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

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Annual Report
of the
Southeastern Minnesota
Farm Management Service
1946

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Cooperator: _____

Mimeographed Report No. 162
Division of Agricultural Economics
University Farm
St. Paul 1, Minnesota
April 1947

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Nineteenth Annual Report of the Farm Management Service of Dakota, Dodge, Freeborn, Goodhue, LeSueur, Mower, Nicollet, Olmsted, Rice, Scott, Steele, Wabasha, Waseca, and Winona Counties for the Year 1946.

Prepared by T.R. Nodland, G.A. Pond and R.O. Olson

INTRODUCTION

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

General administration of this project, analysis of the records and preparation of the reports is handled by the Division of 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. Glen Myers is the field agent for this project. At the end of the year, Howard Ottoson and R.R. Beneke of the Division of Agricultural Economics aided in closing the records. County agricultural extension agents who cooperate in this project include, C.O. Quie, V. Sander, C.L. Blakeslee, G.J. Kunau, R.D. Evans, Everell Smith, F.L. Liebenstein, F.E. Wetherill, Ray Aune, Milton Hoberg, Ed Slettom, C. Graham, J.R. Gute, Oscar Nelson, Herbert Feldman, C.F. Murphy and Geo. Chambers.

The Southeast Minnesota Farm Management Association was organized in 1939 by the farmers cooperating in the S.E. Farm Management Service. This association now represents its membership as an additional cooperating agency to determine policies and especially to maintain the field organization and membership. Officers for 1946 were:

President, Wm. A. Benitt, Hastings, Dakota county;
Vice-President, Homer Goss, Lewiston, Winona County;
Secretary-Treasurer, Emery Lindesmith, Owatonna, Steele County.

The board of directors included these officers and also the following: A.M. Falkenhagen, Dodge county; Alvin Ulland, Freeborn county; Harvery Dankers, Goodhue county; Carl Kehret, Mower county; Adolph Lokensgard, Nicollet County; Charles Passe, Olmsted county; D.L. Krenik, LeSueur, County; Donald Finger, Rice county; Herman Krueger, Scott county; Harvey Carlton, Wabasha county; and David Zimmerman, Waseca county.

The following tabulation shows by counties the number of records submitted in 1946:

Dakota	7	Mower	12	Steele	19
Dodge	15	Nicollet	12	Wabasha	9
Freeborn	18	Olmsted	11	Waseca	19
Goodhue	22	Rice	11	Winona	9
LeSueur	4	Scott	9	Total	177

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

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

	Rochester		Albert Lea		Taribault	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
	Inches	Inches	Inches	Inches	Inches	Inches
January	1.39	+0.29	1.49	+0.58	1.42	+0.74
February	0.75	-0.07	0.78	-0.13	0.70	+0.01
March	1.62	+0.30	3.78	+2.55	3.39	+2.28
April	0.46	-2.00	0.84	-1.56	0.42	-1.49
May	3.44	-0.36	7.01	+3.18	3.14	-0.06
June	4.47	-0.12	3.96	-0.62	4.96	+0.59
July	0.41	-2.75	0.49	-2.99	0.91	-2.44
August	3.98	+0.53	4.14	+0.49	1.46	-1.95
September	6.47	+2.99	6.51	+2.78	6.17	+2.72
October	3.13	+1.03	3.62	+1.49	3.26	+1.18
November	1.20	-0.37	2.34	+0.87	1.68	+0.34
December	0.77	-0.15	1.13	+0.18	.88	+0.20
1946 Total	28.09	-0.68	36.09	+6.92	28.39	+2.12
1945 Total	34.16	+5.39	38.71	+9.54	36.34	+10.07
1944 Total	22.47	-6.30	30.95	+1.78	31.84	+5.57
1943 Total	23.50	-5.27	37.78	+8.61	28.12	+1.85
1942 Total	41.68	+12.91	31.22	+2.05	28.57	+2.30
1941 Total	29.80	+1.03	36.35	+7.18	23.08	-3.19

The month of March was decidedly warmer and considerably wetter than usual. Some small grains were seeded during the latter part of the month. April and May was too dry for pastures, meadows and other crops in most of the counties. A hard freeze on May 11 and 12 resulted in severe damage to fruits and truck crops as well as to some small grain crops. Precipitation was below normal during July and above normal during September and October. Killing frosts occurred on September 29.

Table 2. Summary of Farm Inventories, 1946*

Items	Your farm		Average of 170 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			222	
Size of business (work units)**			634	
Productive livestock (total)			\$4399	\$4841
Dairy and dual purpose cows			1380	1495
Other dairy & dual purpose cattle			879	864
Beef cattle (incl. feeders)			429	476
Hogs			1090	1402
Sheep (including feeders)			198	207
Poultry (including turkeys)			423	397
Horses			223	182
Crop, seed, and feed			3028	4108
Mach. & equipment (total)			3281	3439
Power mach. (farm share)			1003	1046
Crop & general mach. (farm share)			1630	1765
Livestock equipment & supplies			648	628
Buildings, fences, etc.			7513	7580
Land			9723	9723
Total farm capital			28167	29873

Items	34 most profitable farms		34 least profitable farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	285		178	
Size of business (work units)**	770		492	
Productive livestock (total)	\$6332	\$6734	\$3246	\$3560
Dairy & dual purpose cows	1605	1744	1148	1294
Other dairy & dual purpose cattle	1110	1044	717	841
Beef cattle (incl. feeders)	814	837	282	222
Hogs	1745	2149	620	733
Sheep (including feeders)	514	447	102	118
Poultry (including turkeys)	544	513	377	352
Horses	241	184	206	171
Crop, seed, and feed	4339	6439	2390	2873
Mach. & equipment (total)	4555	4924	2233	2223
Power mach. (farm share)	1415	1495	639	620
Crop & general mach.	2333	2650	1075	1092
Livestock equipment & supplies	807	779	519	511
Buildings, fences, etc.	8316	8337	6398	6336
Land	13641	13641	7411	7411
Total farm capital	37424	40259	21884	22574

*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 170 farms	34 most profitable farms	34 least profitable farms
<u>FARM EXPENSES</u>				
Dairy and dual-purpose cows bought		\$ 78	\$ 95	141
Other dairy & dual-pur.cattle bot.		130	115	209
Beef cattle bot. (incl.feeders)		125	252	4
Hogs bought		158	121	95
Sheep bought (including feeders)		86	132	41
Poultry bought (including turkeys)		195	187	161
Horses bought		17	17	23
Misc.livestock expenses		198	264	156
Misc. crop expenses		551	761	442
Feed bought		1920	2235	1435
Custom work hired		363	355	378
Mech.pow.mach.(farm share)(new)		297	446	142
Mech.pow.mach.(farm share)(upkp.)		274	369	199
Mech.pow.(farm share)(gas,oil,etc.)		564	722	413
Crop and general mach.(New)		447	715	227
Crop and general mach.(upkeep)		167	199	138
Livestock equipment (new)		77	82	80
Livestock equipment (upkeep)		90	89	71
Buildings & fencing (new)		431	421	228
Buildings & fencing (upkeep)		277	261	299
Hired labor		740	968	477
Taxes		337	431	290
General farm and insurance		126	151	114
(1) Total farm purchases		\$7648	\$9388	\$5763
(2) Decrease in farm capital		-	-	-
(3) Board furnished hired labor		147	191	89
(4) Interest on farm capital		1451	1942	1111
(5) Unpaid family labor		506	735	536
(6) Total farm.exp.(Sum of(1)to(5))		\$9752	\$12256	\$7499
<u>FARM RECEIPTS</u>				
Dairy and dual-purpose cows		\$ 544	\$ 841	\$ 381
Dairy products		4192	5034	2888
Other dairy & dual-purpose cattle		571	821	435
Beef cattle (including feeders)		405	773	235
Hogs		2863	5099	1285
Sheep and wool (including feeders)		265	636	146
Poultry (including turkeys)		954	1434	739
Eggs		1172	1275	1018
Horses		20	21	21
Corn		207	422	31
Small grain		372	650	220
Other crops		705	1131	715
Machinery & equip. sold		229	339	94
Agricultural adjustment payments		67	74	48
Income from work off the farm		281	292	160
Misc.		89	73	41
(7) Total farm sales		\$12936	\$18915	\$8457
(8) Increase in farm capital		1706	2835	690
(9) Family living from the farm		700	800	624
(10) Total farm receipts(7)+(8)+(9)		\$15342	\$22550	\$9771
(6) Total farm expenses		9752	12256	7499
(11) Operator's labor earn.(10)-(6)		5590	10294	2272

