FARM BUSINESS NOTES

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Farmers' Income and Expenditures During the War

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The income from farming, like that of most other businesses, has increased rapidly during the war period. The annual gross income from the sale of the 19 principal farm products in Minnesota increased 219 per cent from 1940 to 1943.[1] This increase was due in part to higher prices for farm products and in part to increased production in response to the war demand.

Farm operating expense has also increased rapidly during this period but not as fast as income. As a result farmers have more funds available for debt servicing, investments, and personal spending. How they use these increased earnings is important from the standpoint of the immediate problem of price control and the longer-time problem of the farmer's financial position after the war. The records of members of the Southeast and Southwest Minnesota Farm Management Services furnish some interesting information on farmers' earnings and expenditures during the war period.

Complete financial records are available for a group of owner-operators in southern Minnesota. The number varied from 70 to 97 per year. Although there was some slight change in the farmers included from year to year, the size and type of farm remained practically constant.

The gross farm income and the farm expenditures per farm for the years 1940-43 are shown in table 1. Gross income increased 205 per cent from 1940 to 1943. The principal increases were in the sales of livestock and livestock products. These items were in urgent demand for war purposes and the farmers' response was prompt and substantial. Crop sales were reduced in volume but higher prices increased the cash income from this source somewhat.

Farm expenditures increased during the war years but not as rapidly as income. The total increase from 1940 to 1943 was 59 per cent. Feed purchases increased more in total as well as relatively than did any other item. Capital outlay for new machinery and new buildings and fences increased in 1941 but decreased as the shortage and rationing of machinery and building materials developed. Expenditures for the repair of both machinery and buildings increased each year. With replacements difficult, the farmer paid more attention to keeping available equipment in service. Current repairs and replacement more than offset wear and depreciation of machinery in 1940, 1941, and 1942, but in 1943 there was a net depreciation in the machinery account. There was a slight gain in the inventory value of buildings and fences each year. These farmers were able to maintain their machinery and farm plant in spite of the heavy burden placed on it by war production. Livestock were increased in both numbers and value during the period.

Interest payments increased in 1942 and 1943 although, as will be noted later, there was a substantial debt reduction during the period. There was a considerable number of short-time loans in 1942 and 1943, largely for the purchase of feeds and feeder livestock. The higher rate of interest on these short-time loans resulted in larger total interest payments.

Net cash income from the farm increased much more relatively from 1940 to 1944 than did either gross income or farm expenditures. How this income was used is shown in table 2. It is rather significant that the farmers' expenditures for personal living increased but little during this period. The large increase in the item "church, welfare, gifts, and miscellaneous" in 1942 and especially in 1943 was due to the inclusion of income taxes in this classification. By 1943 income taxes had become a major outlay. If this item, including income tax, and "savings and investment" are excluded from personal and household expense the increase from 1940 to 1943 was less than 20 per cent. Increases in the prices of goods and services would account for most of this. In some cases rationing and the shortage of goods available for purchase kept down personal expenditures.

The share of the cost of operating the farm automobile for personal and family use dropped sharply with the advent of gas rationing and the press of farm work involved in meeting goals for farm production. New pur-

[1] Waite, W. C., "Farm Income in Minnesota," Farm Business Notes, No. 252, December, 1943.

chases of automobiles and other power equipment for household use were also curtailed sharply as these items disappeared from the market.

The item of savings and investment includes life insurance premiums, bonds, stocks, and any items of property bought as an investment and not used in the farm business. The sharp upturn in 1942 reflects the buying of war bonds and a much larger increase occurred in 1943. The increase in the value of outside investments for the four years as shown in the net worth statements for these farms is almost exactly equal to the sum of the amounts by which the yearly expenditures for savings and investment in 1941, 1942, and 1943 exceeded that in 1940. This increase in investments was almost exclusively the result of the purchase of war bonds.

The remainder of the gross income not expended for farm operation and investment or for personal purposes was used to service debts or added to the cash on hand. In 1940 the net cash income was insufficient to cover the expenditures including payment on the real estate mortgage and on notes and accounts. This deficit was covered by drawing on cash on hand and by borrowing. In each of the three years—1941, 1942, and 1943—substantial payments were made on both real estate and chattel mortgages and on notes and accounts.

