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## Effects of Inflation and Deflation upon Nebraska Agriculture, 1914 to 1932

H. Clyde Filley

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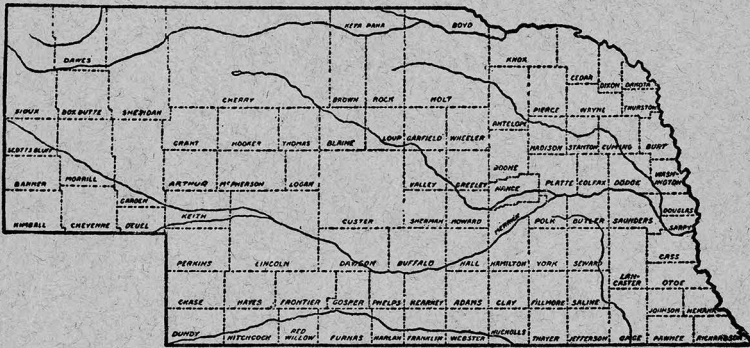
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Filley, H. Clyde, "Effects of Inflation and Deflation upon Nebraska Agriculture, 1914 to 1932" (1934). *Historical Research Bulletins of the Nebraska Agricultural Experiment Station*. 295.  
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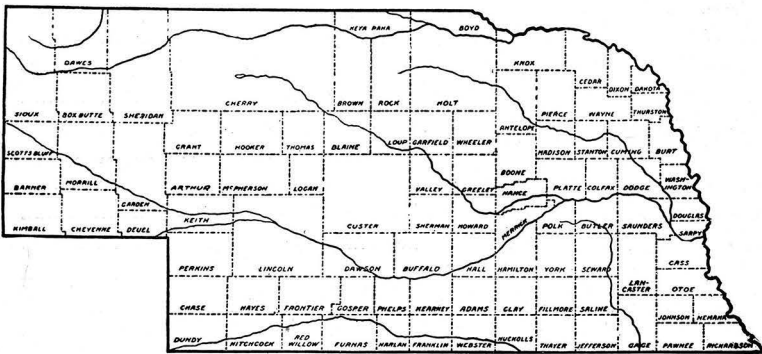


LINCOLN, NEBRASKA  
JUNE, 1934



# Effects of Inflation and Deflation Upon Nebraska Agriculture, 1914 to 1932

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# Effects of Inflation and Deflation Upon Nebraska Agriculture, 1914 to 1932

## CHAPTER I—THE PROBLEM

Nebraska farmers prospered during the period which followed the depression of the nineties and preceded the beginning of the World War. To be sure the prosperity was not uniformly distributed either by years or by areas. The corn crop was unusually short in a large portion of the state in 1901 and an almost total failure in many of the southern counties in 1913. Chinch bugs did considerable injury in 1901 and the Hessian fly in 1905 and 1914. There was noticeable damage from insects in some areas in other years. No part of the state, however, suffered from long-continued drouth or repeated ravages of insect pests. The depression of 1907 affected credit and prices very severely for a few months, but recovery was rapid and within less than a year business was again moving forward.

**An increase in property values.**—The rapid increase in the value of farm property throughout the period is a fair indication of the increase in material prosperity. The values as found by census enumerators in 1900 and 1910 are given in Table 1.

TABLE 1.—*The value of farm property in Nebraska in 1900 and 1910<sup>1</sup>*

Classification	1900	1910
Domestic animals, poultry, and bees.....	\$145,349,587	\$222,222,004
Implements and machinery.....	24,940,450	44,249,708
Buildings .....	91,054,120	198,807,622
Land .....	486,605,900	1,614,539,313
All farm property.....	\$747,950,057	\$2,079,818,647
Number of farms in Nebraska.....	121,525	129,678
Average value per farm.....	\$ 6,155	\$ 16,038

<sup>1</sup> Abstract of the Thirteenth Census of the United States, pp. 626 and 627.

