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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
Data Secured in 1926
on the

FARM ACCOUNTING ROUTE

At

CROOKSTON - POLK COUNTY - MINNESOTA

By

D.C. Mumford - A.T. Hoyerstad - G.A. Pond
C.O. Rood, Routeman

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Section of Farm Management
University Farm
St. Paul, Minn.
July 1927

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FACTS ABOUT THE ORGANIZATION OF THE FARMS

	<u>18 Farms</u>		
	Average	Lowest	Highest
Acres in alfalfa	27.6	0	181.7
Acres in wild hay	27.8	0	162.2
Acres in miscellaneous hay	18.7	0	71.8
Acres in corn	26.5	0	62.6
Acres in wheat	82.3	11.4	196.0
Acres in oats	76.8	17.8	218.8
Acres in barley	36.1	0	86.5
Acres in flax	41.1	0	265.1
Acres in sugar beets	12.4	0	84.0
Acres in potatoes	6.6	.8	22.9
Acres in summer fallow	19.5	0	110.4
Acres in miscellaneous crops	3.3	0	35.7
Total Crop Acres per Farm	378.7	71.9	1157.8
Acres in pasture	54.8	0	158.1
Acres in farmstead, road, waste, etc.	26.5	4.6	87.6
Total Acres per Farm	460.0	90.9	1201.6
Total hours of man labor per farm	9461	4130	15300
Hours of hired labor per farm	3396	18	8686
Hours of unpaid family labor per farm	2421	184	8345
Hours of proprietor labor per farm	3644	2356	4262
Hours per man per work day	11.0	7.0	12.8
Hours per man per Sunday	4.4	1.2	6.3
Number of work horses per farm	8.6	4.1	15.0
Number of crop acres per horse	44.0	17.7	92.8
Number of farms using tractors	8.		

FARM BUSINESS FINANCIAL STATEMENT

Average Per Farm - Crookston 1926

<u>INVESTMENT</u>	March 1, 1926	February 28, 1927
Land	\$12277	\$12277
Buildings	6568	6409
Work stock	914	852
Productive livestock	1773	1983
Machinery and equipment	1854	2053
Auto	457	455
Feeds and supplies	<u>1314</u>	<u>1273</u>
Total	\$25157	\$25302
Increase in investment	\$145	

<u>CASH FARM RECEIPTS</u>		<u>CASH FARM EXPENSES</u>	
Dairy products	\$882	Labor	\$583
Cattle	367	Feed	311
Swine	792	Crops	638
Poultry	160	Livestock purchases	256
Sheep	72	Other livestock expense	26
Horses	22	Real estate	154
Wheat	829	Machinery & equipment	598
Flax	359	Auto	206
Sugar beets	534	Gas, oil, etc.	225
Potatoes	379	Taxes	270
Other crops	230	Interest	381
Outside labor	191	Insurance	27
Miscellaneous	<u>226</u>	Rent	59
	\$5043	Miscellaneous	<u>52</u>
			\$3788
Excess cash receipts over expenses			\$1255
Increase in inventory			<u>145</u>
Farm income			\$1400
Estimated house rent 12% house value	\$438		
Value of farm products used in house (except fruits and vegetables)	<u>322</u>		\$760
Earnings of family and unpaid capital			\$2160
Interest on investment at 6%	\$1514		
Minus interest paid in cash	<u>381</u>		\$1133
Family earnings			\$1027

HOUSEHOLD AND PERSONAL FINANCIAL STATEMENTS
(Average per farm of 17 farms)
(Average size of family 4.29 adult equivalents)

HOUSEHOLD

Cash receipts	\$25.61
Cash expenses	
Food	357.62
Fuel	42.11
Furnishings	80.04
General supplies	9.01
Hired help	<u>29.32</u>
Total household cash expenses	\$518.10
Net household cash expense	\$492.49

PERSONAL

Cash receipts	\$339.98
Cash expenses	
Clothing & dry goods	211.54
Doctor, dentist, medicine	74.09
Railroad and travel	33.89
School	13.20
Reading matter, etc.	2.12
Church & benevolence	26.26
Clubs & organizations	5.90
Amusements	8.48
Life insurance & invest.	154.80
Miscellaneous	183.62
Given to members of family	<u>104.00</u>

Total personal cash expenses \$317.90

FARM PRODUCTS USED IN HOUSE

	Amount	Value
Cream	294 lbs.	\$33.83
Whole milk	1633	33.63
Skimmilk	847	1.69
Butter	137	55.43
Eggs	149-2/3 doz.	39.36
Poultry	105 lbs.	14.66
Beef	411	22.62
Pork	683	72.77
Mutton	4	.46
Potatoes	35 bu.	<u>47.12</u>