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

Items	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms
EXPENSES AND NET DECREASES				
Total power		\$1246	\$1512	\$1017
Horses		165	199	150
Tractor		440	573	315
Truck		131	205	78
Auto (farm share)		226	241	224
Gas engine (farm share)		4	3	12
Elec. plant or current (farm share)		102	122	70
Hired power		178	169	168
Crop and general machinery		397	463	394
Livestock equipment		179	194	149
Buildings, fencing and tiling		521	521	493
Misc. productive livestock expense		182	262	155
Labor		1511	2020	1224
Real estate taxes		281	362	243
Personal property tax		56	69	47
Insurance		47	75	33
General farm		79	76	81
Interest on farm capital		1451	1942	1111
(1) Total expenses & net decreases		5950	7496	4947
RETURNS AND NET INCREASES				
All productive livestock		11253	16131	7348
Dairy and dual purpose cows		4713	5850	3288
Other dairy & dual pur. cattle		882	1216	724
Beef breeding herd		225	175	184
Feeder cattle		136	364	3
Hogs		3097	5486	1367
Sheep - farm flock		160	385	121
Sheep - feeders		33	51	-
Turkeys		526	855	458
Chickens		1481	1749	1203
Crops, seed and feed		-110	1322	-432
Income from labor off the farm		168	119	128
Agricultural conservation payments		67	74	48
Miscellaneous		162	144	127
(2) Total returns & net increases		11540	17790	7219
(1) Total expenses & net decreases		5950	7496	4947
(3) Oper. labor earnings (2) - (1)		5590	10294	2272

*Cash receipts and expenses are adjusted for changes in inventory for each enterprise and for each item of expense in order to show total receipts and net increases, and total expenses and net decreases. The operator's labor earnings are the same as those in page 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			189.0	
Owned			189.0	
Rented			-	
Total farm capital			\$23546	\$25317
Accounts receivable			276	319
Stocks and bonds			2874	3031
Life insurance			1308	1508
Outside real estate			46	401
Other outside investments			421	586
Total outside investments			4619	5526
Cash on hand and in bank			1180	1900
Other household & personal assets			920	996
Total cash, household & personal assets			2100	2896
TOTAL ASSETS			30671	34058
Federal Land Bank Mortgage			604	373
Other mortg. on land operated			3447	3436
Mortgages on other real estate			-	177
Production Credit Association			-	36
Other chattel mortgages			72	94
Notes payable			546	499
Accounts payable			166	191
TOTAL LIABILITIES			4835	4806
Farmer's net worth			25836	29252
Gain in net worth				+3416

	19 part-owners*		23 Renters**	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	262.0		193.8	
Owned	157.5		-	
Rented	104.5		193.8	
Total farm capital	\$22643	\$26173	\$6789	\$7970
Accounts receivable	231	172	132	244
Stocks and bonds	1519	1483	1256	1429
Life insurance	168	182	427	501
Outside real estate	1579	1684	678	678
Other outside investments	745	930	158	181
Total outside investments	4011	4279	2519	2869
Cash on hand and in bank	668	1260	1034	1502
Other household & personal assets	859	876	935	1016
Total cash, household & personal assets	1527	2136	1969	2518
TOTAL ASSETS	28412	32760	11409	13601
Federal Land Bank Mortgage	1443	1204	-	-
Other mortg. on land operated	2539	2275	-	-
Mortgages on other real estate	-	-	171	171
Production Credit Association	237	262	-	-
Other chattel mortgages	339	470	197	152
Notes payable	438	627	1110	838
Accounts payable	197	187	251	134
TOTAL LIABILITIES	5193	5025	1729	1295
Farmer's net worth	23219	27735	9680	12306
Gain in net worth		+4516		+2626

*10 rented for cash, 2 cash and crop share, 6 crop share and 1 livestock share.

**8 rented for cash, 4 cash and crop share and 11 livestock share.

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

	Your farm	44 Owners	19 part- owners	23 renters
FARM EXPENSES				
Dairy and dual purpose cows bot.		\$ 13	\$ 183	\$ 73
Other dairy & dual pur. cattle bot.		116	259	89
Beef cattle bot. (including feeders)		13	4	-
Hogs bot.		154	185	126
Sheep bot. (including feeders)		18	8	46
Poultry bot. (including turkeys)		191	135	215
Horses bot.		9	13	12
Misc. livestock expenses		168	148	129
Misc. crop expenses		440	675	329
Feed bot.		1674	1410	1655
Custom work hired		358	471	256
Mech. power mach. (farm share) (new)		177	431	215
Mech. power mach. (farm share) (upkeep)		256	378	181
Mech. power (farm share) (gas, oil, etc.)		504	607	366
Crop and general mach. (new)		252	523	274
Crop and general mach. (upkeep)		146	220	142
Livestock equipment (new)		99	48	94
Livestock equipment (upkeep)		82	60	116
Land, buildings & fencing (new)		916	1561	140
Buildings and fencing (upkeep)		286	262	56
Hired labor		583	1305	440
Taxes (real estate & pers. property)		268	232	45
General farm and insurance		126	111	80
Cash rent		-	393	609
Interest paid		175	202	56
(1) Total farm purchases	\$	\$7024	\$9834	\$5744
(2) Decrease in farm capital		-	-	-
(3) Board furnished hired labor		129	175	116
(4) Interest on farm capital		1049	1018	313
(5) Unpaid family labor		452	317	270
(6) Total farm exp. (Sum of (1) to (5))	\$	\$8654	\$11344	\$6443
FARM RECEIPTS				
Dairy and dual purpose cows		\$ 434	\$ 514	\$ 276
Dairy products		3911	3922	3041
Other dairy and dual purpose cattle		558	505	337
Beef cattle (including feeders)		177	263	188
Hogs		2521	2308	1839
Sheep and wool (including feeders)		99	84	94
Poultry (including turkeys)		313	360	978
Eggs		1181	917	1099
Horses		16	22	14
Corn		169	194	54
Small grain		262	386	181
Other crops		447	1647	234
Machinery & equipment sold		138	279	103
Agricultural adjustment payments		86	67	46
Income from work off the farm		363	404	170
Misc.		52	111	18
(7) Total farm sales	\$	\$11227	\$11983	\$8672
(8) Increase in farm capital		1671	3530	1181
(9) Family living from the farm		681	624	611
(10) Total farm rec. (7) + (8) + (9)	\$	\$13579	\$16137	\$10464
(6) Total farm expenses		8654	11344	6443
(11) Operator's labor earn. (10) - (6)		4925	4793	4021
(12) Ret. cap. & family lab. (4)+(5)+(11)		6426	6128	4604