An analysis of the data presented in tables 1 and 2 suggests that these farmers are using their increased wartime incomes wisely. They are maintaining their farm plants in as good condition as the availability of equipment and materials permits so that they can make their maximum contribution to wartime needs. They are looking ahead to the postwar readjustments by reducing their indebtedness and accumulating reserves. These reserves are largely invested in war bonds. There is no indication of a rapid increase in consumptive spending that might contribute to price inflation.

It should be noted that the members of the farm management services have larger and more productive farms than the average of their communities. They are generally recognized as successful farm managers. Their farm earnings have doubtless increased more than that of the average farmer in southern Minnesota but they are using these larger earnings in a way that is consistent with both personal and social welfare. Since they are of above average ability as farmers, it is quite likely that their debt reductions and bond purchases are also well above the average of their communities.

Table 1. Gross Cash Farm Income, Expenditures, and Net Cash Income per Farm

	1940	1941	1942	1943
Number farms	94	97	78	70
Gross cash income				
Livestock	$2,967	$4,637	$6,131	$7,401
Livestock products	1,051	1,558	2,066	2,706
Crops	903	1,014	1,166	1,276
Miscellaneous	890	876	632	525
Total	$5,811	$8,085	$9,995	$11,908
Cash farm expense				
Livestock purchases	$1,075	$1,274	$1,272	$1,311
Feed	596	926	1,336	1,999
Miscellaneous livestock expense	64	99	102	173
Crop expense	189	214	297	360
New machinery	558	768	610	403
Machinery repair and expense	399	477	556	681
New buildings and fences	326	492	308	400
Building and fence repair	93	136	214	242
Labor	328	444	510	591
Taxes	226	241	247	242
Interest	376	305	326	354
Miscellaneous	228	224	274	314
Total	$4,458	$5,600	$6,052	$7,070
Net cash farm income	$1,353	$2,485	$3,943	$4,838

Table 2. Average Disposition of Net Farm Income per Farm*

	1940	1941	1942	1943
Personal and household expenditures				
Food	$ 301	$ 336	$ 404	$ 433
Operating expense	116	122	154	155
Furniture and equipment	108	119	162	87
Clothing	149	175	223	240
Health	91	99	122	127
Education, recreation, and development	81	81	105	105
Personal care and spending	52	54	65	80
Church, welfare, gifts, and misc.	91	101	169	735
Personal share, auto expense	99	114	84	54
Personal share, electricity and power	37	39	45	46
New purchases, auto and power	112	73	13	3
Savings and investment	161	187	605	1,078
Total	$1,398	$1,500	$2,151	$3,143
Paid on real estate mortgage	311	333	662	390
Paid on chattel mortgage	—409†	35	392	399
Paid on notes and accounts	136	185	314	389
Increase in cash on hand	—83‡	432	424	517
Total	$1,353	$2,485	$3,943	$4,838

* The average number of persons per family was 4.3. The outlay for food, operating expense, and to a minor extent some other items covers the hired help boarding with the family equivalent to one person for 6 months. In addition to the food purchased, considerable farm-raised food was used. At farm prices this had an average value of $300 per family. Retail prices would be nearly double this amount. In addition fuel worth $25 per year was obtained from the farm.

† Increase in chattel mortgage debt.

‡ Decrease.

Farmers Increase Their Net Worth in 1943

Truman R. Nodland

Farm records kept by the cooperators in the various Farm Management Services in Minnesota provide the basis for a detailed net worth statement. The data for 94 owner-operators, 46 part-owners, and 61 renters in southern Minnesota are presented in table 1.

The total farm capital represents only the operator's investment in the farm business. War savings bonds, stocks, and real estate other than the farm operated are included with outside investments. Cash on hand is included with household and personal assets. The liabilities include the indebtedness on outside real estate and on personal accounts.

The average net worth statements show that substantial financial progress was made in 1943 on these farms. The increase in net worth was the result of both an increase in the value of the total assets and a general decrease in all types of indebtedness. A substantial proportion of the increase in net worth of the owner and part-owner group

