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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
1946

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Cooperator: _____

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Seventh Annual Report of the Southwest Minnesota Farm Management Service
of Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Redwood,
Rock, and Watonwan Counties for the Year 1946

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 S.A. Engene and R. O. Olson 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, Winfield Forsberg, A. B. Hagen, Ross Huntsinger, J. I. Swedberg, George Golla and Ray Fox.

The officers for the Southwest Farm Management Association for 1946 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 Schmotzler, Cottonwood County; Clarence Myers, Faribault County; Chas. Winzer, Jackson County; Paul Peters, Martin County; Ted Drackley, Murray County; Orville Saxon and Ed Olson, Jr., Nobles 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 1946:

Cottonwood	9	Martin	7	Redwood	24
Faribault	16	Murray	17	Rock	9
Jackson	17	Nobles	34	Watonyan	10
				Total	143

In the tables on page 6 and succeeding pages are shown data for 142 farms. One farm was omitted from all of the averages in the tables because the record was not sufficiently complete for a full analysis.

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 1. Monthly and Annual Precipitation.

Worthington	Fairmont		Windom		Redwood Falls			
	Depart.	Precip- itation normal	Depart.	Precip- itation normal	Depart.	Precip- itation normal		
Inches	Inches	Inches	Inches	Inches	Inches	Inches		
January	0.43	-0.20	0.72	-0.08	0.28	-0.36	0.13	-0.81
February	0.85	+0.08	0.80	-0.17	0.82	+0.08	0.50	-0.44
March	2.97	+1.71	5.75	+4.34	3.87	+2.73	1.60	+0.50
April	0.87	-1.21	1.20	-1.03	0.78	-1.11	0.67	-1.58
May	2.85	-1.09	6.25	+2.33	4.72	+1.03	4.82	+1.40
June	6.14	+1.85	7.98	+3.84	5.33	+1.40	3.22	-1.27
July	2.64	-0.75	1.34	-2.22	1.04	-2.43	1.58	-1.46
August	0.76	-3.00	2.05	-1.50	0.85	-2.75	1.20	-1.78
September	5.10	+1.69	5.25	+1.93	6.21	+3.22	6.49	+3.63
October	3.22	+1.53	3.41	+1.56	3.47	+1.84	3.09	+1.42
November	1.37	+0.20	2.24	+0.85	1.38	+0.26	0.86	-0.35
December	0.42	-0.29	0.81	-0.09	0.44	-0.21	0.31	-0.59
1946 Total	27.62	+0.52	37.80	+9.76	29.18	+3.70	24.47	-1.33
Normal								
An. Prec.	27.10		28.04		25.49		25.80	

Table 2. Summary of Farm Inventories, 1946*

Items	Your farm		Average of 142 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			260	
Size of business (work units)**			514	
Productive livestock (total)			\$6721	\$8276
Dairy and dual purpose cows			575	629
Other dairy & dual purpose cattle			332	409
Beef cattle (incl. feeders)			2471	2851
Hogs			2595	3498
Sheep (including feeders)			481	606
Poultry (including turkeys)			267	283
Horses			182	140
Crop, seed, and feed			3912	5288
Mach. & equipment (total)			3332	3628
Power Mach. (farm share)			1123	1240
Crop & general mach. (farm share)			1647	1836
Livestock equipment & supplies			562	552
Buildings, fences, etc.			7313	7351
Land			13739	13739
Total farm capital			35199	38422

Items	28 most profitable		28 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	388		182	
Size of business (work units)**	750		369	
Productive livestock (total)	\$10928	\$15082	\$3610	\$4284
Dairy & dual purpose cows	653	777	530	559
Other dairy & dual purpose cattle	352	423	286	379
Beef cattle (incl. feeders)	3945	4933	1177	1309
Hogs	4726	7026	1257	1646
Sheep (including feeders)	977	1616	89	136
Poultry (including turkeys)	275	307	271	255
Horses	219	175	145	102
Crop, seed, and feed	6863	8943	2210	3192
Mach. & equipment (total)	5044	5686	2408	2592
Power mach. (farm share)	1763	2127	867	951
Crop & general mach.	2519	2811	1121	1209
Livestock equipment & supplies	762	748	420	432
Buildings, fences, etc.	8610	8725	6760	6692
Land	19915	19915	10091	10091
Total farm capital	51579	58526	25224	26953

*For the purpose of comparison, all the data shown in this report with the exception of Tables 5 and 6 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 24 for an explanation of "work units".

Table 3. Summary of Farm Earnings (Cash Statement), 1946

Items	Your farm	Average of 142 farms	28 most profitable farms	28 least profitable farms
FARM EXPENSES				
Dairy and dual-purpose cows bought	\$ 130	\$ 257	\$ 89	
Other dairy & dual-pur. cattle bot.	107	119	104	
Beef cattle bot. (incl. feeders)	1754	3620	455	
Hogs bought	382	535	145	
Sheep bought (Including feeders)	464	995	71	
Poultry bought (including turkeys)	164	200	137	
Horses bought	14	.25	8	
Misc. livestock expense	198	308	120	
Misc. crop expenses	750	1334	486	
Feed bought	2669	4591	1748	
Custom work hired	300	356	252	
Mech.power mach.(farm share)(new)	449	816	285	
Mech.power mach.(farm share)(upkp.)	308	407	245	
Mech.power (f.share)(gas,oil,etc.)	655	997	532	
Crop and general mach. (new)	601	910	369	
Crop and general mach. (upkeep)	258	434	206	
Livestock equipment (new)	97	134	97	
Livestock equipment (upkeep)	92	125	78	
Buildings and fencing (new)	409	569	290	
Buildings and fencing (upkeep)	268	395	221	
Hired labor	723	1509	393	
Taxes	367	534	269	
General farm and insurance	157	204	149	
(1) Total farm purchases	\$11316	\$19374	\$6749	
(2) Decrease in farm capital	-	-	-	
(3) Board furnished hired labor	105	193	78	
(4) Interest on farm capital	1841	2753	1304	
(5) Unpaid family labor	363	391	314	
(6) Total farm exp.(sum of (1) to(5))	\$13625	\$22711	\$8445	
FARM RECEIPTS				
Dairy and dual-purpose cows	\$ 273	\$ 439	\$ 196	
Dairy products	1083	1155	1129	
Other dairy & dual-purpose cattle	242	279	197	
Beef cattle (including feeders)	3711	6979	1202	
Hogs	6166	10751	2831	
Sheep and wool (including feeders)	834	1366	157	
Poultry (including turkeys)	620	910	432	
Eggs	993	1025	994	
Horses	24	26	19	
Corn	814	1493	496	
Small grain	1446	3169	864	
Other crops	878	1378	585	
Machinery & equip. sold	363	467	172	
Agricultural adjustment payments	121	210	76	
Income from work off the farm	343	521	326	
Misc.	67	87	52	
(7) Total farm sales	\$17978	\$30255	\$9728	
(8) Increase in farm capital	3223	6947	1729	
(9) Family living from the farm	679	794	587	
(10) Total farm receipts (7)+(8)+(9)	\$21880	\$37996	\$12044	
(6) Total farm expenses	13625	22711	8445	
(11) Oper. labor earnings (10)-(6)	8255	15285	3599	

