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Report 37

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

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SECOND ANNUAL REPORT of the Better Farming Club of Steele County

30 farms

By

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Division of Farm Management and Agricultural Economics
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Second Annual Report of the Better Farming Club of Steele County for the Year 1929.

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 thirty farmers in Steele County, Minnesota, have been cooperating during the year 1929 in a farm account project, known as the Better Farming Club of Steele County. Three more farmers completed the project in 1929 than in 1928. The work was started January 1, 1928 along with similar clubs in nearby counties, viz., Freeborn, Dodge, Goodhue, Rice and Waseca counties.

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; and R. C. Bevan, the field agent for the project. Hearty support and assistance has been rendered by Russell Seath, County Agricultural Agent of Steele County.

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. Wheat, sweet corn, and canning peas are grown to a limited extent as cash 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 one-third, and receipts from hog sales about one-fourth of the average cash income for the 30 cooperators in Steele County. These are approximately the same results as shown by the 1928 report.

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 omnissions 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 operator 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. Although 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.

Capital Investment in Farm Business

The average size of the farms in this report was 168 acres. The averabe farm inventory was $25,819. This does not include the value of the house in which the operator lived. As changes were made in size of farm in a few cases, and a few additional cooperators included, the average size is ten acres above that in 1928, in which year the average size was 158 acres, and average farm inventory was $22,694. But the distribution of the inventory was practically the same in both years. In 1929, fifty-three per cent of the average farm inventory consisted of land; 16 per cent of permanent improvements; 8 per cent of feeds and supplies; 8 per cent of machinery and equipment; and 15 per cent of livestock, of which almost one-half or an average of $1,714 consists of the average cow inventory.

Analysis of the Farm Business

On page 5 and 6 are presented financial summaries of the year's business, showing the average results for the 30 farms on which the work was completed for the twelve months period, January 1, 1929 to December 31, 1929 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 5 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 these two counties and undoubtedly is adapted to the present general conditions. This study should bring out trends that may be taking place toward more profitable combinations of enterprises, and to the more efficient methods of management within the enterprises.

Returns to Operators for Their Labor and Management

The average cash receipts per farm were $5633. In addition farm produce to the value of $309 was consumed by the farm family and there was an average inventory increase of $1050 per farm. The total average receipts per farm is the sum of these three items, $6992. The average total expense per farm, $3194, includes $3084 cash expense and an estimated allowance of $110 for board of hired labor. The difference between the total income and total expense figure is $3798. 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, $1291, for the services of capital, there remains $2507 for the services of the farmer and his family. The average value of family labor used, if computed at hired man's wages was $445. The average operator's labor earning is the family earnings less their allowance of $445, or $2062. This is the return to the farmer for his labor and management over and above a 5 per cent return for his capital and going wages for other members of the family.

Comparison with Previous Year

In making a comparison of the 1929 results with those of 1928 it should be remembered that there were several changes made and three additional farms included in the 1929 report. The average operator's labor earnings per farm for the farms in 1929 were $622 higher than for those in 1928. Cash receipts were $629 higher in 1929 and the increase in inventory was $624 higher. Expenses were $424 greater in 1929, and due to a larger inventory, interest on investment was $156 higher. Changes in other items were small. The higher cash receipts and inventory increase were due primarily to higher crop yields, larger production of pork, higher prices for hogs sold. The average price received for the sale of hogs was $1.48 per hundred pounds higher in 1929 than in 1928. Butterfat prices were lower near the close of 1929, while eggs averaged one cent higher for the year. The average production of butterfat per cow for the 1929 group of cooperators was 261, while that for 1928 was 262. The group in 1929 produced on the average 3100 pounds more pork than the cooperators who were in the project in 1928. After adjusting cash items for changes in inventory, there was an increase of $500 in gross returns for hogs, with only slight changes for the other classes of livestock.

There were 25 farmers who were in the project in both years. The average earnings for these twenty-five farmers was $1453 in 1928 and $2154 in 1929, which shows an average gain of $701. Only two farmers had lower earnings in 1929 than in 1928.

Summary of Farm Inventories

Items	Your Farm	Average	High Farm	Low Farm
Size of Farm (acres)		168.2	505	~~168~~ 73
Size of business (prod. man work units) (1)		618.0	~~398~~ 375	308
Average farm inventory (without horse)		$25819.	$77140.	$10582.
Land		13725.	50380.	5075.
Farm Improvements		4053.	10808.	1310.
Machinery & equipment (total)		2025.	4097.	777.
General machinery & equipment		1468.	2844.	745.
Tractor		279.	1200.	-
Truck		37.	339.	-
Auto (farm share) (2)		159.	660.	-
Gas engine (farm share)		26.	142.	-
Electrical equipment (farm share)		54.	457.	-
Feeds and seeds		2002.	5175.	852.
Misc. Supplies		19.	78.	-
Horses (total)		513.	965.	143.
Horses		482.	890.	143.
Colts		31.	260.	-
Productive Live Stock (total)		3475.	9027.	1371.
Cows		1714.	4650.	68[illegible].
Other cattle		950.	2320.	2[illegible].
Hogs		578.	1825.	45.
Sheep		20.	264.	-
Poultry		211.	405.	79.

Statement of Average Amounts of Live Stock

Items	Your Farm	Average	High Farm	Low Farm
Total horse animal units (3)		6.1	9.6	2.0
Horses		5.7	9.0	2.0
Colts		.4	1.9	.0
Total Productive Animal Units		33.1	72.8	14.9
Cows		15.5	36.5	7.3
Other cattle		9.2	21.6	2.9
Hogs		6.5	16.3	.1
Sheep		.2	3.0	0.
Poultry (hens)		1.7	3.0	.1
Number of cows per worker		7.2	11.8	3.9
Number of cows per 100 acres		9.9	17.0	4.6

(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) Farm share based on farmer's estimate of amount used for farm purposes only.

