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

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A Preliminary Report
of
LIVESTOCK COSTS AND RETURNS
From
Data Secured in 1932
on the
FARM ACCOUNTING ROUTE
in
STEVENS COUNTY, MINNESOTA

By

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SOURCE OF DATA

Method of Study

The Division of Agricultural Economics of the University of Minnesota, The West Central Agricultural Experiment Station at Morris, and the Bureau of Agricultural Economics of the United States Department of Agriculture are co-operating in an accounting study of twenty-four farms in Stevens County in West Central Minnesota. This study was started March 1, 1932. Farms which are representative of the area were selected in cooperation with the county agricultural agent, Mr. Frank Douglass, and Mr. Allen W. Edson of the West Central Experiment Station. The farmers cooperating in this work keep a complete record of cash receipts and cash expenditures, a daily record of the labor used on each crop and class of livestock, a record of the farm produce used in the house, and other significant facts about the farm operations. The data collected are sent to the central office at University Farm, St. Paul, where a detailed set of records for each farm is kept. From these records, the costs presented in this Preliminary Report of Livestock Costs and Returns have been computed. All data presented are preliminary and may be subject to later analysis and revision. Data on crop costs and returns have been presented in Mimeographed Report No. 56, Division of Agricultural Economics, and a summary of crop and livestock data and financial returns will be published in Mimeographed Report 59, Division of Agricultural Economics.

Description of the Area

Stevens County is located in the west central portion of the state. All of the county lies within the glaciated area, the northwestern part lying within the bed of the glacial Lake Agassiz. As a result of glaciation, the topography is for the most part flat to gently rolling with numerous sinks and

depressions, in many of which stagnanat water stands all year. The level areas are large and in wet years some difficulty is experienced in farming the land that has not been artificially drained with ditches or tile. The soil material is high in lime and due to the fine testure, the leaching has not extended below an average depth of two feet. Liming is seldom needed, even for alfalfa. In most of the county, the soil is very productive if well drained.

The climate is marked by wide variations in temperature. The growing season approximates 133 days and the average annual rainfall is about 24 inches, two-thirds of which comes in the growing season. A mixed type of farming pre-vails. Corn, oats, barley, wheat, flaxseed and some rye are grown. Alfalfa and wild hay are the principal roughages. Sweet clover is grown for both pasture and hay. Beef cattle, dairy cattle, hogs and poultry are found thnout the county. Recently, the raising of turkeys has become an important enterprise on many farms.

Description of the Farms

The average size of the farms studied was 352 acres. This is approximately 35 per cent larger than the average for the county as given in the 1930 census. The 1930 census lists the farms varying from 260 to 499 acres in size as being the most numerous group in Stevens County. Approximately 82 per cent of the farm acreage is in harvested crops. Approximately 49 per cent of the crop acreage was in oats, barley and wheat, 27 per cent in corn, 13 per cent in hay, and 9 per cent in flax. Fifty-seven per cent of the acreage of corn was husked, 23 per cent was cut and shocked, 14 per cent was put in the silo, and 6 per cent was harvested with livestock. According to the census, 47 per cent of the crop acreage in Stevens County was in wheat, oats and barley in 1929, 23 per cent was in corn, 14 per cent in hay, and 3 per cent in flax. Sixty-seven per cent of the corn in the county was husked, 23 per cent cut and shocked, 4 per cent put in the silo, and 7 per cent hogged or grazed off.

Of the twenty-four farms studied, four were owned by the operator, two were rented, and eighteen were partly owned and partly rented. Thirty-eight per cent of the total land operated was rented. Both share and cash rental leases were employed.

METHODS OF COMPUTING AND PRESENTING DATA

The comparative costs and returns for each of the different classes of livestock maintained in 1932 are presented in this preliminary report. All data are shown on the basis of a standard unit such as one head or 100 pounds gain in weight. Both quantities--pounds of feed, days of pasture, man and horse hours, pounds produced, etc.--and money cost and returns are shown. The amounts of feed, with the exception of pasture, are given in pounds rather than bushels or tons. All corn has been reduced to a shelled corn basis. The man hours include both regular daily chore labor and irregular labor such as tending sick animals, marketing livestock and livestock products, and hauling feed and bedding. The horse hours likewise include both regular and irregular work.

Local prices were used, insofar as possible, in determining the costs and returns. Marketable feeds were charged at local prices and non-marketable feeds on a comparative-feeding-value basis. No charge was made for straw or corn-stalk pasture. Man labor was figured at 15 cents per hour and horse work was charged to the individual farm at the rate determined for that farm. The shelter charge was based on the annual cost of the buildings housing livestock, prorated on the basis of the space occupied. The equipment charge is based upon

the annual cost of the particular equipment used by that class of livestock. It includes a charge for any use made of the auto and truck. Interest has been figured at 5 per cent on the average of the beginning and ending inventories. Miscellaneous cash costs include such cash expenses as veterinary fees, medicine, salt, minerals, hatching expense, fuel for brooders, incubators and tank heaters, horseshoeing, sheep-shearing, etc. The manure credit is based on a value of 25 cents per ton in the barnyard. Only the amount of the manure actually hauled out on the fields was credited to the livestock.

The value of livestock production was determined by adding the sales and the value of that used in the house to the ending inventory and then deducting from this total the sum of the beginning inventory and purchases. In the case of the different classes of cattle, transfers from one group to another were handled in the same manner as purchases and sales. The weight produced was calculated in the same manner as the value produced except that the weights were used instead of the values.

In studying the tables and in considering the income from livestock, one should keep in mind that those are comparative figures and represent charges which are not all actual cash expenses. All feed, man labor, horse work, use of buildings and equipment, and interest on the investment have been charged to the enterprise altho they may represent very little direct cash outlay. Therefore, a minus return merely means that the particular class of livestock has failed to pay the usual market prices charged for the different factors. There may be no other more profitable alternative use for the buildings, much of the labor, or for the non-marketable feeds. A return above the price of marketable feeds and cash expenses may justify continued production although these figures fail to show a gain.

The individual farm figures have been arranged in order of increasing cost or decreasing returns, so that the one with the lowest cost or the greatest return comes at the top of the table. In this way, each cooperator may quickly see how he compares with the other cooperators. The returns have been expressed in several ways. The gain is the amount left after deducting all the charges listed in the table. The return over feed cost is what is left after deducting the feed cost from the value of the product, excluding manure. In other words, the return over feed cost and the manure are what the farmer has to pay him for his labor, the horse work, shelter, equipment, interest and miscellaneous cash costs. The return per hour represents what the enterprise returned for each hour of man labor used by it, after all charges except labor had been deducted. In each case, a minus (-) indicates a failure to meet the particular expenses involved.

Cattle

The cattle enterprise was divided into the separate classes and tables are presented for cows, feeder cattle, and miscellaneous or other cattle. Finally a table is shown for the entire cattle enterprise.

Cows. The cow herds were divided into three groups upon the basis of method of handling. Herds of cows of dairy breeding which were handled with particular emphasis on butterfat production were called dairy herds. Herds composed of mixed breeds which were kept for raising calves as well as producing butterfat were classed as general purpose herds. Herds which were kept primarily for the raising of beef calves were called beef-breeding herds. Because the major emphasis with both the dairy and general purpose herds was on butterfat production, the data for these two groups appear in the same table.

Factors of Cost and Return for Cows (Per Head) - Stevens County, 1932

Farm No.	Pounds of Feed					Dairy Herds	Value of Dairy Products					Price per lb.B.F.	
	Corn	Small grain conc.*	Hay	Fodder & legume	Other & stover		Total conc.	Total roughage**	Man hours	Horse	Sold	Used	
082	282	2712	-	1311	482	1567	-	2994	3360	142	279	142.4	12.9 \$60.48 \$4.59 \$14.73 \$79.80 \$.264
132	1013	1940	888	1476	104	357	5655	3841	3822	131	327	169.0	7.1 64.06 3.81 13.19 81.06 .212
231	563	2295	34	1959	-	1971	2571	2892	4787	145	225	140.6	17.7 47.13 1.83 12.37 61.33 .221
012	3	2195	15	1862	680	1238	4736	2213	5359	120	201	120.8	5.0 30.39 6.18 9.23 45.80 .183
013	-	2192	-	1425	1968	3247	-	2192	6640	153	189	172.3	8.2 28.95 5.63 11.54 46.12 .187
193	-	2921	-	1055	4024	1193	-	2921	6272	159	234	285.7	15.0 36.50 5.60 14.70 56.80 .190
051	654	2086	211	4678	-	4964	-	2951	9642	143	199	210.4	17.3 36.62 3.72 13.25 53.59 .217
102	198	1541	47	3415	615	706	4272	1786	6160	145	147	163.3	8.8 25.19 2.30 7.59 35.08 .197
Average	339	2235	149	2148	984	1905	2154	2723	5755	142	225	175.6	11.5 41.16 4.21 12.08 57.45 .209