Table 4. Summary of Farm Earnings (Enterprise Statement) 1946*

Items	Your farm	Average of 142 farms	28 most profitable farms	28 least profitable farms
<u>EXPENSES AND NET DECREASES</u>				
Total power	\$	81268	\$1792	\$1030
Horses		128	166	101
Tractor		535	812	391
Truck		111	216	87
Auto (farm share)		305	373	282
Gas engine (farm share)		4	4	1
Elec. plant or current (f. share)		70	84	65
Hired power		115	137	103
Crop and general machinery		525	807	385
Livestock equipment		185	264	154
Buildings, fencing and tiling		532	746	462
Misc. productive livestock expense		198	308	120
Labor		1278	2201	861
Real estate taxes		298	428	226
Personal property tax		69	106	43
Insurance		49	63	47
General farm		108	142	102
Interest on farm capital		1841	2753	1304
(1) Total expenses & net decreases		6351	9610	4734
<u>RETURNS AND NET INCREASES</u>				
All productive livestock		12971	21925	7189
Dairy and dual purpose cows		1266	1531	1151
Other dairy & dual pur. cattle		431	422	397
Beef breeding herd		812	890	710
Feeder cattle		1631	3558	309
Hogs		6789	12651	3145
Sheep - farm flock		168	210	106
Sheep - feeders		327	800	26
Turkeys		230	564	—
Chickens		1317	1299	1345
Crops, seed and feed		1185	2328	762
Income from labor off the farm		183	256	162
Agricultural conservation payments		121	210	76
Miscellaneous		146	176	144
(2) Total returns & net increased		14606	24895	8333
(1) Total expenses & net decreases		6351	9610	4734
(3) Oper. labor earnings (2) - (1)		8255	15285	3599

* 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 4.

Table 5. Net Worth Statement for Those Farmers Who Kept a Complete Record of All Assets and Liabilities, 1946 (Operator's Share)

	Your farm		44 Owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			227.4	
Owned			227.4	
Rented			\$ -	
Total farm capital			\$ 34468	\$37855
Accounts receivable			138	190
Stocks and bonds			2802	2929
Life insurance			894	953
Outside real estate			1962	1886
Other outside investments			108	114
Total outside investments			5766	5882
Cash on hand and in bank			1035	1418
Other household & personal assets			1163	1230
Total cash, household & personal assets			2198	2648
TOTAL ASSETS			42570	46575
Federal Land Bank Mortgage			1330	977
Other mortg. on land operated			6216	5235
Mortgages on other real estate			1184	1174
Production Credit Association			1032	608
Other chattel mortgages			813	741
Notes payable			758	659
Accounts payable			135	98
TOTAL LIABILITIES			11468	9492
Farmer's net worth			31102	37083
Gain in net worth			+5981	

	22 Part owners*		30 renters **	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	313.3		248.6	
Owned	188.4		-	
Rented	124.9		248.6	
Total farm capital	\$29868	\$33666	\$ 9483	\$12095
Accounts receivable	687	756	85	275
Stocks and bonds	3521	4429	1775	1906
Life insurance	688	1003	319	385
Outside real estate	750	68	18	126
Other outside investments	154	193	56	53
Total outside investments	5113	5693	2168	2470
Cash on hand and in bank	797	2086	600	949
Other household & personal assets	1223	1332	1035	1212
Total cash, household & personal assets	2020	3418	1635	2161
TOTAL ASSETS	37688	43533	13371	17001
Federal Land Bank Mortgage	1451	1573	-	
Other mortg. on land operated	3174	2351	-	
Mortgages on other real estate	36	36	-	
Production Credit Association	269	27	583	368
Other chattel mortgages	437	573	480	427
Notes payable	1474	1408	1042	823
Accounts payable	296	278	274	187
TOTAL LIABILITIES	7137	6246	2379	1805
Farmer's net worth	30551	37287	10992	15196
Gain in net worth	+6736		+4204	

*9 rented for cash, 5 cash and crop share, 6 crop share and 2 livestock share.

**5 rented for cash, 19 cash and crop share 1 crop share and 5 livestock share.

Table 6. Summary of Farm Earnings by Tenure, 1946 (Operator's Share)

FARM EXPENSES	Your farm	44 owners	22 part-owners	30 renters
Dairy and dual-purpose cows bought	\$ _____	\$ 81	\$ 47	\$ 101
Other dairy & dual-pur. cattle bought	_____	116	38	121
Beef cattle bot. (incl. feeders)	_____	1796	2370	763
Hogs bought	_____	389	382	296
Sheep bought (including feeders)	_____	538	514	281
Poultry bought (including turkeys)	_____	153	187	177
Horses bought	_____	3	30	18
Misc. livestock expenses	_____	239	203	159
Misc. crop expenses	_____	650	911	550
Feed bought	_____	3201	3291	1722
Custom work hired	_____	286	345	297
Mech. power mach. (farm share) (new)	_____	400	449	419
Mech. power mach. (farm share) (upkp.)	_____	276	325	297
Mech. power (f. share) (gas, oil, etc.)	_____	597	744	557
Crop and general mach. (new)	_____	456	605	663
Crop and general mach. (upkeep)	_____	218	247	224
Livestock equipment (new)	_____	85	135	106
Livestock equipment (upkeep)	_____	91	97	88
Buildings and fencing (new)	_____	615	390	23
Buildings and fencing (upkeep)	_____	375	231	109
Hired labor	_____	791	900	495
Taxes (real estate & pers. property)	_____	342	288	47
General farm and insurance	_____	170	181	117
Cash rent	_____	-	291	470
Interest paid	_____	400	289	87
(1) Total farm purchases	_____	\$12268	\$13490	\$8187
(2) Decrease in farm capital	_____	-	-	-
(3) Board furnished hired labor	_____	131	101	72
(4) Interest on farm capital	_____	1408	1301	452
(5) Unpaid family labor	_____	335	354	191
(6) Total farm exp. (sum of (1) to (5))	_____	\$14142	\$15246	\$8902
FARM RECEIPTS				
Dairy and dual-purpose cows	\$ _____	\$ 311	\$ 177	\$ 207
Dairy products	_____	1001	856	855
Other dairy and dual-purpose cattle	_____	149	157	371
Beef cattle (including feeders)	_____	3999	4699	1354
Hogs	_____	6810	7111	4206
Sheep and wool (including feeders)	_____	914	526	619
Poultry (including turkeys)	_____	394	1168	574
Eggs	_____	1242	698	961
Horses	_____	23	16	27
Corn	_____	371	922	212
Small grain	_____	1120	1761	731
Other crops	_____	523	1009	509
Machinery & equip. sold	_____	304	345	320
Agricultural adjustment payments	_____	118	125	73
Income from work off the farm	_____	386	269	336
Misc.	_____	72	45	80
(7) Total farm sales	_____	\$17737	\$19884	\$11435
(8) Increase in farm capital	_____	3387	3798	2612
(9) Family living from the farm	_____	653	634	616
(10) Total farm receipts (7)+(8)+(9)	_____	\$21777	\$24316	\$14663
(6) Total farm expenses	_____	14142	15246	8902
(11) Operator's labor earnings (10)-(6)	_____	7635	9070	5761
(12) Ret. cap. & fam. lab. (4)+(5)+(11)	_____	9378	10725	6404