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

Items	Your farm	Average of 95 farms	19 most profit- able farms	19 least profit- able farms
Number of persons in family		4.0	4.6	4.1
Number of adult equivalents in family		2.5	3.5	3.2
Number of other adult equivalents*		.6	.8	.3
EXPENSES				
Food and meals bought	\$	\$ 536	\$ 594	\$ 539
Operating and supplies		191	226	198
Clothing and clothing materials		259	300	234
Personal care, personal spending		70	111	61
Furnishings and equipment		178	247	107
Education, recreation and development		132	266	89
Medical care and health insurance		155	178	132
Church, welfare, gifts		199	303	165
Personal share of auto expense		103	118	80
Household share of elect. & gas. eng. exp.		46	52	36
H.H. & pers. shr. of new auto, gas, eg. & mot. bot.		9	-	-
Total		1878	2395	1641
State and federal income tax		280	392	75
Insurance	\$	\$ 154	\$ 184	\$ 112
Investments		425	608	51
Total household & personal cash expenses		2737	3579	1879
Food furnished by the farm		477	517	447
Fuel furnished by the farm		18	24	17
House rental		190	217	164
Total household and personal expenses	\$	\$3422	\$4337	\$2507
RECEIPTS				
Outside investments		\$ 169	\$ 73	\$ 77
Household and personal		112	67	66

*Hired help or others boarded

Table 8. Family Living From the Farm, 1946

Items	Your farm	Average 170 farms	34 most profit-able farms	34 least profit-able farms	Your farm	Average 170 farms	34 most profit-able farms	34 least profit-able farms
No. of persons (Fam.)	—	3.0	3.3	2.9				
adult equiv.(others*)	—	.7	1.0	.6				
Wholemilk	—	1370 qts.	1596	1209	\$	\$104.80	\$118.70	\$99.21
Skim milk	—	119 qts.	130	152	—	1.36	2.70	2.24
Cream	—	106 pts.	116	151	—	28.18	33.15	39.95
Farm made butter	—	1 lb.	-	2	—	.54	-	1.32
Eggs	—	212 doz.	229	177	—	72.13	77.78	60.03
Cattle	—	447 lbs.	539	342	—	54.62	68.91	43.56
Hogs	—	483 lbs.	627	396	—	81.10	104.52	64.45
Sheep	—	3 lbs.	-	4	—	.43	-	.78
Poultry	—	129 lbs.	137	121	—	31.85	34.58	29.44
Potatoes	—	19 bu.	31	17	—	21.59	33.68	20.14
Vegetables & fruits	—				—	67.48	80.71	63.72
Farm fuel	—	3 cds.	5	3	—	22.29	31.88	17.00
Rental vl. of house	—				—	213.40	212.09	181.98
Misc.	—				—	.36	.88	-
Total	—				\$	\$700.13	\$799.58	\$623.82

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 or 1	14	—	XXXXXXXXXXXXXXXXXXXX	\$2995
2 or 3	78	—	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	4890
4 or 5	66	—	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	6522
6 or 7	12	—	XX	8040

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 170 farms	34 most profit- able farms	34 least profit- able farms
Operator's Labor Earnings	\$ _____	\$5590	\$10294	\$2272
(1) Crop yields*	_____	100	112	91
(2) % of tillable land in high ret.crops**	_____	50.3	52.1	45.9
(3) Ret. for \$100 feed to prod.livestock***	_____	100	107	91
(4) Prod.livestock units per 100 acres****	_____	22.8	23.6	21.1
(5) Size of business - work units	_____	634	770	492
(6) Work units per worker	_____	317	320	259
(7) Pow., mach., equip., & bldg. exp. per work unit	\$ _____	\$3.81	\$3.54	\$4.26

Measures and items related to some of the
above measures:

(3) Index of return for \$100 feed from -				
Dairy cattle (see pages 16 & 17)	_____	100	105	89
Dual purpose cattle (see pages 18 & 19)	_____	100	100	113
Beef breeding herd (see page 20)	_____	100	82	96
Feeder cattle (see page 20)	_____	100	93	-
Hogs (see page 15)	_____	100	110	80
Native sheep (see page 23)	_____	100	109	76
Turkeys (see page 22)	_____	100	137	91
Chickens (see page 21)	_____	100	106	92
(5) Work units on crops	_____	174	234	136
Work units on productive livestock	_____	425	512	330
Other work units	_____	35	24	26
(6) Total number of workers	_____	2.0	2.4	1.9
Number of family workers	_____	1.4	1.6	1.5
Number of hired workers	_____	.6	.8	.4
(7) Power expense per work unit	\$ _____	\$2.02	\$1.99	\$2.11
Crop mach. expense per work unit	_____	.65	.63	.81
Livestock equip. exp. per work unit	_____	.28	.26	.31
Bldgs. & fencing exp. per work unit	_____	.86	.65	1.03

*Given as a percentage of the average

**Crops are marked on page 12 as (A), (B), (C), and (D). All of the acres in (A) crops, one-half of acres in (B) crops, and one-fourth of acres in (C) crops are used in calculating per cent of tillable land in high return crops.

***An index weighted by the animal units of livestock.

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

Thermometer Chart

Using your figures from page 10, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 170 farms included in this summary are located between the dotted lines across the center of this page.

