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 IN 1931

With Averages for 1929 and 1930

From Data Secured
on the

FARM ACCOUNTING ROUTE

in

ROCK & NOBLES COUNTIES - MINNESOTA

By

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INTRODUCTION

Method of Study

The Division of Agricultural Economics and of Animal Husbandry of the University of Minnesota cooperated with the Bureau of Agricultural Economics of the United States Department of Agriculture in a three-year accounting study of twenty-four farms in Rock and Nobles Counties in Southwestern Minnesota. This study was started March 1, 1929 and was continued through 1931. The farms were selected in cooperation with the county agricultural agents in the respective counties,- Mr. C. G. Gaylord in Rock County and Mr. C. J. Gilbert in Nobles County. Farms on which some type of beef production was a major enterprise were chosen. The farmers cooperating in this work kept complete record of cash receipts and cash expenditures, a daily record of the labor used on each crop and each class of livestock, a record of the farm produce used in the house and other detailed information regarding their business. These records were checked at least twice a month by the route man and supplemented with inventories, livestock feed records, reports of crop yields and practices and other significant facts about the farm operations. The data collected were sent to the central office at University Farm, St. Paul, where a detailed set of records for each farm was kept. From those records, the costs presented in this report have been computed. This preliminary report presents the costs and returns in 1931 for the different classes of livestock kept on these farms, and also a partial analysis of the data secured in 1929 and 1930. Averages for 1929 and 1930 are presented for comparison.

Description of Area

Rock and Nobles Counties are located in the southwestern corner of Minnesota. The soil in Rock County and the western edge of Nobles County is a wind-blown loess. This is one of the most fertile soil types in the state. The balance of Nobles County is covered with a glacial till, the prevailing soil type of the southern and central part of the state. This, too, is a productive type well supplied with lime.

Both counties are level to gently rolling with practically all of the land tillable. There are some sections, especially in southern Nobles County, that need drainage to insure regular cropping. In Rock County, there are limited areas of rock outcrop and also limited areas where the surface soil is shallow and underlain by a gravelly subsoil. These latter soils are inclined to be droughty in a dry season. The annual rainfall averages between 26 and 28 inches and the average growing season is from 130 to 140 days. According to the 1930 census, the average size of farms in Rock County was 220 and in Nobles County 208 acres. Farms between 100 and 174 acres in size are the most common in these counties, with those between 260 and 499 acres the second in number. In 1930 the average value of farm land per acre, including buildings, was $103 in Nobles County and $107 in Rock County. Only eight counties in the state reported a higher value per acre and seven of these are located close to Minneapolis and St. Paul. The average value of all farm land in the state was $69 per acre. According to the 1930 census 67% of all farm land in Nobles County and 70% of the land in Rock County was operated by tenants. Both cash and share leases are employed. Beef cattle and hogs are the principal classes of livestock raised. Corn, oats, and barley are the principal grain crops. They are raised primarily for feed altho there is a considerable surplus available for sale on many farms. The landlord's share of the crop is usually sold off the farm. Alfalfa and wild hay are the principal roughages grown.

Description of the Farms Studied

The average size of the farms studied in 1931 was 346 acres, in 1929, 323, and in 1930, 360 acres. This is approximately 62%, 51%, and 68% larger respectively than the average size of the farms in these two counties as reported in the 1930 census.

Corn, oats, barley, flax, alfalfa hay, and wild hay were the principal crops grown on the farms studied. Most of the feed raised on these farms, with the exception of the landlord's share of the crop, is fed on the farm. Only two of the farms studied in 1931 were owned entirely by the operator. Eleven farms were partly owned and partly rented by the operator. Only 34% of the land operated was owned by the operator. Both share and cash rental leases were employed.

Crop Rotation and Cropping Practices

With the high percentage of tenancy, the two year rotation of corn and small grain has persisted. Either landlords have not seen any benefit to be derived from a rotation which tends to conserve soil fertility, or satisfactory lease arrangements permitting the adoption of a more diversified cropping program have not been worked out. Approximately 45 per cent of the crop acreage on these farms was in corn, 36 per cent in oats and barley, 5 per cent in wild hay, and 6 per cent in flax, a total of 92 per cent. This leaves a possible maximum of 8 per cent in legume crops. The proportion of the acreage in legume crops was actually much less than this. These proportions agree closely with the figures for all farms in these counties as given in the 1930 census. According to the census, 43 per cent of the crop land in these two counties was in corn, 40 per cent in small grain and 5 per cent in wild hay.

On all of the farms studied in 1931, cattle, hogs, and chickens were kept and on five small flocks of sheep also. In 1931 an average of approximately 18,200 pounds of cattle and 34,500 pounds of hogs per farm was produced. Eighteen cows and a flock of 214 chickens were kept. On two of the five farms having sheep, feeder lambs were bought. In 1931, 40 per cent of the cash receipts was from cattle sold, 4 per cent from dairy products, 32 per cent from hogs, 2 per cent from sheep and 4 per cent from poultry, a total of 82 per cent from livestock and livestock products. Fourteen per cent of the receipts was from crops, chiefly corn, oats, and flax.

Price Conditions

Generally speaking, price conditions were very favorable for livestock production in 1929, less favorable in 1930 and very unfavorable in 1931. The average price received for livestock and livestock products sold by these farmers is presented in Table 1.

Table 1

Average Price Received for Livestock and Livestock Products
Rock and Nobles Counties

	1929	1930	1931
All cattle, per cwt.	$11.50	$8.70	$5.79
Hogs, per cwt.	9.53	7.81	4.42
Sheep, per cwt.	11.91	7.42	5.30
All chickens, per lb.	.19	.14	.14
Butterfat, per lb.	.43	.35	.25
Eggs, per doz.	.28	.20	.16
Wool, per lb.	.28	.16	.10

The severe decline in prices extending over the three-year period has resulted in decreasing cash incomes from the same physical amount of production.

METHODS OF COMPUTING AND PRESENTING DATA

The comparative costs and returns for each of the different classes of livestock produced in 1931 are presented in this preliminary report. Insofar as possible local prices were used in determining the costs and returns. Marketable feeds were charged at local prices and non-marketable feeds on a comparative-feeding-value basis. Man labor was figured at 30 cents per hour in 1929 and 1930 and 20 cents in 1931. 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 space occupied. The equipment charge is based on the annual cost of the particular class of equipment used by that class of livestock. Miscellaneous cash costs include veterinary fees, medicine, salt, minerals, etc. The manure credit is based on a value of 75 cents per ton in the barnyard. Only the amount of the manure actually spread on the fields was credited to the livestock.

In studying the tables and in considering the income from livestock, one should keep in mind that these are comparative figures and represent charges which are not all actual cash expenses. All man labor and horse work interest on the investment, and the use of the buildings and equipment, as well as the feed have been charged to the enterprise. Therefore, a minus return means just that

the particular class of livestock has failed to pay the 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 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. All tables have been computed on a per hundred pounds gain in weight, per animal, or some similar basis. All corn has been reduced to a shelled corn basis. The returns have been expressed in several ways. The gain or return over all costs is the amount left after deducting all the charges listed in the table. The return over feed cost is what is left after deducting feed from the total income; or in other words, it is what is left to pay for the labor, shelter, equipment, interest, and miscellaneous cash costs. The return per hour represents what the enterprise returned for each hour of man labor used in it, after allowance had been made for all charges except labor. The return per 56 pounds of grain represents what was left to pay for each 56 pounds of farm grain fed after making allowance for all other feed and all of the other charges. The unit of 56 pounds of grain was used because that corresponds to the weight of one bushel of corn.