Average

General Purpose Herds	Value of Dairy Products					Price per lb.B.F.						
	735	5588	152	175	165.7							
041	144	581	10	1270	1590	2728	16.4 20.56 11.27 8.31 40.14 .179					
111	337	428	-	1328	457	1607	-	765	3392	143	144	123.3 17.6 19.33 7.55 7.65 34.53 .196
201	22	1261	3	581	1044	-	5300	1286	3392	104	142	110.9 - 20.81 3.66 7.02 31.49 .185
131	1127	1230	-	305	61	-	6044	2357	2381	146	192	109.3 1.6 24.06 10.86 9.15 44.07 .181
101	88	246	33	568	482	397	3337	367	2559	152	85	108.8 4.1 11.58 2.95 6.54 21.07 .183
081	350	1100	-	2785	515	1586	-	1450	4886	152	190	185.9 8.8 21.26 12.24 12.15 45.65 .172
261	-	576	-	475	1610	654	2753	576	3657	153	104	144.3 11.0 12.97 5.90 5.38 24.25 .190
181	59	827	17	765	1684	4793	-	903	7242	118	168	170.3 20.5 24.79 1.91 9.63 36.33 .181
032	-	1038	-	899	-	1744	4599	1038	4176	150	157	201.2 4.5 23.98 1.99 10.65 36.62 .186
182	45	2190	20	2032	-	7182	-	2255	9214	176	179	173.4 14.2 22.75 11.10 7.76 41.61 .177
011	1180	990	55	1401	1330	3557	-	2225	6288	136	163	205.4 26.4 22.96 10.86 11.84 45.66 .194
192	140	1503	-	1195	329	940	5514	1643	4302	139	126	131.2 9.1 18.02 2.76 7.51 28.29 .182
Average	291	998	11	1133	759	2099	2296	1300	4756	143	154	152.5 11.2 20.26 6.92 8.63 35.81 .183

*Bran, middlings, oilmeal and dairy feed.

**Three pounds of silage considered equivalent to one pound of dry roughage.

Aver- age	32.29	26.34	.54	4.93	5.23	2.23	.72	3.41	75.69	2.10	.30	2.40	73.29	57.45	-15.84	25.16	.06
General Purpose Herds																	
0041	13.99	24.85	.76	.99	.70	1.30	.08	.20	42.87	2.63	-	2.63	.40	.24	40.14	-.10	26.15
11111	12.57	18.50	.93	2.41	2.46	1.50	.17	-	38.54	.79	2.00	2.79	35.75	34.53	-1.22	21.96	.14
2001	17.09	16.64	-	4.47	2.42	1.49	.32	-	42.43	1.87	.39	2.26	40.17	31.49	-8.68	14.40	.07
1311	20.43	16.40	.11	15.67	2.66	2.18	.02	-	57.47	1.75	1.42	3.17	54.30	44.07	-10.23	23.34	.06
1001	12.06	16.30	.21	2.98	2.49	1.19	.07	-	35.30	1.03	.41	1.44	33.86	21.07	-12.79	9.01	.03
081	26.29	27.88	.54	1.81	2.23	1.89	.50	-	61.14	1.14	1.34	2.48	58.66	45.65	-13.01	19.36	.08
261	12.58	21.64	.53	1.53	1.66	1.21	.12	5.39	44.66	1.01	-	1.01	43.65	24.25	-19.40	11.37	.02
1181	21.80	25.54	1.17	9.65	1.78	1.47	.42	-	61.81	1.93	.88	2.81	59.00	36.33	-22.67	14.53	.02
032	19.60	30.18	.25	7.80	1.43	1.90	.57	.30	62.08	2.43	-	2.43	59.65	36.62	-23.03	17.02	.04
1182	34.42	26.01	1.19	.30	4.27	1.97	.31	-	68.47	.77	1.32	2.09	66.38	41.61	-24.77	7.19	.01
011	23.31	30.81	1.27	3.19	3.23	1.27	.14	10.60	73.82	1.00	-	1.00	72.82	45.66	-27.16	22.35	.02
192	23.39	19.68	.42	6.61	3.76	1.55	.33	3.29	59.03	1.86	-	1.86	57.17	28.29	-28.88	4.90	-
Aver- age																	
19.80	22.87	.61	4.78	2.43	1.58	.25	1.35	53.97	1.52	.65	2.17	51.80	35.81	-15.99	16.01	.05	

The costs and returns for the dairy and general purpose herds are for cows only. They neither include any feed or expense for the bull nor any credit for calves born. Due to the fact that calves were in some cases allowed to nurse for a short time, it was necessary to estimate their consumption of whole milk while nursing. It was assumed that the calves that were nursing received the same quantity of milk per day as those being hand fed. The value of the dairy products fed includes all milk and skimmilk fed to calves as well as to the other classes of livestock. The butterfat per cow was calculated by dividing the total butterfat utilized (sales plus used in the house plus fed to livestock) by the average number of cows in the herd. Calculated in this manner, the butterfat production may be materially less than that obtained by dairy herd improvement associations because in the latter case no allowance is made for waste and shrinkage.

In comparing the dairy herds with the general purpose herds, it will be noticed that, on the average, the cows in the dairy herds received over twice as much grain and approximately one thousand pounds more roughage per cow than the cows in the general purpose herds. The dairy cows produced an average of 71 pounds of butterfat more than the general purpose cows. Fifteen per cent more man labor was used per cow in the dairy herds.

There is practically no difference between the dairy herds and the general purpose herds in the return over all costs and the return per man hour. The dairy herds afforded a means of marketing more feed and labor per animal. It is interesting to note that both the largest gain and the largest loss occurred in the dairy herds.

Within the dairy herds, generally speaking, the largest returns or smallest losses were associated with high butterfat production per cow and high butterfat production per cow was usually associated with the feeding of relatively large quantities of grain. Probably one of the main reasons for the low butterfat production on farm 102 was the small quantity of grain fed.

Beef Breeding Herds. The beef breeding herds are kept primarily for raising beef calves. For this reason, the cost of the bull is included with the cost of the cows and the data are presented on a per head basis for the entire breeding herd (page 7). The credit for dairy products fed does not include any whole or skimmilk fed to calves. The entire cost of the cows and bull, less any credit for manure or dairy products is charged against the calves raised. The cost per calf is obtained by dividing the net cost by the calves raised. Two things are of importance in profitably maintaining a beef-breeding herd, first; economical feeding and second, a high percentage calf crop.

Feeder Cattle. This class includes the cattle being fattened for market and covers only the feeding period. A number of farms fattened one or two animals for sale or for home butchering. These farms were eliminated from the tables for feeder cattle (page 8) through the exclusion of all farms on which less than 1000 pounds gain in weight was attained during the feeding period. In two cases there were no sales of feeder cattle during the year and therefore a selling price is not given for these farms. Due to the impossibility of determining the pork credit for feed picked up behind cattle, this item was omitted from all calculations. Two things stand out with regard to the feed used. The first of these is the small amount of oilmeal or high-protein feed fed, and the second is the relatively large quantities of corn fed. The lack of oilmeal is partially offset by the feeding of legume hays.

Factors of Cost for Beef Breeding Herd - Stevens County, 1932
(per head, including the bull)

Farm No.	Pounds of Feed						Pasture days	Hours Man	Hours Horse	Value of Dairy Products Sold	Used	Fed	Total
	Corn	Small Oil-	Hay	Fodder	Silage	Total conc.							
	grain meal	Legume	Other	&	roughage*								
133	-	324	9	310	1.84	7.23	4895	633	2849	147	43.8	8.1	\$5.21 \$1.35 \$.99 \$.55
191	17	75	-	1211	.24	5.20	5502	92	3539	143	17.4	1.5	1.15 1.74 .15 3.02
021	315	996	-	1073	-	1641	-	1311	2714	149	46.4	7.3	.07 3.25 .65 3.97
031	-	567	-	586	1.56	2125	4167	587	4263	120	80.7	8.6	1.95 2.19 .44 4.58
Average	35	571	2	795	91	1252	3646	653	3354	140	47.6	3.4	2.10 2.13 .55 4.78

*Three pounds of silage considered equal to one pound of hay.

