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**UNIVERSITY OF MINNESOTA**  
**Department of Agriculture**  
**and**  
**UNITED STATES DEPARTMENT OF AGRICULTURE**  
**Bureau of Agricultural Economics**  
**and the**  
**County Extension Services of**  
**Dakota, Dodge, Freeborn, Goodhue, Le Sueur, Mower, Nicollet, Olmsted,**  
**Rice, Scott, Steele, Wabasha, Waseca, and Winona Counties**  
**Cooperating**

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**Annual Report**  
**of the**  
**Southeastern Minnesota**  
**Farm Management Service**  
**1945**

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**Cooperator:** \_\_\_\_\_

**Mimeographed Report No. 156**  
**Division of Agricultural Economics**  
**University Farm**  
**St. Paul 8, Minnesota**  
**April 1946**

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Eighteenth Annual Report of the Farm Management Service of Dakota, Dodge, Freeborn, Goodhue, LeSueur, Mower, Nicollet, Olmsted, Rice, Scott, Steele, Wabasha, Waseca, and Winona Counties for the Year 1945.

Prepared by T. R. Nodland and G. A. Pond

## INTRODUCTION

The Division of Agricultural Economics and the Division of Agricultural Extension of the University of Minnesota, the Bureau of Agricultural Economics of the United States Department of Agriculture, and the county extension services of Dodge, Freeborn, Goodhue, Rice, Steele and Waseca counties organized late in 1927 the Farm Management Service Project, to operate in the above names counties, beginning January 1, 1928. Additional counties have since been added. This farm management service is offered to farmers who desire to keep farm records, and to have these records summarized and analyzed in connection with those of other farmers. Each farmer who cooperates in this service 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.

General administration of this project, analysis of the records and preparation of the reports is handled by the Division of Agriculture Economics under the direction of G. A. Pond and T. R. Nodland. Extension work in connection with the project is handled by S. B. Cleland and J. B. McNulty of the Agricultural Extension Division. Glen Myers is the field agent for this project. At the end of the year, S. A. Engene, G. E. Toben, and Jack Steeves of the Division of Agricultural Economics aided in closing the records. County agricultural extension agents who cooperate in this project include H. Lawrenz, C. O. Quie, V. Sander, W. M. Lawson, J. B. Nelson, G. J. Kunau, R. D. Evans, F. L. Liebenstein, F. E. Wetherill, Alfred Halvorson, Milton Hoberg, Don Marti, C. Graham, J. R. Gute, O. Nelson, C. F. Murphy, and Geo. Chambers.

The Southeast Minnesota Farm Management Association was organized in 1939 by the farmers cooperating in the S. E. Farm Management Service. This association now represents its membership as an additional cooperating agency to determine policies and especially to maintain the field organization and membership. Officers for 1945 were:

President, Wm. A. Benett, Hastings, Dakota county;  
Vice-President, Dwight Ericson, Goodhue, Goodhue county;  
Secretary-Treasurer, Emery Lindesmith, Owatonna Steele county.

The board of directors included these officers and also the following: A.M. Falkenhagen, Dodge county; S. L. Moore, Freeborn county; E. J. Braun, Le Sueur county; Carl Kehret, Mower county; Charles Passe, Olmsted county; Donald Finger, Rice county; Herman Krueger, Scott county; Harvey Carlton, Wabasha county; C. L. Sauffeur, Waseca county; and Homer Goss, Winona county.

In addition to records kept by members of the S. E. Minnesota Farm Management Service, 8 records from farmers in a detailed accounting study in Nicollet county are included. Since these farms are in the same area and of the same type as the others and since the same type of records are available they have been combined with those of the regular service to increase the size of the sample and make the comparison more significant. These records have been kept under the general direction of S. A. Engene of the Division of Agricultural Economics and serviced by V. G. Dose.

The following tabulation shows by counties the number of records submitted in 1945:

Dakota	7	Mower	11	Steele	16
Dodge	13	Nicollet	14	Wabasha	9
Freeborn	20	Olmsted	10	Waseca	20
Goodhue	21	Rice	8	Winona	10
LeSueur	5	Scott	10	Total	<u>174</u>

The table on page 4 and succeeding pages show 170 farms. Four farms have been omitted from all the averages in the tables because they differed so widely in type from the others or the records were not sufficiently complete for a full analysis.

#### TYPE OF FARMING

Most of the farms are livestock farms on which dairy cattle, hogs and poultry are the principal sources of income. Although some milk and cream are re-tailed in cities, and some milk is sold for shipment to the Twin Cities, most of the dairy products are sold to creameries and cheese factories. The principal crops grown are corn, oats, barley and hay. These crops are raised primarily as livestock feed, although a seasonal surplus may be sold. Wheat, sweet corn, canning peas, flax and seed crops are grown to a limited extent as cash crops.

#### WEATHER, SOIL AND TOPOGRAPHY

Weather conditions in March were especially favorable for early spring farm activities. By the end of March considerable seeding of small grains had been done in the extreme southern counties. April on the other hand was cooler and wetter than normal. Field work and growth of vegetation was retarded by cold and snow. May, June and July were also cooler and wetter than normal. The planting of corn and haying were delayed. In the southern and western portions of the area it was necessary to replant some corn. Small grains, meadows and pastures were good. There was considerable loss from hail storms in Steele and Waseca counties.

During much of the remainder of the year precipitation was below normal. Corn made rapid progress during September but killing frosts were general on the 28th. Consequently, much of the corn was of poor quality and high in moisture content. Weather conditions in October were ideal for harvesting late crops and for drying the high moisture corn and soybeans.

There is some variation in soil conditions and topography among these counties. The soil varies from sandy loam to a rich black clay loam; the latter type predominates in this area. Some of the farms are level, all tillable and well drained, but most of them are gently rolling with some land too rough or too wet to cultivate. Goodhue, Wabasha and Winona counties have more rolling land than the other counties. Much of the level land is tilled to make possible its cultivation in wet years. However, on a number of farms, there is considerable land which is poorly drained. In much of Goodhue, Dodge, Mower, Olmsted and Winona counties and in the eastern part of Dakota, Rice and Steele counties, the soil is lime deficient and applications of lime are necessary in order to grow alfalfa and sweet clover. In the remainder of the area it is not necessary, as a rule, to apply lime in order to grow these two crops.

Table 1. Monthly and Annual Precipitation

	Rochester		Albert Lea		Faribault		St. Peter	
	Precip- itation	Depart- ure from normal	Precip- itation	Depart- ure from normal	Precip- itation	Depart- ure from normal	Precip- itation	Depart- ure from normal
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
January	0.65	-0.45	0.55	-0.26	0.68	0.00	0.84	-0.04
February	1.74	+0.92	1.93	+1.02	1.68	+0.99	1.27	+0.57
March	2.53	+1.21	2.87	+1.64	2.90	+1.79	2.07	+0.80
April	4.54	+2.08	4.68	+2.28	3.78	+1.87	3.47	+1.26
May	7.28	+3.48	8.50	+4.67	7.10	+3.90	4.23	+0.91
June	3.69	-0.90	4.22	-0.36	5.83	+1.46	8.37	+3.66
July	6.08	+2.92	4.20	+0.72	6.65	+3.30	5.83	+2.43
August	1.86	-1.59	5.47	+1.82	2.55	-0.86	3.87	+0.41
September	2.18	-1.30	3.40	-0.33	1.99	-1.46	3.46	+0.04
October	0.50	-1.60	0.37	-1.76	0.47	-1.61	0.28	-1.91
November	1.17	-0.40	0.84	-0.63	0.82	-0.52	1.42	+0.13
December	1.94	+1.02	1.68	+0.73	1.89	+1.21	2.21	+1.36
1945 Total	34.16	+5.39	38.71	+9.54	36.34	+10.07	37.32	+9.62
1944 Total	22.47	-6.30	30.95	+1.78	31.84	+5.57	30.58	+2.88
1943 Total	23.50	-5.27	37.78	+8.61	28.12	+1.85	35.26	-7.56
1942 Total	41.68	+12.91	31.22	+2.05	28.57	+2.30	27.94	+0.24
1941 Total	29.80	+1.03	36.35	+7.18	23.08	-3.19	29.95	+2.25
1940 Total	28.87	+0.10	27.81	-1.36	23.34	-2.93	38.39	+10.69
1939 Total	21.92	-6.85	19.74	-9.43	16.28	-9.99	22.49	-5.21
1938 Total	43.69	+14.92	38.04	+8.87	27.14	+0.87	30.81	+3.11

#### RECORDS KEPT

The records kept by the cooperators included inventories at the beginning and end of the year, cash receipts and expenses, a report of feed fed to the various classes of livestock, and a record of farm produce used by the farm family. Supplementary information was also secured during the year regarding crop and livestock production and practices.

The cooperators were assisted and supervised in keeping their records by the field agent, Glen Myers, who visited each farm several times during the year. In addition to securing the supplementary information, the field agent's duties included numerous services, such as, securing a monthly list of prices of farm products prevailing in the area, helping the farmer place uniform values on real estate and equipment, checking the cash and feed records, and answering any questions that might arise as to how the entries should be made in the account book. The supervision resulted in uniformity in the type of records secured, in the inventory valuations and in the prices at which feed and farm produce were charged.

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 should 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 2. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1945 (Operator's Share)

	Your Farm		41 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			187.3	
Owned			187.3	
Rented			-	
Total farm capital			\$24138	\$23949
Accounts receivable			125	177
Stocks and bonds			2619	3594
Life insurance			1078	1328
Outside real estate			342	353
Other outside investments			134	151
Total outside investments			4173	5426
Cash on hand and in bank			1035	1291
Other household & personal assets			912	888
Total cash, household & personal assets			1947	2179
TOTAL ASSETS			30383	31731
Federal Land Bank Mortgage			1443	1112
Other mortg. on land operated			2163	2012
Mortgages on other real estate			112	109
Production Credit Association			92	44
Other chattel mortgages			135	82
Notes payable			773	533
Accounts payable			60	70
TOTAL LIABILITIES			4778	3962
Farmer's net worth			25605	27769
Gain in net worth				+2164
	23 Part Owners*		22 Renters**	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	229.1		196.6	
Owned	150.5		-	
Rented	78.6		196.6	
Total farm capital	\$23514	\$23551	\$7573	\$7939
Accounts receivable	167	190	325	402
Stocks and bonds	1150	1556	985	1345
Life insurance	613	732	438	478
Outside real estate	-	517	712	712
Other outside investments	112	158	101	171
Total outside investments	1875	2963	2236	2706
Cash on hand and in bank	346	571	272	929
Other household & personal assets	1215	1159	918	946
Total cash, household & personal assets	1561	1730	1190	1875
TOTAL ASSETS	27117	28434	11324	12922
Federal Land Bank Mortgage	2784	2312	-	-
Other mortg. on land operated	1766	1416	-	-
Mortgages on other real estate	-	126	179	179
Production Credit Association	21	86	-	-
Other chattel mortgages	141	91	301	214
Notes payable	720	881	1083	945
Accounts payable	449	366	118	278
TOTAL LIABILITIES	5881	5278	1681	1616
Farmer's net worth	21236	23156	9643	11306
Gain in net worth		+1920		+1663

\*15 rented for cash, 3 cash and crop share, 3 crop share and 2 livestock share.