Table 7. Household and Personal Expenses and Receipts for
Those Farms Which Kept Complete Accounts of These Expenses, 1946

Items	Your farm	Average of 58 farms	12 most profitable farms	12 least profitable farms
Number of persons in family		4.1	4.6	3.6
Number of adult equivalents in family		3.1	3.7	2.7
Number of other adult equivalents*		.4	.6	.7
EXPENSES				
Food and meals bought	\$	543	794	487
Operating and supplies		180	155	192
Clothing and clothing materials		332	469	247
Personal care, personal spending		98	80	84
Furnishings and equipment		217	246	136
Education, recreation and development		121	120	130
Medical care and health insurance		185	136	147
Church, welfare, gifts		254	247	376
Personal share of auto expense		99	110	101
Household share of elect. & gas. eg. exp.		37	35	40
H.H. & pers. shr. of new auto, gas, eg. & mot. bot.		10	45	-
Total		\$2076	\$2437	\$1940
State and federal income tax		408	1029	284
Insurance		221	343	98
Investments		420	1215	191
Total household & personal cash expenses		\$3125	\$5024	\$2513
Food furnished by the farm		488	623	395
Fuel furnished by the farm		11	10	10
House rental		132	148	222
Total household and personal expenses		\$3806	\$5805	\$3140
RECEIPTS				
Outside investments		224	55	398
Household and personal		257	295	739

*Hired help or others boarded.

Table 8. Family Living from the Farm, 1946

Items	28 most			28 least			28 most			28 least		
	Average Your farm	142 farm	profit- able farms									
No. of pers. (fam.)	3.1		3.5	2.6								
adult equiv. (oth.)*	.4		.6	.4								
Whole milk	1234 qts.	1462	894		\$91.18	\$117.28	\$62.65					
Skim milk	231 qts.	175	201		1.50	1.61	1.20					
Cream	172 pts.	199	164		43.87	51.20	40.57					
Farm made butter	6 lbs.	2	14		3.99	1.11	9.68					
Cattle	508 lbs.	561	304		74.86	88.77	42.84					
Hogs	599 lbs.	823	413		101.04	134.88	68.98					
Sheep	3 lbs.	-	-		.35	-	-					
Poultry	117 lbs.	132	111		29.18	34.17	27.59					
Eggs	160 doz.	189	135		52.33	61.29	44.34					
Potatoes	10 bus.	20	6		12.97	24.43	8.08					
Vegetables & fruits					71.19	80.71	65.95					
Farm fuel					7.38	5.61	5.75					
Rental vl. of house					189.40	192.66	209.22					
Total					\$679.24	\$793.72	\$586.85					

CUMULATIVE EFFECT OF EXCELLING IN A NUMBER OF MANAGEMENT FACTORS

Studies of earnings of farmers in this area show that there are seven major management factors causing variations in earnings among farmers within a given year. These seven factors are (1) crop yields, (2) choice of crops, (3) returns from livestock, (4) amount of livestock, (5) size of business, (6) work accomplishment per worker, and (7) control over expenses. The combined or cumulative influence of these seven management factors on earnings is shown in Table 9. The farmer's earnings are determined to a considerable extent by his accomplishments in these seven factors.

Table 9. 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, 1 or 2	41		XXXXXXXXXXXXXXXXXXXXXX	\$5843
3	37		XXXXXXXXXXXXXXXXXXXXXX	6764
4	32		XXXXXXXXXXXXXXXXXXXXXX	9846
5, 6 or 7	32		XXXXXXXXXXXXXXXXXXXXXX	11477

The array in Table 9 indicates that it will be worth while for each cooperator to study carefully his ranking on pages 10 and 11, and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

Table 10. Measures of Farm Organization and Management Efficiency, 1946

Measures used in chart on page 11	Your farm	Average of 142 farms	28 most profit- able farms	28 least profit- able farms
Operator's labor earnings	\$ _____	\$8255	\$15285	\$3599
(1) Crop yields*	_____	100	105	95
(2) % of tillable land in high ret. crops**	_____	55.4	56.3	56.9
(3) Ret. for \$100 feed to prod. livestock***	_____	100	104	92
(4) Prod. livestock units per 100 acres****	_____	20.7	23.0	18.2
(5) Size of business - work units	_____	514	750	369
(6) Work units per worker	_____	286	326	246
(7) Pow., mach., equip., & bldg. exp. per work unit	\$ _____	\$5.08	\$4.85	\$5.91

Items related to some of the above measures:

(3) Index of return for \$100 feed from -				
Dairy cattle (See pages 16 & 17)	_____	100	99	107
Dual-purpose cattle (See pp. 18 & 19)	_____	100	129	113
Beef cattle - breeding herd (See p. 20)	_____	100	90	89
Beef cattle - feeders (See page 20)	_____	100	102	59
Hogs (See page 15)	_____	100	104	92
Sheep - farm flock (See page 21)	_____	100	139	82
Sheep - feeders (See page 22)	_____	100	82	-
Turkeys (See page 22)	_____	100	-	-
Chickens (See Page 23)	_____	100	112	89
(5) Work units on crops		181	284	121
Work units on productive livestock	_____	296	415	216
Other work units	_____	37	51	32
(6) Total number of workers		1.8	2.3	1.5
Number of family workers	_____	1.3	1.3	1.2
Number of hired workers	_____	.5	1.0	.3
(7) Power expense per work unit	\$ _____	\$2.58	\$2.39	\$3.07
Crop machinery expense per work unit	_____	1.03	1.08	1.06
Livestock equip. expense per work unit	_____	.38	.35	.43
Bldgs. & fencing exp. per work unit	_____	1.09	1.03	1.35

*Given as a percentage of the average.

**Crops are marked in Table 11 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 farmsstead were not included.

Thermometer Chart

Using your figures from page 10, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 142 farms included in this summary are located between the dotted lines across the center of this page.