Cost per Head of Maintaining Breeding Herd - Stevens County, 1932

Farm No.	Cost per Head						Dairy prod.	Manure prod.	Appreciation	Total cost	Calves raised per calf	Cost
	Feed	Man labor	Horse work	Shelter	Equipment	Int. & 5% cash						
133	\$15.18	\$6.56	\$2.47	\$2.03	\$2.18	\$2.26	\$27.30	\$7.55	\$0.94	\$2.06	\$10.55	\$16.75 .65 \$25.68
191	14.77	2.62	.69	5.31	.01	3.18	.12	3.27	29.37	3.02	1.99	- 5.01
021	14.10	7.26	.53	3.75	.59	1.60	.14	1.04	29.01	3.97	1.49	- 5.46
031	15.69	12.10	.55	4.44	1.13	2.22	.24	-	36.37	4.58	1.07	- 5.65
Average	14.93	7.13	.41	3.88	.59	2.30	.19	1.08	30.51	4.78	1.37	.52 6.67 23.84 .74 32.22

Factors of Cost and Return for Feeder Cattle - Stevens County, 1932
(Per 100 pounds produced)

Farm No.	Lbs. produced	Pounds of Feed						Total roughage*	Pasture days	Hours Man Horse	Average Gain selling per day price lb.
		Corn grain	Small oilmeal	Hay	Fodder & Silage	Total conc.	Total roughage*				
		Legume	Other stover								
131	20460	.746	.176	-	.124	.15	-	.270	.922	.229	\$.5.84
191	14535	.298	.347	-	.198	-	-	.12	.645	.202	.4
081	4035	.659	.87	-	.95	-	8	746	.103	-	.3.96
032	8990	.335	.317	-	.55	-	254	.485	.652	-	.7
031	1640	.311	.835	-	.74	.45	356	.217	.1146	.547	.1.1
192	1500	.1254	-	-	-	-	457	-	1254	.437	.5.5
182	16545	.306	.644	6	.500	.24	1136	-	.956	.1660	.6
181	1250	.748	.28	9	.57	.51	224	-	.785	.333	.3
133	15655	.542	.204	7	.30	.35	123	567	.753	.377	.9
021	1935	.1079	.20	-	.103	-	493	-	.1099	.596	-
Average	8654	.628	.266	2	.124	.17	303	.155	.896	.496	1
											4.4
											1.6
											5.06**
											1.60

*Three pounds of silage considered equal to one pound of dry roughage.
**Average for farms selling feeder cattle.

Cost and Return per Hundred Pounds for Feeder Cattle - Stevens County, 1932

Farm No.	Feed	Man- labor	Horse work	Shel- ter	Equip- ment	Int. 5%	Misc. cash	Total expense	Manure credit	Net produced	Gain over fed	Return per hour
131	\$.4.76	\$.44	\$.03	\$.38	\$.28	\$.26	\$.01	\$.6.16	\$.26	\$.5.90	\$.4.28	\$.5.42
191	3.83	.20	.02	.14	-	.40	.01	4.60	.04	4.56	6.78	2.22
081	2.66	.49	.05	.11	.03	.30	.04	3.68	.16	3.52	5.22	1.70
032	4.23	.83	.06	.65	.03	.38	.01	6.19	.30	5.89	5.80	-.09
051	9.89	1.40	.09	.02	1.25	.73	.09	13.45	.09	13.36	12.54	-.62
192	3.33	.87	.19	.22	.18	.65	.05	5.49	.33	5.16	3.93	-.1.23
182	6.35	.55	.21	-	.05	.32	.06	7.54	.05	7.51	5.68	-.1.83
181	2.70	.87	.10	.90	.13	.28	.03	5.01	.14	4.87	2.40	-.2.47
133	4.19	.46	.10	.24	.01	.19	.02	5.21	.16	5.05	1.48	-.5.57
021	3.22	.45	.15	-	.05	.30	.03	4.20	.06	4.14	-.02	-.4.16
Average	4.52	.65	.10	.27	.20	.38	.03	6.15	.15	6.00	5.40	-.60

1.53	.4	.30	.5	\$.5.84	1.53
1.70	.7	.3.96	.7	1.97	1.70
2.19	.1.1	5.50	.1.1	2.19	2.19
1.25	.5.8	4.0	.4.0	1.51	1.25
1.51	-.7	3.7	.7	1.51	1.51
1.14	2.5	4.65	2.5	1.14	1.14
1.67	1.8	-	1.8	1.67	1.67
1.56	2.1	4.11	2.1	1.56	1.56
1.43	2.1	2.82	2.1	1.43	1.43
1.60	1.6	5.06**	1.6	1.60	1.60

Other Cattle. Data for other cattle are presented for the farms on which dairy or general purpose herds were kept (pages 10 and 11). Other cattle include all cattle except the cows and feeders. It represents primarily the heifers being raised for replacement altho in some cases one or two calves being fattened for sale or home butchering are also included. It will be noticed that the average loss per head was almost twice as much for the dairy herds as for the general purpose herds. With the low price for dairy cows and the market discount on beef of dairy breeding during the past year, the raising of dairy calves has been relatively unprofitable. However, the danger of introducing abortion or other diseases when cows or heifers are bought makes it advisable to continue raising herd replacements, particularly from high producing cows.

The general purpose herds were at a comparative advantage due to lower costs and a slightly higher value of product.

All Cattle. Expenses and returns for the entire cattle enterprise, including cows, feeders and other cattle, calculated on a per animal unit basis are presented (pages 12 and 13). In these statements any milk used by calves is omitted both from the feeds used and the value of dairy products fed to livestock. A study of the tables shows the lowest feed consumption per animal unit for the beef herds and the highest for the dairy herds. The pasture is low on the beef herds primarily because of a greater proportion of the cattle being feeders which were dry lot fed. The amount of man labor used per animal unit was decidedly higher with the dairy herds than either of the other two groups. The shelter cost was likewise higher for the dairy herds than the others, indicating the general use of more expensive shelter.

In the matter of gain or return over all costs, the general purpose herds showed the smallest average loss and the dairy herds the largest. However, most of the difference in loss was due to differences in labor and shelter charges which, in most cases, involved no cash outlay. The dairy herds had the largest return over feed cost, while the beef herds failed to return even the cost of the feed. Both the dairy and general purpose herds returned something above feed cost.

Sheep

In the tables (page 14) for sheep, the number of head is the average number of mature head for a year when two lambs up to six months of age are considered equal to one mature sheep. The weight produced per head was calculated by dividing the total weight produced by the average number of head. There was a net loss in weight on Farm 011. The fleece weight was calculated by dividing the total clip by the number of sheep sheared. The per cent death loss was arrived at by dividing the number of deaths by the total number of individual sheep or lambs, regardless of the length of time that they were on the farm. The lambs raised per ewe is the number of lambs raised to six months of age divided by the number of ewes at lambing time. The high death loss on lambs was largely the result of unfavorable weather at lambing time. The high death loss of mature sheep was primarily the result of old age. With low prices for aged ewes, the cooperators felt that it was unprofitable to market them. If these ewes were kept and produced a lamb and a fleece, the farmers felt they would be money ahead. If the ewes died they would lose the feed but feed was cheap.

Factors of Cost for Other Cattle - Stevens County, 1932
(Per head)

Cost and Return per Head of Other Cattle - Stevens County, 1932

Farm No.	Feed	Man labor	Horse work	Shelter	Equip-ment	Int. & 5% cash expense	Misc.	Total	Manure credit	Net expense	Value of product	Gain
013	13.18	2.42	.09	3.18	.03	.61	.02	19.53	.94	18.59	15.26	-3.35
231	14.16	2.61	.42	3.62	.70	1.07	.11	22.89	.24	22.65	13.37	-9.28
012	13.06	2.09	.09	2.08	-	.83	.50	18.65	.78	17.87	5.83	-12.04
102	16.03	2.66	.24	5.23	.51	.72	.25	25.64	.44	25.20	11.34	-13.86
193	16.54	3.09	.26	-	.03	.79	.07	22.78	.96	21.82	6.63	-15.19
082	17.69	2.95	.30	1.29	.22	.68	.33	23.46	.48	22.98	7.40	-15.58
051	23.18	4.50	.40	4.27	.20	1.02	.06	33.63	1.11	32.52	5.98	-26.54
132	15.28	4.26	.10	4.39	.21	.74	.31	25.29	2.02	23.27	.67	-32.94
Average	16.39	3.07	.24	3.03	.24	.80	.21	23.98	.87	23.11	7.02	-16.09
<u>General Purpose Herds</u>												
201	12.43	1.79	-	4.07	.23	.76	.18	19.46	.77	16.69	16.11	-2.58
111	10.61	2.37	.41	.82	.14	.69	.08	15.12	.36	14.76	8.60	-6.16
192	11.72	2.08	.23	.28	-	.39	.23	14.93	.94	13.99	7.39	-6.60
081	14.21	2.40	.19	1.04	.48	.81	.22	19.35	.67	16.68	10.36	-7.82
181	16.06	4.04	.29	2.91	.64	.61	.17	24.72	.99	23.73	15.00	-8.73
101	9.57	1.58	.10	1.86	.12	.92	.27	14.42	.24	14.18	5.11	-9.07
261	7.71	2.51	.21	.93	.09	.58	.02	12.05	.27	11.78	2.26	-9.56
041	12.64	4.52	.45	.27	.25	.56	.03	18.72	-	18.72	8.16	-10.56
032	13.52	2.65	.09	2.08	-	1.00	.12	19.46	1.03	18.43	7.25	-11.18
011	14.78	3.62	.45	-	.24	.54	.08	19.71	-	19.71	8.24	-11.47
Average	12.32	2.75	.24	1.43	.22	.69	.14	17.79	.53	17.26	8.89	-8.57

