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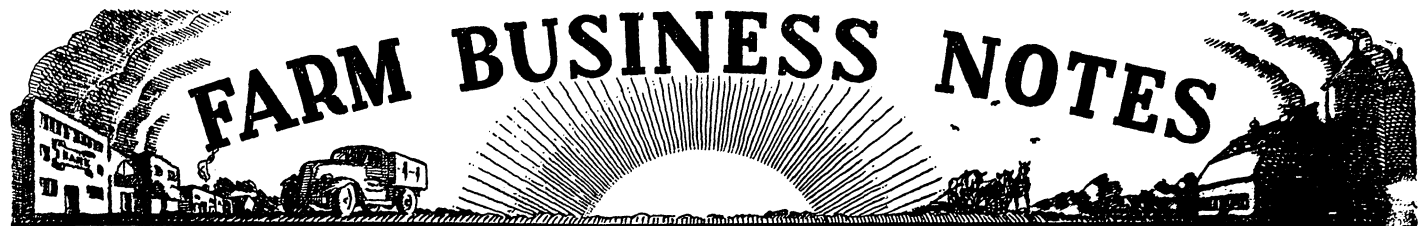
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## Earnings of Farm Workers

S. A. ENGINE

Farm earnings are sometimes compared with earnings in other industries. Such comparisons may be valuable. For example, young people select their vocations partially on the basis of prospective earnings. But these comparisons must be made with care; many factors other than the dollar earnings must be considered. Data from farm records summarized by the University of Minnesota provide some information concerning farm earnings and illustrate some of the difficulties involved in comparisons with the earnings of other groups.

About 150 records a year are available for cooperators in the Southeastern Minnesota Farm Management Service from 1928 through 1945. From 7 to 27 records a year providing more detailed information are available for farmers in Winona County from 1935 through 1940 and in Nicollet County from 1941 through 1945. Most of these farmers operated dairy farms. They were above average in managerial ability and operated farms about one third larger than the average in the area. Their earnings are typical of the more successful farms, but are higher than the average of all farms. Unfortunately, little detailed information is available concerning the average earnings of all farmers.

There are many measures of farmers' earnings, each useful for some particular purpose. Net cash income is a fairly satisfactory simple measure of the earnings of the farm family. For the Southeastern Minnesota Farm Management Service it is obtained by subtracting all farm expenditures, not including interest, from the farm sales. This measure represents the amount which the family has available for paying interest and living expenses, and to retire debts or make savings.

The net cash income on these farms was:

1928-29 .....	\$2,313
1930-32 .....	1,599
1933-40 .....	2,117
1941-45 .....	4,274

Cash income averaged slightly less than \$2,400 a year or \$200 a month in 1928 and 1929 and during the period from 1933 through 1940. During the depression years of 1930

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through 1932 net cash income fell to a level about two thirds of the preceding and following period. During the war years net cash income rose to a level twice that of the prewar years. Of course, the earnings of the individual farmers differed considerably from these averages.

The net cash income represented the principal earnings of these farmers. In addition, however, they used in their homes farm products valued at \$300. Also, insurance and taxes on the farm dwelling were included with farm expenses for all years and repairs and replacements of dwellings were included from 1940 through 1945. The housing costs to be paid out of net cash income therefore were lower than for city workers.

The earnings of farmers as given here was the compensation for work by all members of the family. In many cases the wife or children helped with the farm chores or the field work. It also was pay for management as well as labor. It is difficult to find comparable earnings data for other vocations, because there the functions of management and labor are frequently separated.

In comparing earnings of farmers with other workers it is also necessary to evaluate the purchasing power of their money. Farmers may be able to buy some goods or hire some personal services more cheaply than do workers in the cities; they may pay more for others.

### Examine Hourly Returns with Care

Another measure of earnings which is sometimes used, but which must be interpreted with even greater care, is return per hour. Since the farmers in the Southeastern Minnesota Farm Management Service did not keep records of hours worked, this measure cannot be calculated for them. It is possible to do so for the records obtained in Winona and Nicollet counties. Net cash income for these farmers was nearly the same as those already presented.

