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FARM BUSINESS NOTES

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Farm Income in Minnesota

By WARREN C. WAITE

The income from the sale of the 16 principal agricultural products in Minnesota last year was about 260 million dollars. These 16 products provide between 90 and 95 per cent of the total farm income of the state. Their total this year is about 15 per cent below the income from the sale of these products in 1936 and 1937, but is larger than for any year in the period from 1931 to 1935, inclusive.

The decline in income in 1938 as compared with 1937 is largely the result of lower prices since the physical volume of sales was probably even larger than in 1937. Throughout most of the year, the index of Minnesota farm prices was about 25 per cent lower than in the corresponding period of the preceding year. Production of cash crops in Minnesota in 1938 was as large as in 1937, but the production of feed crops was less than for the preceding year, when production was unusually large. Nevertheless, the 1938 production was well above the average of the preceding 10 years (1927-1936) and supplies of feed per animal will be large during the coming year. Feeding ratios were also favorable during 1938, tending to stimulate the production of livestock and livestock products. Butterfat production exceeded 1937 by a substantial margin, with the larger differences in the early part of the year. Hog marketings also increased during the year. The decline in income from the sale of crops has been relatively larger than the decline in income from the sale of livestock and livestock products.

Estimates of the gross cash income for the last 12 years are given in Table 1. The gross cash income is the total

Table 1. Gross Cash Income from the Sale of 16 Principal Minnesota Agricultural Products, 1924 to 1938

Year	Gross cash sales	Year	Gross cash sales	Benefit payments
	million dollars		million dollars	million dollars
1924-5-6 average	378			
1927	366	1933	177	3
1928	367	1934	218	16
1929	384	1935	241	20
1930	326	1936	303	9
1931	235	1937	305*	17
1932	155	1938	260*	9*

* Preliminary.

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of the sales of the 16 principal agricultural products of the state—butterfat, hogs, cattle, wheat, eggs, milk, corn, flax, oats, barley, potatoes, calves, chickens, hay, rye, and lambs-sheep. The amounts of the principal products sold each month multiplied by their farm price, constitute the cash income for each month. The sum of the 12 calendar months

is the estimated annual cash income. A number of minor crops have been omitted. The figures do not represent the total value of agricultural production, and no allowance has been made either for the value of farm products used by the family or for changes of inventory value of livestock or crops. Cash income from other sources than the sale of farm products is not included.

Seasonal Variation in Sales

The agriculture in Minnesota is sufficiently diverse, when the state is taken as a whole, that the sales of agricultural products provide a fairly uniform income throughout the year. The proportion of the total receipts, from the sale of the 16 principal products, originating in each quarter of the year is shown for the two five-year periods 1924-1929 and 1932-1936 in Table 2. The lowest quarter in the 1932-1936 period provided an average of 22.1 per cent of the receipts, while the highest quarter provided 28.2 per cent. There was some difference between the two five-year periods in the quarters providing the largest and smallest receipts. In the latter period, the third quarter was the one providing the largest receipts, while in the earlier period it had been the last quarter of the year. The

Table 2. Proportion of Receipts in Minnesota from Sales of 16 Principal Agricultural Products by Three-Month Periods, Averages of 1924-28 and 1932-36

Quarter of year	1924-28	1932-36
	per cent	per cent
January-February-March	25.7	22.1
April-May-June	22.1	23.9
July-August-September	23.8	28.2
October-November-December	28.4	25.8
Total	100.0	100.0

shift appears to have been due at least in part to a somewhat earlier marketing of crops in the 1932-1936 period and an increase in the proportion of butterfat sales in that period.

The source of the monthly income shows considerable variation during the year. The relative importance of each of the three groups, crops, livestock, and livestock products, is shown by months for the period 1932-1936 in Table 3. The livestock group includes the receipts from the sale of hogs, cattle, calves, and lambs-sheep; the livestock products include butterfat, milk, eggs, and poultry; the crops include wheat, corn, oats, rye, barley, flax, potatoes, and hay. In no single month did any of these groups provide as much as half the total income. Livestock reached its greatest importance as a source of income in November when it provided 49.0 per cent of the income, livestock products in May with 47.4 per cent, and crops in August with 46.1 per cent.

