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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
Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Redwood,
Rock, and Watonwan Counties
and the
Southwest Minnesota Farm Management Association
Cooperating

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Annual Report of the Southwestern Minnesota Farm Management Service 1945

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Cooperator: _____

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Sixth Annual Report of the Southwest Minnesota Farm Management Service of Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Redwood, Rock, and Watonwan Counties for the Year 1945

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

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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 several southwestern Minnesota counties are cooperating with the Southwest Minnesota Farm Management Association in maintaining a farm management service. The Association was organized in the fall of 1939 by farmers in that part of the state for the purpose of studying the farm business thru farm records. Each farmer pays an annual fee which covers a part of the cost. The balance of the cost is defrayed by the University of Minnesota and the United States Department of Agriculture.

The analysis of the records and the preparation of the report are handled by the Division of Agricultural 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. J. R. Burkholder

is the field agent for this project. At the end of the year G. E. Toben of the Division of Agricultural Economics aided in closing the records. County agricultural extension agents who cooperate in this project include H. J. Vossen, Fred Geisler, Roland Abraham, S. B. Simpson, A. B. Hagen, C. E. Stower, Ross Huntsinger, J. I. Swedberg, C. R. Simon, Ed Kaeder and Henry Fox.

The officers for the Southwest Farm Management Association for 1945 were:

President, Will N. Nelson, Tracy, Redwood County
Vice-President, Lewis Hibma, Brewster, Nobles County
Secretary-Treasurer, Arthur Foster, Garvin, Murray County

The board of directors include these officers and also the following: Walter Schmotzer, Cottonwood County; Clarence Myers, Faribault County; Chas. Winzer, Jackson County; Paul Peters, Martin County; Herbert Johnson, Murray County; Jack L. McKeever and Ed Olson, Jr., Noble's County; Herbert Green, Redwood County; George Hofelman, Rock County and Clayton Johnson, Watonwan County.

The following tabulation shows by counties the numbers of members who completed records in 1945:

Cottonwood	12	Martin	11	Redwood	24
Faribault	17	Murray	17	Rock	9
Jackson	17	Nobles	34	Watonwan	14
				Total	155

In the tables on page 6 and succeeding pages are shown data for 153 farms. Two farms have been omitted from all of the averages in the tables because the account books were not available at the time the summaries were made.

TYPE OF FARMING

The farms in this area have a wide diversity of enterprises. All classes of livestock are important although livestock kept for meat production tends to predominate. The sale of crops constitutes an important source of income. The principal feed crops grown are corn, oats, barley and hay. In addition wheat, soybeans, sweet corn, canning peas, and flax are grown to a limited extent as cash crops.

TOPOGRAPHY, SOILS, AND WEATHER

The soils range from dark brown to heavy black loam. The major part of the area is undulating to gently rolling land interspersed with almost level tracts. In the western part of the area the surface ranges from undulating to sharply rolling. Nearly all of the land is tillable and well drained.

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 southern counties. Precipitation was considerably above normal in the southern counties from April thru July. Field work and growth of vegetation was retarded and corn planting was delayed. Small grains, meadows and pastures were good. During much of the remainder of the year precipitation was below normal. Corn made rapid progress during the late summer but killing frosts were general in late September. Consequently, much of the corn was of poor quality and very high in moisture content. Weather conditions in October were ideal for harvesting late crop and for drying the high moisture corn and soybeans.

Table 1. Monthly and Annual Precipitation

	Worthington		Fairmont		Windom		Redwood Falls	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
January	0.36	-0.27	0.31	-0.49	0.13	-0.51	0.37	-0.57
February	1.31	+0.54	1.39	+0.42	1.34	+0.60	1.18	+0.24
March	1.16	-0.10	1.97	+0.56	1.02	-0.12	1.12	+0.02
April	2.11	+0.03	4.36	+2.13	1.62	-0.27	2.30	+0.05
May	5.18	+1.24	6.52	+2.60	5.06	+1.37	3.17	-0.25
June	5.09	+0.80	6.16	+2.02	4.56	+0.63	4.70	+0.21
July	5.51	+2.12	5.40	+1.84	5.14	+1.67	4.73	+1.69
August	1.06	-2.70	1.39	-2.16	1.54	-2.06	2.64	-0.34
September	2.30	-1.11	2.00	-1.32	5.08	+2.09	3.54	+0.68
October	0.11	-1.58	0.13	-1.72	0.10	-1.53	0.29	-1.38
November	0.60	-0.57	0.77	-0.62	0.58	-0.54	1.26	+0.05
December	1.86	+1.15	1.94	+1.04	1.54	+0.89	1.36	+0.46
1945 Total	26.65	-0.45	32.34	+4.30	27.71	+2.22	26.66	+0.86
1944 Total	32.83	+5.73	31.54	+3.50	30.57	+5.08	24.86	-0.94
1943 Total	33.15	+6.05	36.64	+8.60	30.37	+4.88	31.04	+5.24
1942 Total	33.47	+6.37	25.98	-2.06	31.20	+5.71	21.02	-4.78
1941 Total	28.22	+1.12	32.92	+4.88	25.40	-0.09	26.07	+0.27
1940 Total	22.50	-4.60	28.72	+0.68	27.44	+1.95	25.95	+0.15
1939 Total	24.27	-2.83	21.92	-6.12	21.64	-3.85	18.52	-7.28
1938 Total	40.50	+13.40	39.99	+11.95	34.11	+8.62	26.84	+1.04
Normal Annual Prec.	27.10		28.04		25.49		25.80	

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, who visited each farm in the nine counties 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		45 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			227.3	
Owned			227.3	
Rented			-	
Total farm capital			$ 34060	$33842
Accounts receivable			3	26
Stocks and bonds			2597	3353
Life insurance			862	925
Outside real estate			1992	2537
Other outside investments			163	129
Total outside investments			5614	6944
Cash on hand and in bank			1074	1420
Other household & personal assets			1039	1014
Total cash, household & personal assets			2113	2434
TOTAL ASSETS			41790	43246
Federal Land Bank Mortgage			1219	872
Other mortg. on land operated			6024	5303
Mortgages on other real estate			527	503
Production Credit Association			313	537
Other chattel mortgages			248	293
Notes payable			1271	1051
Accounts payable			146	126
TOTAL LIABILITIES			9748	8685
Farmer's net worth			32042	34561
Gain in net worth				+2519

	33 Part Owners*		33 Renters **	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	333.1		250.7	
Owned	210.9		-	
Rented	122.2		250.7	
Total farm capital	$32294	$23840	$ 9205	$9892
Accounts receivable	164	538	133	107
Stocks and bonds	2492	3023	1721	2298
Life insurance	780	857	307	337
Outside real estate	667	697	-	485
Other outside investments	121	121	48	51
Total outside investments	4060	4698	2076	3171
Cash on hand and in bank	695	888	579	1166
Other household & personal assets	1358	1347	998	1010
Total cash, household & personal assets	2053	2235	1577	2176
TOTAL ASSETS	38571	40311	12991	15346
Federal Land Bank Mortgage	1980	1184	-	-
Other mortg. on land operated	3749	3452	-	-
Mortgages on other real estate	82	15	-	352
Production Credit Association	1259	298	557	633
Other chattel mortgages	444	419	254	139
Notes payable	2482	2454	1004	1142
Accounts payable	206	243	207	217
TOTAL LIABILITIES	10202	8065	2022	2483
Farmer's net worth	28369	32246	10969	12863
Gain in net worth		+3877		+1894

*15 rented for cash, 6 cash and crop share, 11 crop share and 1 livestock share.
** 5 rented for cash, 17 cash and crop share 2 crop share and 9 livestock share.

