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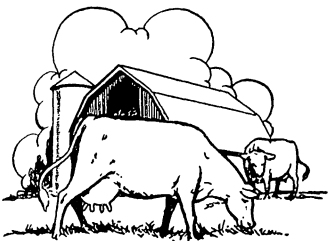
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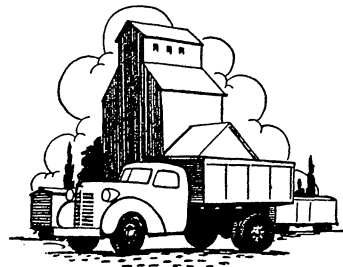
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# MINNESOTA farm business NOTES



NO. 337

UNIVERSITY FARM, ST. PAUL

MAY 30, 1952

## Corn, Oats, and Hay Costs Are Nearly Equal

Niels Rorholm, L. J. Downing, and  
S. A. Engene

As costs rise and prices received drop, farmers are becoming increasingly interested in studying their costs. They want to increase their profit margins by reducing costs wherever possible.

In an effort to pin down these costs of producing crops, information was obtained in three areas of Minnesota in 1951. Preliminary tabulations of data from two of these areas are presented in the accompanying tables.

The costs for producing crops on 13 farms in southeastern Minnesota are presented in table 1, and table 2 gives the same information for farms in the Red River Valley. Data were also gathered on 15 farms in southwestern Minnesota, but these have not yet been summarized.

The average size of the 13 farms in southeastern Minnesota was 184 acres, with 148 acres of tillable land. Eight of the farms are rolling to hilly, with the crops grown on contour strips. The records kept contained information on purchases, sales, inventories, crops raised, feeds fed, labor used on each enterprise, practices employed, and other operations.

The average cost ranged from a low of \$36 per acre for oats to a high of \$51 for corn silage. The costs for husked corn and alfalfa hay were nearly equal to oats.

### Figures Valuable for Comparison

Even though these costs are approximations, they indicate the relative importance of the various items of cost. Efficiency of labor in crop production has been developed to the point where labor is not a major part of the total cost—it is only about one-sixth of the total.

The cost of power is even smaller. Machinery, which has made possible

this increase in labor efficiency, is a more important item of cost. It is about one-fifth of the total cost of producing these crops.

Commercial fertilizers are becoming a fairly important item of cost, especially for corn. These costs are almost as high as for barnyard manure.

### Land Is Biggest Cost

Land is the biggest single item of cost. This is charged at customary cash rents in the area, but the actual cash outlays may be less than this on many farms—especially when the man owns the farm clear of debt.

Only the average costs are shown in table 1; actually costs differed greatly among these farmers. For example, among the 12 farmers raising oats, one had a cost of \$25 per acre; six had costs of \$30-\$36; four had costs of \$40-\$43; and one had a cost of \$47 per acre. The cost per bushel for 11 of these men ranged from \$.50 to \$.77. The twelfth man had a cost of \$1.52 per bushel; his cost per acre was \$35, but his yield was only 23 bushels.

A different picture is shown in the Red River Valley in northwestern Minnesota. The costs of producing crops in that area are shown in table 2. The average size of these farms was 538 acres, with 490 acres tillable. Crop production was more important than livestock production on practically all of these farms, for on

almost half of them there was little or no livestock.

Here, too, labor is not a large portion of the total cost—only one-tenth for the small grains. Labor is more important for alfalfa hay and for corn, especially corn for the silo.

The cost of power is less than that of labor. Machinery is an important cost—larger than man labor on the small grains. Power and machinery together are about one-fifth of the total cost. The costs for commercial fertilizers and for barnyard manures are quite small.

### Costs Lower in Valley

Costs in the Red River Valley were found to be lower than in the southeastern part of the state, but this may be due in part to the method of gathering the information. The records kept in this area were somewhat less detailed than those that were kept in the

Table 1. Costs of Producing Crops in Southeastern Minnesota—1951  
(Preliminary Tabulations)