The increase in the value of Nebraska farm property from 1900 to 1910 was 178 per cent. Not all of this rise can be attributed to increased farm prosperity because the general price level rose about 25 per cent. But if a liberal allowance is made for that part of the rise in the value of farm property which was due to an increase in the price level, there remains a surprisingly large increase which was undoubtedly the result of increased farm prosperity.

One reason for the large increase is that prices were abnormally low in 1900. Nebraska had not yet recovered from the depression of 1893 to 1896. Although the depth of the depression was passed in 1896 and the prices of farm products were on the upgrade after the early months of 1897, the movement was slow. It was not until after 1900 that the rise in the price of farm products outstripped the rise in

price of goods purchased by farmers by a sufficient margin to permit farmers to feel prosperous and to buy freely. With but few exceptions, crops were good during this first decade of the new century. There was no widespread general failure. Livestock of all kinds increased in value. Many new farm improvements were made. Land rose in price because of the increase in farm profits and a return of confidence in mid-western agriculture.

From 1910 to 1914 the price level of farm products remained fairly stable. City residents began to talk about the high cost of living. There was even discussion of a back-to-the-land movement. Farmers were relatively prosperous and this prosperity was reflected in the slowly rising price of land. It is probable that until 1914 land prices were justified by the prices paid for farm products. The years from 1900 to 1914 may be classed as "the golden age of Nebraska agriculture".

**Some aids to farm prosperity.**—Farmers were aided during this period by new discoveries, labor-saving inventions, improved varieties of crops, and improved strains of livestock. A method of controlling hog cholera came into general use, the gang plow replaced the walking plow and one-bottom sulky plow, two-row cultivators for both listed and checked corn reduced the labor on many farms, the acreage of alfalfa increased, the value of sweet clover as a pasture plant was learned, early-maturing oats replaced the later-maturing varieties, and knowledge of balanced rations for livestock became more widespread. New barns made the care of livestock easier; the blow stacker, manure spreader, horse fork, and other new equipment took no small part of the drudgery out of farm life; and the larger machinery reduced materially the hours of labor. The farm homes were influenced by prosperity and the labor of many housewives was greatly reduced by running water and other modern conveniences. Farmers were prosperous because they were able to produce abundantly and could exchange their surplus products for a goodly amount of the things that they and their families needed.

**Agricultural conditions in Nebraska, 1916 to 1920.**—Nebraska farm property more than doubled in value between 1910 and 1920. The 1920 valuation was 562 per cent of the value in 1900. The major part of this remarkable increase took place during the four years which ended in the spring of 1920.

Nebraska farmers were prosperous during these years. The selling price of farm products rose more rapidly from 1916 to 1919 than the cost of production. The increased net re-

turns from farming were followed in 1919 and the early months of 1920 by a rapid increase in the sale price of farm land. The average increase for the state during the four years has been estimated by the Division of Land Economics of the United States Department of Agriculture at 72 per cent of the 1916 value.<sup>1</sup> In some areas of the state land more than doubled in value. The 1910 values of all farm property, as given in the census, are presented in Table 1, and the 1920 values in Table 2.

**Conditions from 1920 to 1933.**—Nebraska farmers have been less prosperous since 1920 than during the years which preceded the World War. Farm property values have shrunk not only because of the fall in the general level of prices, but because the selling price of farm products has fallen more than the necessary costs of production. The decrease in values from 1920 to 1930 is clearly evidenced by the census returns given in Table 2.

TABLE 2.—*The value of farm property in Nebraska in 1920 and 1930*<sup>1</sup>

Classification	1920	1930
Domestic animals, poultry, and bees.....	\$ 336,443,784	\$ 288,901,542
Implements and machinery.....	153,104,448	150,925,108
Buildings .....	381,885,420	446,539,222
Land .....	3,330,222,340	2,048,663,849
All farm property.....	\$4,201,655,992	\$2,935,029,721
Number of farms in Nebraska.....	124,417	129,458
Average value per farm.....	\$ 33,771	\$ 22,672

<sup>1</sup> Fifteenth Census of the United States—Nebraska, Statistics by Counties.