Factors of Cost for All Cattle - Stevens County, 1932
(Per animal unit)

Farm No.	Corn grain	Small Mill-feeds	Hay	Legume	Other	Pounds of Feed			Total conc.	Total roughage*	Pasture days		Hours	
						Dairy	Fodder & stover	Herds			days	Man	Horse	
082	211	1852	-	863	635	1614	-	2063	3112	162	102.1	12.9		
132	797	1608	640	1524	206	235	4939	3045	3612	135	129.6	6.6		
231	734	1600	21	1625	69	1974	1675	2355	4226	149	97.2	16.3		
012	104	1836	10	1344	750	1286	4189	1950	4776	170	88.3	4.8		
C13	766	1828	-	1178	1617	3014	-	2594	5809	208	138.2	7.5		
193	35	2361	-	947	3629	876	-	2396	5452	172	187.3	13.0		
102	143	1267	30	2744	496	601	3768	1440	5097	188	113.8	7.6		
051	494	1705	129	4174	238	4359	-	2328	8771	154	148.3	15.6		
Average	410	1757	104	1800	955	1745	1821	2271	5107	167	125.6	10.5		
131	3602	1080	-	627	83	-	2386	4682	1505	31	33.9	2.6		
041	125	548	8	1490	1776	3365	-	681	3631	179	151.6	19.1		
111	372	501	-	1335	482	1593	-	873	3410	258	88.1	17.4		
182	1088	2463	24	2201	107	4625	-	3575	6933	62	28.4	10.7		
081	1446	1069	-	1794	244	958	-	2535	2996	166	94.6	6.8		
201	635	1463	4	801	931	-	5729	2102	3642	163	74.6	-		
101	225	437	16	506	571	316	2670	678	2283	169	61.4	3.8		
032	825	1508	-	744	14	1592	3779	2333	3610	132	108.3	5.6		
192	744	1168	-	833	207	1220	4162	1912	3647	157	77.2	10.3		
261	90	502	-	328	1633	640	3536	592	3713	200	96.6	10.5		
181	901	758	19	546	1175	3170	-	1678	4891	152	107.8	15.4		
011	708	1327	37	387	1044	2791	-	2072	4722	136	123.2	21.2		
Average	897	1070	9	1008	689	1689	1839	1976	3999	150	87.1	10.3		
191	517	648	-	1125	26	Beef Herds	3595	1165	2683	130	15.6	1.8		
133	1237	862	20	240	178	656	\$8360	2119	2361	149	32.1	6.2		
021	964	559	-	1025	-	1652	-	1523	2677	177	28.3	7.3		
031	365	1377	12	554	303	1706	3317	1754	3669	129	78.5	7.4		
Average	771	861	8	736	127	1037	2693	1640	2848	146	58.6	6.2		

*Three pounds of silage considered equivalent to one pound of dry roughage.

Cost and Return per Animal Unit of All Cattle - Stevens County, 1932

Farm No.	Feed	Man labor	Horse work	Shel- ter	Equip- ment	Int. & 5%	Misc. cash expense	Total	Manure credit expense	Net	Product		Return over feed			
											Dairy	Herd				
082	\$21.49	\$15.32	\$.46	\$2.92	\$4.75	\$1.55	\$.64	\$47.13	\$3.52	\$43.61	\$5.59	\$45.12	\$50.71	\$.71	\$.29	.22
132	31.25	19.45	.21	5.63	5.47	2.72	1.10	65.83	2.52	63.31	6.47	50.99	57.46	-5.85	26.21	
231	25.54	14.58	.79	5.00	4.07	2.06	.47	52.51	.83	51.68	7.63	35.65	43.28	-8.40	17.74	
012	25.50	13.24	.20	4.26	1.57	1.95	.87	47.59	1.66	45.93	3.00	26.31	29.31	-16.62	3.81	
013	27.83	20.72	.37	7.34	3.59	1.55	.06	61.46	2.82	58.64	10.78	28.42	39.20	-19.44	11.37	
193	26.61	28.09	.59	1.88	2.25	2.24	.49	62.15	1.71	60.44	3.16	28.47	31.63	-28.81	5.02	
102	26.32	17.07	.52	7.38	3.30	1.51	.90	57.00	.71	56.29	1.04	19.84	20.88	-35.41	-5.44	
051	36.60	22.25	.81	6.96	2.92	2.39	.25	72.18	1.86	70.32	.68	29.08	28.40	-41.92	-8.20	
Average	27.64	18.84	.49	5.17	3.49	2.00	.60	58.23	1.95	56.28	4.62	32.99	37.61	-18.67	9.97	
								General Purpose Herds								
131	25.84	5.08	.18	4.55	1.89	1.61	.02	39.17	1.51	37.66	46.53	7.70	54.23	16.57	28.39	
041	15.47	22.74	.88	.96	.71	1.39	.09	42.24	2.12	40.12	7.37	28.96	36.33	-3.79	20.86	
111	14.17	13.23	.94	2.72	1.60	1.51	.17	34.34	.79	33.55	9.99	18.05	28.04	-5.51	13.87	
182	26.40	4.26	.90	.14	.74	1.41	.25	34.10	.17	33.93	24.64	3.26	27.90	-6.03	1.50	
081	20.92	14.19	.42	1.57	1.29	1.80	.41	40.60	1.15	39.45	15.80	16.48	32.28	-7.17	11.36	
201	20.48	11.19	-.	6.86	1.60	1.64	.37	42.14	1.86	40.28	17.54	15.13	32.67	-7.61	12.19	
101	12.51	9.21	.20	3.11	1.38	1.40	.28	28.09	.72	27.37	4.65	8.10	12.75	-14.62	.24	
032	22.55	16.25	.33	6.09	.68	2.33	.32	48.55	2.35	46.20	18.47	11.20	29.67	-16.53	7.12	
192	19.90	11.58	.48	3.52	1.90	1.39	.37	39.14	1.81	37.33	7.06	11.20	18.26	-19.07	-1.64	
261	12.33	14.50	.50	1.79	1.00	1.25	.09	31.46	.83	30.63	.48	11.01	11.49	-19.14	-.84	
181	19.67	16.17	.88	7.62	1.43	1.43	.35	47.55	1.75	45.80	12.81	13.44	26.25	-19.55	6.58	
011	18.91	18.50	1.02	1.60	1.82	1.10	.14	43.09	.50	42.59	3.97	17.44	21.41	-21.18	2.50	
Average	19.10	13.07	.56	3.38	1.34	1.52	.24	39.21	1.30	37.91	14.11	13.50	27.61	-10.30	8.51	
								Beef Herds								
191	16.42	2.34	.10	4.36	.10	2.80	.16	26.28	1.35	24.93	17.54	1.92	19.46	-5.47	3.04	
133	18.38	4.81	.48	1.69	.80	1.69	.22	28.07	.93	27.14	11.63	3.86	15.49	-11.65	-2.89	
021	13.32	4.25	.53	3.06	.23	1.71	.13	23.28	1.57	21.71	7.59	1.62	9.21	-12.50	-4.11	
031	20.88	11.78	.48	5.59	.95	2.23	.64	42.55	.85	41.70	18.98	2.94	21.92	-19.78	1.04	
Average	17.25	5.80	.40	3.67	.53	2.11	.29	30.05	1.18	28.87	13.93	2.59	16.52	-12.35	-.75	

Factors of Cost and Return for Sheep - Stevens County, 1932
(Per mature sheep*)

Farm No.	Weight No. of heads, lb.	Pounds of Feed					Pasture days	Hours Man	Fleece weight Sheep	% death loss	Lambs raised per ewe
		Corn	Corn grain	Other hay	Fodder	Silage					
133	106	.77	150	.61	.3	.2	153	.9	211	.161	152
192	12	.55	-	.51	-	-	376	-	51	.376	142
102	82	140	.53	.94	.24	.224	85	132	.147	.377	164
231	99	49	24	.23	-	8	119	.46	.47	.142	170
051	57	.33	--	.21	.166	-	849	-	.21	.1015	150
031	25	.98	.11	.29	.53	-	205	.185	.40	.300	.173
132	78	.23	.5	.7	-	-	257	.206	.10	.326	.166
181	13	.56	-	.28	-	-	40	.464	-	.28	.504
011	7	.7	.8	-	-	-	.36	-	.8	.36	.190
Average	53	58	28	35	25	30	283	.64	.63	.360	.163

*Two lambs considered equivalent to one sheep.