(3) 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.

Summary of Farm Earnings - 1929

CASH EXPENSES	Your Farm	Average	High Farm	Low Farm
Tractor (new & exp.)		$217	$1787	$ -
Truck (new & exp)		47	620	-
Auto (new & exp.) (farm share)		169	665	-
Gas engine (new & exp) (farm share)		15	93	-
Elec. plant or current (new & exp.) (farm share)		34	157	-
Machinery & equipment (new)		284	1159	15
Machinery & equipment (exp.)		77	329	7
Bldgs., fences, tiling (new)		123	913	-
Bldgs., fences, tiling (exp.)		78	380	-
Hired labor		382	1738	3
Feed for livestock		520	2344	15
Other expense for livestock		94	578	11
Horses bought		28	175	-
Cows bought		79	1104	-
Other cattle bought		63	572	-
Hogs bought		261	4475	-
Sheep bought		19	535	-
Poultry bought		50	153	-
Crop (seed, twine, spray)		225	938	36
Taxes and insurance		296	1116	137
General farm		23	41	11
(1) Total cash expense		3084	9937	902
(2) Decrease in farm inventory		-	26	-
(3) Board for hired labor		110	420	-
(4) Total expense (sum of 1,2,& 3)		3194	10357	902
CASH RECEIPTS				
Horses		21	325	-
Cows		443	1190	-
Dairy products		1876	5328	960
Other cattle		504	2121	66
Sheep		5	99	-
Hogs		1692	6681	78
Poultry		130	295	13
Eggs		384	1053	86
Small grain		102	1384	-
Corn		48	358	-
Hay		20	165	-
Root crops		78	1310	-
Other crops		132	2019	-
Miscellaneous		126	402	2
Outside		72	481	-
(5) Total cash receipts		5633	16409	2172
(6) Increase in farm inventory		1050	3162	-
(7) Farm produce used in house		309	550	144
(8) Total receipts (sum of 5,6,& 7)		6992	18936	3190
Total expense (4)		3194	10357	902
(9) Returns to capitol and family labor (8-4)		3798	8580	1373
(10) Interest on farm inventory		1291	3857	529
(11) Family labor earnings (9-10)		2507	5041	702
(12) Unpaid family labor		445	1740	-
(13) Operator's labor earnings (11-12)		2062	4321	363

Summary of Farm Earnings, 1929 (A)

EXPENSES AND NET DECREASES Items	Your Farm	Average	High Farm	Low Farm
Total power machinery & equipment		$ 307	$1054	$ 53
Tractor		108	609	-
Truck		32	185	- 19
Auto (farm share)		114	398	-
Gas engine (farm share)		15	76	-
Elec. plant or current (farm share)		38	167	-
General machinery & equipment		219	544	-112
Bldgs. fencing, tiling		185	537	-112
Hired labor		382	1738	3
Prod. livestock misc. expense		78	204	11
Crop		224	939	38
Taxes and insurance		296	1116	137
General farm		26	103	11
Decrease in crops and feed		-	1214	-
Decrease in horses		10	83	-
Misc. expense for horses		3	24	-
Board for hired labor		110	420	-
Interest on farm inventory		1291	3857	529
Unpaid family labor		445	1740	-
(1) Total expenses		3576	10535	1416
RETURNS AND NET INCREASES				
Increase in crops and feeds		320	2111	-
Gross returns from all prod. livestock		5551	13285	2551
Cows		2353	6505	993
Other cattle		972	2622	222
Hogs		1633	4974	11
Sheep		6	98	-
Poultry		587	1379	173
Outside and misc. receipts		93	498	-
Increase in horses		-	149	-
(2) Total returns and net increases		5964	15486	2875
(3) Products used on the farm		326	979	55
(4) Gross returns (2-3)		5638	14508	2703
Total expenses (1)		3576	10535	1416
(5) Operator's labor earnings (4-1)		2062	4321	344
Gross returns per $100 expense		161	214	104

(A) Cash receipts and expenses are adjusted for changes in inventory for each enterprise and each item of expense in order to show gross returns and net increases, and total expenses and net decreases. The operator's labor earnings are the same as those on page 5.

Utilization of Land and Yield of Crops - 1929

Crop	No. farms growing this crop	Acres per farm: Your Farm	Acres per farm: Average	Yield per acre: Your Farm	Yield per acre: Average	Yield per acre: Highest	Yield per acre: Lowest
Wheat	8		3.0	21.4	32.8	14.8	
Oats	21		11.1	50.8	75.2	28.0	
Barley	19		9.2	37.1	55.4	18.9	
Rye	1		0.4	19.0	-	-	
Flax	3		0.6	8.1	11.6	4.0	
Wheat & Oats	6		1.6	32.3	44.5	14.4	
Oats & Barley	25		21.0	47.3	68.9	25.2	
Canning peas	4		1.8	2764.0	3154.0	2407.0	
Total grain			48.7				
Corn, grain	30		23.9	50.5	80.0	30.0	
Corn, silage	29		11.4	8.9	12.8	2.7	
Corn, fodder	18		1.9	3.3	5.0	1.8	
Sweet corn	3		0.9	2.8	3.0	2.4	
Potatoes	22		1.0	140.0	250.0	80.0	
Sugar Beets	1		1.0	10969.0	-	-	
Total cultivated crops			40.1				
Alfalfa	20		6.6	2.9	4.6	1.0	
Clover & clover mixtures	22		9.7	2.3	3.2	1.4	
Timothy	8		2.5	1.6	2.8	2.3	
Annual hay crops	5		0.4	1.7	3.0	0.0	
Wild hay (on tillable land)	4		1.2	1.2	2.3	0.5	
Wild hay (on non-tillable land)	17		6.8	1.1	2.0	0.5	
Total hay			27.2				
Total Crop acreage			116.0				
Sweet clover pasture	11		4.2				
Miscellaneous legume pasture	14		3.7				
Other tillable pasture	20		8.7				
Non-tillable pasture	23		23.5				
Total pasture			40.1				
Timber - not pastured			1.4				
Roads & waste			5.2				
Farmstead			5.5				
Total acres in farm			168.2				
% of land tillable			74.4				