\*\*10 rented for cash, 4 cash and crop share and 8 livestock share.

Table 3. Summary of Farm Earnings by Tenure, 1945 (Operator's Share)

	Your farm	41 owners	23 owners	22 renters
<b>FARM EXPENSES</b>				
Dairy and dual purpose cows bot.	\$	\$ 53	\$ 358	\$ 61
Other dairy and dual pur.cattle bot.		94	227	130
Beef cattle bot.(including feeders)		22	65	50
Hogs bot.		117	144	144
Sheep bot. (including feeders)		23	5	15
Poultry bot. (including turkeys)		140	221	262
Horses bot.		29	15	10
Misc. livestock expenses		140	178	104
Misc. crop expenses		492	413	260
Feed bot.		1366	2074	1713
Custom work hired		287	288	228
Mech. power mach.(farm share) (new)		202	324	74
Mech. power mach.(farm share) (upkeep)		182	203	138
Mech. power (farm share) (gas,oil,etc.)		424	525	378
Crop and general mach. (new)		309	472	367
Crop and general mach. (upkeep)		117	176	120
Livestock equipment (new)		116	108	88
Livestock equipment (upkeep)		67	93	112
Buildings and fencing (new)		224	412	32
Buildings and fencing (upkeep)		196	235	45
Hired labor		531	732	369
Taxes (real estate & pers. property)		244	184	30
General farm and insurance		110	114	68
Cash rent		-	212	649
Interest paid		182	279	73
(1) Total farm purchases	\$	\$ 5667	\$ 8057	\$ 5520
(2) Decrease in farm capital		189	-	-
(3) Board furnished hired labor		102	150	60
(4) Interest on farm capital		1020	898	315
(5) Unpaid family labor		428	311	164
(6) Total farm exp.(Sum of (1) to (5))	\$	\$ 7406	\$ 9416	\$ 6059
<b>FARM RECEIPTS</b>				
Dairy and dual purpose cows		\$ 406	\$ 720	\$ 249
Dairy products		3449	3396	2635
Other dairy and dual purpose cattle		477	369	234
Beef cattle (including feeders)		185	657	260
Hogs		2303	2217	2153
Sheep and wool (including feeders)		76	78	94
Poultry (including turkeys)		564	929	778
Eggs		1081	1292	1178
Horses		24	15	25
Corn		93	171	53
Small grain		185	255	134
Other crops		1010	802	253
Machinery & equipment sold		128	267	80
Agricultural adjustment payments		44	41	32
Income from work off the farm		255	316	150
Misc.		30	65	36
(7) Total farm sales	\$	\$10310	\$11590	\$ 8344
(8) Increase in farm capital		-	37	366
(9) Family living from the farm		634	660	549
(10) Total farm receipts (7) + (8) + (9)	\$	\$10944	\$12287	\$ 9259
(6) Total farm expenses		7406	9416	6059
(11) Operator's labor earnings (10) - (6)		3538	2870	3200
(12) Ret. cap.& family lab.(4)+(5)+(11)		4986	4079	3679



Table 4. Summary of Farm Inventories, 1945\*

Items	Your Farm		Average of 170 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			224	
Size of business (work units)**			645	
Productive livestock (total)			\$4036	\$4412
Dairy and dual purpose cows			1397	1427
Other dairy & dual purpose cattle			777	856
Beef cattle (incl. feeders)			435	409
Hogs			922	1126
Sheep (including feeders)			175	187
Poultry (including turkeys)			330	407
Horses			279	234
Crop, seed, and feed			3647	3054
Mach. & equipment (total)			3265	3351
Power mach. (farm share)			1081	1010
Crop & general mach. (farm share)			1532	1673
Livestock equipment & supplies			652	668
Buildings, fences, etc.			7349	7287
Land			9177	9177
Total farm capital			27753	27515

Items	34 most profitable farms		34 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	255		257	
Size of business (work units)**	796		628	
Productive livestock (total)	\$4887	\$5743	\$3716	\$3933
Dairy & dual purpose cows	1591	1636	1462	1499
Other dairy & dual purpose cattle	884	988	794	864
Beef cattle (incl. feeders)	617	611	296	223
Hogs	1186	1535	802	996
Sheep (including feeders)	82	81	84	73
Poultry (including turkeys)	527	892	278	278
Horses	281	244	261	219
Crop, seed, and feed	4903	4503	3391	2396
Mach. & equipment (total)	3744	3972	3368	3275
Power mach. (farm share)	1202	1183	1141	1032
Crop & general mach.	1730	1965	1641	1658
Livestock equipment & supplies	812	824	586	585
Buildings, fences, etc.	8278	8153	7692	7496
Land	9657	9657	11066	11066
Total farm capital	31750	32272	29494	28385

\*For the purpose of comparison, all the data shown in this report with the exception of Tables 2 and 3 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 13 for an explanation of "work units".

Table 5. Family Living From the Farm, 1945

Items	Your farm	34 most profit-able farms		34 least profit-able farms		Your farm	34 most profit-able farms		34 least profit-able farms	
		Average 170 farms	profit-able farms	profit-able farms			Average 170 farms	profit-able farms	profit-able farms	
No. of persons (Fam.)	_____	3.3	3.5	2.9						
adult equiv. (Others*)	_____	.4	.5	.5						
Wholemilk	_____	1350 qts.	1580	1097	\$	\$ 81.93	\$ 93.93	\$ 64.06		
Skim milk	_____	121 qts.	184	103		1.78	1.04	.61		
Cream	_____	124 pts.	149	126		27.13	33.08	28.29		
Farm made butter	_____	8 lbs.	16	5		4.05	8.03	2.71		
Eggs	_____	192 doz.	195	173		64.38	64.19	58.60		
Cattle	_____	460 lbs.	505	459		47.35	54.56	44.82		
Hogs	_____	501 lbs.	681	413		69.74	94.17	57.93		
Sheep	_____	5 lbs.	0	3		.59	0	.34		
Poultry	_____	147 lbs.	162	148		33.74	39.18	35.29		
Potatoes	_____	15 bu.	27	6		19.03	35.44	8.40		
Vegetables & fruits	_____					55.36	67.88	59.30		
Farm fuel	_____	3 cds.	4	3		22.23	30.56	20.29		
Rental vl. of house	_____					210.75	246.55	220.77		
Misc.	_____					.47	0	0		
Total	_____				\$	\$638.53	\$768.61	\$601.41		

Table 6. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1945

Items	Your farm	Average of 101 farms	20 most profit-able farms		20 least profit-able farms	
			profit-able farms	profit-able farms	profit-able farms	profit-able farms
Number of persons - family	_____	4.1	4.3	3.4		
Number of persons, (Family adult equivalent (Others*)	_____	3.2	3.4	2.7		
	_____	.4	.5	.6		
Food and meals bought	\$	\$413	\$437	\$396		
Operating and supplies	_____	168	207	207		
Clothing and clothing materials	_____	207	274	174		
Personal care, personal spending	_____	67	82	43		
Furnishings and equipment	_____	76	110	74		
Education, recreation and development	_____	92	156	86		
Medical care and health insurance	_____	138	190	85		
Church, welfare, gifts	_____	259	494	155		
Income tax	_____	204	445	81		
Personal share of auto expense	_____	77	84	58		
Household share of elect. & gas eng. exp.	_____	45	49	46		
H.H.&pers.shr.of new auto,gas eg.&motors bot.	_____	3	0	8		
Life insurance and other investments	_____	873	1381	336		
Total household and personal cash expenses \$	_____	\$2622	\$3909	\$1749		
Food furnished by the farm	_____	411	521	368		
Fuel furnished by the farm	_____	20	22	17		
House rental	_____	203	261	202		
Total household and personal expenses \$	_____	\$3256	\$4713	\$2336		

\*Hired help or others boarded.

Table 7. Summary of Farm Earnings (Cash Statement), 1945

Items	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms
<b>FARM EXPENSES</b>				
Dairy and dual-purpose cows bought	\$ 135	\$ 187	\$ 250	
Other dairy & dual-purpose cattle bot.	135	79	195	
Beef cattle bot. (incl. feeders)	102	257	85	
Hogs bought	168	178	214	
Sheep bought (including feeders)	108	5	7	
Poultry bought (including turkeys)	210	404	165	
Horses bought	17	16	21	
Misc. livestock expenses	165	221	146	
Misc. crop expenses	463	653	500	
Feed bought	1764	2590	1540	
Custom work hired	273	301	303	
Mech. power mach. (farm share) (new)	173	241	232	
Mech. power mach. (farm share)(upkp.)	190	198	205	
Mech. power (farm share)(gas,oil,etc.)	492	555	543	
Crop and general mach. (new)	415	547	363	
Crop and general mach. (upkeep)	142	142	153	
Livestock equipment.(new)	100	122	84	
Livestock equipment (upkeep)	89	158	53	
Buildings and fencing (new)	249	243	134	
Buildings and fencing (upkeep)	200	197	204	
Hired labor	663	1007	846	
Taxes	296	336	298	
General farm and insurance	114	137	112	
(1) Total farm purchases	\$ 6672	\$ 8774	\$ 6653	
(2) Decrease in farm capital	238	-	1109	
(3) Board furnished hired labor	108	184	107	
(4) Interest on farm capital	1382	1601	1447	
(5) Unpaid family labor	441	496	372	
(6) Total farm exp.(Sum of (1) to (5))	\$ 8832	\$ 11055	\$ 9688	
<b>FARM RECEIPTS</b>				
Dairy and dual-purpose cows	\$ 516	\$ 603	\$ 490	
Dairy products	3403	4687	2528	
Other dairy & dual-purpose cattle	465	592	487	
Beef cattle (including feeders)	458	773	410	
Hogs	2573	3299	2031	
Sheep and wool (including feeders)	230	66	96	
Poultry (including turkeys)	787	2142	479	
Eggs	1265	1513	1137	
Horses	23	14	28	
Corn	175	191	218	
Small grain	239	326	171	
Other crops	776	1585	973	
Machinery & equip. sold	152	181	240	
Agricultural adjustment payments	48	57	47	
Income from work off the farm	262	314	300	
Misc.	54	97	23	
(7) Total farm sales	\$ 11426	\$ 16440	\$ 9658	
(8) Increase in farm capital	-	522	-	
(9) Family living from the farm	639	769	601	
(10) Total farm receipts (7)+(8)+(9)	\$ 12065	\$ 17731	\$ 10259	
(6) Total farm expenses	8832	11055	9688	
(11) Operator's labor earnings (10)-(6)	3233	6676	571	