	Oats	Corn husked	Corn for silage	Alfalfa
Number of farms .....	12	13	10	12
Acres per farm .....	32	38	9	37
Costs per acre				
Man labor .....	\$ 5.78	\$ 6.76	\$ 9.46	\$ 5.30
Power .....	4.15	5.82	7.27	3.83
Custom work hired .....	.58	.67	1.77	2.95
Seed .....	3.26	1.41	1.53	3.25
Manure .....	2.74	4.29	4.63	2.97
Commercial fertilizer .....	1.56	4.49	2.12	2.12
Twine or wire .....	.45		.21	.15
Machinery .....	7.36	7.04	13.71	6.74
Total operating costs .....	\$25.88	\$30.48	\$40.70	\$27.31
Land charge .....	10.00	10.00	10.00	10.00
Total cost .....	\$35.88	\$40.48	\$50.70	\$37.31
Production per acre .....	50 bu.	58 bu.	8.2 ton	2.7 ton
Cost per unit .....	\$ .72	\$ .70	\$ 6.18	\$13.82
Hours per acre				
Man labor .....	7.2	8.4	11.8	6.5
Tractor use .....	4.4	6.7	8.6	4.1
Horse work .....	1.2		.2	.9

## MINNESOTA farm business NOTES

Prepared by the Division of Agricultural Economics and Agricultural Extension Service.

Published by the University of Minnesota Agricultural Extension Service, University Farm, St. Paul 1, Minnesota.

southern part of the state, and this difference may have led to some underestimation.

It is reasonable to believe, however, that many of the crop production costs would be lower in the Valley. With large and level fields it is possible to use large labor-saving machinery. And with large farms the machinery costs are spread over many acres, giving low overhead cost per acre. Since many of these farms, especially in the northern part of the area, grow small grain primarily, one line of machinery is sufficient. Investments in corn and hay machinery are small. In the southern part of the state, many farmers carry full lines of grain, corn, and hay machinery.

### Some Costs About Equal

In the southeastern area the costs per acre were about equal for oats, corn (husked), and alfalfa hay. The total costs were \$36, \$40, and \$37 respectively. These crops can also be compared on the basis of direct cash outlays for power, custom work hired, seed, commercial fertilizer, twine or wire, and machinery. These costs were

\$17 for oats, \$19 for corn, and \$19 for alfalfa hay. Thus it can be seen that the costs were nearly the same in this respect, too.

The hours of labor used to raise and harvest an acre of these crops were 7.2 for oats, 8.4 for corn, and 6.5 for alfalfa hay—about the same number for each crop. In the southwestern part of the state the labor for corn would most likely be less.

Since the costs are about the same for these crops the farmers' choice of a good cropping system can be made largely on the basis of relative production per acre. For a livestock farmer the quantity of feed produced per acre is a sound basis for selection. For a cash-crop producer the value produced per acre is satisfactory. These judgments must be modified by the effect of the crop on the future productivity of the soil.

### Corn Costs Higher

The costs per acre for the different crops are also quite similar in the Red River Valley. Here, however, the costs for corn are slightly higher than for hay and small grains. Since corn is not an important crop, the farmers do not have a full line of labor-saving machinery and their labor and power costs are higher. These farmers, also, can select their crops largely on the basis of relative feed production or cash income.

The information presented here has been based on preliminary analyses of the data from the two studies. Additional analyses are being made and will be available in more detailed publications.

Table 2. Costs of Producing Crops in the Red River Valley of Minnesota—1951  
(Preliminary Tabulations)

	Wheat	Oats	Barley	Flax	Corn husked	Corn for silage	Alfalfa hay
Number of farms .....	24	22	22	16	7	12	16
Acres per farm .....	148	44	92	55	31	17	38
Costs per acre							
Man labor .....	\$ 2.43	\$ 2.67	\$ 2.82	\$ 3.13	\$ 5.40	\$ 7.26	\$ 4.22
Power .....	1.68	1.64	1.71	1.93	3.54	4.02	2.17
Custom work hired .....	.47	.31	.31	.30	.91	1.58	2.36
Seed .....	3.63	2.39	2.77	3.28	1.55	1.41	1.47
Manure .....	.88	.91	1.00	.85	2.42	3.81	.59
Commercial fertilizer .....	.64	.77	.54	.64	.87	.68	.23
Twine or wire .....	.02	.04	.04			.04	.32
Machinery .....	3.21	3.22	2.95	2.78	4.35	3.45	3.51
Other costs .....	.77	.27	.06	.06	.02	.01	.10
Total operating .....	\$13.73	\$12.22	\$12.20	\$12.97	\$19.06	\$22.26	\$14.97
Summer fallow .....	4.00	1.70	2.55	1.56	.29	.86	
Land charge .....	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Total cost .....	\$27.73	\$23.92	\$24.75	\$24.53	\$29.35	\$33.12	\$24.97
Production per acre .....	25 bu.	40 bu.	34 bu.	10.4 bu.	27 bu.	6.8 ton	1.4 ton
Cost per unit .....	\$ 1.11	\$ .60	\$ .73	\$ 2.36	\$ 1.01	\$ 4.87	\$17.83
Hours per acre							
Man labor .....	2.4	2.7	2.8	3.1	5.4	7.3	4.2
Tractor use .....	1.8	1.9	2.0	2.4	5.0	5.0	2.6

## FARM REAL ESTATE —BOOM OR BUST?

A. A. Dowell

What lies ahead for Minnesota farm real estate? Will the boom that came about after the outbreak of the war in Korea continue? No one really knows, but a look at the farm price trend offers a few hints.