In calculating return per hour a new figure of net cash income is computed, with no charge being made for hired labor. This is then the cash earnings of all workers

on the farm. To this are added the value of farm produce used in the house and increases in inventory. A charge for the use of the farm capital and decreases in inventory are deducted. The resulting figure is an estimate of the returns to all workers for their labor and management. Dividing this by the total hours of farm work (not including household work or personal activities) gives the earnings per hour.

The earnings during the prewar period 1935-40 (Winona County) averaged 25 cents an hour for all labor. During the war period 1941-45 (Nicollet County) they averaged 67 cents an hour. The increase in hourly earnings was due largely to increases in annual earnings per farm during the war period.

When used in addition to the earnings for the farm as a whole, hourly earnings can contribute some useful information about the farm business, particularly in comparing the operating efficiency of a farm with other farms of the same type. It is less useful in comparison with farms where the type of worker needed or the type of work done is different.

Comparisons of hourly returns in farming with other vocations are even less satisfactory than are those of annual earnings for the family. As with the previous data, the hourly returns are a composite of several kinds of labor—operator, family, hired. Part of the farm earnings are in cash, part in farm produce used. Then, also, hourly rates are only one aspect of earnings. Annual earnings determine the level of living the worker can set. The hourly rate is one factor; the number of hours worked is the other. A high hourly rate may sometimes be paid because seasonality of work limits the number of hours worked. Adequate supplementary employment may not always be available to workers on these seasonal jobs. Dairy farming, however, provides steady work throughout the year, enabling the farmers to put in a large number of hours per year. The average number of hours worked per year by full-time workers was 3,250 in the two areas from which labor records were obtained. This is an average of almost 10 hours for each weekday and 5 hours for each Sunday.

#### Use Hourly Returns by Enterprises for Special Analyses Only

Hourly earnings are sometimes calculated for each of the principal enterprises on the farm. These may be used to compare the efficiency of operation of the enterprises among a group of farmers. They are hardly suitable for comparisons of returns in farming with other vocations. These calculations require an allocation of the costs and returns for the farm to each enterprise. Frequently these allocations must be made arbitrarily. For example, how much of the cost for preparing a seedbed shall be charged to the crop of oats which is harvested this year, and how much shall be charged to the alfalfa which is seeded with the oats for harvesting in future years? The somewhat artificial figure that results is useful only in comparison with similar figures for other farms.

Successful farm management requires a careful balancing of enterprises to make a profitable unit. Each part contributes to the maximum earnings of the farm as a whole,

but the returns per hour as usually calculated may vary widely. For example, practically all farms studied during the war years in Nicollet County included oats, corn, alfalfa, dairy cattle, hogs, and chickens in their farm organization. The return per hour for labor used on these was oats \$1.17, corn (husked) \$2.32, alfalfa hay \$1.71, dairy cattle \$0.35, hogs \$1.52, and chickens \$0.68. In general, hourly returns were higher for crops than for livestock. In calculating these data the crop production was valued at market price; the same price was used for feed for livestock. Since most of the crops were fed on the farm, the farmer as a crop producer sold the feed to himself as a livestock producer. For some of the crops, especially pasture, hay, and silage, the livestock on the farm provided the principal market. It is this market through livestock that holds up the market price for many of these products. That is especially true if all farms in a large area are considered. In making his plans the farmer must then consider that the returns for crops are lower and the returns from livestock higher than are shown here. That is especially true for roughages and roughage-consuming livestock.

The return per hour for these enterprises is also influenced by the number of hours of work. Crop work is seasonal; only a limited number of hours can be worked each year. Farmers with land suitable for the production of oats and corn in most of the acreage can market the crop without livestock. Their hourly returns may be high, but their annual earnings may be limited by the relatively small number of hours of productive work. Work on livestock, however, extends throughout the year. Hourly returns may be low, but annual earnings may be relatively high.

