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Report 29

UNIVERSITY OF MINNESOTA
Department of Agriculture
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
Cooperating

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FIRST ANNUAL REPORT
of the
Better Farming Club
of
Steele County
For 1928

By

W.P. Ranney and G.A. Pond
R.C. Bevan, Field Agent
Russell Seath, County Agent

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Division of Farm Management and Agricultural Economics
University Farm
St. Paul, Minn.
May 1929

First Annual Report of the Steele County Better Farming Club
For the Year 1928

Prepared by W.P. Ranney and G.A. Pond

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INTRODUCTION

The Division of Farm Management and 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 twenty-nine farmers in Steele County, Minnesota, have been cooperating during the year 1928 in a farm account project, known as the Better Farming Club of Steele County.

The project has been under the direction of G.A. Pond of the Division of Farm Management and Agricultural Economics, University of Minnesota, with the assistance of other members of the same department: W.P. Ranney, one of the authors of this report; A.T. Hoverstad, who aided in the organization work late in the year 1927; and G.A. Sallee, who aided in closing the books at the end of the year, 1928. Hearty support and assistance has been rendered by Russell Seath, county agricultural agent of Steele County. The work was started January 1, 1928, along with similar clubs in nearby counties, viz., Dodge, Freeborn, Goodhue, Rice and Waseca counties.

Type of Farming in Steele County

The farms selected for the study are livestock farms on which dairy cattle are the principal source of income. Cream for manufacture into butter is the principal dairy product sold. This is marketed through farmer owned cooperative creameries specializing in the manufacture of high quality butter. The skimmilk is retained on the farm and fed to hogs and poultry. These two classes of livestock are also an important source of income.

The principal crops grown are corn, oats, barley, and hay. These crops are raised primarily as livestock feed altho a seasonal surplus may be sold. However, due to the short crops in 1927, more than the normal amount of feed was purchased in 1928. Wheat is grown to a limited extent as a cash crop, as are also canning crops. These farms are fairly typical of the system of dairy farming prevailing in southeastern Minnesota. This report shows that the receipts from the sales of dairy products constitute approximately two-fifths and receipts from hog sales more than one-fifth of the average cash income from the 27 cooperators in Steele County.

Records Kept

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

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

At the end of the year each farm was visited by a representative of the University who checked the records for completeness and accuracy. The books were then taken to the central office at University Farm, where every entry was again checked and omissions were noted. Any discrepancies found were referred back to the farmers for correction. This double checking insured a high degree of accuracy and completeness in each individual record.

Purpose of Project

The Better Farming Club renders assistance to the cooperators in keeping such records as will enable each cooperator to know the returns for his labor and management, the returns to capital and family labor, and the actual earnings from the farm that the family had to spend for living and personal use. The main purpose of the Club is to secure such data and information, which when compared with that secured on other farms will enable the cooperator to increase his efficiency in various enterprises and to organize his farm on a more profitable basis. For the latter purpose it was necessary for all the cooperators, tenants as well as owner operators, to include the whole farm business in order that the results would be on a comparative basis. The earnings as shown in this report are computed on an owner basis for the purposes of comparison, but each tenant was supplied a statement of his earnings on the basis of the rental system under which he was operating. Altho there is some variation in prices paid for feeds bought, uniform prices were used in making up the feed summaries and in placing values on the inventories of feed and farm products.

Analysis of the Farm Business

On page 4 is presented a financial summary of the year's business, showing the average results for the 27 farms on which the work was completed for the twelve months period, January 1, 1928 to December 31, 1928, and the high and low figure for each item. In the "your farm column" the results of each individual farm business is inserted in the copy sent to the farmer in order that he may compare his figures with the average.

The data on page 4 and the remaining pages, which set up the ranking in the various measures of efficiency, should suggest to each cooperator some possibilities for improvement in his organization of the various enterprises and of his business as a whole. Altho each farm is an individual problem, and has its particular advantages and limitations, the type of farming is fairly uniform in the county and undoubtedly is adapted to the present general conditions. This study should bring out trends that maybe taking place toward more profitable combinations of enterprises, and to the more efficient methods of management within the enterprises.

Capital Investment in Farm Business

The 27 farms in this report averaged 158 acres in size and had an average farm inventory of \$22,694, which does not include the value of the house in which the operator lived. Fifty-four per cent of the average farm inventory consisted of land; 16 per cent of permanent improvements; 7 per cent of feeds and supplies; 8 per cent of all machinery and equipment; and 15 per cent of livestock, of which almost one-half of an average of \$1500 consists of the average cow inventory. The importance of cows is also brought out in a study of the sources of the operator's income.

Returns to Operators for Their Labor and Management

The average cash receipts per farm were \$5004. In addition farm produce to the value of \$326 was consumed by the farm family and there was an average inventory increase of \$426 per farm. The total average receipts per farm is the sum of these three items or \$5756. The average total expense per farm, \$2770, includes \$2687 cash expense and an estimated allowance of \$83 for board for hired labor. The difference between the total income and total expense figure is \$2986. This is the return which the farmer received for his own labor and management; the services of members of his family and the use of his capital. After deducting a charge of 5 per cent on the average inventory valuation, \$1135, for the services of capital, there remains \$1851 for the services of the farmer and his family. The average value of family labor used, if computed at hired man's wages was \$411. The average operator's labor earning is the family earnings less their allowance of \$411, or \$1440. This is the return to the farmer for his labor and management over and above 5 per cent return for his capital and giving wages for other members of the family.