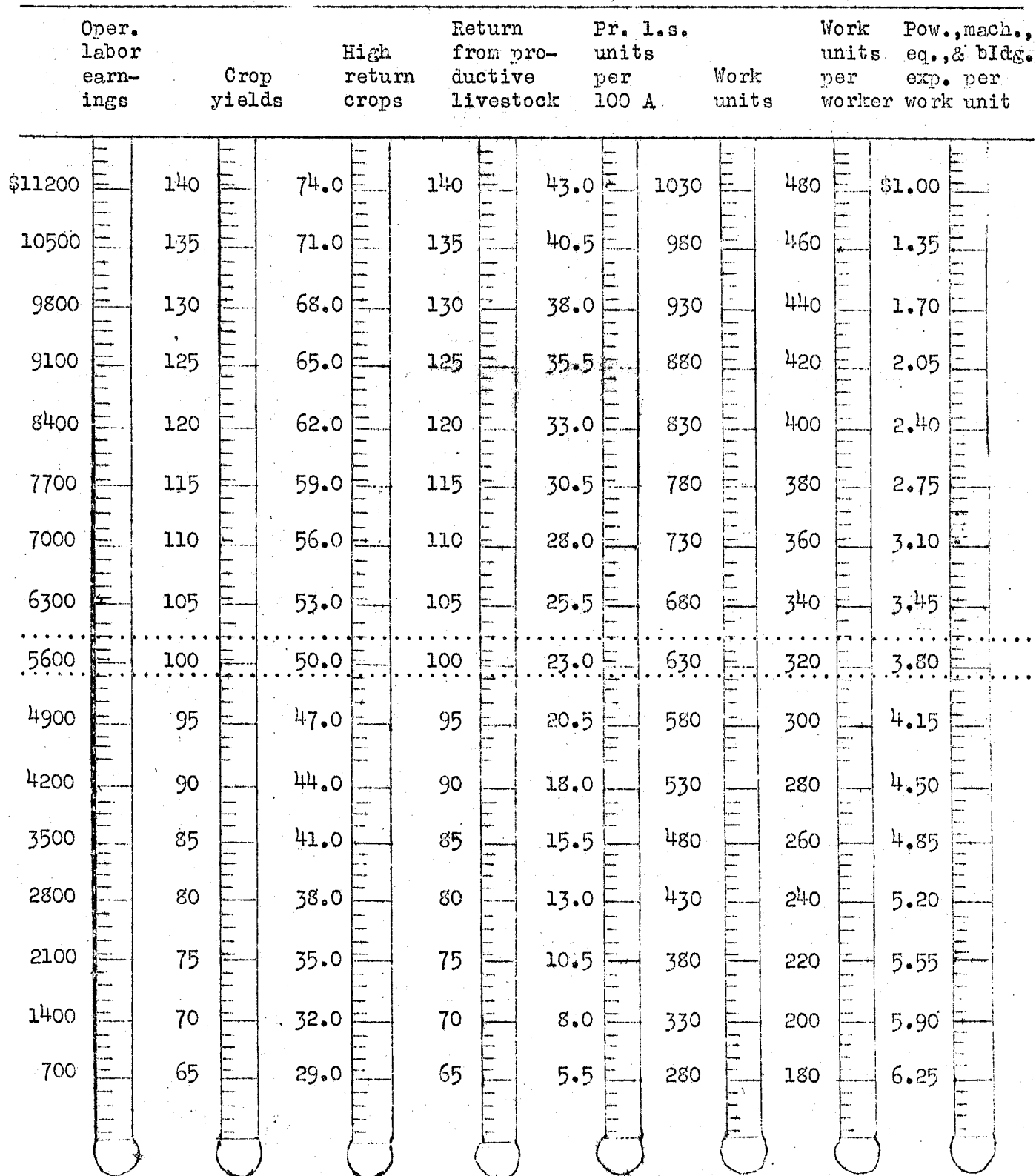


Table 11. Distribution of Acres in Farm, 1946

Crop: (A), (B), (C) and (D) refer to ranking used in calculating % of tillable land in High Return Crops (see page 10)	No. growing this crop	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms	Acres per farm growing crop
Canning peas	(A) 16	_____	1.6	2.8	.8	17.7
Flax	(C) 27	_____	2.2	5.6	1.1	13.8
Barley	(D) 44	_____	3.4	5.6	1.3	13.0
Oats and barley	(D) 18	_____	1.9	4.9	.8	18.0
Wheat	(D) 82	_____	5.1	7.9	3.3	10.6
Oats and wheat	(D) 32	_____	3.1	3.4	1.3	16.4
Oats	(D) 159	_____	33.2	40.0	30.0	35.5
Soybeans for grain	(D) 54	_____	4.8	8.6	1.6	15.2
Rye, millet and buckwheat	(D) 11	_____	.7	.2	1.5	10.6
Total small grain and peas	168		56.0	79.0	41.7	56.7
Sugar beets, hybrid seed corn, potatoes and truck crops	(A) 65	_____	3.7	5.8	3.1	9.7
Corn grain	(A) 168	_____	42.8	59.3	31.1	43.3
Corn silage	(B) 149	_____	10.8	11.6	9.3	12.4
Sweet corn	(B) 15	_____	1.2	1.4	1.1	13.7
Corn fodder	(D) 25	_____	.9	.8	1.3	6.1
Total cultivated crops	170		59.4	78.9	45.9	59.4
Alfalfa hay	(A) 128	_____	15.8	21.5	10.6	21.0
Red clover hay	(B) 39	_____	3.3	4.9	3.8	14.4
Soybean hay	(C) 27	_____	1.1	.9	.6	6.9
Mixed legumes & non-legumes	(C) 57	_____	6.0	6.1	6.4	17.8
Legumes for seed	(C) 11	_____	.4	.9	-	6.4
Timothy and/or brome hay & seed	(D) 32	_____	2.4	2.1	3.9	12.8
Other annual hay	(D) 2	_____	.1	-	.1	10.5
Total tillable land in hay	169		29.1	36.4	25.4	29.3
Alfalfa and mixtures incl. alfalfa	(A) 67	_____	5.5	7.5	5.1	13.9
Sweet clover pasture	(B) 11	_____	1.2	1.2	.1	19.0
Other legumes and mixtures	(C) 39	_____	5.0	6.6	2.1	21.6
Sudan grass or rape pasture	(C) 34	_____	1.2	2.0	.6	5.9
Other tillable pasture	(D) 67	_____	6.7	9.3	9.2	17.0
Total tillable land in pasture	142		19.6	26.6	17.1	23.4
Tillable land not cropped	(D) 18	_____	.9	.2	1.2	8.3
Total tillable land	170		165.0	221.1	131.3	165.0
Phalaris hay (non-tillable)	5	_____	1.2	1.2	-	39.3
Wild hay (non-tillable)	56	_____	3.4	2.6	2.2	10.3
Non-tillable pasture	134	_____	29.0	26.9	26.1	36.8
Timber (not pastured)	71	_____	6.5	13.0	4.3	15.7
Roads and waste		_____	10.4	10.0	9.4	
Farmstead		_____	6.7	10.0	5.0	
Total acres in farm			222.2	284.8	178.3	
Per cent land tillable			74.3	77.6	73.6	
Per cent tillable land in high ret. crops			50.3	52.1	45.9	

Table 12. Crop Yields Per Acre, 1946

Crop	Your farm	Average 170 farms	34 most profitable farms	34 least profitable farms
Canning peas, value above seed cost	\$	\$60.84	\$68.85	\$19.78
Flax, bu.		12.9	15.4	9.9
Barley, bu.		31.0	31.5	33.0
Oats and barley, bu.		42.2	45.2	56.5
Wheat, bu.		21.1	20.9	20.7
Oats and wheat, bu.		38.4	40.7	40.1
Oats, bu.		43.1	48.2	39.1
Soybeans for grain, bu.		16.4	19.3	14.8
Rye, bu.		15.9	22.0	11.0
Buckwheat, bu.		12.0	-	-
Corn, grain, bu.		50.7	58.3	43.5
Corn and cane silage, tons		8.5	9.6	7.2
Sweet corn, tons		2.9	3.1	2.5
Corn and cane fodder, tons		2.5	3.6	2.4
Alfalfa hay, tons		2.2	2.2	2.1
Red clover hay, tons		2.0	2.0	2.5
Soybean hay, tons		1.5	1.4	1.1
Mixed legume & non-legume hay, tons		1.6	1.3	1.7
Legumes for seed, lbs.		93.	106.	-
Timothy and/or brome hay, tons		1.4	1.8	1.4
Timothy seed, lbs.		181.	-	-
Other annual hay, tons		1.0	-	-
Phalaris hay or non-tillable land, tons		1.0	.5	-
Wild hay, tons		.8	.6	.9

Table 13. Average Price of Feeds, 1946

Item	Value	Item	Value
Ear corn, per bu.	\$1.15	Alfalfa hay, per ton	\$15.50
Oats, per bu.	.71	Red or alsike clov. hay, per ton	13.10
Barley, per bu.	1.22	Soybean hay, per ton	13.10
Wheat, per bu.	1.70	Timothy, per ton	9.30
Rye, per bu.	1.70	Sweet clover, per ton	9.00
Soybeans, per bu.	2.20	Wild hay, per ton	7.75
Bran, per cwt.	2.70	Corn fodder, per ton	7.00
Linseed oilmeal, per cwt.	3.40	Corn silage, per ton	5.10
Soybean oilmeal, per cwt.	3.90	Pasture, per mo. per an. unit	1.10
Tankage, per cwt.	5.00	Skim milk, per cwt.	.30