EFFECT OF WELL BALANCED EFFICIENCY ON FARM PROFITS

It is quite evident from this report that few farmers have a monopoly on efficiency. Quite often farm operators show efficient management in one part of the farm business, which is offset byypoor results in other phases of the business. These farmers get medium returns while those who fall down all along the line get the lowest returns, and those few who can manage a large volume of business with high all around efficiency are well paid for their labor and management.

A careful observation of the data secured in this report indicate that the farm earnings in 1929 are affected noticeably by the same seven factors as in 1928. These factors are as follows:

1. Pounds of butterfat per cow.
2. Gross returns above feed cost per unit of productive livestock.
3. Number of productive livestock units per 100 acres.
4. Index of crop yield.
5. Productive man work units per worker.
6. Equipment and farm power expense (buildings, fencing, all machinery, horse feed and miscellaneous expense) per productive man work unit.
7. Size of business (total number of productive man work units).

In Chart 1 is shown the effect of the number of above factors in which the farmer excels on his labor earnings. The four farmers who excelled in six or seven factors had average earnings of $2734 above the average of six farmers who did not excel in more than one factor.

Chart 1. Relation of Operator's Labor Earnings to the Number of Factors in which Farmer is Above the Average in Efficiency.

Number of factors in which farm excels	No. of farms	Your farm	The length of the shaded lines are in proportion to the average operator's labor earnings	Average operator's labor earnings
Six or seven	4		xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	$3799
Four or five	12		xxxxxxxxxxxxxxxxxxxxx	2345
Two or three	8		xxxxxxxxxxxxx	1515
One or none	6		xxxxxxxxxx	1065

The array in Chart 1 suggests that it will be worth while for each co-operator to study carefully his ranking on page 9, and note how he stands in respect to each of the above factors and other related factors and measures of efficiency. A further study of pages 11 to 17 may show him the reasons for his ranking in these various measures.

Each cooperator should bear in mind that the amount by which he is above or below the average may be as important as the number of factors in which he is high or low. For example, the farm that ranks second from the bottom in respect to operator's labor earnings, is above the average in three factors, but is so far below the average in four factors that these offset the effect of the other three and reduce his earnings to the low point.

Measures of Farm Organization and Management Efficiency

Farm No.	Opera. Labor Earn	Index of Crop Yield	Lbs. B.F. per Cow	Returns above feed per Cow	Head of Other Cattle	100 lbs. of Pork	Hen	Expenses per work unit Farm Power	Gen. Mach. and Eq.	Bldgs. Fenc. and Tiling	Prod. Work Units per Worker	Prod. Live Stock Units per 100 A	Total No. Prod. Man Work Units
5111	$4321.	126	190	$62.14	$70.67	$4.29	$1.15	$ .89	$.15	$..44	389	22.6	778
5191	4140.	97	267	97.48	19.64	2.51	2.66	.93	.42	.23	454	24.4	999
5084	3973.	106	295	101.99	15.35	1.96	1.70	1.13	.39	.30	352	19.6	1339
5071	3602.	102	282	95.56	35.46	4.76	5.27	.92	.39	.24	352	17.7	739
5182	3242.	118	286	77.96	70.45	5.54	1.95	1.28	.25	.28	263	23.1	711
5163	3133.	101	313	123.75	34.70	2.99	2.01	.59	.34	.30	282	21.5	649
5102	2976.	111	246	71.59	5.11	3.11	2.58	1.30	.39	.17	342	20.3	786
5033	2747.	91	271	83.42	7.97	3.90	.73	1.18	.15	.13	385	18.4	732
5151	2680.	113	286	84.86	29.13	4.00	3.54	.96	.45	.34	291	19.8	553
5162	2638.	108	280	93.31	39.10	3.87	3.09	1.33	.51	.47	418	27.0	544
5143	2378.	109	255	60.27	3.65	2.50	2.10	1.21	.39	.37	264	16.7	501
5141	2355.	109	311	54.58	11.79	3.25	3.68	.98	.28	.22	332	30.0	597
5142	2200.	86	238	69.03	66.39	3.95	1.05	1.04	.23	.73	349	25.9	733
5035	2102.	108	372	130.24	3.22	4.23	.93	1.05	.38	.13	284	24.1	567
5041	2109.	97	295	118.32	21.34	2.72	2.03	.88	.48	.29	356	18.2	498
5164	1836.	104	323	110.34	54.04	4.07	2.29	.97	.34	.34	180	27.7	397
5193	1754.	127	228	76.40	21.62	2.34	3.00	.86	.43	.16	153	25.4	352
5131	1724.	96	220	58.75	41.15	-2.19	3.43	.66	.32	.25	213	18.7	425
5034	1677.	92	301	105.88	29.89	1.73	1.35	1.34	.20	.26	207	13.6	643
5181	1655.	80	244	66.49	22.99	3.49	4.18	.87	.28	.67	267	15.6	640
5082	1555.	94	173	45.63	21.62	2.66	1.77	.68	.26	.35	298	20.6	595
5081	1410.	90	287	89.89	11.89	5.77	1.46	1.15	.53	.00	330	24.0	363
5083	1287.	84	267	88.04	15.54	3.22	1.63	.93	.34	-.35	217	17.5	326
5101	849.	115	303	107.53	22.95	4.38	.94	1.44	.35	.39	172	26.7	378
5231	849.	81	275	123.77	16.29	2.94	-.13	.94	.53	.40	213	12.1	384
5121	741.	89	252	67.35	30.27	- .04	.87	1.49	.26	.20	227	22.2	453
5232	642.	70	165	50.37	13.73	1.91	.53	1.13	.31	.29	276	19.2	634
5201	563.	105	257	67.92	6.68	2.85	2.26	1.25	.65	.43	220	18.7	308
5021	363.	94	183	47.71	14.98	2.90	2.03	.97	.39	.28	378	14.0	1398
5192	344.	82	166	73.07	- 4.08	3.60	- .20	.94	.56	.28	184	17.1	516
Average	$2062.	100	261	$83.45	$25.12	$3.10	$2.00	$1.04	$.37	$.29	288	20.7	618
High	4321.	127	372	130.24	70.67	5.77	5.27	.59	.15	-.35	454	30.0	1598
Low	344.	70	165	45.63	- 4.08	-2.19	-.20	1.49	.65	.73	153	12.1	308