Oper. labor earn- ings	Crop yields	High return crops	Return from pro- ductive livestock	Pr. L.S. units per 100 A.	Work units	Work units per worker	Pow., mach., eq., & bldgs. exp. per work unit
\$16300	140	79.5	140	40.5	835	445	\$2.30
15300	135	76.5	135	38.0	795	425	2.65
14300	130	73.5	130	35.5	755	405	3.00
13300	125	70.5	125	33.0	715	385	3.35
12300	120	67.5	120	30.5	675	365	3.70
11300	115	64.5	115	28.0	635	345	4.05
10300	110	61.5	110	25.5	595	325	4.40
9300	105	58.5	105	23.0	555	305	4.75
8300	100	55.5	100	20.5	515	285	5.10
7300	95	52.5	95	18.0	475	265	5.45
6300	90	49.5	90	15.5	435	245	5.80
5300	85	46.5	85	13.0	395	225	6.15
4300	80	43.5	80	10.5	355	205	6.50
3300	75	40.5	75	8.0	315	185	6.85
2300	70	37.5	70	5.5	275	165	7.20
1300	65	34.5	65	3.0	235	145	7.55

Table 11. Distribution of Acres in Farm, 1946

Crop: (A) (B) (C) and (D) refer No. to ranking used in calculating % of tillable land in High Return Crops (see page 10)	(A)	(B)	(C)	(D)	28 most growing this crop	Average profit- Your of 142 farm farms	profit- able farms	per farm growing farms	Average crop
Canning peas	9				.9	.6	2.4	14.4	
Flax	77				15.4	30.2	11.3	28.4	
Barley	46				6.6	13.2	1.6	20.3	
Wheat	14				1.0	-	.2	9.9	
Oats	139				51.6	76.1	34.4	52.1	
Soybeans for grain	76				12.6	18.8	7.8	23.6	
Rye, millet and buckwheat	5				.5	1.1	.4	13.2	
Total Small Grain, peas & Soybeans	140				88.6	140.0	58.1	89.9	
Sugar beets, hybrid seed corn, potatoes and truck crops	(A) 16				1.4	4.3	.5	12.7	
Corn grain	(A) 141				82.1	124.0	54.6	82.7	
Corn or sorghum silage	(B) 63				4.2	5.2	3.0	9.5	
Sweet corn	(B) 2				.6	-	-	41.0	
Corn or sorghum fodder	(D) 20				.7	.6	.5	5.1	
Total cultivated crops	142				89.0	134.1	58.6	89.0	
Alfalfa hay	(A) 113				14.8	22.8	10.6	18.5	
Soybean hay	(C) 6				.2	-	.1	4.1	
Mixed legumes & non-legumes	(O) 41				3.1	4.3	2.9	10.6	
Timothy and/or brome for hay or seed	(D) 10				1.2	1.3	1.4	10.3	
Misc. hay and seed	(D) 16				.2	-	.4	6.4	
Total tillable land in hay	131				19.5	28.4	15.4	21.1	
Alfalfa and mixtures inc. alf(A)	65				5.9	6.3	2.5	12.8	
Sweet clover pasture	(B) 11				2.1	4.9	1.8	27.5	
Other legumes and mixtures	(C) 30				3.1	3.3	1.1	14.6	
Sudan grass and/or rape	(C) 20				.6	.5	.3	4.4	
Other tillable pasture	(D) 47				4.4	3.4	3.1	13.1	
Total tillable land in pasture	121				16.1	18.4	8.8	18.8	
Tillable land not cropped	(D) 17				1.0	1.2	.5	8.5	
Total tillable land	142				214.2	322.1	141.4	214.2	
Wild or phalaris hay (non-tillable)	44				3.1	6.6	1.9	10.0	
Non-tillable pasture	95				23.5	32.5	22.8	35.1	
Roads, waste and timber					10.6	17.2	7.7		
Farmstead					8.4	9.5	7.8		
Total acres in farm					259.8	387.9	181.6		
% land tillable					82.4	83.0	77.9		
% tillable land in high return crops					55.4	56.3	56.9		

Table 12. Crop Yields per Acre, 1946

Crop	Your farm	Average of 142 farms	28 most profitable farms	28 least profitable farms
Canning peas, value above seed cost, dollars		\$36.02	\$65.35	\$10.10
Flax, bu.		13.3	13.8	12.7
Barley, bu.		33.4	35.8	30.1
Wheat, bu.		18.1	-	-
Oats, bu.		42.1	44.5	38.9
Soybeans for grain, bu.		19.0	18.8	18.6
Rye, bu.		22.0	-	-
 Corn grain, bu.		53.1	54.4	53.7
Corn or sorghum silage, tons		8.9	9.1	8.7
Sweet corn, tons		2.8	-	-
Corn or sorghum fodder, tons		3.4	2.9	3.7
 Alfalfa hay, tons		2.1	2.1	2.0
Soybean hay, tons		1.4	-	-
Mixed legume & non-legume hay, tons		1.6	1.7	1.6
Legume seed, lbs.		133	200	-
 Timothy and/or brome hay, tons		1.3	1.4	1.2
Other annual hay, tons		1.4	-	.5
Phalaris hay on non-tilable land, tons		1.3	2.8	-
Wild hay, tons		1.0	1.1	.3

Table 13. Average Price of Feeds, 1946

Item	Value	Item	Value
Ear corn, per bu.	\$1.14	Alfalfa hay, per ton	\$16.00
Oats, per bu.	.70	Red or alsike clover hay, per ton	13.60
Barley, per bu.	1.22	Soybean hay, per ton	13.60
Wheat, per bu.	1.70	Timothy hay, per ton	9.60
Soybeans, per bu.	2.20	Brome hay, per ton	9.60
Bran, per cwt.	2.70	Sweet clover hay, per ton	9.35
Linseed oilmeal, per cwt.	3.30	Wild hay, per ton	8.00
Soybean oilmeal, per cwt.	3.80	Corn fodder, per ton	7.20
Tankage, per cwt.	5.10	Corn silage, per ton	5.50
Skim milk, per cwt.	.30	Pasture, per mo. per an. unit	1.25

Table 14. Summary of Amount of Livestock, 1946

Items	Your farm	Average of 142 farms	28 most profitable farms	28 least profitable farms
No. of horses		2.6	3.3	2.2
No. of colts		.2	.3	.1
No. of dairy & dual purpose cows		5.7	6.1	5.5
Head of other dairy & dual pur. cattle		6.7	6.4	6.3
Head of cattle in beef breeding herd		10.7	10.3	10.2
Pounds of feeder cattle produced		6083	14309	1202
Pounds of feeder sheep produced		872	2256	75
Litters of pigs		18.1	30.8	9.7
Pounds of hogs produced		34524	63438	16314
Head of sheep (2 lambs = 1 head)		11.1	10.8	8.6
No. of hens		210	225	208
Total no. of prod:lvstk. animal units		48.5	75.7	29.2
% of total that are:				
Dairy cows		10.4	7.2	13.7
Other dairy cattle		5.9	3.5	7.9
Dual purpose cows		3.9	1.6	5.0
Other dual purpose cattle		2.9	1.5	2.4
Beef breeding herd		15.5	10.5	23.8
Feeder cattle		16.5	25.9	6.5
Hogs		31.6	37.0	28.7
Sheep - farm flock		3.5	1.6	3.2
- feeders		3.4	5.1	5
Turkeys		.5	1.1	-
Hens		5.9	5.0	8.3