Table 14. Summary of Amount of Livestock, 1946

Items	Your farm	Average of 170 farms	34 most profitable farms	34 least profitable farms
No. of horses		2.8	3.2	2.6
No. of colts		.3	.3	.2
No. of dairy & dual purpose cows		16.7	18.8	13.6
Head of other dairy & dual pur. cattle		17.4	20.4	15.3
Head of cattle in beef breeding herd		3.8	3.5	2.4
Pounds of feeder cattle produced		528	1429	-
Litters of pigs		9.1	15.2	5.2
Pounds of hogs produced		15516	26920	7323
Head of sheep (2 lambs = 1 head)		11.3	22.7	11.2
No. of hens		240	260	203
Total no. of prod. lvstk. animal units		42.0	55.4	31.6
% of total that are:				
Dairy cows		39.4	35.0	40.2
Other dairy cattle		20.3	18.3	22.0
Dual purpose cows		2.9	2.4	4.0
Other dual purpose cattle		2.5	2.7	3.1
Beef breeding herd		4.7	3.7	4.1
Feeder cattle		1.9	3.5	-
Hogs		16.1	21.3	12.9
Sheep		3.9	5.6	4.3
Turkeys		1.8	2.3	2.6
Hens		6.5	5.2	6.8

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

Items	Your farm	Average of 160 farms*	31 most profitable farms*	30 least profitable farms*
Feed per horse, ** Lbs.:				
Grain		685	864	592
Hay		3491	3256	4126
Fodder and stover		306	319	332
Feed costs per horse:				
Grain		\$14.32	\$18.76	\$13.04
Roughage		21.05	18.13	23.79
Pasture		5.80	5.30	5.71
TOTAL FEED COSTS		\$41.67	\$42.19	\$42.54
Number of work horses		3.0	3.6	2.9
Number of colts		.4	.4	.2
Crop acres per farm		149.1	198.1	115.2
Tractor and horse exp. per crop acre		\$4.23	\$4.31	\$4.28
Crop & Gen. Mach. exp. per crop acre		2.87	2.64	3.50

* Ten farmers did not have horses. The crop acres and expenses per crop acre are averages for 170 farms.

**Two colts equal one horse.

Table 16. Feed Costs and Returns from Hogs, 1946

Items	Your farm	Average of 146 farms	29 farms, highest in returns above feed	29 farms lowest in returns above feed
Feed per cwt. hogs produced, lbs.:				
Corn		377	267	578
Small grain		141	117	187
Commercial feeds		36	36	32
Total concentrates		554	420	797
Skim milk, buttermilk and whey		39	49	19
Feed cost per cwt. hogs produced:				
Concentrates	\$	\$12.46	\$9.61	\$17.55
Skim milk, buttermilk and whey		.14	.15	.20
Pasture		.17	.17	.20
TOTAL FEED COST	\$	\$12.77	\$9.93	\$17.95
Net increase in value per cwt. hogs prod.	\$	\$19.81	\$21.77	\$18.92
RETURNS ABOVE FEED COST PER CWT. HOGS PROD.	\$	\$7.04	\$11.84	\$.97
RETURNS FOR \$100 OF FEED	\$	\$166	\$225	\$ 109
Price received per cwt. hogs sold	\$	\$17.23	\$19.02	\$16.26
No. of spring litters raised		7.0	8.0	5.7
No. of fall litters raised		3.6	3.3	1.4
Total no. of litters raised		10.6	11.3	7.1
No. of pigs born per litter		8.0	8.1	6.9
No. of pigs weaned per litter		6.5	6.9	5.6
Pounds of hogs produced		17850	18900	11955

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

Items	Your farm	Average of 146 farms	29 farms highest in butterfat per cow	29 farms lowest in butterfat per cow
Pounds of butterfat per cow		266	351	179
Feeds per cow, lbs:				
Corn		973	1203	570
Small grain		1069	1476	585
Commercial feeds		398	634	201
Legume hay		3300	4146	3308
Other hay		731	389	777
Fodder and stover		188	254	143
Total concentrates		2440	3313	1356
Total dry roughage		4219	4789	4228
Silage		7097	7532	7373
Total digestible nutrients*		5110	6184	4354
T.D.N. per lb. B.F.		19.2	17.6	24.3
% T.D.N. that is protein		13.8	14.5	13.6
Feed cost per cow:				
Concentrates	\$	\$55.62	\$77.94	\$30.70
Roughages		45.66	52.25	45.95
Pasture		5.71	5.56	5.94
TOTAL FEED COSTS	\$	\$106.99	\$135.75	\$82.59
Value of produce per cow:				
B.F. Sales	\$	\$250.30	\$338.74	\$149.40
Dairy produce used in house		8.78	7.94	11.78
Milk to livestock		14.02	14.31	15.25
Net increases in value of cows		12.44	11.03	17.61
TOTAL VALUE PRODUCED	\$	\$285.54	\$372.02	\$194.04
RETURNS ABOVE FEED COST PER COW	\$	\$178.55	\$236.27	\$111.45
RETURNS FOR \$100 OF FEED	\$	\$278.	\$285.	\$247.
Price rec. per lb. B.F. sold		\$1.02	\$1.03	.96
As manufacturing cream		.80	.82	.78
Other		1.05	1.05	1.07
Feed cost per lb. B.F. (cents)		40.2	38.7	46.1
% fall freshening		50.8	57.0	36.0
Number of cows**		18.0	20.3	14.8

*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 143 farms*	29 farms highest in butterfat per cow	27 farms lowest in butterfat per cow*
Feeds per head, lbs.:				
Concentrates	_____	583	749	461
Hay and fodder	_____	1635	2052	1886
Silage	_____	2643	2560	3361
Skim milk	_____	232	313	336
Whole milk	_____	355	374	286
TOTAL FEED COSTS PER HEAD	\$ _____	\$46.12	\$54.57	\$44.22
Net inc. in value of other dairy cattle	_____	\$52.62	\$59.69	\$43.47
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$6.50	\$5.12	\$ -.75
RETURNS FOR \$100 OF FEED	\$ _____	\$117.	\$115.	\$100.
Number of head of other dairy cattle	_____	18.0	18.7	17.9

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

Items	Your farm	Average of 146 farms	29 farms highest in butterfat per cow	29 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	1996	2674	1256
Hay and fodder	_____	3839	4447	4027
Silage	_____	6383	6608	7064
TOTAL FEED COSTS PER ANIMAL UNITS	\$ _____	\$92.14	\$115.41	\$77.45
Value of produce per animal unit:				
Dairy products	\$ _____	\$173.34	\$233.78	\$105.93
Net increase in val. of dairy cattle	_____	40.60	44.37	37.85
TOTAL VALUE PRODUCED	\$ _____	\$213.94	\$278.15	\$143.78
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$121.80	\$162.74	\$ 66.33
RETURNS PER \$100 OF FEED	\$ _____	239.	\$245.	\$199.
Animal units of dairy cattle	_____	27.2	30.1	23.5

