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FARM BUSINESS NOTES

Prepared by the Divisions of Agricultural Economics and Agricultural Extension
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Trends in Farm Tenancy

G. A. POND

The long continued increase in farm tenancy in Minnesota has finally come to a halt and now tenancy is actually decreasing. The proportion of farms operated by tenants increased from 9 per cent in 1880, when the first information on the subject was collected by federal census enumerators, to 34 per cent in 1935. The proportion of all farm land operated by tenants increased even faster—from 25 per cent in 1900 to 47 per cent in 1935. The rate of increase was fairly uniform from 1880 to 1920 but somewhat more rapid from 1920 to 1935.

During the earlier period rising land values and the increasing time required to accumulate enough capital to justify the purchase of a farm were important causes of increasing tenancy. From 1920 to 1935 low farm earnings reduced drastically the farmers' savings available for investment in land. In addition many operators of mortgaged farms were forced through foreclosure or voluntary assignment to revert to the status of tenants. Since 1935, however, there has been a fairly general decrease in the proportion of tenant-operated farms. Some decrease has been registered in 54 of the 87 counties in the state (see figure 1). The proportion of tenant-operated farms is shown by federal census periods from 1920 to 1940 in table 1. In all the important type-of-farming areas there was a substantial increase in tenancy in the 15 years following 1920. Since then decreases are reported in five areas, no change in one, and only slight increases in the other three. The net decrease is small but it does mark the reversal of a long and steady upward trend.

Table 1. Percentage of All Farms in Minnesota Operated by Tenants

Type-of-farming Area	1920	1925	1930	1935	1940
	Per Cent				
1	30	32	35	37	38
2	24	26	29	31	32
3	44	48	50	51	48
4	38	42	45	47	47
5	13	16	20	25	26
6	18	22	28	33	30
7	30	33	39	43	36
8	7	7	11	16	13
9	20	17	20	22	20
State	25	27	31	34	32

University Farm Radio Programs

HOMEMAKERS' HOUR—10:45 a.m.

UNIVERSITY FARM HOUR—12:30 p.m.

THE FRIENDLY ROAD—1:00 p.m.

Station WLB—770 on the dial

One factor that may account in part for this decrease in tenancy is lower land prices. The average sale price of all farm land in Minnesota dropped from \$104 in 1920-21 to \$40 in 1934-35.¹ Another factor is an increase in farmers' earnings from 1935-1940. More savings were possible and it took less money to finance the purchase of a farm. The largest decreases in tenancy occurred

in the areas of low land values. Tenancy decreased sharply in all counties in western Minnesota except the group extending from Lincoln to Wilkin in which the drouth of the thirties was especially severe.

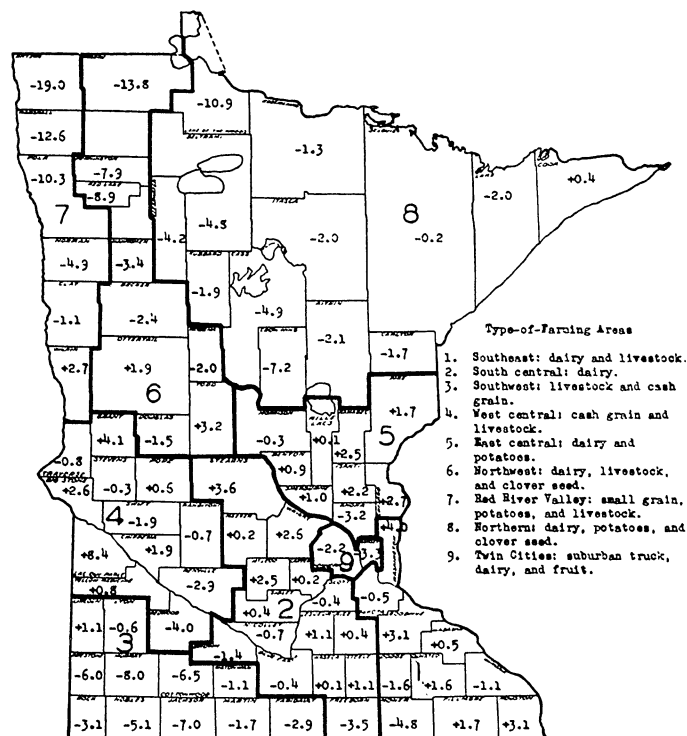


FIG. 1. CHANGE IN PERCENTAGE OF FARMS OPERATED BY TENANTS, 1935-1940

(Plus sign (+) indicates increase, minus sign (-) indicates decrease.)

