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Report 21

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

COST OF CROP PRODUCTION

from  
Date Secured in 1927  
on the

FARM ACCOUNTING ROUTE

at

CROOKSTON - POLK COUNTY - MINNESOTA

By

D.Curtis Mumford and George A. Sallee  
C.O. Raud - Routemen

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Section of Farm Management  
University Farm  
St. Paul, Minn.  
June 1928

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## INTRODUCTION

This preliminary report presents figures which indicate relative costs and returns from the more important crops grown by the eighteen farmers on the Polk County Farm Accounting Route for the year 1927. Polk County is located in the northwestern part of the state in the Red River Valley. This area is known as the small grain farming section of the state.

The soil is a black clay loam and the land is very level. The typical farms in this area are at least a half section in size, the average sized farm on the route in 1927 being 368 acres. One-third of the 291 crop acres were devoted to four cash crops, wheat, flax, sugar beets and potatoes. The amount of live-stock is increasing in the valley. Dairy cows, beef cows, hogs, sheep and poultry are becoming more common.

This is the second report to be issued based on crop data secured on the Polk County Route. The figures give the detailed results obtained in 1927 and also the average results for 1926. In obtaining the relative cost and return figures presented in this report the December 1 farm price for each crop was used in each case to obtain the value of the crop. No summer fallow charge was made in 1926. Man labor in 1927 was charged at 25 cents per hour and horse work at 12 cents per hour. In so far as possible the physical units of cost were charged at market prices. A gain of \$.92 per acre on wheat means that every acre of wheat returned \$.92 over and above the prices charged for the factors of production. A return per hour of 38 cents on wheat indicates that the wheat enterprise could have paid 38 cents for every hour of man labor put on the wheat crop and still have allowed market price for the other factors of production. Wheat, flax, oats, potatoes, alfalfa, wild hay and silage returned less per hour of man labor in 1927 than in 1926, whereas barley and sugar beets returned more in 1927 than the year before. These differences can not be explained by yield alone or price alone or cost alone. They are the result of a combination of factors, yield and prices being among the most important.

The data presented on page three represents a summarized report of relative costs and returns for the principal crops grown on the Polk County Route in 1926 and 1927. It is practically a universal rule that in every year some men can be found who make good returns on certain crops while others lose money on the same crop. Beginning with page five it is of interest to note that the "return per man hour" on wheat in 1927 for the entire route varied from nothing to \$1.26; flax from nothing to \$.10; oats from nothing to \$.56; barley from nothing to \$.20; alfalfa from nothing to \$1.00. It is the same story all thru the report. These variations in relative costs are significant because they suggest that there is something about the methods of production on certain farms which gives those farms a lower cost than their neighbors. The factor chiefly responsible for these wide ranges in "return per man hour" on individual farms is the factor of cost. Ordinarily it is not possible for the individual farmer to obtain prices for his crops a great deal higher than the prices received from these same crops by his neighbors. It is possible, however, for him to lower his cost of production in many instances, thereby obtaining the benefits he would receive from an increased selling price for his commodity. He as an individual may prosper while others with higher cost may fail. One of the most effective ways by which the individual farmer can lower his costs and obtain higher return per unit of land or labor is to secure higher yields. This fact is illustrated in the following table from the Polk County Route.

The Effect of Yield Upon Cost per Bushel and Return for Land and Labor  
Wheat - Polk County, Minn. - 1927

Group	Acres in group	Average yield	Cost per bushel	Net return for land per acre	Return per man per hour
Under $10\frac{1}{2}$ bu.	171	$9\frac{1}{2}$	1.34	1.68	-.11
$10\frac{1}{2}$ - 12	183	11	1.23	2.42	+.01
$12\frac{1}{2}$ - 14	154	$12\frac{1}{2}$	1.11	3.72	+.21
$14\frac{1}{2}$ - 16	205	$15\frac{3}{4}$	.91	6.85	+.59
Over 16 bu.	148	19	.67	10.33	+1.07

Note: A Minus sign(-) indicates a loss.

The above table indicates that as the yield increases the cost per bushel decreases and at the same time the return for both land and labor increases. Similar tables could be shown for other crops.

Good farm management practice demands an intelligent combination of the more profitable crops as well as a low cost of producing a unit of each crop. The proper choice of a combination of crops can not be made on the basis of returns to individual crops alone. Certain crops are necessary to provide feed; others are necessary to fill out a rotation; still others may be necessary to control weeds. Silage, for instance, fails to show up profitably in 1927 on these farms. Nevertheless it deserves consideration in the crop organization of certain farms because it supplies succulence which is now considered essential in dairy rations. The crops chosen should make the most efficient use of the land, labor and equipment available. The crop most profitable over a period of years, all factors of choice being considered, should be given preference in making the crop organization. This crop should then be supplemented with other crops which, even tho not as profitable as the first, will add to the total farm returns by employing certain factors of production when they might not otherwise be utilized. A crop organization once selected should not be followed too rigidly but should be flexible so that it can be adapted to conditions peculiar to any particular season.

The chief purpose of this report is to provide each cooperator on the Polk County Route with sufficient material to enable him to compare his figures with those of others in the same locality. The material here presented should provide a basis for comparing the efficiency of the farms included in this study. Each cooperator may compare his own results with the accomplishments of more successful men and may be able to discover weaknesses in his crop production program and possibly find the clue to a remedy for them.

The results incorporated in this report may be applied to farms that are similarly located with respect to soil type and markets, and that are organized and operated in a similar fashion. Since the farms included in this report are fairly typical of many farms in the Red River Valley, the results here presented may be applied directly to a considerable number of the farms in the Valley.

CROP REPORT SUMMARY - ACRE BASIS @ 1927 - CROOKSTON, POLK COUNTY, MINN.