Table 8. Summary of Farm Earnings (Enterprise Statement) 1945\*

Items	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms
<b>EXPENSES AND NET DECREASES</b>				
Total power	\$	\$1140	\$1268	\$1203
Horses		194	221	173
Tractor		391	463	384
Truck		132	168	166
Auto (farm share)		183	150	226
Gas engine (farm share)		3	2	4
Elec. plant or current (farm share)		94	104	94
Hired power		143	160	156
Crop and general machinery		351	396	397
Livestock equipment		169	253	125
Buildings, fencing and tiling		399	437	409
Misc. productive livestock expense		154	219	144
Labor		1292	1779	1419
Real estate taxes		246	280	249
Personal property tax		50	56	49
Insurance		42	59	40
General farm		72	78	72
Interest on farm capital		1382	1601	1447
(1) Total expenses & net decreases		5297	6426	5554
<b>RETURNS AND NET INCREASES</b>				
All productive livestock		9751	14048	7456
Dairy and dual purpose cows		3818	5192	2808
Other dairy & dual pur. cattle		757	1025	661
Beef breeding herd		175	43	163
Feeder cattle		171	443	132
Hogs		2678	3564	2069
Sheep - farm flock		107	60	78
Sheep - feeders		27	-	-
Turkeys		458	1918	62
Chickens		1560	1803	1483
Crops, seed and feed		-1586	-1464	-1654
Income from labor off the farm		168	245	158
Agricultural conservation payments		48	57	47
Miscellaneous		149	216	118
(2) Total returns & net increases		8530	13102	6125
(1) Total expenses & net decreases		5297	6426	5554
(3) Oper. labor earnings (2) - (1)		3233	6676	571

\*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 operator's labor earnings are the same as those in page 8.

# ANALYSIS OF THE REASONS FOR DIFFERENCES IN OPERATOR'S EARNINGS

The operator's labor earnings varied widely among the farmers included in this study. The average labor earnings of those farmers ranking in the upper 20 per cent in the range according to earnings was \$6676 and of those in the lower 20 per cent was \$571. This is a range of \$6105 between the average earnings of these two groups. Some of the causes for these differences in earnings may be beyond the control of the farmer. However, all of these farmers could make some changes in their farming operations which would increase earnings. A farmer can secure some ideas as to changes that could profitably be made on his farm by studying the facts about his business as presented in this report and comparing his accomplishments with other farmers following the same general type of farming. The more important management factors affecting earnings and their relationships with earnings are presented in the following tables. These factors vary from year to year in their relative influence on earnings.

Table 9. Relation of Crop Yields to Farm Earnings

Per cent crop yields were of the average for all 170 farms		No. of farms	Average operator's labor earnings
Group	Average		
Below 85	71	40	\$1628
85-114	100	87	3403
115 and above	128	43	4380

High production per acre, up to certain limits, tends to lower the cost per bushel of grain or per ton of hay. Any possible method of management that will increase crop yields and therefore lower cost of production more than the extra expense incurred in securing the higher yields should be given consideration.

Table 10. Relation of Choice of Crops to Farm Earnings

Per cent of tillable land in high return crops*		No. of farms	Average operator's labor earnings
Group	Average		
Below 39.0	30.5	41	\$2590
39.0 - 54.9	47.3	89	3224
55.0 and above	63.5	40	3911

\*Crops are marked on page 16 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 per cent of tillable land in high return crops.

As a rule, on these farms, such crops as alfalfa, clover, canning crops, sugar beets, corn, and flax bring a higher net return per acre than other crops usually grown. Additions can be made to earnings by putting as high a percentage as possible of the tillable land into these higher return crops.

Table 11. Relation of Returns From Productive Livestock to Farm Earnings

Index of returns for \$100 feed fed to productive livestock*	No. of farms	Average operator's labor earnings
Group	Average	
Below 86	73	34
86 - 114	99	97
115 and above	127	39
		\$2026
		3126
		4550

\*The index is weighted by the number of animal units of each class of livestock.

The majority of these farms maintain dairy cattle. However, in addition to the dairy herd there is quite an investment in other classes of productive livestock such as beef cattle, hogs, sheep or poultry. Most or all of the feed raised is fed on the farm and considerable additional feed is purchased. Feed is the major item of cost in livestock production and livestock constitute the major source of income on these farms. Hence there is some relationship between returns for \$100 of feed and operator's labor earnings on these farms. There are a number of reasons for differences among farms in livestock returns. High productivity per animal and economy in the use of feed and labor are important. Other factors of considerable importance are kind of feed used, quality of pastures, balance of ration, degree of sanitation, and kind of shelter and equipment.

Table 12. Relation of Amount of Productive Livestock to Farm Earnings

Productive livestock units per 100 acres*	No. of farms	Average operator's labor earnings
Group	Average	
Below 17.0	12.7	37
17.0 - 29.9	22.5	95
30.0 & above	35.9	38
		\$2662
		2974
		4435

\*Acres in timber not pastured, roads, waste and farmstead were not included.

On some farms the returns from livestock are so low that they do not cover feed and other costs. Such livestock is unprofitable, especially if there is more than enough to utilize what would otherwise be waste feed. If the livestock is yielding a net return, an increased amount of livestock adds to size of business and the opportunity to increase the farm earnings. Livestock produces manure and aids in keeping up the fertility of the land, and utilizes waste products on the farm. Livestock also helps to provide productive employment throughout the year. Any method that aids in utilizing the available resources to full and efficient capacity should add to the farm income.

Table 13. Relation of Size of Business (Work units) to Farm Earnings

Days of productive work	No. of farms	Average operator's labor earnings
Group	Average	
Below 475	412	32
475 - 799	608	108
800 and above	1030	30
		\$2130
		3207
		4503



Average farm earnings tend to increase with an increase in size of business. For farmers operating their farms at a loss, the larger the volume of business, the larger will be the loss, but a farmer who is making a profit could make a larger profit if he increased his size of business, providing that in so doing he does not lower materially the efficiency in some one or more important branches of his business. Those farmers who have large businesses usually have more flexibility of their organization than does the man with a small business, and can utilize more efficiently and to better advantage available labor, power, machinery and buildings.

Table 14. Relation of Amount of Work Accomplished per Worker to Farm Earnings

Group	Work units per worker	No. of farms	Average operator's labor earnings
Below 280	243	42	\$3109
280 - 389	331	87	3140
390 and above	449	41	3557

More days of productive work accomplished per worker reduces the labor charge per unit of business. Higher labor accomplishment can be secured in several ways. In the first place, the business must be large enough so that there will be at least sufficient work available for the family labor. The farm should be so organized that the labor requirements are well distributed throughout the year. Handling pastures in such a way that as large a proportion as possible of the year's feed for livestock may be obtained from them helps to reduce labor requirements. Proper planning of the farm work and economical use of labor-saving machinery help to increase the work accomplished per worker.

Table 15. Relation of Power, Machinery, Equipment and Building Expense to Farm Earnings\*

Group	Expense per work unit	No. of farms	Average operator's labor earnings
\$3.70 and above	\$4.63	50	\$2575
\$2.70 - \$3.69	3.19	70	3493
Below \$2.70	2.21	50	3526

\*Includes building, fencing, all crop machinery and livestock equipment, power, horse feed, and miscellaneous horse expense.

The expense factor does not show as high relationship with earnings when prices are high as when they are low. Some farms are under-equipped. On a few farms, excessive expenses constitute the main factor causing earnings to be very low.

Some of the cash expenses can be kept down by careful management. Often times necessary repairs and improvements can be made by using the available farm labor rather than by hiring extra help. Repairs and overhauling should be done before spring work begins insofar as possible; or on rainy days or in other spare time during the summer. Reducing the number of horses to the minimum required for efficient operation of the farm helps reduce the power expense. In some cases, farmers can offset some or all of the power and machinery expense by using their equipment for outside work.

### CUMULATIVE EFFECT OF EXCELLING IN A NUMBER OF MANAGEMENT FACTORS

The relation of several management factors to operator's labor earnings has been shown in the preceding section. Because of the large number of interrelationships between these factors the exact relationship between one factor and earnings could not be determined. However, when the combined or cumulative influence of seven management factors on earnings is shown, the relationship becomes more marked. This is illustrated in Table 16. These seven factors alone are responsible for a considerable proportion of the variation among farmers in the returns secured from the farm business. Insofar as these factors are within the farmer's control, he will be well paid for his efforts to improve his efficiency in them.

Table 16. Relation of Operator's Labor Earnings to the Number of Factors in Which the Farmer Excels

No. 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 operator's labor earnings
None	5		xxx	\$ 781
1	11	=====	xxxxxx	1435
2	29	=====	xxxxxxxx	2010
3	54	=====	xxxxxxxxxxxx	2953
4	32	=====	xxxxxxxxxxxxxxxx	3522
5	21	=====	xxxxxxxxxxxxxxxxxxxx	4006
6	15	=====	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5939
7	3	=====	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	8726

The array in Table 16 indicates that it will be worth while for each cooperator to study carefully his ranking on pages 14 and 15, and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

### 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 17.

Table 17. Number of Work Units for Each Class of Livestock and Each Acre of Crop

Item	No. of work units	Item	No. of work units
Dairy and dual pur. cows.	14.5 per cow	Small grain	.8 per acre
Other dairy & du.pur.cattle	4.4 per an.unit*	Sugar beets	3.0 per acre
Beef breeding herd	4.0 per an.unit*	Sweet corn	2.3 per acre
Feeder cattle	.4 per 100 lbs.	Corn, husked	1.2 per acre
Sheep - farm flock	2.0 per an.unit*	Corn, hogged	.7 per acre
Sheep - feeders	.5 per 100 lbs.	Corn, shredded	2.4 per acre
Hogs	.3 per 100 lbs.	Corn silage	1.9 per acre
Turkeys	.7 per 100 lbs.	Corn fodder	1.1 per acre
Hens	28.0 per 100 hens	Alfalfa hay	1.0 per acre
Canning peas	2.0 per acre	Soybean hay	1.4 per acre
Soybeans for grain	1.0 per acre	Other hay crops	.6 per acre

\*Animal unit represents one cow, one bull, one feeder steer or heifer, two head of other cattle, seven head of sheep, fourteen lambs, five hogs, ten pigs, 100 hens or 1400 pounds of turkeys produced.