Table 15. Feed Costs for Horses and Misc. Power and Machinery Expense, 1946

Items	Your farm	Average of 122 farms*	26 most profitable farms*	22 least profitable farms*
Feed per horse, ** lbs.:				
Grain		730	673	606
Hay		1667	1909	1412
Fodder and stover		96	39	277
Feed costs per horse:				
Grain	\$	\$15.31	\$13.29	\$12.83
Roughage		10.56	12.61	9.72
Pasture		6.96	7.09	6.90
TOTAL FEED COSTS	\$	\$32.83	\$32.99	\$29.45
Number of work horses		3.0	3.6	2.8
Number of colts		.2	.3	.2
Crop acres per farm		200.2	309.1	133.9
Tractor and horse exp. per crop acre	\$	\$3.57	\$3.31	\$3.97
Crop and gen.mach.exp. per crop acre	\$	2.73	2.72	3.00

*Eight farmers did not have horses. The crop acres and expenses per crop acre are averages of 142 farms.

**Two colts equal one horse.

Table 16. Feed Costs and Returns from Hogs, 1946

Items	Your farm	Average of 136 farms	27 farms highest in returns above feed	27 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn		384	313	465
Small grain		120	96	139
Commercial feeds		32	29	33
Total concentrates		536	438	637
Skim milk and buttermilk		38	20	35
Feed cost per cwt. hogs produced:	\$			
Concentrates	\$	11.67	9.70	13.76
Skim milk and buttermilk		.11	.07	.10
Pasture		.17	.19	.17
TOTAL FEED COSTS	\$	11.95	9.96	14.03
Net increase in val. per cwt. hogs prod.	\$	19.63	21.83	17.57
RETURNS ABOVE FEED COST PER CWT. HOGS PROD		7.68	11.87	3.54
RETURNS FOR \$100 OF FEED	\$	170	222	127
Price received per cwt. hogs sold	\$	17.17	19.08	16.49
No. of spring litters raised		15.7	14.6	16.0
No. of fall litters raised		3.2	2.3	3.7
Total no. of litters raised		18.9	16.9	19.7
No. of pigs born per litter		7.7	7.9	7.1
No. of pigs weaned per litter		6.4	6.9	5.5
Pounds of hogs produced		36027	33601	33735

Table 17. Factors of Cost and Returns from Dairy Cows, 1946

	Your farm	Average of 44 farms	10 farms highest in butterfat per cow	10 farms lowest in butterfat per cow
Pounds of butterfat per cow		244	316	168
Feeds per cow, lbs.:				
Corn		1380	1333	1047
Small grain		1013	1203	803
Commercial feeds		175	243	84
Legume hay		3144	3220	2175
Other hay		827	620	1824
Fodder and stover		355	277	618
Total concentrates		2568	2779	1934
Total dry roughage		4326	4117	4617
Silage		4561	6920	4521
Total digestible nutrients*		4901	5319	4527
T.D.N. per lb. B.F.		20.1	16.8	26.9
% T.D.N. that is protein		13.8	14.0	11.9
Feed cost per cow:				
Concentrates	\$	\$55.73	\$61.47	\$41.40
Roughages		41.53	47.83	38.93
Pasture		6.43	6.45	6.24
TOTAL FEED COSTS	\$	\$103.69	\$115.75	\$86.57
Value of produce per cow:				
B.F. sales	\$	\$181.26	\$263.44	\$113.95
Dairy produce used in house		17.99	11.05	19.44
Milk to livestock		17.33	14.91	11.64
Net increases in value of cows		8.19	13.21	-8.17
TOTAL VALUE PRODUCED	\$	\$224.77	\$302.61	\$136.86
RETURNS ABOVE FEED COST PER COW	\$	\$121.08	\$186.86	\$50.29
RETURNS FOR \$100 OF FEED	\$	\$220	\$266	\$168
Price rec. per lb. B.F. sold (cts.)		83.5	88.8	80.8
As manufacturing cream (cts.)		77.4	77.5	78.3
Other		100.9	100.1	103.5
Feed cost per lb. B.F. (cts.)		42.5	36.6	51.5
% fall freshening		52	56	52
Number of cows**		12.8	16.8	8.0

*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 18. Feed Costs and Returns from Other Dairy Cattle, 1946

Items	Your farm	Average of 42 farms*	highest in butterfat per cow	lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates		782	739	617
Hay and fodder		1606	1758	1504
Silage		1515	2560	861
Skim milk		1231	673	867
Whole milk		255	172	228
TOTAL FEED COSTS PER HEAD	\$	\$46.24	\$46.69	\$36.82
Net inc. in value of other dairy cattle	\$	\$61.51	\$74.48	\$50.23
RETURNS ABOVE FEED COST PER HEAD	\$	\$15.27	\$27.79	\$13.41
RETURNS FOR \$100 OF FEED	\$	\$140	\$157	\$119
Number of head of other dairy cattle		14.8	19.8	8.9

Table 19. Feed Costs and Returns from All Dairy Cattle, 1946

Items	Your farm	Average of 44 farms	highest in butterfat per cow	lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates		2166	2244	1674
Hay and fodder		3757	3773	3896
Silage		4064	6172	3994
TOTAL FEED COSTS PER ANIMAL UNIT	\$	\$89.12	\$99.59	\$75.26
Value of produce per animal unit:				
Dairy products	\$	\$131.00	\$174.11	\$95.01
Net incr. in value of dairy cattle	\$	45.30	61.52	23.26
TOTAL VALUE PRODUCED	\$	\$176.30	\$235.63	\$118.27
RETURNS ABOVE FEED PER ANIMAL UNIT	\$	\$87.18	\$136.04	\$43.01
RETURNS PER \$100 OF FEED	\$	\$201	\$238	\$168
Animal units of dairy cattle		20.2	27.2	11.9

*Two farmers having both a dairy and a beef herd used a beef bull and included all the young stock in the beef herd.