Feeder Cattle. This class of cattle includes all cattle being fattened for market and covers only the feeding period. The return per 56 pounds of farm grain is obtained by deducting from the selling price all charges except that for farm grains fed. The result is then divided by the number of pounds of farm grains fed and multiplied by 56. Due to the impossibility of determining the pork credit for the feed picked up behind cattle, this item was omitted from all calculations. This fact should be kept in mind when studying the statements for cattle and for hogs.

Breeding Herd. The breeding herd includes the bull as well as the cows. Insofar as was possible, decreases in inventory values due to the change in price level have been eliminated for the cows which were listed on both the opening and closing inventory. The cost per calf was obtained by dividing the total cost of the herd by the number of calves raised. The calves raised per cow was obtained by dividing the number of calves raised by the average number of cows in the herd for the year. An average of more than one calf per cow may be obtained either by raising twin calves or by raising calves from cows which remain in the herd less than a full year.

All Cattle. Three more or less distinct types of beef production were found on the farms studied and averages are presented for each type. Group A is composed of the farms on which dairy and beef production were combined. Group B is composed of the farms on which more cattle are fattened than are raised in one year. The additional number was obtained either by purchase or by accumulation from past years. Group C is composed of the farms on which breeding herds are maintained for raising calves. They are primarily baby beef producers. The "value of animal product" was obtained by deducting the value of the purchases and opening inventory from the value of the sales, used in the house, and the closing inventory. The low value of animal product (in many cases a minus) is largely due to the decline in the price of cattle. The average value per hundred pounds of cattle on these farms March 1, 1931 was $7.09 and on March 1, 1932 it was $4.79, a drop of $2.30. The average inventory weight was approximately twice the weight produced which means that each 100 pounds of cattle produced was charged with a loss in inventory value of $4.60. The data for the individual farms varied from these averages. No attempt was made to eliminate the decrease in inventory values due to the price decline as was done with the breeding herd.

Hogs. It is common practice on these farms to have hogs following the cattle. However, due to the methods of handling the cattle and the practice of supplementary feeding, it was impracticable to obtain any estimate of the feed salvaged in this way. The amounts and the costs of feed presented are in addition to any salvaged behind cattle. The pigs raised per litter were calculated by dividing the number of pigs raised to market weight by the number of farrowings. The return per 56 pounds of grain was calculated in the same manner as for feeder cattle.

Sheep. The value of the product in sheep was calculated in the same manner as for all cattle, namely, by deducting the value of the purchases and beginning inventory from the value of the sheep and lambs sold, butchered, and on the ending inventory. The number of lambs per ewe was obtained by dividing the number of lambs raised by the number of ewes in the flock. The per cent of death loss of lambs is for lambs up to six months of age. After six months of age, they were considered as sheep. The large decline in lamb and wool prices resulted in losses.

Poultry. In the data presented, the equivalent in chickens was substituted for ducks, geese and turkeys. One duck was considered equal to one hen, one goose equal to two hens, and one turkey equal to three hens. Two birds under six months of age were considered equal to one mature bird.

Work Horses. The farms were divided into two groups for the presentation of work horse costs. One group comprises the farms on which tractors were used for drawbar work and the other group comprises the farms on which tractors were not used for drawbar work.

Tractor. Tractor costs are presented for both two-plow and three-plow tractors. In these statements, gasoline is charged at a price which did not include the three cent state tax even though some farmers did not claim the tax refund.

Auto. Auto costs are presented for each cooperator. These costs do not include a charge for shelter.

PLANNING THE LIVESTOCK ENTERPRISES

Two things are necessary in order to obtain the largest income from the livestock enterprises. These are, (1) the selection of the most profitable kinds of livestock and (2) the adoption of profitable practices in handling the classes of livestock chosen.

Selection of Profitable Kinds of Livestock

No two farms or farmers are exactly alike. Farms vary in the amount of pasture available, in the kind and amount of hay and grain raised, in the amount of shelter available for livestock, in the water supply, and in the adequacy of the fencing. Further, farmers vary in their likes and dislikes and in their ability to handle different kinds of livestock. For these reasons, the best selection of the particular kinds and combinations of kinds of livestock will vary with the individual farm and the farm operator. However, the results of the three years study will give valuable information for the planning of any farm livestock program.

In general, these records indicate that the hog enterprise was consistently the most profitable major livestock enterprise; that the baby-beef type of production was the most profitable type of beef production; that the attempted combination of milk and beef production found on these farms was consistently the least profitable type of beef production; and that poultry properly handled are a desirable part of the farm business. Altho the fattening of purchased cattle was the most profitable type of beef production in 1931 and the second in profitableness in 1929 and 1930, the skill in buying and selling which it requires and its highly speculative nature are such as not to recommend this type of beef production for general adoption on any very large scale. However, farmers who are particularly capable in buying and selling and who are good feeders may find the feeding of purchased cattle very profitable.

Profitable Livestock Practices

A study of the records obtained for these three years indicate the following results of different livestock practices.

Cattle

1. Breeding stock of good beef conformation and type required no more feed than low grade breeding stock but at sale time the calves from the well bred stock commanded an appreciable premium over the calves from low grade stock.

2. There was a wide variation between farms in the amount of grain and hay fed to breeding stock. The data would indicate that feed in excess of enough to keep the breeding stock in fair flesh, but not fat, brought little or no return.

3. The farmers who fed oilmeal to fattening cattle secured more economical gains than those not feeding oilmeal. A comparison of the feed expenditures is presented in Table 2.

Table 2

Relation between Amount of Oilmeal Fed and Feed Consumption per 100 Pounds Gain in Weight for Feeder Cattle,* 1930,1931

Amount of oilmeal fed per 100 lbs. gain in weight	No. of farm years	Oil-meal lbs.	Grain lbs.	Dry roughage lbs.	Pasture days
10 lbs. or less	14	3	986	370	10
Over 10 lbs.	13	27	824	266	2

*Only farms producing over 5000 pounds gain in weight included in this comparison.

At 1931 prices, the difference in total feed cost per one hundred pounds gain in weight is $1.34 in favor of those feeding oilmeal.

Hogs

1. Where complete swine sanitation was properly carried out, unit costs were materially reduced. The data for one farm illustrates what is possible in some cases (Table 3). Sanitation, to be successful, must be carried out completely.

Table 3

Expenditures per 100 Pounds Gain in Weight for Hogs, Farm A

	Man hr.	Grain lbs.	Skim-milk lbs.	Pasture days	Feed cost*	Pigs raised per litter
1929, without sanitation	2½	646	50	-	$6.48	3.8
1930, complete sanitation	1½	485	131	28	5.14	6.7

*At average prices for 1930.

