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# FARM BUSINESS NOTES

Prepared by the Divisions of Agricultural Economics and Agricultural Extension  
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## The Farmer's Work Day

By G. A. SALLEE and G. A. POND

Agriculture has a reputation for being an industry in which long work days are the rule. The extent to which this reputation is justified is of considerable interest at the present time in view of the marked increase in mechanization in farming, the recent problems of surplus production in agriculture, and the general reduction in hours of work in other industries.

Considerable information regarding the length of work day on Minnesota farms, both at the present time and for the last 35 years, is contained in detailed farm records collected annually since 1902. This information is summarized in the following discussion.

### Average Length of Work Day for the Year

The average number of hours worked per day, considering the year as a whole, by the regular workers on farms included in each of 10 localities is presented in Table 1. A brief characterization of these farms is given

Table 1. Average Number of Hours Worked per Day on Selected Minnesota Farms

Area and county	Date of study	Hours worked per day	
		Week days	Sundays
Southeastern: Winona .....	1935-37	10.2	3.9
South Central: Rice .....	1902-07	8.9	3.6
Steele .....	1920-24	11.1	6.1
Southwestern: Lyon .....	1902-07	8.7	3.1
Cottonwood and Jackson .....	1920-22	10.0	4.2
Rock and Nobles .....	1929-31	9.4	3.1
West Central: Stevens .....	1932	10.2	4.1
Northwestern: Norman .....	1902-07	8.1	2.8
Polk .....	1926-28	10.8	4.6
Northeastern: Pine .....	1925-27	9.3	4.4

in Table 2. Although there is a wide range between counties, the general level is above eight hours on week days and, except for Norman County, above three hours on Sundays. In five studies, the average on week days is 10 hours or more. In only one study was the average as high as 11 hours. In general, the counties in which a large number of hours per week day were reported also are those in which a large number of hours were reported on Sundays.

There are several reasons farmers work a large number of hours per day. Approximately sixty per cent of all workers gainfully employed in agriculture are operators

of farms and another 15 per cent are members of these operators' families working without wages. As a result, 75 per cent of the workers have a direct interest in employing their time as fully and effectively as possible. The farm worker lives on the farm where he works and can spend in productive work the time the industrial worker uses in going to and from work. Then, too, the great variety and frequent change in the nature of farm work together with the absence of much of the pressure to maintain a high rate of speed so frequently found in industrial work tend to reduce fatigue and so to permit longer work days. Most farmers and farmers' wives prefer not to have hired men living with them. Since the hired man seldom does anything the farmer himself can not do, there is a tendency for farmers to work longer themselves in order to avoid the expense and inconvenience of hired help. The natural limitations on the number of days available for doing certain jobs, such as seeding and harvesting, and the advantages of having work done on time tend to encourage long work days at certain seasons of the year, which are not entirely offset by shorter work days at other times.

A comparison of the number of hours of work per day reported in the earlier years with that reported in the later years indicates that on these farms the length of work day is increasing rather than decreasing. The number of hours reported for week days is 2.2 hours greater in Steele County than in Rice County, 0.7 hour more in Rock and Nobles counties than in Lyon County, and 2.7 hours larger in Polk County than in Norman.

Some of the reasons for this apparent increase in hours per day are as follows:

1. An increase in the amount and quality of livestock production. This has tended to increase the average length of work day largely by providing more work during the winter and therefore a more uniform distribution of work, rather than by increasing the length of day in the busy season.

2. An increase in the number of tractors, automobiles, and trucks. These can be used continuously whereas there is a limit to the number of hours per day horses can be worked.

3. A decrease in physical effort needed for much of the work because of the adoption of tractors, trucks, automobiles, and other modern machinery and equipment.

Table 2. Description of Farms Studied

Area and county	Land, acres			Animal units of livestock	Principal sources of income
	Total	Pasture	Crop		
Southeastern:					
Winona .....	303	116	174	44	Dairy products, hogs, poultry and eggs
South Central:					
Rice .....	176	33	136	32	Dairy products and hogs
Steele .....	186	46	129	41	Dairy products and hogs
Southwestern:					
Lyon .....	324	62	224	41	Cattle and hogs
Cottonwood and Jackson .....	187	40	137	31	Cattle and hogs
Rock and Nobles .....	342	65	256	70	Cattle and hogs
West Central:					
Stevens .....	352	46	289	42	Livestock, grain, and dairy products
Northwestern:					
Norman .....	305	52	229	27	Grain, potatoes, and livestock
Polk .....	396	63	321	33	Grain, potatoes, sugar beets, and dairy products
Northeastern:					
Pine .....	114	40	55	18	Dairy products, potatoes, and rutabagas