For most Minnesota farms a combination of crops and livestock permits effective use of all labor and crops. The farm must be considered as a unit. Earnings of the entire farm unit for a year provide the best basis for studying the income level of farmers.

## World Wheat Situation

D. C. DVORACEK

World stocks of wheat located in four principal exporting countries (Argentina, Australia, Canada, and the United States) on July 1, 1946, were about 373 million bushels, the smallest since 1938, and about one fifth less than the 1935-39 average of 458 million bushels. Owing to large world crops and restricted trade as a result of the war, stocks in these countries reached 1,740 million bushels on July 1, 1943, the largest on record for that date. These large stocks were reduced by the war and postwar demand for food and short crops in the southern hemisphere.

The 1946 world wheat production, exclusive of U.S.S.R. and China, is expected to be at least 10 per cent above the reduced 1945 production and about equal to the prewar (1935-39) average. Because of the low July 1, 1946, carry-over, the supplies available for consumption during 1946-47 are estimated at about 4.1 billion bushels,<sup>1</sup> as compared with 4.5 billion bushels a year ago and the

<sup>1</sup> Wheat Situation, August, 1936.

prewar (1935-39) average of 5.6 billion bushels. World wheat imports by deficit countries are expected to continue larger than normal during 1946-47.

Wheat is the key commodity in the international trade in food. About 1.1<sup>2</sup> billion bushels will be needed by food deficit countries during 1946-47. This would require about 732 million bushels from the four major wheat exporting countries, or somewhat less than was exported from these countries in 1945-46. Since the world carry-over of wheat is small, world needs must come largely from the 1946 wheat crop.

The United States has a supply of 1,261 million bushels of wheat for the 1946-47 season made up of the smallest carry-over in years, 101 million bushels, and the largest crop on record, 1,160 million bushels.

Prospects indicate a 30 per cent better wheat crop in Europe than the very poor crops of 1945 and 1942, but not as good crops as the prewar 1935-39 average. The largest gains are indicated in the Mediterranean areas and in parts of Western Europe.

Production of wheat in North Africa, though not as good as prewar, is definitely above the small crops of 1944 and 1945. Northern Europe reports about an average crop, except in Finland. Conditions in Central and Eastern Europe are the least favorable on the Continent. Prospects in Czechoslovakia are the most favorable of any country in this area. Crop conditions are generally more favorable than last year in the Balkan countries.

The condition of the wheat crop in the United Kingdom indicates a higher yield per acre on a smaller acreage. The crop in Ireland is slightly above that of last year.

The wheat crop in U.S.S.R. is expected to be considerably below the prewar level. The acreage is smaller and yield is about the same as last year.

The wheat crop in Canada is estimated at about 466 million bushels. Bushel production estimates are not available for the Southern Hemisphere. Over 13 million acres are now seeded to wheat in Australia, as compared to 11.5 million acres in 1945 and about the same as the five prewar years.

In Argentina the acreage seeded is estimated at 16.5 million acres compared with 14.2 million acres a year ago and 18.7 million during the five prewar years.

In spite of the 10 per cent estimated increase in world wheat production in 1946 the world supply of wheat is short of requirements and below last year or the five-year prewar average. Demand will exceed supply and prices should maintain present levels for the 1946 crop.