2. Hogs raised under a one-litter a year system used less feed and labor per one hundred pounds gain in weight than hogs raised under a system involving both spring and fall farrowing. (See Table 4)

Table 4

Feed and Labor Used per 100 Pounds Gain in Weight for Hogs Raised under One-Litter and Two-Litter per Year Systems 1929, 1930, 1931

System	No. of farm years	Total concentrates lbs.	Skim-milk lbs.	Pasture days	Man hours
One-litter per year	42	457	46	26	2¼
Two-litter per year	23	490	59	25	2

3. When the pigs were pushed along, thereby securing more rapid gains, less feed was used for a hundred pounds gain in weight than where gains were slower (Table 5).

Table 5

Rate of Gain in Weight and Feed and Labor Used per 100 Pounds Gain in Weight for Hogs - 1929, 1930, 1931

Gain in weight per mature* hog day	Farm record years	Average gain lbs.	Total concentrates lbs.	Skim-milk lbs.	Pasture days	Man hours
Less than .9 lb.	23	.84	505	52	34	2½
.9 to 1.20 lbs.	21	1.11	460	55	23	2
1.21 lbs. and over	21	1.32	438	45	20	1¾

*Two pigs under 6 months equal to 1 mature hog.

4. Less feed and labor per pound of gain was used when from 5 to 6.9 pigs were raised per litter than when less than 5 were raised (Table 6).

Pigs Raised per Litter and Feed Consumption per 100 Pounds Gain in Weight for Hogs
1929, 1930, 1931

Pigs raised per litter	No. of farm years*	Pigs per litter	Total grain lbs.	Skim-milk lbs.	Pasture days	Man hours
3 to 4.9	23	4.2	492	70	27	2½
5 to 6.9	27	6.0	456	39	27	2

*Farms on which feeder pigs were bought were excluded from this comparison.

Sheep

1. The largest returns from sheep were received from small flocks which obtained a large part of their feed from the yards, road, and other places where this feed would not have otherwise been utilized.

2. Flocks that were culled regularly and the ewes sold before they became aged gave the greatest returns. High death loss due to old age resulted in large losses on some farms.

Poultry

1. A high death rate due to disease, largely as a result of lack of sanitation, was an important cause of low returns.

2. The raising of chickens added to the profit from the poultry enterprise. The farmers raising a large number of chickens relative to the number of laying hens had larger net returns from the poultry enterprise than those raising relatively fewer chickens.

3. High egg production per hen was an important cause of high returns from the poultry enterprise. Good breeding, careful culling, and heavy feeding of mash and skimmilk are necessary for high egg production.

By carefully studying the data for his farm in comparison with that for the other farms, each farmer will find some conditions in his livestock enterprises which may be improved with profit.

Cost and Return for Feeder Cattle - Rock and Nobles Counties - 1931
(per 100 pounds gain in weight)

Farm no.	Pounds gain	Corn, lb.	Small grain, lb.	Protein feeds, lb.	Hay & fodder, lb.	Silage, lb.	Pasture days	Hours		Feed	Labor	Shelter	Equipment	Interest	Misc. cash
								Man	Horse						
113	5080	340	93	22	66	224	-	2¾	¾	$4.25	$.62	$.34	$.25	$.58	$.06
123	12090	677	62	7	204	-	-	2½	1¼	5.93	.62	.08	.05	.35	.02
218	12475	711	-	6	216	-	-	3	¾	6.01	.69	.02	.08	.32	.07
602	20710	752	58	14	190	94	-	2½	1	6.55	.56	.72	.09	.33	.04
312	5625	667	95	4	399	-	-	4¾	3¼	6.37	1.23	.44	.02	.41	.04
419	80405	548	157	34	89	539	9	2¾	¾	7.65	.63	.24	.14	.16	.05
105	11138	467	192	1	223	-	-	4¾	3¼	5.91	1.18	1.29	.04	.54	.11
115	2435	681	210	-	193	-	14	3¾	¼	6.99	.76	.98	.31	.51	.03
502	1810	1002	-	-	442	-	20	2	1¼	7.24	.51	.71	.42	.77	.01
202	5825	755	44	22	195	483	13	4¼	1	8.70	.91	.04	.36	.42	-
104	25730	1074	168	-	319	353	34	1¼	1¾	10.55	.38	.24	.04	.04	.06
207	680	1112	75	-	243	-	-	7	¾	10.15	1.48	.05	.07	.52	.03
201	9210	806	349	-	310	-	-	4	¼	8.99	.84	.93	-	.47	.01
102	2135	824	-	-	211	1324	-	2	-	9.10	.41	1.28	.01	.62	.01
116	2205	1430	-	-	541	-	-	6¾	1¾	10.21	1.46	-	.18	.10	.01
401	19195	1175	-	12	269	134	-	3½	2¾	10.09	.98	.04	.02	1.14	.20
319	1850	1141	199	-	229	-	22	4	3	10.05	1.09	.16	.19	.69	.02
302	10820	911	333	43	250	-	-	3¾	1½	10.66	.86	.10	.37	.55	.07
301	1851	756	474	-	135	-	-	5¾	6½	9.13	1.75	3.14	1.77	.91	.01
Average															
1931	12172	828	132	9	249	166	6	3¾	1¾	8.14	.89	.57	.23	.50	.04
1930	11608	889	186	12	373	91	5	3¼	1½	12.80	1.12	.25	.15	1.13	.07

*None sold. Closing inventory value used as sale price.

Total expense	Manure	Net expense	Average selling price	Return per 56# grain
$6.10	$.83	$5.27	$6.52	$.57
7.05	.13	6.92	8.26	.46
7.19	-	7.19	7.78	.43
8.29	.38	7.91	7.31	.33
8.51	.02	8.49	6.97	.25
8.87	.35	8.52	6.48	.22
9.07	.37	8.70	7.96	.33
9.58	.12	9.46	5.82	.12
9.66	-	9.66	4.30*	.01
10.43	.29	10.14	7.31	.20
11.31	.57	10.74	5.69	.14
12.30	1.41	10.89	6.65	.20
11.24	.14	11.10	8.45	.26
11.43	.22	11.21	5.58	none
11.96	.47	11.49	4.06	.03
12.47	.73	11.74	7.09	.19
12.20	-	12.20	4.46*	.03
12.61	.14	12.47	7.06	.13
16.71	.40	16.31	5.80	none
10.37	.35	10.02	6.50	.16
15.52	.64	14.89	8.82	.32

Cost per Head for Breeding Herd - Rock and Nobles Counties - 193[illegible]