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

FARM EXPENSES	Your farm	45 owners	33 part-owners	33 renters
Dairy and dual-purpose cows bought	$	$ 58	$ 18	$ 93
Other dairy & dual-pur. cattle bought		26	40	91
Beef cattle bot. (incl. feeders)		1489	1733	732
Hogs bought		302	705	248
Sheep bought (including feeders)		238	607	664
Poultry bought (including turkeys)		166	231	153
Horses bought		17	9	6
Misc. livestock expenses		216	216	129
Misc. crop expenses		493	725	398
Feed bought		2653	2649	1780
Custom work hired		288	271	278
Mech. power mach. (farm share) (new)		150	221	117
Mech. power mach. (farm share) (upkp.)		230	299	176
Mech. power (f. share) (gas, oil, etc.)		549	669	474
Crop and general mach. (new)		344	437	417
Crop and general mach. (upkeep)		171	242	160
Livestock equipment (new)		56	64	117
Livestock equipment (upkeep)		107	76	101
Buildings and fencing (new)		394	558	25
Buildings and fencing (upkeep)		266	268	33
Hired labor		791	740	370
Taxes (real estate & pers. property)		280	259	37
General farm and insurance		138	142	83
Cash rent		-	415	475
Interest paid		407	367	81
(1) Total farm purchases		$ 9829	$11961	$ 7238
(2) Decrease in farm capital		218	-	-
(3) Board furnished hired labor		96	103	44
(4) Interest on farm capital		1291	1261	396
(5) Unpaid family labor		251	365	257
(6) Total farm exp. (Sum of (1) to (5)		$11685	$13690	$ 7935
FARM RECEIPTS				
Dairy and dual-purpose cows	$	$ 163	$ 192	$ 238
Dairy products		1008	828	673
Other dairy and dual-purpose cattle		199	378	263
Beef cattle (including feeders)		3632	5400	2046
Hogs		4876	4561	2792
Sheep and wool (including feeders)		857	740	870
Poultry (including turkeys)		617	912	429
Eggs		1199	948	785
Horses		19	29	25
Corn		358	475	296
Small grain		499	1122	648
Other crops		643	902	248
Machinery & equip. sold		250	208	243
Agricultural adjustment payments		47	91	19
Income from work off the farm		213	472	213
Misc.		36	61	27
(7) Total farm sales		$14616	$17319	$ 9815
(8) Increase in farm capital		-	546	687
(9) Family living from the farm		621	649	537
(10) Total farm receipts (7)+(8)+(9)		$15237	$18514	$11039
(6) Total farm expenses		11685	13690	7935
(11) Operator's labor earnings (10)-(6)		3552	4824	3104
(12) Ret. cap. & fam. lab. (4)+(5)+(11)		5094	6450	3757

Table 4. Summary of Farm Inventories, 1945*

Items	Your farm Jan. 1	Your farm Dec. 31	Average of 153 farms Jan. 1	Average of 153 farms Dec. 31
Size of farm (acres)			268	
Size of business (work units)**			535	
Productive livestock (total)			$6063	$6833
Dairy and dual purpose cows			605	582
Other dairy & dual purpose cattle			369	361
Beef cattle (incl. feeders)			2479	2371
Hogs			1820	2528
Sheep (including feeders)			518	608
Poultry (including turkeys)			272	383
Horses			252	188
Crop, seed, and feed			4443	4084
Mach. & equipment (total)			3390	3362
Power Mach. (farm share)			1264	1155
Crop & general mach. (~~farm share~~)			1546	1643
Livestock equipment & supplies			580	564
Buildings, fences, etc.			7425	7420
Land			14146	14146
Total farm capital			35719	36033

Items	31 most profitable farms Jan. 1	31 most profitable farms Dec. 31	31 least profitable farms Jan. 1	31 least profitable farms Dec. 31
Size of farm (acres)	402		228	
Size of business (work units)**	784		425	
Productive livestock (total)	$9202	$10919	$4908	$5111
Dairy & dual purpose cows	580	637	620	517
Other dairy & dual purpose cattle	375	421	315	251
Beef cattle (incl. feeders)	4214	3478	2219	2194
Hogs	2896	4260	1330	1664
Sheep (including feeders)	866	1335	121	151
Poultry (including turkeys)	271	788	303	334
Horses	324	236	273	205
Crop, seed, and feed	7163	7181	3764	2892
Mach. & equipment (total)	4585	4482	2882	2835
Power mach. (farm share)	1676	1477	1096	1055
Crop & general mach.	2168	2292	1304	1310
Livestock equipment & supplies	741	713	482	470
Buildings, fences, etc.	8034	8081	7651	7427
Land	20195	20195	13396	13396
Total farm capital	49503	51094	32874	31866

*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	Average 153 farms	31 most profit-able farms	31 least profit-able farms	Your farm	Average 153 farms	31 most profit-able farms	31 least profit-able farms
No. of pers. (fam.		3.2	3.5	2.9				
adult equiv. (oth.*		.3	.6	.3				
Whole milk		1159 qts.	1491	947	$	$67.26	$80.50	$58.26
Skim milk		241 qts.	56	122		1.80	.31	.91
Cream		188 pts.	156	176		38.68	33.45	34.87
Farm made butter		14 lbs.	6	5		6.87	3.16	2.26
Eggs		162 doz.	199	154		54.33	71.05	51.06
Cattle		566 lbs.	689	469		71.30	89.06	59.32
Hogs		564 lbs.	766	501		78.29	104.89	72.59
Sheep		5 lbs.	-	-		.68	-	-
Poultry		130 lbs.	142	106		30.43	33.69	26.75
Potatoes		10 bus.	15	10		15.84	21.02	14.69
Vegetables & fruits						65.39	63.18	66.18
Farm fuel						6.09	4.82	5.91
Rental vl. of house						197.94	198.15	205.15
Misc.						.17	-	-
Total						$635.07	$703.28	$597.95

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

Items	Your farm	Average of 70 farms	14 most profit-able farms	14 least profit-able farms
Number of persons - family		4.3	4.6	3.5
Number of persons, (family		3.2	3.5	2.9
adult equivalent (other*		.3	.5	.2
Food and meals bought	$	$452	$480	$342
Operating and supplies		227	449	135
Clothing and clothing materials		273	328	224
Personal care, personal spending		85	124	72
Furnishings and equipment		91	133	37
Education, recreation and development		124	271	88
Medical care and health insurance		160	180	162
Church, welfare, gifts		229	242	167
Income tax		528	833	171
Personal share of auto expense		58	69	69
Household share of elect. & gas eng. exp.		36	34	30
H.H.&pers.shr.of new auto,gas eng.&motors bot.		10	5	-
Life insurance and other investments		969	1856	308
Total household and personal cash expenses		$3242	$5004	$1805
Food furnished by the farm		447	472	376
Fuel furnished by the farm		7	6	8
House rental		184	178	204
Total household and personal expenses		$3880	$5560	$2393

*Hired help or others boarded.

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

Items	Your farm	Average of 153 farms	31 most profitable farms	31 least profitable farms
FARM EXPENSES				
Dairy and dual-purpose cows bought	$	$ 65	$ 123	$ 36
Other dairy & dual-pur. cattle bot.		53	83	29
Beef cattle bot. (incl. feeders)		1390	2401	936
Hogs bought		377	700	293
Sheep bought (including feeders)		600	1169	39
Poultry bought (including turkeys)		195	416	149
Horses bought		15	7	22
Misc. livestock expense		194	333	160
Misc. crop expenses		575	904	493
Feed bought		2416	3162	1861
Custom work hired		292	327	298
Mech.power mach.(farm share)(new)		200	178	217
Mech.power mach.(farm share)(upkp.)		235	290	233
Mech.power (f.share)(gas,oil,etc.)		582	807	541
Crop and general mach. (new)		414	583	248
Crop and general mach. (upkeep)		195	246	207
Livestock equipment (new)		78	100	59
Livestock equipment (upkeep)		94	137	85
Buildings and fencing (new)		370	517	154
Buildings and fencing (upkeep)		219	240	207
Hired Labor		636	1229	475
Taxes		311	424	273
General farm and insurance		125	150	128
(1) Total farm purchases		$ 9631	$14526	$ 7143
(2) Decreased in farm capital		-	-	1008
(3) Board furnished hired labor		83	152	94
(4) Interest on farm capital		1794	2515	1619
(5) Unpaid family labor		322	335	341
(6) Total farm exp.(sum of (1) to (5)		$11830	$17528	$10205
FARM RECEIPTS				
Dairy and dual-purpose cows	$	$ 217	$ 183	$ 218
Dairy products		906	840	874
Other dairy & dual-purpose cattle		256	289	320
Beef cattle (including feeders)		3777	6929	2553
Hogs		4484	7118	3298
Sheep and wool (including feeders)		926	1446	116
Poultry (including turkeys)		659	1474	442
Eggs		977	1042	953
Horses		27	30	38
Corn		587	817	365
Small grain		949	1837	542
Other crops		673	1117	504
Machinery & equip. sold		251	378	169
Agricultural adjustment payments		51	140	38
Income from work off the farm		295	517	169
Misc.		48	58	29
(7) Total farm sales		$15083	$24215	$10628
(8) Increase in farm capital		314	1590	-
(9) Family living from the farm		635	703	598
(10) Total farm receipts (7)+(8)+(9)		$16032	$26508	$11226
(6) Total farm expenses		11830	17528	10205
(11) Oper. labor earnings (10)-(6)		4202	8980	1021