Table 20. Factors of Cost and Returns from Dual Purpose Cows, 1946

Items	Your farm	Average of 24 farms	8 farms highest in butterfat per cow	8 farms lowest in butterfat per cow
Pounds of butterfat per cow		191	261	129
Feeds per cow, lbs.:				
Corn		1478	1543	1413
Small grain		599	720	485
Commercial feeds		49	76	19
Legume hay		2953	3158	2665
Other hay		414	44	41
Fodder and stover		34	-	-
Total concentrates		2126	2339	1917
Total dry roughage		3401	3202	2706
Silage		4123	3784	5598
Total digestible nutrients*		4035	4091	3828
T.D.N. per lb. B.F.		21.4	15.7	29.7
%T.D.N. that is protein		13.8	14.4	12.8
Feed cost per cow:				
Concentrates	\$	\$45.42	\$48.57	\$39.36
Roughages		35.25	34.02	34.53
Pasture		7.15	7.09	7.56
TOTAL FEED COSTS	\$	\$87.82	\$89.68	\$81.45
Value of produce per cow:				
B.F. sales	\$	\$122.04	\$171.08	\$73.25
Dairy produce used in house		18.45	24.51	15.29
Milk to livestock		18.12	21.30	15.67
Net increases in value of cows		23.47	27.13	32.57
TOTAL VALUE PRODUCED	\$	\$182.08	\$244.02	\$136.78
RETURNS ABOVE FEED COST PER COW	\$	\$94.26	\$154.34	\$55.33
RETURNS FOR \$100 OF FEED	\$	\$219	\$292	\$178
Price recd. per lb. B.F. sold (cts.)		77.0	78.0	75.5
As manufacturing cream		75.0	77.7	72.3
Other		91.2	-	-
Feed cost per lb. B.F. (cts.)		46.0	34.4	63.1
% fall freshening		34	32	28
Number of cows		7.4	6.1	7.6

*Not including nutrients received from pasture.

Table 21. Feed Costs and Returns from Other Dual-Purpose Cattle, 1946

Items	Your farm	Average of 19 farms*	highest in returns above feed	lowest in returns above feed
Feeds per head, lbs.:				
Concentrates		1143	1072	1370
Hay and fodder		1318	1144	1130
Silage		1585	1040	2163
Skim milk		683	787	1028
Whole milk		185	131	330
TOTAL FEED COSTS PER HEAD	\$	\$48.16	\$41.43	\$60.42
Net Increase in value	\$	\$75.43	\$100.08	\$54.45
RETURNS ABOVE FEED COST PER HEAD	\$	\$27.27	\$58.65	-\$5.97
RETURNS FOR \$100 OF FEED	\$	\$177	\$270	\$93
No. of head of other dual-purpose cattle		13.7	12.9	13.5

Table 22. Feed Costs and Returns from All Dual-Purpose Cattle, 1946

Items	Your farm	Average of 24 farms	highest in returns above feed	lowest in returns above feed
Butterfat per cow		191	227	147
Feeds per animal unit, lbs.:				
Concentrates		2129	2107	2103
Hay and fodder		3022	3670	2634
Silage		3470	3242	3676
FEED COSTS PER ANIMAL UNIT	\$	\$82.15	\$82.58	\$83.55
Value of produce per animal unit:				
Dairy products	\$	\$89.92	\$119.21	\$67.66
Net increase in value	\$	65.55	90.50	42.06
TOTAL VALUE PRODUCED	\$	\$155.47	\$209.71	\$109.72
RETURNS ABOVE FEED PER ANIMAL UNIT	\$	\$73.32	\$127.13	\$26.17
RETURNS FOR \$100 OF FEED	\$	\$197	\$267	\$132
Animal units of dual-purpose cattle		13.2	9.9	13.6

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

Table 23. Feed Costs and Returns from Beef Cattle, 1946

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:		39	10	10
Feeds per animal unit, lbs.:				
Concentrates		1333	1503	1124
Legume hay		1718	1589	962
Other hay		540	463	576
Fodder and stover		174	286	199
Silage		3065	5045	4187
Skim milk*		40	82	48
Whole milk*		4	15	-
Feed cost per animal unit:				
Concentrates	\$	\$27.55	\$30.44	\$23.89
Roughages		23.52	25.31	20.99
Milk*		.27	.76	.14
Pasture		7.25	6.43	7.11
TOTAL FEED COSTS		\$58.59	\$62.94	\$52.13
Value of produce per animal unit:				
Dairy products	\$	\$21.38	\$36.79	\$ 5.85
Net increase in value of animals		79.33	105.40	51.49
TOTAL VALUE PRODUCED		\$100.71	\$142.19	\$57.34
RETURNS ABOVE FEED COST PER ANIMAL UNIT	\$	\$42.12	\$79.25	\$ 5.21
RETURNS FOR \$100 OF FEED	\$	\$165	\$257	\$124
Number of cows and herd bulls		16.0	14.7	13.6
Number of animal units in the herd		27.8	25.6	22.9
Lbs. beef produced		11493	13909	7403
Feeder cattle: No. of farms		55	11	11
Feeds per cwt. beef produced, lbs.:				
Corn		617	552	817
Small grain		44	40	36
Commercial feeds		38	49	22
Legume hay		288	258	413
Other hay		74	74	109
Fodder and stover		6	-	4
Total Concentrates		699	641	875
Total dry roughages		368	332	526
Silage		467	394	586
Feed cost per cwt. beef produced:				
Concentrates	\$	\$13.89	\$12.82	\$17.09
Roughages		3.68	3.21	4.96
Pasture		.46	.38	.61
TOTAL FEED COSTS		\$18.03	\$16.41	\$22.66
Net increase in value of feeders		\$26.62	\$33.44	\$22.52
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.	\$	\$8.59	\$17.03	-\$14
RETURNS FOR \$100 OF FEED	\$	\$163	\$221	\$103
Price recd. per cwt. beef sold in 1946	\$	\$16.54	\$18.06	\$15.94
Price pd. for feeder cattle bot. in 1946		\$15.79	\$15.23	\$15.73
No. of animal units		28.6	44.7	27.4
Pounds of beef produced		15443	22311	14917

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

Table 24. Feed Costs and Returns from a Farm Flock of Sheep, 1946

Items	Your farm	Average of 36 farms	highest in returns above feed	lowest in returns above feed
Feeds per head, *lbs.				
Concentrates	82	85	86	
Legume hay	189	249	233	
Other hay	33	31	44	
Fodder and stover	10	-	39	
Silage	79	24	112	
Feed cost per head:				
Concentrates	\$ 1.79	\$1.99	\$1.79	
Roughages	1.71	1.90	2.26	
Pasture	1.24	1.35	1.12	
TOTAL FEED COSTS	\$4.74	\$5.24	\$5.17	
Value of produce per head:				
Wool	\$ 2.71	\$2.72	\$2.91	
Net increase in value of sheep	13.00	19.89	6.47	
TOTAL VALUE PRODUCED	\$15.71	\$22.61	\$9.38	
RETURNS ABOVE FEED COST PER HEAD	\$ 10.97	\$17.37	\$4.21	
RETURNS FOR \$100 OF FEED	\$ 372	\$524	\$197	
Price per cwt. of lambs sold	\$ 18.33	\$20.91	\$16.88	
Price per lb. wool sold (cts.)	4.34	43.9	43.8	
Pounds of wool per sheep sheared	8.4	8.7	8.8	
Number of ewes kept for lambing	29	21	38	
% lamb crop**	108	128	89	
% death loss**	6.5	5.6	9.2	
Pounds of sheep produced	2640	2447	2263	
No. of head of sheep*	42.5	27.5	55.6	