The decrease for the state as a whole during the 10-year period was about 33 per cent. The rate of decrease in the three years following the taking of the 1930 census was even more rapid than during the period 1920 to 1930. The Division of Land Economics of the United States Department of Agriculture reports a decrease in land values of 39 per cent for the years March, 1930, to March, 1933.<sup>2</sup> The 1933 Nebraska farm land value was materially lower than the 1910 value.

Every farm boy knows that conditions are not right. In recent years there has been little money for wall paper and paint, bath tubs or barns, new clothing or farm equipment. Many boys and girls have had to postpone their plans for a college education and others are working their way through school with but little help from home. Most of the residents of Nebraska cities and villages and many of the industrial

<sup>1</sup> B. R. Stauber, *The Farm Real Estate Situation, 1932-33*, U. S. Department of Agriculture, Circular 309, p. 8.

<sup>2</sup> *Ibid.*, p. 8.



workers of the East have come to realize that something is wrong with midwestern agriculture.

**The field of this study.**—This study attempts to give the effects of war-time inflation and the subsequent deflation upon Nebraska agriculture. It presents statistical evidence of what happened. It is too late to prevent the present depression. Information concerning the situation may aid in promoting recovery. It is hoped that a knowledge of the inflation of 1916 to 1920 and the depression following may aid in avoiding the making of similar errors in the future.

## CHAPTER II—INFLATION AND DEFLATION

Inflation is sometimes defined as any rise in the general level of prices. Deflation is the opposite of inflation. It is best defined as any fall in the general level of prices. No attempt is made in this study to analyze the causes of inflation and deflation.

**Index numbers.**—Changes in price levels are indicated statistically by the use of index numbers. The average prices of a considerable number of commodities during some one year or for a term of years are taken as a base and are always given the value of 100. If the purchasing power of money decreases below the base period, that is, if prices go ~~down~~, the index number will ~~fall below 100~~, *rise above 100.* <sup>up,</sup>

The Bureau of Labor Statistics of the U. S. Department of Labor has been assembling information upon prices for many years. Its "all commodities" price index is at present (1934) based on the wholesale price of 784 commodities. When the index was first constructed a somewhat smaller number of commodities was used, but the list was, nevertheless, large enough to be representative.

The Bureau of Labor Statistics originally used the 10-year period, 1890 to 1899, as a base. This base was afterward changed to 1913, and more recently to 1926. Computations necessary to place the index on the 1910-14 base have been made by the Department of Farm Management, Cornell University, Ithaca, New York. All index numbers used in this study, except where some other source is stated, are the index numbers prepared by Cornell University, which are based on the index numbers of the Bureau of Labor Statistics.

The Bureau of Agricultural Economics of the United States Department of Agriculture has prepared indices of farm prices on the five-year base, August, 1909, to July, 1914. Their indices include index numbers for six groups of farm products, a weighted index for all groups, and an index of the prices paid by farmers for commodities used in living and production. These indices are used in several tables in this study.

The Department of Rural Economics of the University of Nebraska has prepared weighted index numbers of the farm prices of Nebraska farm products, using prices for the five-year period, 1910 to 1914, as a base. These index numbers are given in only one table in this study. They are used many times for comparison with the other series of index numbers. Index numbers of the wholesale prices of "all commodities" are presented in Table 3.

**The inflation of 1915 to 1920.**—The general price level in the United States rose from an average of 68 in 1896 and

TABLE 3.—*Index numbers of the wholesale prices of all commodities with variable group weights, by months, 1896-1933 (1910-14=100)*<sup>1</sup>