Summary of Farm Earnings - 1928

<u>CASH EXPENSES</u>	Your farm	Average	High farm	Low farm
Tractor(new & exp.)		\$75	\$561	-
Truck(new & exp.)		24	215	-
Auto(new & exp.)(farm share)*		155	651	-
Gas engine(new & exp.)(farm share)		12	52	-
Light plant or bill(new & exp.)(farm share)		28	153	-
Machinery & equipment(new)		166	423	-
Machinery & equipment(exp.)		86	230	23
Bldgs., fences, tiling(new)		146	532	-
Bldgs., fences, tiling(exp.)		56	150	3
Hired labor		283	1755	-
All feed for livestock		636	3096	5
Other expense for livestock		68	233	9
Horses bought		55	474	-
Cows bought		148	1450	-
Other cattle bought		93	695	-
Hogs bought		110	1350	-
Poultry bought		32	112	-
Sheep bought		-	-	-
Crop,(seed, twine, spray)		220	1239	34
Taxes and insurance		264	612	136
General farm		30	77	5
(1) Total cash expense		2687	9569	671
(2) Decrease in farm inventory		-	1088	-
(3) Board for hired labor		83	240	-
(4) Total expense(sum of 1, 2 & 3)		2770	10657	671
<u>CASH RECEIPTS</u>				
Horses		25	325	-
Cows		562	1789	73
Dairy products		1874	5120	472
Other cattle		480	1745	-
Sheep		5	121	-
Hogs		1075	3286	149
Poultry		123	232	25
Eggs		335	886	38
Small grain		163	2088	-
Corn		29	263	-
Hay		15	120	-
Other crop		178	2772	-
Miscellaneous		60	177	-
Outside		88	394	-
(5) Total cash receipts		5004	16859	1909
(6) Increase in farm inventory		426	1349	-
(7) Farm produce used in house		326	541	200
(8) Total receipts(sum of 5, 6 & 7)		5756	17390	2854
Total expense(4)		2770	9657	671
(9) Return to capitol & family labor(8-4)		2986	7732	1233
(10) Interest on farm inventory		1135	3804	532
(11) Family labor earnings(9-10)		1851	3928	424
(12) Unpaid family labor		411	1500	20
(13) Operator's labor earnings(11-12)		1449	3148	359

*Farm share based on farmers estimate of amount used for farm purposes only,

Summaries of Farm Inventories

Items	Your farm	Average	High farm	Low farm
Size of farm(acres)		158	372	80
Size of farm business(prod. of man work units)(1)		564	1324	317
Average farm inventory(wihtout house)		\$22694	\$76078	\$10630
Land		12146	47445	3975
Farm improvements		3705	11080	1255
Machinery & equipment(total)		1849	3522	829
General machinery & equipment		1349	2602	442
Tractor		237	1300	-
Truck		28	225	-
Auto(farm share)		166	491	-
Gas engine(farm share)		24	151	-
Electrical equipment(farm share)		45	375	-
Feeds and seeds		1597	5283	620
Misc. supplies		14	59	1
Horses(total)		489	895	180
Horses		430	795	180
Colts		59	350	-
Productive livestock		2888	8200	1110
Cows		1521	4325	518
Other cattle		758	2038	103
Hogs		432	1581	76
Sheep		8	181	-
Poultry		169	282	26

Statement of Average Number of Animal Units(2)

Total horse units	6.08	10.05	3.00
Horses	5.69	9.17	3.00
Colts	.39	2.04	-
Total productive animal units	30.53	69.80	10.99
Cows	14.41	31.08	5.33
Other cattle	8.43	22.12	1.34
Hogs	6.04	14.10	1.23
Sheep	.09	2.42	-
Poultry(hens)	1.56	3.56	.35

1. Productive man work units are a measure of size of business based on the average amount of man labor required per head of productive livestock and per acre of crops. They may also be used as a measure of labor efficiency. The units used were computed from data presented in Minn. Tech. Bul. 44, "A Study of Dairy Farm Organization in Southeastern Minnesota."
2. An animal unit represents an average mature horse, cow or the equivalent in other livestock, based upon the amount of feed eaten and manure produced. The above units are computed as an average of the monthly units.

Statement of Returns from Livestock(3)

Items	Your farm	Average	High farm	Low farm
All productive livestock		\$4779	\$11645	\$1623
Cows		2351	6195	833
Other cattle		831	2680	61
Hogs		1133	2626	210
Sheep		5	133	-
Poultry		513	1124	35

Statement of Expenses for Buildings, Machinery & Equipment(4)

Buildings and fences	171	551	62
General machinery & equipment	223	468	87
Total power equipment	292	808	60
Tractor	98	373	-
Truck	23	227	-
Auto(farm share)	121	266	-
Gas engine(farm share)	15	61	-
Electric equipment(farm share)	35	154	-

Statement of Miscellaneous Items

Total farm power expense(5)	672	1461	237
Net increase in feeds & grains(6)	51	2709	-
Net decrease in horses(6)	23	147	-
Gross returns per \$100 expense(7)	219	323	98

3. Gross returns from livestock are the sum of cash receipts and farm products used in the house or on the farm, and adjusted for increases or decreases in inventory.
4. Expenses in connection with buildings and machinery are the cash expenses adjusted for increases or decreases in inventory, less any receipts from sales or hire.
5. Total farm power expense is a sum of horse expense and horse feed cost, and tractor and truck expense and farm share of auto, gas engine and electrical expense. No attempt was made to allocate part of the auto and truck expense to vehicles, or a part of the electrical expense to lighting farm buildings.
6. An increase in horses and in feeds and grain is calculated with gross returns, and a decrease with expenses.
7. In calculating gross returns per \$100 expense for the farm as a whole, any produce used on the farm is not included with gross returns. But all produce used in the house and any miscellaneous cash receipts are included. In addition to building and machinery costs mentioned in (3) above expenses include all other cash expense, board for hired labor and unpaid family labor.