## Returns from Feeder Cattle and Lambs

TRUMAN R. NODLAND

Fattening cattle and sheep is an important enterprise on many farms in Minnesota. The records of the farm management services in southern Minnesota are a source of information in regard to costs and returns under farm conditions. The data presented are on a lot basis begin-

Table 1. Number of Head on Feed, Production, and Feed Consumed

	Feeder cattle	Feeder lambs
Number of lots.....	30	10
Number of head bought.....	50	465
Number of days on farm.....	211	140
Percentage death loss.....	.6	5.4
Weight per head bought, pounds.....	651	69
Weight per head sold, pounds.....	1,001	99
Gain per head, pounds.....	350	30
Gain per head per day, pounds.....	1.7	.21
Total pounds produced per lot.....	17,729	10,356
Pounds feed per cwt. gain in weight:		
Concentrates.....	841	782
Hay and fodder.....	260	347
Silage.....	358	172
Total digestible nutrients*.....	869	821
Percentage protein in T.D.N.....	11.2	11.0
Number of days on pasture.....	18	34

\* Not including nutrients received from pasture.

ning with the time of purchase and continuing until the animals are sold. The records cover the 1944-45 feeding period.

The number of head purchased, length of feeding period, death loss, gain in weight, and the feed required to produce 100 pounds gain in weight are shown in table 1. The number of head of cattle per lot varied from less than a carload to 193. The length of feeding period ranged from 126 to 360 days. The average weight of all cattle purchased was 651 pounds, with a low of 377 pounds for one lot and a high of 1,123 pounds for another.

The number of head of lambs per lot varied from 151 to 803 and the average weight per lamb purchased varied from a low of 59 pounds for one lot to a high of 78 pounds for another. The shortest feeding period reported for lambs was 80 days and the longest was 200 days.

Corn, legume hay, and corn silage were the principal feeds utilized for both cattle and lambs. In general the lambs purchased during September and early October received a considerable amount of feed from pasture. One third of the 30 lots of cattle had access to some pasture.

The return above feed cost, the return per \$100 of feed, and the prices paid and received for cattle and lambs are shown in table 2. The net increase in value is due to the gain in weight put on in the feed lot and the price spread. It is computed by subtracting from sales the cost of the animals purchased and dividing by the number of hundred-weight produced. The return above feed cost per 100 pounds net gain in weight, \$6.56 for cattle and \$9.96 for lambs, is the amount available to pay for labor, shelter, risk, interest, and similar costs and to pay the farmer for his labor and management.

Table 2. Costs and Returns per 100 Pounds Net Gain in Weight

	Feeder cattle	Feeder lambs
Net increase in value.....	\$22.42	\$25.52
Feed cost.....	15.86	15.56
Return above feed cost.....	\$ 6.56	\$ 9.96
Return per \$100 of feed.....	141	164
Purchase price.....	11.49	12.57
Sale price.....	15.17	15.40
Price spread.....	3.68	2.83

<sup>2</sup> F.A.O. Press Release, May 9, 1946.

## Minnesota Farm Prices For September, 1946

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

The index number of Minnesota farm prices for September, 1946, is 222. This index expresses the average of the increases and decreases in farm product prices in September, 1946, over the average of September, 1935-39, weighted according to their relative importance.

**Average Farm Prices Used in Computing the Minnesota Farm Price Index, September, 1946, with Comparisons\***

	Sept. 15, 1946	Aug. 15, 1946	Sept. 15, 1945		Sept. 15, 1946	Aug. 15, 1946	Sept. 15, 1945
Wheat .....	\$1.82	\$1.84	\$1.47	Hogs .....	\$16.00	\$20.50	\$14.00
Corn .....	1.69	1.71	1.02	Cattle .....	15.00	18.70	11.60
Oats .....	.68	.67	.51	Calves .....	15.20	16.80	13.20
Barley .....	1.45	1.38	1.02	Lams-Sheep .....	15.03	15.84	12.27
Rye .....	2.03	1.63	1.35	Chickens .....	.253	.244	.222
Flax .....	3.79	3.65	2.91	Eggs .....	.372	.324	.326
Potatoes .....	1.25	1.55	1.25	Butterfat .....	.80	.77	.53
Hay .....	9.60	9.30	7.60	Milk .....	3.75	3.55	2.75
				Wool† .....	.44	.45	.47

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

† Not included in the price index number.

