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# Income to Iowa Agriculture 1920 to 1926

BY KNUTE BJORKA

AGRICULTURAL EXPERIMENT STATION  
IOWA STATE COLLEGE OF AGRICULTURE AND  
MECHANIC ARTS  
C. F. Curtiss, Director

AGRICULTURAL ECONOMICS SECTION



Ames, Iowa

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The gross income to Iowa farmers has increased rather steadily since the low point of the depression in 1921. This fact is brought out in the study reported in this circular. The accompanying diagram, fig. 1, is based upon the gross income of 10 of the state's leading agricultural commodities and indicates the extent of the annual increase. The figures for each of the seven years, 1920 to 1926, inclusive, upon which the diagram is based, are as follows:

1920-----	\$782,040,000
1921-----	487,449,000
1922-----	533,907,000
1923-----	609,118,000
1924-----	622,356,000
1925-----	659,348,000
1926-----	719,145,000

The income of \$782,040,000 to Iowa farmers in 1920 slumped to \$487,449,000 in 1921, a reduction of 38 percent. The shrinkage in income was greater still from the high years of 1918 and 1919. The price index of Iowa farm products had decreased 30 points in 1920 from the average for 1919. Consequently, a considerable portion of the 1920 farm products were sold at prices materially lower than those that prevailed a year or two earlier. From the low year of 1921 the gross income gradually increased every year until 1926 when it reached \$719,145,000, within 8 percent of the 1920 value.

By converting these sums into an index of gross income a comparison may be made which will aid in discerning the trend of income for these years. Using 1920 as the base of 100, we find the index of gross income as follows:

1920-----	100
1921-----	62
1922-----	68
1923-----	78
1924-----	80
1925-----	84
1926-----	92

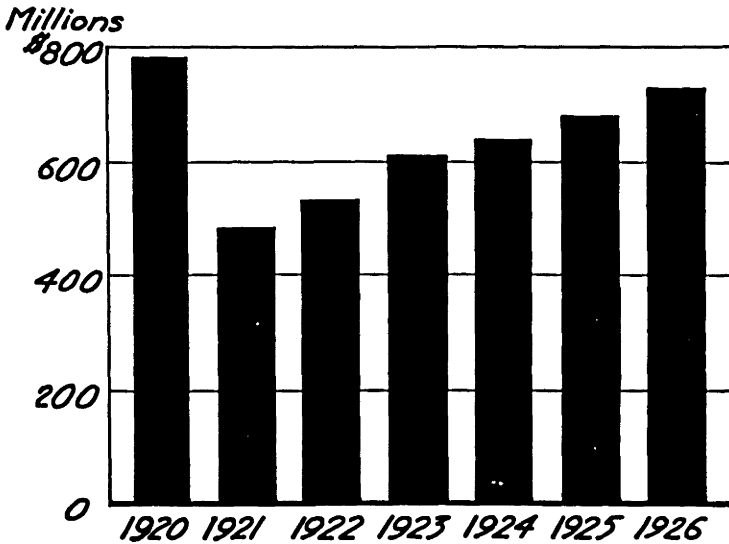


Fig. I. Gross income to Iowa farmers from 10 agricultural commodities, 1920 to 1926, inclusive.

In determining the annual income to Iowa agriculture it was necessary to limit the computation to commodities on which we have fairly reliable statistics both as to quantity marketed and price. By selecting the more important commodities and ascertaining the returns from them for a series of years, we have a fairly satisfactory measure of the trend of income. The 10 commodities important to Iowa agriculture chosen were hogs, cattle, sheep, corn, oats, wheat, barley, butter (including creamery butter, ice cream, sweet cream, market milk, cheese, cottage cheese and condensed milk, all converted to a butter equivalent), eggs and poultry. Sheep and barley yield proportionately small returns but are included because fairly dependable statistical data were available upon which to determine their value.

Iowa agriculture has been making a consistent improvement from year to year as measured by income figures. Every year since 1921 shows larger gross returns over the previous one. These data, it should be remembered, measure gross income, and not profits of production.