Table 1. Net Worth Statement

	Owners	Part-owners	Renters
Number of cases	94	46	61
Acres per farm	214	298	234
Owned	214	185	....
Rented	....	113	234
JANUARY 1, 1943			
Total farm capital	$29,025	$29,222	$ 9,976
Accounts receivable	267	73	155
Outside investments	1,889	1,318	1,495
Household and personal assets	1,515	1,528	1,447
Total assets	$32,696	$32,141	$13,073
Liabilities:			
Real estate mortgages	$ 7,083	$ 5,792	$ 261
Chattel mortgages	940	1,464	1,115
Notes	1,039	894	1,048
Accounts payable	207	315	202
Total liabilities	$ 9,269	$ 8,465	$ 2,626
Net worth	$23,427	$23,676	$10,447
DECEMBER 31, 1943			
Total farm capital	$29,231	$29,766	$10,404
Accounts receivable	207	23	150
Outside investments	2,858	2,223	3,131
Household and personal assets	1,829	1,775	1,506
Total assets	$34,125	$33,787	$15,191
Liabilities:			
Real estate mortgages	$ 6,288	$ 4,665	$ 883
Chattel mortgages	651	1,101	720
Notes	721	922	787
Accounts payable	128	170	194
Total liabilities	$ 7,788	$ 6,858	$ 2,584
Net worth	$26,337	$26,929	$12,607
Change in net worth	+$2,910	+$3,253	+$2,160

was due to a reduction in the liabilities. Renters, on the other hand, not having as large an indebtedness purchased more bonds than the other two groups. Most of the increase in household and personal assets was due to increases in cash on hand and in banks.

In addition to showing financial progress, a second and very important use of net worth statements concerns the farmer's credit status. A statement covering a period of years makes an excellent basis for a credit rating and may be presented to the bank or other agencies from which credit may be secured. From such a statement the banker can note the financial progress the applicant has made over a period of time, the ratio of liabilities to net worth, and the farmer's equity in his business.

Dry Milk Expansion in Minnesota

E. Fred Koller

The output of Minnesota's dry milk plants continued to expand in 1943 reaching a total of 125 million pounds as compared with 104 million in 1942. Present prospects are that in 1944 and 1945 the production of dry milk in this state will increase at an even more rapid rate, provided that the active wartime demand for these products continues.

During the first half of this year three central drying plants, each with sufficient capacity to produce 5 to 8 million pounds of powder and large enough to serve 8 to 15 creameries, have started operations. In the remainder of 1944 and the first months of 1945 about 10 more central projects, each with an annual output of 3 to 8 million pounds, are contemplated.[1] In addition a number of large creameries are installing roller equipment to dry their own milk, and several of the older drying plants are enlarging their capacity.

A survey shows that during this year 121 creameries are installing or making plans to install milk equipment with the intention of supplying milk to central drying plants. These creameries and five others which are installing equipment this year to dry their own milk will bring the number of plants receiving milk direct from farmers for drying to at least 286 in January, 1945, as compared with 160 in January, 1944, and less than 50 in 1939. Plants which may still initiate plans to install equipment in the remainder of the year may bring the total to 300, or 40 per cent of all creameries in the state. As these plants are above the average in size, more than 40 per cent of the total milk supply (milk equivalent basis) handled by creameries is represented.

An estimate of the potential whole milk supplies of the 126 plants shifting to the milk basis this year shows a total of about 1.4 billion pounds. Assuming that an average milk diversion of 60 per cent is realized and average yields of powder are obtained, the production from this source may be at the annual rate of 65 million pounds of nonfat dry milk solids by January, 1945. Plants previously equipped to receive milk are obtaining increasing supplies which may add another 15 to 20 million pounds of powder. Thus by January, 1945, Minnesota dry milk plants may be prepared to produce at an annual rate of 200 to 210 million pounds. Such an output would be about five times as large as that of the prewar years 1937 to 1941. Relatively large increases in dry milk output also have been effected in other midwestern and western dairy states.

Many questions are being raised as to the market possibilities for this greatly increased output of dry milk after the war. While large quantities may be required for relief in war-torn areas, these demands are likely to be of brief duration. More thought should be given to the adjustments which may be required when overseas outlets decline. Since domestic markets must be relied on to provide the principal outlet for these products, a well-planned marketing program emphasizing high nutritional values and economy should be prepared to encourage larger commercial and household usage. The adoption of a food enrichment program on a national scale may provide an outlet for substantial quantities of dry milk. It must be recognized that demand creation is often a slow process and therefore dry milk producers may find long intervals after the war when returns may be very low. Some adjustment may be made by shifting some milk supplies to condensed milk, cheese, and other dairy products which may be in relatively good demand. This calls for greater flexibility of plant arrangements, but investment in greater diversification should be very worth while. If Minnesota plants are to gain a larger share of the market after the war than they had before the war, they must be prepared to produce more efficiently and at lower cost than plants in other areas.

[1] Several of these plants are under construction while others are in various stages of development including priority and financing applications.

