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FARM BUSINESS NOTES

Prepared by the Divisions of Agricultural Economics and Agricultural Extension
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Sale Prices of Farm Real Estate in Minnesota

A. A. DOWELL

The decline in sale prices of Minnesota farm real estate, which began after World War I, continued through 1938-39. This is indicated by the data in Table 1 which show the average sale prices per acre by districts and for the state as a whole by two-year periods from 1910-11 to 1938-39.

From 1910-11 to 1928-29 the data were based on county records of actual transactions as obtained by the Minnesota Tax Commission. As the consideration has been omitted in many transactions reported to the county offices during recent years, such data, for the two-year period 1930-31, were supplemented with sales made by various lending agencies. For the periods 1932-33 through 1938-39, all figures were based on reports of sales by corporate agencies direct to the Division of Agricultural Economics. These agencies include insurance companies, trust companies, land banks and the State Department of Rural Credit.

As the trend in sale prices from 1910-11 to 1936-37 was explained in a previous report,¹ this article is concerned primarily with the data obtained for the two-year period 1938-39.

The reporting agencies sold 2587 farms in Minnesota during 1938, and 2601 during 1939, or a total of 5188 farms during the two-year period. The distribution of sales by districts was as follows: southeastern, 471; southwestern, 846; west central, 928; east central, 1356; northwestern, 1050; and northeastern, 537. The sample appears to be adequate from the standpoint both of the number and distribution of transactions. The extent to which the sample may be representative of sales made during the two-year period by private individuals and other corporate agencies is not known.

The average sale price of farm real estate for the state declined from \$39 an acre during 1936-37 to \$35 an acre during 1938-39, or approximately 10 per cent. As shown in Table 2, the index of sale prices per acre for the state declined from 79 (1912-13=100) during 1936-37 to 71 during 1938-39. The average price obtained per acre

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during 1938-39 was only about one-third the average during 1920-21, and was considerably below the average during 1910-11. The average sale price of farm real estate in Minnesota, therefore, has declined to the lowest level in more than 30 years.

Average sale prices for the state as a whole are of little value to prospective purchasers or to lending agencies because of wide variations in soil and climate in different parts of the state. To eliminate some of these variations, the data have been tabulated by districts. Considerable variations exist, however, between farms within a given district due to differences in productivity, location, size and condition of the improvements and other factors. Although the value of a given tract of land can be ascertained only upon inspection, the district figures serve a useful purpose in that they give some indication of the trends that have taken place.

The average sale price per acre was lower in each district during 1938-39 than during the preceding two-year period (Table 1). However, the extent of the decline varied considerably from district to district. The least relative decline occurred in the southwestern district where the index of sale prices declined 4 points, and the greatest relative decline occurred in the northeastern district where the index fell from 118 to 91, or 27 points (Table 2). The decline in the index of sale prices per acre in the other districts was as follows: west central, 8 points; northwestern, 8 points; southeastern, 10 points; and east central, 12 points.

A sharp decline in sale prices of farm land has taken place in all districts since 1920-21. The most severe declines occurred during 1922-23 and again during 1930-31 or 1932-33. The decline during recent years has been uninterrupted in the southeastern, west central and east central districts. Sale prices advanced in the northeastern district during 1934-35 and 1936-37, but declined below the 1932-33 level during 1938-39. In the northwestern district, land values strengthened during 1934-35 but the subsequent decline carried the average sale price below the previous low point in 1932-33. The decline which took place in the southwestern district during 1938-39

¹ Dowell, A. A., "The Trend in Sale Prices of Farm Real Estate in Minnesota," Minnesota Agricultural Experiment Station Bulletin 338, September, 1938.

