



**AgEcon** SEARCH

RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

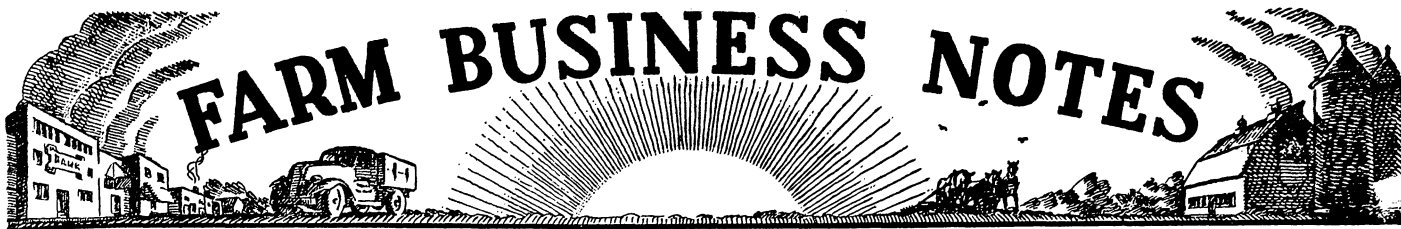
AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*



Prepared by the Divisions of Agricultural Economics and Agricultural Extension  
Paul E. Miller, Director Agricultural Extension

NO. 214

UNIVERSITY FARM, ST. PAUL

OCTOBER 1940

## Farm Mortgage Lending by Minnesota Banks

G. L. PETERSON

### University Farm Radio Programs

Monday through Friday

UNIVERSITY FARM HOUR—6:00 a.m.  
(Effective November 4)

MID-MORNING MARKETS—10:30 a.m.  
(Effective immediately)

Station WLB—760 on the dial

The total farm mortgage debt in the United States was \$3,207,863,000 in 1910. It increased rapidly to \$10,785,621,000 in 1923. Thereafter it declined slowly to \$9,630,768,000 in 1930, and then more rapidly to \$7,070,896,000 on January 1, 1939. A large part of this decrease, especially that occurring from 1931 to 1935, was undoubtedly due to foreclosure. Since the latter date farmers have been more able to meet the current payments on their farm mortgage loans, and the total farm mortgage debt has been reduced. From January 1936 to January 1940 the total farm mortgage loans of the leading organizations holding such loans declined \$475 million. When the amount held by private individuals and other miscellaneous creditors is included, the decline may be approximately \$740 million, or about 10 per cent. All of the important mortgage creditors shared in this decline except the commercial banks which increased their volume of these loans. (The amount held by the Farm Security Administration also increased, but this agency is new and the total held relatively small.) Since 1936 the farm mortgage loans of banks have increased from year to year, the increase amounting to 9.6 per cent by January 1, 1940.

In Minnesota, the farm mortgage debt followed the same trend as for the nation as a whole. It increased more rapidly from 1910 to 1923, however, and also declined more thereafter. In 1910 this debt was \$144 million; in 1923, \$606 million; in 1930, \$476 million; and in 1939, \$351 million. The reduction during the period of heavy foreclosure was proportionally the same as for the United States. Incidentally, the reduction in total farm mortgage debt in Minnesota from 1936 to 1939 was greater, relatively, than in any state in the nation except two. No figures were available for the loans held by miscellaneous creditors and insurance companies as of January 1, 1940. If a change is allowed for the latter agency equivalent to the change which occurred in their holdings in the previous year, the total held by the leading agencies (exclusive of miscellaneous creditors) declined 10 per cent from January 1, 1936. (See table 1.) This decline is the same as that occurring throughout the entire country. In Minnesota, however, the loans held by commercial banks increased

much more than for the country as a whole. Banks increased their holdings of these loans by 34 per cent in this four-year period. The farm mortgage holdings of banks increased in 29 states, but in only five was the increase greater than in Minnesota. Apparently bankers in some states are looking more favorably upon farm mortgage loans as an investment than was true a few years ago.

What policies do bankers in Minnesota follow in making first mortgage loans on farm land? Do they lend liberally? What interest rates do they charge? May these loans ultimately lead to difficulty? Reports from 67 banks, 10 per cent of all banks in the state exclusive of those in the three large cities, suggest answers to these questions.