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1896	70	69	69	68	67	66	66	66	66	68	70	70	68
1897	68	68	68	67	66	66	66	69	71	70	70	70	68
1898	70	71	71	71	76	71	70	70	70	70	70	71	71
1899	71	73	73	74	74	75	76	77	80	81	82	83	77
1900	83	84	84	84	82	81	82	81	82	81	81	80	82
1901	81	80	80	79	79	79	80	81	82	82	83	84	81
1902	83	83	83	84	85	86	86	85	86	92	89	90	86
1903	91	91	88	88	86	86	86	86	87	86	85	85	87
1904	87	89	88	87	85	85	85	86	87	87	89	89	87
1905	89	89	88	88	87	87	87	88	87	87	88	89	88
1906	89	89	89	89	90	90	87	89	90	92	93	94	90
1907	93	95	94	94	96	97	97	97	97	98	94	92	95
1908	91	90	90	91	91	91	92	92	92	93	94	95	92
1909	94	95	95	97	98	99	99	100	101	103	104	105	99
1910	104	104	106	107	105	104	104	103	102	99	97	97	103
1911	97	94	95	92	92	92	93	96	97	97	96	95	95
1912	96	97	99	102	102	101	101	102	103	103	103	102	101
1913	103	102	102	102	101	101	102	102	103	103	102	101	102
1914	100	100	99	99	98	98	99	101	103	99	99	98	99
1915	99	100	100	100	101	100	101	100	100	103	105	108	101
1916	112	115	117	119	121	121	122	124	127	133	142	145	125
1917	149	153	157	167	176	178	180	182	180	178	179	180	172
1918	183	179	185	187	187	188	193	196	201	199	199	199	191
1919	196	190	192	194	198	198	206	211	206	207	211	220	202
1920	230	229	232	242	244	243	242	236	227	211	195	176	226
1921	167	153	150	144	141	136	136	137	136	137	138	136	143
1922	134	136	136	136	140	141	145	144	145	145	147	147	141
1923	149	151	153	152	149	147	144	143	146	145	144	143	147
1924	145	146	144	142	140	139	140	142	142	143	145	148	143
1925	150	152	152	149	148	150	152	152	151	151	153	151	151
1926	151	149	147	147	147	147	145	145	146	145	144	143	146
1927	141	140	138	137	138	137	138	139	141	141	141	141	139
1928	141	140	139	141	142	141	142	143	144	141	140	140	141
1929	140	139	140	139	138	139	141	141	140	139	137	136	139
1930	135	134	132	131	130	127	123	123	123	121	119	116	126
1931	114	112	111	109	107	105	105	105	104	103	103	100	107
1932	98	97	96	96	94	93	94	95	95	94	93	91	95
1933 <sup>2</sup>	89	87	88	88	92	95	101	102	103	104	104	103	96

<sup>1</sup>G. F. Warren and F. A. Pearson, Wholesale Prices for 213 Years, 1720 to 1932, Memoir 142, p. 10, Cornell University Experiment Station, 1932.

<sup>2</sup>Farm Economics, Cornell University, May, 1934, p. 2,042.

1897 to 100 in August, 1909. This was an increase of over 46 per cent based on 1896-97 prices. The rise was gradual and comparatively well sustained throughout the period. Prices fluctuated somewhat during the ensuing six years, but there was no sustained rise and no serious decline.

The general price level rose from 100 in September, 1915, to 244 in May, 1920. The effects of this rapid rise were so far reaching and the ultimate results were so disastrous that every thoughtful American should know the economic history of these eventful years in order that he may exert his influence to prevent a recurrence of a period of rapid inflation.

The inflation of 1915 to 1920 may be divided into two periods. The first period began when the price level started to rise in the autumn of 1915 and ended with our entry into the World War. The second period extended from April, 1917, to the peak of prices in May, 1920. The most spectacular rise occurred during this second period. The continuance of unusually high prices for a considerable period was essential to set in motion all the forces which combined to make the ensuing depression a matter of serious concern to Nebraska farmers.

**The deflation of 1920 to 1921.**— Wholesale prices reached a high point in May, 1920 (Table 3, Column 6). They declined slightly in June and July and fell rapidly during the remainder of 1920 and the early months of 1921. The wholesale price index was 244 in May, 1920, and 141 one year later. A low point of 134 was reached in January, 1922.

**Prices from 1922 to 1929.**—The "all commodities" price index fluctuated within relatively narrow limits from the beginning of 1922 to the close of 1929 (Table 3). The lowest point recorded during this eight-year period was 134 in January, 1922. A high point of 153 was reached in March, 1923, and in November, 1925. The price index declined from 141 in August, 1929, to 136 in December of that year. Many persons believed that the price level of these years was permanent and made investments upon that premise.