Table 1. Average Sale Prices per Acre of Farm Real Estate in Minnesota by Districts, by Two-Year Periods, 1910-11 to 1938-39

| District | 1910-11 | 1912-13 | 1914-15 | 1916-17 | 1918-19 | 1920-21 | 1922-23 | 1924-25 | 1926-27 | 1928-29 | 1930-31 | 1932-33 | 1934-35 | 1936-37 | 1938-39 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Southeastern | \$58 | \$69 | \$82 | \$92 | \$117 | \$141 | \$114 | \$104 | \$106 | \$100 | \$88 | \$64 | \$52 | \$51 | \$44 |
| Southwestern | 57 | 69 | 84 | 100 | 118 | 152 | 119 | 110 | 109 | 102 | 88 | 65 | 58 | 60 | 58 |
| West central | 39 | 46 | 56 | 67 | 78 | 98 | 82 | 74 | 72 | 67 | 51 | 42 | 38 | 35 | 31 |
| East central | 24 | 29 | 34 | 41 | 50 | 68 | 56 | 49 | 49 | 44 | 36 | 27 | 26 | 22 | 19 |
| Northwestern | 24 | 29 | 32 | 37 | 40 | 57 | 44 | 44 | 36 | 33 | 22 | 20 | 22 | 21 | 19 |
| Northeastern | 11 | 13 | 14 | 15 | 18 | 24 | 23 | 22 | 22 | 21 | 18 | 14 | 15 | 16 | 12 |
| Minnesota | 41 | 49 | 58 | 68 | 82 | 104 | 85 | 78 | 76 | 71 | 60 | 45 | 40 | 39 | 35 |

Table 2. Index of Sale Prices per Acre of Farm Real Estate in Minnesota, by Districts, by Two-Year Periods, 1910-11 to 1938-39 (1912-13=100)

| District | 1910-11 | 1912-13 | 1914-15 | 1916-17 | 1918-19 | 1920-21 | 1922-23 | 1924-25 | 1926-27 | 1928-29 | 1930-31 | 1932-33 | 1934-35 | 1936-37 | 1938-39 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Southeastern | 84 | 100 | 119 | 133 | 170 | 204 | 165 | 151 | 154 | 145 | 128 | 93 | 76 | 74 | 64 |
| Southwestern | 83 | 100 | 122 | 145 | 171 | 220 | 172 | 159 | 158 | 148 | 128 | 94 | 84 | 88 | 84 |
| West central | 85 | 100 | 122 | 146 | 170 | 213 | 178 | 161 | 157 | 146 | 111 | 91 | 82 | 75 | 67 |
| East central | 83 | 100 | 117 | 141 | 172 | 234 | 193 | 169 | 169 | 152 | 124 | 93 | 89 | 78 | 66 |
| Northwestern | 83 | 100 | 110 | 128 | 138 | 197 | 152 | 152 | 124 | 114 | 76 | 69 | 76 | 73 | 65 |
| Northeastern | 85 | 100 | 108 | 115 | 138 | 185 | 177 | 169 | 169 | 162 | 138 | 108 | 112 | 118 | 91 |
| Minnesota | 84 | 100 | 118 | 139 | 167 | 212 | 173 | 159 | 155 | 145 | 122 | 92 | 80 | 79 | 71 |

was sufficient to cancel the increase that occurred in this district during the preceding two-year period.

It will be observed that average sale prices per acre in each of the districts were lower during 1938-39 than during 1912-13, and in all but the southwestern and northeastern districts they were lower during 1938-39 than during 1910-11 (Table 1). These relationships are shown more clearly in Table 2. The indices of sale prices for 1938-39 were approximately one-third below the base period, 1912-13, in the southeastern, west central, east central, and northwestern districts. The least relative declines between these two periods occurred in the northeastern and southwestern districts.

Pronounced Decline in Sale Prices

No conclusive evidence is available to account for the fairly pronounced decline in sale prices of farm real estate that occurred between 1936-37 and 1938-39. This may have resulted from a greater willingness on the part of the reporting agencies to sell the properties which they had acquired. These agencies sold a total of 5188 farms during 1938-39 compared with a total of 2915 farms during the preceding two-year period. Relatively low prices for some farm products and the many uncertainties surrounding the future may have been other contributing factors.

