	34	41
Total concentrates	_____	118	110	124
TOTAL FEED COST PER HEN	\$ _____	\$3.71	\$3.52	\$3.84
Value of produce per hen:				
Eggs sold and used in house	\$ _____	\$5.52	\$6.19	\$4.83
Net increase in value of chickens	_____	-.47	-.17	-.79
TOTAL VALUE PRODUCED	\$ _____	\$5.05	\$6.02	\$4.04
RETURNS ABOVE FEED COST PER HEN	\$ _____	\$1.34	\$2.50	\$.20
RETURNS FOR \$100 OF FEED	\$ _____	\$141	\$176	\$108
Price rec'd per dozen eggs sold (¢)	_____	33.1	33.9	32.4
Eggs laid per hen	_____	198	219	179
Ave. number hens on farm during year	_____	1239	2008	488
Percent of hens that are pullets	_____	70	68	71
Percent death loss of hens	_____	7	7	7
Number of chicks bought:				
Pullets	_____	966	1898	115
Cockerels	_____	39	8	32
Number of pullet hens bought	_____	394	409	358
Number of old hens bought	_____	8	-	17

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

EXPLANATION OF "WORK UNITS"

The total "work units" for any one farm is a measure of the size of that farm business. A work unit as used in this report is the average accomplishment of a farm worker, in a ten hour day, working on crops and productive livestock at 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 21.

Table 21. Number of Work Units for Each Class of Livestock and Each Acre of Crop

Items	Number of work units	Items	Number of work units
Dairy cows	10.0 per cow	Small grain	.5 per acre
Other dairy cattle	3.5 per an. unit*	Sugar beets	1.5 per acre
Beef breeding herd	3.5 per an. unit*	Sweet corn	.7 per acre
Feeder cattle	.25 per 100 lbs.	Corn husked	.7 per acre
Sheep, farm flock	1.5 per an. unit*	Corn hogged	.4 per acre
Sheep, feeders	.3 per 100 lbs.	Corn shredded	1.5 per acre
Hogs	.2 per 100 lbs.	Corn silage	1.0 per acre
Turkeys	.5 per 100 lbs.	Corn fodder	1.0 per acre
Hens	20.0 per 100 hens	Alfalfa hay	.6 per acre
Canning peas	.5 per acre	Soybean hay	.8 per acre
Soybeans for grain	.5 per acre	Other hay crops	.4 per acre
		Labor off the farm	10.0 per \$12

* 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 22. Summary by Years

Items	Average 1928-29	Average 1930-34	Average 1935-39	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	1964	1965	1966
Number of farms	148	140	149	177	169	162	165	158	155	149	147
Acres in farm	170	199	218	227	223	226	235	256	264	269	273
Crop acres in farm	116	136	147	148	148	155	162	178	186	188	192
Farm inventory	\$24574	\$19851	\$20286	\$25912	\$31402	\$42663	\$49342	\$60988	\$66076	\$68438	\$74331
Farm earnings											
FARM EXPENSES											
Cattle bought	\$ 141	\$ 83	\$ 213	\$ 441	\$ 485	\$ 902	\$1148	\$1450	\$1069	\$ 852	\$1158
Hogs bought	85	52	72	154	194	202	258	386	298	383	377
Sheep bought	6	14	94	64	64	35	143	88	30	4	5
Poultry bought	37	41	80	142	176	154	124	154	176	102	186
Horses bought	36	33	43	32	14	6	6	2	3	2	1
Misc. livestock expense	66	64	94	124	228	359	530	731	778	807	855
Misc. crop expense	186	160	222	301	701	1010	1528	2011	2569	2851	3452
Feed bought	440	313	535	1273	1954	2241	2747	3735	3887	3957	4812
Custom work hired	-	-	-	165	401	552	745	857	951	962	1083
Power, mach. & equip. (new & upkeep)	661	498	907	1253	2687	3609	4261	4764	5217	5761	7279
Buildings (new)	130	81	245	331	778	983	982	1229	1492	1475	1256
Buildings (upkeep)	52	32	79	188	323	368	320	344	315	378	428
Hired labor	272	243	398	585	849	857	878	922	972	997	1079
Taxes and insurance	298	313	281	303	449	736	1001	1497	1683	1742	1611
General farm expense*	30	28	35	52	93	136	176	213	236	243	506
Total farm purchases	\$2440	\$1955	\$3298	\$5408	\$9396	\$12150	\$14847	\$18383	\$19676	\$20516	\$24088
Decrease in farm capital	-	230	-	-	-	-	-	-	274	-	-
Board to hired labor	102	87	145	158	174	166	134	101	101	84	71
Interest on farm capital	1228	992	1014	1296	1570	2133	2467	3049	3304	3422	3717
Unpaid family labor	358	261	239	326	511	496	540	629	705	836	836
Total farm expense	\$4128	\$3525	\$4696	\$7188	\$11651	\$14945	\$17988	\$22162	\$24060	\$24858	\$28712

* Insurance included with general farm expense.