Table 18. Measures of Farm Organization and Management Efficiency, 1945

Measures used in chart on page 15	Your farm	Average of 170 farms	34 most profit- able farms	34 least profit- able farms
Operator's Labor Earnings	\$	\$3233	\$6676	\$571
(1) Crop yields*		100	113	81
(2) % of tillable land in high ret. crops**		47.1	48.9	45.8
(3) Ret. for \$100 feed to prod. livestock***		100	110	87
(4) Prod. livestock units per 100 acres****		23.4	27.6	17.3
(5) Size of business - work units		645	796	628
(6) Work units per worker		323	348	314
(7) Pow., mach., equip., & bldg. exp. per work unit	\$	\$3.32	\$3.09	\$3.64

Measures and items related to some of the  
above measures:

(3) Index of return for \$100 feed from -				
Dairy cattle (see pages 20 & 21)		100	111	86
Dual purpose cattle (see pages 22 & 23)		100	89	99
Beef breeding herd (see page 26)		100	-	93
Feeder cattle (see page 26)		100	102	82
Hogs (see page 19)		100	110	88
Native sheep (see page 27)		100	85	110
Turkeys (see page 24)		100	111	73
Chickens (see page 25)		100	109	96
(5) Work units on crops		166	197	196
Work units on productive livestock		445	550	400
Other work units		34	49	32
(6) Total number of workers		2.0	2.3	2.0
Number of family workers		1.4	1.4	1.3
Number of hired workers		.6	.9	.7
(7) Power expense per work unit	\$	\$1.85	\$1.69	\$2.05
Crop mach. expense per work unit		.56	.52	.68
Livestock equip. exp. per work unit		.26	.31	.21
Bldgs. & fencing exp. per work unit		.65	.57	.70

\*Given as a percentage of the average.

\*\*Crops are marked on page 16 as (A), (B), (C), and (D). All of the acres in (A) crops, one-half of acres in (B) crops, and one-fourth of acres in (C) crops are used in calculating per cent 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.

# Thermometer Chart

Using your figures from page 14, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 170 farms included in this summary are located between the dotted lines across the center of this page.

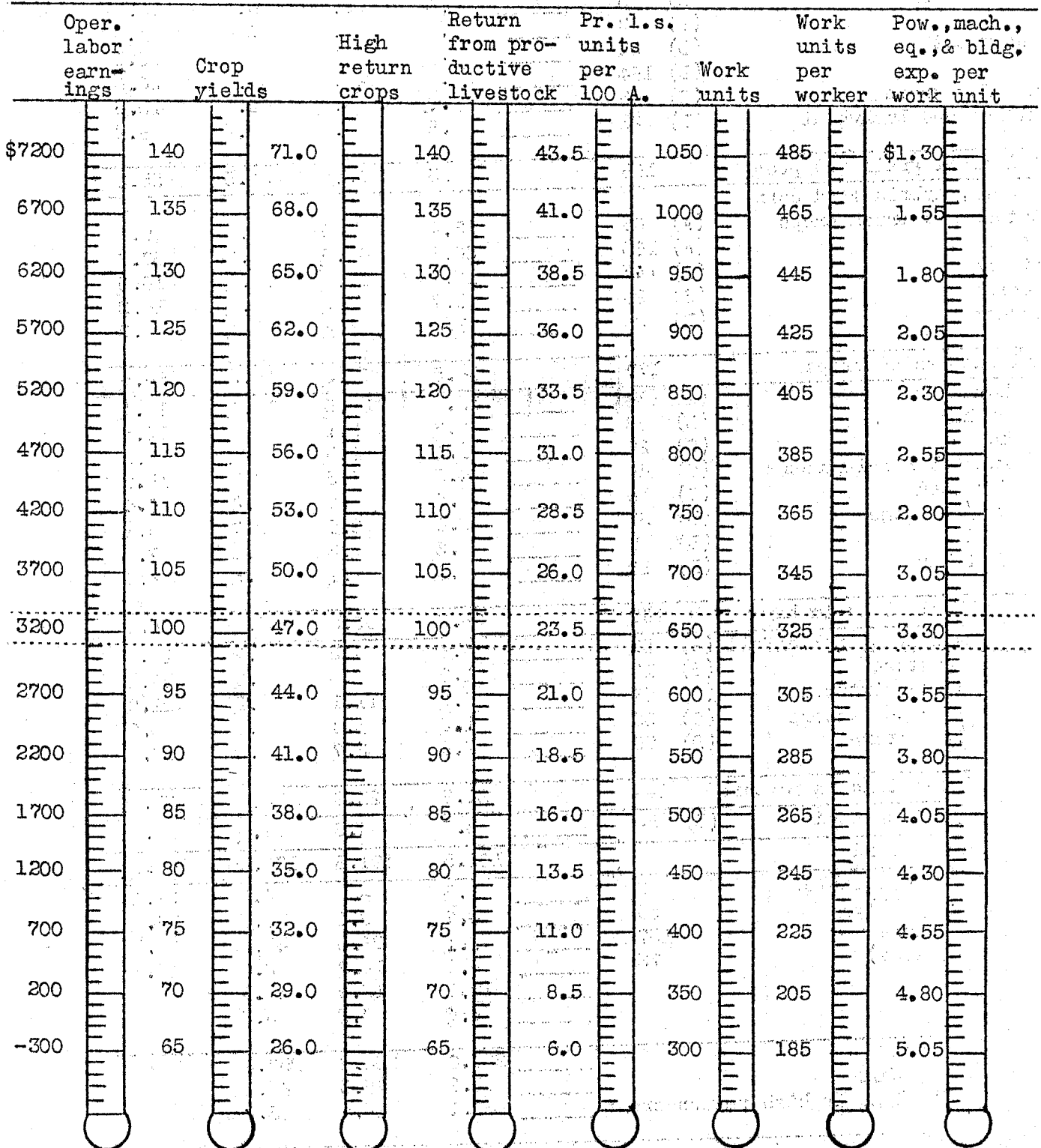


Table 19. Distribution of Acres in Farm, 1945

Crop: (A) (B) (C) and (D) refer to ranking used in calculating % of tillable land in High Return Crops (see page 14)	No. growing this crop	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms	Acres per farm growing crop
Canning peas	(A) 19	_____	1.7	2.7	2.1	14.9
Flax	(C) 44	_____	3.1	3.3	3.3	11.9
Barley	(D) 24	_____	1.2	1.4	1.1	8.2
Oats and barley	(D) 6	_____	.6	1.4	.2	17.1
Wheat	(D) 68	_____	4.4	3.9	3.9	11.0
Oats and wheat	(D) 25	_____	2.2	3.0	.8	15.1
Oats	(D) 164	_____	35.3	43.4	35.0	36.6
Soybeans for grain	(D) 55	_____	5.0	3.6	9.3	15.5
Rye, millet and buckwheat	(D) 21	_____	.8	.6	.8	6.9
Total small grain and peas	168	_____	54.3	63.3	56.5	55.0
Sugar beets, hybrid seed corn, potatoes and truck crops	(A) 64	_____	3.4	5.5	6.7	9.1
Corn grain	(A) 165	_____	36.6	43.5	42.2	37.7
Corn silage	(B) 143	_____	13.7	12.0	16.0	16.3
Sweet corn	(B) 20	_____	1.7	1.9	3.8	14.2
Corn fodder	(D) 25	_____	1.1	1.4	.6	7.2
Total cultivated crops	170	_____	56.5	64.3	69.3	56.5
Alfalfa hay	(A) 136	_____	18.3	20.5	10.1	19.1
Red clover hay	(B) 52	_____	3.8	3.1	5.0	12.5
Soybean hay	(C) 26	_____	1.1	1.5	1.0	7.2
Mixed legumes & non-legumes	(C) 48	_____	4.5	4.5	3.1	15.9
Legumes for seed	(C) 16	_____	.6	.9	.4	6.4
Timothy and/or brome	(D) 37	_____	2.0	2.9	3.7	9.1
Timothy seed	(D) 8	_____	.3	.3	.4	7.1
Other annual hay	(D) 11	_____	.6	.1	1.5	8.7
Total tillable land in hay	169	_____	28.2	33.8	25.2	28.4
Alfalfa and mixtures incl. alfalfa	(A) 52	_____	4.8	4.2	2.8	15.7
Sweet clover pasture	(B) 13	_____	1.0	.4	1.9	13.1
Other legumes and mixtures	(C) 56	_____	6.9	11.1	3.2	21.0
Sudan grass or rape pasture	(C) 32	_____	1.3	1.4	.9	6.7
Other tillable pasture	(D) 75	_____	7.8	8.7	7.1	17.7
Total tillable land in pasture	144	_____	21.8	25.8	15.9	25.7
Tillable land not cropped	(D) 54	_____	4.7	4.6	12.0	14.7
Total tillable land		_____	165.5	191.8	178.9	165.5
Phalaris hay (non-tillable)	8	_____	1.3	-	4.0	27.1
Wild hay (non-tillable)	55	_____	4.7	2.2	11.5	14.4
Non-tillable pasture	137	_____	29.1	26.0	42.4	36.1
Timber (not pastured)	73	_____	6.6	14.7	2.9	15.3
Roads and waste	3.6	_____	10.2	12.9	11.2	
Farmstead		_____	6.6	7.2	6.3	
Total acres in farm		_____	224.0	254.8	257.2	
Per cent land tillable		_____	73.9	75.3	69.6	
Per cent tillable land in high return crops		_____	47.1	48.9	45.8	