Table 3. Number of Hours Worked per Week Day on Selected Minnesota Farms by Months

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Southeastern:												
Winona .....	9.2	9.3	9.9	10.6	11.1	11.0	11.4	11.1	10.9	10.8	10.2	9.2
South Central:												
Rice .....	6.8	6.6	7.6	9.9	9.0	9.6	9.3	10.2	11.0	9.6	9.1	7.3
Steele .....	10.6	10.4	10.8	11.6	12.1	11.8	11.8	11.6	11.6	12.0	11.3	10.7
Southwestern:												
Lyon .....	6.1	6.2	7.4	9.0	9.5	9.6	9.5	10.3	9.8	9.7	9.1	7.0
Cottonwood and Jackson .....	7.9	8.0	8.7	10.4	11.1	11.2	11.1	10.9	9.9	10.6	9.6	8.4
Rock and Nobles .....	7.2	7.7	9.0	10.6	10.6	10.8	11.3	11.1	10.1	10.2	8.6	7.4
West Central:												
Stevens .....	8.2	8.0	9.2	11.4	11.4	11.3	11.5	11.7	11.2	10.7	9.1	8.8
Northwestern:												
Norman .....	5.4	5.9	6.3	7.6	9.1	8.6	9.5	9.8	9.5	9.6	8.1	5.6
Polk .....	9.1	9.1	10.1	11.3	11.7	11.2	11.1	11.6	11.8	11.2	9.9	8.9
Northeastern:												
Pine .....	8.2	8.2	8.6	10.2	10.6	9.9	10.0	9.4	9.6	10.3	8.7	7.7

This tends to permit an increase in number of hours of work without a corresponding increase in fatigue.

4. Greater difficulty in obtaining satisfactory hired help when needed at wages the farmer feels he can afford to pay. This has tended to lead farmers to increase the number of hours they work in order to reduce hired labor to the minimum.

#### Variation in Hours Worked per Day by Months

The number of hours worked per week day varies from month to month in each of the areas, as is shown in Table 3. Farmers in all areas worked more hours per day in summer than in winter. They averaged more than 11 hours per week day for at least one month in all counties except Lyon and Norman. Steele County is the only county in which the work day averaged as much as 12 hours for any one month.

A comparison of the early studies with later ones in the same area shows a longer work day for each month in the latter. The increase is greater for the winter than for the summer months.

These facts do not bear out a common impression that farmers work 12 to 16 hours a day. Some farmers do work that many hours a day during rush seasons, but this is offset to a considerable extent by a shorter working day during slack periods. The fact that farmers may start morning chores at 5:00 a.m. and not complete

evening chores until 9:00 p.m. does not indicate a 16-hour day. Such a schedule is not maintained throughout the year. Furthermore, from the 16 hours must be deducted time spent at meals, assisting with housework and care of the children, taking children to school, transacting personal business, resting, reading, and visiting with the neighbors. Time lost due to sickness, weather interference, and the like also serves to reduce the average per day for the month or year. As compared with workers in other industries, however, the farmer's work day is still long and the trend toward shorter hours that characterizes practically all other industries seems not yet to have reached agriculture.

## Competition of Lard and Lard Substitutes

By REX W. COX and WARREN C. WAITE

A survey of 2,350 families in Minneapolis in the spring of 1938 shows that the consumption of lard substitutes exceeds the consumption of lard except for the group on the lowest income levels, despite about a 50 per cent higher cost per pound for the lard substitutes. Even on the low income levels, expenditures for lard substitutes exceed those for lard, and for all the families included in the study were nearly twice as large. As is

shown in Table 1, about two thirds of the families in the low income group use lard, but this proportion declines to less than half of the families in the higher income groups. Except for the lowest income group lard substitutes are used by about three fourths of the families.