One factor that added to the complexity and severity of the farm problem during the past two decades was the decline in farm land values following the previous land boom which reached its peak in 1920. While there is little evidence at the present time that World War II may lead to another land boom, past history indicates that all prolonged major conflicts have had this result. Consequently, if the present war continues over a period of years and leads to a decided price rise, this should not be used as a basis for a speculative boom in land prices.

Marketing Margins on Minnesota Farm Products

W. B. GARVER AND W. C. WAITE

Calculations are currently made by the Division of Agricultural Economics on the marketing margins, or spreads, between Minnesota farm prices and the Minneapolis retail prices of the derivative products of Minnesota agriculture. The prices analyzed are those for wheat, flour, bread, milk (including butter and cheese), potatoes, chickens, eggs, pork and beef. A "retail food basket" is made up of typical family purchases of these ten foods. The items are priced at retail monthly from the Bureau of Labor Statistics retail prices for Minneapolis. The necessary quantities of farm products required for these purchases are priced monthly from Bureau of Agricultural Economics farm prices for Minnesota. The total of the spreads between the two sets of prices thus may be taken as a measure of the costs of processing and distribution of the food items included in the comparisons.

Farmer's Share of Consumer's Food Dollar Varies

The retail value of the items in the typical food basket has ranged from \$31.68 in June 1920 to a low of \$12.37 in March 1933. During 1939 the average value was \$19.75 and a peak of \$20.40 was reached in February 1940. The margins on the items ranged from \$13.78 in 1920 to the low of \$7.52 in 1933. The 1939 average was \$11.42, while in February of 1940 the margin was \$11.85, the highest month since 1930. When these margins are expressed as a percentage share of the consumer's retail dollar expenditure the range is from 35 per cent in early 1920 to the high point of 65 per cent in January 1934. During 1939 the percentage margin was 58 to 60 per cent, with the latest available figure showing 56 per cent for May 1940. Over the period 1920-1939 the margin aver-

aged 51 per cent. Thus, slightly more than half of the consumer's food expenditures on these items is absorbed by processing and distribution.

Margins Made Up Largely of Fixed Costs

Margins for individual commodities vary considerably depending to some extent upon the degree to which processing and other service costs are involved in their preparation for the retail market. The average percentage margins for individual groups, 1920-39, were: beef, 48%; pork, 40%; chickens, 47%; eggs, 33%; potatoes, 52%; milk, 60%; butterfat, 31%; wheat flour, 52%; bread, 81%. Most of these percentage margins show a considerable fluctuation over the past 20 years. Such fluctuations are largely a reflection of the difference of price behavior between farm prices on one hand and the cost of marketing on the other. Farm prices have fluctuated up and down quite considerably during the period while the margins remained much more stable from year to year. Being made up largely of fixed costs, or elements slow to show price changes, these margins tend to take a more uniform amount out of the consumer's food expenditures than do the agricultural producers.

The stability of these margins may be seen from a comparison of the annual average margins on the ten foods combined. Taking the 1920-39 average as a basis, the margin on the ten foods in the 20 years never rose more than 10 per cent above the average, and in the worst of the 1929 depression dropped only to 13 per cent below the average for 1933. Meanwhile the retail value of the items ranged from 39% above to 31% below the average, and the farm value ranged from 69% above to 46% below the average. The margins show no particular trend either upward or downward for the 20-year period.

However, some of the individual commodities or groups do show some indications of trends in the dollar margins. Beef, and more recently potatoes, show a slight trend upward, while bread and eggs, and milk slightly, show a downward tendency.

When prices decline sharply these margins on foods are slow to respond. Because of the institutional structure and conventions of processing and distribution agencies, these shocks are passed along in magnified form to the producers who, since they are almost perfectly competitive, stand only as residual claimants for whatever is left of the consumer's food dollar after the relatively fixed deductions for processing and distribution have been made.