Table 20. Crop Yields Per Acre, 1945

Crop	Your farm	Average 170 farms	34 most profitable farms	34 least profitable farms
Canning peas, value above seed cost	\$	\$49.06	\$78.08	\$10.73
Flax, bu.		11.2	13.0	9.0
Barley, bu.		32.7	31.2	34.1
Oats and barley, bu.		48.1	54.1	43.4
Wheat, bu.		22.4	21.2	19.3
Oats and wheat, bu.		41.6	41.2	30.4
Oats, bu.		48.3	51.7	41.9
Soybeans for grain, bu.		12.6	17.2	9.8
Rye, bu.		15.8	19.8	19.3
Millet, bu.		7.7	-	-
Buckwheat, bu.		17.2	-	-
Corn, grain, bu.		34.0	39.5	24.7
Corn and cane silage, tons		6.7	8.2	5.9
Sweet corn, tons		1.9	2.7	1.3
Corn and cane fodder, tons		2.4	2.6	2.1
Alfalfa hay, tons		2.5	2.7	2.6
Red clover hay, tons		2.6	3.0	2.2
Soybean hay, tons		1.6	1.5	1.7
Mixed legume & non-legume hay, tons		2.0	2.4	1.9
Legumes for seed, lbs.		81.	84.	67.
Timothy and/or brome hay, tons		1.6	1.6	1.8
Timothy seed, lbs.		207.	-	-
Other annual hay, tons		1.2	-	1.1
Phalaris hay or non-tillable land, tons		1.1	-	-
Wild hay, tons		.8	1.0	.8

Table 21. Average Price of Feeds, 1945

Item	Value	Item	Value
Ear corn, per bu.	\$ .86	Alfalfa hay, per ton	\$15.00
Oats, per bu.	.64	Red or alsike clov. hay, per ton	12.75
Barley, per bu.	.94	Soybean hay, per ton	12.75
Wheat, per bu.	1.50	Timothy, per ton	9.00
Rye, per bu.	1.20	Sweet clover, per ton	8.75
Soybeans, per bu.	2.05	Wild hay, per ton	7.50
Bran, per cwt.	2.20	Corn fodder, per ton	6.75
Linseed oilmeal, per cwt.	2.82	Corn silage, per ton	5.00
Soybean oilmeal, per cwt.	3.05	Pasture, per mo. per an. unit	1.10
Tankage, per cwt.	4.10	Skim milk, per cwt.	.26



Table 22. Summary of Amount of Livestock, 1945

Items	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms
No. of horses		3.2	3.5	3.1
No. of colts		.5	.3	.8
No. of dairy & dual purpose cows		17.3	20.5	16.3
Head of other dairy & dual pur. cattle		17.6	20.2	17.5
Head of cattle in beef breeding herd		3.4	1.6	2.1
Pounds of feeder cattle produced		920	2129	977
Litters of pigs		12.3	14.4	11.4
Pounds of hogs produced		18669	24692	14459
Head of sheep (2 lambs = 1 head)		11.8	8.3	9.3
No. of hens		247	275	239
Total no. of prod. lvstk. animal units		44.1	54.3	39.7
% of total that are:				
Dairy cows		38.0	39.6	36.7
Other dairy cattle		19.0	19.1	21.2
Dual purpose cows		3.7	2.6	3.8
Other dual purpose cattle		2.8	2.2	2.4
Beef breeding herd		3.9	1.2	2.8
Feeder cattle		2.8	5.6	3.5
Hogs		17.8	16.7	18.3
Sheep		3.9	1.4	3.6
Turkeys		1.5	5.0	.3
Hens		6.6	6.6	7.4

Table 23. Feed Costs for Horses and Misc. Power and Machinery Expense, 1945

Items	Your farm	Average of 163 farms*	32 most profitable farms*	34 least profitable farms
Feed per horse, ** Lbs.:				
Grain		1063	1271	959
Hay		3758	3598	3174
Fodder and stover		431	171	247
Feed costs per horse:				
Grain	\$	\$18.75	\$22.42	\$16.52
Roughage		20.60	20.38	16.96
Pasture		4.44	4.11	4.27
TOTAL FEED COSTS	\$	\$43.79	\$46.91	\$37.75
Number of work horses		3.4	3.8	3.1
Number of colts		.6	.3	.8
Crop acres per farm		145.0	163.6	166.5
Tractor and horse exp. per crop acre		\$4.41	\$4.55	\$3.92
Crop & Gen. Mach. exp. per crop acres		2.59	2.64	2.62

\*Seven farmers did not have horses. The crop acres and expenses per crop acre are averages of 170 farms.

\*\*Two colts equal one horse.

Table 24. Feed Costs and Returns from Hogs, 1945

Items	Your farm	Average of 159 farms	32 farms highest in returns above feed	32 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	414	310	580
Small grain	_____	93	85	122
Commercial feeds	_____	44	32	45
Total concentrates	_____	551	427	747
Skim milk, buttermilk and whey	_____	60	58	85
Feed cost per cwt. hogs produced:				
Concentrates	\$ _____	\$9.64	\$7.43	\$12.86
Skim milk, buttermilk and whey	_____	.15	.15	.22
Pasture	_____	.18	.16	.24
TOTAL FEED COSTS	\$ _____	\$9.97	\$7.74	\$13.32
Net increase in value per cwt. hogs prod.	\$ _____	\$14.23	\$14.90	\$13.78
RETURNS ABOVE FEED COST PER CWT. HOGS PROD.	\$ _____	\$4.26	\$7.16	\$ .46
RETURNS FOR \$100 OF FEED	\$ _____	\$150	\$196	\$106
Price received per cwt. hogs sold	\$ _____	\$14.24	\$14.64	\$14.14
No. of spring litters raised	_____	8	8	7
No. of fall litters raised	_____	5	6	4
Total no. of litters raised	_____	13	14	11
No. of pigs born per litter	_____	7.9	8.3	7.2
No. of pigs weaned per litter	_____	6.3	6.5	5.9
Pounds of hogs produced	_____	19853	21381	13525

High returns are associated with high quality management. The combined effect on return over feed from excelling in a number of hog management factors is shown in Table 25. The factors included are: (1) pounds of concentrates required to produce 100 pounds of hogs including skim milk and buttermilk on a grain equivalent basis, (2) price received for hogs sold, (3) number of pigs born per litter, (4) number of pigs weaned per litter, and (5) sanitation (pigs raised on clean ground). The 18 farmers who were below the average of the group in all five factors received a return over feed cost of \$2.23 per 100 pounds of hogs produced as compared to \$5.71 for the 7 farmers who were above average in all five factors. The difference between the two extremes amounts to \$3.48 per 100 pounds or \$691 for the average production of 19853 pounds of hogs on these farms.

Table 25. Relation of Return Over Feed Per 100 Pounds of Hogs to the Number of Management Factors in Which Farmers Excelled

No. of factors in which farmer excels	No. of farms*	The length of the shaded lines are in proportion to the average return over feed per 100 pounds of hogs	Average return over feed
0	18	xxxxxxxxxxxxxxxx	\$2.23
1	23	xxxxxxxxxxxxxxxxxxxxxxxx	3.43
2	42	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	4.34
3	42	xx	4.72
4	23	xx	5.29
5	7	xx	5.71

\* The data from 4 farmers who purchased feeder pigs or who did not supply information on sanitation practices were omitted from this table.

Table 26. Factors of Cost and Returns from Dairy Cows, 1945

Items	Your farm	Average of 143 farms	29 farms highest in butterfat per cow	29 farms lowest in butterfat per cow
Pounds of butterfat per cow		254	338	167
Feeds per cow, lbs:				
Corn		1192	1352	843
Small grain		746	1259	264
Commercial feeds		446	677	234
Legume hay		3252	3959	2924
Other hay		923	653	823
Fodder and stover		385	369	516
Total concentrates		2384	3288	1341
Total dry roughage		4560	4981	4263
Silage		6932	7237	7617
Total digestible nutrients*		5248	6192	4420
T.D.N. per lb. B.F.		20.7	18.3	26.5
% T.D.N. that is protein		13.4	14.5	12.4
Feed cost per cow:				
Concentrates	\$	\$44.77	\$63.98	\$24.55
Roughages		45.13	49.94	43.97
Pasture		5.42	5.22	5.51
TOTAL FEED COSTS	\$	\$95.32	\$119.14	\$74.03
Value of produce per cow:				
B.F. Sales	\$	\$195.72	\$270.36	\$112.41
Dairy produce used in house		7.04	6.92	8.67
Milk to livestock		11.30	10.82	11.05
Net increases in value of cows		7.11	6.99	2.43
TOTAL VALUE PRODUCED	\$	\$221.17	\$295.09	\$134.56
RETURNS ABOVE FEED COST PER COW	\$	\$125.85	\$175.95	\$60.53
RETURNS FOR \$100 OF FEED	\$	\$239.13	\$255.00	\$195.00
Price rec. per lb. B.F. sold (cts)		83.0	85.5	76.7
As manufacturing cream (cents)		64.9	65.2	64.7
Other (cents)		88.7	88.8	89.7
Feed cost per lb. B.F. (cents)		37.5	35.2	44.3
% fall freshening		52.1	56.5	46.2
Number of cows**		18.7	20.7	15.7

\*Not including nutrients received from pasture.

\*\*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 27. Feed Costs and Returns from Other Dairy Cattle, 1945

Items	Your farm	Average of 142 farms*	29 farms highest in butterfat per cow	28 farms lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates	_____	566	721	315
Hay and fodder	_____	1841	1933	1773
Silage	_____	2304	2127	2167
Skim milk	_____	319	333	409
Whole milk	_____	360	397	241
TOTAL FEED COSTS PER HEAD	\$ _____	\$40.05	\$44.70	\$32.14
Net inc. in value of other dairy cattle	_____	\$45.26	\$59.49	\$38.05
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$5.21	\$14.79	\$5.91
RETURNS FOR \$100 OF FEED	\$ _____	\$135.	\$139	\$126.
Number of head of other dairy cattle	_____	18.1	19.4	17.0

Table 28. Feed Costs and Returns From All Dairy Cattle, 1945

Items	Your farm	Average of 143 farms	29 farms highest in butterfat per cow	29 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	1919	2609	1064
Hay and fodder	_____	4167	4481	3984
Silage	_____	6069	6157	6668
TOTAL FEED COSTS PER ANIMAL UNITS	\$ _____	\$81.71	\$98.53	\$64.15
Value of produce per animal unit:				
Dairy products	\$ _____	\$136.30	\$184.12	\$80.84
Net increase in val. of dairy cattle	_____	32.22	38.50	27.85
TOTAL VALUE PRODUCED	\$ _____	\$168.52	\$222.62	\$108.69
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$86.81	\$124.09	\$ 44.54
RETURNS PER \$100 OF FEED	\$ _____	\$211.	\$231.	\$177.
Animal units of dairy cattle	_____	28.3	30.9	24.5

\* One farmer having both a dairy and a beef herd used a beef bull and included all the young stock in the beef herd.