**Three pounds of silage considered the equivalent of one pound of hay.

Farm No.	Feed	Man labor	Horse work	Sheep shelter	Cost and Return per Sheep - Stevens County, 1932			Production Wool Total	Return over feed
					Total	Misc.	Int. cash expense	Net credit expense	
133	\$1.16	\$.37	\$.04	\$.04	\$.05	\$.09	\$.22	\$1.93	\$.79
192	1.17	.40	.09	.09	.27	.18	.15	.2.26	1.49
102	1.88	.49	.06	.18	.03	.19	.12	.2.95	.19
231	.87	.30	.04	.18	.04	.19	.16	.1.78	.01
051	2.04	.45	.12	.16	.02	.19	.10	.3.06	.07
031	1.09	.35	.05	.06	.05	.18	.03	.1.81	-
132	1.34	.47	.03	.24	.22	.27	.03	.2.60	.08
181	1.61	1.37	.12	1.34	.16	.22	.24	.5.06	.10
011	.53	1.11	.05	-	.40	.22	.35	.2.66	-
Average	1.30	.59	.07	.24	.14	.19	.15	.2.68	.05

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*Two lambs considered equivalent to one sheep.
**Three pounds of silage considered the equivalent of one pound of hay.

With low prices for both wool and sheep and short pasture necessitating the feeding of more hay and grain, the returns were low.

Hogs

Fall pigs were raised on six of the farms studied, but only on three of the farms was the proportion of the total pigs farrowed in the fall large enough to be significant. As the data for these farms were comparable in other respects, they were included in the tables (pages 16 and 17). The pigs per litter is the number of pigs raised to six months of age plus the pigs sold or butchered at less than six months of age divided by the number of farrowings. The average market weight is the average weight for all pigs and hogs sold. The price received per hundred pounds is the average price received for all hogs sold. The pounds produced include any gain in weight for breeding hogs and likewise the expenses and receipts include those for the breeding herd. The data do not include any charge for feed salvaged from feeder cattle. The low feed expenditure on Farm 131 is partly the result of the hogs following feeder cattle.

In the table of money costs and returns (page 17), the gain is the difference between the net expense and the selling price. The return over feed is obtained by deducting the feed cost from the selling price. Calculated in this manner, the effect of any gain or loss in inventory values due to a change in the price level is eliminated.

Although on the average there was a loss on hogs, on all but three farms there was some return over feed cost and on three-fourths of the farms the return was large enough to pay the other costs and leave something for the labor. Relatively, the hog enterprise was one of the more profitable enterprises.

Chickens

The data for chickens are presented on the basis of one hundred chickens (pages 18 and 19). In a few instances a small number of ducks or geese were raised. In such cases, the feed, labor, other expenses and the receipts are included with the chickens and the number of chickens adjusted accordingly. The amount of meat produced was calculated in the same manner as for feeder cattle and for hogs. The cost per dozen eggs was calculated by deducting from the total cost all income from the production and sale of meat and dividing the remainder by the number of dozens of eggs laid. The selling price per dozen eggs was obtained by dividing the total cash receipts for eggs by the total number of dozens sold. Portable brooder houses were included with the equipment rather than with the buildings. For this reason, the equipment charge on a particular farm may be large and the shelter charge small or vice versa. The data presented show a wide range between farms in each of the factors. Six of the cooperators followed a sanitation system and used other good methods. On these farms less grain and more skimmilk

Table 1

Relation of Better Methods to Cost and Returns
per 100 Chickens

	Grain lb.	Skimmilk equive- lent, lb.	Eggs per hen	Net ex- pense	Value of product	Gain
Better methods	5421	4451	95	\$92.91	\$83.57	-\$9.34
All others	5857	4041	85	89.73	72.34	-17.39

Factors of Cost and Return for Hogs - Stevens County, 1932

(Per hundred pounds produced)

Farm No.	Pounds produced	Corn	Pounds of Feed			Skimmilk equiv.*	days	Pasture		Hours		Pigs per litter	Average market weight lb.	Price received per cwt.
			Small grain	Middlings	Total conc. oilmeal			Man	Horse	days				
131	12358	156	53	-	209	236	5	1.4	.1	4.6	209	\$2.44		
021	20686	212	137	-	349	19	34	1.6	.1	5.5	229	2.35		
193	20025	340	93	-	433	53	37	1.7	.5	6.4	215	2.68		
082	11651	244	46	-	290	336	8	2.0	.2	6.0	256	2.69		
051	13184	200	202	-	402	-	3	2.5	.1	5.2	266	2.36		
032	26535	204	260	-	464	9	28	1.7	.1	6.3	254	2.28		
133	22552	259	157	1	417	91	24	1.3	.3	8.3	237	2.67		
081	34367	124	229	-	353	47	24	2.1	.2	6.8	278	2.63		
191	22564	222	177	-	399	35	19	1.5	.2	6.1	204	2.85		
182	11292	16	297	-	313	111	-	2.1	.2	6.9	188	3.00		
201	13682	253	255	2	510	18	25	2.9	-	4.9	279	2.10		
111	4850	138	282	-	420	81	-	2.8	.3	6.7	227	3.15		
051	18151	277	175	-	452	189	22	3.1	.3	5.2	217	2.64		
181	9088	364	133	-	497	50	-	4.7	.5	4.7	198	2.38		
102	8240	120	246	4	370	298	31	3.3	1.4	6.2	270	2.26		
012	13541	318	143	-	461	291	34	3.0	.3	5.6	305	2.67		
011	3997	208	272	-	480	-	-	3.1	.6	5.8	121	2.72		
132	16330	223	107	17	347	504	25	2.7	.3	5.4	242	2.52		
231	19660	393	101	-	494	559	22	2.5	.7	4.4	213	2.53		
192	15832	360	159	-	529	297	10	3.5	.1	5.5	293	2.47		
013	10210	308	324	-	632	78	48	3.9	.4	5.6	209	2.88		
041	4893	303	227	-	530	333	52	5.7	.1	6.3	90	2.78		
101	7515	632	292	-	924	46	41	3.1	.2	6.4	181	2.51		
261	5170	382	357	6	745	31	64	7.5	.7	8.5	226	3.36		
Average	14516	261	197	1	459	155	23	2.9	.3	6.0	225	2.62		

*One pound of tankage or meat scraps considered equivalent to 10 pounds of skimmilk.

Cost and Return per 100 Pounds of Hogs Produced - Stevens County, 1932

Farm No.	Feed	Man labor	Horse work	Shel- ter	Equip- ment	Int. @ 5%	Misc. cash	Total expense	Manure credit	Average selling price	Gain over feed	Return per hour
131	\$1.01	.21	\$.01	\$.01	\$.09	\$.08	\$.09	\$1.40	\$.09	\$1.31	\$1.43	\$.96
021	1.33	.15	.01	-	.11	.05	-.01	1.65	.01	1.64	1.02	.86
193	1.44	.25	.02	-	.23	.04	.06	2.04	.08	1.96	2.24	.57
082	1.48	.30	.01	.11	.09	.03	.15	2.17	.02	2.15	1.21	.42
031	1.48	.37	.01	.15	.13	.05	-	2.19	.02	2.17	2.36	.23
032	1.84	.25	.01	.16	.03	.05	-	2.34	.12	2.22	2.28	.19
133	1.66	.20	.02	.03	.31	.06	-	2.28	.04	2.24	2.67	.48
081	1.62	.32	.01	.13	.11	.03	.14	2.36	.01	2.35	2.63	.28
191	1.86	.22	.01	.15	.08	.06	-	2.38	.01	2.37	2.83	.46
182	1.99	.51	.01	-	.09	.09	.03	2.52	-	2.52	3.00	.38
201	1.87	.44	-	-	.31	.04	.02	2.68	.04	2.64	2.10	-
111	1.90	.42	.01	.03	.17	.05	.08	2.66	.02	2.64	3.15	.35
051	1.97	.46	.02	.10	.13	.08	.03	2.79	.04	2.75	2.64	.11
181	1.54	.70	.03	.18	.13	.05	.15	2.78	.03	2.75	2.38	.07
102	2.23	.49	.10	-	.16	.02	.03	3.03	.03	3.00	2.26	-
012	2.27	.45	.01	.08	.05	.11	.08	3.05	.04	3.01	2.67	.34
011	2.25	.46	.03	.18	.10	.08	-	3.10	.02	3.08	2.72	.04
132	2.36	.40	.01	.12	.15	.08	.09	3.21	.04	3.12	2.52	.03
231	2.58	.58	.03	.31	.13	.06	-	3.49	.02	3.47	2.53	-
192	2.50	.52	.01	.06	.41	.09	.05	3.74	.03	3.71	2.47	-
013	2.78	.59	.02	.18	.14	.07	.02	3.80	.05	3.75	2.88	-
041	2.57	.85	-	.18	.04	.05	.24	3.93	.05	3.88	2.78	-
101	3.21	.47	.01	.17	.17	.07	-	4.10	.01	4.09	2.51	.21
261	2.92	1.12	.03	.09	.07	.10	-	4.33	-	4.33	3.36	.02
Aver-	2.03	.43	.02	.10	.14	.06	.05	2.83	.03	2.80	2.62	.09