Farm no.	Corn lb.	Small grain lb.	Misc. conc. lb.	Hay & fodder lb.	Silage lb.	Pasture days	Hours Man	Hours Horse	Feed	Labor	Shelter	Equipment	Interest	Misc. cash	Deprec.	Total expense
Herds Kept Primarily for Beef Production																
201	-	114	-	509	-	248	50	¾	$9.96	$10.04	$3.34	$.56	$2.84	$.06	$7.83	$34.63
301	434	-	-	1902	-	240	60¾	6¼	20.46	12.74	1.71	.27	2.48	.62	1.65	39.93
218	-	236	-	3950	-	239	37¾	5¼	21.46	8.24	2.68	.28	3.07	.01	3.73	39.47
105	228	486	-	2947	-	233	52¾	9	23.89	11.24	1.16	.75	3.35	.32	3.84	44.55
202	148	240	-	1961	5262	241	21	3	30.41	4.40	2.76	.09	3.86	.16	2.12	43.80
123	-	216	-	4635	-	237	22¾	9	24.20	5.28	1.84	.55	3.65	.15	7.51	43.18
113	178	283	-	309	8473	241	55¼	4	29.11	11.49	2.36	.40	3.01	.84	5.20	52.41
602	272	912	-	1929	5892	227	44¼	7¼	34.70	9.33	5.35	.14	2.93	.23	-	52.68
401	191	202	4	1099	11039	168	40¾	9	34.55	9.10	6.34	.50	3.57	.02	8.59	62.67
Average																
1931	161	239	-	2138	3407	230	42¾	6	25.41	9.10	3.06	.39	3.20	.27	4.49	45.92
1930	118	267	1	2017	1212	240	39½	4	22.35	12.21	1.52	.59	4.30	.34	7.00	48.31
Herds Kept for Both Milk and Beef Production																
116	488	416	-	805	-	269	113¾	5	16.37	23.06	1.30	.64	2.41	.30	4.52	48.60
104	261	-	-	3314	1718	216	80	5¾	22.31	16.36	4.25	.69	2.85	.68	3.41	50.55
207	143	1173	-	3800	-	246	117⅓	7¾	32.71	24.19	11.89	1.39	2.94	.33	-	73.45
502	167	532	-	3347	-	249	69¼	7¼	23.19	14.53	3.28	.50	2.15	.04	1.28	44.97
115	851	668	-	1262	-	251	170¾	2⅔	25.43	34.43	7.40	1.50	2.27	.64	3.95	75.62
312	371	38	-	2755	-	243	70¼	9¾	18.19	14.87	3.44	.46	2.21	1.03	6.81	47.01
319	435	328	-	1925	-	236	62	9¾	22.40	13.33	4.90	.75	2.74	.31	9.82	54.25
501	665	878	-	4892	-	241	100	4⅓	44.92	20.35	5.15	2.49	2.63	3.87	1.59	81.00
211	684	1880	23	4526	-	221	117¾	12¼	44.87	24.73	7.33	.69	3.34	.16	13.88	95.00
318	389	1149	-	3819	-	238	188	12	31.10	38.74	10.74	.97	2.23	.59	.45	84.82
102	375	404	2	3032	9829	218	140¾	1½	49.45	28.28	12.29	1.20	3.18	.08	2.17	96.65
402	618	1201	-	2386	-	238	117¾	11¾	31.36	24.36	2.52	.78	4.17	-	25.97	89.16
302	493	2187	234	4890	-	214	146¼	3¼	50.37	29.45	3.40	1.29	3.47	1.20	7.48	96.66
419	484	1284	203	1484	6991	231	178½	4	47.82	36.07	11.18	2.57	2.79	.85	10.79	112.07
Average																
1931	459	867	33	3017	1324	237	119½	7	32.89	24.48	6.36	1.14	2.81	.72	6.58	74.98
1930	442	959	5	2656	715	247	113	6¼	34.64	34.52	4.64	1.41	3.57	.79	8.89	88.46

Dairy Products			Manure	Total credit	Net cost	Cost per calf	Calves raised per cow
Sold	Used	Fed					
$5.37	$2.21	$1.35	$.49	$9.42	$25.21	$38.20	.69
6.89	4.74	1.79	.84	14.26	25.67	41.40	.65
3.03	2.20	.20	1.46	6.89	32.58	34.66	.98
1.08	3.59	.91	.84	6.42	38.13	52.23	.76
-	2.45	.05	2.12	4.62	39.18	55.97	.73
1.02	.86	.36	1.46	3.70	39.48	49.35	.83
5.52	1.39	2.59	2.69	12.19	40.22	42.34	.98
4.32	3.52	2.02	2.52	12.38	40.30	41.98	.99
3.72	2.51	1.42	1.24	8.89	53.78	58.46	.96
3.44	2.60	1.19	1.52	8.75	37.17	45.89	.84
6.79	2.64	1.14	2.10	12.67	35.64	45.83	.80
24.81	3.07	1.45	1.99	31.32	17.28	14.90	1.23
19.35	3.91	6.73	2.67	32.66	17.89	21.82	.83
34.24	1.20	5.58	10.81	51.83	21.62	20.59	1.07
3.65	12.86	1.03	.58	18.12	26.85	34.87	.84
31.29	9.43	6.61	.99	48.32	27.30	26.00	1.16
12.43	2.78	1.03	1.22	17.46	29.55	49.25	.64
14.06	4.27	2.35	1.25	21.93	32.32	29.38	1.15
21.54	9.96	4.37	2.10	37.97	43.03	42.60	1.06
13.44	32.53	2.58	2.62	51.17	43.83	47.64	1.00
30.72	1.85	1.85	3.16	37.58	47.24	48.20	1.07
35.10	3.92	3.75	4.12	46.89	49.76	57.20	.96
31.12	1.43	3.52	2.87	38.94	50.22	73.85	.73
29.90	2.42	5.84	2.14	40.30	56.36	68.73	.89
18.23	9.11	5.93	2.58	35.85	76.22	124.95	.65
22.85	7.05	3.76	2.79	26.45	38.53	43.29	.95
32.28	7.77	5.28	3.05	48.38	40.08	59.66	.74

Cost and Returns for All Cattle - Rock and Nobles Counties - 1931
(per 100 pounds gain in weight)