Table 29. Factors of Cost and Returns from Dual Purpose Cows, 1945

Items	Your farm	Average of 18 farms	9 farms highest in butterfat per cow	9 farms lowest in butterfat per cow
Pounds of butterfat per cow		173	212	134
Feeds per cow, lbs.:				
Corn		868	852	884
Small grain		529	654	404
Commercial feeds		198	249	146
Legume hay		2703	3034	2372
Other hay		616	641	591
Fodder and stover		418	679	157
Total concentrates		1595	1755	1434
Total dry roughage		3737	4354	3120
Silage		4745	5006	4484
Total digestible nutrients*		3880	4336	3424
T.D.N. per lb. B.F.		22.4	20.5	25.6
% T.D.N. that is protein		13.2	13.4	13.1
Feed cost per cow:				
Concentrates	\$	\$29.12	\$32.38	\$25.87
Roughages		34.95	38.94	30.96
Pasture		5.86	5.97	5.74
TOTAL FEED COSTS	\$	\$69.93	\$77.29	\$62.57
Value of produce per cow:				
B.F. sales**	\$	\$106.30	\$141.78	\$70.82
Dairy produce used in house		7.62	7.96	7.28
Milk to livestock		20.78	17.85	23.71
Net increases in value of cows		9.38	4.27	14.48
TOTAL VALUE PRODUCED	\$	\$144.08	\$171.86	\$116.29
RETURNS ABOVE FEED COST PER COW	\$	\$74.15	\$94.57	\$53.72
RETURNS FOR \$100 OF FEED	\$	\$218.	\$233.	\$204.
Price received per lb. B.F. sold (cts)**		74.2	77.7	70.6
As manufacturing cream (cents)		66.2	66.1	66.3
Other (cents)		85.7	85.3	86.4
Feed cost per lb. B.F. (cents)		40.4	36.5	46.7
% fall freshening		43	41	45
Number of cows		14.8	13.7	15.9

\* Not including nutrients received from pasture.

\*\* Including dairy subsidy payments.

Table 30. Feed Costs and Returns from Other Dual Purpose Cattle, 1945

Items	Your farm	Average of 18 farms	9 farms highest in returns above feed	9 farms lowest in returns above feed
Feeds per head, lbs.:				
Concentrates	_____	571	603	540
Hay and fodder	_____	1691	1418	1963
Silage	_____	1850	2105	1594
Skim milk	_____	579	722	436
Whole milk	_____	481	460	502
TOTAL FEED COST PER HEAD	\$ _____	\$41.90	\$40.94	\$42.85
Net increase in value	\$ _____	\$46.55	\$55.85	\$37.24
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$4.65	\$14.91	-\$5.61
RETURNS FOR \$100 OF FEED	\$ _____	\$120.	\$150.	\$90.
Number of head	_____	23.5	23.0	24.0

Table 31. Feed Costs and Returns From All Dual Purpose Cattle

Items	Your farm	Average of 18 farms	9 farms highest in returns above feed	9 farms lowest in returns above feed
Pounds of butterfat per cow	_____	173	188	158
Feeds per animal unit, lbs.:				
Concentrates	_____	1366	1036	1696
Hay and fodder	_____	3447	3279	3615
Silage	_____	4201	4001	4400
TOTAL FEED COSTS PER ANIMAL UNIT	\$ _____	\$61.57	\$53.30	\$69.83
Value of produce per animal unit:				
Dairy products	\$ _____	\$65.26	\$78.43	\$52.09
Net increase in value	\$ _____	40.79	40.75	40.82
TOTAL VALUE PRODUCED	\$ _____	\$106.05	\$119.18	\$92.91
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$44.48	\$65.88	\$23.08
RETURNS FOR \$100 OF FEED	\$ _____	\$186.	\$235.	\$136.
Animal units	_____	27.0	24.0	30.0



The farmer who excels in all phases of the management of the dairy herd receives a larger return than one who excels in none or only a few of the management factors. The combined effect on return over feed per cow in the dairy herd from excelling in a number of management factors is shown in Table 32. The factors included are (1) pounds of butterfat per cow, (2) total digestible nutrients per pound of butterfat, (3) percentage of protein in the T.D.N. (4) price received for butterfat, (5) feed cost per pound of butterfat, and (6) percentage of fall freshening. Ten farmers were below the average of the group in all six factors; their return over feed amounted to \$57.26 per cow. Thirteen farmers who were above the average of the group in all six factors received a return over feed of \$193.34 per cow. The difference between these two extremes amounts to \$136.08 per cow or \$2545 for the average herd of 18.7 cows.

Table 32. Relation of Return Over Feed per Dairy Cow to Number of Management Factors in Which Farmers Excelled

No. of factors in which farmer excels	No. of farms	The length of the shaded lines is in proportion to the average return over feed per milk cow	Average return over feed
0	10	xxxxxxxxxx	\$57.26
1	15	xxxxxxxxxxxxxxxxxx	93.15
2	24	xxxxxxxxxxxxxxxxxx	91.88
3	30	xxxxxxxxxxxxxxxxxx	114.45
4	23	xxxxxxxxxxxxxxxxxx	138.13
5	28	xxxxxxxxxxxxxxxxxx	167.78
6	13	xxxxxxxxxxxxxxxxxx	193.34

Table 33. Feed Costs and Returns for Turkeys, 1945

Items	Your farm	Average of 9 farms	4 farms highest in returns above feed	4 farms lowest in returns above feed
Feed per cwt. turkeys produced, lbs.:				
Grain		361	407	294
Commercial feeds		224	198	272
Total concentrates		585	605	566
Skim milk		7	17	0
Feed cost per cwt. turkeys produced	\$	\$15.28	\$15.11	\$15.93
Value of produce per cwt. turkeys prod.				
Eggs and poults	\$	\$1.45	\$3.27	-
Net increases in turkeys		28.13	30.80	25.83
TOTAL VALUE PRODUCED	\$	\$29.58	\$34.07	\$25.83
RETURNS ABOVE FEED COST PER CWT.				
TURKEYS PRODUCED	\$	\$14.30	\$18.96	\$ 9.90
RETURNS FOR \$100 FEED	\$	\$195	\$227	\$163
Price rec'd per lb. turkey sold(cts)		33.0	33.7	32.6
No. of poults put on feed		1823	3071	556
Price paid per poult purchased (cts)		84.1	86.5	83.2
Weight per bird sold, lbs.		18.3	19.2	17.5
% death loss		23.4	21.8	26.4
Pounds of turkeys produced		26832	46702	6652



Table 36. Feed Costs and Returns From Beef Cattle, 1945

Items	Your farm	Average of all farms	Farms highest in returns above feed	Farms lowest in returns above feed
Beef breeding herd: no. of farms:		14	7	7
Feeds per animal unit, lbs.:				
Concentrates		1476	1752	1201
Legume hay		1460	1551	1370
Other hay		657	887	426
Fodder and stover		453	518	388
Silage		3411	2900	3921
Skim milk*		12	24	-
Whole milk*		3	6	-
Feed cost per animal unit:				
Concentrates	\$	\$24.65	\$28.77	\$20.52
Roughages		22.82	23.31	22.33
Milk*		.12	.25	-
Pasture		5.16	4.32	6.00
TOTAL FEED COSTS	\$	\$52.75	\$56.65	\$48.85
Value of produce per animal unit:				
Dairy products	\$	\$6.16	\$10.05	\$2.26
Net increase in value of animals		64.62	77.51	51.73
TOTAL VALUE PRODUCED	\$	\$70.78	\$87.56	\$53.99
RETURNS ABOVE FEED COST PER ANIMAL UNIT	\$	\$18.03	\$30.91	\$5.14
RETURNS FOR \$100 OF FEED	\$	\$142	\$172	\$113
Number of cows and herd bulls		15.3	15.6	15.0
Number of animal units in the herd		28.3	31.9	24.7
Lbs. beef produced		11850	15408	8800
Feeder cattle: no. of farms:		17	8	8
Feeds per cwt. beef produced, lbs.:				
Corn		671	421	916
Small grain		35	20	41
Commercial feeds		40	34	48
Legume hay		198	143	257
Other hay		123	80	166
Fodder and stover		29	37	25
Total concentrates		746	475	1005
Total dry roughages		350	260	448
Silage		575	432	724
Feed cost per cwt. beef produced:				
Concentrates	\$	\$12.44	\$7.99	\$16.66
Roughages		3.37	2.41	4.39
Pasture		.38	.49	.32
TOTAL FEED COSTS	\$	\$16.19	\$10.89	\$21.37
Net increase in value of feeders	\$	\$18.60	\$18.32	\$18.65
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.		2.41	7.43	-2.72
RETURNS FOR \$100 OF FEED	\$	\$131	\$168	\$95
Price recd. per cwt. beef sold in 1945	\$	\$13.86	\$14.58	\$13.01
Price pd. for feeder cattle bot. in 1945	\$	\$13.46	\$14.51	\$12.08
No. of animal units		18.4	22.3	15.0
Pounds of beef produced		9006	11136	6927
*Two farmers had both dairy cows and beef cows and fed milk produced by the milking				

Table 37. Feed Costs and Returns from a Farm Flock of Sheep, 1945

Items	Your farm	Average of 44 farms	9 farms highest in returns above feed	9 farms lowest in returns above feed
Feeds per head, * lbs.:				
Concentrates		105	74	102
Legume hay		150	143	235
Other hay		78	91	74
Fodder and stover		56	35	32
Silage		116	178	136
Feed cost per head:				
Concentrates	\$	\$1.77	\$1.29	\$1.76
Roughages		1.82	1.88	2.38
Pasture		1.01	1.16	.96
TOTAL FEED COSTS	\$	\$4.60	\$4.33	\$5.10
Value of produce per head:				
Wool	\$	\$2.69	\$3.10	\$2.39
Net increase in value of sheep		6.96	10.72	3.65
TOTAL VALUE PRODUCED	\$	\$9.65	\$13.82	\$6.04
RETURNS ABOVE FEED COST PER HEAD	\$	\$5.05	\$9.49	\$ .94
RETURNS FOR \$100 OF FEED	\$	\$235	\$348	\$122
Price per cwt. of lambs sold	\$	\$14.19	\$14.34	\$14.38
Price per lb. wool sold (cts)		44.2	44.8	43.1
Pounds of wool per sheep sheared		8.0	8.8	7.1
Number of ewes kept for lambing		27	18	20
% lamb crop**		102	112	79
% death loss**		8.5	7.1	13.2
Pounds of sheep produced		2072	1827	760
No. of head of sheep*		44.1	25.6	34.4

\* Two lambs under six months of age considered as one head.