Factors of Cost and Return per Hundred Chickens* - Stevens County, 1932

Farm No.	Size of Flock	Pounds of Feed						Hours	Meat produced per hen	Eggs produced per hen	% hatch ⁺	Per Dozen Eggs						
		Laying hens	Other	Corn grain	Small Bran Midds.	Total meat feeds	Skim-milk scrap & milk tankage						Man	Horse	Cost cents	Selling price, cents		
013	231	259	1171	3529	98	41	4839	44	2995	3743	111.6	3.7	628	110	75	5.0	13.6	
182	29	27	850	1429	-	89	2368	-	3143	219.6	13.4	709	82	70	3.6	10.4		
192	159	86	731	4334	82	10	5157	127	1286	3445	223.4	4.8	510	90	45	9.8	12.2	
181	137	62	1238	5844	100	37	7219	18	-	306	347.5	3.5	680	48	67	9.3	10.6	
191	207	142	1027	4917	-	72	6016	-	708	103.2	1.3	459	80	53	9.8	11.4		
051	96	90	1264	4018	204	108	5594	210	4235	7805	196.5	12.9	752	102	29	11.6	10.0	
011	119	49	1983	3357	42	20	5402	-	2092	2092	159.1	15.8	235	92	19	11.5	10.6	
032	44	31	1792	5280	-	133	7205	-	5884	5884	338.7	1.0	770	126	49	12.7	12.4	
082	231	114	2329	3398	-	426	6153	309	1391	6644	132.7	7.2	235	104	-	14.5	12.6	
201	128	172	2800	2446	995	117	6358	237	1941	5970	189.1	-	742	115	56	19.2	16.9	
041	61	49	1171	4996	-	45	6212	-	7264	7264	243.6	2.3	393	166	20	11.7	9.3	
021	110	116	1499	3791	100	133	5523	137	754	3083	111.6	3.5	551	72	58	16.2	10.5	
012	142	116	1215	4223	39	78	5555	322	1137	6611	112.9	3.7	336	92	43	15.9	11.9	
132	57	51	2644	3665	-	33	6342	-	1903	1903	298.1	11.3	719	62	-	18.1	9.0	
081	125	58	1331	2332	49	-	3712	-	4656	4656	173.5	2.6	434	67	74	17.5	10.0	
131	195	69	2715	1741	-	-	4456	-	4392	4392	88.3	2.7	95	84	65	15.1	10.6	
133	59	70	564	5370	-	-	5934	78	5064	6390	185.7	2.9	442	107	46	16.3	10.1	
001	105	59	1400	5674	-	36	7110	-	3072	6072	136.4	2.4	402	77	49	22.1	11.1	
031	73	181	2888	4660	-	472	8020	138	1181	3527	145.9	7.2	577	62	-	40.1	9.8	
231	92	61	1208	3080	385	-	4671	122	5105	7179	143.5	6.7	305	61	66	30.1	14.9	
261	49	66	1412	4353	191	-	5956	76	3431	4723	302.6	19.8	729	80	74	29.2	9.2	
193	157	125	1725	4198	378	142	6443	343	5101	10932	236.7	1.7	246	58	49	38.6	15.0	
Aver-	age	118	93	1589	3938	121	90	5738	98	3170	4840	190.9	5.9	498	88	57	17.1	11.5

*Two birds under 6 months of age considered as one chicken.

**Skimmilk plus 17 times meat scraps and tankage.

+Chickens hatched per hundred eggs set.

Cost and Return per Hundred Chickens - Stevens County, 1932

Farm No.	Feed	Man labor	Horse work	Shel- ter	Equip- ment	Int. @ 5%	Misc. cash expense	Total credit	Manure expense	Net	Product			Return over feed	Return per hour		
											Eggs	Total	Gain				
013	\$27.34	\$16.74	\$.18	\$5.51	\$4.16	\$1.56	\$6.97	\$62.46	\$.56	\$61.90	\$49.95	\$52.63	\$102.58	\$40.68	\$75.24	\$.51	
132	18.53	32.94	1.13	1.71	8.36	2.11	6.70	71.48	.45	71.03	59.35	36.93	96.28	25.25	77.75	.26	
192	27.69	33.50	.22	9.21	9.60	2.01	4.41	86.64	1.22	85.42	40.23	55.23	95.46	10.04	67.77	.19	
181	33.31	52.12	.20	14.85	2.88	1.95	3.75	109.06	1.51	107.55	45.02	71.27	116.29	8.74	82.98	.18	
191	34.41	15.48	.08	4.71	4.02	1.85	4.84	65.39	.72	64.67	26.79	43.22	70.01	5.34	35.60	.20	
051	39.11	29.48	.67	4.84	11.83	1.78	7.04	94.75	1.21	93.54	43.53	45.74	89.27	-4.27	50.16	.13	
011	33.08	23.86	.75	4.00	5.12	1.29	11.22	79.32	1.19	78.13	15.53	58.25	73.83	-4.30	40.75	.12	
032	44.95	50.80	.05	25.33	1.35	2.39	7.93	132.80	2.33	130.47	55.25	67.39	122.84	-7.83	77.69	.15	
082	46.01	19.90	.26	10.44	21.30	1.91	7.51	107.33	1.16	106.17	24.12	71.06	95.18	-10.99	49.17	.07	
201	44.98	28.36	-	12.00	17.94	2.10	26.80	132.18	1.67	130.51	57.63	61.24	116.87	-11.34	73.89	.09	
401	42.20	36.54	.11	12.22	9.77	1.85	2.77	105.46	.45	105.01	21.64	69.32	90.96	-14.05	48.76	.09	
021	33.98	16.74	.26	5.95	15.49	1.55	10.30	84.27	1.66	82.61	35.06	31.16	66.22	-16.39	32.24	-	
012	39.10	16.93	.15	-	7.09	1.86	7.38	72.51	1.16	71.35	5.77	48.66	54.43	-16.92	15.33	-	
132	24.05	44.72	.35	8.33	2.46	1.96	3.43	85.30	2.08	83.22	34.29	27.11	61.40	-21.82	37.35	.08	
031	24.79	26.03	.16	2.49	7.39	3.12	8.66	72.64	2.18	70.46	9.15	39.04	48.19	-22.27	23.40	.02	
131	25.05	13.25	.18	13.64	4.85	2.56	1.08	58.61	4.92	53.69	-23.89	53.82	29.93	-23.76	6.88	-	
133	41.99	27.84	.17	3.53	7.43	2.17	5.43	83.56	1.16	87.40	41.12	22.47	63.59	-25.61	21.60	.02	
101	44.71	20.46	.12	13.76	15.53	1.88	9.70	106.16	1.68	104.48	19.15	42.89	62.04	-42.44	17.33	-	
031	48.97	21.88	.46	6.19	5.06	1.13	5.31	69.00	.62	86.33	29.19	14.74	43.93	-44.45	-5.04	-	
231	35.27	21.52	.31	7.37	2.35	2.49	14.59	63.90	2.45	81.45	-4.06	37.56	33.50	-47.85	-1.77	-	
261	36.60	45.39	.95	-	36.91	2.16	7.13	129.14	.22	128.92	50.20	27.32	77.52	-51.40	40.92	-	
193	50.66	35.50	.07	.64	6.32	2.03	13.07	108.29	1.51	106.78	16.17	30.50	46.67	-60.11	-3.99	-	
Aver-	age	36.13	23.63	.31	7.58	9.42	1.99	8.00	92.06	1.46	90.60	29.60	45.80	75.40	-15.20	32.27	.07

were fed per hundred chickens, more eggs were secured per hen and the loss was much smaller than on the others.

Turkeys

The turkey flocks on the farms studied were kept primarily for the production of meat. With the exception of one farm, the production of turkey eggs for sale was of little importance. For this reason, the data for turkeys are presented on the basis of one hundred pounds gain in weight (pages 21 and 22).

Sanitation and the use of clean ground is of major importance with turkeys. Good methods including clean range and liberal feeding of protein were used on seven of the fourteen farms. The results are indicated in Table 2. There is a difference of over \$13 per hundred pounds in the net returns.

