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AGRICULTURAL EXTENSION DIVISION  
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MINNESOTA FARM BUSINESS NOTES

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Prepared by the Division of Agricultural Economics  
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SIGNIFICANCE OF A DECLINING PRICE LEVEL TO FARMERS

Prepared by Wm. L. Cavert

During the period beginning with August 1929, there has been a drastic decline in the general price level, somewhat comparable to that which occurred in 1920. The following table exhibits the trend of prices since 1920:

Year	General all level of commodities at wholesale	United States price of farm pro- ducts at the farm	Price of commodities that farmers buy	Taxes on farm real estate	Price of farm real estate	
					Minne- sota	United States
1910-14	100	100	100	100	100	100
1920	226	205	206	155	213	170
1921	143	116	156	217	212	157
1922	141	124	152	232	187	139
1923	147	135	153	246	177	135
1924	143	134	154	249	170	130
1925	151	147	159	250	159	127
1926	146	136	156	253	155	124
1927	139	131	154	258	145	119
1928	143	139	156	263	140	117
1929	141	138	155	267	138	116
1930	126	117	150	-	133	115
Aug. 1929	143	143	155			
Sept. 1929	142	141	155			
Oct. 1929	141	140	154			
Nov. 1929	138	136	154			
Dec. 1929	138	135	154			
Jan. 1930	136	134	153			
Feb. 1930	135	131	152			
Mar. 1930	133	126	151			
Apr. 1930	132	127	150			
May 1930	130	124	150			
June 1930	127	123	149			
July 1930	123	111	149			
Aug. 1930	123	108	149			
Sept. 1930	123	111	149			
Oct. 1930	121	106	149			
Nov. 1930	117	103	149			
Dec. 1930	115	97	147			
Jan. 1931	112	94	143			
Feb. 1931	-	90	143			

Column 1	United States Bureau of Labor Statistics, index of wholesale prices of all commodities converted to 1910-14 base, as reported in Farm Economics, New York State College of Agriculture, February 1931 and other issues.
Column 2	Farm prices of Agricultural commodities, U. S. Department of Agriculture, Index Agricultural Situation, February 1931 and other issues.
Column 3	Prices of commodities that farmers buy, U. S. Department of Agriculture, Agricultural Situation, February 1931, and other issues.
Column 4	Taxes, U. S. Department of Agriculture, index, Agricultural Situation, February 1931, page 17.
Columns 5 & 6	Farm real estate, Circular 150, U. S. Department of Agriculture, page 11.

From August 1929 to January 1930, the percentage of decline in prices was as follows:

<u>Kind of goods</u>	<u>Per cent</u>
All commodities at wholesale	22
Agricultural commodities at the farm	34
Goods that farmers buy for living and production	8

There seems to be rather general agreement among economists that a considerable part of the recent drop in commodity prices is a general decline to a lower price level such as occurred in 1920. There is decided disagreement as to the causes of the recent decline. In an ordinary depression, the expectation is that prices will return to their former level. The usual upturn in the revival following previous depressions has been about 10 per cent. The upturn is usually greater in the case of agricultural commodities than for the average of all commodities.

It is sometimes said, "The farmer is not interested in the general price level as long as the commodities that he sells and buys are on a fair exchange basis." This statement overlooks the important fact that many farmers are borrowers on mortgages running from 5 to 34 years.

Furthermore all real estate owners have taxes on their property. These taxes largely represent payments by the various governmental units for interest, payments on principal of loans, and salaries and wages. The public debts are like private debts in that it takes more units of butterfat, hogs, grain, etc. to pay them, and salaries and wages always remain at about their former level for some time after a drop in commodity prices. This tendency for wages and salaries to remain at their former level is more pronounced in the case of public employees than in the case of private employees. The effect of the declining price level on debtors may be illustrated by the trend of butter prices. For the years 1924-28, the average Minnesota farm price of butterfat was \$.452\*. The corresponding price on February 15 was 28 cents. This means that where it would take 1770 pounds of butterfat to pay annual interest, taxes and amortization payments of \$800 in 1924-28. With butterfat at 28 cents it would take 2857 pounds or an increase of 61 per cent. The comparison would be far more striking if one figured the increased number of bushels of wheat, barley, oats or rye required to meet a given annual payment.

The margin between butterfat and feed or between hogs and feed may be fairly satisfactory, but for the producer who raises the bulk of his feed, his net income is largely determined by the prices of the products that he sells.

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\*Weighted average, calculated by D. D. Kittredge, Division of Agricultural Economics.