¹ Dowell, A. A. The Trend in the Sale Prices of Farm Real Estate in Minnesota. Minn. Agr. Expt. Sta. Bul. 338.

Table 2. Percentage Distribution of Leases by Type of Leases

Type of Lease	1910	1920	1930	1940
	Per Cent			
Cash	24	34	40	38
Share-cash	12	19	.....	34
Share	56	43	60*	22
Other	8	4	.....	6

* Only cash leases shown separately in 1930.

Whether this decrease in tenancy will continue will depend at least in part on trends in land prices and farmers' earnings. It is interesting to note that the state farm census, which is taken annually, reports practically the same trends as shown by the federal census. It does, however, show the additional fact that most of the decrease reported between 1935 and 1940 actually occurred in one year, 1939 to 1940. The decrease from 1940 to 1941 as shown by the state farm census was even larger—in fact almost equal to the total decrease for the five-year period 1935-1940.

Trends in Types of Leases

There have been some significant changes in the type of farm leases used in Minnesota. The proportion of cash leases in use increased steadily from 1880 to 1935. Since then there has been a slight drop. Data for the last 30 years are shown in table 2. Share leases have decreased in relative importance and share-cash leases have increased in popularity. Cash leases are used principally in areas of small or highly specialized farms. Although 38 per cent of all tenants were operating under cash leases in 1940 the land they operated made up only 24 per cent of all rented farm land in the state. The proportion of all rented land operated under cash leases was actually less by 4 per cent in 1940 than in 1920 even though the proportion of cash leases was greater. The general trend during the drouth and depression was away from cash leases and to share leases. Landlords found a share of the crop easier to collect than cash and the tenants found it easier to pay.

Increasing Length of Tenure

Tenants are moving less frequently and staying on the same farm longer than formerly. This is indicated by the data in table 3. During the period from 1920 to 1935 when the proportion of tenants was increasing, the percentage of tenants on farms the first year was also increasing. Since 1935 this trend has been reversed and the length of tenancy has increased. In fact the steady increase since 1920 in the number of tenants on the same farm for more than five years suggests a growing stabilization of tenancy. Moves are expensive and it takes several years for a tenant to become sufficiently familiar with a farm to operate it to best advantage. On the other hand, as a tenant accumulates capital and experience it may be to his advantage to move to a larger or better farm. A longer tenancy may also indicate that an increasing proportion of tenants are accepting tenancy as a permanent status and are not looking forward to eventual ownership.

Table 3. Percentage Distribution of Tenants by Years Tenant Has Been on Same Farm

Years on Farm	1920	1930	1935	1940
First	16	20	22	16
Second	20	18	13	12
Third to fifth	36	26	26	25
Sixth and over	28	36	39	47

Economic Effects of Artificial Insemination of Dairy Cows¹

A. A. DOWELL

The first artificial insemination association for commercial dairy cows in the United States apparently was organized in New Jersey in May, 1938. By the end of 1941 a total of 88 associations had been organized in 25 states, chiefly east of the Mississippi and north of the Ohio and Potomac rivers. The number of cows in these associations increased from about 5,000 by the end of 1938 to over 100,000 by the end of 1941. The latter figure represents only about 0.4 per cent of the cows and heifers kept for milk. This is about the same proportion of all dairy cows as the proportion of corn acreage planted to hybrid seed in the 12 corn belt states in 1934.

It is too early to reach final conclusions as to the future of the artificial insemination program. However, if the recent rate of expansion continues over a period of years, it will have far-reaching economic consequences to consumers and producers of dairy products.