Table 1. Consumption of Lard and Lard Substitutes on Various Income Levels by Minneapolis Families, 1938

Per capita income	Proportion of families reporting use		Weekly per capita consumption in all families		Weekly per capita expenditure in all families	
	Lard	Lard substitutes	Lard	Lard substitutes	Lard	Lard substitutes
	per cent	per cent	pounds	pounds	cents	cents
Under \$300 .....	66.8	57.7	.16	.13	2.1	2.5
\$300-\$599 .....	56.4	76.7	.12	.17	1.5	3.2
\$600-\$899 .....	47.1	78.1	.11	.20	1.3	3.7
\$900 and over .....	45.1	74.9	.08	.17	1.0	3.2

The shift from lard to lard substitutes at different income levels is shown in greater detail in Table 2. In the lowest income group, two fifths of the families use lard exclusively. In the next higher income group, the proportion of families using lard exclusively is just half as large, and this decline has been offset by a nearly equal increase in the proportions of families using both lard and lard substitutes, and using lard substitutes only. In the remaining income groups, the proportion of families using lard only remains about the same, but there is a decline in the proportion of the families using both lard and substitutes and an increase in the proportion using substitutes only. The declines in the highest income level appear to be due to the substitution of other fats for both lard and lard substitutes. This fat is probably butter, since we find 18 per cent of the families on the highest income level in their baking use butter exclusively as compared with 6.5 per cent on the next lower level.

Table 2. Proportion of Families Using Lard and Lard Substitutes on Various Income Levels

Per capita income	Proportion of total families consuming			
	Lard only	Lard and substitutes	Substitutes only	Neither lard nor substitutes
	per cent	per cent	per cent	per cent
Under \$300 .....	40.0	26.8	31.0	2.2
\$300-\$599 .....	19.9	36.5	40.2	3.4
\$600-\$899 .....	19.0	28.1	50.0	2.9
\$900 and over .....	18.6	26.3	48.6	6.4

It thus appears that lard consumption is greatest on the lower income levels, and that there is increasing substitution of lard substitutes for lard on the higher income levels, while on the highest income level butter appears to have taken the place of some of the lard substitutes.

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Hog Outlook

By S. T. WARRINGTON

The estimated 13 per cent increase in the 1938 spring pig crop, combined with this year's larger than normal supply of corn, would ordinarily cause a much greater

than usual decline in hog prices from the summer highs to the fall and winter lows. However, this year there are four factors which tend to "temper" the seasonal decline in hog prices.

Although part of the 55 per cent increase in August slaughterings was due to late marketings of the 1937 fall pigs, the greater part of this marked increase over last year was a result of earlier than usual spring pig marketings. This large volume of butcher hogs "cut the peak" off the summer price, and also decreased the number which will come to market later.

Employment, payrolls, and hence consumer purchasing power have been improving since June. If this continues through the fall and winter months, it will be another major factor tending to reduce hog price declines.

Storage stocks of pork and lard combined for September, amounting to 451 million pounds, were below last year's total of 486 million pounds, and only 65 per cent of the ten-year average (1928 through 1937) of 686 million pounds. These small stocks should also be a factor limiting the fall decline in hog prices.

Exports of lard, although small compared with the ten-year average, have been increasing.

1935 .....	97 million pounds
1936 .....	112 million pounds
1937 .....	136 million pounds
1938 (8 months only) .....	130 million pounds

Pork exports of 63 million pounds for the first eight months of 1938 were 23 million pounds larger than for the same period last year. This increase in exports is largely the result of the larger production and the resultant lower prices. It is reasonable to expect, therefore, that with even greater production and lower prices exports may increase during the next few months. This should aid in checking excessive declines in hog prices.

Weighing the price-depressing influence of the larger spring pig crop and the large supply of corn against the improved consumer demand, small storage stocks, larger exports, and the earlier than usual movement of spring pigs, it seems that the decline in prices from the summer high will not be so great as in 1937 and probably not any more than usual.

Assuming that hog prices this fall will be maintained at or near levels that will make hog feeding profitable at present farm corn loan values, it seems logical to expect that farmers generally will expand their sow breeding program this fall to absorb the large corn supplies available. If such is the case and farrowing conditions are average, the number of spring pigs going to market during the fall and winter of 1939 and 1940 will be greater than this year. In addition, indicated supplies of 1938 fall pigs going to market next spring will be 9 per cent heavier than last.

Unless consumer and export demand improve much faster than they have during the last three months, hog prices during 1939 are likely to be below the levels of this year. Farmers who are considering breeding more sows for spring farrowing should recognize this possibility and weigh carefully their feed costs or the alternatives for the disposition of feed supplies on hand.