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

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

Table 25. Feed Costs and Returns from Feeder Sheep, 1946

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		782	504	1023
Legume hay		269	185	345
Other hay		82	63	111
Fodder and stover		22	-	47
Silage		130	39	238
Feed cost per cwt.:				
Concentrates	\$	\$16.15	\$10.39	\$21.09
Roughages		2.78	1.79	3.77
Pasture		.37	.33	.34
TOTAL FEED COSTS	\$	\$19.30	\$12.51	\$25.20
Net increase in value of sheep	\$	\$37.32	\$42.98	\$30.96
RETURNS ABOVE FEED COST PER CWT. PROD.	\$	\$18.02	\$30.47	\$ 5.76
RETURNS FOR \$100 OF FEED	\$	\$260	\$392	\$141
Price per cwt. sheep sold	\$	\$18.44	\$18.83	\$18.05
Price per cwt. for sheep bot.	\$	\$16.62	\$16.03	\$17.16
% death loss		2.4	1.8	2.8
Pounds of sheep produced		7220	4433	8578

Table 26. Feed Costs and Returns for Turkeys, 1946

Items	Your farm	Average of 3 farms
Feed per cwt. turkeys produced, lbs.:		
Grain		345
Commercial feeds		174
Total concentrates		519
Feed cost per cwt. turkeys produced	\$	\$15.80
Net increases in value of turkeys	\$	\$31.93
RETURNS ABOVE FEED COST PER CWT. TURKEYS PRODUCED	\$	\$16.13
RETURNS FOR \$100 FEED	\$	\$206
Price rec'd per lb. turkey sold (cts.)		37.2
No. of poult's put on feed		2243
Price paid per poult purchased (cts.)		81.1
Weight per bird sold, lbs.		18.0
% death loss		14.8
Pounds of turkeys produced		33361

Table 27. Feed Costs and Returns from Chickens, 1946

Items	Your farm	Average of 123 farms	highest in return above feed	lowest in return above feed
Feed per hen, lbs.:				
Grain		106	115	128
Commercial feeds		41	42	42
Total concentrates		147	157	170
Skim milk and buttermilk		2	5	1
TOTAL FEED COST PER HEN	\$	\$3.95	\$4.22	\$4.44
Value of produce per hen:				
Eggs sold and used in house	\$	\$4.86	\$6.09	\$3.86
Net increase in value of chickens		1.36	2.63	.86
TOTAL VALUE PRODUCED	\$	\$6.22	\$8.72	\$4.72
RETURNS ABOVE FEED COST PER HEN	\$	\$2.27	\$4.50	\$.28
RETURNS FOR \$100 OF FEED	\$	\$166	\$219	\$110
Price rec'd per doz. eggs sold (cts.)		33.5	34.3	32.2
Eggs laid per hen		174	214	144
Ave. no. of hens on farm during the year		240	235	191
% of hens that are pullets		91	94	90
% death loss of hens		10.2	7.4	12.3
Number of chicks purchased		533	702	442
Lbs. chickens produced		1691	2600	1208

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 28. 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 5. 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.

Table 28. Total feed Costs and Returns from Your Livestock Enterprises, 1946

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

Feed is the largest single item of cost for all classes of livestock. However, the proportion of the total cost represented by feed varies considerably between classes of livestock. Feed makes up approximately 45 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.

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 29.

Table 29. 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 30. Summary of Farm Earnings by Years*

Items	1940	1941	1942	1943	1944	1945	1946
No. of farms	165	166	165	164	163	153	143
Total farm capital	\$32724	\$36613	\$37728	\$37602	\$36000	\$35876	\$36810
Monthly charge for unpaid family lab.*	45	50	60	75	85	90	110
Monthly charge for board to hired labor.*	18	20	25	25	25	25	30
FARM EXPENSES							
Dairy and dual-pur. cattle bot.	\$ 76	\$ 138	\$ 141	\$ 135	\$ 112	\$ 118	\$ 237
Beef cattle bot. (incl. feeders)	1243	1766	1718	1187	1109	1390	1754
Hogs bot.	103	209	339	408	315	377	382
Sheep bot. (incl. feeders)	414	686	866	694	321	600	464
Poultry bot. (incl. turkeys)	99	96	138	165	200	195	164
Horses bot.	32	32	49	33	43	15	14
Misc. livestock expense	72	109	148	199	173	194	198
Misc. crop expenses	243	303	377	507	582	575	750
Feed bought	1007	1718	2235	3080	2164	2416	2669
Custom work hired	150	140	199	215	261	292	300
Power mach. (new)	379	446	256	180	337	200	449
Power mach. (upkeep)	411	497	533	617	699	817	963
Crop and gen. mach. (new)	319	416	387	221	332	414	601
Crop and gen. mach. (upkeep)	69	84	135	157	174	195	258
Livestock equipment (new)	74	123	134	138	91	78	97
Livestock equipment (upkeep)	20	32	57	87	78	94	92
Buildings and fencing (new)	412	434	327	236	297	370	409
Buildings and fencing (upkeep)	88	141	156	168	192	219	268
Hired labor	392	561	622	739	651	636	723
Taxes	313	337	355	335	311	311	367
Insurance	15	32	35	40	41	41	108
General farm	59	55	60	72	80	84	
(1) Total farm purchases	\$5990	\$8355	\$9257	\$9613	\$8563	\$9631	\$11316
(2) Decrease in farm capital	-	-	-	-	412	-	-
(3) Board furnished hired labor	131	171	143	147	118	83	105
(4) Interest on farm capital	1635	1831	1886	1880	1800	1794	1841
(5) Unpaid family labor	252	288	360	335	316	322	363
(6) Total farm exp. (sum of (1)to(5))	\$8008	\$10645	\$11656	\$11975	\$11209	\$11830	\$13625

*These adjustments should be considered in comparing 1946 results with previous years.

Table 30. Summary of Farm Earnings by years (continued)

