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FARM BUSINESS NOTES

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Farm Income in Minnesota

WARREN C. WAITE

The year of 1941 was unusually favorable for Minnesota agriculture. The gross cash sales of products appear to have been the largest in many years. These sales were about at the 1925-1929 levels and may have been as great as for any year since World War I. The physical quantities of products sold were, on the whole, somewhat smaller than for the record year of 1940 but were just about the same as in 1939. Production in 1939 and 1941 was next to 1940, the largest in Minnesota history. Prices advanced sharply during 1941, and the average for the year was the highest since 1929. The preliminary estimates of the sales of 19 of the principal agricultural products of the state are 415 million dollars as compared with 367 million dollars in 1940, an increase of nearly 50 million dollars.

Indexes of the gross cash sales of the 19 principal agricultural products, the prices of these products, and the physical quantity of sales are shown in table 1, for 1929 to 1941, with the average of the years 1935 to 1939 as 100. The index of gross cash sales is based upon the estimated dollar sales of wheat, corn, oats, barley, rye, flax, potatoes, hay, hogs, cattle, calves, lambs-sheep, butterfat, milk, farm butter, chickens, eggs, wool, and turkeys. A number of the less important commodities have been omitted, but the index is adequate for showing the relative changes between years. The included products account for about 95 per cent of the total cash sales in most years. The index represents only the returns from the cash sale of products as no allowance has been made either for the value of farm products used by the farm family or for changes in the inventory value of livestock or crops.

Table 1. Indexes of Gross Cash Sales, Prices, and Quantities of Sales of Minnesota Agricultural Products, 1929-1941 (1935-1939=100)

Indexes				Indexes			
Year	Gross Cash Income	Prices	Quantities Sold	Year	Gross Cash Income	Prices	Quantities Sold
1929	132.9	136.9	97.1	1936	106.8	109.8	97.3
1930	111.0	113.9	97.4	1937	109.9	114.7	95.8
1931	79.4	79.5	99.9	1938	99.6	92.3	107.9
1932	53.6	57.2	93.6	1939	100.4	86.4	116.1
1933	61.0	60.1	101.6	1940	118.4*	89.3*	132.7*
1934	68.5	74.0	92.5	1941	133.9*	115.4*	116.0*
1935	83.4	101.0	82.5				

* Preliminary.

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The volume of agricultural production during the year was large. In the years from 1924 to 1937, except for the declines due to the drouths, the physical volume of sales of agricultural products in the state remained about constant. In the past four years, however, production and sales have appreciably exceeded those in this earlier period. Crop yields this year, while some-

what below those of the two preceding years, were nevertheless good.

Production Generally Large

The index of yields for corn, wheat, oats, barley, rye, flax, and potatoes was 108 with the average yield for the years 1935 to 1939 equal to 100. The growing season was especially favorable for corn and this crop was the second largest ever produced in the state. The number of hogs marketed during the year was smaller than in 1940, but an upswing in the hog cycle began during the year. Cattle production continued to expand. Dairy production appears to have increased over a year ago as a result of a slight increase in the number of cows kept for milk on farms and a larger milk production per cow during much of the year. The number of livestock units on farms, however, has not yet reached the levels of 1933 and early 1934 preceding the drouth. Supplies of animal feedstuffs are ample and are sufficient to indicate a probable expansion in livestock numbers.

Rise in Agricultural Prices

A marked rise in agricultural prices began in the early part of the year, and by the close of the year the index of prices was about one-third higher than at the same time in 1940. The price increases were general, but most marked in the livestock items. Hog prices in the fall were nearly twice those of the preceding year, eggs were about two-thirds higher, and cattle and butterfat prices were about one-third higher. Crop prices, although rising, continued low relative to the prices of livestock and livestock products. Feeding ratios in consequence remained favorable for feeding livestock.

Government payments to farmers in the state thus far have been smaller than in the two preceding years. The

January to August total in 1941 was reported as 4.8 million dollars in contrast to 22.6 million dollars in the same period in 1940. The cost of things bought by farmers increased during the year but at a much less rapid rate than the prices of agricultural products, and the purchasing power of Minnesota farmers appears to have exceeded any year in the last two decades.

Sources of Farm Income

The relative importance of the various products in the gross cash income of the state is shown by five-year averages in table 2. From 1910 to 1918 wheat was the largest contributor to the cash income, but since then milk and butterfat combined have generally been the largest source. In a few years the sales of hogs have exceeded the combined sales of butterfat and milk but usually have been second in importance. Dairy products and hogs together have constituted about half of the total income in recent years. Cattle and calves occupy third place and provide about one sixth of the total income. The increase in importance of some of the minor items of income, such as sheep-lambs, chickens, turkeys, and wool has been especially marked. In terms of dollars, both hogs and dairy products have reached 100 million dollars in certain years. The sales of hogs exceeded 100 million dollars in 1925 and 1926, while sales of butterfat and milk exceeded 100 million dollars in the years from 1925 to 1929. No other single product has provided this large an income in any year.