**The deflation of 1929 to 1933.**—The price decline which began in September, 1929, continued with but slight interruptions for three and one-half years. In only two months of this period was the "all commodities" wholesale price index higher than in the preceding month. A low point of 87 was reached in February, 1933.

From January, 1922, to September, 1929, the price index averaged 43 per cent above pre-war. The low point in 1933 was 13 per cent below pre-war. This severe decline following a period when prices seemed fairly stable had far-reaching effects, not only upon Nebraska agriculture but upon the industrial and financial structure of the nation. Since this is a study of the effects of inflation and deflation upon Nebraska agriculture, the effects upon other industries are mentioned only where the relationship to agriculture is definite and important.

**Farm profits not entirely dependent on the price level.**—The farmer, as a business man, is interested primarily in profits; and profits in farming, as in other productive enterprises, are not determined solely by the price at which the products are sold but by the relationship which exists between

the prices of the products sold and the expenses of production.

Farmers must buy equipment and materials and must provide labor. They must pay rent, or take into consideration the capital invested in land and in improvements. Even if a farmer uses only family labor and thus avoids hiring other help, the labor is nevertheless an important item in the cost of production because the amount that the labor of the farmer and other members of his family would have earned had they been engaged in some alternative enterprise must be regarded as a cost.

Farmers are prosperous when the amount received for their products is considerably more than the "out of pocket" or actual money costs of production. They are receiving a satisfactory return upon their investment, relatively high wages for their labor, and some reward for their risk and managerial ability.

**Prices and purchasing power.**—Farm prosperity cannot be measured by comparing the prices of farm products at any given time with the prices of the same or similar products at some preceding period. Production costs may have varied either more or less than the price of the products. For example, 50 cents a bushel for wheat in April, 1896, was a higher price relative to cost of production than 50 cents per bushel in April, 1931, even though the hours of labor required to produce a bushel of wheat decreased very materially between 1896 and 1931. It is of historical interest to know that eggs, butter, hogs, corn, cattle, and various other farm products sold at lower average prices from 1893 to 1896 than in 1930, but these prices of themselves prove nothing concerning the relative prosperity of the farmers during the two periods. We must compare the price of farm products with the price of the things that farmers buy in order to get an accurate conception of relative prosperity. The price of farm products measured in dollars and cents is of much less importance to the farmer who is out of debt than is the purchasing power of those products measured in terms of farm equipment, clothing, furniture, and groceries. The farmer who must meet heavy debt and interest payments is ordinarily more interested in the price of the products that he sells than in the price of the new goods that he might purchase. The debtor cannot entirely overlook purchasing power, because a part of his income must be used to meet current living and operating expenses.

**Price changes not uniform.** — Very unfortunately the prices of various groups of commodities or of the commod-

ities within any single group do not rise uniformly during inflation or fall uniformly during deflation. The producers of the commodities which rise first have an economic advantage when prices are going up, and the producers of the commodities which fall first in price are at an economic disadvantage when prices are going down. Because of the difference in the rate of rise and fall, as well as for other reasons, both inflation and deflation invariably result in changing the economic balance between the various groups of producers and consumers. Whenever some one group gains an advantage, some other group or groups suffer a disadvantage. This variation in the rate at which prices change has had a very material effect on the prosperity of Nebraska farmers since 1914.

**A comparison of prices paid for farm products with prices paid by farmers for commodities purchased: 1914 to 1933.**—Mention has been made on page 6 of the index of farm prices prepared by the Bureau of Agricultural Economics of the U. S. Department of Agriculture. This index for the years 1910 to 1933, inclusive, is given in Column 2 of Table 4. This index includes cotton, tobacco, oranges, and various other products not grown in Nebraska.