Farm no.	Weight produced	Corn lb.	Small grain lb.	Com. feeds lb.	Hay & fodder lb.	Silage lb.	Pasture days	Hours Man	Hours Horse	Feed	Labor	Shelter	Equip-ment	Int. @ 5%	Misc. cash	Total expense	Manure	Dairy products
419B	89520	504	187	32	96	595	14	4 1/4	3/4	$7.75	$.94	$.42	$.15	$.20	$.07	$9.53	$.36	$.31
602C	37794	489	152	8	377	770	36	6 3/4	1 1/2	8.52	1.42	1.04	.07	.60	.15	11.80	.54	.97
218C	19465	456	37	4	430	-	45	7 1/4	1 1/4	7.14	1.70	.36	.09	.67	.08	10.04	.21	.71
115A	10595	298	185	-	263	-	60	20	1 1/2	6.88	4.04	1.53	.23	.55	.09	13.32	.24	5.08
104B	53490	535	94	-	513	426	48	4 1/2	1 1/2	8.00	.99	.33	.05	.16	.06	9.59	.52	1.11
301B	22938	139	56	-	341	-	91	7	1 1/2	5.05	1.53	.43	.18	.32	.07	7.58	.32	1.13
207A	5055	392	401	-	1021	-	78	25	1 3/4	12.61	5.14	2.15	.25	.64	.09	20.88	2.82	6.97
123C	18420	444	112	5	948	-	47	6 1/2	2 1/2	8.69	1.51	.45	.11	.87	.08	11.71	.35	.31
502A	7785	258	140	-	791	-	72	13 1/4	1 3/4	7.48	2.81	.99	.17	.69	.01	12.15	.12	2.64
312A	10940	394	96	2	706	-	56	14 1/4	3 1/4	7.29	3.10	1.51	.07	.51	.21	12.79	.35	2.24
105C	16218	368	212	1	461	-	48	12	3 3/4	8.34	2.71	1.11	.14	.92	.26	13.48	.86	.85
401B	26345	879	30	10	312	1296	26	7 1/2	3	11.33	1.83	.99	.07	1.23	.15	15.60	.99	.82
318A	8690	51	237	-	724	-	90	27 1/2	2 1/4	7.13	5.72	1.84	.16	.43	.12	15.40	.51	4.42
211A	3550	129	428	3	923	-	43	18	2 1/4	10.64	3.84	1.34	.09	.68	.03	16.62	.54	5.94
302B	16895	630	478	54	774	-	43	16 1/4	1 1/2	13.23	3.50	.38	.36	.88	.18	18.53	.40	3.59
201C	12535	592	281	-	337	-	86	14 1/2	1/4	9.49	2.95	2.06	.11	.95	.02	15.58	.28	1.83
113C	11260	217	167	10	108	2587	82	13 1/4	1 1/2	10.74	2.81	.86	.19	1.14	.09	15.83	.98	1.86
319A	12315	296	221	-	692	-	99	14	2 1/4	9.58	3.03	1.76	.16	.90	.09	15.52	.44	3.66
202	14555	347	172	9	478	1353	84	9	1 1/4	11.80	1.85	.90	.27	1.35	.64	16.81	.56	.52
102A	6475	338	118	-	771	2480	76	29 1/4	1/4	15.78	5.89	3.37	.22	.95	.02	26.23	.87	7.59
116A	7270	642	153	1	520	-	179	35 2/3	2 3/4	11.62	7.28	.59	.22	1.28	.09	21.08	.99	7.64
501A	2955	330	386	-	2059	-	155	35 3/4	2 1/2	20.46	7.33	3.11	.88	1.37	1.52	34.67	1.27	10.84
402A	3045	489	862	-	1362	-	182	56 1/4	6 1/4	21.81	11.82	1.66	.34	2.22	.43	38.28	1.63	15.77
Aver. 1931 Group																		
A***	7152	329	293	1	894	225	99	26 1/4	2 1/4	11.93	5.46	1.80	.25	.94	.25	20.63	.89	6.62
B	41838	537	169	19	407	463	44	8	1 1/4	9.07	1.76	.51	.16	.56	.11	12.17	.52	1.39
C	19282	428	160	5	444	560	57	10 1/4	1 1/4	8.82	2.18	.98	.12	.86	.11	13.07	.54	1.08
Aver. - all farms																		
1931	18179	401	226	6	652	414	76	17 1/4	2	10.49	3.64	1.27	.20	.85	.20	16.65	.70	3.77
1930	22416	375	206	6	466	137	64	14	1 1/2	9.67	3.90	.80	.16	.93	.15	15.61	.69	3.87
1929	18683	332	175	7	438	234	44	14 1/2	1 1/2	11.58	4.67	.90	.14	1.20	.12	18.61	.88	5.26

*Animal value product is the net value of animals produced after allowing for differences in inventory values.

**A minus (-) indicates a failure to cover the expenses charged.

***Group A,- farmers combining dairying and beef production; Group B,- farmers feeding more cattle than were raised; Group C,- production.

Total credit	Net expense	Animal value product*	Gain**	Average selling price
$.67	$8.86	$7.48	$-1.38	$6.34
1.51	10.29	5.10	-5.19	7.19
.92	9.12	3.67	-5.45	7.28
5.32	8.00	1.73	-6.27	5.82
1.63	7.96	1.67	-6.29	5.16
1.45	6.13	-1.25	-7.38	4.88
9.79	11.09	3.58	-7.51	6.65
.66	11.05	2.34	-8.71	7.28
2.76	9.39	.22	-9.17	-
2.59	10.20	.14	-10.06	5.77
1.71	11.77	.88	-10.89	7.96
1.81	13.79	2.31	-11.48	7.12
4.93	10.47	-1.30	-11.77	2.37
6.48	10.14	-3.08	-13.22	3.88
3.99	14.54	1.31	-13.23	6.88
2.11	13.47	-.05	-13.52	8.54
2.84	12.99	-3.10	-16.09	5.87
4.10	11.42	-4.86	-16.28	2.63
1.08	15.73	-2.68	-18.41	7.76
8.46	17.77	-1.10	-18.87	5.59
8.63	12.45	-8.19	-20.64	3.97
12.11	22.56	-4.03	-26.59	4.40
17.40	20.88	-13.14	-34.02	4.06
7.51	13.12	-2.73	-15.85	4.51
1.91	10.26	2.31	-7.95	6.08
1.62	11.45	1.47	-9.98	7.44
4.47	12.18	-.54	-12.72	5.79
4.56	11.05	4.37	-6.68	8.70
6.14	12.47	11.15	-1.32	11.50

farmers specializing in baby-beef

Cost and Returns for Swine* - Rock and Nobles Counties - 19 1

Farm no.	Pounds produced	Corn lb.	Small grain lb.	Com. feeds lb.	Tankage lb.	Total conc. lb.	Skim-milk lb.	Pasture days	Hours Man	Hours Horse	Feed	Labor	Shelter	Equip-ment	Int. @ 5%	Misc. cash	Total expense
401	30580	347	55	-	7	409	21	45	1	½	$2.62	$.26	$.16	$ -	$.10	$.12	$3.26
115	42185	370	34	-	-	404	70	19	1½	-	2.61	.28	.20	.04	.08	.01	3.22
419	69134	266	50	11	9	336	47	11	1½	¼	2.82	.30	.15	.20	.11	.10	3.68
105	29415	311	82	-	15	408	28	28	2	⅓	3.07	.42	.11	.03	.10	.02	3.75
218	33830	342	72	3	5	422	-	13	1¾	¼	3.12	.40	.03	.03	.09	.02	3.69
123	64010	343	91	4	4	442	1	9	1	¼	3.07	.24	.06	.07	.12	.21	3.77
207	19100	315	108	1	5	429	107	12	1¾	-	3.08	.38	.62	.03	.14	.14	4.39
102	9210	330	21	-	-	351	188	27	3¾	-	2.69	.73	.37	.03	.10	-	3.92
302	82460	367	27	9	19	422	51	12	1¼	-	3.39	.25	.05	.10	.14	.04	3.97
312	25085	294	96	1	2	393	18	36	2⅓	¼	2.84	.51	.25	.02	.18	.20	4.00
201	24865	374	87	-	-	461	53	19	2¼	-	3.21	.43	.09	.02	.11	.16	4.02
319	33397	307	119	2	7	435	60	46	1⅓	-	3.34	.32	.14	.03	.10	.18	4.11
116	13615	371	70	-	-	441	98	11	2	-	3.13	.40	.27	.01	.13	.23	4.17
301	25309	358	145	4	5	512	62	44	1¾	¼	3.46	.35	.11	.04	.11	.16	4.23
211	43795	316	176	3	10	505	7	33	1¼	-	3.61	.25	.20	.03	.08	.12	4.29
113	43274	274	146	4	6	430	49	33	1½	¼	3.09	.34	.20	.04	.06	.61	4.34
502	26490	327	107	-	7	441	21	27	3	¼	3.17	.62	.35	.01	.13	.08	4.36
602	35270	244	174	7	9	434	88	18	2	¾	3.40	.46	.37	.13	.10	.14	4.60
501	19470	522	83	-	5	610	89	26	2	¼	3.91	.41	.23	.08	.13	.13	4.89
202	29765	391	99	3	11	504	-	26	2	½	3.58	.45	.31	.14	.12	.19	4.79
318	11345	323	105	10	6	444	70	44	3¾	½	3.43	.79	.16	.06	.07	.28	4.79
402	32778	413	172	4	11	600	65	22	2	¼	4.42	.40	.03	.09	.18	.03	5.15
104	50070	297	208	-	2	507	111	44	1½	⅓	4.16	.30	.15	.08	.12	.28	5.09
Average																	
1931	34541	339	101	3	6	450	57	26	2	¼	3.27	.40	.20	.06	.11	.15	4.19
1930	31288	339	142	4	6	490	52	31	2	⅓	5.18	.62	.21	.08	.20	.20	6.49
1929	28414	445	106	6	5	562	41	23	2¾	½	7.14	.84	.24	.09	.32	.27	8.90

*The data presented are for 100 pounds gain in weight.