	Wheat		Flax		Oats		Barley		Sugar Beets	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
Acres	1225	861	647	695	1049	863	517	809	220	43
Man hours	6 $\frac{3}{4}$	7 $\frac{1}{2}$	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	16	18 $\frac{1}{2}$
Horse hours	17 $\frac{3}{4}$	17 $\frac{3}{4}$	12 $\frac{1}{2}$	16	17 $\frac{1}{2}$	18 $\frac{3}{4}$	19	5	45	49 $\frac{3}{4}$
Tractor hours	$\frac{1}{2}$	$\frac{1}{2}$	1	1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	-	$\frac{1}{2}$
Man labor cost	1.71	1.84	1.39	1.50	1.65	1.81	1.88	1.83	4.01	4.61
Contract labor cost	-	-	-	-	-	-	-	-	24.29	24.74
Total labor cost	3.57	4.39	3.56	4.26	3.63	4.73	4.10	3.83	32.13	35.89
Seed cost	2.35	2.30	1.40	1.34	1.05	1.20	1.16	1.40	2.62	2.39
Twine cost	.36	.31	.11	.23	.32	.30	.32	.29	-	-
Summer fallow	-	.25	-	.18	.	.22	-	.21	-	2.78
Spray cost	-	-	-	-	-	-	-	-	-	.44
Thresh or silo cost	.84	.81	.77	.71	.93	1.04	.90	1.02	-	-
Manure and fertilizer	.33	.76	.07	.37	.19	.56	.34	.65	1.79	2.40
Machine charge	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.50	1.50
Marketing cost	.04	.05	.07	.03	.01	-	.01	.01	5.27	5.38
OPERATING COSTS	8.49	9.87	6.98	8.12	7.13	9.05	7.83	9.41	43.31	50.78
Land charge	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
TOTAL COSTS	12.49	13.87	10.98	12.12	11.13	13.05	11.83	13.41	47.31	54.78
Credit	.04	.04	-	.01	-	.02	-	.01	-	.03
NET COST	12.45	13.83	10.98	12.11	11.13	13.03	11.83	13.40	47.31	54.75
Yield-grain, bu.	14 $\frac{3}{4}$	13 $\frac{1}{2}$	7 $\frac{3}{4}$	5 $\frac{1}{2}$	30 $\frac{1}{2}$	25 $\frac{1}{2}$	23 $\frac{3}{4}$	26	-	-
Yield-roughage, ton	-	-	-	.2	-	-	-	-	8.7	10.8
COST PER UNIT	.84	1.02	1.42	2.23	.37	.51	.50	.51	5.42	5.07
December 1 price	1.25	1.09	1.95	1.85	.33	.39	.46	.66	6.00	6.00
CROP VALUE	18.44	14.75	15.10	11.23	9.99	9.88	10.98	17.21	52.35	64.92
GAIN OR LOSS	5.99	.92	4.12	-.88	-1.14	-3.15	-.85	3.8	5.04	10.17
Net return for land	9.99	4.98	8.12	3.12	2.86	.85	3.15	7.81	9.04	14.17
% earned on land†	12.49	6.15	10.15	3.90	3.58	1.06	3.94	9.876	11.30	17.71
RETURN PER MAN HOUR	1.13	.38	.99	.10	.08	None	.14	.77	.56	.60

†Land charge per acre: wild hay \$2.00; all other crops \$4.00

Value of land per acre: wild hay land \$40.00; all other crop land \$80.00

(-) indicates a loss.

CROP REPORT SUMMARY - ACRE BASIS - - CROOKSTON, POLK COUNTY, MINN.

	Potatoes		Alfa Fa		Wild Hay		Silage Corn	
	1926	1927	1926	1927	1926	1927	1926	1927
Acres	117	116	498	378	401	507	194	173
Man hours	39½	40½	7½	9½	3¾	4	17	18
Horse hours	60½	54½	11½	11¾	6	7½	42½	39½
Tractor hours	½	¾	-	-	-	-	½	½
Man labor cost	9.82	10.14	1.83	2.34	.93	.99	4.22	4.54
Contract labor cost	.90	.14	-	-	-	-	-	-
Total labor cost	16.13	17.27	2.80	3.75	1.45	1.84	8.17	9.79
Seed cost	22.34	12.58	1.00	1.00	-	-	.64	.87
Twine cost	-	-	-	-	-	-	.25	.39
Summer fallow	-	.32	-	-	-	-	-	.07
Spray cost	1.05	1.03	-	-	-	-	-	-
Thresh or silo cost	-	-	-	-	-	-	.99	1.59
Manure and fertilizer	1.80	2.02	.30	.99	-	-	1.56	2.88
Machine charge	3.00	3.00	1.22	1.19	.90	.90	2.64	2.58
Marketing cost	1.13	1.03	-	-	-	-	-	-
OPERATING COSTS	45.45	37.25	5.32	6.93	2.35	2.74	14.25	18.17
Land charge	4.00	4.00	4.00	4.00	2.00	2.00	4.00	4.00
TOTAL COSTS	49.45	41.25	9.32	10.93	4.35	4.74	18.25	22.17
Credit	-	-	.23	.46	.08	.09	.04	.07
NET COST	49.45	41.25	9.09	10.47	4.27	4.65	18.21	22.10
Yield-grain, bu.	79½	88	-	-	-	-	-	-
Yield-roughage, ton	-	-	1.2	1.4	.6	.50	3.2	3.6
COST PER UNIT	.62	.47	7.66	7.74	7.72	9.49	5.69	6.20
December price	1.05	.40	13.00	10.00	8.00	5.00	4.00	4.00
CROP VALUE	83.10	35.19	15.42	13.74	4.43	2.50	12.80	14.26
GAIN OR LOSS	33.65	-6.06	6.33	3.27	.16	-2.15	-5.41	-7.84
Net return for land	37.65	-2.06	10.33	7.27	2.16	-.15	-1.41	-3.84
% earned on land†	47.06	-2.58	12.91	9.09	5.40	-.38	-1.76	-4.80
RETURN PER MAN HOUR	1.11	.10	1.11	.60	.29	None	None	None

†Land charge per acre: wild hay \$2.00; all other crops \$4.00.