# Minnesota Farm Prices for August, 1938

By W. C. WAITE and W. B. GARVER

The index number of Minnesota farm prices for the month of September 1938 was 62. When the average of farm prices of the three Septembers, 1924-25-26, is represented by 100, the indexes for September of each year from 1924 to date are as follows:

September, 1924—94	September, 1929—110	September, 1934—78
September, 1925—103	September, 1930—84	September, 1935—73
September, 1926—103	September, 1931—55	September, 1936—97
September, 1927—100	September, 1932—41	September, 1937—87*
September, 1928—101	September, 1933—58	September, 1938—62*

\* Preliminary.

The price index of 62 for the past month is the net result of increases and decreases in the prices of farm products in September 1938 over the average of Septembers 1924-25-26, weighted according to their relative importance.

This represents a two-point rise from the August level, when it was 60. All the grains showed increases for the month, except rye and corn. Seasonal declines were registered for rye and potatoes, with declines also for hay and milk, the latter due apparently to continued heavy production. Butter remained unchanged at 26 cents, not showing the usual seasonal rise for September, in part a reflection of heavy stocks, supplies, and the price-stabilization program. Hogs and cattle advanced somewhat more than the seasonal rise.

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

	Sept. 15, 1938	Aug. 15, 1938	Sept. 15, 1937		Sept. 15, 1938	Aug. 15, 1938	Sept. 15, 1937
Wheat .....	.57	.56	1.24	Cattle .....	6.90	6.70	6.12
Corn .....	.40	.40	.91	Calves .....	8.40	8.10	9.17
Oats .....	.18	.16	.36	Lambs-sheep .....	6.79	6.80	10.92
Barley .....	.35	.34	.56	Chickens .....	.12	.119	.179
Rye .....	.29	.30	.77	Eggs .....	.208	.175	.29
Flax .....	1.60	1.56	2.19	Butterfat .....	.26	.26	.41
Potatoes .....	.40	.55	.84	Hay .....	4.30	4.58	12.00
Hogs .....	8.10	7.70	10.59	Milk .....	1.45	1.50	2.21

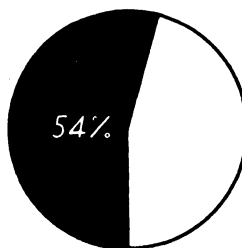
**Indexes and Ratios of Minnesota Agriculture\***

	Sept., 1938	Aug., 1938	Sept., 1937	Average, Sept., 1924-26
U. S. farm price index.....	69.3	65.2	86.1	100
Minnesota farm price index.....	62.5	60.2	86.7	100
U. S. purchasing power of farm products .....	86.3	81.2	100.7	100
Minnesota purchasing power of farm products .....	77.8	75.0	101.4	100
Minnesota farmer's share of consumer's food dollar .....		44.9	51.4	53.8
U. S. hog-corn ratio .....	16.8	16.1	11.2	11.7
Minnesota hog-corn ratio .....	20.5	19.2	12.1	12.9
Minnesota egg-grain ratio .....	26.8	23.1	12.4	17.5
Minnesota butterfat-farm-grain ratio .....	40.5	42.9	33.4	35.4

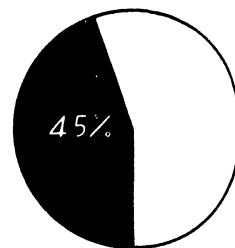
\* Explanations of the computation of these data may be had upon request.

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

The measurement of the Minnesota farmer's share of the consumer's food dollar is based upon monthly prices paid at Minneapolis for the average consumer purchases of bread, flour, beef, pork, milk and butter, chickens, eggs, and potatoes. The farmer's share is the value he received in corresponding months for the commodities making up these average purchases. This share has varied from 65 per cent in 1920 to 35 per cent in 1932. In August last year the share was 54 per cent, as compared with 45 per cent in August 1938. When farm prices are relatively high the farmer's share is relatively large, while in periods of low farm prices the margin is considerably smaller.



**August 1937**



**August 1938**

In the decline of the farmer's share from last year, as shown by the above chart, decreases occurred for all the items except eggs. The largest proportional changes were in bread and wheat, pork products, and milk and butter. Wheat in August 1938 was bringing less than half the August 1937 price, while retail flour had declined only 20 per cent and the price of bread was the same. For all the pork products sharp retail declines had occurred, especially for chops and lard, yet none of these prices declined as much as farm hog prices. The decline in retail butter prices pretty well matched the fall in the farm butterfat price, although fluid milk prices declined relatively much more than Minneapolis retail milk prices.

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