Manure	Net expense	Average selling price	Return per 56# grain	Pigs raised per litte
$.09	$3.17	$4.11	$.44	5.6
.03	3.19	3.48	.36	4.5
.10	3.58	5.14	.56	4.7
.07	3.68	4.51	.47	6.3
-	3.69	4.44	.25	4.8
.06	3.71	4.36	.44	6.7
.62	3.77	4.63	.47	5.4
.04	3.88	4.20	.39	3.8
.03	3.94	5.49	.47	6.3
.05	3.95	5.44	.57	5.8
.06	3.96	4.39	.41	4.2
.09	4.02	4.41	.35	5.5
.11	4.06	3.78	.32	4.8
.04	4.19	3.82	.28	3.2
.06	4.23	3.69	.30	5.6
.06	4.28	3.96	.30	6.9
.04	4.32	5.02	.46	5.1
.08	4.52	4.38	.35	7.2
.27	4.62	4.31	.29	4.4
.10	4.69	4.57	.34	5.4
.02	4.77	3.84	.22	6.1
.12	5.03	5.39	.40	4.7
.04	5.05	4.22	.30	3.6
.09	4.10	4.42	.40	5.2
.02	6.42	7.81	.71	5.5
.09	8.81	9.53	.74	4.9

Farm no.	No. of sheep	Grain lb.	Hay & fodder lb.	Silage lb.	Pasture days	Ho Man
401	126.94	65	66	2	241	1½
113	64.64	61	14	252	226	1¾
211	181.44	83	457	-	243	2
318	24.58	42	227	-	266	4
105	21.25	-	259	-	259	2
Average						
1931	84	50	205	51	247	2¼
1930	80	58	101	35	227	1¼
1929	106	120	113	29	251	2

*A minus (-) indicates a loss. Two lambs u

Cost and Return per Mature Sheep - Rock and Nobles Counties - 1931

rs rse	Feed	Labor	Shelter	Equip- ment	Interest	Misc. cash	Total expense	Manure	Net expense	Value of Product Sheep	Wool	Total	Gain*	Selling Price Wool per lb.	Sheep per cwt.	Lambs per ewe	% Death Loss Sheep	Lambs
1¼	$2.15	$.40	$.04	$ -	$.32	$.14	$3.05	$.07	$2.98	$.34	$.60	$.94	$-2.04	$.09	$5.42	1.06	12	9
	2.33	.44	.21	.02	.35	.54	3.89	.07	3.82	.81	.63	1.44	-2.38	.10	6.44	.98	18	21
1½	3.36	.54	.02	.03	.29	.14	4.38	.20	4.18	.11	.69	.80	-3.38	.10	5.55	1.07	10	11
	2.35	.84	1.63	.25	.27	.15	5.49	.46	5.03	.52	.97	1.49	-3.54	.11	4.29	1.13	5	6
1¾	2.30	.50	.21	.03	.32	.03	3.39	-	3.39	-1.60	1.38	-.22	-3.61	.10	4.81	1.00	-	6
1	2.50	.54	.42	.07	.31	.20	4.04	.16	3.88	.04	.85	.89	-2.99	.10	5.30	1.05	9	10
½	2.43	.45	.14	.02	.48	.20	3.72	.19	3.53	.56	.96	1.52	-2.01	.16	7.42	.90	11	17
½	3.49	.66	.21	.26	.50	.15	5.28	.06	5.22	3.22	1.34	4.56	-.66	.28	11.91	1.04	16	12

to 6 months of age considered equal to 1 mature sheep.

Cost and Return for Poultry - Rock and Nobles Counties - 1931
(per 100 chickens)

Farm no.	Size of flock	% of flock laying hens	Grain lb.	Coml. feeds lb.	Skim-milk lb.	Hours Man	Hours Horse	Feed	Labor	Shelter	Equip-ment	Int.	Misc. cash	Total expense	Manure	Net expense	Value Produced Poultry	Value Produced Eggs	Value Produced Total	Gain*
211	309	48	3937	522	588	79¼	¼	$39.08	$15.87	$11.26	$9.32	$2.51	$2.37	$80.41	$1.27	$79.14	$125.15	$34.40	$159.55	$80.41
401	308	52	4819	420	3639	76½	¼	52.13	15.36	13.64	4.69	2.63	1.46	89.91	2.43	87.48	63.33	76.72	140.05	52.57
502	197	64	1478	-	98	49	2	9.93	9.98	5.79	.77	3.23	.29	29.99	1.14	28.85	24.42	55.13	79.55	50.70
602	227	36	4028	671	2174	163¾	⅜	47.16	32.97	2.64	12.16	1.73	3.49	100.15	1.98	98.17	101.97	44.36	146.33	48.16
318	91	75	3584	604	1721	227	6½	37.33	46.02	13.19	10.20	2.46	3.13	112.33	1.65	110.68	47.30	108.35	155.65	44.97
218	227	55	2723	161	991	105	1	22.55	21.12	9.94	1.58	2.85	.44	58.48	-	58.48	56.19	44.92	101.11	42.63
102	216	53	3052	382	1070	118¾	-	30.83	23.63	-	13.40	2.74	1.23	71.83	2.19	69.64	56.99	52.05	109.04	39.40
202	378	46	3249	833	198	90⅝	1	37.42	18.15	5.81	4.66	3.69	6.94	76.67	1.68	74.99	61.48	38.83	100.31	25.32
115	270	69	1269	26	1302	54¼	-	13.58	10.83	6.67	3.36	3.38	2.96	39.78	.83	38.95	23.26	39.61	62.87	23.92
113	232	44	2648	1315	1572	95⅝	8½	50.84	19.98	19.24	7.21	2.55	10.34	110.16	1.81	108.35	63.49	66.83	130.32	21.97
319	239	66	2634	-	995	103¼	2	19.55	20.86	12.80	.27	3.42	5.02	61.92	1.19	60.73	23.44	56.79	80.23	19.50
302	231	55	4386	1039	671	96⅞	2⅛	65.19	19.55	23.90	5.12	2.89	10.67	127.32	3.90	123.42	54.47	77.86	132.33	8.91
104	341	54	2363	88	1605	62½	-	24.37	12.44	10.03	4.28	3.12	5.99	60.23	2.64	57.59	12.77	37.03	49.80	-7.79
312	97	62	2392	263	2030	146¼	1½	24.16	29.35	21.03	5.06	3.62	2.83	86.05	5.79	80.26	1.44	62.14	63.58	-16.68
207	129	78	1282	224	2104	115	-	16.19	23.02	20.93	15.58	2.74	4.38	82.84	14.53	68.31	-19.69	67.73	48.04	-20.27
501	108	89	1289	-	717	88¾	-	10.03	17.73	21.11	3.47	3.62	-	55.96	3.47	52.49	-44.17	72.88	28.71	-23.78
105	419	49	4034	286	1210	80¾	1¾	36.81	16.30	12.89	8.19	2.59	7.63	84.41	3.73	80.68	15.52	29.63	45.15	-35.53
301	39	77	954	-	638	218⅔	4⅜	7.72	47.72	36.92	1.79	2.36	-	96.51	14.41	82.10	-20.31	62.74	42.43	-39.67
201	178	75	2782	-	899	190¼	-	21.89	38.15	2.70	-	3.78	-	66.52	4.25	62.27	-46.77	64.20	17.43	-44.84
123	321	86	4628	1246	1057	102	1	54.02	20.51	17.08	10.01	3.74	6.37	111.73	3.81	107.92	-26.50	71.99	45.49	-62.43
116	99	63	1430	51	1264	191⅔	-	13.08	38.33	30.30	2.93	2.66	-	87.30	3.03	84.27	-38.59	26.05	-12.54	-96.81
419	55	69	2138	-	-	167¾	-	14.14	33.54	82.91	2.33	4.24	8.33	145.49	5.45	140.04	-106.45	70.29	-36.16	-176.20
Average																				
1931	214	62	2777	370	1207	119¼	3½	29.45	24.15	17.31	5.70	3.02	3.82	83.45	3.69	79.76	19.49	57.30	76.79	-2.97
1930	261	57	3060	395	1027	125	1¼	45.27	37.66	14.78	6.27	3.51	7.42	114.91	2.40	112.51	21.19	68.90	90.09	-22.42
1929	250	57	3700	402	479	165¼	4¾	59.67	50.46	16.92	6.39	4.15	4.61	142.20	3.96	138.24	46.40	94.75	141.15	2.91