Table 22. Summary by Years (continued)

Items	Average 1928-29	Average 1930-34	Average 1935-39	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	1964	1965	1966
FARM RECEIPTS											
Cattle	\$ 753	\$ 431	\$ 713	\$1335	\$2022	\$2981	\$3532	\$4749	\$4803	\$4669	\$4894
Dairy products	1662	1188	1451	2138	4080	4702	6032	8105	9370	9582	10455
Hogs	1164	793	1074	2517	3598	4253	4653	5961	5745	6360	8568
Sheep and wool	52	60	200	186	232	171	272	222	181	89	98
Poultry	140	166	381	629	672	354	212	88	64	135	181
Eggs	275	243	372	751	1319	1297	1075	1015	1141	901	1316
Horses	30	27	55	34	20	14	8	4	6	1	5
Corn	37	62	153	121	335	766	1926	1594	1778	1649	1926
Small grain	241	177	357	278	659	495	481	624	531	446	371
Other crops	163	155	174	455	819	853	1334	2181	3107	3421	3932
Income from labor off farm	102	118	168	141	178	182	269	239	325	343	362
Miscellaneous	134	212	477	536	528	684	729	882	1135	1005	1027
Total farm sales	\$4753	\$3632	\$5575	\$9121	\$14462	\$16752	\$20523	\$25664	\$28186	\$28601	\$33135
Increase in farm capital	617	-	524	921	1411	1905	941	601	-	3604	5006
Family living from farm	325	232	273	566	715	620	304	307	298	293	321
Total farm receipts	\$5695	\$3864	\$6372	\$10608	\$16588	\$19277	\$21768	\$26572	\$28484	\$32498	\$38462
Total farm expenses	4128	3525	4696	7188	11651	14945	17988	22162	24060	24858	28712
Labor earnings	1567	339	1676	3420	4937	4332	3780	4410	4424	7640	9750
MISCELLANEOUS ITEMS											
Yield per acre:											
Corn (bu.)	44.8	43.4	47.2	55.7	47.6	59.8	73.1	72.4	63.9	72.1	91.0
Barley (bu.)	36.0	26.2	28.7	24.8	30.8	29.1	41.4	44.9	47.9	54.9	44.1
Oats (bu.)	46.0	40.0	43.4	44.2	48.2	32.8	58.3	58.3	61.3	69.7	61.7
Alfalfa (tons)	3.0	2.3	2.3	2.4	2.3	2.7	2.9	3.0	2.7	2.7	3.4
Percent high return crops	31.9	35.8	41.0	43.3	50.9	62.8	62.7	60.1	59.1	58.6	58.9
Animal units lvstk. per 100 A	19.2	20.6	19.3	24.5	22.8	28.9	33.7	36.4	36.3	33.3	38.5
Number of work units	599	747	777	670	601	535	486	548	593	561	577
Work units per worker	310	338	341	305	300	284	274	318	349	330	361
Expense per work unit	\$1.76	\$1.26	\$1.37	\$2.35	\$4.69	\$8.18	\$10.81	\$11.61	\$10.94	\$12.94	\$13.76
Number of milk cows	14.2	17.8	17.8	17.6	17.0	17.7	19.8	22.2	24.5	24.0	23.4

Table 22. Summary by Years (Concluded)