Table 2

Relation of Good Methods to Cost and Returns for Turkeys (Per 100 Pounds Produced)						
	Man hours	Total concen- trates	Skimmilk equiva- lent	Feed cost	Net cost	Gain
		lb.	lb.			
Sanitation and better methods	16.9	684	981	\$4.65	\$9.91	\$2.83
Common methods	45.8	1147	673	6.77	16.11	-10.58

Work Horses

The farms were divided into two groups for the presentation of the data on work horses (page 23). One group consists of the farms on which tractors were used for drawbar work and the other group is composed of the rest of the farms. The farms on which tractors were used were larger and raised more acres of crops per horse than the farms without tractors. There is remarkably little difference between the averages of the two groups in amount of feeds used, hours worked and costs per hour of horse work. The data in the table show that in general the farms on which the horses were worked the most hours were the ones which had the lowest cost per hour.

Tractors

The tractors were divided into two classes, namely, two-plow and three-plow tractors. The number of four-plow tractors used was too small to provide any significant comparisons and for that reason were omitted. The costs are presented on the basis of a ten-hour day (page 24). The cost per hour can be obtained by dividing the cost per day by ten. The state gas tax is not included in the fuel cost as it was quite generally refunded. Miscellaneous cash includes cash paid for repairs, parts, etc. Depreciation is the difference between the value at the beginning and end of the year.

Factors of Cost and return for Turkeys - Stevens County, 1932
(Per hundred pounds produced)

Farm No.	Corn grain	Small Mill feeds**	Pounds of Feed			Skim-milk conc.	Skim-milk equiv. ⁺	Hours			% Hatch [†]	Average selling price per lb.
			Coml. feeds	Meat scraps	Total			Man	Horse			
082D*	251	418	-	10	25	156	679	581	7.0	.1	62	\$.138
012D	323	453	-	10	23	79	786	470	10.6	.5	66	.129
192C	95	349	-	18	-	363	462	363	20.6	.6	27	.150
111D	208	545	36	3	50	187	792	1037	13.3	.5	46	.145
182A	-	619	-	-	-	293	619	293	20.3	-	35	.125
081B	232	550	42	-	-	853	824	853	22.4	.2	59	.130
021B	230	625	6	-	7	20	861	139	11.2	-	45	.115
201D	108	313	64	-	19	535	485	858	14.0	-	49	.144
101B	460	569	-	-	-	607	1029	607	22.2	-	60	.107
013A	578	586	6	65	3	346	1235	397	54.1	.1	54	.122
231C	277	265	217	3	91	1162	762	2709	30.2	.5	54	.125
011A	222	104	-	-	-	-	-	-	-	-	-	-
261B	289	867	65	-	19	137	1221	460	60.4	-	48	.113
193A	1076	1604	57	-	57	1848	2737	2817	121.1	-	40	.091

Aver-age

511	562	35	8	21	470	916	827	31.3	.5	49	.125	

*Farms divided into four groups on the basis of weight produced. Group A produced less than 500 pounds per farm, Group B from 500 to 1499 pounds, Group C from 1500 to 2500 pounds, and Group D over 2500 pounds.

**Millfeeds include bran and middlings. Commercial feeds include mash, scratch, and oatmeal. Meat scraps also includes tankage. Skimmilk includes dried buttermilk adjusted to a liquid basis.

+Skimmilk equivalent is the pounds of skimmilk plus 17 times the pounds of tankage or meat scraps.

†Poults hatched per 100 eggs set.

Cost and Returns per 100 Pounds of Turkeys Produced - Stevens County, 1932

Farm No.	Feed	Man labor	Horse work	Shel- ter	Equip- ment	Int. & 5%	Misc. cash	Total expense	Product		Gain over feed	Return per hour
									Turkeys	Eggs	Total	
082D	\$4.25	\$1.05	\$	-	\$	-\$	\$.40	\$.10	\$.15	\$5.95	\$12.88	\$8.63
012D	3.82	1.59	.02	-	.67	.12	.47	6.69	12.21	5.52	8.39	.67
192C	3.08	3.09	.03	-	1.68	.18	.27	8.33	13.37	5.04	10.29	.39
111D	5.06	2.00	.02	-	1.16	.15	1.68	10.07	12.67	1.08	13.75	.43
182A	2.49	3.04	-	-	.68	.20	-.	6.41	8.96	.90	9.86	.32
081B	5.09	3.36	.01	-	1.03	.26	.65	10.40	13.64	-	13.64	.29
021B	4.73	1.67	-	-	.21	.18	.06	6.85	9.89	-	9.89	.42
201D	3.88	2.11	-	-	1.56	.15	2.73	10.43	12.18	.01	12.19	.28
101B	5.60	3.33	-	-	.52	.20	.01	9.66	9.53	-	9.53	.14
013A	5.86	8.11	-	-	.44	.25	.61	15.27	9.45	-	9.45	.04
231C	7.38	4.53	.02	1.42	1.19	.26	2.70	17.50	10.51	.64	11.15	.35
011A	1.74	4.70	.23	-	.63	.45	.30	8.05	1.65	-	1.65	1
261B	6.48	9.06	-	-	3.92	.48	4.11	24.05	6.89	3.57	10.46	-.02
193A	20.48	18.17	-	-	2.59	1.21	-.	42.45	-12.14	-	-12.14	-.02
Aver- age	5.71	4.70	.02	.10	1.19	.30	.98	13.00	8.69	.44	9.13	-.87
											3.42	.03

22

Cost of Horse Work per Horse - Stevens County, 1932

Farm No.	Feed		Man		Feed		Man		Shelter		Equip-ment		Int.		Misc. cash		Total cost		Credit manure & cost		Net worked		Hours per hour		Crop acres appre-	
	Hay	Grain	Pasture	hr.	1b.	1b.	day																			
Farms With Tractors																										
132	1500	1864	106	61.2	\$13.16	\$9.18		\$2.25	\$5.43	\$2.78	\$1.11		\$1.25		\$34.16		\$2.67		\$31.49		1001 $\frac{1}{4}$		\$0.031		77.6	
012	4511	5068	5	52.2	32.30	7.83		5.10	4.66	2.02	.14		2.55		54.60		2.81		51.79		1222 $\frac{1}{2}$.042		84.1	
193	3810	4795	112	48.4	29.43	7.26		5.00	4.97	3.25	.12		3.33		53.36		1.71		51.65		1138		.045		41.3	
192	3596	3553	60	41.4	24.39	6.22		8.36	3.99	2.81	.22		9.23		55.22		2.77		52.45		1141 $\frac{3}{4}$.046		46.1	
231	3091	1780	93	50.2	15.35	7.52		5.62	2.33	2.07	.11		5.62		38.62		.06		38.56		810 $\frac{1}{4}$		C48		50.1	
101	4784	4086	51	62.5	30.86	9.37		4.50	4.02	2.45	.07		6.00		57.27		2.95		54.32		1055 $\frac{3}{4}$.051		37.6	
032	5734	2715	43	78.8	21.98	11.83		5.71	3.36	1.85	.35		4.29		49.37		2.36		47.01		816 $\frac{1}{4}$.058		47.0	
133	4935	2418	56	31.4	24.39	4.71		2.73	5.53	2.55	.12		7.95		47.98		3.55		44.43		763 $\frac{1}{2}$.058		54.4	
191	6442	3197	30	53.3	26.41	7.99		7.83	5.94	3.99	—		3.48		55.64		4.04		51.60		869 $\frac{1}{4}$.059		35.9	
081	4050	3460	103	92.4	28.27	13.85		10.00	4.80	3.48	.35		2.14		62.89		2.00		60.89		985		.062		51.5	
031	5565	2632	70	64.7	20.85	9.70		8.10	3.38	1.81	.18		7.50		51.52		1.17		50.35		787 $\frac{3}{4}$.064		63.0	
131	4430	5603	37	50.9	28.19	7.64		13.42	13.78	7.87	1.86		—		72.76		6.43*		66.35		974 $\frac{1}{2}$.068		57.2	
021	3185	3677	115	26.8	21.38	3.21		5.38	3.55	3.32	.84		7.27		44.95		2.41		42.54		584 $\frac{1}{2}$.073		33.5	
182	4712	1553	93	42.1	15.07	6.31		.44	4.46	5.27	.11		16.34		48.00		.20		47.80		569 $\frac{1}{2}$.084		54.9	
Average	4310	3314	70	54.0	23.72	8.04		6.03	5.01	3.25	.33		5.50		51.88		2.51**		49.37		908 $\frac{1}{2}$.054		52.4	