Find Your Weak Links

Using your figures from page 9, locate your standing with respect to the various measures of farm organization and management efficiency. The average for the 30 farms included in this summary are located between the two lines across the center of the page:

Oper. Lab. Earn.	Ind.. of Crop Yield	Lbs. B.F. per Cow	Returns above feed per				Expenses per work unit			Prod. Work Units per Worker	Prod. Live Stock Units per 100-A	Total No. Prod. Man Work Units
			Cow	Head of other cat.	100 Lbs of Pork	Hen	Farm Power	Gen. Mach. and Eq.	Bldgs. Fen. and Til.			
$4321.	127	372	$130.24	$ 70.67	$5.77	$5.27	$ .59	$.15	$-.35	454	30.0	1398
3712	120	336	118.45	60.12	5.10	4.50	.69	.24	.04	413	28.2	1118
3382	116	321	111.45	53.12	4.70	4.00	.76	.25	.09	388	26.7	1018
3052	112	306	104.45	46.12	4.30	3.50	.83	.28	.14	363	25.2	918
2722	108	291	97.45	39.12	3.90	3.00	.90	.31	.19	338	23.7	818
2392	104	276	90.45	32.12	3.50	2.50	.97	.34	.24	313	22.2	718
2062	100	261	83.45	25.12	3.10	2.00	1.04	.37	.29	288	20.7	618
1782	96	246	77.45	21.12	2.50	1.70	1.10	.41	.36	268	19.3	568
1502	92	231	71.45	17.12	1.90	1.40	1.16	.45	.43	248	17.9	518
1222	88	216	65.45	13.12	1.30	1.10	1.22	.49	.50	228	16.5	468
942	84	201	59.45	9.12	.70	.80	1.28	.53	.57	208	15.1	418
662	80	186	53.45	5.12	.10	.50	1.34	.57	.66	188	13.7	368
344	70	165	45.63	-4.08	-2.19	-.20	1.49	.65	.73	153	12.1	308

Prices Received for Products Sold - 1929

Farm No.	Butterfat per lb. sold as milk or spec. cream	Butterfat per lb. sold as mfg. cream	Eggs per dozen	Hogs per 100 pounds
5111	-	.51	.31	9.77
5191	.-	.52	.28	9.83
5084	.69	.51	.33	10.08
5071	-	.52	.24	9.71
5182	-	.51	.27	13.27
5163	1.32	.51	.27	9.18
5102	-	.50	.28	9.14
5033	-	.51	.26	9.71
5151	-	.52	.29	9.74
5162	-	.51	.31	9.17
5143	-	.52	.28	9.82
5141	1.25	.49	.27	10.29
5142	-	.51	.27	9.12
5035	-	.51	.25	10.36
5041	-	.51	.27	9.16
5164	-	.50	.25	9.70
5193	-	.49	.29	8.92
5131	-	.49	.28	9.08
5034	-	.49	.27	10.08
5181	-	.51	.33	9.30
5082	-	.50	.30	10.06
5081	-	.51	.27	9.90
5083	-	.52	.28	9.13
5101	-	.51	.26	10.44
5231	.67	-	.26	8.35
5121	-	.49	.26	8.58
5232	.53	.48	.28	9.12
5201	.92	.50	.28	9.18
5021	-	.51	.27	10.76
5192	-	.50	.27	8.87
Average	.90	.49	.28	9.66
High	1.32	.52	.33	13.27
Low	.53	.48	.24	8.35

Factors of Cost in Dairy Production - 1929 (per cow basis)