Table 3. Relative Importance of Sources of Minnesota Gross Cash Income from the Sales of Agricultural Products, 1932-1936

Month	Livestock	Livestock products	Crops	Total
January	46.2	39.3	14.5	100.0
February	42.3	41.9	15.8	100.0
March	40.6	40.2	19.2	100.0
April	38.0	45.3	16.7	100.0
May	34.9	47.4	17.7	100.0
June	37.2	46.8	16.0	100.0
July	34.1	40.1	25.8	100.0
August	25.2	28.7	46.1	100.0
September	31.6	29.3	39.1	100.0
October	44.5	28.7	26.8	100.0
November	49.0	31.8	19.2	100.0
December	47.6	36.1	16.3	100.0

Crops were the most important source of income in only two months, August and September. This is the period when crop marketings are large and receipts from the sale of hogs are at their low for the year, while butterfat sales have declined greatly from the June peak. In the four months, July, August, September, and October, sales of crops provided more than one-fourth of the income. In the other eight months, this source provided less than one-fifth of the income in any month.

Livestock sales provided the largest share of the receipts from October to March. They reached nearly half the total from November to January, when the marketings of hogs reached their peak and cattle sales were also large. Butterfat production reaches the low for the year at this period and the marketing of crops has been largely completed. From this period, there is a gradual decline in the relative importance of livestock until the following August, at which time they contribute only about one-fourth of the total receipts.

Livestock products were the most important source of income from April to July. This is the period of largest receipts from the sale of butterfat and eggs, while crop sales are small and sales of livestock are moderate. Livestock products were least important from August to October, during which period the low of 28.7 per cent of the monthly receipts was reached. From this point, there was a gradual increase in importance until the following May.

The income of the individual farmer, of course, is not likely to be so regular as that for the state as a whole since he will seldom approach the diversity of sources of income found for the state.

Minnesota Farmers' Response to Price in Production of Potatoes

By REX W. COX

The acreage of potatoes in Minnesota has shown much variation during the last 15 years, ranging from a low of 270,000 acres in 1925 to a high of 379,000 in 1928 and 1932. A study of the year-to-year variations during this period indicates that shifts in acreage are closely related to the returns obtained from the preceding crops. While relatively high returns of any one season tend to be followed by an increase in acreage, usually two years of relatively high returns are necessary to effect a significant change in the subsequent acreage.

Table 1 shows the changes in acreage that have occurred during each of the last 15 years, and the acre returns obtained during the first and second preceding seasons. The change in acreage for each year is expressed as a per cent of the acreage of the previous year. The acre returns have been determined by multiplying the average October-April farm price by the yield per acre.

Table 1. Changes in Minnesota Potato Acreage and the Acre Returns from the Crops of the Preceding Seasons, 1924-1938

Year	Change in acreage	Acre returns		Year	Change in acreage	Acre returns	
		1st preceding year	2nd preceding year			1st preceding year	2nd preceding year
	per cent	dollars	dollars		per cent	dollars	dollars
1924	-21	56	37	1932	+5	51	72
1925	-19	33	56	1933	-11	48	51
1926	+5	158	33	1934	+6	69	48
1927	+19	98	158	1935	-3	26	69
1928	+12	67	98	1936	-24	42	26
1929	-13	34	67	1937	-11	57	42
1930	-5	83	34	1938	-3	50	47
1931	+15	72	83				

The acreage in 1924 was 21 per cent less than the acreage in 1923. The returns per acre from the 1922 crop were \$37 and those of the 1923 crop, \$56. A similar situation prevailed during the seasons preceding the 24 per cent decline in the acreage in 1936. The unusually high returns of \$158 and \$98 from the 1925 and 1926 crops were followed by an acreage expansion of 19 per cent in 1927, the maximum increase in any one year during the period. Expansion of acreage, of course, is limited by various physical factors.

The estimates of acreage change shown in Table 2 have been determined on the basis of the average relationship prevailing during the 15-year period between acre returns of the preceding seasons and the per cent changes in acreage.

Table 2. Estimated Changes in Acreage Following Seasons of Specified Acre Returns

Acre returns in dollars	Change, first year	Change, second year
	per cent	per cent
25- 34	-16	-13
35- 44	-13	-7
45- 54	-8	-1
55- 64	-2	+4
65- 74	+2	+9
75- 84	+4	+10
85- 94	+6	+11
95-104	+7	+12
105 and above.....	+8	+12

The acre returns from the 1937 crop were \$50. According to the data in Table 2, a return of this size would effect about a one per cent decrease in acreage in the second year following or in 1939. If the returns from the crop of 1938 are around \$60 per acre, such returns would effect a 5 per cent increase in the following year, 1939. In this case, the combined influence of the returns from both preceding seasons would indicate a net increase of about 4 per cent in the 1939 acreage.