The long-time trends in land prices for Minnesota and the United States are shown in the table in the form of index numbers, with 1912-1914 equal to 100. The index of prices received and the ratio of prices received to prices paid by farmers of the country as a whole are shown in the last two columns of the table (1910-14=100). All of the figures in the table are from the Bureau of Agricultural Economics.

The index of prices received is a fairly good indicator of the amount of inflation or deflation over a period of time. Land prices tend to follow inflationary or deflationary tendencies. However, they are also influenced by the relationship between prices received and prices paid.

### Farms Known As Good Investments

The trend in farm land prices in Minnesota was upward from the time of settlement to 1920. This long-time experience caused farmers and others to look upon a farm as a good investment, and this feeling of confidence was reinforced by high farm earnings during the war and for a short time after. The result was a brief but violent land boom.

The boom was followed by a decline in farm income and land prices. The index of prices received dropped to a low of 65 in 1932 and the ratio of prices received to prices paid dropped to a low of 58. Although prices received increased significantly from 1932 to 1940, the ratio of prices received to prices paid continued to be unfavorable to farmers. The decline in land prices was especially severe during the great depression of the 1930's, the index dropping to 79 in 1933.

In some parts of the state the situation was aggravated by several extremely dry years. Many farmers had little to sell, even at the extremely low prices. The result was widespread foreclosure of farms and general distress.

The combination of extremely low land prices, disposal of the large number of acquired farms by lending agencies, and rising farm incomes set the

**Indexes of Prices of Farm Real Estate Per Acre, Prices Received, and Ratio of Prices Received to Prices Paid by Farmers\***

Year	Land prices (March 1) 1912-14=100		Prices received, 1910-14= 100		Ratio of prices re- ceived to prices paid 1910-14= 100
	Minn.	U. S.	U. S.	U. S.	
1912	95	97	99	98	
1913	100	100	102	100	
1914	105	103	102	99	
1915	107	103	99	94	
1916	122	108	119	103	
1917	138	117	178	120	
1918	155	129	206	119	
1919	167	140	218	111	
1920	213	170	212	99	
1921	212	157	124	80	
1922	187	139	131	87	
1923	177	135	142	89	
1924	170	130	143	89	
1925	159	127	156	95	
1926	155	124	146	91	
1927	145	119	141	89	
1928	140	117	149	92	
1929	138	116	148	92	
1930	133	115	125	83	
1931	116	106	87	67	
1932	98	89	65	58	
1933	79	73	70	64	
1934	83	76	90	75	
1935	83	79	109	88	
1936	85	82	114	92	
1937	87	85	122	93	
1938	88	85	97	78	
1939	86	84	95	77	
1940	86	84	100	81	
1941	86	85	123	93	
1942	90	91	158	105	
1943	100	99	192	113	
1944	110	114	196	108	
1945	115	126	206	109	
1946	129	142	234	113	
1947	143	159	275	115	
1948	157	170	285	110	
1949	164	175	249	100	
1950	169	169	256	100	
1951	197	193	302	107	
Nov. '51	210	206	301	106	
Mar. '52	.....	.....	288	100	

\*Source: Bureau of Agricultural Economics.

# Crop-Share Cash Lease Plan Explored

R. M. Dennistoun and T. R. Nodland

The crop-share cash lease is the most common leasing arrangement in west central Minnesota. According to the 1950 Federal Farm Census 59 per cent of all rented farms are operated on this basis.

In order to secure information on leasing arrangements in west central Minnesota, a questionnaire was sent in 1951 to the instructors of veterans taking on-the-farm training. Out of a total of 448 questionnaires received, 258 were from tenants who operated their farms under a crop-share cash lease. In 40 per cent of the cases the landlord received one-third of the corn raised, 38 per cent received two-fifths, and 14 per cent received one-half of the corn. In general the share of the small grains and soybeans received by the landlord was the same as for corn.

Most of the cash rent paid for hay and pasture land was between \$3.00 and \$8.00 per acre. The highest rates were paid for legume hay and pasture and lower rates were paid for wild hay land. Eighteen per cent of the renters also paid cash for buildings and farmstead.