Utilization of Land and Yield of Crops - 1928

Crop	Number of farms growing this crop	Acres per Farm			Yield per Acre			
		Your farm	Average	Highest	Lowest	Your farm	Average	Highest
Wheat	7	2.4	15.5	2.0	17.0	25.0	12.0	
Oats	19	9.6	34.0	2.0	44.0	64.0	25.0	
Barley	13	8.7	55.0	6.0	38.8	55.0	24.0	
Rye	1	.3	9.0	-	26.5	25.5	-	
Flax	2	1.6	22.0	20.0	4.9	9.0	0.7	
Wheat & oats	5	1.8	20.0	5.5	36.1	47.4	25.5	
Oats & barley	21	20.0	50.0	7.5	43.6	63.5	22.0	
Canning peas	3	1.7	32.0	6.0	3389.2	4025	2945	
Other grains & mixtures	1	.3	8.0	-	-	-	-	
Total grain		46.4	132.0	16.0				
Corn, grain	27	21.1	40.0	3.5	38.9	65.0	10.4	
Corn, silage	26	13.3	32.0	5.5	7.5	13.8	3.4	
Corn, fodder	10	1.3	10.0	1.5	2.4	4.0	1.0	
Potatoes	11	0.4	2.5	0.3	156.5	240.0	100.0	
Total cultivated crops		36.1	78.5	15.5				
Alfalfa	18	4.8	16.1	0.5	2.6	4.0	1.2	
Clover & clover mixtures	16	6.8	24.0	2.0	1.7	3.5	0.7	
Other legumes	3	1.7	34.5	1.3	1.9	2.3	1.2	
Timothy	5	1.7	15.0	1.5	1.3	1.5	1.0	
Annual hay crops	6	.7	10.0	1.0	1.9	3.3	1.5	
Wild hay	17	9.6	40.0	2.0	1.1	2.0	0.5	
Total hay		25.3	74.5	8.0				
Total crop acreage	27	108.1	263.5	45.0				
Pasture	27	37.6	94.5	10.0				
Timber-not/pastured	12	2.0	10.0	1.0				
Roads & waste	27	5.0	13.0	1.0				
Farmstead	27	5.5	9.3	2.5				
Total acres in farm		158.2	372.0	80.0				

Measures of Farm Organization and Management Efficiency

Farm No.	Index of operator's earnings	Lbs. of F.F. per cow	Returns per \$1.00 of Feed				Eggs per hen	Index of crop yield	Per cent of crop acres in legumes	Gross returns per \$100 expense
			Cows	Hogs	Other cattle	Poultry				
-5084	218.7	281	\$2.70	\$1.08	\$3.12	\$3.42	66	100	13	\$206
-5102	201.8	255	2.23	1.47	1.62	2.70	172	114	9	292
-5111	176.4	205	2.57	1.15	2.05	2.76	76	117	6	263
-5191	172.9	263	1.89	.83	1.41	2.61	111	114	12	253
-5141	145.2	315	2.50	1.20	1.76	2.77	180	87	9	195
-5131	142.7	200	2.28	.92	3.11	2.76	113	94	11	323
-5162	136.8	253	1.94	1.60	2.51	2.41	167	137	-	221
-5082	124.1	184	2.32	1.11	2.41	2.64	51	98	14	315
-5193	116.4	286	3.88	.83	1.27	2.20	129	94	18	245
-5163	116.3	279	2.69	1.64	1.88	1.87	85	106	22	214
-5035	116.2	292	2.44	1.56	1.79	2.51	107	99	1	190
-5151	110.3	305	1.92	1.21	2.28	2.71	185	116	18	225
-5041	109.4	238	2.34	1.05	1.73	2.51	121	97	24	214
-5143	105.2	271	2.44	1.15	1.22	2.04	163	106	30	221
-5164	104.7	343	2.92	1.23	2.52	2.49	118	102	20	190
-5034	101.4	248	2.07	.99	2.94	3.19	103	102	1	216
-5161	99.5	352	2.29	.68	1.67	2.20	60	89	10	273
-5081	97.2	281	2.19	1.62	1.80	3.26	107	89	7	287
-5071	93.0	294	2.37	1.22	1.18	1.31	55	87	10	197
-5083	74.7	287	2.40	1.40	1.00	4.82	83	83	14	272
5003 5101	65.0	292	2.61	1.13	1.21	2.59	95	136	15	160
-5033	36.6	253	1.77	1.35	1.20	1.71	169	85	17	154
-5232	33.1	150	2.26	.95	1.17	4.07	127	74	20	191
-5031	27.9	197	2.13	.99	.61	1.45	36	72	9	182
-5231	25.3	264	2.38	.90	.95	1.56	73	92	17	194
-5121	24.9	302	2.58	1.30	2.58	1.49	144	95	11	137
-5192	-51.3	175	2.80	1.07	.78	1.94	30	68	21	98
Avg.	100	262	2.41	1.17	1.77	2.52	108	98	13	219
High	218.7	352	3.88	1.64	3.12	4.82	185	137	30	323
Low	-51.3	150	1.77	.68	.61	1.31	36	68	0	98