The evidence is that changes in Minnesota potato acreage are definitely influenced by the returns which farmers have received for their crops of the past seasons and that the returns of the first and second preceding seasons account for a large proportion of these changes.

Agriculture and Trade Agreements

By SKULI RUTFORD

Questions of agricultural exports and imports, of foreign trade policy, and of the ultimate effect of the Trade Agreements program are being carefully scrutinized by an ever-increasing number of farmers. The reason for this reconsideration is that a great deal of what has been said and written and many of the conclusions drawn just will not check with the facts.

At the time the earliest trade agreements were signed, many dire predictions were made as to the disastrous effects on agriculture. Total trade did increase, but no such flood of agricultural imports as had been pictured developed. In the fiscal year of 1936-37, following the drouth of 1936, imports of farm products did reach an abnormally high level, and that group which would bar all imports was constantly before the public decrying the policies that permitted such imports. During this period, however, farmers received fairly satisfactory prices for those products which they had to sell. Today the "no imports" group is either silent or is still harking back to 1936-37.

The reason is not hard to find. As soon as the abundant crops of 1937 began to reach market, the whole export-import picture changed abruptly. Imports of competitive products such as wheat, corn, and similar products, which had received much publicity, stopped almost entirely and foreign demand and exports developed rapidly. Total

exports of farm commodities were higher during 1937-38 than during any year since 1930-31. The increase in value of exports amounted to 22 per cent as compared to the year previous. Value of grain and flour was more than 6 times the preceding year, with a much greater rise in quantity. Oats exports were more than 13 times those of last year, rye more than 25 times, and corn almost 190 times.

Farm imports, on the other hand, declined rapidly, and in spite of heavy imports in July, August, and September, 1937, showed a total decline of 25 per cent for the year. The decline of competitive farm imports was even greater, amounting to slightly over 32 per cent. So we have increased farm exports and decreased imports. The "decriers" of a year ago should be rejoicing. The difficulty and reason for their silence may be due to the fact that these exports developed under the *same* policies which were blamed for imports a year previous, and also that under the changed export-import situation prices have been drastically lower and farm income has fallen.

Agricultural exports are a part of the whole foreign trade problem and really should be considered with it rather than separately. As we examine the *total* export and import figures, we find much the same situation as in farm commodities. Total exports increased by slightly more than 20 per cent, while total imports declined by just under 20 per cent. The value of exports exceeded the value of imports by approximately a billion dollars. Should these figures be a cause for rejoicing or the reverse?

The conclusion of thoughtful persons who have studied this problem is that this excess of exports over imports must be cause for concern. In all international trade, imports must largely pay for exports. This is particularly true of a country like the United States, which is already a creditor nation by many billions of dollars. Any such excess of exports over imports as is shown by the 1937-38 figures must be regarded as unstable.

As to the part that the Trade Agreements program may actually have had in the developments which have taken place, it must be stated that accurately measuring its effects is extremely difficult. The program seeks to increase total trade and to establish a better balance of exports and imports through a general lowering of trade barriers on a reciprocal basis. Total trade has increased by more than 50 per cent when 1937-38 is compared with the year previous to the enactment of the Trade Agreements Act. Total exports and farm exports show an increase in 1937-38 as compared with last year and a big increase as compared with 1933-34 before the act went into effect.

The Reciprocal Trade Agreements should be judged not only by the concessions obtained by the United States which promise exports, but possibly even more by the concessions made by the United States which promise development of imports, particularly of industrial products. Either imports must expand or exports will have to decline. Insofar as the program is successful in effecting removal of trade restrictions, resulting in an increased total volume of trade, both exports and imports, it should serve the best interests of farmers.