Total value of farm products used in house \$321.57

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SUMMARY OF STATEMENT OF FINANCES

CASH RECEIPTS (All sources)

Farm	\$5043.47
Household	25.61
Personal	339.98
Old accounts	31.17
Money borrowed	<u>740.56</u>
Total	\$6180.79
Cash deficit	\$83.93

CASH EXPENSES (Entire outgo)

Farm	\$3787.55
Household	518.10
Personal	817.90
Old accounts paid	83.94
Mortgages & notes paid	<u>1057.23</u>
Total	\$6264.72

COST PER ACRE OF PRODUCING WHEAT
(Average of 1225 acres)

	Total		Range	
Man labor, hours	63 $\frac{1}{2}$	41 $\frac{1}{2}$	-	101 $\frac{1}{2}$
Horse labor hours	17 $\frac{1}{2}$	7 $\frac{1}{2}$	-	26 $\frac{1}{2}$
Tractor hours	$\frac{1}{2}$	0	-	1
Total labor cost	\$3.57	\$2.16	-	\$4.69
Seed	2.35	1.97	-	2.78
Twine	.36	.08	-	.59
Threshing	.84	.44	-	1.40
Manure	.33	0	-	1.64
Machinery	1.00	1.00	-	1.00
Marketing	.04	0	-	.39
Land charge	4.00	4.00	-	4.00
Total cost	\$12.49	\$10.68	-	\$14.85
Credit for hail insurance	.04	0	-	.26
Net cost	\$12.45	\$10.68	-	\$14.85
Yield	14 $\frac{3}{4}$	3.3	-	23.3
Net return per acre	\$5.99	-\$7.13	-	\$15.36
Cost per bushel	.84	.59	-	3.42
Return per man hour	1.13	.90	-	1.86
December 1 price per bu.	1.25			

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COST PER ACRE OF PRODUCING FLAX
(Average of 647 acres)

	Total		Range	
Man labor hours	51 $\frac{1}{2}$	41 $\frac{1}{2}$	-	10
Horse labor hours	12 $\frac{1}{2}$	2 $\frac{1}{2}$	-	34 $\frac{1}{2}$
Tractor hours	1	0	-	1 $\frac{3}{4}$
Total labor cost	\$3.56	\$3.22	-	\$5.46
Seed	1.40	1.03	-	1.67
Twine	.11	0	-	.41
Threshing	.77	.55	-	1.23
Manure	.87	.00	-	1.96
Machine	1.00	1.00	-	1.00
Marketing cost	.07	.00	-	1.46
Land charge	4.00	4.00	-	4.00
Total cost	\$10.98	\$10.31	-	\$14.60
Yield, bushels	7 $\frac{3}{4}$	6.8	-	10.4
Net return per acre	\$4.12	-\$1.15	-	\$6.87
Cost per bushel	1.42	1.22	-	2.12
Return per man hour	.99	.13	-	1.63
December 1 price per bushel	\$1.95			

COST PER ACRE OF PRODUCING SUGAR BEETS
(Average of 220 acres)

	Total		Range	
Man labor hours	16	12	-	28
Horse labor hours	45	37½	-	75½
Tractor hours	0	0	-	0
Labor cost(excluding contract labor)	\$7.84	\$6.15	-	\$13.37
Contract labor	24.29	22.83	-	25.31
Seed	2.62	2.22	-	2.95
Manure and fertilizer	1.79	1.01	-	2.62
Machine	1.50	1.50	-	1.50
Marketing cost	5.27	3.59	-	7.72
Land charge	4.00	4.00	-	4.00
Total cost	\$47.31	\$45.26	-	\$52.81
Yield - tons	8.72	5.8	-	11.3
Net return per acre	\$5.04	-\$18.01	-	\$19.37
Cost per ton	5.42	4.29	-	9.10
Return per man hour	.56	.00	-	1.27
December 1 price	\$6.00			

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COST PER ACRE OF PRODUCING POTATOES
(Average of 117 acres)