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

Items	Your farm	Average of 153 farms	31 most profitable farms	31 least profitable farms
EXPENSES AND NET DECREASES				
Total power	$ [illegible]	$1215	$1627	$1153
Horses		158	226	135
Tractor		521	750	477
Truck		116	203	104
Auto (farm share)		230	229	249
Gas engine (farm share)		5	1	5
Elec. plant or current (f. share)		61	77	52
Hired power		124	141	131
Crop and general machinery	[illegible]	456	552	432
Livestock equipment	[illegible]	177	252	147
Buildings, fencing and tiling	[illegible]	481	594	480
Misc. productive livestock expense		193	330	159
Labor	[illegible]	1109	1798	984
Real estate taxes		259	347	231
Personal property tax		52	77	42
Insurance		41	54	36
General farm		84	96	92
Interest on farm capital		1794	2515	1619
(1) Total expenses & net decreases	[illegible]	5861	8242	5375
RETURNS AND NET INCREASES				
All productive livestock	$ [illegible]	$10748	$16681	$7900
Dairy and dual purpose cows	[illegible]	1084	1035	935
Other dairy & dual pur.cattle	[illegible]	378	433	390
Beef breeding herd	[illegible]	594	518	551
Feeder cattle	[illegible]	1745	3341	1151
Hogs	[illegible]	4892	7887	3411
Sheep - farm flock	[illegible]	119	92	102
Sheep - feeders	[illegible]	298	654	4
Turkeys	[illegible]	323	1395	71
Chickens	[illegible]	1315	1326	1285
Crops, seed and feed	[illegible]	-1056	-149	-1745
Income from labor off the farm		187	412	74
Agricultural conservation payments		51	140	38
Miscellaneous		133	138	129
(2) Total returns & net increased	[illegible]	10063	17222	6396
(1) Total expenses & net decreases	[illegible]	5861	8242	5375
(3) Oper. labor earnings (2) - (1)	[illegible]	4202	8980	1021

* 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 on 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 $8,980 and of those in the lower 20 per cent was $1,021. This is a range of $7,959 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 153 farms		No. of farms	Average operator's labor earnings
Group	Average		
Below 86	75	34	$2463
86-113	100	90	4025
114 and above	125	29	6793

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 49.0	43.5	39	$3557
49.0 - 57.9	53.9	59	4425
58.0 & above	66.4	55	4421

*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.

Farmers' earnings are affected by the choice of crops as well as by the yields of 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* Group	Average	No. of farms	Average operator's labor earnings
Below 86	76	30	$2648
86 - 113	98	92	4184
114 and above	128	31	5761

*The index is weighted by the number of animal units.

The majority of these farms are livestock farms. A large proportion of the crops raised are fed on the farm and some additional feed is purchased. Feed is the major item of cost in livestock production and livestock constitutes an important source of income on these farms. Hence there is a marked 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* Group	Average	No. of farms	Average operator's labor earnings
Below 14.0	10.3	30	$4022
14.0 - 28.9	20.8	92	4142
29.0 and above	37.6	31	4554

*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

No. of work units Group	Average	No. of farms	Average operator's labor earnings
Below 375	316	35	$2378
375 - 674	496	85	3938
675 and above	870	33	6818

The size of the farming operations is one of the important factors affecting the earnings of farmers. On the average, the farmers with a large business had larger earnings than the farmers with a small business. The size of the farm business is here measured in terms of the number of work units. 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. The size of the farm business may be increased by farming more land, by keeping more livestock, or by keeping livestock or growing crops of a more intensive type.

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

Work units per worker Group	Average	No. of farms	Average operator's labor earnings
Below 250	210	32	$2487
250 - 374	302	94	4236
375 and above	445	27	6116

Farmers' earnings are generally higher on those farms on which a large amount of work is accomplished per worker. 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*

Expense per work unit Group	Average	No. of farms	Average operator's labor earnings
$6.00 and above	$6.73	27	$2467
$3.25 - $5.99	4.45	96	4347
Below $3.25	2.77	30	5300

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

Some of the cash expenses can be kept down by careful management. Oftentimes 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 is Above Average

No. of factors in which farm 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 or one	26	_____	xxxxxxxxxxxxx	$2292
Two or three	55	_____	xxxxxxxxxxxxxxxxxx	3058
Four or five	57	_____	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	5695
Six or seven	15	_____	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	6036

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	13.5 per cow	Small grain	.7 per acre
Other dairy & du.pur.cattle	4.0 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	.35 per 100 lbs.	Corn, husked	1.0 per acre
Sheep - farm flock	1.6 per an. unit*	Corn, hogged	.6 per acre
Sheep - feeders	.4 per 100 lbs.	Corn, shredded	2.1 per acre
Hogs	.25 per 100 lbs.	Corn silage	1.7 per acre
Turkeys	.7 per 100 lbs.	Corn fodder	.9 per acre
Hens	26.0 per 100 hens	Alfalfa hay	1.0 per acre
Canning peas	2.0 per acre	Soybean hay	1.4 per acre
Soybeans for grain	.9 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 153 farms	31 most profitable farms	31 least profitable farms
Operator's labor earnings	$_____	$4202	$8980	$1021
(1) Crop yields*	_____	100	109	90
(2) % of tillable land in high ret. crops**	_____	55.7	55.8	54.4
(3) Ret. for $100 feed to prod. livestock***	_____	100	105	91
(4) Prod. livestock units per 100 acres****	_____	22.1	23.5	21.0
(5) Size of business - work units	_____	535	784	425
(6) Work units per worker	_____	297	356	250
(7) Pow., mach., equip., & bldg. exp. per work unit	$_____	$4.52	$3.98	$5.23

Items related to some of the above measures:

(3) Index of return for $100 feed from -				
Dairy cattle (See pages 20 & 21)	_____	100	97	99
Dual-purpose cattle (See pp. 22 &23)	_____	100	78	88
Beef cattle - breeding herd (See p.26)	_____	100	93	97
Beef cattle - feeders (See page 25)	_____	100	111	88
Hogs (See page 19)	_____	100	110	91
Sheep - farm flock (See page 28)	_____	100	78	116
Sheep - feeders (See page 29)	_____	100	104	-
Turkeys (See page 26)	_____	100	105	-
Chickens (See page 27)	_____	100	101	101
(5) Work units on crops	_____	184	272	149
Work units on productive livestock	_____	313	429	261
Other work units	_____	38	83	15
(6) Total number of workers	_____	1.8	2.2	1.7
Number of family workers	_____	1.3	1.3	1.3
Number of hired workers	_____	.5	.9	.4
(7) Power expense per work unit	$_____	$2.38	$2.17	$2.76
Crop machinery expense per work unit	_____	.88	.71	.96
Livestock equip. expense per work unit	_____	.34	.34	.36
Bldgs. & fencing exp. per work unit	_____	.92	.76	1.15

*Given as a percentage of the average.

**Crops are marked in Table 19 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.

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

Oper. labor earnings	Crop yields	High return crops	Return from productive livestock	Pr. l.s. units per 100 A.	Work units	Work units per worker	Pow., mach., eq., & bldg. exp. per work unit
$9000	140	79.5	140	42.0	855	460	$2.10
8400	135	76.5	135	39.5	815	440	2.40
7800	130	73.5	130	37.0	775	420	2.70
7200	125	70.5	125	34.5	735	400	3.00
6600	120	67.5	120	32.0	695	380	3.30
6000	115	64.5	115	29.5	655	360	3.60
5400	110	61.5	110	27.0	615	340	3.90
4800	105	58.5	105	24.5	575	320	4.20
4200	100	55.5	100	22.0	535	300	4.50
3600	95	52.5	95	19.5	495	280	4.80
3000	90	49.5	90	17.0	455	260	5.10
2400	85	46.5	85	14.5	415	240	5.40
1800	80	43.5	80	12.0	375	220	5.70
1200	75	40.5	75	9.5	335	200	6.00
600	70	37.5	70	7.0	295	180	6.30
0	65	34.5	65	4.5	255	160	6.60