*A minus (-) indicates a failure to cover the charges indicated.

Return over feed cost	Return per man hr.	Eggs per hen	Price recd. per doz. eggs sold
$120.47	$1.21	57	$.19
87.92	.89	85	.22
69.62	1.23	75	.14
99.17	.49	89	.18
118.32	.40	130	.14
73.56	.61	75	.13
78.21	.53	91	.13
62.89	.48	74	.14
49.29	.64	51	.14
79.48	.43	93	.21
60.68	.39	83	.13
67.14	.29	104	.17
25.43	.07	44	.21
39.42	.09	87	.13
31.85	.02	77	.14
18.68	none	65	.15
8.34	none	57	.13
34.71	.02	61	-
none	none	72	.14
none	none	75	.14
none	none	40	-
none	none	82	.16
47.34	.18	76	.16
44.82	.12	26	.20
81.48	.31	74	.28

Farm no.	Feed			Man hrs.	Feed
	Hay lb.	Grain lb.	Pasture days		
104	2165	1999	178	23	$23.00
602	2239	3342	218	44½	33.18
202	2850	3765	153	32	38.90
501	2743	2012	173	38¾	29.74
502	1821	3394	166	46¼	32.52
419	1542	4832	129	40½	44.06
319	1775	3949	163	58¾	34.64
211	4695	3244	183	51½	46.91
401	2600	3325	134	60	35.19
115	622	2027	220	37½	20.74
218	4257	2331	170	26¼	37.70
Average					
1931	2483	3111	172	41¾	34.24
1930	3115	2642	162	48	41.03
1929	3382	3229	139	57½	59.55
116	2728	3544	150	54¼	34.55
302	4176	3527	166	35½	39.53
105	2800	4111	160	52	39.37
123	5145	2648	163	34½	39.01
312	2935	2495	153	40	30.46
201	2417	2372	147	6¾	27.18
207	4872	2316	178	33	43.92
102	4835	4142	25	68½	49.29
301	5702	3771	126	46¼	47.67
318	2833	2342	179	38¾	30.55
113	4034	4315	133	54¾	45.43
Average					
1931	3862	3235	144	47½	38.81
1930	3766	3504	148	53½	49.47
1929	3582	4094	125	47	67.61
1931	3172	3173	158	44½	36.53
1930	3255	2953	155	50¾	45.07
1929	3487	3682	132	52	63.77

*Credit for horse rented out.

Cost of Horse Labor per Horse - Rock and Nobles Counties - 1931

Man labor	Shelter	Equipment	Interest	Misc. cash	Deprec.	Total cost	Manure	Colt credit	Total credit	Net cost	Hours worked	Cost per hour	Crop acres per horse
Farms on Which Tractors Were Used for Drawbar Work													
$4.59	$5.66	$4.07	$6.18	$.10	$11.34	$54.94	$1.55	$2.06	$3.61	$51.33	834½	6.2¢	21.85
8.94	4.97	3.44	4.48	1.13	3.73	59.87	3.73	-	3.73	56.14	883¾	6.3	40.76
6.45	1.60	2.57	3.83	-	8.33	61.68	1.69	-	1.69	59.99	944¾	6.4	33.56
7.77	5.87	3.94	4.00	.04	3.19	54.55	4.78	-	4.78	49.77	702	7.1	35.16
9.24	5.52	3.49	3.13	.04	8.62	62.66	1.29	-	1.29	61.37	689¼	8.9	34.33
8.08	8.41	6.94	4.27	1.84	15.20	88.80	2.57	-	2.57	86.23	932½	9.2	24.24
11.74	10.36	9.32	5.33	.18	7.50	79.07	5.02	-	5.02	74.05	780¼	9.5	34.20
10.33	1.82	3.23	5.27	.16	2.51	70.23	2.45	-	2.45	67.78	698¼	9.7	28.18
12.01	6.00	2.40	5.28	.01	19.00	79.89	3.00	-	3.00	76.89	729	10.5	33.11
7.49	10.06	3.32	2.91	.19	12.10	56.81	1.37	-	1.37	55.44	513¼	10.8	33.54
5.23	9.16	2.08	2.69	.02	15.86	72.74	1.46	-	1.46	71.28	577¼	12.3	24.14
8.35	6.31	4.07	4.31	.34	9.76	67.38	2.63	.18	2.81	64.57	753¼	8.6	31.2
14.40	6.00	3.73	4.73	.47	8.18	78.54	3.75	1.12	4.87	73.67	814¾	9.1	28.7
17.32	5.48	5.25	4.82	.49	8.67	101.58	4.41	.22	4.63	96.95	884½	11.0	28.9
Farms on Which Tractors Were Not Used for Drawbar Work													
10.84	3.07	3.01	4.18	.05	5.00	60.70	1.88	-	1.88	58.82	933½	6.3	30.50
7.13	4.46	3.56	5.66	.06	2.53	62.93	9.27	-	9.27	53.66	782¾	6.9	31.10
10.44	16.00	3.09	5.71	.28	9.44	84.33	4.50	2.22	6.82	77.51	1008¼	7.7	22.40
6.91	4.89	3.21	3.14	.26	2.79	60.21	3.55	-	3.55	56.66	699¼	8.1	21.25
8.00	8.91	5.00	4.82	.36	4.51	62.06	5.37	.23*	5.60	56.46	685¾	8.2	20.05
12.75	9.54	2.36	3.60	.06	7.22	62.71	1.68	-	1.68	61.03	738	8.3	34.27
6.63	19.22	7.66	5.20	.20	10.89	93.72	12.39	-	12.39	81.33	910½	8.9	25.39
13.70	9.75	4.20	3.88	1.18	10.00	92.00	9.28	-	9.28	82.72	907½	9.1	39.91
9.25	10.92	2.38	5.36	.21	25.77	101.56	.84	-	.84	100.72	1101½	9.2	41.20
7.76	6.67	1.84	3.21	.27	3.34	53.64	2.00	-	2.00	51.64	537¾	9.6	15.85
10.95	3.16	5.11	6.30	4.07	14.00	89.02	6.77	1.00	7.77	81.25	771¼	10.5	25.92
9.49	8.78	3.77	4.64	.64	8.68	74.81	5.24	.31	5.55	69.26	825	8.4	28.0
16.02	6.75	3.75	4.92	.38	7.97	89.26	4.64	.48	5.12	84.14	916½	9.2	28.2
17.38	7.95	6.73	5.50	.67	11.67	117.51	5.05	1.52	6.57	110.94	945	11.7	28.2
All Farms													
8.92	7.55	3.92	4.47	.48	9.22	71.09	3.93	.25	4.18	66.91	789¼	8.5	28.8
15.18	6.36	3.74	4.82	.43	8.07	83.67	4.17	.82	4.99	78.68	863½	9.1	28.4
17.35	6.77	6.02	5.17	.60	10.24	109.92	4.75	.30	5.65	104.27	916¼	11.4	28.6