*Three 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 15 farms	7 farms highest in butterfat per cow	7 farms lowest in butterfat per cow
Pounds of butterfat per cow		170	210	128
Feeds per cow, lbs.:				
Corn		578	678	537
Small grain		463	502	434
Commercial feeds		155	217	66
Legume hay		2560	2931	2271
Other hay		788	817	806
Fodder and stover		435	891	42
Total concentrates		1196	1397	1037
Total dry roughage		3783	4639	3119
Silage		5709	4339	6800
Total digestible nutrients*		3694	3973	3486
T.D.N. per lb. B.F.		21.7	18.9	27.2
% T.D.N. that is protein		12.7	13.0	12.1
Feed cost per cow:				
Concentrates	\$	\$26.65	\$31.21	\$22.73
Roughages		37.24	37.79	36.82
Pasture		6.08	6.33	5.70
TOTAL FEED COSTS	\$	\$69.97	\$75.33	\$65.25
Value of produce per cow:				
B.F. sales**	\$	\$135.02	\$166.83	\$98.62
Dairy produce used in house		9.59	12.14	7.58
Milk to livestock		21.87	24.87	20.82
Net increases in value of cows		14.07	7.60	20.55
TOTAL VALUE PRODUCED	\$	\$180.55	\$211.44	\$147.57
RETURNS ABOVE FEED COST PER COW	\$	\$110.58	\$136.11	\$82.32
RETURNS FOR \$100 OF FEED	\$	\$273.	\$316.	\$227.
Price received per lb. B.F., sold**		\$.94	\$.94	\$.93
As manufacturing cream		.87	.80	.91
Other		1.04	1.05	1.03
Feed cost per lb. B.F. (cents)		41.2	35.8	50.9
% fall freshening		61	52	69
Number of cows		14.3	12.6	16.2

*Not including nutrients received from pasture.

**Including dairy subsidy payments.

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

Items	Your farm	Average of 15 farms	7 farms highest in returns above feed	7 farms lowest in returns above feed
Feeds per head, lbs.:				
Concentrates	_____	450	539	257
Hay and fodder	_____	1493	1347	1769
Silage	_____	2079	2508	1430
Skim milk	_____	593	420	754
Whole milk	_____	320	120	562
TOTAL FEED COST PER HEAD	\$ _____	\$39.19	\$34.80	\$42.80
Net increase in value	\$ _____	\$49.97	\$59.64	\$39.15
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$10.78	\$24.84	\$-3.65
RETURNS FOR \$100 OF FEED	\$ _____	\$137	\$171	\$92
Number of head	_____	24.3	25.2	22.8

Table 22. Feed Costs and Returns From All Dual Purpose Cattle

Items	Your farm	Average of 15 farms	7 farms highest in returns above feed	7 farms lowest in returns above feed
Pounds of butterfat per cow	_____	170	189	146
Feeds per animal unit, lbs.:				
Concentrates	_____	1067	975	963
Hay and fodder	_____	3334	3665	2984
Silage	_____	4872	4203	5568
TOTAL FEED COSTS PER ANIMAL UNIT	\$ _____	\$60.47	\$59.02	\$57.50
Value of produce per animal unit:				
Dairy products	\$ _____	\$82.17	\$103.07	\$59.14
Net increase in value	_____	50.63	48.15	50.16
TOTAL VALUE PRODUCED	\$ _____	\$132.80	\$151.22	\$109.30
RETURNS ABOVE FEED PER ANIMAL UNIT	\$ _____	\$ 72.33	\$ 92.20	\$ 51.80
RETURNS FOR \$100 OF FEED	\$ _____	\$229.	\$256.	\$190.
Animal units	_____	26.9	23.4	30.6

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:		15	7	7
Feeds per animal unit, lbs.:				
Concentrates		1126	818	1530
Legume hay		1572	1640	1439
Other hay		719	573	771
Fodder and stover		393	250	520
Silage		4178	2995	5123
Skin milk*		51	-	110
Whole milk*		8	-	17
Feed cost per animal unit:				
Concentrates	\$	\$25.10	\$18.06	\$34.25
Roughages		25.54	22.10	27.46
Pasture		5.68	5.72	5.44
TOTAL FEED COSTS	\$	\$56.32	\$45.88	\$67.15
Value of produce per animal unit:				
Dairy products	\$	\$7.26	\$2.58	\$5.52
Net increase in value of animals		77.90	91.66	71.24
TOTAL VALUE PRODUCED	\$	\$85.16	\$94.24	\$76.76
RETURNS ABOVE FEED COST PER ANIMAL UNIT	\$	\$28.84	\$48.36	\$9.61
RETURNS FOR \$100 OF FEED	\$	\$163	\$212	\$116
Number of cows and herd bulls		15.4	17.2	12.4
Number of animal units in the herd		28.9	29.6	26.1
Lbs. beef produced		13253	15332	10828
Feeder cattle: no. of farms:		11	5	5
Feeds per cwt. beef produced, lbs.:				
Corn		526	432	650
Small grain		103	51	170
Commercial feeds		26	23	26
Legume hay		240	231	249
Other hay		104	69	126
Fodder and stover		116	-	111
Total concentrates		655	506	846
Total dry roughages		460	300	486
Silage		1113	822	1339
Feed cost per cwt. beef produced:				
Concentrates	\$	\$13.79	\$10.70	\$17.70
Roughages		5.11	3.94	5.81
Pasture		.83	1.24	.54
TOTAL FEED COSTS	\$	\$19.73	\$15.88	\$24.05
Net increase in value of feeders	\$	\$24.69	\$26.54	\$23.08
RETURNS ABOVE FEED COST PER CWT. BEEF PROD.		4.96	10.66	-.97
RETURNS FOR \$100 OF FEED	\$	\$134	\$167	\$96
Price recd. per cwt. beef sold in 1946	\$	\$15.53	\$15.61	\$15.56
No. of animal units		22.7	32.9	15.1
Pounds of beef produced		8025	11416	5261

*One farmer 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 Chickens, 1946

Items	Your farm	Average of 156 farms	31 farms highest in return above feed	31 farms lowest in return above feed
Feed per hen, lbs.:				
Grain		100	109	104
Commercial feeds		44	42	54
Total concentrates		144	151	158
Skim milk and buttermilk		3	-	1
TOTAL FEED COST PER HEN	\$	\$4.11	\$4.28	\$4.55
Value of produce per hen:				
Eggs sold and used in house	\$	\$5.06	\$6.22	\$4.08
Net increase in value of chickens		1.10	2.05	.61
TOTAL VALUE PRODUCED	\$	\$6.16	\$8.27	\$4.69
RETURNS ABOVE FEED COST PER HEN	\$	\$2.05	\$3.99	.14
RETURNS FOR \$100 OF FEED	\$	\$156	\$198	\$103
Price rec'd per doz. eggs sold (cents)		35.2	36.0	35.0
Eggs laid per hen		173	211	140
Ave. no. of hens on farm during the yr.		260	276	269
% of hens that are pullets		90	97	88
% of death loss of hens		12.3	9.6	16.1
Number of chicks purchased		499	538	513
Pounds of poultry produced		1490	2523	999

Table 25. Feed Costs and Returns for Turkeys, 1946

Items	Your farm	Average of 8 farms	4 farms highest in returns above feed	4 farms lowest in returns above feed
Feed per cwt. turkeys produced, lbs.:				
Grain		383	385	381
Commercial feeds		229	215	243
Total concentrates		612	600	624
Skim milk		6	5	7
Feed cost per cwt. turkeys produced	\$	\$19.93	\$19.00	\$20.87
Value of produce per cwt. turkeys prod.				
Eggs and poults	\$	\$2.13	\$3.04	\$1.22
Net increases in turkeys		27.65	30.49	24.82
TOTAL VALUE PRODUCED	\$	\$29.78	\$33.53	\$26.04
RETURNS ABOVE FEED COST PER CWT. TURKEYS PRODUCED	\$	\$9.85	\$14.53	\$5.17
RETURNS FOR \$100 FEED	\$	\$154	\$180	\$128
Price rec'd per lb. turkey sold (cts.)		32.7	34.1	31.3
No. of poults put on feed		2364	3336	1392
Price paid per poult purchased (cts)		72.1	74.6	69.7
Weight per bird sold, lbs.		18.7	18.9	18.5
% death loss		24.5	17.7	31.4
Pounds of turkeys produced		36049	52819	19278