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 153 farms	31 most profit-able farms	31 least profit-able farms	Average per farm growing crop
Canning peas	(A)	8	____	.8	.7	.3	14.8
Flax	(C)	83	____	15.8	29.3	10.8	29.0
Barley	(D)	17	____	1.1	2.8	.5	9.6
Wheat	(D)	10	____	.6	1.5	.6	9.7
Oats	(D)	149	____	52.0	73.9	43.2	53.4
Soybeans for grain	(C)	76	____	13.9	25.0	11.0	28.1
Rye, millet and buckwheat	(D)	6	____	.4	.6	.3	10.2
Total Small Grain, peas & Soybeans		152	____	84.6	133.8	66.7	85.1
Sugar beets, hybrid seed corn, potatoes and truck crops	(A)	17	____	1.0	1.4	1.1	9.0
Corn grain	(A)	152	____	84.2	133.8	62.8	84.8
Corn or sorghum silage	(B)	80	____	7.1	7.8	7.2	13.5
Sweet corn	(B)	6	____	1.1	-	.6	27.8
Corn or sorghum fodder	(D)	21	____	.8	1.3	1.0	5.8
Total cultivated crops		153	____	94.2	144.3	72.7	94.2
Alfalfa hay	(A)	130	____	14.8	18.4	12.6	17.4
Soybean hay	(C)	17	____	.7	.8	.8	6.6
Mixed legumes & non-legumes	(C)	34	____	3.0	4.4	5.7	13.5
Timothy and/or brome for hay or seed	(D)	18	____	1.2	1.6	.3	10.0
Misc. hay and seed	(D)	8	____	.2	.1	-	4.4
Total tillable land in hay		145	____	19.9	25.3	19.4	21.0
Alfalfa and mixtures inc.alf	(A)	74	____	6.0	5.8	5.2	12.3
Sweet clover pasture	(B)	13	____	1.6	.5	1.4	19.0
Other legumes and mixtures	(C)	35	____	3.4	4.5	4.2	15.0
Sudan grass and/or rape	(C)	22	____	1.1	2.7	.7	7.8
Other tillable pasture	(D)	56	____	5.9	8.8	4.3	16.1
Total tillable land in pasture		132	____	18.0	22.3	15.8	20.9
Tillable land not cropped	(D)	38	____	3.9	3.7	2.0	16.0
Total tillable land			____	220.6	329.4	176.6	220.6
Wild or phalaris hay (non-tillable)		51	____	3.8	7.6	6.0	11.4
Non-tillable pasture		94	____	23.8	36.1	27.9	38.7
Roads, waste and timber			____	11.3	17.5	8.3	
Farmstead			____	8.5	10.9	8.8	
Total acres in farm			____	268.0	401.5	227.6	
% land tillable			____	82.3	82.0	77.6	
% tillable land in high return crops			____	55.7	55.8	54.4	

Table 20. Crop Yields per Acre, 1945

Crop	Your farm	Average of 153 farms	31 most profitable farms	31 least profitable farms
Canning peas, value above seed cost	$	$56.76	-	-
Flax, bu.		13.8	14.6	12.8
Barley, bu.		44.3	43.5	50.5
Wheat, bu.		27.1	27.5	20.0
Oats, bu.		51.8	60.4	46.8
Soybeans for grain, bu.		15.3	17.5	15.0
Corn grain, bu.		33.5	36.5	31.4
Corn or sorghum silage, tons		7.1	7.7	6.4
Sweet corn, tons		2.6	-	-
Corn or sorghum fodder, tons		2.6	2.4	1.7
Alfalfa hay, tons		2.1	2.0	1.9
Soybean hay, tons		1.1	.8	.9
Mixed legume & non-legume hay, tons		1.9	1.6	1.4
Timothy and/or brome hay, tons		1.6	1.7	-
Other annual hay, tons		1.2	-	-
Phalaris hay on non-tillable land, tons		1.2	-	-
Wild hay, tons		1.0	1.1	1.0

Table 21. Average Price of Feeds, 1945

Item	Value	Item	Value
Ear corn, per bu.	$ .84	Alfalfa hay, per ton	$15.00
Oats, per bu.	.64	Red or alsike clover hay, per ton	12.75
Barley, per bu.	.94	Soybean hay, per ton	12.75
Wheat, per bu.	1.47	Timothy hay, per ton	9.00
Soybeans, per bu.	2.05	Brome hay, per ton	9.00
Bran, per cwt.	2.18	Sweet clover hay, per ton	8.75
Linseed oilmeal, per cwt.	2.88	Wild hay, per ton	7.50
Soybean oilmeal, per cwt.	3.00	Corn fodder, per ton	6.75
Tankage, per cwt.	4.10	Corn silage, per ton	5.00
Skim milk, per cwt.	.26	Pasture, per mo. per an. unit	1.10

Table 22. Summary of Amount of Livestock, 1945

Items	Your farm	Average of 153 farms	31 most profitable farms	31 least profitable farms
No. of horses	_____	3.1	4.1	3.0
No. of colts	_____	.3	.5	.4
No. of dairy & dual purpose cows	_____	6.1	6.7	5.7
Head of other dairy & dual pur. cattle	_____	7.1	7.7	6.7
Head of cattle in beef breeding herd	_____	10.8	10.6	10.6
Pounds of feeder cattle produced	_____	7695	14209	5474
Pounds of feeder sheep produced	_____	1237	2238	18
Litters of pigs	_____	19.4	28.8	17.6
Pounds of hogs produced	_____	33994	52726	24561
Head of sheep (2 lambs = 1 head)	_____	13.6	16.8	12.3
No. of hens	_____	215	236	212
Total no. of prod.lvstk. animal units	_____	52.1	77.8	41.8
% of total that are:				
Dairy cows	_____	10.5	8.4	10.9
Other dairy cattle	_____	6.4	5.2	6.6
Dual purpose cows	_____	3.8	2.9	2.9
Other dual purpose cattle	_____	2.7	2.5	2.0
Beef breeding herd	_____	14.8	10.5	18.7
Feeder cattle	_____	18.7	23.0	20.4
Hogs	_____	29.4	31.2	28.1
Sheep - farm flock	_____	3.7	2.5	3.8
- feeders	_____	3.1	5.8	.1
Turkeys	_____	1.1	4.0	.5
Hens	_____	5.8	4.0	6.0

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

Items	Your farm	Average of 145 farms*	30 most profitable farms*	30 least profitable farms*
Feed per horse,** lbs.:				
Grain	_____	905	1066	659
Hay	_____	1827	1882	1925
Fodder and stover	_____	68	78	48
Feed costs per horse:				
Grain	$_____	$15.81	$19.35	$10.65
Roughage	_____	10.79	10.66	11.22
Pasture	_____	5.50	5.34	5.68
TOTAL FEED COSTS	$_____	$32.10	$35.35	$27.55
Number of work horses	_____	3.3	4.3	3.1
Number of colts	_____	.4	.5	.4
Crop acres per farm	_____	202.5	311.0	164.8
Tractor and horse exp. per crop acre	$_____	$ 3.46	$ 3.11	$ 3.70
Crop & gen.mach.exp.per crop acre	$_____	2.34	1.82	2.67

*Eight farmers did not have horses. The crop acres and expenses per crop acre are averages of 153 farms.

**Two colts equal one horse.

Table 24. Feed Costs and Returns from Hogs, 1945

Items	Your farm	Average of 144 farms	29 farms highest in returns above feed	29 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn	_____	414	313	559
Small grain	_____	77	54	100
Commercial feeds	_____	37	30	38
Total concentrates	_____	528	397	697
Skim milk and buttermilk	_____	57	49	84
Feed cost per cwt. hogs produced:				
Concentrates	$_____	$ 8.74	$ 6.70	$11.43
Skim milk and buttermilk	_____	.14	.13	.18
Pasture	_____	.16	.14	.21
TOTAL FEED COSTS	$_____	$ 9.04	$ 6.97	$11.82
Net increase in val. per cwt. hogs prod.	$_____	$14.27	$15.02	$13.83
RETURNS ABOVE FEED COST PER CWT. HOGS PROD.	$_____	$ 5.23	$ 8.05	$ 2.01
RETURNS FOR $100 OF FEED	$_____	$165	$217	$118
Price received per cwt. hogs sold	$_____	$14.27	$14.68	$14.23
No. of spring litters raised	_____	15.1	15.1	14.1
No. of fall litters raised	_____	5.5	3.8	5.9
Total no. of litters raised	_____	20.6	18.9	20.0
No. of pigs born per litter	_____	7.6	7.9	7.1
No. of pigs weaned per litter	_____	6.2	6.4	5.9
Pounds of hogs produced	_____	36069	38805	30842

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). Nine farmers were below the average of the group in all five factors; their average return over feed was $3.03 per 100 pounds of hogs. The 23 farmers who were above average in four or all five factors had an average return over feed of $6.88 per 100 pounds. The difference between the two extremes amounts to $3.85 per 100 pounds, or $1389 for the average production of 36069 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 is in proportion to the average return over feed per 100 pounds of hogs	Average return over feed
0	9	xxxxxxxxxxxxxx	$3.03
1	28	xxxxxxxxxxxxxxxxxxxxxx	4.30
2	35	xxxxxxxxxxxxxxxxxxxxxxxxxx	5.20
3	39	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5.47
4 or 5	23	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	6.88