Table 2. Relative Importance of Sources of Income from Gross Cash Sales of Minnesota Farmers by Five-year Intervals, 1910-1939

Commodity	1910-14	1915-19	1920-24	1925-29	1930-34	1935-39
	Per cent					
Wheat	22.1	21.4	9.2	6.2	3.6	5.3
Corn	3.3	3.2	4.1	2.7	2.9	3.6
Oats	4.3	4.6	4.7	3.0	1.9	1.9
Barley	5.3	3.5	1.6	1.8	1.6	3.2
Rye	1.7	2.1	3.2	1.1	.5	.9
Flax	2.6	1.7	3.0	3.4	3.2	2.9
Potatoes	5.1	4.7	4.9	3.9	2.9	1.8
Hay	3.0	.9	1.3	1.1	.8	.6
Hogs	14.3	19.0	21.1	24.3	22.5	21.1
Cattle-calves	10.5	14.0	11.2	13.8	15.6	17.0
Lambs-sheep	.5	.5	.6	.9	1.7	2.4
Chickens	1.3	1.2	2.4	3.2	4.2	3.4
Eggs	4.1	4.5	6.2	5.9	6.0	5.9
Butterfat-milk	21.0	17.9	25.3	27.4	30.8	27.7
Turkeys	.6	.5	.9	1.0	1.3	1.7
Wool	.3	.3	.3	.3	.5	.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

These shifts in the source of income are of interest with respect to the increases in the demand for products in the present and previous war situations. Just prior to World War I nearly one half of the Minnesota farm income was derived from crop sales. During World War I crop prices rose very high relatively to the prices of livestock and dairy products. The increase in the demand for wheat was especially great. The dollar value of crop sales was more than twice as great in 1918 as it had been in the period 1910 to 1914. In the period between the wars a great shift in Minnesota agriculture occurred. In the years immediately preceding World War II, nearly 80 per cent of the income came from the sale of livestock

and their products and the remaining 20 per cent from the sale of crops. In this war, in contrast to the preceding, the largest increases in demand thus far have been for livestock and their products, and there is little immediate prospect of increases in the demand for crops of the magnitude of the last war. Minnesota agriculture has thus been especially well situated to benefit from changes in demand in each World War.

Change in Net Worth on Owner-Operated Farms in 1940

TRUMAN R. NODLAND

The farm records kept by the cooperators in the various Farm Management Services in Minnesota furnish the basis for a detailed net worth statement. A total of 163 of the 1940 records on owner-operated farms in four different areas in the state were sufficiently complete for such an analysis (Table 1).

Table 1. Net Worth Statement for Owner Operated Farms, December 31, 1940

	Fillmore and Houston Counties	13 S.E. Counties	11 S.W. Counties	8 N.W. Counties
Number of cases	18	47	73	25
Size of farm, acres	208	179	236	355
Farm capital:				
Productive livestock	\$ 1,995	\$ 2,432	\$ 3,574	\$ 1,635
Crops, Seeds, and Feeds	1,305	2,073	3,744	943
Power, mach., and equip.	2,132	2,791	2,876	2,294
Real estate	12,459	13,184	19,622	8,891
Total farm capital	\$17,891	\$20,480	\$29,816	\$13,763
Total accounts receivable	126	383	578	61
Total household and personal assets	1,407	2,581	3,201	592
Total assets	\$19,424	\$23,444	\$33,595	\$14,416
Liabilities:				
Real estate mortgages	\$ 4,274	\$ 5,015	\$ 9,297	\$ 3,012
Chattel mortgages	299	328	1,064	316
Sealed grain	27	222	1,499	98
Notes	543	1,040	979	163
Accounts	79	212	538	133
Total liabilities	\$ 5,222	\$ 6,817	\$13,377	\$ 3,722
Farmer's net worth	\$14,202	\$16,627	\$20,218	\$10,694
Change in net worth				
Jan. 1 to Dec. 31, 1940	+310	+1,152	+1,258	+608
No. with increase in net worth	13	41	58	19
No. with decrease in net worth	5	6	15	6

The total farm capital represents the investment in the farm business. The household and personal assets include, in addition to the household goods, such items as the cash surrender value of life insurance, cash on hand and in the bank, stocks, bonds, and outside real estate. Likewise the real estate mortgages include the indebtedness on real estate other than that included with the farm capital. The number of farmers reporting the various types of liabilities is presented in table 2, on page 3.