Items	1940	1941	1942	1943	1944	1945	1946
<u>FARM RECEIPTS</u>							
Dairy and dual-purpose cattle	\$ 265	\$ 392	\$ 446	\$ 419	\$ 392	\$ 473	\$ 515
Dairy products	570	758	804	916	865	906	1083
Beef cattle (incl. feeders)	2373	3399	3860	3590	2478	3777	3711
Hogs	1162	2306	4336	5630	4671	4484	6166
Sheep and wool (incl. feeders)	470	1032	1402	968	768	926	834
Poultry (including turkeys)	372	396	598	622	829	659	620
Eggs	244	334	589	905	911	977	993
Horses	42	41	47	45	47	27	24
Corn	516	477	625	724	578	587	814
Small grain	849	1133	1120	1382	669	949	1446
Other crops	239	283	365	510	600	673	878
Machinery and equipment sold	249	278	133	137	185	251	363
Agri. adjustment payment	506	503	503	264	74	51	121
Income from work off the farm	193	196	163	137	183	295	343
Miscellaneous	394	176	166	185	197	48	67
(7) Total farm sales	\$8444	\$11704	\$15158	\$16434	\$13447	\$15083	\$17978
(8) Increase in farm capital	1179	2618	2102	2	-	314	3223
(9) Family living from farm	483	538	584	588	572	635	679
(10) Tot. farm rec. (7)+(8)+(9)	\$10106	\$14860	\$17844	\$17024	\$14019	\$16032	\$21880
(6) Total farm expenses	8008	10645	11656	11975	11209	11830	13625
(11) Oper. lab. earn. (10) - (6)	2098	4215	6188	5049	2810	4202	8255
<u>MEAS. OF FARM ORG. AND MANAGEMENT EFFICIENCY</u>							
% high return crops*	35.9	36.5	38.9	40.3	54.2	55.7	55.4
Prod. livestock units per 100A.	22.1	24.7	24.7	25.1	21.4	22.1	20.7
Work units	569	631	624	586	530	535	514
Work units per worker	263	264	281	279	279	297	286
Expenses per work unit	\$2.17	\$2.30	\$2.90	\$3.52	\$4.20	\$4.52	\$5.08
ACRES PER FARM	279	295	291	280	268	268	260
Crop acres per farm	213	223	219	212	191	203	200
<u>CROP YIELDS PER ACRE</u>							
Flax, bu.	13.7	12.0	11.5	9.5	6.0	13.8	13.3
Barley, bu.	42.3	29.6	24.0	10.7	18.8	44.3	33.4
Oats, bu.	60.1	26.4	44.8	34.3	36.3	51.8	42.1
Corn, grain, bu.	46.2	55.9	57.4	39.6	49.6	33.5	53.1
Corn silage, tons	8.5	9.5	10.3	8.5	7.5	7.1	8.9
Alfalfa hay, tons	2.0	2.0	2.5	2.3	2.0	2.1	2.1

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

Table 31. Summary of Miscellaneous Items by Years

Items	1940	1941	1942	1943	1944	1945	1946
<u>RETURN ABOVE FEED COST PER:</u>							
Dairy cow	\$43.03	\$56.89	\$70.13	\$69.86	\$69.45	\$92.30	\$121.08
Dual-purpose cow	26.49	39.13	54.28	41.21	46.01	61.28	94.26
Animal unit in beef breeding herd	18.20	25.06	35.53	18.54	12.20	24.00	42.12
100 lbs. feeder cattle produced	2.92	3.99	3.64	1.43	3.56	7.38	8.59
Head of sheep in farm flock	3.27	5.96	5.61	3.37	3.00	4.86	10.97
100 lbs. feeder sheep produced	2.13	8.01	6.67	4.24	10.85	9.44	18.02
100 lbs. hogs produced	1.23	5.15	7.61	2.93	3.31	5.23	7.68
Hen	.96	1.35	2.07	2.48	1.71	2.63	2.27
100 lbs. turkeys produced	5.74	9.63	14.09	12.31	10.27	12.17	16.13
<u>FEED COST PER:</u>							
Dairy cow	\$46.50	\$53.11	\$62.99	\$88.03	\$88.04	\$92.68	\$103.69
Dual-purpose cow	34.85	44.19	48.55	70.09	68.02	78.02	87.82
Animal unit in beef breeding herd	29.86	33.57	34.55	46.58	49.92	52.84	58.59
100 lbs. of feeder cattle produced	8.00	9.21	13.27	17.25	15.06	15.62	18.03
Head of sheep in farm flock	2.60	2.76	3.01	4.14	3.78	4.33	4.74
100 lbs. feeder sheep produced	7.16	8.38	14.23	13.85	12.98	15.15	19.30
100 lbs. hogs produced	4.29	5.55	6.76	9.89	10.32	9.04	11.95
Hen	1.11	1.50	2.15	3.17	3.46	3.53	3.95
100 lbs. turkeys produced	7.27	8.26	11.40	14.96	14.88	14.89	15.80
Horse	29.74	31.80	37.06	47.87	40.58	32.10	32.83
<u>MISC. LIVESTOCK INFORMATION</u>							
No. of work horses	4.1	4.2	4.0	3.7	3.3	3.1	2.6
No. of colts	1.0	1.0	.7	.7	.6	.3	.2
No. of dairy or dual-purpose cows	8.6	9.1	8.6	7.6	6.6	6.1	5.7
Head in beef breeding herd	9.0	9.4	9.9	10.7	13.5	10.8	10.7
Lbs. feeder cattle produced	8678	14087	10119	8483	5315	7695	6083
Litters of pigs	13.6	16.9	20.1	25.4	16.7	19.4	18.1
Lbs. of hogs produced	21335	27550	34522	39596	29054	33994	34524
No. of hens	161	173	196	223	230	215	210
Lbs. of butterfat per dairy cow	250	254	250	251	226	242	244
Lbs. of butterfat per dual-pur. cow	179	190	190	182	172	182	191
No. of pigs weaned per litter	6.2	6.4	6.3	6.0	5.9	6.2	6.4
% lamb crop	110	110	109	105	94	99	108
Eggs per hen	113	117	135	146	157	163	174

Table 31. Summary of Miscellaneous Items by Years (continued)

ITEMS	1940	1941	1942	1943	1944	1945	1946
<u>PRICE RECEIVED PER:</u>							
Lb. B.F. sold to creameries	\$.31	\$.37	\$.42	\$.53	\$.58	\$.62	\$.76
100 lbs. feeder cattle	8.81	10.13	12.22	13.68	13.83	14.95	16.54
100 lbs. feeder sheep	8.74	10.08	12.47	14.52	15.32	15.91	18.44
Pound of wool	.29	.38	.41	.41	.41	.42	.43
100 lbs. of hogs	5.15	9.07	13.13	13.80	13.12	14.27	17.17
Dozen eggs	.15	.21	.28	.35	.31	.35	.34
Pound of turkeys	.14	.18	.29	.32	.34	.32	.37
<u>PRICE OF FEED</u>							
Shelled corn, bu.	\$.47	\$.54	\$.68	\$.91	\$.92	\$.86	\$1.14
Oats, bu.	.26	.32	.41	.60	.70	.64	.70
Barley, bu.	.31	.39	.52	.77	.92	.94	1.22
Alfalfa hay, ton	7.50	8.50	8.00	11.00	15.00	15.00	16.00
Timothy hay, ton	4.80	5.45	5.15	6.75	9.00	9.00	9.60
Corn silage, ton	2.10	2.55	2.75	3.62	5.00	5.00	5.50
Bran, cwt.	1.20	1.50	2.10	2.10	2.20	2.18	2.70
Linseed oilmeal, cwt.	1.75	2.00	2.40	2.55	2.85	2.88	3.30
Tankage, cwt.	2.50	3.20	4.10	4.00	4.18	4.10	5.10
Soybean meal, cwt.	1.70	2.10	2.75	2.80	3.15	3.00	3.80