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

. Superior management in the sheep enterprise results in a comparatively high return over feed just as superior management in the dairy herd or poultry flock resulted in a high return over feed per cow or per hen. The effect on return over feed from excelling in 6 factors is shown in Table 38. The factors included are (1) feed cost per head, (2) price received per 100 lbs. of lambs sold, (3) price received per lb. of wool sold, (4) lbs. of wool per sheep sheared, (5) per cent lamb crop, and (6) per cent death loss. The 5 farmers who were below the average in all 6 factors or excelled in only one received a return over feed cost of \$1.18 per head, while 7 farmers who excelled in 5 or 6 factors received a return of \$7.56 per head. The difference between the two extremes is \$6.38 or \$281 for the average flock of 44 head.

Table 38. Relation of Return Over Feed Per Head of Sheep to Number of Management Factors in Which Farmers Excelled

[illegible]

Table 39. Total Feed Costs and Returns From Your Livestock Enterprises, 1945

	<u>Dairy or dual purpose cattle</u>			<u>Beef</u>	
	<u>Cows</u>	<u>Other</u>	<u>All</u>	<u>breeding</u>	<u>Feeder</u>
				<u>herd</u>	<u>cattle</u>
Total returns	_____	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____	_____
		<u>Sheep</u>			
		<u>Farm</u>			
	<u>Hogs</u>	<u>Flock</u>	<u>Feeders</u>	<u>Turkeys</u>	<u>Chickens</u>
Total feed cost	_____	_____	_____	_____	_____
Total returns	_____	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____	_____

The total "return over feed costs" for each class of livestock is shown in Table 39. 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 returns and net increases shown on page 9. 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.

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 per cent of the total costs of maintaining dairy cattle and poultry, 50 per cent in the case of a farm flock of sheep and 75 to 90 per cent 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 40. Summary of Farm Earnings by Counties

	Dodge & Mower	Free- born	Goodhue & Dakota	Nicollet	Olmsted, Wabasha & Winona	Rice & Scott	Steele	Waseca & LeSueur
<b>FARM EXPENSES</b>								
Cattle bought	\$ 567	\$645	\$ 158	\$ 254	\$ 500	\$ 275	\$ 331	\$ 233
Hogs bought	173	184	67	138	197	188	313	140
Sheep bought	301	527	3	9	15	4	6	27
Poultry bought	161	148	133	106	423	221	152	231
Other livestock expense	186	110	115	149	151	255	196	180
Crop expense	603	502	655	379	346	324	435	392
Feed	2067	1526	1086	1909	1819	1977	2011	1945
Custom work hired	289	240	327	187	257	388	215	245
Power machine and equipment	1827	1643	1411	1790	1630	1491	1584	1641
Buildings	330	519	259	535	356	811	643	381
Hired labor	931	481	682	524	545	644	729	712
Taxes, insurance and misc.	434	392	443	328	429	340	481	396
(1) Total purchases	\$7869	\$6917	\$5339	\$6308	\$6668	\$6918	\$7096	\$6523
(2) Decrease in capital	1268	577	313	-	87	-	300	516
(3) Board to hired labor	59	93	128	134	121	139	101	97
(4) Unpaid family labor	384	462	555	408	413	552	479	296
(5) Int. on farm capital	1425	1367	1295	1523	1269	1175	1803	1372
(6) Total expenses	\$11005	\$9416	\$7630	\$8373	\$8558	\$8784	\$9779	\$8804
<b>FARM RECEIPTS</b>								
Cattle sales	\$ 1934	\$ 1607	\$ 1243	\$ 1483	\$ 1754	\$ 849	\$ 1729	\$ 928
Dairy products	4147	2789	3782	2662	4115	4354	2728	2143
Hogs	2772	3099	1744	4024	2343	1524	3548	2461
Sheep and wool	617	633	195	5	85	30	90	129
Poultry and eggs	1753	1627	1557	1237	2401	2476	1801	3105
Crops	1139	843	2010	910	686	715	1317	1592
AAA payment	46	57	58	50	48	44	60	27
Income from work off farm	284	249	146	315	439	211	96	293
Misc. cash receipts	313	252	114	133	136	515	276	178
(7) Total farm sales	\$13005	\$11156	\$10849	\$10819	\$12007	\$10718	\$11645	\$10856
(8) Increase in capital	-	-	-	537	-	1152	-	-
(9) Family living from farm	594	580	645	804	602	613	726	628
(10) Total receipts	\$13599	\$11736	\$11494	\$12160	\$12609	\$12483	\$12371	\$11484
(6) Total expenses	11005	9416	7630	8373	8558	8784	9779	8804
(11) Oper. labor earnings	2594	2320	3864	3787	4051	3699	2592	2680



Table 41. Miscellaneous Information - Averaged by Counties, 1945

	Dodge & Mower	Free- born	Goodhue & Dakota	Nicollet	Olmsted, Wabasha & Winona	Rice & Scott	Steele	Waseca & LeSueur
<u>FARM INVENTORIES (Beginning of year)</u>								
Productive livestock	\$5301	\$3820	\$3440	\$4473	\$4260	\$3183	\$4939	\$3222
Horses	294	237	281	180	274	351	279	301
Crop, seed and feed	4141	3743	3777	3887	3344	2715	4330	3417
Mach. and equipment	3394	3486	3077	3595	2994	2644	3775	3422
Buildings	6973	7371	7599	7930	6247	6078	11286	6711
Land	9023	8969	7874	10136	8314	7959	11611	10635
Total farm capital	\$29126	\$27626	\$26048	\$30201	\$25433	\$22930	\$36220	\$27708
<u>MEAS. OF FARM ORG. AND MANAGEMENT EFFIC.</u>								
Crop yields - % of ave.	88	89	103	110	115	106	90	96
% high return crops	44.0	47.2	43.4	48.8	47.9	48.9	49.8	48.7
Index ret. from livestock	100	100	106	85	101	111	93	98
A.U. livestock per 100 A.	23.2	24.3	21.2	22.2	31.2	21.6	20.5	20.1
Work units	682	661	613	727	664	575	646	620
Work units per worker	359	368	304	383	348	276	32	340
Exp. per work unit	\$3.39	\$3.07	\$3.26	\$2.78	\$3.23	\$3.46	\$3.77	\$3.54
<u>DISTRIBUTION OF ACRES IN FARM</u>								
Small grain	60.1	50.4	61.6	62.5	45.8	40.9	60.4	54.9
Cultivated crops	60.7	70.2	42.8	70.2	47.2	44.1	69.4	60.4
Tillable hay land	28.5	27.0	35.5	28.8	31.0	24.5	36.0	18.7
Tillable pasture	27.2	19.9	26.7	15.9	29.4	17.2	22.5	10.7
Total acres in farm	228.6	226.0	211.1	241.8	201.5	209.7	256.9	236.1
% land tillable	78.6	75.0	80.2	73.6	76.3	64.4	75.9	65.6
<u>CROP YIELDS PER ACRE</u>								
Oats, bu.	42.6	40.2	51.7	61.7	52.8	46.3	42.4	48.6
Corn, grain, bu.	30.4	31.1	37.1	33.0	38.0	37.9	29.1	32.5
Corn silage, tons	4.9	6.1	7.6	7.1	9.0	6.2	6.6	5.4
Alfalfa hay, tons	2.3	2.1	2.1	3.4	2.8	2.8	2.4	2.3
<u>AMOUNT OF LIVESTOCK</u>								
Total animal units	47.1	46.6	40.4	45.0	49.0	37.6	47.0	40.0
% dairy and du. pur. cattle	64.6	59.7	67.8	58.8	64.0	75.1	62.4	55.7
% in beef breeding herd	3.5	3.6	4.0	5.0	7.2	2.9	-	3.2
% feeder cattle	2.6	2.2	.4	4.6	3.7	-	6.3	3.6
% hogs	18.3	20.6	13.2	25.7	14.4	13.0	21.8	20.8
% sheep	4.9	7.1	6.2	.3	3.3	.8	1.5	4.3
% turkeys	.4	-	1.0	-	3.0	2.4	-	3.4
% hens	5.7	6.8	7.4	5.6	4.4	5.8	8.0	9.0

Table 42. Summary by Years

	Average 1928-29	Average 1930-32	Average 1933-37	1938	1939	1940	1941	1942	1943	1944	1945
Number of farms	148	157	139	122	154	148	197	201	177	161	170
Acres in farm	170	194	207	241	225	225	227	230	224	229	224
Crop acres in farm	116	134	140	164	147	148	147	150	148	145	145
Farm inventory	\$24574	\$21767	\$18440	\$22704	\$20480	\$24044	\$24117	\$26088	\$27278	\$28034	\$27634
Farm Earnings (see page 33)											
<b>FARM EXPENSES</b>											
Cattle	\$ 141	\$ 79	\$ 145	\$ 217	\$ 299	\$ 607	\$ 421	\$ 444	\$ 374	\$ 357	\$ 372
Hogs bought	85	69	57	65	62	60	121	203	205	182	168
Sheep bought	6	10	61	110	98	82	45	53	62	80	108
Poultry bought	37	39	59	100	95	100	118	132	167	194	210
Horses bought	36	32	44	36	28	28	32	34	34	30	17
Misc. livestock expense	66	72	66	130	110	78	101	123	161	155	165
Misc. crop expenses	186	177	173	278	235	182	202	284	364	472	463
Feed bought	440	324	438	603	475	600	820	1416	1799	1730	1764
Power mach. (new & exp.)	399	340	456	578	530	604	821	696	647	818	855
Custom work hired	-	-	-	-	-	123	115	164	185	240	273
Mach. and equip. (new)	190	132	205	330	261	296	470	464	348	384	515
Mach. and equip. (upkeep)	72	57	59	78	65	68	90	166	188	208	231
Bldgs., fencing (new)	130	98	161	282	250	352	313	245	361	382	249
Bldgs., fencing (upkeep)	52	29	56	114	69	84	164	226	228	236	200
Hired labor	272	252	318	519	340	404	454	571	693	805	663
Taxes and insurance	298	338	270	322	285	276	280	313	312	332	338
General farm	30	31	30	40	36	42	43	46	63	67	72
Total farm purchases	\$2,440	\$2,079	\$2,598	\$3,802	\$3,238	\$3,986	\$4,610	\$5,580	\$6,191	\$6,672	\$6,663
Decrease in farm capital	-	755	-	22	-	-	-	-	-	511	238
Board to hired labor	102	93	115	174	128	141	145	177	171	156	108
Interest on farm capital	1,228	1,089	922	1,135	1,024	1,202	1,206	1,304	1,364	1,402	1,382
Unpaid family labor	358	292	232	231	236	269	278	304	386	395	441
Total farm expenses	\$4,128	\$4,308	\$3,867	\$5,364	\$4,626	\$5,598	\$6,239	\$7,365	\$8,112	\$9,136	\$8,832