Measures of Farm Organization and Management Efficiency - Con'd

Farm No.	Index of product. man work units per worker	Crop Acres per Horse With tractor	Without tractor	Index of farm power expense	Index of general machy. & equip. expense	Index of bldg. & fecning expense	No. of cows per 100 acres	No. of product. livestock units per 100 acres	Obs. of pork produced per feed acre*	Total No. product. man work units
5084	125	36	-	94	88	142	8	19	184	1324
5102	128	20	-	107	110	64	11	18	241	755
5111	126	-	20	87	63	122	10	18	158	728
5191	146	10	-	97	108	115	11	25	206	960
5141	116	15	-	66	40	54	11	30	661	619
5131	95	-	16	72	80	71	11	23	100	484
5162	124	20	-	97	125	183	10	24	343	499
5082	124	-	15	50	80	88	10	20	107	547
5193	68	-	18	100	105	129	8	17	96	378
5163	99	-	15	108	83	159	12	15	154	638
5035	109	20	-	101	95	68	10	27	339	637
5151	79	25	-	140	150	54	7	17	272	479
5041	130	-	20	68	100	112	6	19	252	497
5143	118	16	-	119	100	156	9	19	182	633
5164	62	-	16	122	138	88	13	26	154	374
5034	84	10	-	101	68	54	7	15	100	641
5161	98	-	18	102	60	92	12	21	99	319
5081	120	-	17	93	110	44	12	21	304	369
5071	123	-	17	94	88	81	9	18	269	759
5083	96	-	15	60	103	102	9	20	231	334
5101	66	-	15	112	100	166	15	26	210	381
5033	118	19	-	131	145	88	7	17	283	649
5232	95	19	-	108	78	102	6	16	133	627
5031	62	23	-	135	78	68	4	8	126	317
5231	60	19	-	116	133	78	6	12	67	346
5121	55	-	16	103	85	128	16	26	260	433
5192	67	20	-	117	188	92	9	17	209	520
Avg.	100	21	17	100	100	100	10	20	215	565
High	146	36	20	140	188	183	16	30	661	1324
Low	55	15	15	50	40	44	4	8	67	317

*Corn, for grain, oats, barley and mixed small grain.

An index of expense is a comparison of each farmer's expense with the average of the 27 farms.

The power, machinery and building expense are calculated as so much expense per productive man work unit.

Measure of Farm Organization and Management Efficiency

Index of operator's earnings	Lbs. of B.F. per cow	Returns per \$1.00 of Feed				Eggs per hen	Index of crop yield	Per cent of crop acres in legumes	Gross returns per \$100 expense
		Cows	Hogs	Other cattle	Poultry				
220	382	\$3.61	\$1.76	\$3.57	\$4.32	228	153	31	\$399
200	362	3.41	1.66	3.27	4.02	208	148	28	369
180	342	3.21	1.56	2.97	3.72	188	138	25	339
160	322	3.01	1.46	2.67	3.42	168	128	22	309
140	302	2.81	1.36	2.37	3.12	148	118	19	279
120	282	2.61	1.26	2.07	2.82	128	108	16	249
100	262	2.41	1.16	1.77	2.52	108	98	13	219
80	242	2.21	1.06	1.47	2.22	88	88	8	189
60	222	2.01	.96	1.17	1.92	68	78	6	150
40	202	1.81	.86	.87	1.62	48	68	4	129
-20	182	1.61	.76	.57	1.32	28	58	2	99

Measure of Farm Organization and Management Efficiency - Con'd

Index of productive man work units per worker	Crop Acres With tractor	per Horse Without tractor	Index of farm power expense	Index of gen. machy.& equip. expense	Index of bldg. & fencing expense	No. of cows per 100 acres	No. of product. livestock units per 100 acres	Lbs. of pork produced per feed crop acre	Total No. product. man work units
160	33	29	10	10	10	16	32	515	1165
150	31	27	25	25	25	15	30	465	1065
140	29	25	40	40	40	14	28	415	965
130	27	23	55	55	55	13	26	365	865
120	25	21	70	70	70	12	24	315	765
110	23	19	85	85	85	11	22	265	665
100	21	17	100	100	100	10	20	215	565
90	19	15	115	115	115	9	18	165	465
80	17	13	130	130	130	8	16	115	365
70	15	11	145	145	145	7	14	65	265
60	13	9	160	160	160	6	12	15	165

Prices Received for Products Sold - 1928			
Farm No.	Butterfat per lb.	Eggs per dozen	Hogs per 100 pounds
5102	53¢	27¢	\$8.50
5111	54	26	8.12
5191	54	27	8.04
5084	-	27	9.87
5141	53	25	8.24
5131	52	26	8.16
5162	54	30	8.47
5082	53	28	8.11
5193	52	27	8.91
5163	54	25	8.11
5035	54	26	7.13
5151	55	31	8.43
5041	54	26	7.88
5143	54	28	7.47
5164	53	25	7.93
5034	52	28	7.78
5161	54	31	7.71
5081	54	25	8.16
5071	54	28	8.06
5083	54	27	7.50
5033	53	26	8.36
5232	52	27	10.32
5101	53	25	8.52
5031	55	-	7.70
5231	54	32	7.97
5121	52	26	8.87
5192	53	24	8.48
Average	53	27	8.25
High	55	32	10.32
Low	52	24	7.13

Factors of Cost in Dairy Production - 1928 (Per cow basis)