These reports indicate that Minnesota bankers are being conservative in extending farm mortgage credit. The ratio of loan to land value is low and therefore affords an ample margin of security. In June 1939 these banks had 935 farm mortgage loans aggregating \$1,970,774. The average loan was therefore \$2,107. The average Federal Land Bank and Land Bank Commissioner loan in Minnesota in January 1940 was \$4,440. Of greater importance than the average loan, however, is the amount loaned per acre. The 935 loans held were secured by 113,400 acres of land. The average advance per acre was thus \$17.37. This figure is less than one half of the average sale price of land in Minnesota in 1936-37<sup>1</sup> and therefore appears to indicate conservative lending practices. The loans of the Federal Land Bank and Land Bank Commissioner averaged \$29 per acre as of January, 1940.

Table 1. Farm Mortgage Loans of the Leading Lending Agencies\*

	United States		Minnesota	
	1936	1940	1936	1940
Total loans .....	(000) \$4,571,918	(000) \$4,096,484	(000) \$267,942	(000) \$243,548†
Amount held by banks .....	487,505	534,273	14,339	19,226

\* Exclusive of the amounts held by miscellaneous creditors.  
† Includes a \$50,000,000 estimate for insurance companies.

<sup>1</sup> The Trend in Sale Prices of Farm Real Estate in Minnesota, by A. A. Dowell, Minnesota Bulletin 338.

There is, however, considerable variation in Minnesota soils and very substantial areas in which loans of \$17 per acre would be unsound. In order to observe differences in lending practices in the better and poorer agricultural areas of the state, the state was divided into two parts, roughly by a line extending from the Twin Cities to Breckenridge. This line is the same as that which separates the northern type-of-farming areas from the southern. Twenty of the banks submitting information relative to their farm mortgage loans were located in the northern division and 47 in the southern.

#### Loans in Northern Minnesota

The banks in the northern division of the state had 300 loans aggregating \$287,042. These loans averaged only \$957. They were secured by 35,492 acres, making the average loan per acre only \$8.08. Inasmuch as nearly all of these banks are located in the better agricultural areas of the northern division, it would seem that these loans were made on a conservative basis. Average loans in the different banks ranged from \$2.50 per acre to \$22 per acre. The bank averaging \$22 per acre was the only one in which average loans exceeded \$10 per acre. It is located in a county bordering on the division line. Average sale prices of land in 1936-37 were less than \$15 per acre in only three counties,<sup>2</sup> and none of the 20 banks in the northern division were located in these counties.

The average acreage per loan in the northern division was 118. Interest rates ranged from 5½ to 8 per cent. Ten banks charged 6 per cent, nearly all the remainder charging higher rates.

#### Loans in Southern Minnesota

In the southern division of the state the average loan was almost three times as large as that in the northern division. The 635 loans held averaged \$2,651 and covered 122 acres. The loans totaled \$1,683,732 and were secured by 77,908 acres. Loans per acre were \$21.61. The average loan per acre in the various banks ranged from \$3 to \$36 per acre. Loans averaged \$30 per acre or better in nine banks but were \$20 or less in 24 banks. In only three of the 50 counties in the southern division were sale prices of land in 1936-37 below \$30 per acre and in three fourths of them they averaged \$40 or more. The two banks which had loans averaging \$36 per acre were located in counties where sale prices in 1936-37 averaged above \$50. On the basis of these comparisons it would seem that the loans held by these banks were sound loans and that very few, if any, banks might anticipate any difficulty from their farm mortgage loans.

Interest rates in the southern division were on the whole lower by one per cent or more than in the northern division. They ranged from 4 to 8 per cent, but only two banks reported any loans at the latter rate. Nine charged rates of 4 to 5 per cent, 27 charged 5 to 6 per cent, and 8 charged 6 per cent.