A Comparison of the Leadership of Owner and Tenant Operator Families in Agricultural Extension Projects

J. B. McNULTY

How do tenant families compare with owner operator families with respect to assuming responsibility and providing leadership for the educational work of the community? A recent study of the families of 1890 unpaid local leaders who served in home management projects, such as clothing and nutrition, provides some information on this question.

Table 1 shows that the percentage of all local leaders from tenant families was somewhat lower than the per cent of all farms that were tenant farms in type-of-farming areas 3, 5, 6, and 7; it was higher in area 1 and equal in areas 2 and 4. Of the total of 1890 local leaders, 685, or 36.2 per cent, came from tenant families. The 1935 census shows that 37.4 per cent of all the farms in these 38 counties were tenant farms. Apparently there was no important difference between the degree of leadership assumed by tenant and owner families in this group. However, as shown in Table 2, there was a significant difference in the degree of leadership assumed by tenants related to their landlords as compared to tenant families not related to their landlords.

In a study made by the Division of Agricultural Economics, University Farm, in 1936, it was found that there were about four times as many non-related as related tenants. Table 2 shows that only twice as many leaders came from the non-related tenant families. This was less than one-half their proportionate share.

Table 1. Number of Counties, Number of Local Leaders, Percentage of All Local Leaders That Were from Tenant Families and Percentage of All Families That Were Tenant Families by Type-of-Farming Areas

| Area | No. of counties included in the study | No. of local leaders included in the study | Per cent of all local leaders from tenant families | Per cent of all farms operated by tenants |
|---------------------------|---------------------------------------|--|--|---|
| 1. Southeast | 6 | 395 | 37 | 35 |
| 2. South central | 7 | 397 | 31 | 31 |
| 3. Southwest | 6 | 280 | 46 | 49 |
| 4. West central | 6 | 297 | 47 | 47 |
| 5. East central | 4 | 206 | 20 | 23 |
| 6. Northwest | 5 | 157 | 27 | 33 |
| 7. Red River Valley | 4 | 158 | 39 | 44 |
| Total | 38 | 1890 | 36.2 | 37.4 |

Table 2. Number of Counties and Number of Local Leaders That Were from Owner, Non-related, and Related Tenant Operator Families

| Area | No. of counties included in the study | Local leaders from owner operator families | Local leaders from non-related tenant families | Local leaders from related tenant families |
|---------------------------|---------------------------------------|--|--|--|
| 1. Southeast | 6 | 248 | 77 | 70 |
| 2. South central | 7 | 274 | 60 | 63 |
| 3. Southwest | 6 | 150 | 98 | 32 |
| 4. West central | 6 | 158 | 106 | 33 |
| 5. East central | 4 | 164 | 30 | 12 |
| 6. Northwest | 5 | 114 | 8 | 15 |
| 7. Red River Valley | 4 | 97 | 46 | 15 |
| Total | 38 | 1205 | 445 | 240 |

Minnesota Farm Prices for July, 1940

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

The index number of Minnesota farm prices for the month of July, 1940 was 66. When the average of farm prices of the three Julys, 1924-25-26, is represented by 100, the indexes for July of each year from 1924 to date are as follows:

| | | | |
|----------|----------|---------|----------|
| 1924—85 | 1929—110 | 1934—56 | 1939—61* |
| 1925—107 | 1930—82 | 1935—73 | 1940—66* |
| 1926—107 | 1931—57 | 1936—86 | |
| 1927—98 | 1932—45 | 1937—95 | |
| 1928—110 | 1933—58 | 1938—73 | |

* Preliminary.

The price index of 66 for the past month is the net result of increases and decreases in the prices of farm products in July, 1940, over the average of July, 1924-25-26, weighted according to their relative importance.