Farm No.	B.F. per cow	Feed per Cow - Lbs.										Total digest. nutri. per lb. B.F.	Nutri- tive ratio	% cows fresh to Dec. incl.	Per cent calves born		
		Corn grain	Small feeds	Mill feeds	Oil-meal	Tame hay	Wild hay	Alfalfa	Corn fodder	Silage	Total concn.					Total dry rough.	Total diges. Nutri.
5161	352	666	2059	21	359	2360	-	404	616	6977	3105	3380	5655	16.1	1:6.8	50	125
5164	343	261	1190	319	305	-	1143	1619	571	4762	2075	3333	4017	11.7	1:6.2	44	152
5141	315	-	551	827	7	-	894	3577	745	7452	1385	5216	4840	15.4	1:6.5	87	112
5151	305	-	2100	416	145	-	-	2550	800	15600	2661	3350	6147	20.2	1:7.0	83	120
5121	302	-	865	591	243	239	-	1709	-	7919	1699	1948	3525	11.7	1:5.9	82	75
5071	294	60	1309	332	123	750	-	2142	321	10176	1024	3213	4653	15.7	1:6.5	86	112
5035	292	241	1791	121	208	208	208	1956	485	9570	2361	2857	4763	16.3	1:6.6	67	62
5101	292	248	539	609	209	1192	-	851	809	5873	1605	2852	3542	12.1	1:6.3	54	111
5083	287	-	1121	648	117	2209	-	-	283	5947	1086	2492	3605	12.6	1:6.8	77	138
5193	286	147	384	22	-	3580	-	-	842	5054	553	4422	2481	8.7	1:6.7	80	158
5081	281	322	1278	269	178	336	96	1727	1008	9405	2047	3167	4634	14.4	1:6.9	54	125
5084	281	-	1356	1158	29	965	-	1287	-	5406	2543	2252	3873	13.8	1:7.2	57	113
5163	279	324	1117	53	105	-	-	1632	789	7263	1599	2421	3651	13.1	1:7.0	47	89
5143	271	44	1603	202	7	862	-	1293	790	9052	1856	2945	4269	15.7	1:8.2	79	101
5231	264	339	1267	202	105	-	-	2743	914	7315	1913	3657	4370	16.6	1:6.3	67	69
5191	263	57	1349	260	93	3405	-	1419	689	12081	1759	5513	5302	20.2	1:7.6	75	80
5102	255	473	1092	-	69	1511	-	1511	-	8932	1634	3022	4241	16.6	1:7.7	38	93
5033	253	348	1517	596	211	2444	-	1536	-	8340	2672	3980	5436	21.5	1:6.1	75	117
5162	253	-	1884	41	265	1490	-	773	1159	11424	2190	3422	5249	20.7	1:7.9	57	116
5034	248	3	2003	311	44	1928	653	466	-	6841	2361	3047	4381	17.7	1:6.3	84	118
5041	230	-	476	849	20	2644	1017	-	509	10780	1345	4170	4782	20.1	1:8.4	70	102
5111	205	-	1010	72	13	1624	1083	361	496	5503	1095	3564	3375	16.5	1:8.9	78	122
5131	200	-	1253	-	48	1725	-	-	488	7802	1301	2213	3296	16.5	1:9.3	38	120
5031	197	-	2206	-	38	5065	-	-	1576	-	2244	6641	4766	24.2	1:7.3	50	75
5082	184	-	1038	86	61	1502	-	-	1103	5573	1185	2695	3078	16.7	1:8.0	45	122
5192	175	-	-	-	-	1866	-	1006	736	4787	-	3608	2513	14.4	1:7.1	73	81
5232	150	78	234	336	-	2373	-	265	-	5695	648	2630	2701	18.0	1:7.6	42	133
Avg.	252	134	1207	309	111	1495	189	1142	583	7613	1761	3409	4191	16.2	1:7.1	64	109

Feed Costs and Returns for Dairy Cows - 1928 (Per cow basis)

Farm No.	B.F. per cow	Feed per Cow			Total cost	Feed cost per lb. B.F. cents	Value of Produce per Cow					Gross returns per \$1.00 feed	% voluntary sales	% fresh heifers are of total cows		
		Concen.	Rough.	Pasture			B.F. sales	Dairy prod. used in house	Milk to other live-stock	Apprec.	Total				Depr.	Net value of prod.
5161	352	\$56.02	\$31.56	\$7.01	\$94.59	26.9	\$170.41	\$13.62	\$29.40	\$3.59	\$217.02	-	\$217.02	\$2.29	21	41
5164	343	35.47	28.19	6.14	70.15	20.5	166.40	10.11	17.85	10.13	204.49	-	204.49	2.92	29	57
5141	315	23.34	47.54	6.22	77.10	24.5	153.76	7.91	33.13	-	194.80	1.80	193.00	2.50	75	67
5151	305	43.14	51.80	4.68	99.62	32.7	159.27	5.96	21.44	4.67	191.34	-	191.34	1.92	130	10
5121	302	31.96	25.74	6.58	64.28	21.3	152.73	3.59	12.32	-	168.64	2.79	165.85	2.50	21	21
5071	294	31.92	40.65	5.44	78.01	26.5	148.85	5.15	22.89	8.03	184.92	-	184.92	2.37	43	37
5035	292	35.97	36.12	5.76	77.85	26.7	146.76	7.66	23.85	11.74	190.01	-	190.01	2.44	14	14
5101	292	28.85	28.85	5.53	63.23	21.7	144.07	6.80	15.76	-	166.63	1.47	165.16	2.61	9	-
5083	287	35.02	26.28	6.64	67.94	23.7	137.51	7.89	16.29	6.64	168.33	-	168.33	2.48	42	64
5193	286	7.72	33.59	6.48	47.79	16.7	132.22	6.90	24.49	21.59	185.20	-	185.20	3.88	21	53
5081	281	31.99	37.79	5.20	74.98	26.7	139.67	7.79	15.97	.75	164.18	-	164.18	2.19	29	12
5084	281	42.60	26.07	5.25	73.92	26.3	164.75	4.47	26.62	3.52	199.36	-	199.36	2.70	23	35
5163	279	25.34	29.37	6.05	60.76	21.8	143.15	5.35	14.25	.53	163.28	-	163.28	2.69	16	16
5143	271	29.80	33.87	6.02	69.69	25.7	133.41	6.84	26.75	3.25	170.25	-	170.25	2.44	-	29
5231	264	28.30	37.03	6.13	71.46	27.1	122.41	18.39	16.93	12.51	170.24	-	170.24	2.38	34	23
5191	263	30.98	55.52	5.62	92.12	35.0	130.70	7.27	24.42	12.02	174.41	-	174.41	1.89	41	24
5102	255	24.27	38.00	5.60	67.87	26.6	128.84	3.07	19.91	-	151.82	.80	151.02	2.23	9	18
5033	253	44.61	41.49	5.95	92.05	36.4	125.66	4.78	20.36	12.09	162.89	-	162.89	1.77	37	66
5162	253	33.87	40.84	6.33	81.04	32.0	130.88	5.76	13.70	7.06	157.40	-	157.40	1.94	17	8
5034	248	35.52	28.89	6.57	70.98	28.6	121.99	5.96	21.54	-	149.49	2.46	147.03	2.07	19	6
5041	238	22.50	40.78	6.32	69.60	29.2	114.22	11.23	23.01	14.68	163.14	-	163.14	2.34	112	10
5111	205	17.52	28.94	6.28	52.74	25.7	101.82	3.43	24.03	6.07	135.35	-	135.35	2.57	18	41
5131	200	21.96	26.26	6.15	54.37	27.2	92.65	9.32	16.68	5.55	124.80	-	124.20	2.28	15	30
5031	197	34.91	34.33	4.22	73.46	37.3	80.83	14.93	16.99	35.64	156.17	-	156.17	2.13	-	-
5082	184	19.28	24.37	6.68	50.33	27.4	88.71	7.41	11.95	8.51	116.58	-	116.58	2.32	24	37
5192	175	-	29.46	6.43	35.85	20.5	80.27	8.07	15.80	-	104.14	3.52	100.62	2.80	15	7
5232	150	10.68	25.39	6.94	43.01	28.7	64.87	6.29	25.58	.25	96.99	-	96.99	2.26	14	14
Avg.	262	29.02	34.40	6.02	69.44	26.8	129.07	7.63	20.44	6.99	164.13	.48	163.65	2.41	31	28