Farm No.	Feed		Man		Feed		Man		Shelter		Equip-ment		Int.		Misc. cash		Total cost		Credit manure & cost		Net worked		Hours per hour		Crop acres appre-	
	Hay	Grain	Pasture	hr.	1b.	1b.	day																			
Farms Without Tractors																										
082	2233	3565	103	29.1	17.92	4.36		4.17	3.08	3.78	.33		5.33		38.97		5.08		33.89		945		.036		33.1	
041	7704	3334	81	76.8	22.41	11.51		1.20	2.78	1.82	.29		7.00		47.01		2.65		44.36		966 $\frac{1}{4}$.046		21.3	
011	3938	2774	103	72.2	19.41	10.82		3.72	3.82	2.71	.40		9.04		49.92		1.81		48.11		997		.048		37.1	
261	6930	2400	88	68.8	23.81	10.31		1.50	2.35	3.41	—		1.25		42.63		2.00		40.63		855 $\frac{1}{4}$.048		35.1	
013	5047	2541	63	58.5	22.41	8.78		3.04	3.58	2.96	.06		6.76		47.59		2.57		45.02		912 $\frac{1}{2}$.049		48.0	
051	4272	3964	82	55.6	27.45	8.33		9.00	7.03	3.96	.57		5.00		61.32		1.88		59.44		1140		.052		40.8	
111	1844	1451	100	31.9	11.84	4.79		3.00	4.11	1.40	2.42		5.83		33.39		.75		32.64		607 $\frac{3}{4}$.054		20.9	
181	3816	3607	53	70.6	23.52	10.58		6.59	3.58	2.05	.50		8.00		54.82		1.00		53.82		942 $\frac{1}{2}$.057		31.0	
102	3733	5109	96	74.5	27.93	11.18		6.92	6.50	4.11	.25		13.61		70.57		.71		69.86		1007 $\frac{1}{2}$.069		34.6	
Average	4391	3194	85	59.8	21.85	8.96		4.36	4.09	2.91	.54		6.87		49.58		2.05		47.53		930 $\frac{1}{2}$.051		33.5	

*Includes \$4.72 appreciation.

**Includes \$.34 appreciation.

Summary of Tractor Costs - Stevens County, 1932

Farm No.	Hours Worked			Fuel, oil & grease	Misc. cash	Depreciation	Int. & 5% labor	Use of truck & auto	Per Ten-Hour Day			Gallons of Fuel	Oil	Kero-	Distil-	Total gal.
	Drawbar	Belt	Total													
Two-Plow Tractors																
081	546	324 $\frac{1}{2}$	870 $\frac{1}{2}$	\$2.23	.17	\$1.03			\$3.75	12.8	-	2.0	14.8	.6		
270	1057 $\frac{1}{4}$	99	1156 $\frac{1}{4}$	2.58	.66	.86	.20	.10	.02	4.42	19.1	-	19.1	.9		
101	42	113 $\frac{3}{4}$	155 $\frac{1}{4}$	2.84	.49	-	.80	.41	.13	4.67	16.6	-	16.6	1.2		
031	369	258	627	2.53	-	2.23	.53	.14	.02	5.45	20.0	-	20.0	.2		
133	686	-	686	2.43	.07	2.92	.51	.07	.01	6.01	10.2	5.3	-	15.5	.8	
193	189 $\frac{1}{4}$	71	260 $\frac{1}{4}$	3.32	.38	1.92	.24	.29	.06	6.21	11.2	12.2	-	23.4	.5	
131	532 $\frac{1}{2}$	229	761 $\frac{1}{2}$	3.53	2.23	-	.33	.08	.05	6.22	25.0	-	25.0	.8		
132	425 $\frac{1}{4}$	52	477 $\frac{1}{4}$	2.54	.08	3.14	.71	.10	.06	6.63	18.8	-	18.8	1.0		
Average	481	143 $\frac{1}{2}$	624 $\frac{1}{2}$	2.75	.51	1.51	.44	.16	.05	5.42	16.7	2.2	.2	19.1	.8	
Three-Plow Tractors																
192	122 $\frac{1}{4}$	344 $\frac{1}{2}$	466 $\frac{1}{2}$	3.01	.21	1.07	.29	.11		4.69	22.0	-	-	22.0	.7	
012	460 $\frac{1}{2}$	274 $\frac{1}{2}$	735 $\frac{1}{2}$	3.44	.19	1.36	.48	.13	.01	5.61	20.0	5.0	-	25.0	.8	
271	533 $\frac{1}{4}$	327 $\frac{1}{4}$	860 $\frac{1}{2}$	3.84	.31	1.16	.32	.10	.02	5.75	30.2	-	-	30.2	1.1	
182	421 $\frac{1}{4}$	226 $\frac{1}{2}$	648	3.06	.09	1.95	.63	.05	-	5.76	7.7	.6	18.4	26.7	1.0	
231	345 $\frac{1}{2}$	53	398 $\frac{1}{2}$	4.68	.31	2.51	1.19	.08	-	8.77	21.1	-	11.3	32.4	1.7	
191	43	196 $\frac{1}{4}$	239 $\frac{1}{2}$	3.83	.16	4.17	1.77	.01	-	9.94	25.0	-	-	25.0	1.3	
021	161 $\frac{1}{2}$	71	232 $\frac{1}{2}$	3.34	-	8.16	2.37	.01	-	13.88	24.2	-	-	24.2	1.1	
Average	298 $\frac{1}{4}$	213 $\frac{1}{4}$	511 $\frac{1}{2}$	3.60	.18	2.91	1.00	.07	.01	7.77	21.5	.8	4.2	26.5	1.1	

Interest was calculated on the average of the beginning and ending inventories. There were no tractors bought during the year. Man labor is the value of the time the regular farm laborers spent repairing, servicing, etc. The use of the truck or auto in getting repairs, etc. for the tractor is charged on a mileage basis. The expenses as given do not include a charge for shelter. Some of the tractors were housed and some were not. In any case, the charge for shelter would be of relatively little importance.

Automobiles

The cost of operation of the automobiles is presented on a per farm basis rather than per car (page 26). In three cases, the data involve more than one car. On a few farms the cars were traded during the year. The labor charge is the value of the time the regular farm workers spent repairing and servicing the cars. In a few cases, a small amount of horse work is included. Miscellaneous cash includes any cash paid for repair work, insurance, parts, tires, and greasing when hired done at a service station. All oil and gasoline, regardless of whether bought in bulk or small lots at service stations is included under gasoline and oil. Because the records cover the period March first to February twenty-eight and the time for buying auto licenses was extended, the miscellaneous cash costs do not include the license, except where a new car was bought and a license obtained for the remainder of 1932. The purchase price of cars bought is included in the miscellaneous cash. The miles driven are speedometer miles in practically all cases with the exception that any miles travelled in getting repairs for the auto are omitted. It will be noticed that as with tractors, there is no charge for shelter. Because of the difficulty of obtaining a satisfactory charge for shelter and its comparative lack of importance, it was omitted from the calculations.

		Summary of Auto Costs per Farm - Stevens County, 1932							
Farm No.	Labor	Gasoline & oil	Misc. cash	Decrease in inventory	Interest (5%)	Total cost	Miles driven	Cost per mile (cents)	Miles per gallon of gasoline
192	\$11.92	160.56	\$249.81	\$75.00*	20.62	367.91	17333**	2.1	19.1
061	14.74	139.61	84.92	150.00	23.75	462.12	18349**	2.5	16.7
082	2.02	129.08	108.04	-	12.50	251.64	9978	2.5	13.8
111	2.18	81.08	147.50	-35.00*	5.88	201.64	7921	2.5	19.0
012	3.26	102.95	30.60	25.00	6.88	168.69	6150	2.7	10.0
031	9.26	104.30	62.65	100.00	7.50	283.71	9846	2.9	16.9
191	-	156.17	107.02	200.00	42.50	505.69	17267**	2.9	20.6
193	9.51	45.16	44.15	-	1.75	100.57	3225	3.1	13.8
021	1.58	62.02	14.53	100.00	15.00	193.18	5712	3.4	15.2
261	1.88	37.43	11.05	25.00	1.88	77.24	2187	3.5	10.0
041	2.60	70.33	46.13	-	5.00	131.06	3667	3.6	11.0
201	4.80	89.72	89.01	75.00	14.38	272.91	7633	3.6	13.6
133	3.69	71.03	11.70	125.00	11.88	223.30	5997	3.7	14.9
182	9.04	109.76	43.98	-	1.25	164.03	4429	3.7	14.0
131	2.18	161.03	269.76	100.00	22.50	555.47	14580	3.8	15.0
132	1.88	78.70	76.48	150.00	16.25	323.31	8434	3.8	18.0
013	2.74	47.35	33.56	50.00	8.75	142.40	3406	4.2	14.6
101	3.79	80.81	34.76	150.00	13.75	283.11	5931	4.8	13.5
181	2.81	41.55	24.69	100.00	7.50	176.46	3265	5.4	17.1
231	1.76	59.90	60.27	125.00	36.88	283.81	4986	5.7	13.7
011	4.12	34.09	16.68	100.00	7.50	162.39	2600	6.2	14.8
051	5.10	71.78	191.21	50.00	8.75	326.84	4946	6.6	12.2
032	.75	41.59	168.15	50.00	8.75	269.24	3781	7.1	15.9
<u>Average</u>		88.09	83.73	68.04	13.10	257.68	7462	3.5	14.9

*Increase in inventory.
**More than one car used.