*The data from 10 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

	Your farm	Average of 56 farms	11 farms highest in butterfat per cow	11 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	242	329	153
Feeds per cow, lbs.:				
Corn	_____	1950	1764	1942
Small grain	_____	765	912	499
Commercial feeds	_____	164	244	87
Legume hay	_____	3388	3212	2820
Other hay	_____	492	655	707
Fodder and stover	_____	141	104	187
Total concentrates	_____	2879	2920	2528
Total dry roughage	_____	4021	3971	3714
Silage	_____	4376	5640	3881
Total digestible nutrients*	_____	4987	5216	4402
T. D. N. per lb. B.F.	_____	20.6	15.9	28.8
% T. D. N. that is protein	_____	13.5	13.6	12.5
Feed cost per cow:				
Concentrates	$_____	$48.77	$51.48	$41.20
Roughages	_____	38.27	40.87	33.99
Pasture	_____	5.64	5.51	5.65
TOTAL FEED COSTS	$_____	$92.68	$97.86	$80.84
Value of produce per cow:				
B.F. sales	$_____	$143.51	$228.43	$77.80
Dairy produce used in house	_____	14.50	9.05	12.54
Milk to livestock	_____	18.39	18.46	14.23
Net increases in value of cows	_____	8.58	13.16	3.22
TOTAL VALUE PRODUCED	$_____	$184.98	$269.10	$107.79
RETURNS ABOVE FEED COST PER COW	$_____	$92.30	$171.24	$26.95
RETURNS FOR $100 OF FEED	$_____	$205	$280	$137
Price rec. per lb. B.F. sold (cts.)	_____	67.7	74.1	62.8
As manufacturing cream (cts.)	_____	62.6	63.4	60.9
Other	_____	89.1	91.4	81.9
Feed cost per lb. B.F. (cts.)	_____	38.3	29.7	52.8
% fall freshening	_____	44.5	48.5	30.3
Number of cows**	_____	11.5	15.0	7.9

*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 52 farms*	11 farms highest in butterfat per cow	9 farms lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates	_____	918	866	1079
Hay and fodder	_____	1681	1724	1573
Silage	_____	1406	2294	770
Skim milk	_____	871	753	1024
Whole milk	_____	288	228	295
TOTAL FEED COSTS PER HEAD	$_____	$42.01	$43.38	$41.96
Net inc. in value of other dairy cattle	$_____	$52.76	$52.70	$45.01
RETURNS ABOVE FEED COST PER HEAD	$_____	$10.75	$ 9.32	$ 3.05
RETURNS FOR $100 OF FEED	$_____	$126	$123	$107
Number of head of other dairy cattle	_____	15.1	17.7	8.1

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

Items	Your farm	Average of 56 farms	11 farms highest in butterfat per cow	11 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	2442	2396	2404
Hay and fodder	_____	3672	3616	3403
Silage	_____	3890	5072	3476
TOTAL FEED COSTS PER ANIMAL UNIT	$_____	$80.54	$84.68	$74.91
Value of produce per animal unit:				
Dairy products	$_____	$103.69	$150.89	$67.55
Net incr. in value of dairy cattle	_____	41.95	45.80	28.86
TOTAL VALUE PRODUCED	$_____	$145.64	$196.69	$96.41
RETURNS ABOVE FEED PER ANIMAL UNIT	$_____	$ 65.10	$112.01	$21.50
RETURNS PER $100 OF FEED	$_____	$186	$235	$133
Animal units of dairy cattle	_____	18.9	24.4	11.4

*Four farmers 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 29 farms*	10 farms highest in butterfat per cow	10 farms lowest in butterfat per cow*
Pounds of butterfat per cow	_____	182	241	130
Feeds per cow, lbs.:				
Corn	_____	1562	1835	1805
Small grain	_____	729	516	471
Commercial feeds	_____	73	109	80
Legume hay	_____	3172	3303	2517
Other hay	_____	182	151	268
Fodder and stover	_____	288	233	235
Total concentrates	_____	2364	2460	2356
Total dry roughage	_____	3642	3687	3020
Silage	_____	3344	3178	2791
Total digestible nutrients*	_____	4241	4324	3869
T.D.N. per lb. B.F.	_____	23.3	17.9	29.8
% T.D.N. that is protein	_____	13.7	13.6	13.1
Feed cost per cow:				
Concentrates	$_____	$39.53	$39.68	$38.85
Roughages	_____	33.11	33.24	27.75
Pasture	_____	5.38	4.91	5.45
TOTAL FEED COSTS	$_____	$78.02	$77.83	$72.05
Value of produce per cow:				
B.F. sales	$_____	$89.26	$121.31	$60.71
Dairy produce used in house	_____	18.72	23.08	16.42
Milk to livestock	_____	16.39	18.28	13.59
Net increases in value of cows	_____	14.93	20.68	12.85
TOTAL VALUE PRODUCED	$_____	$139.30	$183.35	$103.57
RETURNS ABOVE FEED COST PER COW	$_____	$61.28	$105.52	$31.52
RETURNS FOR $100 OF FEED	$_____	$195	$250	$157
Price recd. per lb. B.F. sold (cts.)	_____	61.9	60.9	62.7
Feed cost per lb. B.F. (cts.)	_____	42.9	32.3	55.4
% fall freshening	_____	43.0	54.5	33.4
Number of cows	_____	7.6	6.1	8.5

* Not including nutrients received from pasture.

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

Items	Your farm	Average of 26 farms*	9 farms highest in returns above feed	9 farms lowest in returns above feed
Feeds per head, lbs.:				
Concentrates	_____	1214	1047	1449
Hay and fodder	_____	1370	819	1757
Silage	_____	1250	1471	1742
Skim milk	_____	1166	1051	1155
Whole milk	_____	329	245	468
TOTAL FEED COSTS PER HEAD	$_____	$44.69	$37.50	$55.30
Net Increase in value	$_____	$58.06	$70.40	$46.37
RETURNS ABOVE FEED COST PER HEAD	$_____	$13.37	$32.90	$-8.93
RETURNS FOR $100 OF FEED	$_____	$147	$207	$ 88
No. of head of other dual-purpose cattle	_____	11.7	13.6	11.2

Table 31. Feed Costs and Returns from All Dual-Purpose Cattle, 1945

Items	Your farm	Average of 29 farms	10 farms highest in returns above feed	10 farms lowest in returns above feed
Butterfat per cow	_____	182	220	136
Feeds per animal unit, lbs.:				
Concentrates	_____	2287	1933	2586
Hay and fodder	_____	3223	3367	3340
Silage	_____	2822	2084	3905
FEED COSTS PER ANIMAL UNIT	$_____	$71.76	$62.68	$82.16
Value of produce per animal unit:				
Dairy products	$_____	$72.90	$99.55	$54.98
Net increase in value	_____	48.04	50.36	40.95
TOTAL VALUE PRODUCED	$_____	$120.94	$149.91	$95.93
RETURNS ABOVE FEED PER ANIMAL UNIT	$_____	$49.18	$87.23	$13.77
RETURNS FOR $100 OF FEED	$_____	$180	$252	$119
Animal units of dual-purpose cattle	_____	13.2	10.8	14.7

*Three farmers having both a dual-purpose and a beef herd used a beef bull and included all the young stock in the beef herd.

The farmer who excels in all phases of the management of his dairy cows 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 dairy cow 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. Five farmers were below the average of the group in all six factors; their return over feed amounted to $26.43 per cow. Three farmers who were above the average of the group in all six factors received a return over feed of $175.91 per cow. The difference between these two extremes amounts to $149.48 per cow or $1719 for the average herd of 11.5 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 dairy cow	Average return over feed
0	5	xxxxx	$26.43
1	11	xxxxxxxx	39.30
2	8	xxxxxxxxxxxxxxxxx	91.65
3	13	xxxxxxxxxxxxxxxxxxxx	98.76
4	10	xxxxxxxxxxxxxxxxxxxxxxxxx	123.01
5	6	xxxxxxxxxxxxxxxxxxxxxxxxxxxxx	138.22
6	3	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	175.91

Similar variations occur in the returns secured from dual purpose cows. The data in Table 33 show the combined effect from excelling in the six factors listed above. The 5 farmers who were below the average of the group in all six factors or excelled in only one factor received a return over feed cost per cow of $21.26. Seven farmers who excelled in five or six factors received a return of $101.36 per cow. The difference between these two extremes amounts to $80.10 per cow or $609 for the average milking herd of 7.6 cows.