Table 26. Feed Costs and Returns from a Farm Flock of Sheep, 1946

Items	Your farm	Average of 42 farms	8 farms highest in returns above feed	8 farms lowest in returns above feed
Feeds per head,*lbs.:				
Concentrates		76	141	72
Legume hay		143	127	186
Other hay		73	16	153
Fodder and stover		20	46	14
Silage		151	139	265
Feed cost per head:				
Concentrates	\$	\$1.63	\$2.75	\$1.60
Roughages		1.77	1.39	2.72
Pasture		1.00	.91	.86
TOTAL FEED COSTS	\$	\$4.40	\$5.05	\$5.18
Value of produce per head:				
Wool	\$	\$2.99	\$3.35	\$2.72
Net increase in value of sheep		9.93	16.88	4.46
TOTAL VALUE PRODUCED	\$	\$12.92	\$20.23	\$7.18
RETURNS ABOVE FEED COST PER HEAD	\$	\$8.52	\$15.18	\$2.00
RETURNS FOR \$100 OF FEED	\$	\$362	\$548	\$139
Price per cwt. of lambs sold	\$	\$18.28	\$20.81	\$17.24
Price per lb. wool sold (cts)		45.9	46.1	46.0
Pounds of wool per sheep sheared		8.3	9.1	8.3
Number of ewes kept for lambing		28	45	20
% lamb crop**		108	118	107
% death loss**		8.8	8.4	16.5
Pounds of sheep produced		2572	6234	1208
No. of head of sheep*		44.2	67.6	37.4

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

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

TOTAL RETURNS AND FEED COST FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 27. This differs from the "return over feed" shown in the enterprise statement in that it is the total for each class of livestock instead of a return "per head" "per unit" or per "100 pounds". These data indicate the relative importance of different classes of livestock as a source of income and as a market for feed. The total return is the same as the returns and net increases shown on page 9. The return over feed is not a net return but rather the amount available from the gross income, after paying the feed bill, to cover the outlay for hired labor, power, equipment, taxes, insurance, interest, and veterinary bills and to provide a return for the use of family labor and capital.

Table 27. Total Feed Costs and Returns From Your Livestock Enterprises, 1946

	Dairy or dual purpose cattle			Beef	
	Cows	Other	All	breeding herd	Feeder cattle
Total returns	_____	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____	_____
	Hogs	Sheep		Turkeys	Chickens
		Farm Flock	Feeders		
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 28.

Table 28. Number of Work Units for Each Class of Livestock and Each Acre of Crop

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

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

Table 29. Summary by Years

	Average 1928-29	Average 1930-32	Average 1933-39	1940	1941	1942	1943	1944	1945	1946
Number of farms	148	157	139	148	197	201	177	161	170	170
Acres in farm	170	194	214	225	227	230	224	229	224	222
Crop acres in farm	116	134	144	148	147	150	148	145	145	149
Farm inventory	\$24574	\$21767	\$19341	\$24044	\$24117	\$26088	\$27278	\$28034	\$27634	\$29020
Farm Earnings (see page 28)										
FARM EXPENSES										
Cattle	\$ 141	\$ 79	\$ 177	\$ 607	\$ 421	\$ 444	\$ 374	\$ 357	\$ 372	\$ 333
Hogs bought	85	69	59	60	121	203	205	182	168	158
Sheep bought	6	10	73	82	45	53	62	80	108	86
Poultry bought	37	39	70	100	118	132	167	194	210	195
Horses bought	36	32	40	28	32	34	34	30	17	17
Misc. livestock expense	66	72	82	78	101	123	161	155	165	198
Misc. crop expenses	186	177	197	182	202	284	364	472	463	551
Feed bought	440	324	467	600	820	1416	1799	1730	1764	1920
Custom work hired	-	-	-	123	115	164	155	240	273	363
Power mach. (new & exp.)	399	340	483	604	821	696	647	818	855	1135
Mach. and equip. (new)	190	132	231	296	470	464	348	384	515	524
Mach. and equip. (upkeep)	72	57	63	68	90	166	188	208	231	257
Bldgs., fencing (new)	130	98	191	352	313	245	361	382	249	431
Bldgs., fencing (upkeep)	52	29	66	84	164	226	228	236	200	277
Hired labor	272	252	350	404	454	571	693	805	663	740
Taxes and insurance	298	338	280	276	280	313	312	332	338	384
General farm	30	31	32	42	43	46	3	67	72	79
Total farm purchases	\$2,440	\$2,079	\$2,861	\$3,986	\$4,610	\$5,580	\$6,191	\$6,672	\$6,663	\$7,648
Decrease in farm capital	-	755	-	-	-	-	-	511	238	-
Board to hired labor	102	93	125	141	145	177	171	156	108	147
Interest on farm capital	1,228	1,089	967	1,202	1,206	1,304	1,364	1,402	1,382	1,451
Unpaid family labor	358	292	233	269	278	304	386	395	441	506
Total farm expenses	\$4,128	\$4,308	4186	\$5,598	\$6,239	\$7,365	\$8,112	\$9,136	\$8,832	\$9,752

Table 29. Summary by Years (continued)

	Average 1928-29	Average 1930-32	Average 1933-39	1940	1941	1942	1943	1944	1945	1946
FARM RECEIPTS										
Cattle	\$ 753	\$ 467	\$ 617	\$1,176	\$1,215	\$1,514	\$1,280	\$1,492	\$1,439	\$1,520
Dairy products	1,662	1,209	1,366	1,454	1,720	2,078	2,475	2,961	3,403	4,192
Hogs	1,164	950	926	984	1,778	3,104	3,551	3,168	2,573	2,863
Sheep and wool	52	39	169	162	173	177	203	214	230	265
Poultry	146	139	331	339	583	722	688	814	787	954
Eggs	275	232	340	405	523	765	1,040	1,022	1,265	1,172
Horses	30	30	46	48	31	34	31	28	23	20
Corn	37	39	137	128	88	111	137	143	175	207
Small grain	241	140	322	235	262	312	320	261	239	372
Other crops	163	170	162	250	287	457	520	762	776	705
Income labor off farm	102	112	157	148	146	119	146	145	168	168
Agric. adj. payments	0	0	218	324	331	343	190	81	48	67
Misc.	134	151	210	295	342	269	214	290	300	431
(7) Total farm sales	\$4,753	\$3,678	\$5,001	\$5,948	\$7,479	\$10,005	\$10,795	\$11,381	\$11,426	\$12,936
(8) Increase in farm cap.	617	-	534	1,017	1,432	1,498	1,167	-	-	1,706
(9) Fam. living from farm	325	248	254	458	505	576	643	646	639	700
(10) Total farm receipts	5,695	3,926	5,789	7,423	9,416	12,079	12,605	12,027	12,065	15,342
(6) Total farm expenses	4,128	4,308	4,186	5,598	6,239	7,365	8,112	9,136	8,832	9,752
(11) Oper. lab. earnings	1,567	-382	1,603	1,825	3,177	4,714	4,493	2,891	3,233	5,590
MISCELLANEOUS ITEMS										
Yield per A. corn (bu.)	44.8	43.5	46.1	56.3	57.6	61.2	51.8	51.6	34.0	50.7
Yield per A. barley (bu.)	36.0	30.1	26.3	41.0	29.0	28.1	16.2	9.8	32.7	31.0
Yield per A. oats (bu.)	46.0	48.1	39.0	58.2	31.5	49.3	42.7	39.1	48.3	43.1
Yield per A. alfalfa (tons)	3.0	2.6	2.2	2.3	2.6	2.7	2.4	2.1	2.5	2.2
% high return crops	31.9	34.1	40.2	41.4	41.0	43.5	41.1	49.3	47.1	50.3
A.U. livestock per 100 A.	19.2	20.7	19.6	23.4	24.6	25.2	25.4	23.8	23.4	22.8
No. of work units	599	729	777	658	664	690	671	666	645	634
Work units per worker	310	339	339	292	301	316	305	303	323	317
Expenses per work unit	\$1.76	\$1.34	\$1.30	\$1.66	\$1.87	\$2.23	\$2.79	\$3.21	\$3.32	\$3.81
No. of work horses	5.4	5.4	4.8	4.1	4.0	3.9	3.8	3.5	3.2	2.8
No. of colts	.8	.8	1.0	1.0	.9	.9	.7	.7	.5	.3
No. of milk cows	14.2	17.1	18.1	17.1	17.4	18.1	17.5	17.9	17.3	16.7