	Total		Range	
Man labor hours	39½	17½	-	63½
Horse labor hours	60½	32½	-	100
Tractor hours	½	0	-	4
Labor cost(excluding contract labor)	\$15.23	\$10.25	-	\$29.21
Contract labor	.90	.00	-	3.86
Seed	22.34	11.55	-	32.09
Spray	1.05	.00	-	2.27
Manure and fertilizer	1.80	.00	-	10.09
Machine	3.00	3.00	-	3.00
Marketing	1.13	.00	-	2.86
Land charge	4.00	4.00	-	4.00
Total	\$49.45	26.99	-	66.76
Yield - bushels	79½	13.6	-	122
Net return per acre	\$33.65	-\$31.40	-	\$94.14
Cost per bushel	.62	.36	-	2.45
Return per man hour	1.11	.00	-	2.63
December 1 price	\$1.05			

COST PER ACRE OF PRODUCING OATS
(Average of 1049 acres)

	Total	Range		
Man labor hours	6 $\frac{1}{2}$	4 $\frac{3}{4}$	-	12 $\frac{1}{2}$
Horse labor hours.	17 $\frac{1}{2}$	8 $\frac{1}{2}$	-	31 $\frac{3}{4}$
Tractor hours	$\frac{1}{2}$	0	-	1 $\frac{1}{2}$
Labor cost	\$3.63	\$2.80	-	\$6.03
Seed	1.05	.88	-	1.37
Twine	.32	.17	-	.52
Threshing	.93	.49	-	1.88
Manure and fertilizer	.19	.00	-	1.90
Machine	1.00	1.00	-	1.00
Marketing	.01	.00	-	.04
Land charge	4.00	4.00	-	4.00
Total Cost	\$11.13	\$9.65	-	\$16.33
Yield bu.	30 $\frac{1}{2}$	11.3	-	70.6
Net return per acre	-\$1.14	-\$5.98	-	\$6.96
Cost per bushel	.37	.23	-	.86
Return per man hour	.08	.00	-	.80
December 1 price per bushel	33 cents			

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COST PER ACRE OF PRODUCING BARLEY
(Average of 517 acres)

	Total	Range		
Man labor hours	7 $\frac{1}{2}$	6	-	12 $\frac{3}{4}$
Horse labor hours	19	10	-	36 $\frac{1}{2}$
Tractor hours	$\frac{1}{2}$	0	-	1 $\frac{1}{2}$
Labor cost	\$4.10	\$3.02	-	\$6.31
Seed	1.16	.87	-	1.40
Twine	.32	.18	-	.46
Threshing	.90	.51	-	1.34
Manure	.34	.00	-	3.44
Machinery	1.00	1.00	-	1.00
Marketing	.01	.00	-	.04
Land	4.00	4.00	-	4.00
Total cost	\$11.83	10.34	-	17.27
Yield, bu,	23 $\frac{3}{4}$	18	-	36.1
Net return per acre	-\$1.85	-\$4.04	-	\$4.05
Cost per bushel	.50	.35	-	.67
Return per man hour	.14	.00	-	1.34
December 1 price per bushel	46 cents			

COST PER ACRE OF PRODUCING ALFALFA HAY
(Average of 498 acres)

	Total	Range		
Man labor hours	7 $\frac{1}{2}$	4	-	12 $\frac{1}{2}$
Horse labor hours	11 $\frac{1}{2}$	7	-	16
Tractor hours	0	0	-	0
Labor cost	\$2.80	\$1.56	-	\$4.47
Seed	1.00	1.00	-	1.00
Twine	-	0	-	.02
Threshing	-	0	-	.04
Manure	.30	0	-	2.96
Machine	1.22	1.07	-	1.25
Land	4.00	4.00	-	4.00
Total Cost	\$9.32	\$7.46	-	\$13.53
Credit (seed and pasture)	.23	.00	-	6.03
Net cost	\$9.09	\$2.99	-	13.53
Yield tons	1.18	.5	-	2.6
Net return per acre	\$6.73	\$.26	-	\$28.28
Cost per ton	7.66	2.20	-	12.63
Return per man hour	1.11	.29	-	4.76
December 1 price per ton	13.00			

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COST PER ACRE OF PRODUCING TAME HAY
(Average of 97 acres)

	Total	Range		
Man labor hours	4	3 $\frac{1}{2}$	-	6 $\frac{1}{2}$
Horse labor hours	6 $\frac{1}{2}$	6 $\frac{1}{2}$	-	9 $\frac{1}{2}$
Tractor hours	0	0	-	0
Labor cost	\$1.56	\$1.44	-	\$2.37
Seed	1.00	1.00	-	1.00
Manure	.39	.00	-	2.57
Machine	.90	.90	-	.90
Land	4.00	4.00	-	4.00
Total Cost	\$7.85	\$7.49	-	\$10.16
Credit	.35	.00	-	1.08
Net cost	\$7.50	\$6.91	-	\$10.16
Yield tons	.6	.4	-	1.4
Net return per acre	-\$1.07	-\$3.27	-	\$5.75
Cost per ton	11.66	5.92	-	17.76
Return per man hour	.00	.00	-	1.17
December 1 price per ton	\$10.00			