It is estimated that prices of Minnesota farm products dropped by almost 4 per cent from August to September. This decrease is due to the nearly 20 per cent drop in quoted livestock prices resulting from the reimposition of ceilings. Crop prices rose by nearly 3 per cent while livestock product prices rose by nearly 6 per cent. The purchasing power of Minnesota farm products continues to be more than 40 per cent higher than the 1935-39 average but some weakening is evident.

The reimposition of ceilings on livestock has reduced the hog-corn and beef-corn ratio for Minnesota. Under existing ceilings corn prices will have to fall to \$1.26 per bushel for beef feeding or \$1.07 per bushel for hog feeding to be as profitable, from the feed standpoint alone, as it was in 1935-39. The major price increases from August to September were rye, 25 per cent; eggs, 15 per cent; and milk, 6 per cent.

**Indexes and Ratios for Minnesota Agriculture\***

	Sept. 15, 1946	Sept. 15, 1945	Sept. 15, 1944	Average 1935-39
U. S. farm price index .....	226.7	183.8	179.1	100
Minnesota farm price index .....	221.8	169.8	164.0	100
Minn. crop price index .....	241.7	181.6	172.8	100
Minn. livestock price index .....	188.4	155.9	150.0	100
Minn. livestock product price index .....	237.8	172.0	170.3	100
U. S. purchasing power of farm products .....	141.7	126.9	128.0	100
Minn. purchasing power of farm products .....	138.6	117.2	116.5	100
Minn. farmers' share of consumers' food dollar .....	65.3†	62.7	62.2	48.6
U. S. hog-corn ratio .....	9.1	12.6	11.7	12.6
Minnesota hog-corn ratio .....	9.5	13.7	13.3	14.9
Minnesota beef-corn ratio .....	8.9	11.4	10.5	11.9
Minnesota egg-grain ratio .....	13.1	16.1	16.1	17.3
Minnesota butterfat-farm-grain ratio .....	31.1	37.0	35.1	32.4

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

† Figure for June, 1946.

## Legume Seed Harvest

OWEN K. HALLBERG

Most leguminous forage seeds will continue to be in short supply in 1947, particularly red clover and alfalfa, with alsike clover less scarce. Sweet clover should be plentiful, and will have to be used as a substitute for the other legumes in pastures.

The alsike clover acreage harvested in the northern Minnesota seed-producing sections was approximately 25 per cent less than that of 1945 because of: (1) smaller seedings in 1945; (2) failure of many fields to set seed; and (3) dry weather in June and July which eliminated the usual volunteer stands of clover and caused many fields to be pastured or cut for hay. Yields averaged about 150-200 pounds per acre, approximately 100 pounds less than in 1945. Farmers received the full ceiling price of \$27.00 per 100 pounds on a 100 per cent pure seed base, with demand being very high, and seed moving directly to market after threshing. The 1947 acreage of alsike will probably be 25-40 per cent less than this year, as seedings last spring did not catch properly during the dry weather.

The acreage of alfalfa was about that of previous years, but 15-20 per cent more was left for seed. The seed set was very heavy and production was the highest since 1937. Yields averaged about 200-250 pounds per acre, with many fields yielding 500 pounds. Demand was sufficient to move the crop at the full ceiling price of \$35.00 per 100 pounds. While new seedings of alfalfa were numerous, they did not catch well, and the 1947 acreage will be somewhat smaller.

Sweet clover acreage was 15-20 per cent higher than in 1945, with high yields, 500-800 pounds per acre, being common. Early sales of seed went at the ceiling price of \$10.00 per 100 pounds, but later dropped to \$7-\$8.

Growers of alsike clover and alfalfa received a subsidy of \$3.50 per 100 pounds of clean seed, plus \$7 per acre up to 25 acres. Thus, average returns per acre on alsike, after adding subsidy payments, ranged from \$40-\$55, and on alfalfa, from \$85-\$105. The acre return on sweet clover, which did not come under a subsidy, ranged from \$50-\$80.

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