Feed Costs and Returns from Young Cattle - 1928

Farm No.	Feeds Used Per Head				Feed Costs per Head					Net value of product per head	Net value of product per \$1.00 feed	% death loss	
	Concen.	Hay & fodder	Silage	Whole milk	Skim-milk	Concen.	Rough.	Milk	Pasture				Total
5084	352	324	-	250	1616	\$6.23	\$1.88	\$8.89	\$2.85	\$19.85	\$62.00	\$3.12	14
5131	58	173	3051	173	1070	1.08	7.00	6.20	2.71	16.99	52.90	3.11	7
5034	320	1011	1432	76	1519	4.98	7.24	5.27	3.05	20.54	60.36	2.94	21
5121	309	832	2627	63	988	5.67	9.68	4.35	2.85	22.55	58.15	2.58	44
5164	696	930	3163	248	2051	12.94	11.75	11.81	3.23	39.73	100.17	2.52	28
5162	450	682	3520	75	2653	5.68	10.69	8.16	.54	25.07	62.94	2.51	-
5082	205	1800	2040	77	1764	2.86	13.80	6.05	3.32	26.03	62.61	2.41	18
5151	440	1056	4561	148	1992	7.72	15.96	8.00	2.96	34.64	79.09	2.28	-
5111	283	1338	1385	281	2799	4.10	9.40	12.72	3.08	29.38	60.22	2.05	14
5163	588	548	2330	90	1302	9.32	8.36	5.69	2.74	26.11	48.97	1.88	41
5081	374	741	3260	399	1751	5.79	11.60	12.51	2.38	52.28	57.96	1.80	15
5035	244	1681	5770	108	2125	3.93	20.19	7.52	2.75	34.40	61.44	1.79	-
5141	72	716	2090	234	2634	1.20	7.46	11.01	3.12	22.79	40.01	1.76	12
5041	381	716	1971	142	1983	6.43	7.32	7.64	3.71	25.10	43.43	1.73	-
5161	974	1643	2039	386	5103	16.87	11.95	20.24	2.71	51.77	86.43	1.67	11
5102	268	2112	5412	671	4039	3.78	24.82	23.12	1.91	53.63	86.61	1.62	-
5191	207	1231	4704	120	1453	3.57	14.74	5.97	3.02	27.30	38.55	1.41	-
5193	14	2677	2591	472	521	.26	19.22	10.69	3.43	33.60	42.66	1.27	-
5143	333	886	2727	277	1828	6.05	10.33	10.23	3.02	29.63	36.11	1.22	27
5101	224	3483	4001	293	3338	4.32	29.49	16.24	1.82	51.87	53.14	1.21	44
5033	450	1936	3170	162	1378	7.55	18.41	6.75	3.02	35.73	42.92	1.20	23
5071	93	1380	4246	256	1778	1.53	17.14	9.66	2.85	31.18	36.83	1.18	11
5232	449	299	4270	252	1543	8.61	9.87	9.91	2.99	31.38	36.62	1.17	9
5083	-	655	6435	263	2040	-	16.05	12.45	3.37	31.87	34.39	1.08	17
5231	272	1780	2044	35	1535	4.27	13.88	4.74	3.07	25.96	24.69	.95	13
5192	44	1918	1653	382	2023	.80	13.88	12.67	2.57	29.92	23.37	.78	-
5031	378	2400	-	586	2073	6.38	13.64	16.25	-	36.27	22.20	.61	-
Avg.	314	1291	2977	341	2033	5.26	13.18	10.18	2.71	31.33	52.77	1.77	14

Feed Costs and Returns per Animal Unit from Dairy Herd - 1928
(Both cows and young cattle included)