Value of land per acre: wild hay \$40.00; all other crop land \$80.00.

(-) indicates a loss.

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COST PER ACRE OF PRODUCING SPRING WHEAT - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost								Net cost	Yield	Cost per bu.	Net return for land	Return per hour	
	Man	Horse	Tractor	Labor	Seed	Twine	Summer fallow	Thresh	Manure	Machine	Market.						Land
032	11½	26½	-	6.10	2.11	.46	-	1.31	.73	1.00	.31	4.00	16.02	21½	.64	11.71	.92
073	8½	16	-	3.97	2.90	.37	-	1.43	-	1.00	-	4.00	13.67	20	.68	12.32	1.26
031	7½	16½	-	3.83	2.18	.48	-	1.21	2.71	1.00	-	4.00	15.41	20	.76	10.57	1.13
023	7½	22½	-	4.53	1.88	.40	.32	.90	.32	1.00	.14	4.00	13.30	16	.83	8.23	.82
032	6½	8	1½	3.96	2.18	.35	-	1.09	2.19	1.00	-	4.00	14.77	17½	.84	8.32	.93
082	10	22½	-	5.18	2.26	.37	.26	.92	.57	1.00	-	4.00	14.56	16	.91	9.21	.71
051	6½	12¾	1½	4.49	2.54	.21	-	.68	.24	1.00	.05	4.00	13.21	12¾	1.04	4.66	.35
025	6½	16¾	-	3.62	1.87	.35	-	.68	.61	1.00	.31	4.00	12.44	11½	1.11	3.83	.22
031	8	17½	½	4.56	2.30	.32	.61	.76	.70	1.00	.02	4.00	14.11	12½	1.14	3.42	.18
233	8½	9½	1¾	5.30	2.17	.36	-	.90	2.77	1.00	-	4.00	16.50	14½	1.14	3.29	.16
026	5	14½	-	2.98	2.94	.26	1.29	.62	-	1.00	-	4.00	13.09	11	1.20	2.79	.01
161	6	19	-	3.80	2.17	.17	-	.49	.54	1.00	-	4.00	12.17	9½	1.27	2.29	None
201	8	28¾	-	5.48	2.69	.31	-	.77	.59	1.00	-	4.00	14.84	11¾	1.27	1.88	None
022	7½	17½	2½	5.51	1.63	.34	.08	.55	.36	1.00	.08	4.00	13.55	9¾	1.39	1.11	None
221	8	24½	-	4.96	2.17	.32	-	.74	2.22	1.00	.13	4.00	15.54	11½	1.39	.65	None
021	9½	19½	1½	5.86	3.16	.17	-	.47	.80	1.00	-	4.00	15.46	6¾	2.30	-4.13	None
<b>Averages</b>																	
1927	7½	17½	½	4.39	2.30	.31	.25	.81	.76	1.00	.05	4.00	13.83	13½	1.02	4.92	.38
861 acres																	
1926	6¾	17¾	¾	3.57	2.35	.36	-	.84	.33	1.00	.04	4.00	12.45	14¾	.84	9.99	1.13
1225 acres																	

1927 Dec. 1 price = \$1.09 per bu.

1926 Dec. 1 price = \$1.25 per bu.

+Credit of 19¢ for wheat hay

++Credit of 16¢ for wheat hay

A minus sign(-) indicates a loss.

COST PER ACRE OF PRODUCING FLAX - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost								Net cost	Yield		Cost per bu.††	Net return for land	Return per hour		
	Man	Horse	Tractor	Labor	Seed	Twine	Summer fallow	Thresh	Manure	Mach.	Market.		Land	Grain				Straw	
161	8 $\frac{3}{4}$	26 $\frac{1}{2}$	-	5.39	1.10	.17	-	1.32	2.12	1.00	.03	4.00	15.13	9 $\frac{3}{4}$	.8	1.55	11.45	1.10	
232	5 $\frac{1}{2}$	7	1 $\frac{1}{2}$	3.91	1.09	.27	.46	1.06	.17	1.00	-	4.00	11.96	7 $\frac{1}{2}$	-	1.63	5.64	.57	
231	6	11 $\frac{3}{4}$	1 $\frac{1}{2}$	4.33	1.21	.13	-	.98	1.69	1.00	.07	4.00	13.41	7	-	1.88	3.79	.22	
022	8 $\frac{1}{2}$	20	2 $\frac{1}{2}$	6.68	1.24	.20	-	.98	.72	1.00	.12	4.00	14.94	6	-	2.32	2.07	.02	
026	5 $\frac{1}{2}$	18 $\frac{3}{4}$	-	3.63	1.25	.17	1.23	.70	-	1.00	-	4.00	11.98	5	-	2.33	1.54	None	
201	7	28 $\frac{3}{4}$	-	5.19	1.81	.30	-	.82	.33	1.00	.08	4.00	13.53	5 $\frac{3}{4}$	-	2.38	1.01	None	
028	5 $\frac{1}{2}$	13 $\frac{1}{2}$	1 $\frac{1}{2}$	3.98	1.38	.21	-	.53	-	1.00	-	4.00	11.10	4 $\frac{3}{4}$	.4	2.40	3.79	.21	
025	7 $\frac{3}{4}$	21 $\frac{1}{2}$	-	4.57	1.67	.28	-	.87	5.46	1.00	-	4.00	17.85	7 $\frac{1}{4}$	-	2.46	-.43	None	
051	4 $\frac{3}{4}$	15 $\frac{3}{4}$	-	3.08	1.10	.23	-	.46	.24	1.00	.08	4.00	10.19	3 $\frac{3}{4}$	-	2.66	.90	None	
071	6 $\frac{3}{4}$	26 $\frac{3}{4}$	-	4.65	.98	.23	-	.65	.85	1.00	-	4.00	12.36	4 $\frac{1}{4}$	-	2.91	-.49	None	
082	13	25 $\frac{1}{2}$	-	6.27	2.17	.34	-	.58	-	1.00	1.08	4.00	14.02†	3 $\frac{3}{4}$	.4	3.75	-3.10	None	
021	7	7 $\frac{1}{2}$	2 $\frac{1}{2}$	4.67	1.37	.30	-	.39	.80	1.00	.08	4.00	12.61	2 $\frac{3}{4}$	.1	4.57	-3.12	None	
Average																			
1927	6	16	1	4.26	1.34	.23	.18	.71	.37	1.00	.03	4.00	12.11	5 $\frac{1}{2}$	.0	2.23	3.12	.10	
695 acres																			
1926	5 $\frac{1}{2}$	12 $\frac{1}{2}$	1	3.56	1.40	.11	-	.77	.07	1.00	.07	4.00	10.98	7 $\frac{3}{4}$	-	1.42	8.12	.99	
647 acres																			