#### **Agricultural Product Prices Still Below Non-Agricultural**

There is still considerable spread between the price of farm products and the cost of farmers' purchases, but some improvement has taken place since the low year of 1921. The index of

purchasing power of farm products in terms of non-agricultural commodities, when considering the five year average, 1910 to 1914, inclusive, as the base of 100, has registered as follows since 1920:

1920-----	78
1921-----	62
1922-----	66
1923-----	67
1924-----	75
1925-----	89
1926-----	87

This means that in 1926 Iowa farm products exchanged for only 87 percent as much non-agricultural commodities as during the pre-war period, while in 1921 they exchanged for only 62 percent. Altho the Bureau of Labor Statistics non-agricultural commodities index does not accurately represent farmers' purchases, it seems to come closer than any other index we now have.

The index of purchasing power does not represent the situation of farmers who contracted debts at inflated prices during and just following the war. These men find themselves staggering under the load of heavy interest payments. It is believed that considerable interest rate adjustment has been made thru the refunding of these debts, but the original principal has probably not been greatly reduced, consequently large annual interest payments continue.

### Hogs Chief Source of Income

The gross income to Iowa farmers from individual commodities for each year from 1920 to 1926, inclusive, is given in the accompanying table. Many interesting comparisons may be drawn from this summary.

The relative importance of the sources of income to Iowa farmers may be readily ascertained. The proportion of the income obtained from the various commodities is not constant from year to year, but the variation is not great. When taking the average for the seven years we find that about 38 percent of the gross returns, based upon the 10 commodities included in the study, come from hogs, 21 percent from cattle, 14 percent from butter and other dairy products, 13 percent from corn, 6 percent from eggs and poultry combined and 5 percent from oats. Barley, wheat and sheep together total only about 2 percent.

For 1926 the proportion of the total income contributed by each commodity changed somewhat. Hogs increased to 43 percent and butter (dairy products) to 15 percent of the total income. Corn and oats decreased to 1 and 4 percent, respectively. The

TABLE I. GROSS INCOME TO IOWA FARMERS FROM TEN AGRICULTURAL COMMODITIES

	1920	1921	1922	1923	1924	1925	1926
Hogs .....	\$269,760,000	\$164,127,000	\$199,801,000	\$213,138,000	\$233,447,000	\$278,884,000	\$305,750,000
Cattle .....	152,388,000	105,476,000	109,617,000	137,444,000	141,417,000	147,337,000	153,748,000
Sheep .....	5,644,000	3,305,000	2,912,000	3,548,000	4,656,000	4,422,000	4,695,000
Corn .....	137,386,000	70,170,000	73,024,000	86,361,000	73,893,000	50,947,000	70,449,000
Oats .....	62,584,000	24,156,000	22,743,000	30,630,000	37,529,000	32,670,000	24,415,000
Wheat .....	16,875,000	7,521,000	9,064,000	9,082,000	7,733,000	5,893,000	6,614,000
Barley .....	2,699,000	895,000	746,000	784,000	897,000	1,221,000	1,094,000
Butter* .....	84,686,000	70,619,000	79,300,000	86,394,000	86,184,000	96,356,000	106,631,000
Eggs .....	32,899,000	21,177,000	24,135,000	27,466,000	24,084,000	27,334,000	30,098,000
Poultry .....	17,119,000	11,003,000	12,565,000	14,271,000	12,516,000	14,234,000	15,651,000
Total .....	\$782,040,000	\$487,449,000	\$533,907,000	\$609,118,000	\$622,356,000	\$659,348,000	\$719,145,000

\*Data for butter includes income from creamery butter, ice cream, sweet cream, market milk, cheese, cottage cheese and condensed milk converted to butter equivalent.

proportion of the total contributed by cattle and poultry products remained the same as the average for the entire period.

### **Small Crop May Bring Largest Income**

When considering individual commodities we observe that the amount of the crop marketed is not always an indication of the income it yields. Income is the product of quantity marketed and the price at which it sells. When the supply is large, it ordinarily sells at a low price. Hence the total income for a small crop is sometimes greater than for a large one. Hogs may be used as an example. In 1924, 13,870,000 hogs brought about \$233,447,000 while in 1926, 10,702,000 hogs sold for \$305,750,000. That is, 3,000,000 fewer hogs in 1926 brought \$72,000,000 more than in 1924. This was because the 1926 crop sold at an average of about \$4.30 higher price per hundred pounds than the 1924 crop, and because the 1926 hogs averaged about 10 pounds heavier. A similar illustration may be drawn with corn. In 1924 Iowa farmers sold approximately 93,000,000 bushels of corn for \$74,000,000, and in 1926 they sold 118,000,000 bushels, a 27 percent larger volume, at \$70,000,000, or 5 percent less. This is accounted for by the fact that in 1924 the average farm price for corn was 22 cents per bushel higher than in 1926.