Farm No.	B.F. per cow	Percent cow of cattle units	Feed Cost per Animal Unit				Value Production per Animal Unit			Returns per \$1.00 feed cost
			Concen.	Rough.	Pasture	Total	Dairy products	Sales and appreciation	Total	
5161	352	66	\$47.37	\$28.16	\$6.29	\$81.82	\$129.62	\$54.39	\$184.01	\$2.25
5164	343	65	31.71	26.18	6.38	64.27	118.65	73.35	192.00	2.99
5141	315	60	14.94	34.22	6.09	55.25	108.95	28.97	137.92	2.50
5151	305	61	32.08	43.37	5.02	80.47	108.72	60.31	169.03	2.10
5121	302	70	25.54	23.38	6.18	55.10	116.00	29.91	145.91	2.65
5071	294	65	21.80	37.74	5.41	64.95	108.184	29.43	138.27	2.13
5035	292	54	22.79	37.34	5.55	65.68	88.93	61.04	149.97	2.28
5101	292	75	23.56	34.42	4.94	62.92	118.27	26.15	144.42	2.30
5083	287	60	21.04	27.57	6.46	55.07	88.02	29.23	117.25	2.13
5193	286	61	4.93	34.75	6.50	46.15	91.78	44.86	136.64	2.96
5081	281	73	26.04	33.01	4.91	63.96	113.18	27.89	141.07	2.21
5084	281	58	29.94	16.75	5.39	52.08	107.17	52.44	159.61	3.06
5163	279	70	22.86	25.18	5.74	53.78	111.41	26.83	138.24	2.57
5143	271	65	23.55	29.14	5.99	58.68	101.72	26.89	128.61	2.19
5231	264	52	18.55	31.74	5.95	56.24	77.68	28.74	106.42	1.89
5191	263	57	20.72	44.20	5.77	70.69	87.71	39.51	127.22	1.80
5102	255	84	21.46	39.93	5.24	65.63	120.98	23.82	144.80	2.21
5033	253	59	32.31	38.78	5.85	76.94	84.40	40.14	124.54	1.62
5162	253	62	24.98	32.86	4.30	62.14	87.14	49.20	136.34	2.19
5034	248	57	24.22	22.37	6.26	52.85	80.07	48.98	129.05	2.44
5041	238	52	17.75	28.05	6.80	52.60	69.38	49.02	118.40	2.25
5111	205	67	14.35	25.47	6.19	46.01	77.88	43.28	121.16	2.63
5131	200	63	14.65	21.44	5.76	41.85	70.92	39.77	110.69	2.65
5031	197	80	30.52	33.06	3.37	66.95	89.63	37.64	127.27	1.90
5082	184	65	14.41	24.95	6.53	45.89	66.10	46.99	113.09	2.46
5192	175	73	.39	28.25	5.94	34.58	69.78	8.82	78.60	2.27
5232	150	54	13.39	22.45	6.40	42.24	43.56	32.49	76.05	1.80
Avg.	262	64	21.70	30.51	5.75	57.96	93.94	39.26	133.20	2.31

Factors of Cost in Pork Production - 1928

Farm No.	Lbs. of pork produced	Lbs. of Feed per 100 Lbs. of Pork					Value of Feed per 100 Lbs.					Total No. of litters	Average No. of pigs per litter	Returns per \$1.00 of feed
		Corn	Small grain	Mill feeds	Total grain	Tank. milk	Skim- milk	Grain & mill feeds	Tank.& skim- milk	Pasture	Total			
5163	14972	152	169	-	321	-	479	\$4.07	\$1.20	-	\$5.27	10	5.9	\$1.64
5081	9109	190	105	30	325	2	285	4.19	.77	.09	5.05	3	9.0	1.62
5162	17675	284	140	13	434	-	38	5.27	.09	.27	5.63	7	8.7	1.60
5035	21023	194	114	14	322	-	299	3.93	.77	.26	4.96	12	7.0	1.56
5083	7385	174	62	20	254	-	55	3.48	.14	.27	3.89	4	5.3	1.48
5102	21720	284	96	-	380	2	371	4.67	.98	-	5.67	18	5.2	1.47
5033	23083	209	174	4	387	6	273	5.20	.91	.25	6.36	17	4.5	1.35
5121	5205	155	181	18	354	-	830	4.40	2.07	.30	6.77	3	7.7	1.30
5164	5098	383	38	4	425	-	475	5.02	1.19	.25	6.46	4	5.5	1.23
5071	23510	309	150	-	459	-	391	5.77	.98	.18	6.93	14	6.5	1.22
5151	16606	301	199	-	500	-	271	6.55	.68	.27	7.50	9	7.9	1.21
5141	33053	164	86	61	311	-	961	4.02	2.49	.19	6.61	16	6.2	1.20
5111	12131	358	88	-	446	-	823	5.59	2.06	.22	7.87	8	5.1	1.15
5143	13755	256	124	-	380	-	566	4.82	1.42	.23	6.44	8	6.7	1.15
5101	6298	373	113	41	527	-	432	6.72	1.08	.15	7.95	4	5.5	1.13
5082	5787	479	150	12	641	-	656	8.01	1.59	.31	9.91	6	5.1	1.11
5084	26530	338	36	73	447	-	641	5.88	1.62	.24	7.72	18	5.6	1.08
5192	9205	280	294	-	574	-	375	7.43	.94	.31	8.68	10	4.3	1.07
5041	13865	327	91	8	426	-	890	5.10	2.23	.23	7.56	8	9.4	1.05
5031	8557	450	157	-	607	-	204	7.44	.51	.29	8.24	7	6.7	.99
5034	9679	156	339	3	498	-	889	6.49	2.22	.26	8.97	12	5.1	.99
5232	8245	145	345	99	589	-	137	7.58	3.41	.71	11.70	9	8.9	.95
5131	5925	352	95	5	452	-	641	5.55	1.60	.64	7.79	5	6.6	.92
5231	2535	400	78	16	494	-	1021	6.23	2.55	.44	9.22	3	5.7	.90
5193	3936	613	41	-	654	-	737	8.02	1.84	.17	10.05	1	9.0	.83
5191	19189	291	244	3	538	-	749	7.41	1.87	.37	9.65	17	5.7	.83
5161	2675	732	-	-	732	-	1402	8.42	3.51	.29	12.22	2	5.0	.68
Avg.	12843	309	137	16	462	.37	551	5.83	1.50	.27	7.60	9	6.4	1.17