1927 December 1 prices = \$1.85 per bu.

1926 December 1 prices = \$1.95 per bu.

+Credit of \$1.42 for flax hay.

††Credit for flax straw sold not allowed in calculating "Cost per bushel."

In obtaining "net return for land" and "Return per hour" credit was given for flax straw sold.

A minus sign (-) indicates a loss.



COST PER ACRE OF PRODUCING OATS - BROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost								Yield	Cost per bu.	Net return for land	Return per hour	
	Man	Horse	Tractor	Labor	Seed	Twine	Summer fallow	Tresh	Manure	Machine	Land					Net cost
032	10 $\frac{3}{4}$	32	-	6.54	1.06	.42	-	1.74	.73	1.00	4.00	15.49	48 $\frac{1}{2}$	.32	7.40	.56
024	7 $\frac{1}{2}$	6	2	4.40	1.29	.40	-	1.70	1.77	1.00	4.00	14.56	42 $\frac{1}{2}$	.34	6.04	.53
161	7 $\frac{3}{4}$	25 $\frac{1}{2}$	-	5.02	1.24	.31	.39	1.46	.55	1.00	4.00	13.97	36 $\frac{1}{2}$	.38	4.25	.28
082	10 $\frac{1}{2}$	24 $\frac{3}{4}$	-	5.59	1.88	.41	-	1.46	.42	1.00	4.00	+14.69	35 $\frac{1}{2}$	.41	3.16	.17
081	9	19 $\frac{3}{4}$	1	5.47	1.29	.44	-	1.30	.64	1.00	4.00	14.14	33	.43	2.75	.11
073	6 $\frac{3}{4}$	21	-	4.24	1.29	.43	-	1.11	-	1.00	4.00	12.07	27 $\frac{3}{4}$	.44	2.73	.06 ✓
031	10 $\frac{1}{2}$	25 $\frac{1}{2}$	-	5.63	1.08	.45	-	1.37	2.67	1.00	4.00	16.20	36	.45	1.87	.04
071	5	13 $\frac{3}{4}$	-	2.93	1.03	.22	-	1.24	.85	1.00	4.00	11.27	23 $\frac{3}{4}$	.47	2.02	None ✓
051	7 $\frac{1}{2}$	16 $\frac{1}{2}$	1	4.82	1.29	.25	-	1.06	.24	1.00	4.00	12.66	26 $\frac{1}{2}$	.48	1.63	None ✓
201	6 $\frac{1}{2}$	22 $\frac{3}{4}$	-	3.90	1.29	.29	-	.97	.33	1.00	4.00	11.78	22 $\frac{3}{4}$	.52	1.05	None ✓
232	6 $\frac{3}{4}$	10 $\frac{3}{4}$	1 $\frac{3}{4}$	5.00	1.00	.33	-	1.01	.72	1.00	4.00	+13.06	25 $\frac{1}{2}$	.52	.80	None ✓
023	8 $\frac{1}{2}$	26 $\frac{1}{2}$	-	5.26	1.08	.36	.53	1.04	.32	1.00	4.00	++13.35	23 $\frac{1}{2}$	.57	-.01	None ✓
025	6 $\frac{3}{4}$	20 $\frac{1}{2}$	$\frac{1}{2}$	4.40	1.14	.26	-	.77	.70	1.00	4.00	12.27	19 $\frac{1}{2}$	.64	-.74	None ✓
026	5 $\frac{3}{4}$	20 $\frac{1}{2}$	-	3.88	1.07	.22	-	.73	.50	1.00	4.00	11.40	16 $\frac{1}{2}$	.70	-1.04	None ✓
233	7 $\frac{1}{2}$	7 $\frac{1}{2}$	2 $\frac{1}{2}$	5.67	1.29	.15	.72	.78	.40	1.00	4.00	14.01	18 $\frac{1}{2}$	.75	-2.73	None ✓
021	6 $\frac{1}{2}$	8 $\frac{1}{2}$	2 $\frac{1}{2}$	4.83	2.52	.22	-	.65	1.01	1.00	4.00	14.23	16 $\frac{1}{2}$	.88	-3.91	None ✓
022	6 $\frac{1}{2}$	11 $\frac{1}{2}$	2 $\frac{1}{2}$	5.02	.87	.21	-	.50	.36	1.00	4.00	11.96	12 $\frac{1}{2}$	.95	-3.07	None ✓
231	5 $\frac{3}{4}$	11	1	4.06	.86	.22	1.03	.42	-	1.00	4.00	11.59	9 $\frac{1}{2}$	1.26	-4.00	None ✓
221	7 $\frac{1}{2}$	25 $\frac{1}{2}$	-	4.93	.70	.27	-	.37	.65	1.00	4.00	11.92	9 $\frac{1}{2}$	1.28	-4.28	None ✓
Average																
1927	7 $\frac{1}{2}$	18 $\frac{3}{4}$	$\frac{3}{4}$	4.73	1.20	.30	.22	1.04	.56	1.00	4.00	13.03	25 $\frac{1}{2}$	.51	.85	None
863 acres																
1926	6 $\frac{1}{2}$	17 $\frac{1}{2}$	$\frac{1}{2}$	3.63	1.05	.32	-	.93	.19	1.00	4.00	11.13	30 $\frac{1}{2}$	.37	2.86	.08
1049 acres																