Farm No.	B.F. per cow	Feed per Cow - Lbs.								Silage	Total concen.	Total dry rough-age	Total digest nutri. per lb. B.F.	Nutri-tive ratio	% Cows fresh Sept.to Dec. incl.	Per cent calves born
		Corn	Small grain	Mill feeds	Oil Meal	Tame hay	Wild hay	Alfalfa	Corn fodder							
5035	372	-	2708	485	94	1021	-	2553	426	10723	3287	4000	13.9	1:4.8	85	170
5164	323	205	1629	437	148	1949	-	468	585	6079	2415	3002	13.4	1:5.8	54	86
5163	313	-	1457	-	105	-	-	2206	111	7317	1562	2317	11.4	1:6.2	55	100
5141	311	-	2338	405	-	2080	-	4755	446	8172	2745	7281	22.8	1:5.7	92	104
5101	303	204	1152	428	237	1642	-	274	1004	7938	2021	2920	13.8	1:7.0	44	82
5034	301	478	3072	15	-	1962	491	1057	453	8588	3565	3963	20.0	1:6.9	92	105
5084	295	-	2057	984	79	367	-	2782	-	13023	3120	3149	20.5	1:6.8	65	104
5041	295	135	1670	156	12	-	3123	-	2942	6245	1973	6065	18.5	1:10.8	86	170
5081	287	283	1368	92	133	-	-	1379	1746	8548	1876	3125	12.5	1:7.0	75	74
5151	286	-	1416	187	-	-	-	2936	1554	11918	1603	4490	18.3	1:7.2	90	86
5182	286	71	2396	269	122	2123	-	3043	-	7360	2858	5166	20.8	1:5.8	62	113
5071	282	-	1151	401	17	1448	-	1893	390	6904	1569	3731	11.7	1:4.9	84	72
5162	280	146	1714	608	118	2841	-	513	1026	7814	2586	4580	19.2	1:7.3	62	126
5231	275	842	1584	110	149	2092	-	-	-	7171	2685	2092	15.7	1:7.7	22	90
5033	271	476	1579	37	152	3948	-	-	-	7897	2511	3948	19.4	1:6.8	54	98
5087	267	-	2242	300	52	2120	-	-	620	8686	2594	2740	17.7	1:7.8	75	83
5191	267	439	924	227	55	1686	-	1373	784	9803	1645	3843	17.7	1:7.9	55	105
5201	257	49	1795	375	-	3250	-	313	1250	7000	2219	4813	18.3	1:5.7	75	100
5143	255	344	1396	150	14	273	-	2455	1637	10639	1904	4365	24.5	1:8.2	100	123
5121	252	128	1022	260	220	672	134	1882	470	6854	1630	3158	15.4	1:6.1	78	94
5102	246	-	1636	-	81	1567	-	1273	-	10773	1717	2840	16.0	1:6.4	27	108
5181	244	-	1350	427	75	2571	-	-	1580	10489	1852	3951	20.4	1:8.4	44	129
5142	238	215	1325	927	67	-	-	2405	722	7985	2534	3127	18.5	1:5.5	47	91
5193	228	410	811	16	-	2255	-	-	1771	6764	1237	4026	17.8	1:10.0	86	121
5131	220	97	2013	9	40	3023	-	-	777	7600	2159	3800	21.4	1:8.9	41	103
5111	190	391	783	97	34	677	1270	1905	593	6690	1305	4445	22.3	1:7.6	73	93
5021	187	46	1291	27	19	4106	-	-	-	7390	1383	4106	23.5	1:9.6	29	76
5082	173	123	1164	-	-	1926	-	220	1100	5204	1287	3246	18.2	1:8.0	44	99
5192	166	-	-	61	-	477	1772	477	409	5113	61	3135	14.4	1:10.5	26	102
5232	165	-	447	170	-	3136	-	-	-	7635	617	3136	19.7	1:9.3	13	102
Aver-age	261	169	1516	264	67	1634	226	1205	746	8149	2016	3611	17.9	1:7.4	61	104

Feed Costs and Returns for Dairy Cows - 1929 (per cow basis)