COST OF PRODUCING WILD HAY PER ACRE
(Average of 401 acres)

	Total	Range	
Man labor hours	33	3	13
Horse labor hours	6	4 $\frac{1}{2}$	17 $\frac{1}{2}$
Tractor hours	0	0	0
Labor cost	\$1.45	\$1.13	\$4.72
Machine	.90	.90	.90
Land	2.00	2.00	2.00
Total Cost	\$4.35	4.03	7.62
Credit	.08	.00	1.07
Net Cost	\$4.27	\$3.86	\$7.62
Yield tons	.6	.4	2.0
Net return per acre	\$.16	-\$1.30	\$8.49
Cost per ton	7.72	3.78	10.79
Return per man hour	.29	.00	.90
December 1 price per ton	\$8.00		

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COST PER ACRE OF PRODUCING SILAGE
(Average of 194 acres)

	Total	Range	
Man labor hours	17	10 $\frac{1}{2}$	30 $\frac{1}{2}$
Horse labor hours	42 $\frac{1}{2}$	25	72 $\frac{1}{2}$
Tractor hours	4	0	14
Labor cost	\$8.17	\$4.79	\$13.73
Seed	.64	.46	1.08
Fine	.25	.19	.41
Silo filling	.99	.00	2.20
Manure	1.56	.00	6.74
Machinery	2.64	1.60	3.00
Land	4.00	4.00	4.00
Total Cost	\$18.25	\$13.50	\$28.65
Credit	.04	.00	.34
Net cost	\$18.21	\$13.50	\$28.65
Yield tons	3.2	1.8	6.5
Net return per acre	-\$1.41	-\$12.90	\$2.20
Cost per ton	5.69	3.66	7.80
Return per man hour	.00	.00	.36
December 1 price per ton	\$4.00		

COST OF HORSE LABOR
(Average of 142 horses on 17 farms)

<u>COSTS</u>	Per Horse	
	Amount	Value
Feeds		
Hay lbs.	5405	\$23.62
Corn fodder & stover, lbs.	904	4.30
Beet tops, lbs.	208	.29
Oats, lbs.	3407	34.45
Other grain, lbs.	249	2.72
Mill feeds, lbs.	48	.34
Pasture days	42	<u>1.42</u>
Total feed cost		\$67.14
Labor		
Man hours	82½	\$16.45
Other Costs		
Shelter		\$12.49
Equipment		5.45
Interest		6.26
Miscellaneous cash		1.23
Decrease in inventory		<u>7.02</u>
Total other costs		<u>\$32.45</u>
Total all costs		\$116.04
<u>CREDITS</u>		
Rent of horses		\$0.24
Miscellaneous cash receipts		.02
Manure		<u>5.01</u>
Total credits		<u>\$5.27</u>
<u>Net cost of horse labor</u>		\$110.77
Number of hours worked	1110½	
Cost per hour	10¢	
	Average	Lowest Highest
Net cost per horse	\$110.77	\$57.46 \$144.41
Hours per horse	1110½	589 1569½
Cost per hour	10¢	6.4¢ 16.5¢

COSTS AND RETURNS PER DAIRY COW
(Average of 168 cows on 13 farms)

<u>COSTS</u>	Amount	Value	
Feed			
Dry roughage, lbs.	2966	\$25.12	
Succulent feed, lbs.	5749	10.80	
Grain, lbs.	926	10.06	
Commercial feed, lbs.	484	3.29	
Oilmeal, lbs.	12	.31	
Pasture, days	150	<u>4.83</u>	
Total feed cost			\$54.41
Labor			
Man hours	178 ¹	\$35.72	
Horse hours	7	<u>.76</u>	
Total labor cost			\$36.48
Other Costs			
Shelter		\$10.73	
Equipment		5.16	
Interest		3.86	
Cash		.32	
Depreciation		<u>.92</u>	
Total other costs			<u>\$20.99</u>
Total all costs			\$111.88
<u>CREDITS</u>			
Skim milk, lbs.		\$20.51	
Manure		4.07	
Miscellaneous cash		<u>.03</u>	
Total credits			<u>\$24.61</u>
<u>Net cost of butterfat</u>			\$87.27
	Average	Lowest	Highest
Pounds of butterfat per cow	175	113	285
Feed cost per pound of butterfat, ¢	31	21.4	47.4
Net cost per pound of butterfat, ¢	50	27.1	107.0
Average selling price per pound, ¢	44	39.5	50.6
Return per hour of man labor, ¢	14.3	0	41.2
Return over cost of feed, \$	50.39	16.47	147.49
Net return, \$	-10.16	-68.77	38.90
Nutritive ratio	1:6.6	1:5.5	1:8.5