Items	Average 1928-29	Average 1930-34	Average 1935-39	Average 1940-44	Average 1945-49	Average 1950-54	Average 1955-59	Average 1960-64	1964	1965	1966
MISCELLANEOUS ITEMS (Cont)											
No. of litters of pigs	9.3	10.8	9.5	14.4	11.7	13.5	17.3	19.4	17.8	17.2	20.5
Pounds of hogs produced	12706	15153	13438	21586	18505	17579	28272	36619	37318	30933	36834
Pounds of feeder cattle prod.	*	*	*	1534	813	2118	3529	5573	4947	3955	4469
Number of head of ewes	*	*	*	10	7	7	5	4	4	4	4
Number of hens	136	169	182	222	235	219	209	197	231	191	218
Pounds of BF per dairy cow	244	240	238	252	278	308	342	375	403	415	401
Pigs weaned per litter	6.3	6.1	6.4	6.2	6.5	6.7	6.9	7.1	7.3	7.5	7.3
Number of eggs laid per hen	95	114	131	145	177	194	203	205	207	186	198
PRICE RECEIVED PER:											
Cwt. of milk	*	*	*	*	*	*	*	\$3.48	\$3.46	\$3.58	\$4.17
Pound BF as cream	\$.52	\$.28	\$.34	\$.47	\$.80	\$.75	\$.66	-	-	-	-
Cwt. hogs sold	8.92	4.98	8.26	10.93	19.36	19.54	15.99	15.55	14.69	20.32	23.06
Cwt. feeder cattle sold	*	*	*	11.55	20.56	26.22	21.19	22.61	19.96	21.67	25.26
Pound wool sold	.36	.16	.25	.39	.43	.58	.50	.62	.64	.58	.68
Dozen eggs sold	.28	.16	.19	.27	.39	.37	.31	.28	.27	.26	.33
RETURN ABOVE FEED COST PER:											
Dairy cow	\$76.50	\$28.15	\$49.95	\$81.83	\$161.27	\$156.86	\$162.86	\$183.05	\$191.12	\$199.71	\$230.01
Cwt. hogs produced	1.50	.48	2.98	3.93	6.09	6.47	4.62	4.57	4.09	12.13	7.85
Ewe	*	*	*	6.97	11.16	9.47	6.18	5.40	7.35	8.85	8.64
Hen	1.82	.99	1.12	1.82	2.11	1.60	1.39	1.27	1.15	.39	1.34
Cwt. feeder cattle prod.	*	*	*	2.98	6.40	7.37	4.76	1.78	-.16	7.06	1.03
FEED COST PER:											
Dairy cow	\$69.50	\$47.30	\$44.93	\$63.13	\$123.22	\$142.59	\$147.05	\$169.62	\$187.27	\$200.19	\$216.61
Cwt. hogs produced	7.66	4.21	5.10	7.52	13.23	12.95	10.65	10.65	10.18	11.39	12.69
Ewe	*	*	*	7.92	8.07	10.73	11.17	13.46	12.98	16.00	15.56
Hen	1.62	1.13	1.57	2.38	4.39	4.76	3.78	3.28	3.07	3.31	3.71
Cwt. feeder cattle prod.	*	*	*	11.80	23.08	19.46	18.83	19.10	18.97	20.44	23.15
PRICE OF FEED:											
Corn (per bu.)	\$.70	\$.45	\$.59	\$.71	\$1.29	\$1.31	\$1.11	\$.99	\$1.06	\$1.13	\$1.19
Barley (per bu.)	.60	.42	.49	.59	1.31	1.16	.92	.91	.90	.98	1.02
Oats (per bu.)	.48	.26	.28	.46	.75	.74	.59	.61	.63	.63	.66
Oilmeal (per cwt.)	3.00	1.96	2.12	2.30	3.84	4.19	3.73	4.36	4.60	4.60	5.25
Alfalfa (per ton)	14.75	11.10	9.30	9.90	18.40	18.30	18.20	19.40	20.00	23.00	21.00

* Information not available.

Footnote for pages 22, 23 and 24.

The values of farm real estate in 1931 were reduced approximately 25 percent from 1928-30 values. The values in 1932 were reduced about 29 percent from the 1931 values. Only land was affected by the reduction in 1931, but in 1932 buildings and improvements were cut 25 percent. In 1936 the values of land were adjusted upward 10 percent. The value of dairy cows was also adjusted downward in 1932 and upward in 1936. The capital losses were not included in the inventory decreased in the financial statement but the changes in valuation resulted in variations in the interest charge. No changes in the basis of inventory valuations were made in the years 1933 to 1935 and 1937 to 1965.

The charges for unpaid family labor and board for hired labor were also changed from year to year. The rates for the period 1928 to 1966 are as follows:

Year	Unpaid family labor	Board for hired labor	Year	Unpaid family labor	Charge for 2nd operator	Board for hired labor
1928-30	\$60	\$20	1944	\$85	\$85	\$25
1931	40	15	1945	90	90	25
1932-34	30	10	1946	100	100	30
1935	40	15	1947-55	125	125	36
1936	43	18	1956-60	135	135	38
1937-40	45	18	1961-64	150	200	40
1941	50	20	1965	160	275	45
1942	60	25	1966	160	300	45
1943	75	25				

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 expense 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. Also, the value of the house, which had been included in the investment of farm buildings since 1940, was omitted from all the records except the net worth statements.

These adjustments should be considered in comparing 1966 results with previous years.