Farm No.	B.F. per cow lbs.	Feed per cow				Feed cost per lb. B.F. (cents)	Value of produce per cow						Returns above feed cost per cow	% voluntary sales	% fresh heifers are of total cows
		Concen.	Rough.	Pasture	Total cost		B.F. sales	Dairy prod used in house	Milk to other live-stock	Increc.	Total	Depr.	Net value of prod.			
5035	372	$46.39	$46.00	$3.74	$96.13	26	$171.97	$ 7.59	$27.28	$19.53	$226.37	-	$226.37	$130.24	34	102
5164	328	35.75	28.88	6.25	70.88	22	146.39	9.22	19.78	5.83	181.22	-	181.22	110.34	7	-
5163	313	20.53	31.25	4.92	56.70	18	152.18	4.64	16.53	7.10	180.45	-	180.45	123.75	38	27
5141	311	55.24	50.40	6.50	121.14	39	142.86	7.66	24.83	.37	175.72	-	175.72	54.58	-	7
5101	303	30.78	31.43	.58	62.79	21	147.94	5.21	17.53	-	170.68	.36	170.32	107.53	45	54
5034	301	38.95	38.48	5.94	83.37	28	138.59	5.98	22.70	21.98	189.25	-	189.25	105.88	45	60
5084	295	43.95	47.54	5.39	96.88	33	162.88	4.26	29.92	1.81	198.87	-	198.87	101.99	21	24
5041	295	23.42	37.06	5.21	65.69	22	130.73	12.86	20.02	11.40	184.01	-	184.01	118.32	24	96
5081	287	27.08	33.96	6.34	67.38	23	132.64	8.03	19.39	-	160.06	2.79	157.27	89.89	27	-
5151	286	20.15	49.65	6.95	76.75	27	140.64	4.71	22.23	-	167.58	5.97	161.61	84.86	60	25
5162	286	38.45	49.15	6.17	93.77	33	133.50	5.36	27.32	5.55	171.73	-	171.73	77.96	35	14
5071	282	27.29	35.50	6.30	65.10	23	135.90	6.58	21.13	-	163.69	2.95	160.74	95.56	38	11
5182	280	40.04	37.54	5.46	83.14	30	133.60	6.46	21.30	15.09	176.45	-	176.45	93.31	31	39
5231	275	37.03	23.16	6.72	66.91	24	162.00	13.05	5.43	10.20	190.68	-	190.68	123.77	49	39
5033	271	36.66	39.41	6.44	82.51	30	129.64	4.05	21.67	9.67	165.03	-	165.03	83.42	37	22
5083	267	34.52	32.06	6.91	73.49	28	125.51	6.14	23.91	5.97	161.53	-	161.53	88.04	10	31
5191	267	21.78	40.92	6.47	69.17	26	127.38	6.12	22.76	10.39	166.65	-	166.65	97.48	31	31
5201	257	33.46	39.38	6.88	79.72	31	120.02	6.00	18.41	3.13	147.64	-	147.64	67.92	-	-
5143	255	24.10	45.29	5.87	75.26	30	105.61	9.13	34.62	-	149.36	13.83	135.53	60.27	-	54
5121	252	25.00	34.04	6.00	65.04	26	116.88	3.18	14.60	-	134.66	2.27	132.39	67.35	20	33
5102	246	22.26	39.14	5.71	67.11	27	113.67	3.17	23.19	-	140.03	1.33	138.70	71.59	9	-
5181	244	26.55	38.97	5.14	70.66	29	117.27	2.70	23.64	-	143.61	6.46	137.15	66.49	50	35
5142	238	35.42	34.49	6.73	76.64	32	107.86	8.81	20.49	8.51	145.67	-	145.67	69.03	14	38
5193	228	15.43	31.88	6.98	54.29	24	100.16	4.90	19.99	5.64	130.69	-	130.69	76.40	-	16
5131	220	27.02	33.85	5.00	65.87	30	99.57	4.44	25.19	-	129.20	4.58	124.62	58.75	43	25
5111	190	16.83	37.62	6.40	60.85	32	88.11	3.21	21.34	10.33	122.99	-	122.99	62.14	29	8
5021	183	17.19	36.70	6.73	60.62	33	84.92	3.86	16.26	3.20	108.33	-	108.33	47.71	32	27
5082	173	16.07	25.81	5.78	47.66	28	81.60	3.15	4.69	3.85	93.29	-	93.29	45.63	5	16
5192	166	3.95	27.31	7.03	34.29	21	80.68	6.82	22.03	-	109.53	2.17	107.36	77.07	13	27
5232	165	7.81	32.55	6.60	46.96	28	71.43	2.91	22.14	.85	97.33	-	97.33	50.37	6	20
Average	261	28.17	37.15	5.91	71.23	27	123.41	6.04	21.31	5.75	156.11	1.43	154.68	83.45	25	29

Feed Costs and Returns for Young Cattle - 1929

Farm No.	Feeds Used per Head, Lbs.					Feed Costs per Head					Net value of product per head	Net value of Prod. above feed cost per head	% death Loss
	Concen.	Hay & Fodder	Silage	Whole Milk	Skim-Milk	Concen.	Rough	Milk	Pasture	Total			
5111	446	1862	2297	301	2872	$5.50	$12.81	$13.77	$1.08	$33.16	$103.84	$70.67	-
5182	901	2493	2337	391	1440	10.56	21.05	11.74	2.87	46.22	116.70	70.45	-
5142	610	592	3034	226	2138	8.15	9.03	9.79	.80	27.77	94.20	66.39	14
5164	600	1141	1095	228	3435	8.63	8.49	14.79	.73	32.64	86.68	54.04	-
5131	210	676	3716	250	1267	2.63	10.85	8.24	2.44	24.16	65.31	41.15	55
5162	527	997	2617	141	3166	6.20	10.01	10.79	1.73	28.73	67.79	39.10	18
5071	211	1755	2264	207	2059	2.77	13.34	9.34	2.73	28.18	63.64	35.46	-
5163	437	696	1739	144	1550	5.53	8.52	7.36	1.36	22.77	57.47	34.70	28
5121	100	1030	1999	184	1094	1.35	8.23	8.10	2.81	20.49	50.76	30.27	-
5034	506	1287	2230	116	1155	5.52	10.22	5.17	2.99	23.90	53.80	29.89	-
5151	392	1272	3901	146	1626	5.04	16.66	7.03	2.42	31.15	60.27	29.13	8
5181	362	1836	3060	272	3302	4.58	15.53	13.77	1.64	35.52	58.51	22.99	38
5101	341	1156	1637	130	1781	4.21	8.96	7.75	2.65	23.57	46.51	22.95	19
5082	376	893	2455	119	289	4.59	8.76	3.12	2.01	18.48	40.09	21.62	11
5193	167	2307	2461	772	1714	2.10	15.00	19.96	2.18	39.24	60.84	21.62	-
5041	176	1390	2316	164	1289	2.14	10.84	6.56	2.75	22.29	43.63	21.34	12
5191	91	892	3080	168	1817	1.07	9.78	7.86	2.17	20.88	40.51	19.64	8
5231	679	1053	3228	154	-	9.91	10.63	3.63	2.71	27.08	43.37	16.29	21
5083	1	1389	6315	344	3992	.08	20.59	18.72	3.57	42.96	58.50	15.54	12
5084	877	662	8041	343	3661	10.07	18.36	15.53	1.53	45.49	60.84	15.35	7
5021	163	2338	1228	267	935	1.90	14.99	7.77	2.06	26.72	41.70	14.98	17
5232	207	904	3245	210	1039	3.31	11.63	6.85	2.88	24.67	38.39	13.73	-
5081	479	1029	2515	296	2625	6.83	10.52	12.94	1.66	31.95	43.84	11.89	-
5141	81	1399	2736	211	2062	.97	11.15	9.45	2.67	24.24	36.02	11.79	12
5033	561	1383	1697	199	2559	7.16	11.36	10.43	1.72	30.67	38.65	7.97	30
5201	521	1947	3074	317	2405	7.52	16.29	13.31	1.67	38.79	45.46	6.68	-
5102	297	1538	3691	646	1436	3.56	15.46	16.32	2.01	37.35	42.47	5.11	23
5143	216	1335	4050	581	774	2.73	15.80	13.08	3.04	34.65	38.30	3.65	7
5035	182	1984	4568	241	1310	2.28	19.45	7.91	2.00	31.64	34.86	3.22	3
5192	88	2468	1185	609	1223	1.15	12.19	15.41	3.86	32.61	28.54	- 4.08	20
Average	360	1387	2927	279	1667	4.60	12.88	10.56	2.22	30.26	55.38	25.12	12