### **Increase Fairly Steady Since 1921**

The income from all commodities fell off materially in 1921 as compared to 1920. Most of them, however, show a rather steady recovery after 1921. The returns from hogs and cattle have increased every year over the subsequent one up to the present. Sheep returns were lowest in 1922, increasing in 1923 and 1924. The income fell off slightly in 1925 but increased again in 1926.

Corn income, following the low point in 1921, increased in 1922 and 1923. It fell off in 1924 and reached the lowest value for the entire period in 1925. The income for 1926 was somewhat higher and equalled the returns for 1921. The extremely low returns in 1925 were due to the small crop of 1924 and the small proportion of that crop marketed. The United States Department of Agriculture estimated that the Iowa corn crop of 1924 was about 82 percent of the average production for the five preceding years, and that only 15 percent of the 1924 corn crop was shipped out of the county where grown, whereas normally, such shipments range from 25 to 30 percent and sometimes more.

Income from oats reached its low point in 1922, increased for two years, then decreased again in 1925 and 1926, bringing the

same returns in 1926 as in 1921. The low returns in 1926 were due to the low price per bushel.

Wheat income was smallest in 1925, followed in order by 1926, 1921, and 1924.

Barley is a minor crop as a direct source of revenue in Iowa. The highest returns after 1920 were for 1925 and 1926.

The income from dairy products, as represented by butter, was reduced relatively less from 1920 to 1921 than that of other commodities in the group. The reduction was about 6 percent. The 1922 income was about the same as that for 1921, whereas the returns for 1923 and 1924 slightly exceeded the 1920 income. The returns for 1925 were 11 percent and in 1926 26 percent greater than for 1920.

Eggs and poultry brought the lowest receipts in 1921. They increased in 1922 and 1923, fell off in 1924 and increased again in 1925 and 1926.

#### **Figures are for Portion Sold**

In calculating the annual income, all duplications are omitted as far as possible. That is, the income derived from the portion sold off the farm is used, and not the value of the commodities produced. It does not include the value of farm products used in the household, nor does it account for change in farm inventories from year to year.

These income figures are based upon reports from several sources. The figures are not all equally dependable, but attempts have been made to select the sources that seemed to contain the most reliable information. Reports of the Iowa and Washington offices of the Bureau of Agricultural Economics of the United States Department of Agriculture, terminal livestock market reports, data from both federal and state censuses and reports of the Dairy and Food Division of the Iowa Department of Agriculture have been used in arriving at the Iowa farm income figures.

Altho complete figures on farm income would be of interest, to most of us it would mean little to know the exact number of millions of dollars that farm commodities yield annually. The comparison of income from year to year has greater significance. This we can make by using the representative group given in the table.

Farmers derive considerable income from sources of which we have no authentic data. For example, anyone attempting to estimate what farmers receive from the sale of horses in Iowa would probably come wide of the mark, because we have very little information upon which such an estimate may be based. The same will apply to purebred livestock which does not enter the ordinary

market channels, and fruits and vegetables, all of which yield considerable return in the aggregate, but for which we have no satisfactory means of determining the amount. However, the 10 commodities used will account for about 95 percent of the total income.

It would be interesting also, for purposes of comparison, to have income figures as far back as 1910, or at least to the beginning of the Great War. These are very difficult to determine because statistical information upon which to base computations prior to 1920 is much less complete.

The impression seems to be quite general that improvements in farming technique the last few years have resulted in production economies that serve the farmers advantageously. This is extremely important to the producers because it will affect their net incomes, but it is something that is difficult to measure.

A great deal of emphasis is often placed upon the price paid per bushel, per pound and per dozen. This is important, of course, but unless farmers have the physical products to market it does not benefit them. The size of the marketable crop and price must be considered jointly in order to get a measure of gross income.

The data submitted on gross farm income by no means constitutes a complete analysis of the agricultural situation. It takes into account only the quantity of the product marketed and the price at which it was sold. The cost of the goods purchased by farmers and the effectiveness with which production is carried on are equally important in ascertaining the true condition of agriculture. However, the evidence at hand does indicate that on the whole Iowa farming conditions have improved the last five years, but it has not as yet reached the point where it is on a parity with industry.