Farm no.	Man hrs. servicing	Gasoline gal.	Kerosene gal.
115	40	480	70
501	13½	761	-
319	9½	675	-
218	6¼	520	41
202	6	385	-
Average			
1931	15	564	22
1930	23	530	45
602	38	1019	789
419	36	858	-
104	18	1622	350
401	10½	33	446
211	67	205	-
502	22½	135	541
Average			
1931	32¼	645	354
1930	65	396	324

Summary of Tractor Expense - Rock and Nobles Counties - 1931

Distillate gal.	Oil gal.	Depreciation	Man labor	Fuel & oil	Misc. cash	Int, @ 5%	Use of auto	Total expense	Hours Worked Draw-bar	Belt	Total	Cost per hr,	Fuel per 10 hrs, gal.	Oil per 10 hrs. gal.
				Two-Plow Tractors										
-	17	$50.00	$8.00	$69.95	$1.00	$23.75	$.37	$153.07	349¾	40¾	390½	$.39	14	.4
-	45	150.00	2.70	100.01	-	31.25	-	283.96	426½	45¾	472¼	.60	16	1.0
-	40	130.00	1.90	109.73	14.60	36.25	-	292.48	382	66½	448½	.65	15	.9
-	22	100.00	1.25	77.85	-	30.00	-	209.10	228	90¼	318¼	.66	18	.7
-	14	75.00	1.20	55.50	13.61	15.38	-	161.19	129¾	60¼	190	.85	20	.7
-	27½	101.00	3.01	82.61	5.84	27.43	.07	219.96	303	60¾	363¾	.60	16	.8
75	34	81.67	5.88	115.61	4.68	20.23	.48	229.55	309½	53½	363	.63	18	.9
				Three-Plow Tractors										
232	80¼	50.00	7.60	241.91	27.75	28.75	2.78	358.79	403¼	345½	748¾	.48	27	1.1
200	54	50.00	7.60	158.65	20.30	11.25	1.03	248.83	136¾	310	446¾	.56	24	1.2
-	46	200.00	3.60	242.80	8.60	25.00	-	480.00	294	417½	711½	.68	28	.6
336	33	160.00	2.10	130.05	-	43.00	1.11	336.26	36½	314½	351	.96	39	.9
492	73½	130.00	13.40	102.25	26.21	36.50	4.16	362.52	115½	149¼	264¾	1.37	26	2.8
-	16	120.00	4.50	77.38	16.46	36.00	.84	255.18	170¾	14¼	185½	1.38	36	.9
302	50½	126.67	6.47	158.84	16.55	30.08	1.65	340.26	192¾	258¾	451½	.75	29	1.1
322	75	125.63	19.50	173.48	16.38	31.58	5.64	372.21	218½	253¼	471¾	.79	22	1.6

Summary of Auto Costs - Rock and Nobles Counties - 1931

Farm no.	Man labor	Gasoline	Oil	Misc. cash	Interest @ 5%	Depre-ciation	Total cost	Miles driven	Cost per mile (cents)	Miles per gallon of gasoline
201	$ -	$54.15	$11.68	$23.25	$3.88	$95.00	$187.96	6359	3.0	16.1
102	.30	79.48	11.55	34.80	28.12	125.00	279.25	9280	3.0	17.2
218	5.40	51.42	5.92	66.59	8.12	75.00	212.45	6400	3.3	17.5
301	1.80	40.69	3.60	43.81	5.00	-	94.90	2852	3.3	9.5
116	.60	29.13	12.12	32.25	6.12	35.00	115.22	3063	3.8	15.7
211	1.50	76.06	7.00	67.26	28.75	150.00	330.57	8195	4.0	16.0
502	4.10	212.52*	-	49.07	32.50	200.00	498.19	12348	4.0	-
401	2.85	52.51	4.74	98.35	10.62	75.00	244.17	6000	4.1	16.0
202	1.35	98.12	11.14	62.05	15.62	75.00	263.28	6344	4.2	9.9
115	10.25	101.40	10.84	111.01	17.88	115.00	366.38	8535	4.3	11.3
207	19.50	46.07	6.90	30.90	17.50	100.00	220.87	5099	4.3	17.0
302	2.40	109.69	15.49	37.24	32.50	200.00	397.32	8862	4.5	12.2
319	9.10	158.09	21.41	159.61	29.38	275.00	652.59	14465	4.5	13.1
105	.50	53.40	8.00	60.51	27.50	150.00	299.91	6025	5.0	15.3
318	24.69	72.77	19.39	75.80	2.50	70.00	265.15	5264	5.0	10.4
123	8.60	75.85	14.90	74.88	25.00	200.00	399.23	7560	5.3	14.2
113	3.00	71.16	17.33	108.67	41.25	150.00	391.41	6798	5.8	14.5
602	.20	48.70	10.61	79.06	26.88	125.00	290.45	5000	5.8	13.0
501	6.20	29.37	11.40	13.00	6.25	150.00	216.22	3300	6.6	14.3
104	2.70	88.83	25.29	80.80	17.50	100.00	315.12	4400	7.2	6.9
312	-	16.25	3.14	18.75	3.75	50.00	91.89	817	11.2	7.7
Average										
1931	5.00	74.57	11.07	63.82	18.41	119.76	292.03	6522	4.5	13.4**
1930	5.06	88.74	13.03	83.64	23.07	142.34	355.88	5812	5.2	13.9

*Includes gasoline and oil.

**Exclusive of Farm 502.