Factors of Cost in Pork Production - 1929

Farm No.	Lbs. of Feed per 100 Lbs. of Pork						Value of Feed per 100 Lbs.				Returns above feed cost per 100 lbs. pork	Total No. of litters	Average No. of pigs per litter
	Corn	Small grain	Mill feeds	Total grain	Tank.	Skim-milk	Grain & mill feeds	Tank.& Skim-milk	Pasture	Total			
5081	101	189	9	299	1	423	$3.54	$1.10	$ .25	$4.89	$5.77	6	8.5
5182	294	220	18	532	4	240	6.79	.75	.24	7.78	5.54	19	8.5
5071	235	138	2	375	-	296	4.48	.74	.17	5.39	4.76	19	6.2
5101	349	122	2	473	-	710	5.64	1.78	.16	7.58	4.38	5	7.2
5111	200	171	1	372	-	352	4.27	.88	.27	5.42	4.29	10	8.3
5035	278	167	4	449	-	274	5.36	.69	.20	6.25	4.23	10	7.9
5164	256	130	-	368	-	463	4.31	1.16	.20	5.67	4.07	4	4.8
5151	251	153	6	410	-	299	5.00	.75	.22	5.97	4.00	17	6.7
5142	175	118	15	308	-	666	3.87	1.67	.19	5.73	3.95	10	4.6
5033	286	124	4	414	4	119	4.95	.46	.23	5.64	3.90	21	6.2
5162	248	150	17	415	-	88	4.98	.23	.20	5.41	3.87	9	6.1
5192	177	256	-	433	-	308	4.95	.77	.29	6.01	3.60	5	6.0
5161	170	225	10	405	7	212	4.82	.80	.35	5.97	3.49	14	8.2
5141	175	219	1	395	-	756	4.49	1.89	.14	6.52	3.25	1	4.0
5083	264	139	2	405	-	639	4.81	1.60	.30	6.71	3.22	3	5.7
5102	386	67	2	455	8	326	5.47	1.14	.18	6.79	3.11	21	5.8
5163	234	211	-	445	-	443	5.23	1.11	.14	6.48	2.99	19	6.2
5231	448	-	-	448	-	-	5.60	-	-	5.60	2.94	-	-
5021	389	143	-	532	-	376	6.86	.94	.07	7.87	2.90	16	7.8
5201	239	223	6	468	-	402	5.43	1.00	.37	6.80	2.85	5	6.2
5041	300	175	14	489	3	314	6.01	.90	.25	7.16	2.72	9	5.7
5082	485	114	15	614	-	140	7.56	.35	.05	7.96	2.66	2	4.0
5191	181	320	11	512	-	458	6.31	1.14	.19	7.64	2.51	18	6.1
5143	430	141	-	571	1	233	6.94	.61	.33	7.88	2.50	16	6.1
5193	220	93	-	313	-	947	3.88	2.37	.08	6.37	2.34	2	6.0
5064	395	166	4	565	1	679	6.89	1.73	.32	8.94	1.96	25	7.6
5132	205	217	-	422	-	900	4.90	2.25	.35	7.50	1.91	16	6.3
5034	276	239	8	523	-	708	6.10	1.77	.28	8.15	1.73	10	5.8
5121	274	157	27	458	-	1165	5.57	2.96	.36	8.89	- .04	3	5.7
5131	594	64	2	660	-	1234	8.03	3.09	.43	11.55	- 2.19	7	6.9
Average	283	162	6	451	1	473	5.43	1.22	.23	6.88	3.11	11	6.6