Minnesota Farm Prices for June, 1944

Prepared by W. C. Waite and R. W. Cox

The index number of Minnesota farm prices for June, 1944, is 177. This index expresses the average of the increases and decreases in farm product prices in June, 1944, over the average of June, 1935-39, weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, June, 1944, with Comparisons*

	June 15, 1944	May 15, 1944	June 15, 1943		June 15, 1944	May 15, 1944	June 15, 1943
Wheat	$ 1.45	$ 1.49	$ 1.24	Hogs	$12.60	$12.90	$13.50
Corn	1.01	1.01	.94	Cattle	12.40	12.00	12.40
Oats	.73	.73	.60	Calves	13.40	13.40	13.60
Barley	1.13	1.13	.84	Lambs-sheep	12.45	12.83	12.84
Rye	1.00	1.09	.79	Chickens	.21	.21	.21
Flax	2.86	2.86	2.86	Eggs	.28	.28	.34
Potatoes	1.05	1.10	1.55	Butterfat	.53	.54	.51
Hay	9.40	11.40	7.20	Milk	2.65	2.65	2.60
				Wool†	.43	.41	.43

* 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 wheat, rye, and potatoes have shown some decline during the past month but the largest decline in crop prices occurred in the price of hay. The prices of hogs and lambs-sheep also declined but the price of cattle increased. The reported price of butterfat is one cent lower than one month ago. The Minnesota farm price index is about the same as in June, 1943. The crop price index increased 16 per cent, but the livestock and livestock product price indexes declined 4.5 and 1.7 per cent, respectively.

The feed ratios are less than one year ago, mainly because of the rise in grain prices. If the subsidy payment of 6 cents per pound of butterfat is added to the reported price of this product, the butterfat-farm-grain ratio would be raised to 27.1.

Indexes and Ratios for Minnesota Agriculture*

	June 15, 1944	June 15, 1943	June 15, 1942	Average 1935-39
U. S. farm price index	183.1	185.0	146.1	100
Minnesota farm price index	176.7	177.2	148.9	100
Minn. crop price index	191.3	165.0	124.5	100
Minn. livestock price index	163.3	169.2	159.7	100
Minn. livestock product price index	184.2	187.2	146.3	100
U. S. purchasing power of farm products	131.0	137.8	120.3	100
Minn. purchasing power of farm products	126.4	132.9	122.7	100
Minn. farmers' share of consumers' food dollar	62.6†	61.2	56.4	45.5
U. S. hog-corn ratio	10.9	12.8	16.3	12.0
Minnesota hog-corn ratio	12.5	14.4	19.1	15.2
Minnesota beef-corn ratio	12.3	13.2	15.7	12.8
Minnesota egg-grain ratio	12.8	18.1	19.3	14.6
Minnesota butterfat-farm-grain ratio	24.3	28.4	30.7	30.9

* Explanation of the computation of these data may be had upon request.
† Figure for May.

The June Pig Crop Report

Farmers' intentions for sows to farrow this fall show a decrease of 34 per cent from last fall for the United States and about 40 per cent for Minnesota. If realized, this will be the largest percentage decrease on record except for the drouth year of 1934. The table below for the United States shows the relation of farrowing intentions as indicated in advance by farmers and their reported actual farrowings since 1941. The intended spring farrowings are made on the December 15 preceding and the intended fall farrowings on the June 15 preceding.

Farrowings as a Per Cent of the Preceding Year*

	Indicated intentions for farrowings	Reported actual farrowings
	Per cent	Per cent
Spring 1941	down 14	down 5
Fall 1941	up 13	up 16
Spring 1942	up 28	up 26
Fall 1942	up 25	up 24
Spring 1943	up 24	up 26
Fall 1943	up 25	up 12
Spring 1944	down 16	down 23
Fall 1944	down 34	....

The sharp rise in hog prices after January 1, 1941, and the appeal to farmers to increase hog production apparently led to less curtailment in farrowings than farmers had intended in December, 1940. From this point farmers expanded production rapidly and hog production reached an all-time record high in 1943. Following June 15, 1943, some farmers appear to have begun to decrease their hog enterprise since actual farrowings in the fall of 1943 were considerably smaller than indicated in the June intentions. Spring farrowings this year were below the intentions given in December, indicating a continued growth of pessimism regarding the hog outlook. The total pig crop in 1944, however, is expected to be about 88 million head. This would be 28 per cent below 1943 and 16 per cent below 1942, but larger than any other year on record.

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