Table 33. Relation of Return Over Feed per Dual Purpose 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 dual purpose cow	Average return over feed
None or 1	5	xxxxxxx	$21.26
2	7	xxxxxxxxxxxx	36.32
3	5	xxxxxxxxxxxxxxx	44.09
4	5	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	97.35
5 or 6	7	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	101.36

Table 34. 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:		45	11	11
Feeds per animal unit, lbs.:				
Concentrates	_____	1569	1541	1787
Legume hay	_____	1803	1917	2606
Other hay	_____	352	480	166
Fodder and stover	_____	462	597	456
Silage	_____	2749	2841	1848
Skim milk*	_____	63	45	148
Whole milk*	_____	2	0	7
Feed cost per animal unit:				
Concentrates	$_____	$24.54	$24.47	$26.29
Roughages	_____	22.61	24.02	25.22
Milk*	_____	.20	.12	.54
Pasture	_____	5.49	5.16	6.14
TOTAL FEED COSTS	$_____	$52.84	$53.77	$58.19
Value of produce per animal unit:				
Dairy products	$_____	$14.88	$23.03	$ 6.95
Net increase in value of animals	_____	61.96	86.25	48.51
TOTAL VALUE PRODUCED	$_____	$76.84	$109.28	$55.46
RETURNS ABOVE FEED COST PER ANIMAL UNIT	$_____	$24.00	$55.51	$-2.73
RETURNS FOR $100 OF FEED	$_____	$158	$215	$95
Number of cows and herd bulls	_____	15.8	19.7	12.4
Number of animal units in the herd	_____	25.6	30.5	20.7
Lbs. beef produced		10531	13070	7854
Feeder cattle: No. of farms		73	15	15
Feeds per cwt. beef produced, lbs.:				
Corn	_____	757	642	1013
Small grain	_____	21	10	28
Commercial feeds	_____	36	38	38
Legume hay	_____	205	186	219
Other hay	_____	75	35	98
Fodder and stover	_____	32	71	25
Total concentrates	_____	814	690	1079
Total dry roughages	_____	312	292	342
Silage	_____	395	196	357
Feed cost per cwt. beef produced:				
Concentrates	$_____	$12.60	$10.61	$16.44
Roughages	_____	2.81	2.02	2.98
Pasture	_____	.21	.08	.17
TOTAL FEED COSTS	$_____	$15.62	$12.71	$19.59
Net increase in value of feeders	$_____	$23.00	$25.45	$20.48
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.	$_____	$ 7.38	$12.74	$ .89
RETURNS FOR $100 OF FEED	$_____	$157	$207	$108
Price recd. per cwt. beef sold in 1945	$_____	$14.95	$15.11	$14.26
Price pd. for feeder cattle bot. in 1945	$_____	$12.60	$12.01	$13.44
No. of animal units	_____	26.9	25.1	24.2
Pounds of beef produced	_____	15977	17280	13820

*Two farmers had both dairy cows and beef cows and fed milk produced by the milking herd to beef calves.

Table 35. Feed Costs and Returns from a Farm Flock of Sheep, 1945

Items	Your farm	Average of 48 farms	10 farms highest in returns above feed	10 farms lowest in returns above feed
Feeds per head,* lbs.:				
Concentrates	_____	93	84	105
Legume hay	_____	164	90	249
Other hay	_____	28	9	32
Fodder and stover	_____	10	21	11
Silage	_____	130	18	194
Feed cost per head:				
Concentrates	$_____	$ 1.60	$ 1.44	$ 1.82
Roughages	_____	1.66	.82	2.34
Pasture	_____	1.07	1.20	.95
TOTAL FEED COSTS	$_____	$ 4.33	$ 3.46	$ 5.11
Value of produce per head:				
Wool	$_____	$ 2.84	$ 2.86	$ 2.82
Net increase in value of sheep	_____	6.35	11.39	1.01
TOTAL VALUE PRODUCED	$_____	$ 9.19	$14.25	$ 3.83
RETURNS ABOVE FEED COST PER HEAD	$_____	$ 4.86	$10.79	$-1.28
RETURNS FOR $100 OF FEED	$_____	$251	$458	$78
Price per cwt. of lambs sold	$_____	$13.93	$15.47	$10.89
Price per lb. wool sold (cts.)	_____	42.4	42.9	41.8
Pounds of wool per sheep sheared	_____	8.4	8.4	7.5
Number of ewes kept for lambing	_____	30	21	31
% lamb crop**	_____	99	109	65
% death loss**	_____	9.4	6.4	14.4
No. of head of sheep*	_____	42	29	36

*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 36. 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 9 farmers who were above the average in only one or two factors received a return above feed cost of $1.73 per head, while 11 farmers who excelled in 5 or 6 of the factors received a return of $7.47 per head. The difference between the two extremes is $5.74 or $241 for the average flock of 42 head.

Table 36. Relation of Return Over Feed Per Head of Sheep to Number of Management Factors in Which Farmers Excelled

No. of factors in which farmer excels	No. of farms*	Length of shaded lines is in proportion to the average return over feed per head of sheep	Average return over feed
1 or 2	9	xxxxxxxxx	$1.73
3 or 4	18	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	6.61
5 or 6	11	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	7.47

*The records of 10 farmers who did not sell lambs or failed to report weights were omitted.

Table 37. Feed Costs and Returns from Feeder Sheep, 1945

Items	Your farm	Average of 17 farms	8 farms highest in returns above feed	8 farms lowest in returns above feed
Feeds per cwt. sheep produced, lbs.:				
Concentrates	_____	793	748	840
Legume hay	_____	292	245	342
Other hay	_____	40	48	37
Silage	_____	171	307	50
Feed cost per cwt.:				
Concentrates	$_____	$11.95	$11.46	$12.44
Roughages	_____	2.66	2.64	2.74
Pasture	_____	.54	.14	1.01
TOTAL FEED COSTS	$_____	$15.15	$14.24	$16.19
Net increase in value of sheep	$_____	$24.59	$28.62	$20.90
RETURNS ABOVE FEED COST PER CWT. PROD.	$_____	$ 9.44	$14.38	$ 4.71
RETURNS FOR $100 OF FEED	$_____	$172	$215	$132
Price per cwt. sheep sold	$_____	$15.91	$15.75	$16.12
Price per cwt. for sheep bot.	$_____	$14.59	$14.45	$14.79
% death loss	_____	3.0	3.5	2.6
Pounds of sheep produced	_____	11034	10511	13242

Table 38. Feed Costs and Returns for Turkeys, 1945

Items	Your farm	Average of 6 farms	3 farms highest in returns above feed	3 farms lowest in returns above feed
Feed per cwt. turkeys produced, lbs.:				
Grain	_____	361	324	397
Commercial feeds	_____	197	198	196
Total concentrates	_____	558	522	593
Feed cost per cwt. turkeys produced	$_____	$14.89	$13.30	$16.47
Net increases in value of turkeys	$_____	$27.06	$26.90	$27.21
RETURNS ABOVE FEED COST PER CWT. TURKEYS PRODUCED	$_____	$12.17	$13.60	$10.74
RETURNS FOR $100 FEED	$_____	$184	$202	$165
Price rec'd per lb. turkey sold (cts.)	_____	32.5	32.7	32.2
No. of poults put on feed	_____	1963	2995	930
Price paid per poult purchased (cts.)	_____	96.3	87.2	105.3
Weight per bird sold, lbs.	_____	19.4	19.1	19.7
% death loss	_____	16.1	14.8	17.5
Pounds of turkeys produced	_____	30747	49236	12257

Table 39. Feed Costs and Returns from Chickens, 1945

Items	Your farm	Average of 137 farms	28 farms highest in return above feed	28 farms lowest in return above feed
Feed per hen, lbs.:				
Grain	_____	112	121	124
Commercial feeds	_____	42	52	34
Total concentrates	_____	154	173	158
Skim milk and buttermilk	_____	9	18	9
TOTAL FEED COST PER HEN	$_____	$ 3.53	$ 4.04	$ 3.42
Value of produce per hen:				
Eggs sold and used in house	$_____	$ 4.75	$ 5.84	$ 3.42
Net increase in value of chickens	_____	1.41	2.92	.61
TOTAL VALUE PRODUCED	$_____	$ 6.16	$ 8.76	$ 4.03
RETURNS ABOVE FEED COST PER HEN	$_____	$ 2.63	$ 4.72	$ .61
RETURNS FOR $100 OF FEED	$_____	$180	$225	$121
Price rec'd per doz. eggs sold (cts.)	_____	35.0	35.6	34.7
Eggs laid per hen	_____	163	197	120
Ave. no. of hens on farm during the year	_____	238	224	215
% of hens that are pullets	_____	86	93	73
% death loss of hens	_____	11.5	8.9	14.5
Number of chicks purchased	_____	644	929	401
Lbs. chickens produced	_____	1828	2858	903

Superior management leads to high returns. The combined effect on return over feed from excelling in a number of poultry management factors is shown in Table 39. The factors included are (1) pounds of concentrates per hen, including skim milk on a grain equivalent basis, (2) price received per dozen of eggs sold, (3) Number of eggs laid per hen, (4) percentage of the hens that are pullets, and (5) death loss. The 13 farmers who excelled in only one of these five factors received an average return over feed of $1.11 per hen. The six farmers who excelled in all five factors had an average return over feed of $3.88 per hen. The difference between the two extremes amounts to $2.77 or $659 for the average flock of 238 hens.