Artificial insemination makes it possible to eliminate 80 to 90 per cent of the number of bulls used for the herds included. Some of the released feed, labor, and barn space may be used for carrying an extra cow in the dairy herd. Some increase in the supply of veal also may result as most dairy bull calves that are not required for breeding are sold as vealers.

Membership in the breeding associations leads to the adoption of improved feeding and management practices. Production records must be kept and these reveal differences between cows in a given herd and between different herds. Qualified technicians also bring about an improvement in the health of dairy herds.

The most important long-run effect to be expected is that of improvement in the genetic make-up of dairy herds. Animal and dairy husbandry specialists and animal geneticists have estimated that heifers sired by superior bulls and out of the common run of dairy cows may be about 20 per cent more productive than their dams and that a total increase of about 38 per cent in productivity may be expected in the course of four generations.

There may be a tendency if the program is widely adopted for a larger proportion of dairy cow replacements to be raised in surplus feed areas. Buyers in deficit feed areas will have reasonable assurance that the heifers are free from disease and that they will be satisfactory producers. Based upon estimates of specialists in a number of states, it appears that over 20 per cent of the dairy cows of the country are discarded each year due to accidents, disease, age, or unsatisfactory production. This suggests that about one half the dairy cows of the country would need to be enrolled in the artificial breeding program if all replacements came from this source.

If the artificial breeding program is adopted by a considerable proportion of dairy farmers, it may lead to a fairly sharp increase in the supply of dairy products. Gains would be shared with consumers in the form of

¹ For a more complete discussion see Dowell, A. A., and Winters, L. M. "Economic Aspects of Artificial Insemination of Commercial Dairy Cows." *Journal of Farm Economics* XXIV (3):665-676. August, 1942.

lower prices. There would be a tendency for high-cost producers either to embrace the new technique or to shift to other enterprises. Some of the effects of an expanded program would be felt rather promptly while others would appear gradually over a period of years.

Farming—A Twelve-Months' Job

S. A. ENGEL

Livestock farming in Minnesota is a twelve months' job. This is shown by records gathered from 26 Nicollet County dairy farms (see table 1). Livestock required the most attention during the winter, but the variation from winter to summer was not large. Labor on crops was heaviest during the months from April to October. Other farm work was quite uniform through the year. The total hours per day varied only from 16 during the winter to slightly more than 20 during the crop season.

The longer period of daylight permits longer work days during the summer. Summer vacations release the school children for more work. These two factors permit the regular workers to take care of most of the seasonal variation in work. Only a small amount of additional labor is hired during the summer. To be of value to Minnesota farmers most of the farm labor must be available throughout the year. Transient and other short time workers can be of only limited service.

Table 1. Hours of Man Labor Per Day, Nicollet County, 1941

Month	Livestock	Crops	Other	Total
January	13.0	1.4	1.5	15.9
February	12.8	.9	2.0	15.7
March	13.5	1.4	2.0	16.9
April	12.8	4.3	2.1	19.2
May	11.1	7.4	2.2	20.7
June	10.5	6.7	2.8	20.0
July	9.5	10.8	2.7	23.0
August	9.2	10.7	1.5	21.4
September	9.1	6.9	3.7	19.7
October	9.3	5.3	2.9	17.5
November	11.0	3.4	3.9	18.3
December	11.8	1.4	3.6	16.8

Dockage in Minnesota Flaxseed¹

REX W. COX

An analysis of the records of 7,436 carloads of flaxseed received at Minneapolis from Minnesota points during the crop year, August, 1941, to July, 1942, reveals that the dockage content in these cars averaged 11.7 per cent

Distribution of 7,436 Carloads of Flaxseed Received in Minneapolis from Minnesota Points According to the Per Cent of Dockage

Per cent of dockage	Number of cars	Per cent of cars
Less than 5.0	221	3.0
5.0-9.9	2,256	30.3
10.0-14.9	3,369	45.3
15.0-19.9	1,250	16.8
20.0-24.9	272	3.7
25.0-29.9	55	.7
30.0 and above	13	.2

¹ Assistance in the preparation of this material was furnished by the personnel of the Work Projects Administration, Official Project No. 265-1-71-236, Subproject No. 503.

with individual cars ranging from 3 to 37 per cent. One third of the cars had less than 10 per cent of dockage, almost one half had between 10.0 and 14.9 per cent, and one fifth had 15 per cent or more of dockage material.