National banks may execute farm mortgage loans for periods exceeding five years only if they are made on the amortization principle in which case they may be 10-year loans. State banks generally follow a policy of drawing

mortgage loans for less than 10 years, five being prevalent. Only loans which bear a low relation to value can be paid from earnings in such short periods of time. Most of the loans held by banks bear a low relation to value. In view of these considerations it is apparent that country banks are competing with other lenders principally for those loans which involve advances of but a minor portion of the value of the real estate to be financed. Banks cannot prudently furnish a major portion of the funds necessary in the typical real estate transaction. Their loans are essentially of a different character. Many are loans for the purpose of making major improvements or for securing other loans. Where real estate transactions are involved the loans required bear low ratios to the value of the land. In recent years banks have had excess funds which they have been anxious to invest in farm mortgages of this type. Such loans are sound loans. In times of stress they can be disposed of quite readily if necessary.

## Efficiency of Field Operation As Affected by the Size of Field

A. W. ANDERSON

The size of fields is an important factor influencing the efficiency of a farmer's field operations. A study of the amount of time actually expended for field operations on a group of farms in Stevens county, made by the Division of Agricultural Economics, provides a basis for determining these relationships. The average number of hours per acre actually spent in working fields of varying sizes are shown in table 1.

More labor and power were required per acre for performing these field operations on the smaller fields than on the larger fields. On the fields of less than ten acres, much more time was required per acre than on the fields from 10 to 20 acres and larger. On fields larger than 20 acres, increasing the field size did not cause as much of a decrease in the time required per acre as on fields smaller than 20 acres. This indicates that size of field does not have much effect on labor requirements on fields of more than approximately 20 acres. Although the table does not show a division of the small fields of ten acres or less, it was observed in summarizing the labor data that the small fields of five acres and less required considerably more labor than fields of over five acres for all operations.

The greatest total change in the amount of time required to work fields of various sizes was found in disking, where the requirement per acre decreased most rapidly as the size of field increased. A marked decrease

Table 1. Man Hours Expended Per Acre for Specified Field Operations, by Size of Field

Size of Field	Harrowing with 4 horses		Disking with 4 horses		Seeding with 4 horses		Planting Corn with 2 horses		Cultivating Corn (2-row) with horses	
	No. of Fields	Hrs. Per Acre	No. of Fields	Hrs. Per Acre	No. of Fields	Hrs. Per Acre	No. of Fields	Hrs. Per Acre	No. of Fields	Hrs. Per Acre
0.0- 9.9	43	.30	27	.74	58	.62	26	.89	12	.83
10.00-19.9	64	.25	36	.55	69	.52	34	.75	20	.81
20.0-29.9	44	.24	18	.51	52	.49	13	.72	7	.81
30.0-39.9	39	.23	13	.48	25	.43	18	.72	17	.79
40.0 & over	25	.22	10	.45	23	.42	20	.63	17	.70

<sup>2</sup> Ibid.

was also noted for seeding, with somewhat smaller decreases for harrowing and for planting corn. In all cases this decrease was smaller after a field size of about twenty acres was reached.

The effect of these variations in labor requirements by various field sizes on the total amount of time required for field operations may be illustrated by applying them to an individual farm. The average farmer in Stevens county raises about 150 acres of small grain a year. If the 150 acres were divided into three fields of 50 acres each, and he prepared the seed bed by disking and harrowing and then seeded the grain, all with four-horse teams, it would require a total of about 164 hours for these three operations. The total labor requirements for these same operations would be 186 hours if the 150 acres were divided into six fields of 25 acres each, 200 hours if divided into 10 fields of 15 acres each, and 250 hours if divided into 20 fields of  $7\frac{1}{2}$  acres each. This is an increase of 22 hours for the same total acreage when the field size is decreased from 50 to 25 acres, a further increase of 14 hours when decreased from 25 to 15 acres, and 50 hours more when the size is decreased from 15 to  $7\frac{1}{2}$  acres. The 50 hours more labor required on the  $7\frac{1}{2}$ -acre fields as compared with the 15-acre fields is the equivalent of five 10-hour days, or is an increase of 25 per cent. Adding five days to the spring season work which can be done in 20 days by farming 15-acre fields makes an appreciable difference to the farmer.