Index numbers of the prices paid Nebraska farmers for their products are given in Column 3 of Table 4. The index numbers for Nebraska differ somewhat from the all agricultural commodities index of the Department of Agriculture but the trends are quite similar. In 10 of the 23 years, following 1910, the Nebraska index and the United States index rose; in nine years they fell; in three years one rose and the other fell; and in one year the Nebraska index remained the same as for the previous year and the United States index rose.

The four most important reasons for the variations in the two indices are as follows:

1. The Nebraska index is based on a smaller number of products.
2. The weighting is not identical.
3. The farm price of any farm product in Nebraska is seldom the average farm price of that product in the United States.
4. The base periods of the two indices are not identical. The index of the Bureau of Agricultural Economics is based on prices paid farmers from August, 1909, to July, 1914; the Nebraska index is based on prices paid during the calendar years, 1910 to 1914.

In Column 4 of Table 4 is given an index of the prices paid by farmers for commodities bought. The ratio of prices received for products sold to prices paid in the United States for commodities is given in Column 5 and the ratio of the prices paid Nebraska farmers for their products to the prices

TABLE 4.—*General trend of prices and purchasing power, 1910 to 1933*

Year	Index numbers of farm prices, all groups <sup>1</sup>	Index numbers of Nebr. farm prices <sup>2</sup>	Index numbers of prices paid by farmers for commodities <sup>1</sup>	Purchasing power of farm products in U. S. <sup>1</sup>	Purchasing power of Nebr. farm products <sup>2</sup>
1910	103	101	98	105	103
1911	95	87	102	93	85
1912	99	100	99	100	101
1913	100	103	101	99	102
1914	102	108	100	102	108
1915	100	105	105	95	100
1916	117	122	124	94	98
1917	176	197	149	118	132
1918	200	215	175	114	123
1919	209	226	200	104	113
1920	205	200	194	106	103
1921	116	108	150	77	72
1922	124	112	146	84	77
1923	135	113	149	90	76
1924	134	127	150	89	85
1925	147	145	154	95	94
1926	136	150	153	89	98
1927	131	142	151	87	94
1928	139	142	153	91	93
1929	138	146	152	91	96
1930	117	119	144	81	83
1931	80	80	124	65	65
1932	57	58	107	53	54
1933	63	60	109	58	55

<sup>1</sup> The Agricultural Situation, U. S. Department of Agriculture, Vol. 18, No. 5.

<sup>2</sup> Department of Rural Economics, University of Nebraska.

The index numbers prepared by the U. S. Department of Agriculture are on a five-year base; August, 1909, to July, 1914=100. The index numbers prepared by the Department of Rural Economics, University of Nebraska, are on a five-year base; 1910 to 1914=100.

paid by farmers is given in Column 6. This ratio is the purchasing power of farm products. The data given in Columns 2, 3, and 4 are presented graphically in Figure 1.

From 1917 until sometime in 1920 the index of the prices paid for farm products in Nebraska and in the nation was higher than the index of the prices paid by farmers for commodities bought. This indicates that farmers had an advantage. The products from a farm would purchase more desirable goods than during pre-war years, or the operator might limit his purchases to about the same volume of goods that he had bought in pre-war years and accumulate a reserve for the purchase of land or Liberty Bonds or for some other investment.

At no time from the beginning of deflation in 1920 to the end of 1933 would the products raised on an average farm purchase as large an amount of the goods commonly pur-