Dockage in flaxseed ordinarily consists of clipped flax, hulls, chaff, and weed seeds such as wild oats, pigeon grass, rag weed, mustard, wild buckwheat and false flax. Frequently, flax is cleaned by the local elevator and the screenings ground and sold as feed. However, most of the flax produced in Minnesota is shipped to the terminal market without cleaning.

Minnesota marketed over 13 million bushels of the 1941 crop of flax or 366 thousand tons. On the basis of an average dockage content of 11.7 per cent, about 43,000 tons of dockage were included in the receipts of flaxseed at the terminal markets. The transportation of this dockage cost over \$73,000 and utilized around 1,075 cars at a time when the cars were urgently needed for hauling vital war supplies or other essential goods.

There was a wide variation among the different counties of the state in the per cent of dockage in flaxseed shipments to Minneapolis, ranging from less than 6.0 per cent in Roseau and Sherburne counties to more than 14.0 per cent in several of the counties in the southern part of the state.

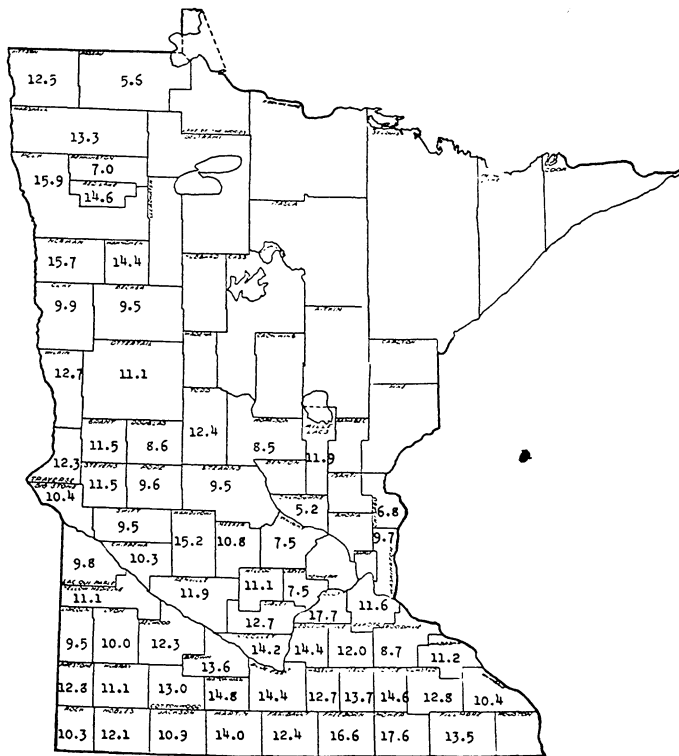


FIG. 1. AVERAGE PER CENT OF DOCKAGE IN FLAXSEED SHIPMENTS FROM VARIOUS COUNTIES IN MINNESOTA TO MINNEAPOLIS

Reduction of dockage depends primarily on clean flax fields. In many areas where the volume is sufficient to warrant scalping before shipping, the dockage material can be reduced ordinarily to a minimum of 3 per cent. Cleaning at the local elevator not only saves in transportation but provides a source of feed at a lower cost than much of the commercial feeds shipped into the area.

Minnesota Farm Prices For September, 1942

Prepared by H. W. HALVORSON and H. G. HIRSCH

The index number of Minnesota farm prices for September, 1942, was 138. The index numbers for the three classes of farm products were: crop prices 119, livestock prices 150, and livestock product prices 147.