## Expense Arrangement Studied

In general the share of expenses paid by tenants depended on the share of the crops received by the landlord as rent. Tenants receiving two-thirds or three-fifths share of corn commonly paid all of the following expenses: combining, threshing, baling, silo filling, seed corn, seed grain, twine, baling wire, hired labor needed to operate the farm, labor used to repair or build new fence, and delivery of the landlord's share of grain to market. In nearly all cases the landlord furnished the material needed for the repair or upkeep of the buildings and also labor for tiling.

If prices received and the relationship between prices received and prices paid continue to be favorable, land prices will continue to rise. However, there are some indications that this favorable situation may be coming to an end. Between March 1951 and March 1952, both prices received and the ratio of prices received to prices paid dropped sharply.

While it is too early to conclude that the land boom has reached its peak, it is not too early to suggest caution for prospective buyers with limited capital.

Tenants receiving one-half of the corn usually paid all of the following expenses: baling, silo filling, hired labor needed to operate the farm, and labor used to repair or build new fence. The combining and threshing expense was shared equally by both parties. The costs of seed corn, seed grain, material for building repair, and labor for tiling generally were paid by the landlord.

Some major expense items were shared differently by the tenant and landlord. The more common divisions under the different crop-share cash plans are presented in the table.

**Number of Tenants Reporting Various Expense Items and the Most Common Payments**

Items	Share of corn received by landlord as rent		
	1/3	2/5	1/2
<b>Commercial fertilizer</b>			
Number reporting .....	67	60	23
Paid all .....	16	11	1
Paid 2/3 .....	26	8	1
Paid 3/5 .....	.....	13	.....
Paid 1/2 .....	15	18	8
None paid by tenant .....	8	4	13
<b>Legume seed</b>			
Number reporting .....	62	75	30
Paid all .....	27	20	6
None paid by tenant .....	31	35	23
<b>Grass seed</b>			
Number reporting .....	51	70	24
Paid all .....	22	25	4
None paid by tenant .....	21	28	20
<b>Corn picking</b>			
Number reporting .....	89	86	36
Paid all .....	88	86	16
Paid 1/2 .....	.....	.....	20
<b>Weed spraying</b>			
Number reporting .....	65	72	26
Paid all .....	40	56	10
Paid 2/5 .....	10	3	.....
Paid 1/2 .....	10	7	10
<b>Chemical spray material</b>			
Number reporting .....	67	79	27
Paid all .....	29	29	2
Paid 2/5 .....	17	6	.....
Paid 1/2 .....	11	11	6
None paid by tenant .....	9	24	19
<b>Fencing material</b>			
Number reporting .....	86	85	36
Paid all .....	12	15	5
None paid by tenant .....	68	65	31
<b>Labor, building repair</b>			
Number reporting .....	81	80	33
Paid all .....	31	25	14
None paid by tenant .....	49	48	17
<b>Labor, grass waterways</b>			
Number reporting .....	24	20	6
Paid all .....	13	13	1
None paid by tenant .....	11	6	4

stage for the advance in land prices that began during the early 1940's. For a time land prices lagged behind farm earnings. But the combination of high prices, a favorable ratio between prices received and prices paid by farmers, good weather, and high yields kept land prices up through 1948.

During 1949, prices of farm products declined sharply while farm costs declined only slightly. There was even fear of a postwar recession.

With the outbreak of war in Korea the picture changed quickly. From March 1950 to November 1951, land prices increased nearly one-fourth in Minnesota and more than one-fifth in the country as a whole.

# Minnesota Farm Prices For March-April, 1952

Prepared by Jerry M. Law

## Average Farm Prices for Minnesota, March and April 1952, with Comparisons\*

	March 1952	March 1951	April 1952	April 1951
Wheat .....	\$2.17	\$2.17	\$2.15	\$2.18
Corn .....	1.30	1.47	1.40	1.51
Oats .....	.82	.85	.80	.85
Barley .....	1.23	1.49	1.20	1.43
Rye .....	1.73	1.66	1.68	1.69
Flax .....	3.91	4.64	3.67	4.38
Potatoes .....	2.05	1.00	2.20	.95
Hay .....	15.70	16.20	14.50	19.30
Hogs .....	16.50	21.00	16.30	20.50
Cattle .....	28.00	30.00	28.00	29.80
Calves .....	31.50	33.40	31.50	33.50
Lambs-sheep .....	24.33	35.44	25.54	34.05
Chickens .....	.194	.235	.178	.248
Eggs .....	.298	.385	.305	.390
Butterfat .....	.82	.74	.79	.74
Milk .....	3.85	3.55	3.75	3.50
Wool† .....	.48	1.11	.46	1.04

\* Average prices as reported by the USDA.