The following table shows the importance of interest and tax payments in representative farm budgets in the West North Central States for a period of years as reported by the United States Department of Agriculture:

Year	Number of farms	Average interest payment	Average tax payment	Total interest and tax payment	Cash business expenses including taxes and interest on borrowed money	Per cent interest and taxes are of total business expenses
1923	3817	\$380	\$240	\$620	\$1870	33
1924	3398	387	239	626	1967	32
1925	3402	387	246	633	2119	29
1926	2969	371	245	616	2114	29
1927	3129	359	235	594	2033	29
1928	2735	347	238	585	2211	27
1929	2594	339	240	579	2173	27

From the foregoing data, it appears that taxes and interest on debts have constituted 27 to 33 per cent of total expenses on farms operated by owners. On these same farms, the average cash receipts above current cash expenses, including interest on borrowed money for 1923-29 inclusive was \$955. During this same period, the average outlay for taxes and interest was \$609 or taxes and interest on borrowed money were 64 per cent as great as the receipts above expenses. According to the 1925 census of agriculture, 49 per cent of owner operated farms in the West North Central States had no mortgage debt. This suggests that for large numbers of the mortgaged farms, interest and taxes are 40 to 50 per cent of the total cash business expenses.

#### The Minnesota Situation

The following Minnesota data are taken from the 1925 federal census of agriculture:

Number of full owners	112,906
Number reporting mortgage debt	52,184
Value of land and buildings on full owner farms having mortgage debt	\$12,428,182
Amount of mortgage debt on such farms	267,026,995
Ratio of debt to value	43.6%
Value of land and buildings per acre (mortgaged farms)	\$81.13
Mortgage debt per acre	35.37

The census does not report debts not secured by real estate. It is almost certainly true that if the debt not secured by real estate mortgages in 1925 had been reported that the 52,184 full owner mortgaged farms had an indebtedness of over 50 per cent of the 1925 value of their real estate. According to an estimate made by the United States Department of Agriculture in 1928\*, the total mortgaged debt on owner operated farms in Minnesota was one per cent greater than in 1925 and land\*\* values 12 per cent less. By 1930, land values were 16 per cent

\*Crop and Markets, Vol. 6, No. 10, page 408.

\*\*Wiecking, E. H., and Stauber, B. R., The Farm Real Estate Situation 1929-30, Circular No. 150, United States Department of Agriculture, November 1930, page 11.

less than in 1925. Thus the situation in recent years has been one in which there has been a continuous decline in real estate values, and at least up to 1928, no appreciable reduction in mortgage debts. This is in marked contrast to the rising price level from 1900 to 1920 when farm real estate was continually rising in value. Then, even if no reduction was made in the mortgage, the owner's equity constantly increased.

The decline in real estate values really has been greater than government figures indicate, as such indices do not give due weight to distress real estate that cannot find buyers, even at substantial concessions from the quoted figures.

#### Other Effects of Price Decline

Aside from the fact that a decreasing price level means that a farmer finds it much more difficult to pay debts and taxes, it has important effects in two other ways: First, it injures his credit as a decreasing price level means a shrink in his equity. Under present conditions, a mortgage loan that appeared conservative prior to 1925 can frequently be renewed, if at all, only with the company that originally made it. Second, it puts farmers under excessive strain immediately following such a drop as has recently occurred for the reason that the prices of goods for living and production and wages of farm labor do not come down for some time after the drop in raw materials. For example, the data on page 1 show that in February 1931, the prices of commodities that farmers buy were 143 per cent of the pre-war level while prices of farm products were only 90 per cent of the pre-war level.

#### MINNESOTA FARM PRICES FOR FEBRUARY 1931 Prepared by D.D. Kittredge and A. E. Erickson

The index number of Minnesota farm prices for the month of February 1931 was 69.5. When the average of farm prices of the three Februarys of 1924-25-26 is represented by 100, the indexes for February of each year from 1924 to date are as follows:

February 1924 -	88.2
" 1925 -	99.5
" 1926 -	115.2
" 1927 -	113.4
" 1928 -	100.7
" 1929 -	106.2*
" 1930 -	102.5*
" 1931 -	69.5*

\*Preliminary

The price index of 69.5 for the past month is the net result of increases and decreases in the prices of farm products in February 1931 over the average of February 1924-25-26 weighted according to their relative importance. The increase is 5 per cent. The decreases range from 68 per cent to 2. The products ranked according to the size of their percentage increases or decreases in this comparison are shown in the following list:

Principal Farm Products which Showed Price Increases and Decreases  
in February 1931 when Compared with Average Prices  
in February 1924-25-26  
(listed in descending order of percentage change)

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Increases: Cattle.

Decreases: Rye, Eggs, Wheat, Barley, Flax, Lambs-Sheep, Oats, Butterfat, Corn,  
Milk, Potatoes, Hogs, Chickens, Hay, Calves.

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Although the Minnesota index for February 1931 does not measure price changes from January 1931, a comparison of month to month changes in price has been made. The increase is 3 per cent. The decreases range from 33 per cent to 2. The products ranked according to the size of their percentage increases or decreases in February 1931 over January 1931 are shown in the following list:

Principal Farm Products which Showed Price Increases and Decreases  
in February 1931 when Compared with January 1931  
(listed in descending order of percentage change)

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Increases: Lambs-Sheep.

Decreases: Eggs, Potatoes, Rye, Calves, Cattle, Chickens, Barley, Corn, Flax,  
Hogs, Milk, Butterfat, Hay.

No Change: Wheat, Oats.

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