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

| | July 15, 1940 | June 15, 1940 | July 15, 1939 | | July 15, 1940 | June 15, 1940 | July 15, 1939 |
|----------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| Wheat | \$0.64 | \$0.67 | \$0.59 | Cattle | \$7.20 | \$6.80 | \$6.60 |
| Corn | .50 | .49 | .35 | Calves | 8.50 | 8.50 | 8.00 |
| Oats | .25 | .27 | .22 | Lambs-sheep | 7.95 | 8.04 | 7.52 |
| Barley | .34 | .37 | .31 | Chickens | .11 | .10 | .11 |
| Rye | .32 | .32 | .30 | Eggs | .14 | .12 | .13 |
| Flax | 1.44 | 1.55 | 1.40 | Butterfat | .28 | .28 | .24 |
| Potatoes | .70 | .55 | .75 | Hay | 4.60 | 4.52 | 3.89 |
| Hogs | 5.60 | 4.65 | 6.00 | Milk | 1.50 | 1.40 | 1.30 |

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

The rise of one point in the index from June reflects the net improvement in prices resulting from gains in hogs and cattle slightly outweighing the losses shown for crops. Chicken and egg prices rose somewhat more than seasonally while butterfat remained unchanged at 28 cents. Milk advanced 10 cents to \$1.50 with most of the supporting strength apparently arising from the rise in powdered milk prices.

Prices paid by U. S. farmers declined slightly for the month, with declines in "interest and taxes," and in feeds. Farm wage rates for the country as a whole are slightly higher, about 2 per cent, than a year ago.

Indexes and Ratios of Minnesota Agriculture*

| | July 1940 | June 1940 | July 1939 | Average July 1924-26 |
|--|--------------|--------------|--------------|----------------------------|
| U. S. farm price index | 68.4 | 68.4 | 64.0 | 100 |
| Minnesota farm price index | 66.4 | 64.6 | 61.4 | 100 |
| U. S. purchasing power of farm products | 85.7 | 85.0 | 81.6 | 100 |
| Minn. purchasing power of farm products | 83.3 | 80.4 | 78.3 | 100 |
| Minn. farmer's share of consumer's food dollar | | 39.3 | 41.4 | 53.5 |
| U. S. hog-corn ratio | 9.2 | 7.6 | 13.1 | 12.0 |
| Minnesota hog-corn ratio | 11.2 | 9.5 | 17.1 | 13.2 |
| Minnesota egg-grain ratio | 14.4 | 12.5 | 16.4 | 14.0 |
| Minnesota butterfat-farm-grain ratio | 35.4 | 33.6 | 36.3 | 32.0 |

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

The Feed Situation

The number of grain-consuming animals is expected to decline during the balance of 1940. The supply of feed grains (corn, oats, barley, and grain sorghum) for the year will be more than ample to feed animals to be kept, according to present indications. Although the carry-over of feed grains this year is somewhat larger than it was a year ago, when it is added to the indicated current crops the total feed supply will be a little smaller than that of 1939. However, this supply will be larger than any other year since 1932. Drought in the corn belt has been serious and unless some improvement is shown the expectations of yield may have to be revised downward.

With reduced animal units and the relatively large feed supplies in prospect, the feed per animal unit will be the largest in the last 15 years, or nearly .9 tons per animal unit. However, if deduction is made for corn sealed or held by the government, the supply per animal unit drops to somewhat less than .8 tons, the lowest in the past 4 years.

Corn stocks on July 1, including sealed corn, reached a record peak of 975 million bushels with about 55% of them sealed or held by the government, leaving only about 435 million bushels unsealed. This was about 200 million bushels less than the unsealed stocks a year ago. This, together with the prospects for a smaller 1940 crop, indicate the major reasons for better corn prices of recent weeks than for a year ago. The supply of hay, based on indications as of July 1, will be the largest in 13 years.

Price ratios relative to feeding have been declining during the past year until July, when some improvement upward to a less unfavorable position was shown. The hog-corn ratio for Minnesota declined from 17.1 bushels for July 1939 to the low of 9.5 bushels for June of this year, and rose to 11.2 for July with the improvement in hog prices. The beef feeding situation also showed some improvement with a slight rise in cattle prices.

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