The average net worth statement for each area shows a substantial increase in the net worth or financial progress made during 1940. The financial progress made by these farmers is undoubtedly much higher than that of all farm-

Table 2. Number of Farmers Reporting Liabilities, December 31, 1940

	Fillmore and Houston Counties	13 S.E. Counties	11 S.W. Counties	8 N.W. Counties
Number reporting liabilities.....	17	46	72	22
Real estate mortgages.....	13	32	63	21
Chattel mortgages.....	6	14	31	8
Sealed grain.....	1	13	56	3
Notes.....	9	26	42	4
Accounts.....	9	28	48	4

ers in the area covered because, in general, only the better farmers keep complete accounting records. The average financial progress shown for each area cannot be taken as indicative of the difference between areas but merely represents the results obtained in one particular year.

Income and Food Consumption

The importance of the families with the higher incomes in the demand for the principal agricultural products produced in Minnesota is indicated by data from the Consumer's Purchases Study, a nation-wide survey conducted by federal agencies in 1935-36. Estimates made from this survey show that the 25 per cent of the nonrelief city families who had the lowest incomes purchased only 14 per cent of the white potatoes, 15 per cent of the pork, 11 per cent each of the beef and butter, and 4 per cent of the lamb used by all the nonrelief city families. In contrast, the 25 per cent of the families with the highest incomes were purchasing 34 per cent of the white potatoes, 39 per cent of the pork, 42 per cent of the beef, 41 per cent of the butter, and 62 per cent of the lamb.

The level of family incomes is evidently of great importance in the consumption of these products. About three fifths of the lamb and two fifths of the butter, beef, and pork appear to be consumed by the quarter of the families with the highest income. The amount of consumption per family in the high income group appears to be nearly four times as great for beef and butter as in the low income group; for lamb it appears to be fifteen times larger, and even for pork and potatoes two and a half and twice as large, respectively. Since the low rates of consumption are the result of restricted income rather than a lack of desire to consume these products, it is evident that an increase in the incomes of these groups would considerably increase the demand for these products.

Farm Products Consumed in Minnesota Farm Households

HARLOW W. HALVORSON

Farmers in Minnesota receive the greatest portion of their income from the cash sales of agricultural products. An important supplement to this cash income consists of those products consumed in the farm household which are produced on the farm. Statistical information released by the Bureau of Agricultural Economics of the United States Department of Agriculture makes possible an estimate of the relative importance of this source of income. Average prices received by producers for farm products

sold were used in valuing the quantities of the various products considered in the study.

During the years 1936-1938 the value of farm production consumed in the farm household in Minnesota averaged 10.3 per cent as large as the income from cash sales of farm products. With Minnesota farmers' cash income from sales of 19 products estimated at 415 million dollars, the estimated value of farm products consumed in the farm household in 1941 is about 42.7 million dollars.

In addition to an estimate of the relative importance of farm production consumed in farm households, the material permits an estimate of the contribution of the various types of farm products to this type of income. Table 1 shows the average percentage contribution to the value of farm products consumed in farm households, by the major types of farm products during 1936 to 1938. On the basis of these percentages estimates are presented in column 3 of the value of each of the kinds of farm products consumed in 1941.

Table 1. Percentage Distribution of Value of Farm Products Consumed in Minnesota Farm Households by Source, 1936-38, and Estimated Value by Source in 1941

Commodity	Per cent, 1936-1938	Estimated Value, 1941 Million dollars
Wheat.....	1.8	.77
Corn.....	0.1	.04
Potatoes.....	7.9	3.37
Truck Crops and Farm Gardens.....	8.0	3.42
Cattle and Calves.....	6.5	2.78
Hogs.....	19.6	8.37
Sheep and Lambs.....	0.1	.04
Chickens.....	12.0	5.12
Eggs.....	14.2	6.06
Dairy Products.....	29.8	12.73
Total.....	100.0	\$42.70

Dairy products are first in importance in value of farm production consumed in the farm household, comprising 29.8 per cent of the total. Livestock and the combination of chickens and eggs were equally important, each comprising 26.2 per cent of the total. The major contribution to farm family living from farm production comes, therefore, from consumption of farm animals and farm animal products.

The importance of farm consumption in relation to cash sales for specific products may be estimated for the years 1936-1938 from the same data. We find that for potatoes, truck crops and farm garden products, chickens and eggs the value of home consumption in each case was at least 20 per cent of the total farm income from these products. About 10 per cent of dairy products produced in Minnesota are consumed in the farm household. Table 2 gives these estimates in greater detail.