Minnesota Farm Prices for November 1938

Prepared by W. C. WAITE and W. B. GARVER

The index number of Minnesota farm prices for the month of November, 1938, was 66. When the average of farm prices of the three Novembers, 1924-25-26, is represented by 100, the indexes for November of each year from 1924 to date are as follows:

November, 1924	92	November, 1929	99	November, 1934	65
November, 1925	105	November, 1930	77	November, 1935	76
November, 1926	104	November, 1931	53	November, 1936	91
November, 1927	96	November, 1932	39	November, 1937	81*
November, 1928	96	November, 1933	48	November, 1938	66*

* Preliminary.

The price index of 66 for the past month is the net result of increases and decreases in the prices of farm products in November, 1938, over the average of Novembers, 1924-25-26, weighted according to their relative importance.

The index rose nearly 4 points from the October level, when it was 61. Excessive declines in grains were more than offset by less than normal seasonal declines in all the livestock items. The general level of Minnesota farm grain prices for November was less than half as high as that of the 1924-26 base period. Rye and wheat showed the greatest disparity, while flax and barley showed the least. The level for livestock products, chiefly butterfat, is in a slightly better relative position. It stood at 62% of the base period level. The livestock price level was in the strongest relative position, although it, too, was under the base period point, and by nearly 20%.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, November 15, 1938, with Comparisons

	Nov. 15 1938	Oct. 15, 1938	Nov. 15, 1937	Average Nov. 1924-25-26		Nov. 15 1938	Oct. 15, 1938	Nov. 15, 1937	Average Nov. 1924-25-26
Wheat	.55	.55	.90	1.32	Cattle	6.40	6.30	6.60	5.67
Corn	.32	.33	.41	.66	Calves	8.00	8.20	8.20	8.63
Oats	.17	.18	.24	.36	Lambs-sheep	7.05	6.71	8.11	10.90
Barley	.32	.35	.51	.58	Chickens	.106	.109	.155	.158
Rye	.29	.30	.57	.95	Eggs	.252	.233	.234	.41
Flax	1.61	1.64	1.82	2.22	Butterfat	.27	.26	.39	.45
Potatoes	.41	.37	.35	.89	Hay	4.35	4.55	6.38	11.81
Hogs	7.20	7.20	8.30	10.06	Milk	1.50	1.45	1.90	2.29

Indexes and Ratios of Minnesota Agriculture*

	Nov. 1938	Oct. 1938	Nov. 1937	Average Nov. 1924-26
U. S. farm price index	68.6	68.8	78.1	100
Minnesota farm price index	65.6	61.2	81.1	100
U. S. purchasing power of farm products	86.2	86.4	92.8	100
Minnesota purchasing power of farm products	82.4	76.9	96.3	100
Minn. farmer's share of consumer's food dollar		43.7	48.2	55.7
U. S. hog-corn ratio	18.1	17.4	17.2	13.4
Minnesota hog-corn ratio	22.5	21.8	20.2	15.6
Minnesota egg-grain ratio	35.8	32.5	22.3	26.2
Minnesota butterfat-farm-grain ratio	46.9	42.6	47.3	40.7

* Explanations of the computation of these data may be had upon request.

Recovery and Demand

The year 1938 has been variously characterized as a "depression" or "recession" year. Most of the economic indicators leave little doubt of a slow-up. The wholesale price level began declining in early 1937 and continued downward until midsummer of this year. Industrial activity fell off at about the same time and did not begin to accelerate until May or June of this year. Farm prices showed the same general pattern but, as usual, fell further and have shown little eagerness to rise since the low point in August of this year.

The turn came in midsummer of this year and, except for construction, the recovery since then has been rather moderate. Industrial activity on the whole declined about 35% and since midsummer has recovered about 45% of this loss. The same figures characterize factory payrolls. In the iron and steel industry the decline in activity amounted to 67% of which 40% has been recovered. Automobile production dropped off over 70% but has since recovered most of this drop, or within 12% of its 1937 high level. In textiles the loss in activity was not quite 50%, of which loss about half has been resumed. The story of construction is somewhat more rosy. A decline of 30% has been erased by a gain of half again as much as was lost. In residential building the loss was greater, about 45%, but here too the gain has been greater since the turning point than the loss to that point.

Leaving aside the question of burdensome farm surpluses, the prospect appears to be fairly good for increased demand for farm products for the 1939 year. Some temporary slowing up in the early part of the year is indicated in some forecasts. Most observers appear to feel that while there will be continued increase in activity for 1939 it will not reach the relatively prosperous levels of early 1937.

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