1927 December 1 price = 39¢ per bu.

1926 December 1 price = 33¢ per bu.

+Credit of \$.07 for oat hay

++Credit of \$.24 for oat hay

A minus sign (-) indicates a loss.

COST PER ACRE OF PRODUCING BARLEY - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost								Net cost	Yield	Cost per bu.	Net return for land	Return per hour	
	Man	Horse	Tractor	Labor	Seed	Twine	Summer fallow	Thresh	Manure	Machine	Market.						Land
071	5 $\frac{3}{4}$	14 $\frac{1}{2}$	-	3.18	1.27	.30	1.39	.95	1.00	1.00	-	4.00	12.09	35 $\frac{1}{2}$	.34	5.88	2.20
161	7 $\frac{3}{4}$	23 $\frac{1}{2}$	-	4.77	1.33	.37	1.57	.54	1.00	1.00	-	4.00	13.58	36 $\frac{1}{2}$	.35	15.81	1.76
082	12 $\frac{3}{4}$	28 $\frac{3}{4}$	-	6.64	1.62	.47	1.64	.68	1.00	1.00	-	4.00	16.05	41	.39	15.03	1.11
201	7	22 $\frac{1}{4}$	-	4.39	1.62	.32	.67	1.13	.33	1.00	-	4.00	13.46	31 $\frac{3}{4}$	.42	11.52	1.33
233	8	9 $\frac{1}{2}$	1 $\frac{1}{4}$	4.75	1.40	.31	-	.95	.51	1.00	-	4.00	12.92	29 $\frac{3}{4}$	.43	10.73	1.08
232	5 $\frac{1}{2}$	5	2	4.38	1.44	.22	-	.93	-	1.00	-	4.00	11.97	23 $\frac{3}{4}$	.51	7.67	.96 ✓
073	6	19 $\frac{3}{4}$	-	3.88	1.36	.25	-	.79	-	1.00	-	4.00	11.28	21	.54	6.59	.68 ✓
022	7 $\frac{1}{4}$	14 $\frac{3}{4}$	$\frac{3}{4}$	4.31	2.41	.35	.39	.87	.36	1.00	-	4.00	13.69	25 $\frac{1}{4}$	.54	7.01	.66 ✓
081	9	21 $\frac{3}{4}$	-	4.88	2.09	.33	-	1.02	1.17	1.00	-	4.00	14.40	26 $\frac{1}{2}$	.55	6.95	.58 ✓
051	7 $\frac{3}{4}$	16	1	4.79	1.44	.21	-	.84	.24	1.00	-	4.00	12.52	21 $\frac{1}{4}$	.59	5.56	.45 ✓
031	10 $\frac{1}{2}$	49 $\frac{1}{4}$	-	8.50	1.08	.48	-	1.26	2.66	1.00	-	4.00	18.98	32 $\frac{1}{4}$	.59	6.27	.47 ✓
023	8 $\frac{1}{2}$	27 $\frac{1}{2}$	-	5.43	1.43	.39	-	.84	.32	1.00	.07	4.00	13.19	21 $\frac{3}{4}$	.60	5.23	.40 ✓
025	7 $\frac{1}{2}$	21 $\frac{3}{4}$	$\frac{1}{2}$	4.97	1.27	.39	.65	.94	.78	1.00	-	4.00	14.00	22 $\frac{3}{4}$	.61	4.98	.38 ✓
021	10 $\frac{1}{2}$	14 $\frac{3}{4}$	2 $\frac{1}{4}$	6.52	1.76	.32	-	1.29	2.33	1.00	.06	4.00	17.28	28	.61	5.28	.37 ✓
026	5 $\frac{1}{2}$	22	-	3.98	1.27	.13	-	.69	.83	1.00	-	4.00	11.90	17 $\frac{1}{4}$	.69	3.55	.17 ✓
024	9	7 $\frac{1}{4}$	2 $\frac{1}{2}$	5.52	1.44	.42	-	1.01	4.12	1.00	-	4.00	17.51	25 $\frac{1}{2}$	.69	3.22	.16 ✓
221	7 $\frac{3}{4}$	26 $\frac{1}{4}$	-	5.13	1.27	.25	-	.72	.96	1.00	-	4.00	13.33	19	.70	3.20	.15 ✓
231	6 $\frac{1}{2}$	12 $\frac{3}{4}$	-	5.02	1.08	.24	1.14	.79	-	1.00	-	4.00	13.27	17 $\frac{1}{4}$	.77	2.06	None ✓
<b>Average</b>																	
1927	7 $\frac{1}{4}$	16	1	4.83	1.40	.29	.21	1.02	.65	1.00	.01	4.00	13.40	26	.51	7.81	.77
809 acres																	
1926	7 $\frac{1}{2}$	19	$\frac{1}{2}$	4.10	1.16	.32	-	.90	.34	1.00	.01	4.00	11.83	23 $\frac{3}{4}$	.50	3.15	.14
517 acres																	

1927 Dec. 1 price = 66¢ per bu.  
 1926 Dec. 1 price = 46¢ per bu.

+Credit of \$.29 for barley hay.