† Not included in the price index numbers given below for Minnesota.

The index of Minnesota farm prices represents the average of the increases and decreases in farm product prices in the given month of 1952 over the average of the five corresponding months of the period 1935-1939. Weights for Minnesota indexes are the average sales in the five corresponding months of 1935-39. Weights for the U. S. indexes are average sales of 60 months in 1935-39.

Minnesota farm prices averaged about the same in April as a month earlier. Higher prices for corn, potatoes, sheep, and lambs were offset by price declines for most grains, dairy products, and hogs. Prices in April averaged lower than a year earlier.

## The Outlook Corner — Flaxseed Picture

Minnesota and the Dakotas account for almost 85 per cent of the domestic production of flaxseed. Before World War II, imports averaged about 50 per cent of our supply. Since 1947, the U. S. has been an exporter of flaxseed.

The demand for flaxseed is a reflection of the demand for linseed oil and linseed oil meal. Linseed oil is used primarily in the drying industries—for paints, varnishes, linoleum, and other products. It also is used as a protective covering for armaments and machinery, and as a lubricant. It may constitute as much as 75 per cent of all oils used in the drying industries.

Linseed oil has only limited competition. Other comparable drying oils, such as tung, are restricted in supply or are expensive. The semidrying oils, such as soybean, are limited in adaptability. The drying industries probably will continue to rely primarily on linseed oil.

The demand for linseed oil then is largely dependent on the demand for products of the drying industries. And this latter demand is closely related to general industrial activity, particularly the construction and repair of buildings.

The demand for linseed oil meal depends on the number of livestock and the supply and price of competing feeds, such as cottonseed and soybean meals and tankage. In general, the range of competition is quite extensive.

Over a period of years the demand for linseed oil and linseed oil meal has been highly variable. This variability, along with fluctuations in yield, largely accounts for the marked variability of the price of flaxseed.

During the past few weeks the price of flaxseed has declined sharply. The linseed oil market has been particu-

### Flaxseed—Production and Foreign Trade

	Production			Foreign trade*	
	U. S.	Minn.	N. D.	Exports	Imports
		million	bushels		
1935-39	11	6	3	†	15
1940	31	17	4	†	11
1941	32	15	5	2	23
1942	41	16	9	4	9
1943	50	16	15	15	21
1944	22	7	7	10	7
1945	35	12	12	†	8
1946	23	9	5	†	10
1947	41	15	12	2	2
1948	55	19	16	6	1
1949	44	16	14	4	†
1950	40	13	17	5	†
1951	34	11	15	5	†

\* Includes linseed oil reduced to flaxseed equivalent.

† Less than 500,000 bushels.

larly weak. Although industrial activity remains high, building contracts are down and there is some pessimism because of unsettled business conditions. Also, stocks of linseed oil have been quite large.

Very little linseed oil meal is offered for sale, even though ceiling prices have been raised. Crushing margins have not been sufficient to interest processors.

With a current-market flaxseed price of about \$3.90 and a support price of \$4.03 for the 1952 crop, it is unlikely that any marked further decline in flaxseed prices will occur. Nor is it likely that prices will advance above the support level.

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Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Co-operating, Paul E. Miller, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

### Indexes and Ratios for Minnesota Agriculture

	March 15, 1952	Average, March 1935-39	April 15, 1952	Average, April 1935-39
U. S. farm price index .....	263.7	100	265.1	100
Minnesota farm price index .....	273.8	100	263.1	100
Minn. crop price index .....	263.6	100	246.9	100
Minn. livestock price index .....	307.9	100	308.6	100
Minn. livestock products price index .....	237.1	100	225.9	100
Purchasing power of farm products, United States .....	114.8	100	115.4	100
Minnesota .....	119.2	100	114.5	100
Minn. farmers' share of con- sumers' food dollar .....	57.8*	48.3	57.8†	47.9
U. S. hog-corn ratio .....	10.12	13.4	9.76	12.5
Minn. hog-corn ratio .....	12.69	16.5	11.64	15.4
Minn. beef-corn ratio .....	21.54	12.9	20.00	12.6
Minn. egg-grain ratio .....	10.28	13.6	10.38	13.7
Minn. butterfat-farm-grain ratio	32.77	32.4	31.60	31.8

\* Figure for January 1952.

† Figure for February 1952.

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University Farm, St. Paul 1, Minn.  
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