Table 40. Relation of Return Over Feed Per Hen 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 is in proportion to the average return over feed per hen	Average return over feed per hen
1	13	xxxxxxxxxxx	$1.11
2	39	xxxxxxxxxxxxxxxxxxx	1.90
3	42	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	2.87
4	37	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	3.47
5	6	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	3.88

Table 41. Total feed Costs and Returns from Your Livestock Enterprises, 1945

	Dairy or dual purpose cattle			Beef breeding herd	Feeder cattle
	Cows	Other	All		
Total returns	____	____	____	____	____
Total feed cost	____	____	____	____	____
Total return over feed	____	____	____	____	____

		Sheep			
	Hogs	Farm Flock	Feeders	Turkeys	Chickens
Total returns	____	____	____	____	____
Total feed cost	____	____	____	____	____
Total return over feed	____	____	____	____	____

The total "return over feed costs" for each class of livestock is shown in Table 41. 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 value of milk consumed by calves is included in the total returns from dairy or dual purpose cows and in the total feed cost for other dairy or other dual purpose cattle. The value of milk consumed by calves is not included in either the total returns or the feed cost of "all dairy" or "all dual purpose" 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.

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 42. Summary of Farm Earnings - Averaged by Counties, 1945

	Cotton-wood	Fari-bault	Jackson	Martin	Murray	Nobles	Redwood	Rock	Watonwan
FARM EXPENSES									
Cattle bought	$1049	$1423	$2159	$1247	$1589	$1173	$2439	$1309	$585
Hogs bought	542	324	293	158	484	385	440	533	211
Sheep bought	1908	891	36	1	583	1256	13	90	53
Poultry bought	213	156	137	97	91	373	167	207	114
Misc. livestock exp.	136	172	166	267	142	218	157	417	173
Crop expense	778	477	528	652	593	493	745	501	440
Feed	2508	2269	2830	1317	2048	2843	2608	2864	1644
Custom work hired	383	348	250	363	240	268	226	372	322
Power expense	1220	955	1061	881	1024	845	1352	1159	848
Crop mach. & livestock equip.	814	661	554	600	799	945	867	1153	495
Buildings	388	293	674	740	635	577	904	690	247
Labor	573	490	618	767	718	445	730	1380	483
Taxes, insurance, & misc.	494	441	410	312	461	405	485	540	392
(1) Total purchases	$11006	8900	9716	7402	9407	$10226	11133	$11215	6007
(2) Decrease in cap.	940	379	-	173	261	-	-	-	-
(3) Board to hired labor	87	29	41	212	89	28	128	204	66
(4) Unpaid family labor	538	464	367	368	249	218	284	490	147
(5) Int. on farm cap.	1832	1803	1714	1820	1825	1673	1980	1940	1649
(6) Total Expenses	14403	11575	11838	9975	11831	12145	13525	13849	7869
FARM RECEIPTS									
Cattle sales	$3337	$3492	$4254	$3121	$5005	$3969	$6709	$3830	$2508
Dairy products	1313	998	632	1789	555	761	535	1623	1040
Hogs	3659	4711	4715	3295	3749	4544	5093	6536	3913
Sheep	3063	1109	77	271	806	1603	76	1314	120
Poultry & eggs	1847	1432	1850	1017	1052	2325	1431	1927	1156
Crop	3790	2130	2100	1979	3189	1132	3128	1177	1647
AAA payment	107	32	55	28	54	37	70	83	10
Work off the farm	236	109	168	371	506	246	436	316	275
Misc. cash receipts	300	259	250	224	405	417	323	425	222
(7) Total farm sales	17652	14272	14101	12095	15321	$15034	17801	17231	10891
(8) Increase in cap.	-	-	498	-	-	374	1592	86	948
(9) Family living from farm	606	619	688	577	665	549	645	799	712
(10) Total receipts	18258	14891	15287	12672	15986	15957	20038	18116	12551
(6) Total expenses	14403	11575	11838	9975	11831	12145	13525	13849	7869
(11) Oper. labor earnings	3855	3316	3449	2697	4155	3812	6513	4267	4682

Table 43. Miscellaneous Information - Averaged by Counties, 1945

	Cottonwood	Faribault	Jackson	Martin	Murray	Nobles	Redwood	Rock	Watonwan
FARM INVENTORIES (Beginning of Year)									
Productive livestock	$5342	$5932	$5552	$5242	$6249	$5736	$7302	$7706	$5419
Horses	154	275	259	289	233	284	226	221	287
Crop, seed and feed	4107	3628	4253	4319	4451	4466	5142	5844	3844
Mach. and equipment	3646	3195	3232	2849	4169	3088	3734	3969	2788
Buildings	8440	8724	7184	7346	7847	6286	6424	8717	8466
Land	15427	14494	13544	16445	13691	13404	15983	12309	11705
Total farm capital	37116	36248	34024	36490	36640	33264	38811	38766	32509
MEAS. OF FARM ORG. AND MANAGEMENT EFFIC.									
Crop yields - % of ave.	96	102	96	97	94	91	111	95	116
% high return crops	58.8	57.6	52.0	53.3	55.0	53.9	56.0	62.8	57.8
Index ret. from livestock	108	94	96	101	96	102	96	104	106
A.U. livestock per 100 A.	18.9	23.1	22.2	21.9	21.2	25.8	17.7	28.6	19.4
Work units	569	495	483	549	572	502	590	636	478
Work units per worker	286	292	288	276	315	330	321	300	319
Exp. per work unit	$4.91	$4.82	$5.12	$4.38	$4.41	$4.31	$4.54	$4.14	$3.98
DISTRIBUTION OF ACRES IN FARM									
Small grain	110.6	76.1	77.3	72.6	100.4	69.3	113.3	70.2	66.2
Cultivated crops	110.9	82.8	86.0	90.0	100.7	80.3	127.6	76.7	85.2
Tillable hay land	20.9	19.8	17.7	20.3	20.5	20.6	15.9	36.1	15.2
Tillable pasture	12.8	22.9	12.6	24.0	19.5	14.0	20.5	20.7	20.1
Tillable land not cropped	5.8	6.1	6.9	.2	5.6	3.0	4.7	.8	0
Total acres in farm	317.3	245.8	245.5	231.7	304.3	220.8	355.5	259.7	228.9
% land tillable	82.3	84.5	81.7	89.4	81.1	84.8	79.3	78.7	81.6
CROP YIELDS PER ACRE									
Flax, bu.	13.3	12.0	11.7	15.7	14.1	13.4	15.0	16.0	14.4
Oats, bu.	54.9	50.2	47.6	47.3	52.5	46.2	58.2	55.1	60.0
Soybeans, bu.	13.3	15.5	13.7	14.2	15.6	13.2	17.6	-	19.8
Corn, grain, bu.	31.6	35.9	35.9	33.5	29.0	29.6	37.9	30.0	39.0
Corn silgge, tons	6.6	8.0	5.7	9.1	6.6	6.4	8.5	5.5	8.5
Alfalfa hay, tons	2.1	2.3	2.3	2.1	1.7	1.9	2.3	2.1	2.6
AN. UNITS OF LIVESTOCK	46.6	49.0	50.4	47.0	54.3	51.6	59.1	68.2	41.8
% dairy and du. pur. cattle	31.5	23.1	14.6	33.0	17.2	22.9	20.8	32.2	27.3
% in beef breeding herd	1.6	17.2	24.3	15.6	25.7	8.7	11.3	17.7	15.9
% feeder cattle	14.5	14.4	24.5	18.3	25.5	18.4	21.9	8.0	14.8
% hogs	30.1	29.6	27.7	23.7	22.1	30.5	34.7	27.1	33.6
% sheep-farm flock	6.6	5.4	2.0	4.9	3.0	3.2	2.5	7.5	2.3
% sheep-feeders	7.5	5.2	.2	.1	2.4	7.1	-	1.8	.3
% turkeys	1.4	1.1	-	-	-	3.7	6	-	-
% hens	6.8	4.0	6.7	4.4	4.1	5.5	8.2	5.7	5.8