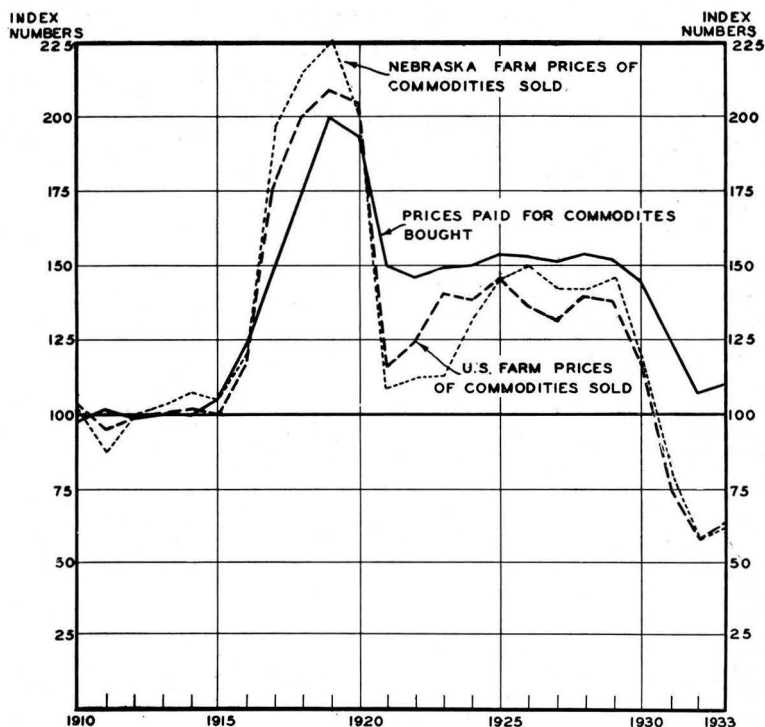


FIG. 1.—Nebraska and United States farm prices of commodities sold and prices paid by farmers for commodities used in living and production, 1910 to 1933 (1910-14=100).

chased by farmers as in pre-war years. The average purchasing power of farm products in the entire United States for the nine years, 1921 to 1929, was 88 per cent of pre-war and for Nebraska was 87 per cent of pre-war. For the four years 1930 to 1933 the average purchasing power of Nebraska farm products was only 64 per cent of pre-war. Changes in the prices of various manufactured goods during inflation and deflation are given in Chapter III. Changes in the prices and purchasing power of specific farm products for the years 1910 to 1933 are given in Chapter IV.



### CHAPTER III—CHANGES IN THE PRICES OF VARIOUS COMMODITIES DURING INFLATION AND DEFLATION

The prosperity of Nebraska farmers is affected not only by the prices of the commodities which they sell but by the prices of the commodities which they buy. The prices of manufactured goods are determined in part by the cost of materials which are used either directly or indirectly in their production. Farmers are interested, therefore, not only in the prices of sugar, salt, muslin, and other products which they buy regularly, but in the prices of steel rails, chemicals, coal, and many other products of which their purchases are relatively small. Information concerning the prices of a few representative commodities helps to explain how inflation and deflation have affected the prosperity of Nebraska farmers.

**Price data.**—The Bureau of Labor Statistics of the United States Department of Agriculture publishes not only monthly and yearly index numbers of wholesale prices of "all commodities" (Table 3), but also index numbers for ten different groups of commodities. The yearly index numbers for the commodity groups for the years 1910 to 1932 have been converted to a 1910-14 base and are given in Table 5.

The "all commodities" index (Column 1) did not vary widely during the years 1910 to 1915, inclusive. Prices were, in fact, more nearly stable during these six years than during any preceding six-year period since 1890. The price index rose gradually from 68 in 1897 to 103 in 1910. This was an increase of 35 points—approximately 51 per cent in 13 years. From 1915 to 1920 the wholesale price index increased 125 per cent. These average yearly figures do not reveal the full extent of the rise as prices fell rapidly during the later months of 1920. The wholesale price index was 99 in January, 1915, and 244 in May, 1920.

**Price rise not uniform.**—The price rise of the specific groups was far from uniform. Farm products rose in price more rapidly from 1914 to the close of the war than commodities as a whole, but rose less rapidly than chemicals and drugs and fuel and lighting. The post-war boom of 1919 and 1920 resulted in a small increase in the price of farm products and a large increase in the price of many kinds of manufactured goods. Index numbers of house furnishings rose to 260 per cent, textile products to 293 per cent, and fuel and lighting to 311 per cent of pre-war.