Table 2. Proportion of Minnesota Gross Farm Income from Specified Products Consumed in Farm Households, 1936-1938

	Per cent		Per cent
Wheat.....	3.0	Cattle and Calves.....	3.9
Corn.....	.2	Hogs.....	8.2
Rye.....	2.9	Sheep and Lambs.....	.5
Buckwheat.....	9.7	Chickens.....	23.7
Potatoes.....	29.9	Eggs.....	20.2
Truck Crops and Farm Gardens.....	28.6	Dairy Products.....	9.9

Minnesota Farm Prices for November, 1941

Prepared by W. C. WAITE and H. W. HALVORSON

The index number of Minnesota farm prices for the month of November, 1941, was 92. 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:

1924— 92	1929— 99	1934— 65	1939— 67*
1925—105	1930— 77	1935— 76	1940— 68*
1926—104	1931— 53	1936— 91	1941— 92*
1927— 96	1932— 38	1937— 81	
1928— 96	1933— 48	1938— 66	

* Preliminary.

The price index of 92 for the past month is the net result of increases and decreases in the prices of farm products in November, 1941, over the average of November, 1924-25-26, weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, November 15, 1941, with Comparisons*

	Nov. 15, 1941	Oct. 15, 1941	Nov. 15, 1940		Nov. 15, 1941	Oct. 15, 1941	Nov. 15, 1940
Wheat	\$0.92	\$0.87	\$0.74	Cattle	\$8.80	\$9.00	\$7.30
Corn .....	.54	.54	.49	Calves	10.50	11.20	9.00
Oats .....	.36	.34	.27	Lambs-Sheep	9.20	9.39	7.96
Barley .....	.56	.49	.37	Chickens .....	.12	.13	.10
Rye .....	.52	.48	.37	Eggs .....	.30	.28	.21
Flax	1.60	1.63	1.40	Butterfat .....	.40	.39	.33
Potatoes .....	.55	.50	.35	Hay	4.86	5.03	4.45
Hogs	9.60	10.10	5.40	Milk	2.25	2.20	1.65
				Wool† .....	.38	.37	.31

* These are the average prices for Minnesota as reported by the United States Department of Agriculture.

† Not included in the price index number.

The prices of the grains were generally higher on November 15 than on October 15, and the prices of livestock slightly lower. Eggs, butterfat, and milk were somewhat higher. The rises in the grains were contrary to the usual seasonal movement and the declines in livestock, while seasonal in character, were somewhat less than usual. The prices on November 15 for livestock and livestock products were the highest November prices reported for many years. Eggs, butterfat, and milk prices were the highest since 1929, cattle since 1928, hogs since 1926, and wool since 1924.

Indexes and Ratios of Minnesota Agriculture*

	Nov. 1941	Oct. 1941	Nov. 1940	Average Nov. 1924-26
U. S. farm price index	98.5	100.7	72.3	100
Minnesota farm price index	92.0	86.0	67.7	100
U. S. purchasing power of farm products	106.1	112.5	90.3	100
Minn. purchasing power of farm products	98.7	96.4	84.4	100
Minn. farmers share of consumers food dollar		53.2	45.0	54.7
U. S. hog-corn ratio	15.2	15.5	9.9	13.3
Minnesota hog-corn ratio	17.8	18.7	11.0	15.6
Minnesota beef-corn ratio	16.3	16.7	14.9	8.7
Minnesota egg-grain ratio	24.4	23.7	21.0	26.2
Minnesota butterfat-farm-grain ratio	36.5	38.0	39.6	40.7

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

Minnesota Farmer's Share of the Consumer's Food Dollar

The Minnesota farmer's share of the consumer's food dollar has been increased since the beginning of World War II. A representative food basket made up of foods in the proportions usually purchased by city families in a month, of the products produced on Minnesota farms, cost \$18.93 at retail in Minneapolis in August, 1939 and \$22.35 in August, 1941. The foods included were flour and bread; milk, butter, and cheese; pork and beef; chickens; eggs; and potatoes. The value of the products required to provide the foods to fill this basket, valued at Minnesota farm prices on the same dates, were \$7.65 and \$11.63 respectively. The farmer was thus receiving 52 per cent of the consumer's food dollar in August, 1941 as compared with 40 per cent in August, 1939. There is no evidence in these data that marketing margins in dollars and cents of the processors and retailers have widened during the period. In fact, the actual margin as computed from current prices for this group of products has narrowed during the two-year period.

The increase in the farmer's share of the consumer's dollar has been largest in the case of pork and eggs, both of which products have had large advances in price. In August, 1939 the farmer was getting 49 per cent of the dollar spent for pork, but in August, 1941 he was getting over 75 per cent. The change of his share in eggs was from 56 to 68 cents. The share in the case of beef, chickens, and butterfat and milk increased by 9 cents, and wheat by about 5 cents. The only commodity for which there was a decline was potatoes.

During World War I the margin in dollars and cents between producers and consumers increased by a substantial amount and it is to be expected that this movement will be repeated during the present war. Whether retail prices will rise sufficiently more than farm prices to lower the percentage margin remains to be seen.

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