COST PER ACRE OF PRODUCING ALFALFA - BROOKSTON, MINN. - 1927

Farm No.	Hours of Labor		Cost					Total cost	Pasture credit	Net cost	Yield	Cost per ton	Net return for land	Return per hour
	Man	Horse	Labor	Seed	Fertilizer	Machine	Land							
232	10 $\frac{1}{2}$	12 $\frac{3}{4}$	4.14	1.00	1.78	1.25	4.00	12.17	1.17	11.00	1.7	5.45	11.76	1.00
051	6	7 $\frac{1}{2}$	2.38	1.00	.24	1.03	4.00	8.65	-	8.65	1.3	6.82	8.03	.92
082	21	26	8.36	1.00	1.35	1.04	4.00	15.75	-	15.75	2.3	6.93	10.98	.58
231	12	13 $\frac{1}{2}$	4.59	1.00	.57	1.25	4.00	11.41	-	11.41	1.6	6.96	8.98	.66
201	6 $\frac{3}{4}$	5	2.53	1.00	.33	1.25	4.00	9.11	-	9.11	1.3	7.01	7.89	.75
233	9 $\frac{1}{2}$	14 $\frac{1}{2}$	4.07	1.00	.12	1.25	4.00	10.44	.40	10.04	1.4	7.27	7.77	.65
161	10 $\frac{1}{2}$	11 $\frac{3}{4}$	3.97	1.00	.54	1.25	4.00	10.76	.24	10.52	1.4	7.32	7.86	.63
081	6 $\frac{1}{2}$	9 $\frac{1}{2}$	2.75	1.00	.64	1.02	4.00	9.41	1.29	8.12	1.0	7.34	5.61	.49
031	11 $\frac{1}{2}$	19	5.16	1.00	2.76	1.22	4.00	14.14	-	14.14	1.8	7.68	8.27	.62
025	10	13 $\frac{1}{2}$	4.13	1.00	5.26	1.25	4.00	15.64	-	15.64	1.7	9.20	5.36	.39
023	9	12 $\frac{1}{2}$	3.70	1.00	2.17	1.25	4.00	12.12	.76	11.36	1.2	9.58	4.48	.31
026	6 $\frac{1}{2}$	12	3.08	1.00	.83	1.19	4.00	10.10	.68	9.42	1.0	9.88	4.12	.27
032	16 $\frac{1}{2}$	19 $\frac{1}{2}$	6.40	1.00	1.34	1.25	4.00	13.99	-	13.99	1.4	10.11	3.85	.24
024	15 $\frac{1}{2}$	13 $\frac{1}{2}$	5.44	1.00	1.77	1.17	4.00	13.38	-	13.38	1.3	10.12	3.85	.24
071	7 $\frac{1}{2}$	13 $\frac{1}{2}$	3.43	1.00	1.35	1.25	4.00	11.03	-	11.03	.8	13.46	1.15	No
<hr/>														
Average														
1927	9 $\frac{1}{2}$	11 $\frac{3}{4}$	3.75	1.00	.99	1.19	4.00	10.93	.46	10.47	1.4	7.74	7.27	.60
378 acres														
1926	7 $\frac{1}{2}$	11 $\frac{1}{2}$	2.80	1.00	.30	1.22	4.00	9.32	.23	9.09	1.2	7.66	10.33	1.11
498 acres														

1927 Dec. 1 price = \$10.00 per ton

1926 Dec. 1 price = \$11.00 per ton

COST PER ACRE OF PRODUCING WILD HAY - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor		Cost			Total cost	Pasture credit	Net cost	Yield	Cost per ton	Net return for land	Return per hour
	Man	Horse	Labor	Machine	Land							
233	6½	10	2.81	.90	2.00	5.71	-	5.71	1.6	3.49	4.27	.63
082	12	16	4.90	.90	2.00	7.80	-	7.80	1.3	5.94	.77	.5
081	10½	15¾	4.49	.90	2.00	7.39	-	7.39	1.0	7.51	-.47	.01
021	4½	8¾	2.23	.90	2.00	5.13	-	5.13	.6	8.09	.04	None
201	5¾	11½	2.81	.90	2.00	5.71	-	5.71	.7	8.25	-.25	None
232	6½	8¾	2.17	.90	2.00	5.07	-	5.07	.6	8.31	-.02	None
026	3	5¾	1.45	.90	2.00	4.35	-	4.35	.5	9.03	.06	None
072	3½	6¾	1.70	.90	2.00	4.60	-	4.60	.4	10.86	-.48	None
151	5½	8½	1.74	.90	2.00	4.64	-	4.64	.4	11.42	-.61	None
025	2½	4½	1.13	.90	2.00	4.03	.48	3.55	.3	11.57	-.02	None
Average												
1927	4	7½	1.84	.90	2.00	4.74	.09	4.65	.5	9.49	-.15	None
507 acres												
1926	3¾	6	1.45	.90	2.00	4.35	-.08	4.27	.6	7.72	2.93	.29
401 acres												
1927 Dec. 1 price = \$5.00 per ton						A minus sign(-) indicates a loss						
1926 Dec. 1 price = \$8.00 per ton												