COSTS AND RETURNS FROM YOUNG DAIRY CATTLE
(Average per farm of 13 farms)

COSTS

Feed	\$354.31
Man labor 348 hours	69.60
Horse labor	1.96
Shelter	75.69
Interest	28.02
Purchases	35.77
Miscellaneous cost	.92
Decrease in inventory	<u>11.00</u>

Total costs

\$578.27

CREDITS

Sale of stock	\$245.10
Products used in house	21.46
Credit for heifers freshened	170.00
Miscellaneous cash	.64
Manure	<u>29.02</u>

Total credits

\$466.22

Net loss

\$112.05

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COSTS AND RETURNS FROM ALL CATTLE
(Average per farm of 16 farms)

COSTS

Opening inventory	\$1277.94
Purchases of livestock	47.66
Feed	1042.58
Man labor 2452 hours	490.42
Horse labor	10.39
Shelter	205.31
Equipment	57.36
Interest	76.52
Cash	<u>5.21</u>

Total costs

\$3213.39

CREDITS

Closing inventory	\$1271.19
Sales of cattle	388.43
Meat products used in house	24.04
Sale of dairy products	965.33
Dairy products used in house	123.59
Dairy products used for feed	89.91
Miscellaneous cash receipts	2.04
Manure	<u>78.53</u>

Total credits

\$2943.06

Net Loss

\$270.33

Return per hour of man labor

9¢

COST OF PRODUCING PORK PER 100 POUNDS
(Average cost on 16 farms)

<u>COSTS</u>	Amount	Value	
Feed			
Corn, lbs.	77	\$.82	
Small grain, lbs.	388	4.20	
Commercial feeds, lbs.	26	.23	
Skim milk & buttermilk, lbs.	287	.30	
Other feeds		.03	
Pasture		<u>.15</u>	
Total feed cost			\$5.73
Labor			
Men hours	35½	.70	
Horse hours	3½	<u>.04</u>	
Total labor cost			.74
Other costs			
Shelter		.41	
Equipment		.01	
Interest		.24	
Cash		<u>.04</u>	
Total other costs			<u>.70</u>
Total all costs			\$7.17
<u>CREDITS</u>			
Manure		\$.10	
Miscellaneous cash receipts		<u>.10</u>	
Total credits			<u>.20</u>
<u>Net return of 100 pounds of pork</u>			\$6.97
Average selling price			\$10.83
	Average	Lowest	Highest
Cost per 100 lbs., \$	6.97	5.00	12.96
Selling price per 100 lbs., \$	10.83	9.89	12.55
Pork production per farm, lbs.	9327	2403	20635

COSTS AND RETURNS FROM POULTRY
(Average per flock of 72 hens on 17 farms)

COSTS

Feed	\$52.59
Man labor 265 hours	53.02
Horse labor 16½ hours	1.72
Shelter	29.76
Equipment	6.49
Interest	8.13
Purchases	11.13
Miscellaneous cash expense	2.44
Decrease in inventory	<u>23.21</u>

Total costs \$218.49

CREDITS

Sales - eggs 334-5/6 doz.	92.24
Sales - poultry	67.15
Used in house - eggs 150-1/3 doz.	39.36
Used in house - poultry	14.64
Manure	1.58
Miscellaneous cash receipts	<u>.31</u>

Total credits \$215.28

Loss on poultry

\$3.21

	Per Flock	Per Hen	
Eggs laid	6102	85	
Pounds of grain	6567	91	
Pounds of commercial feeds	531	7	
Pounds of protein feeds(purchased)	8	--	
Pounds of succulent feed	44	--	
Pounds of skimmilk & buttermilk	323	35	
Labor - Man hours	265	3½	
Horse hours	16½	¼	
	Average	Lowest	Highest
Cost per dozen eggs, ¢	27.6	16.2	1188
Average selling price, ¢	27.5	24.5	39.0
Return per hour man labor, ¢	18.8	0	120