Labor requirements per acre, therefore, are a major consideration on fields of less than approximately 20 acres in size when no more than four horses are used as the power unit. For fields larger than this, labor requirements become secondary and other factors are of more importance. By having large fields, flexibility in the cropping system must be sacrificed, but less land is wasted in headlands and along field edges. The saving in labor that can be expected by increasing the size of field over 20 acres is so small when the power unit is four horses or less that it may not be profitable to remove existing field boundaries in order to have large fields if such removal involves considerable expense. The advantage of large fields is undoubtedly greater when larger-sized horse or tractor power units are used.

## Progress of Rural Zoning in Minnesota

ROY M. GILCREAST

Rural land-use zoning is a new development in Minnesota. It is a specific measure designed to permit local governmental units to deal with local problems peculiar to the cut-over regions of the state.

The basis for rural land-use zoning is Chapter 340, Session Laws of 1939. This act, which is merely an enabling act, authorizes the county boards of counties in which there is located a federal forest, a state forest, or a state conservation area, in conjunction with the town boards, to establish districts and to regulate the use of land and buildings in such districts. The general objectives of this act are: (1) To direct future agricultural settlement onto the better agricultural lands; (2) to make

possible the economic and adequate provision of roads, schools, and other public facilities; (3) to decrease local governmental expenditures; and (4) to conserve and develop all of the natural resources of the area. Such regulations as are adopted under the act are to be made with a reasonable consideration of the character of the district and its peculiar suitability for particular uses.

In Carlton, Koochiching, and Lake of the Woods counties the county boards have followed through the procedure outlined in the enabling act and have officially adopted rural land zoning ordinances. In these counties the adoption of a zoning ordinance followed the preparation of land classification maps by township and county committees as part of the county land-use program being sponsored jointly by the U. S. Department of Agriculture and the Minnesota Agricultural Extension Service. These local committees, composed of farmers living in the area, classified the land in each township as agricultural or nonagricultural, and recommended to the county boards that a zoning ordinance be adopted as a means of preventing future settlement on lands not suitable for agriculture or on lands not served by established roads or schools.

Land classification maps have also been prepared by similar committees in Beltrami, Cass, Clearwater, and Roseau counties and the adoption of rural zoning ordinances have been recommended by the county land-use committees. However, the county boards of these counties have not yet adopted an ordinance.

In each of the three counties which have adopted zoning ordinances, two types of districts have been established—restricted and unrestricted. The regulations adopted apply only to the restricted areas. In the restricted areas no building or structure shall be erected, occupied, or used by any person or persons as an established home or with the intent to establish a home. However, these regulations do not apply to uses or occupancies established before the adoption of the ordinances. That is to say, the ordinance is not retroactive. None of the ordinances adopted specifically prohibit the use of land within the restricted districts for agriculture or any other purpose. The restrictions adopted apply entirely to occupancy. This is because the people in the counties are most interested in preventing the excessive road and school costs which usually follow isolated settlement. They do not wish to have new homes established in areas not served by existing public facilities. They point out that in practically every community there are plenty of unoccupied tracts of good land adjacent to roads and schools, and that both new and old settlers are best served by making full use of existing facilities.

It should be recognized that zoning is only a preventive measure. Of itself it does not correct any mistakes in land use or land settlement which have been made in the past. Positive action to correct past mistakes must come through settler relocation, land exchange, and similar activities. As past mistakes are corrected land-use zoning will prevent similar mistakes from being made over again. It is for this reason that land-use zoning is looked upon by people in the counties wherein it has been adopted as the keystone in a long-time land-use program.

# Minnesota Farm Prices for September, 1940

Prepared by W. C. WAITE and W. B. GARVER

The index number of Minnesota farm prices for the month of September, 1940 was 63. 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:

1924— 94	1929—110	1934— 78	1939— 68*
1925—103	1930— 84	1935— 73	1940— 63*
1926—103	1931— 55	1936— 97	
1927—100	1932— 41	1937— 88	
1928—101	1933— 58	1938— 64	

\* Preliminary.

The price index of 63 for the past month is the net result of increases and decreases in the prices of farm products in September, 1940 over the average of September, 1924-25-26, weighted according to their relative importance.