COST PER ACRE OF PRODUCING SUGAR BEETS - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost							Net cost	Yield	Cost per ton	Net return for land	Return per hour	
	Man	Horse	Tractor	Labor	Seed	Summer fallow	Spray	Manure	Machine	Market						Land
023	16½	49½	-	35.03	2.41	.88	.10	2.56	1.50	6.25	4.00	52.67	11.1	4.55	10.39	.82
022	20¾	50½	1½	36.96	2.36	5.19	.86	2.20	1.50	4.29	4.00	57.36	9.9	5.78	6.32	.33
Average																
1927	18½	49¾	½	35.89	2.39	2.78	.44	2.40	1.50	5.38	4.00	54.75	10.8	5.07	14.17	.60
43 acres																
1926++	22¾	60½	-	35.49	2.77	-	-	1.62	1.50	4.56	4.00	49.94	9.4	5.30	10.66	.54
55 acres																
1927 Dec. 1 price = \$6.00 per ton									+Credit of \$.06 - culls							
1926 Dec. 1 price = \$6.00 per ton									++1926 average includes the same farms as 1927 average.							

COST PER ACRE OF PRODUCING POTATOES - CROOKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost							Net cost	Yield	Cost per bu.	Net return for	Return per land hour	
	Man	Horse	Tractor	Labor	Seed	Summer fallow	Spray	Fertilizer	Machine	Market						Land
232	39	50½	-	16.05	15.73	4.95	1.77	1.76	3.00	-	4.00	47.26	162	.29	21.35	.70
082	41½	54½	-	16.98	12.95	-	.82	2.59	3.00	.62	4.00	40.96	126	.33	13.44	.48
161	50	66	-	20.42	13.00	-	1.14	5.02	3.00	3.45	4.00	50.03	149	.34	13.62	.44
024	73	34½	1½	23.63	12.06	-	2.15	1.77	3.00	-	4.00	46.61	122	.37	6.17	.28
051	39	47½	1	14.11	12.50	-	.57	.24	3.00	-	4.00	34.42	86	.40	3.95	.25
231	41½	57	-	17.13	16.30	2.47	1.40	1.31	3.00	-	4.00	45.61	103	.44	-4.43	.14
022	62½	61½	-	26.24	9.88	.62	1.23	7.89	3.00	1.53	4.00	54.39	104½	.52	-8.61	.05
026	38½	44	-	15.01	8.80	-	.44	.83	3.00	-	4.00	33.08	61½	.54	-4.57	.03
023	33½	55½	-	15.06	9.93	-	1.57	.48	3.00	1.23	4.00	35.27	56	.63	-8.94	None
081	36½	59½	-	16.27	14.62	-	.88	.64	3.00	-	4.00	39.41	60	.66	-11.41	None
025	31½	48½	1½	14.91	14.49	-	.74	.61	3.00	1.85	4.00	39.60	58½	.68	-12.18	None
031	42½	60½	-	17.93	15.17	-	.70	2.64	3.00	-	4.00	43.44	63½	.68	-13.95	None
021	45	45½	5½	21.87	10.00	-	.95	.80	3.00	.68	4.00	41.30	60	.69	-13.30	None
201	34	39½	-	16.14	12.62	-	.60	4.71	3.00	2.42	4.00	43.69	63	.69	-14.45	None
032	51	75	-	21.74	14.08	-	.40	2.81	3.00	1.76	4.00	47.79	54½	.88	-22.09	None
221	35½	57½	-	15.70	7.69	-	-	.65	3.00	-	4.00	31.04	19	1.61	-19.35	None
<hr/>																
Average																
1927	40½	54½	¾	17.27	12.58	.32	1.03	2.02	3.00	1.03	4.00	41.25	88	.47	-2.06	.10
116 acres																
1926	39½	60½	½	16.13	22.34	-	1.05	1.80	3.00	1.13	4.00	49.45	79½	.62	-37.65	1.11
117 acres																

1927 Dec. 1 price = \$.40 per bu.  
 1926 Dec. 1 price = \$1.05 per bu.

A minus sign(-) indicates a loss

COST PER ACRE OF PRODUCING SILAGE CORN - CROCKSTON, MINN. - 1927

Farm No.	Hours of Labor			Cost								Net cost	Yield	Cost per ton	Net return for land	Return per hour
	Man	Horse	Tractor	Labor	Seed	Twine	Summer fallow	Filling	Manure	Machine	Land					
232	12 $\frac{1}{2}$	24 $\frac{3}{4}$	1 $\frac{1}{2}$	7.83	.47	.45	-	1.42	1.76	3.00	4.00	18.93	4.9	3.87	4.65	.32
231	21 $\frac{1}{2}$	47 $\frac{1}{2}$	-	10.99	1.13	.72	1.03	2.27	1.61	3.00	4.00	24.75	6.1	4.07	3.60	.23
161	19	34 $\frac{3}{4}$	-	8.91	.75	.21	-	2.07	.92	1.60	4.00	18.46	3.8	4.90	.62	.07
023	21 $\frac{1}{2}$	46 $\frac{1}{2}$	-	10.84	1.37	.46	-	3.12	.53	3.00	4.00	23.32	4.3	5.48	-2.30	None
026	16	39 $\frac{1}{2}$	-	8.73	1.06	.29	-	.93	4.60	3.00	4.00	22.61	4.0	5.63	-2.53	None
031	22 $\frac{3}{4}$	48 $\frac{1}{2}$	-	13.74	1.43	.98	-	2.82	3.10	3.00	4.00	28.57	3.9	7.24	-8.79	None
081	19 $\frac{1}{2}$	47 $\frac{1}{2}$	-	10.58	.85	.44	-	1.68	2.73	1.60	4.00	+21.46	2.9	7.44	-5.92	None
024	18	25 $\frac{1}{2}$	1 $\frac{1}{2}$	9.01	.53	.54	-	1.23	5.63	3.00	4.00	23.94	3.2	7.48	-7.13	None
071	16 $\frac{1}{2}$	45 $\frac{1}{2}$	-	9.47	.89	.19	-	.59	3.58	3.00	4.00	21.72	1.6	13.89	-11.47	None
032	20 $\frac{3}{4}$	49 $\frac{3}{4}$	-	11.16	.48	.13	-	1.31	.68	3.00	4.00	20.76	.5	38.03	-14.58	None
Average																
1927	18	39 $\frac{1}{2}$	$\frac{1}{2}$	9.79	.87	.30	.07	1.59	2.88	2.58	4.00	22.17	3.6	6.30	-3.84	None
173 acres																
1926	17	42 $\frac{1}{2}$	$\frac{1}{2}$	8.17	.64	.25	-	.99	1.56	2.64	4.00	18.25	3.2	5.69	-1.41	None
194 acres																