Table 29. Summary by Years (Continued)

Misc. items (Cont.)	Average 1928-29	Average 1930-32	Average 1933-39	1940	1941	1942	1943	1944	1945	1946
No. of litters of pigs	9.3	11.7	9.5	12.1	13.8	15.7	18.1	12.1	12.3	9.1
Lbs. of hogs produced	12,706	16,219	13,471	17,671	20,330	24,383	25,149	20,398	18,669	15,516
No. of head of sheep	7.0	11.5	18.2	18.6	16.1	16.2	15.2	12.7	11.8	11.3
No. of hens	136	156	184	197	197	219	246	250	247	240
Lbs. B.F. per dairy cow	244	241	238	260	261	253	247	237	254	266
Lbs. B.F. per dual pur. cow	-	-	-	181	203	189	182	169	173	170
No. of pigs weaned per litter	6.3	6.2	6.3	6.3	6.3	6.3	6.0	6.1	6.3	6.5
No. of eggs laid per hen	95	112	127	131	142	146	147	157	168	173
<u>PRICE RECEIVED PER:</u>										
Lb. B.F. sold as cream	\$.52	\$.30	\$.31	\$.33	\$.39	\$.45	\$.55	\$.61	\$.65	\$.82
Cwt. hogs sold	8.92	5.82	6.96	5.27	9.20	13.24	13.88	13.08	14.24	17.23
Cwt. feeder cattle sold	-	-	-	8.67	9.72	11.69	13.84	13.84	13.86	15.53
Lb. wool sold	.36	.13	.24	.31	.40	.41	.42	.43	.44	.46
Doz. eggs sold	.28	.17	.17	.17	.22	.29	.36	.32	.37	.35
Lb. turkey sold	-	-	.19	.16	.21	.29	.33	.34	.33	.33
<u>RETURN ABOVE FEED COST PER:</u>										
Dairy cow	\$76.50	\$28.16	\$43.72	\$58.05	\$71.65	\$84.86	\$93.27	\$101.31	\$125.85	\$178.55
Dual purpose cow	-	-	-	31.69	52.01	55.88	57.81	60.36	74.15	110.58
Cwt. hogs prod.	1.50	.30	2.34	1.50	5.41	7.09	2.90	2.77	4.26	7.04
Head of sheep	5.50	-.07	2.62	3.43	5.48	5.77	4.51	3.98	5.05	8.52
Hen	1.82	1.13	1.02	.92	1.66	2.16	2.55	1.82	2.66	2.05
Cwt. turkeys prod.	-	-	10.51	6.30	10.72	16.56	14.89	19.24	14.30	9.85
<u>FEED COST PER:</u>										
Dairy cow	\$69.50	\$52.27	\$43.47	\$43.22	\$49.10	\$58.29	\$77.61	\$87.44	\$95.32	\$106.99
Dual purpose cow	-	-	-	36.29	39.50	50.39	62.90	71.32	69.93	69.97
Cwt. hogs produced	7.66	4.50	4.72	4.11	5.17	7.16	10.21	10.93	9.97	12.77
Head of sheep	2.82	2.26	2.56	2.61	2.57	3.01	4.34	3.96	4.60	4.40
Hen	1.62	1.09	1.47	1.36	1.80	2.27	3.03	3.42	3.56	4.11
Cwt. turkeys prod.	-	-	8.04	9.06	9.33	11.90	17.66	16.35	15.28	19.93
Horse	55.09	36.13	35.67	31.33	35.49	40.25	50.93	49.60	43.79	41.67
<u>PRICE OF FEED:</u>										
Shelled corn (per bu.)	\$.70	\$.49	\$.53	\$.46	\$.52	\$.69	\$.91	\$.98	\$.88	\$ 1.17
Barley (per bu.)	.60	.36	.50	.31	.38	.57	.79	.92	.94	1.22
Oats (per bu.)	.48	.25	.28	.26	.32	.44	.62	.68	.64	.71
Bran (per cwt.)	1.70	1.00	1.14	1.20	1.45	1.95	2.10	2.20	2.20	2.70
Oilmeal (per cwt.)	3.00	2.00	2.05	1.75	2.00	2.30	2.55	2.82	2.82	3.40
Alfalfa (per ton)	14.75	12.00	9.45	7.50	8.00	8.00	11.00	15.00	15.00	15.50

Footnote for pages 30, 31 and 32.

The values of farm real estate in 1931 were reduced approximately 25 per cent from 1928-1930 values. The values in 1932 were reduced about 29 per cent from the 1931 values. Only land was affected by the reduction in 1931, but in 1932 buildings and improvements were cut 25 per cent. In 1936 the values of land were adjusted upward 10 per cent. The value of dairy cows was also adjusted downward in 1932 and upward in 1936. These capital losses were not included in the inventory decreased in the financial statement but the changes in valuation resulted in variations in the interest charge. No changes in the basis of inventory valuations were made in the years 1933 to 1935 and 1937 to 1946.

The charges for unpaid family labor and board for hired labor were also changed from year to year. The rates used for the period 1928 to 1946 were as follows:

<u>Year</u>	<u>Unpaid family labor</u>	<u>Board for hired labor</u>	<u>Year</u>	<u>Unpaid family labor</u>	<u>Board for hired labor</u>
1928	\$60	\$20	1938	\$45	\$18
1929	60	20	1939	45	18
1930	60	20	1940	45	18
1931	40	15	1941	50	20
1932	30	10	1942	60	25
1933	30	10	1943	75	25
1934	30	10	1944	85	25
1935	40	15	1945	90	25
1936	43	18	1946	100	30
1937	45	18			

Several changes were made in the 1940 records. The value of the house which had previously been omitted from the farm business was included and a rental charge equal to 10 per cent of the average value of the house was included with the farm perquisites. The standards used in the calculation of work units were changed in accordance with new information made available. This latter change also affected the work units per worker and the factor of expense per work unit. The acres in protected woodlots, roads, waste and farmstead were omitted from the acreage used in the calculation of amount of livestock per 100 acres. Several new livestock statements were added. Cattle were classified into two groups "specialized dairy cattle" and "dual purpose cattle". Statements for beef breeding cattle, feeder cattle and feeder sheep were also included.

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

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