Table 44. Summary of Farm Earnings by Years*

Items	1940	1941	1942	1943	1944	1945
No. of farms	165	166	165	164	163	153
Total farm capital	$32724	$36613	$37728	37602	$36000	$35876
Monthly charge for unpaid family lab.*	45	50	60	75	85	90
Monthly charge for board to hired lab.*	18	20	25	25	25	25
FARM EXPENSES						
Dairy and dual-pur.cattle bot.	$ 76	$ 138	$ 141	$ 135	$ 112	$ 118
Beef cattle bot.(incl.feeders)	1243	1766	1718	1187	1109	1390
Hogs bot.	103	209	339	408	315	377
Sheep bot. (incl. feeders)	414	686	866	694	321	600
Poultry bot. (incl. turkeys)	99	96	138	165	200	195
Horses bot.	32	32	49	33	43	15
Misc. livestock expense	72	109	148	199	173	194
Miscellaneous crop expenses	243	303	377	507	582	575
Feed bought	1007	1718	2235	3080	2164	2416
Custom work hired	150	140	199	215	261	292
Power mach. (new)	379	446	256	180	337	200
Power mach.(upkeep)	411	497	533	617	699	817
Crop and gen. mach. (new)	319	416	387	221	332	414
Crop and gen. mach. (upkeep	69	84	135	157	174	195
Livestock equipment (new)	74	123	134	138	91	78
Livestock equipment (upkeep)	20	32	57	87	78	94
Buildings and fencing (new)	412	434	327	236	297	370
Buildings and fencing (upkeep)	88	141	156	168	192	219
Hired labor	392	561	622	739	651	636
Taxes	313	337	355	335	311	311
Insurance	15	32	35	40	41	41
General farm	59	55	60	72	80	84
(1) Total farm purchases	$5990	$8355	$9267	$9613	$8563	$9631
(2) Decrease in farm capital	-	-	-	-	412	-
(3) Board furnished hired labor	131	171	143	147	118	83
(4) Interest on farm capital	1635	1831	1886	1880	1800	1794
(5) Unpaid family labor	252	288	360	335	316	322
(6) Total farm exp. (Sum of (1)to(5)	$8008	$10645	$11656	$11975	$11209	$11830

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

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Table 44 Summary of Farm Earnings by years (continued)

Items	1940	1941	1942	1943	1944	1945
FARM RECEIPTS						
Dairy and dual-purpose cattle	$ 265	$ 392	$ 446	$ 419	$ 392	$ 473
Dairy products	570	758	804	916	865	906
Beef cattle (incl. feeders)	2373	3399	3860	3590	2478	3777
Hogs	1162	2306	4336	5630	4671	4484
Sheep and wool (incl. feeders)	470	1032	1402	968	768	926
Poultry (including turkeys)	372	396	598	622	829	659
Eggs	244	334	589	905	911	977
Horses	42	41	47	45	47	27
Corn	516	477	625	724	578	587
Small grain	849	1133	1120	1382	669	949
Other crops	239	283	366	510	600	673
Machinery and equipment sold	249	278	133	137	185	251
Agri. adjustment payment	506	503	503	264	74	51
Income from labor off the farm	193	196	163	137	183	295
Miscellaneous	394	176	166	185	197	48
(7) Total farm sales	$8444	$11704	$15158	$16434	$13447	$15083
(8) Increase in farm capital	1179	2618	2102	2	–	314
(9) Family living from farm	483	538	584	588	572	635
(10) Tot. farm rec. (7)+(8)+(9)	$10106	$14860	$17844	$17024	$14019	$16032
(6) Total farm expenses	8008	10645	11656	11975	11209	11830
(11) Oper. lab. earn. (10) - (6)	2098	4215	6188	5049	2810	4202
MEAS. OF FARM ORG. AND MANAGEMENT EFFICIENCY						
% high return crops*	35.9	36.5	38.9	40.3	54.2	55.7
Prod. livestock units per 100A.	22.1	24.7	24.7	25.1	21.4	22.1
Work units	569	631	624	586	530	535
Work units per worker	263	264	281	279	279	297
Expenses per work unit	$2.17	$2.30	$2.90	$3.52	$4.20	$4.52
ACRES PER FARM	279	295	291	280	268	268
Crop acres per farm	213	223	219	212	191	203
CROP YIELDS PER ACRE						
Flax, bu.	13.7	12.0	11.5	9.5	6.0	13.8
Barley, bu.	42.3	29.6	24.0	10.7	18.8	44.3
Oats, bu.	60.1	26.4	44.8	34.3	36.3	51.8
Corn, grain, bu.	46.2	55.9	57.4	39.6	49.6	33.5
Corn silage, tons	8.5	9.5	10.3	8.5	7.5	7.1
Alfalfa hay, tons	2.0	2.0	2.5	2.3	2.0	2.1

* The crop ratings used in calculating the percentage of the tillable land in high return crops was changed considerably in 1944.

Table 45. Summary of Miscellaneous Items by years

Items	1940	1941	1942	1943	1944	1945
RETURN ABOVE FEED COST PER:						
Dairy cow	$43.03	$56.89	$70.13	$69.86	$69.45	$92.30
Dual-purpose cow	26.49	39.13	54.28	41.21	46.01	61.28
Animal unit in beef breeding herd	18.20	25.06	35.53	18.54	12.20	24.00
100 lbs. feeder cattle produced	2.92	3.99	3.64	1.43	3.56	7.38
Head of sheep in farm flock	3.27	5.96	5.61	3.37	3.00	4.86
100 lbs. feeder sheep produced	2.13	8.01	6.67	4.24	10.85	9.44
100 lbs. hogs produced	1.23	5.15	7.61	2.93	3.31	5.23
Hen	.96	1.35	2.07	2.48	1.71	2.63
100 pounds turkeys produced	5.74	9.63	14.09	12.31	10.27	12.17
FEED COST PER:						
Dairy cow	$46.50	$53.11	$62.99	$88.03	$88.04	$92.68
Dual-purpose cow	34.85	44.19	48.55	70.09	68.02	78.02
Animal unit in beef breeding herd	29.86	33.57	34.55	46.58	49.92	52.84
100 lbs. of feeder cattle produced	8.00	9.21	13.27	17.25	15.06	15.62
Head of sheep in farm flock	2.60	2.76	3.01	4.14	3.78	4.33
100 lbs. feeder sheep produced	7.16	8.38	14.23	13.85	12.98	15.15
100 lbs. hogs produced	4.29	5.55	6.76	9.39	10.32	9.04
Hen	1.11	1.50	2.15	3.17	3.46	3.53
100 lbs. turkeys produced	7.27	8.26	11.40	14.96	14.88	14.89
Horse	29.74	31.80	37.06	47.87	40.58	32.10
MISC. LIVESTOCK INFORMATION						
No. of work horses	4.1	4.2	4.0	3.7	3.3	3.1
No. of colts	1.0	1.0	.7	.7	.6	.3
No. of dairy or dual-purpose cows	8.6	9.1	8.6	7.6	6.6	6.1
Head in beef breeding herd	9.0	9.4	9.9	10.7	13.5	10.8
Lbs. feeder cattle produced	8678	14087	10119	8483	5315	7695
Litters of pigs	13.6	16.9	20.1	25.4	16.7	19.4
Pounds of hogs produced	21335	27550	34522	39596	29054	33994
No. of hens	161	173	196	223	230	215
Lbs. of butterfat per dairy cow	250	254	250	251	226	242
Lbs. of butterfat per dual-pur. cow	179	190	190	182	172	182
No. of pigs weaned per litter	6.2	6.4	6.3	6.0	5.9	6.2
% lamb crop	110	110	109	105	94	99
Eggs per hen	113	117	135	146	157	163

Table 45, Summary of Miscellaneous Items by Years (Continued)

Items	1940	1941	1942	1943	1944	1945
PRICE RECEIVED PER:						
Lb. B.F. sold to creameries	$ .31	$ .37	$ .42	$ .53	$ .58	$ .62
100 pounds feeder cattle	8.81	10.13	12.22	13.68	13.83	14.95
100 pounds feeder sheep	8.74	10.08	12.47	14.52	15.32	15.91
Pound of wool	.29	.38	.41	.41	.41	.42
100 pounds of hogs	5.15	9.07	13.13	13.80	13.12	14.27
Dozen eggs	.15	.21	.28	.35	.31	.35
Pound of turkeys	.14	.18	.29	.32	.34	.32
PRICE OF FEED						
Shelled corn, bu.	$ .47	$ .54	$ .68	$ .91	$ .92	$ .86
Oats, bu.	.26	.32	.41	.60	.70	.64
Barley, bu.	.31	.39	.52	.77	.92	.94
Alfalfa hay, ton	7.50	8.50	8.00	11.00	15.00	15.00
Timothy hay, ton	4.80	5.45	5.15	6.75	9.00	9.00
Corn silage, ton	2.10	2.55	2.75	3.62	5.00	5.00
Bran, cwt.	1.20	1.50	2.10	2.10	2.20	2.18
Linseed oilmeal, cwt.	1.75	2.00	2.40	2.55	2.85	2.88
Tankage, cwt.	2.50	3.20	4.10	4.00	4.18	4.10
Meat scraps, cwt.	2.55	3.20	4.10	4.00	4.18	4.10

Suggestions for Improvements