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Silage corn valued at \$4.00 per ton in 1927  
 Silage corn valued at \$4.00 per ton in 1926

+Credit of \$.42 for fodder corn

A minus sign(-) indicates a loss

SUMMARY OF TRACTOR COSTS - 1927 - CROOKSTON, MINN.

Farm No.	Fuel		Grease		Oil		Misc. costs & repairs	Repair labor at 25¢	Interest	Depr.	Total cost	Hours worked	Cost per hour
	Amount	Value	Amount	Value	Amount	Value							
021	1022	\$149.34	35	\$4.00	64	\$41.90	\$30.87	\$21.31	\$19.05	\$25.00	\$260.47	42½	\$4.87
022	370	66.40	8	1.00	60	40.97	17.05	13.13	8.40	-	146.35	275½	.53
024	850	156.38	-	-	78	68.01	73.62	4.50	30.75	75.00	408.26	333½	1.22
025	360	60.50	105	8.91	12	8.76	8.15	3.38	28.63	59.50	177.83	161½	1.10
027	1921	304.11	50	4.61	93	48.26	68.15	38.31	47.29	155.00	665.73	731½	.91
031	150	34.41	5	.50	12	7.46	-	2.13	13.65	35.00	93.15	44½	2.11
051	995	249.00	5	.37	40	27.76	14.12	16.13	30.75	75.00	413.13	410	1.01
081	141	27.40	10	4.00	21	15.00	17.84	6.44	14.25	25.00	109.93	47½	2.33
231	1013	186.43	-	-	66	56.36	2.60	7.31	61.44	212.00	526.14	643	.82
232	2357	446.34	-	-	151	116.50	23.40	32.40	48.90	230.00	897.54	914½	.98
233	1255	224.60	65	9.77	-	-	.25	4.44	56.91	233.00	528.97	633½	.83
Average per tractor 9485													
		173.17	237	3.01	54	39.13	24.10	13.59	32.73	107.68	393.41	418¾	.94

SUMMARY OF TRUCK COSTS - 1927 - CROOKSTON, MINN.

Farm No.	Fuel		Grease		Oil		Misc. Wash & repairs	Repair labor at 25¢	Interest	Depr.	Total cost	Total miles	Cost per mile
	Amount	Value	Amount	Value	Amount	Value							
025	534	119.78	11	1.25	51	8.80	40.05	11.94	8.25	75.00	265.07	391	6.6¢
026	332	58.56	-	-	90	14.98	92.45	7.38	24.00	50.00	247.37	2830	8.7
082	203	41.38	-	-	33	8.37	40.27	5.38	3.00	-	98.40	2050	4.8
161	486	94.59	-	-	41	9.31	110.63	10.13	12.00	75.00	311.66	3117	10
Average per truck													
	389	78.58	2¾	.31	54	10.36	70.85	8.71	11.81	50.00	230.62	2997	7.7

SUMMARY OF AUTO COSTS - 1927 - CROOKSTON, MINN.

Farm No.	Fuel		Grease		Oil		Misc. cash & repairs	Repair labor at 25¢	Interest	Depr.	Total cost	Total miles	Cost per mile
	Amount	Value	Amount	Value	Amount	Value							
022	238	49.22	-	-	36	8.91	69.50	21.44	3.75	25.00	177.82	3484	5.1
026	300	56.89	-	-	67	10.54	45.35	1.50	24.00	100.00	238.28	1988	12.1
031	223	32.07	10	1.00	83	13.70	37.95	8.56	2.55	15.00	110.83	978	11.3
032	181	35.15	-	-	16	2.96	24.52	12.13	3.75	25.00	103.51	1349	7.7
051	468	98.24	-	-	31	8.45	134.89	20.75	60.00	250.00	572.33	5364	10.7
071	191	40.40	4	1.00	47	8.06	16.40	7.13	2.25	25.00	100.24	1434	7
081	456	108.54	10	4.00	108	25.10	60.85	5.31	4.50	50.00	258.30	3865	6.7
082	132	30.44	-	-	18	5.96	50.10	7.31	43.50	175.00	312.31	3323	9.4
201	235	44.06	-	-	70	13.25	104.81	4.31	72.00	300.00	538.43	6150	8.8
231	506	97.57	5	1.50	46	9.90	176.79	15.94	26.25	175.00	502.95	4387	11.5
232	302	64.46	-	-	60	13.81	87.81	15.75	14.10	50.00	245.93	5382	4.6
Average per auto	294	59.73	2½	.68	53	10.97	73.54	10.92	23.33	108.18	287.35	3426	8.4