Table 42. Summary by Years (Continued)

	Average 1928-29	Average 1930-32	Average 1933-37	1938	1939	1940	1941	1942	1943	1944	1945
<b>FARM RECEIPTS</b>											
Cattle	\$ 753	\$ 467	\$ 534	\$ 838	\$ 813	\$1,176	\$1,215	\$1,514	\$1,280	\$1,492	\$1,439
Dairy products	1,662	1,209	1,377	1,509	1,170	1,454	1,720	2,078	2,475	2,961	3,403
Hogs	1,164	950	862	1,248	926	984	1,778	3,104	3,551	3,168	2,573
Sheep and wool	52	39	151	217	216	162	173	177	203	214	230
Poultry	140	139	290	520	344	339	583	722	688	814	787
Eggs	275	232	340	378	301	405	523	765	1,040	1,022	1,265
Horses	30	30	45	51	45	48	31	34	31	28	23
Corn	37	39	126	190	142	128	88	111	137	143	175
Small grain	241	140	347	244	274	235	262	312	320	261	239
Other crops	163	170	159	185	157	250	287	457	520	762	776
Income labor off farm	102	112	148	219	136	148	146	119	146	145	168
Agric. Adj. payments	0	0	192	223	336	324	331	343	190	81	48
Misc.	134	151	185	314	231	295	342	269	214	290	300
(7) Total farm sales	\$4,753	\$3,678	\$4,756	\$6,136	\$5,091	\$5,948	\$7,479	\$10,005	\$10,795	\$11,381	\$11,426
(8) Increase in farm cap.	617	-	573	-	891	1,017	1,432	1,498	1,167	-	-
(9) Fam. living from farm	325	248	254	252	260	458	505	576	643	646	639
(10) Total farm receipts	5,695	3,926	5,583	6,388	6,242	7,423	9,416	12,079	12,605	12,027	12,065
(6) Total farm expenses	4,128	4,308	3,867	5,364	4,626	5,598	6,239	7,365	8,112	9,136	8,832
(11) Oper. lab. earnings	1,567	- 382	1,716	1,024	1,616	1,825	3,177	4,714	4,493	2,891	3,233
<b>MISCELLANEOUS ITEMS</b>											
Yield per A. corn (bu.)	44.8	43.5	42.4	51.7	59.0	56.3	57.6	61.2	51.8	51.6	34.0
Yield per A. barley (bu.)	36.0	30.1	24.4	28.2	33.5	41.0	29.0	28.1	16.2	9.8	32.7
Yield per A. oats (bu.)	46.0	48.1	37.7	35.9	48.5	58.2	31.5	49.3	42.7	39.1	48.3
Yield per A. alfalfa (tons)	3.0	2.6	2.2	2.1	2.2	2.3	2.6	2.7	2.4	2.1	2.5
% high return crops	31.9	34.1	39.9	41.3	40.8	41.4	41.0	43.5	41.1	49.3	47.1
A.U. livestock per 100 A.	19.2	20.7	19.9	19.7	18.5	23.4	24.6	25.2	25.4	23.8	23.4
No. of work units	599	729	763	866	759	658	664	690	671	666	645
Work units per worker	310	339	333	360	349	292	301	316	305	303	323
Expenses per work unit	\$1.76	\$1.34	\$1.26	\$1.44	\$1.41	\$1.66	\$1.87	\$2.23	\$2.79	\$3.21	\$3.32
No. of work horses	5.4	5.4	5.0	4.4	4.1	4.1	4.0	3.9	3.8	3.5	3.2
No. of colts	.8	.8	1.0	1.3	1.1	1.0	.9	.9	.7	.7	.5
No. of milk cows	14.2	17.1	18.2	18.6	17.2	17.1	17.4	18.1	17.5	17.9	17.3

Table 42. Summary by Years (Continued)

Misc. items (Cont.)	Average 1928-29	Average 1930-32	Average 1933-37	1938	1939	1940	1941	1942	1943	1944	1945
No. of litters of pigs	9.3	11.7	8.8	11.1	11.5	12.1	13.8	15.7	18.1	12.1	12.3
Lbs. of hogs produced	12,706	16,219	12,467	15,948	16,014	17,671	20,330	24,383	25,149	20,398	18,669
No. of head of sheep	7.0	11.5	17.5	23.3	16.2	18.6	16.1	16.2	15.2	12.7	11.8
No. of hens	136	156	185	187	177	197	197	219	246	250	247
Lbs. B.F. per dairy cow	244	241	236	240	245	260	261	253	247	237	254
Lbs. B.F. per dual pur. cow	-	-	-	-	-	181	203	189	182	169	173
No. of pigs per litter	6.3	6.2	6.2	6.7	6.3	6.3	6.3	6.3	6.0	6.1	6.3
No. of eggs laid per hen	95	112	126	135	126	131	142	146	147	157	168
<b>PRICE RECEIVED PER:</b>											
Lb. B.F. sold as cream	\$ .52	\$ .30	\$ .32	\$ .31	\$ .28	\$ .33	\$ .39	\$ .45	\$ .55	\$ .61	\$ .65
Cwt. hogs sold	8.92	5.82	6.98	7.69	6.17	5.27	9.20	13.24	13.88	13.08	14.24
Cwt. feeder cattle sold	-	-	-	-	-	8.67	9.72	11.69	13.84	13.84	13.86
Lb. wool sold	.36	.13	.25	.18	.26	.31	.40	.41	.42	.43	.44
Doz. eggs sold	.28	.17	.18	.18	.15	.17	.22	.29	.36	.32	.37
Lb. turkey sold	-	-	.20	.20	.17	.16	.21	.29	.33	.34	.33
<b>RETURN ABOVE FEED COST PER:</b>											
Dairy cow	\$76.50	\$28.16	\$42.62	\$47.89	\$45.05	\$58.05	\$71.65	\$84.86	\$93.27	\$101.31	\$125.85
Dual purpose cow	-	-	-	-	-	31.69	52.01	55.88	57.81	60.36	74.15
Cwt. hogs prod.	1.50	.30	2.22	3.47	1.82	1.50	5.41	7.09	2.90	2.77	4.26
Head of sheep	5.50	-.07	2.78	1.28	3.18	3.43	5.48	5.77	4.51	3.98	5.05
Hen	1.82	1.13	1.01	1.12	.97	.92	1.66	2.16	2.55	1.82	2.66
Cwt. turkeys prod.	-	-	10.59	12.38	8.27	6.30	10.72	16.56	14.89	19.24	14.30
<b>FEED COST PER:</b>											
Dairy cow	\$69.50	\$52.27	\$45.02	\$40.55	\$38.67	\$43.22	\$49.10	\$58.29	\$77.61	\$87.44	\$95.32
Dual purpose cow	-	-	-	-	-	36.29	39.50	50.39	62.90	71.32	69.93
Cwt. hogs produced	7.66	4.50	5.14	3.86	3.51	4.11	5.17	7.16	10.21	10.93	9.97
Head of sheep	2.82	2.26	2.55	2.37	2.33	2.61	2.57	3.01	4.34	3.96	4.60
Hen	1.62	1.09	1.55	1.30	1.23	1.36	1.80	2.27	3.03	3.42	3.56
Cwt. turkeys prod.	-	-	8.28	7.75	7.09	9.06	9.33	11.90	17.66	16.35	15.28
Horse	55.09	36.13	38.42	29.94	27.61	31.33	35.49	40.25	50.93	49.60	43.79
<b>PRICE OF FEED:</b>											
Shelled corn (per bu.)	\$ .70	\$ .49	\$ .59	\$ .43	\$ .36	\$ .46	\$ .52	\$ .69	\$ .91	\$ .98	\$ .88
Barley (per bu.)	.60	.36	.56	.39	.30	.31	.38	.57	.79	.92	.94
Oats (per bu.)	.48	.25	.30	.22	.23	.26	.32	.44	.62	.68	.64
Bran (per cwt.)	1.70	1.00	1.18	1.05	1.10	1.20	1.45	1.95	2.10	2.20	2.20
Oilmeal (per cwt.)	3.00	2.00	1.97	2.30	2.15	1.75	2.00	2.30	2.55	2.82	2.82
Alfalfa (per ton)	14.75	12.00	10.30	7.50	7.00	7.50	8.00	8.00	11.00	15.00	15.00

Footnote for pages 30, 31 and 32.

The values of farm real estate in 1931 were reduced approximately 25 per cent from 1928-1930 values. The values in 1932 were reduced about 29 per cent from the 1931 values. Only land was affected by the reduction in 1931, but in 1932 buildings and improvements were cut 25 per cent. In 1936 the values of land were adjusted upward 10 per cent. The value of dairy cows was also adjusted downward in 1932 and upward in 1936. These capital losses were not included in the inventory decreases 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 1945.

The charges for unpaid family labor and board for hired labor were also changed from year to year. The rates used for the period 1928 to 1945 were as follows:

Year	Unpaid family labor	Board for hired labor	Year	Unpaid family labor	Board for hired labor
1928	\$60	\$20	1938	\$45	\$18
1929	60	20	1939	45	18
1930	60	20	1940	45	18
1931	40	15	1941	50	20
1932	30	10	1942	60	25
1933	30	10	1943	75	25
1934	30	10	1944	85	25
1935	40	15	1945	90	25
1936	43	18			
1937	45	18			

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 per cent 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 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. Cattle were classified into two groups "specialized dairy cattle" and "dual purpose cattle." 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.

These adjustments should be considered in comparing 1945 results with previous years.