Feed Costs and Returns for Poultry - 1929

Farm No.	Total feed (lbs.) per 100 Hens		Cost of feed per 100 Hens			Value per 100 Hens			Returns above feed cost per 100 Hens	Eggs laid per Hen
	Concen.	Skim-milk	Concen.	Skim-milk	Total	Eggs	Poultry	Total		
5071	5042	12666	$81.87	$31.67	113.54	$272.62	$367.81	$640.43	$526.89	124
5161	21652	7588	344.09	18.97	363.06	421.44	359.31	780.75	417.69	155
5141	9152	3934	125.70	24.83	150.53	430.79	79.50	518.29	367.76	102
5151	12644	3730	195.48	9.33	204.81	444.66	114.26	558.92	354.11	171
5131	7572	3686	101.48	9.21	110.69	244.42	209.65	454.07	343.38	109
5162	9027	8047	138.29	20.12	158.41	373.94	93.63	467.57	309.16	145
5193	6626	3254	87.50	8.14	95.64	205.24	190.62	395.86	300.22	83
5191	8904	4830	147.53	12.07	159.60	355.39	70.13	425.52	265.92	150
5102	8409	7996	123.49	19.99	143.48	353.60	48.00	401.60	258.12	151
5164	9982	3433	135.79	8.59	144.38	252.73	120.23	372.96	228.58	126
5201	8618	4512	164.77	11.28	176.05	304.92	96.71	401.63	225.58	129
5143	13437	-	231.74	-	231.74	301.40	140.20	441.60	209.86	134
5041	7947	4885	106.75	12.22	118.97	288.32	33.65	321.97	203.00	127
5021	15513	8498	246.06	21.25	267.31	145.83	324.34	470.17	202.86	63
5163	10761	4051	149.61	10.13	159.74	240.03	121.11	361.14	201.40	103
5182	6238	2381	64.83	5.95	70.78	268.15	- 2.64	265.51	194.73	116
5082	11907	1277	164.65	3.19	168.04	189.98	154.95	344.93	176.89	81
5084	8378	2556	169.25	6.39	175.64	260.26	85.47	345.73	170.09	96
5083	9974	4259	135.20	10.65	145.85	206.83	101.95	308.78	162.93	90
5081	10490	7148	164.63	17.87	182.50	194.61	134.36	328.97	146.47	85
5034	8172	2289	117.20	5.72	118.92	211.17	43.06	254.23	135.31	81
5111	8480	1409	104.48	3.52	108.00	175.93	46.94	222.87	114.87	69
5142	13847	3035	180.33	7.59	187.92	240.57	52.61	293.18	105.26	104
5101	4783	1669	74.88	4.18	79.06	163.69	9.06	172.75	93.69	74
5035	10254	338	170.00	.84	170.84	172.71	91.08	263.79	92.95	89
5121	12349	5702	193.20	14.25	207.45	300.13	- 5.77	294.36	86.91	136
5033	4256	509	80.66	1.27	81.93	127.61	27.12	154.69	72.76	59
5232	13972	8798	202.04	21.99	224.03	235.70	41.37	277.07	53.04	102
5231	10567	-	168.11	-	168.11	127.01	27.69	154.70	-13.41	56
5192	11681	14660	139.56	36.65	176.21	113.13	42.77	155.90	-20.31	50
Average	10057	4771	150.16	11.93	162.09	254.33	107.29	361.62	199.54	108

Feed Cost for Horses - 1929

Farm No.	% colts are of horses	Feed per Horse (lbs.)			Feed Costs per Horse				Crop acres per horse	
		Grain	Tame hay & alfalfa	Wild hay & fodder	Grain	Rough.	Pasture	Total	With tractor	Without tractor
5201	-	320	2000	1130	$ 4.40	$13.86	$ 7.08	$25.36	30	-
5193	-	903	2400	-	11.81	11.60	3.44	26.85	10	-
5161	-	1536	1000	800	19.51	7.30	4.79	31.60	29	-
5143	-	3227	1750	1250	20.74	14.75	3.71	39.20	14	-
5162	-	1632	1750	2250	19.68	15.88	5.71	41.27	19	-
5191	2.6	2406	1000	2625	28.67	12.13	2.67	43.47	20	-
5232	9.6	1630	3125	1887	20.15	20.40	3.64	44.19	18	-
5231	-	2306	1500	2000	28.82	12.25	3.85	44.92	27	-
5034	10.8	2465	-	3444	29.30	12.65	3.10	45.05	18	-
5035	-	2390	2000	2400	27.93	18.20	-	46.13	22	-
5151	9.0	2182	3333	1333	26.86	19.08	.74	46.68	-	17
5083	11.3	1294	3959	1901	15.04	29.93	3.73	48.70	-	16
5082	7.7	2775	-	2462	34.90	10.15	3.72	48.77	-	17
5163	13.7	2933	1995	314	36.88	11.85	1.71	50.44	-	18
5061	-	2444	1515	1960	30.83	17.80	3.31	51.94	-	13
5101	-	3147	1333	1333	38.26	12.67	1.46	52.39	-	16
5071	19.2	2314	2075	3215	29.69	19.97	3.08	52.74	-	18
5121	11.1	2688	444	3333	33.80	16.89	2.22	52.91	-	20
5041	23.1	3647	-	4212	29.40	21.23	4.97	55.60	-	19
5192	-	2568	-	6309	32.60	22.14	1.63	56.37	23	-
5164	-	2831	2333	3667	36.13	20.33	1.60	58.06	-	17
5064	-	3247	875	3550	38.48	18.34	2.37	59.19	33	-
5151	20.5	3270	636	5246	37.99	16.69	4.78	59.46	18	-
5033	15.5	2625	3210	3217	32.77	24.01	4.29	61.07	20	-
5142	-	3226	3167	1667	39.25	19.75	2.71	61.71	20	-
5021	-	2969	2000	3333	37.22	23.67	1.87	62.76	33	-
5182	-	2960	3125	2750	37.80	30.78	.97	69.55	-	15
5102	-	4212	946	4136	52.85	19.39	-	72.24	18	-
5111	-	5032	-	2667	60.55	9.33	3.42	77.30	-	19
5141	-	1367	4250	2255	51.89	24.81	2.44	79.14	20	-
Average	5.1	2551	1724	2555	31.44	17.59	2.97	52.00	22	17