**Average Farm Prices Used in Computing the Minnesota Farm Price Index, September 15, 1940, with Comparisons\***

	Sept. 15, 1940	Aug. 15, 1940	Sept. 15, 1939		Sept. 15, 1940	Aug. 15, 1940	Sept. 15, 1939
Wheat	\$0.62	\$0.58	\$0.75	Cattle	7.70	7.50	7.40
Corn	.50	.51	.45	Calves	9.00	8.60	9.30
Oats	.20	.20	.26	Lambs-sheep	7.68	7.77	7.59
Barley	.34	.33	.40	Chickens	.12	.11	.11
Rye	.31	.30	.38	Eggs	.17	.13	.16
Flax	1.31	1.36	1.53	Butterfat	.29	.28	.26
Potatoes	.43	.55	.55	Hay	4.75	4.75	4.28
Hogs	6.10	5.70	7.00	Milk	1.60	1.55	1.40

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

Price improvement was shown in all three groups of commodities: crops, livestock, and livestock products. The rises were particularly marked in some of the crops where wheat, barley, and rye all showed rises for September as against usual seasonal declines for the month. However, the greatest single gain was shown for hogs, which advanced considerably more than the customary August to September rise. Hogs averaged \$6.10 for September compared with \$5.70 for August, a gain of 40 cents, whereas the usual seasonal rise would have been only 10-12 cents. Eggs also showed strength, having advanced to 17.1 cents from 13.4 cents for August, a gain of 3.7 cents as compared with a normal seasonal rise of about 1.7 cents at this level of prices.

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

	Sept. 1940	Aug. 1940	Sept. 1939	Average Sept. 1924-26
U. S. farm price index	70.8	68.1	71.5	100
Minnesota farm price index	63.0	60.7	68.0	100
U. S. purchasing power of farm products	88.2	84.8	89.1	100
Minn. purchasing power of farm products	78.4	75.6	84.6	100
Minn. farmer's share of consumer's food dollar		43.9	43.5	53.9
U. S. hog-corn ratio	9.9	9.2	12.6	11.7
Minnesota hog-corn ratio	12.2	11.2	15.6	12.9
Minnesota beef-corn ratio	15.4			
Minnesota egg-grain ratio	19.1	15.4	15.7	17.5
Minnesota butterfat-farm-grain ratio	40.7	39.3	31.9	35.4

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

# The Livestock Situation

With the current corn prices running high relative to hog prices, the present expectations are that this year's spring pig crop is coming to market early. Receipts at 12 public stockyards were running substantially heavier the last half of September than they were a year earlier. It appears probable that due to the feed situation a share of the season's marketings relatively larger than usual will be marketed before January 1, with a rather pronounced decline in marketings after January 1. It is expected that next year will bring a material reduction in hog marketings. However, the current hog-corn ratio is showing some improvement with the increase in hog prices against fairly stable corn prices. The Minnesota ratio was down to 9.5 bushels for June and was at 12.2 bushels for September. Storage stocks of pork and lard are headed downward toward their usually low point in the late fall. Although pork stocks on September 1 were reduced better than 30 per cent of their August 1 figure, they were 20 per cent larger than on September 1 last year.

Cattle prices have strengthened materially since early summer with most of the improvement coming in the upper grade of slaughter steers. Slaughter the last part of September was running somewhat behind last year, although totals cumulated for the year are larger than for 1939. Stocker and feeder prices were running above last September figures but still were relatively low compared to the better grades of slaughter stock. Meanwhile the Minnesota beef-corn ratio continued to rise for September, reaching 15.4 bushels for September, above the 13.9 bushels for May and June, but below the 16.4 bushel figure for September, 1939. Feed supplies will be lower than for a year ago. Corn supplies (excluding sealed corn) as of October were indicated at below 2,500 million bushels compared with 2,938 million bushels last year.

The decrease in livestock supplies for the coming year tends, of course, to strengthen prices. On the demand side there is a material strengthening of consumer demand for meats as industrial activity expands to supply defense needs.

UNIVERSITY OF MINNESOTA  
Department of Agriculture  
Agricultural Extension  
University Farm, St. Paul, Minn.

PENALTY FOR PRIVATE  
USE TO AVOID PAYMENT  
OF POSTAGE, \$300

P. E. MILLER, Director

FREE—Co-operative Agricultural Extension  
Work, Acts of May 8 and June 30, 1914.

UNIVERSITY FARM, ST. PAUL, MINNESOTA