The price index of 138 for the past month is the net result of increases and decreases in the prices of farm products in September, 1942, 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 15, 1942, with Comparisons*

	Sept. 15, 1942	Aug. 15, 1942	Sept. 15, 1941		Sept. 15, 1942	Aug. 15, 1942	Sept. 15, 1941
Wheat	\$.98	\$.93	\$.98	Cattle	\$11.30	\$11.90	\$ 9.10
Corn .....	.71	.72	.60	Calves	12.70	13.00	11.40
Oats .....	.37	.37	.36	Lambs-Sheep	11.62	11.99	9.89
Barley .....	.55	.60	.53	Chicken .....	.18	.17	.14
Rye .....	.52	.45	.56	Eggs .....	.31	.30	.27
Flax	2.23	2.26	1.86	Butterfat .....	.45	.43	.39
Potatoes .....	.80	1.00	.50	Hay	4.50	4.80	4.50
Hogs	13.50	14.10	11.20	Milk	2.15	2.10	2.00
				Wool† .....	.39	.39	.38

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

† Not included in the price index number.

Wheat and rye are the only crops which were higher in price in September than in August. The price of oats remained unchanged. The prices of all other crops and of all types of livestock went down, while livestock product prices increased.

The Minnesota farm price index at 138 is 12 points lower than the U. S. farm price index of 150. The main reason for this difference is that grains are given much more weight in the Minnesota farm price index number for August, September, and October than in the U. S. index. Grain prices have not risen as high above 1935-39 prices as livestock and livestock product prices. In consequence, Minnesota farm prices appear unfavorable when compared with U. S. prices, but, actually, the differences are not as great as would appear from the index numbers.

Indexes and Ratios for Minnesota Agriculture*

	Sept. 15, 1942	Aug. 15, 1942	Sept. 15, 1941	Average Sept. 1935-39
U. S. farm price index	150.4	152.9	128.2	100
Minnesota farm price index	138.1	140.9	119.6	100
U. S. purchasing power of farm products	122.9	125.8	120.5	100
Minn. purchasing power of farm products	112.8	115.9	112.4	100
Minn. farmers' share of consumers' food dollar		59.0	53.8	48.6
U. S. hog-corn ratio	16.4	16.9	15.7	12.6
Minnesota hog-corn ratio	19.0	19.6	18.7	14.9
Minnesota beef-corn ratio	15.9	16.5	15.2	11.9
Minnesota egg-grain ratio	22.3	22.0	20.7	17.3
Minnesota butterfat-farm-grain ratio	37.8	35.5	35.3	32.4

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

Distribution of Benefit Payments

"Who gets the benefit payments?" is the question to which an answer was recently sought by analyzing 3,050 records of farm incomes for the period October, 1938, through September, 1939. These records were collected by the Minnesota Income Study during the fall and winter of 1939.

When farms were sorted into benefit- and nonbenefit-receiving classes, analysis revealed among other things that:

1. About two thirds of the farms received benefits.
2. In all but one of the nine type-of-farming districts¹ the average benefit farmer had a larger net farm income (excluding benefits) than the average nonbenefit farmer. For the state, benefit farmers had \$264 more of net farm income than nonbenefit farmers. Adding to this the average benefit payment per farm receiving benefits of \$152 increased the advantage of the benefit farmer to \$416.
3. Benefit farmers in each of the nine districts, on the average, operated the larger farms, the difference for the state being 65 acres.

When farms were classified by size of cash income from sales of farm products the results indicated that the fourth of the farmers selling the smallest value of products received 4.8 per cent of the benefit payments. On the other hand, the 25 per cent of the farmers selling the largest value of products received 56.6 per cent of all the benefit payments in the state.

The 1939 program of distributing government funds to farmers thus was directed toward helping to a greater extent the larger, commercial farmer with a relatively larger income than toward helping raise the incomes of farmers having lowest incomes. The criterion of need as a basis for distributing government funds to farmers appeared to have little place in this program. Almost nothing has happened since 1939 to indicate any substantial change from that policy.

¹ An outline map showing type-of-farming areas in Minnesota may be found in Minn. Farm Business Notes, July, 1942.

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PAUL E. MILLER, Director

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