Feed Costs and Returns for Poultry - 1928

Farm No.	Total Feed per 100 Hens		Cost of Feed per 100 Hens			Value per 100 Hens			Returns per \$1.00 feed cost	Eggs laid per hen
	Concen.	Skim-milk	Hens			Eggs	Poultry	Total		
			Concen.	Skim-milk	Total					
5083	5520	5042	\$77.41	\$12.61	\$90.02	\$178.71	\$255.58	\$433.59	\$4.82	83
5232	5109	20127	71.81	50.32	122.13	289.51	207.87	497.38	4.07	127
5084	3634	2907	57.30	7.27	64.57	149.98	71.00	220.98	3.42	66
5081	6286	6800	133.72	17.00	130.72	225.52	201.25	426.77	3.26	107
5034	5615	1402	78.52	3.51	82.03	240.67	21.56	262.23	3.19	103
5131	6625	7056	98.10	17.64	115.74	246.51	74.78	321.29	2.78	113
5141	8222	25372	119.48	63.43	182.91	385.73	120.10	505.83	2.77	180
5111	5369	3948	84.67	9.87	94.54	161.21	100.15	261.36	2.76	76
5151	12900	2661	223.43	6.65	230.08	473.33	150.81	624.14	2.71	185
5102	6764	14000	123.01	32.00	158.01	387.02	40.23	427.25	2.73	172
5082	7863	572	103.20	1.43	104.63	106.88	169.66	276.54	2.64	51
5191	4264	5510	72.03	13.80	85.83	245.92	-22.02	223.90	2.61	111
5101	7409	1663	110.80	4.16	114.96	194.04	103.46	297.50	2.59	95
5035	8262	2142	135.98	5.35	141.33	232.94	121.90	354.84	2.51	107
5041	7475	4804	116.41	22.01	128.42	264.85	57.34	322.19	2.51	121
5164	7001	-	107.97	-	100.07	248.64	.20	248.84	2.49	118
5162	12476	7572	189.77	18.93	208.70	418.65	83.29	501.94	2.41	167
5161	6872	5476	114.32	13.69	128.01	124.22	157.88	282.10	2.20	60
5193	11946	12863	168.22	32.16	200.38	286.20	153.98	440.18	2.20	129
5143	9794	5633	192.04	14.08	206.12	371.63	47.34	419.63	2.04	163
5192	4607	1504	64.12	3.76	67.88	77.94	53.65	131.59	1.94	38
5163	13095	5102	223.08	12.75	235.83	182.52	260.07	442.59	1.87	85
5033	12707	535	288.23	1.34	289.57	334.36	161.19	495.55	1.71	160
5231	11385	4939	170.83	12.35	183.18	183.05	101.89	284.94	1.56	73
5121	14124	6403	246.00	16.00	262.00	312.38	80.44	392.82	1.49	144
5031	3875	2572	62.33	6.43	68.76	99.80	-	99.80	1.45	36
5071	6937	8501	115.40	21.25	136.65	119.30	59.25	178.55	1.31	55
Avg.	8002	6116	130.39	15.29	145.68	242.27	104.95	347.22	2.52	108

Feed Cost for Horses - 1928

Farm No.	% colts are of horses	Feed per Horse			Feed Costs per Horse				Crop acres per horse	Tractor used for field work
		Grain	Tame hay & alfalfa	Wild hay & fodder	Grain	Rough.	Pasture	Total		
5162	-	632	1750	125	\$9.04	\$9.94	\$4.68	\$23.66	20	Yes
5085	20	591	-	3689	8.66	15.64	4.17	28.47	15	No
5031	10.4	492	1512	2079	8.94	14.27	5.91	29.12	23	Yes
5082	13.8	1579	1778	207	22.82	7.67	2.50	32.99	15	No
5111	-	1905	1445	867	27.46	11.85	.90	40.21	20	No
5141	-	879	-	6400	12.49	24.50	3.37	40.36	15	Yes
5041	44.9	1632	1136	1563	23.95	13.06	4.63	41.64	20	No
5121	20	1510	667	3556	22.50	18.45	4.17	45.12	16	No
5232	16	1473	2089	2527	22.36	19.68	3.49	45.53	19	Yes
5143	-	2555	1000	-	37.78	5.00	3.13	45.91	16	Yes
5034	19.4	1739	-	5359	26.21	21.71	3.35	51.27	18	Yes
5163	20.6	3025	231	923	46.94	5.30	2.35	54.59	15	No
5035	-	2214	5000	800	31.06	23.00	1.25	55.31	20	Yes
5131	14.3	2274	2308	2615	33.64	21.54	.96	56.14	16	No
5081	-	2858	240	1918	46.46	10.31	2.40	59.17	17	No
5193	-	1626	5400	-	25.09	31.70	3.25	60.04	18	No
5231	-	1308	3000	5250	20.71	37.25	2.87	60.83	19	Yes
5161	-	3427	3500	1133	41.18	21.03	-	62.21	18	No
5151	52.8	3012	717	2957	43.17	13.66	6.50	63.33	25	Yes
5033	3.3	2698	3217	2145	41.27	23.06	4.02	68.35	19	Yes
5071	16.5	3142	2275	5006	48.82	20.02	2.84	71.68	17	No
5191	11.3	2736	720	2881	41.02	28.15	3.39	72.56	19	Yes
5192	-	2701	-	7700	38.19	34.95	-	73.14	20	Yes
5101	-	3034	1333	5667	46.83	29.00	-	75.83	15	No
5102	-	4015	750	4250	58.73	22.37	-	81.10	20	Yes
5084	-	4764	1364	1910	65.52	16.13	-	81.65	36	Yes
5164	-	3515	3667	3333	48.92	34.90	.83	84.65	16	No
Avg.	9.8	2272	1670	2773	33.32	19.78	2.63	55.73	19	