Farm products dropped more rapidly in price during deflation than did most types of manufactured goods. House furnishings, fuel and lighting, and building materials were relatively higher in 1932 than were the other groups. One

TABLE 5.—*Index numbers of wholesale prices in the United States with variable group weights, 1910 to 1932 (1910-14=100)*<sup>1</sup>

Year	Farm products	Food	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House furnishings	Miscellaneous	All commodities
1910	104	101	93	104	90	100	100	101	99	139	103
1911	94	96	91	99	89	95	100	101	97	99	95
1912	102	104	100	99	97	105	101	99	97	97	101
1913	100	100	106	102	116	106	103	99	103	85	102
1914	100	100	110	97	107	94	96	100	104	82	99
1915	100	101	117	96	98	101	97	138	103	79	101
1916	118	117	145	125	141	137	123	198	113	91	125
1917	181	162	192	175	200	177	160	203	136	111	172
1918	208	185	195	244	207	160	179	225	171	122	191
1919	221	201	270	240	198	153	209	193	194	126	202
1920	211	213	266	293	311	175	272	203	260	152	226
1921	124	140	169	168	184	138	177	142	207	99	143
1922	132	136	162	178	204	121	176	124	190	84	141
1923	138	144	162	198	185	128	197	125	200	91	147
1924	140	141	157	190	175	125	185	122	192	85	143
1925	154	155	163	192	183	121	184	125	189	99	151
1926	141	155	155	178	190	117	181	124	184	91	146
1927	139	150	167	170	168	113	172	119	179	83	139
1928	149	156	188	170	160	114	171	118	174	78	141
1929	147	155	169	161	158	118	173	116	173	75	139
1930	124	141	155	143	149	108	163	110	170	71	126
1931	91	116	134	118	128	99	144	98	156	63	107
1932	68	95	113	99	133	94	130	91	138	59	95

<sup>1</sup>G. F. Warren and F. A. Pearson, *Wholesale Prices for 213 Years, 1720 to 1932*, Memoir 142, Cornell University, pp. 10, 84-111.

reason for the higher price of fuel and building materials was the high cost of transportation, which in 1932 was about 48 per cent higher than in 1916.

**Building materials.**—The index numbers of the price of building materials increased from 100 in the five pre-war years to 272 in 1920. Nebraska farmers buy few bricks, but they are relatively heavy purchasers of lumber. Nearly all farm houses, barns, sheds, corn cribs, and other farm buildings in Nebraska are built largely of wood except the foundations, which are nearly all constructed of concrete. Price data for lumber, linseed oil, and white lead are given in Table 6 and for cement in Table 9.

The term *price relative* is used to express the ratio existing between the prices of some commodity at two different periods when the price at one of the periods is taken as a base. It is customary to use the average price for some period such as one year or five years as a base. If the price at any other time is divided by the price for the base period the quotient shows the percentage that the price for the time selected is of the price for the base period. For example, the average

price of yellow pine boards, No. 2 common, at wholesale, in 1913 (Table 6, Column 3) was \$12.73. The average price in 1914 was \$11.22; dividing \$11.22 by \$12.73 gives 0.88. The price in 1914 was, therefore, 88 per cent of the price in the base period. If, then, we assign to the average price of yellow pine boards, No. 2 common, in 1913 the value of 100 the price of the same kind of boards in 1914 relative to it is 88.

The price relative of lumber at wholesale rose from 100 in 1913 to 221 in 1920. It fell to 165 in the depression of 1921 but the average for the 10-year period, 1921 to 1930, was 178. Yellow pine lumber was widely used in Nebraska during the period under discussion. The wholesale price relative of No. 2 common yellow pine boards rose to 252 in 1919 and to 292 in 1920. It averaged 170 for the nine-year period, 1921 to 1929, inclusive.

Retail prices in Nebraska were relatively higher during and following the war-time and post-war inflation period than wholesale prices. Transportation and handling costs increased so that the margin between the wholesale price and the retail price was wider. Retail prices of yellow pine lumber in Nebraska from 1920 to 1930 averaged nearly double pre-war.

The wholesale price of raw linseed oil in New York rose from 6.2 cents per pound in 1913 to an average of 23.6 cents per pound in 1919 (Table 6, Column 5). This was an increase of 281 per cent in six years. The average wholesale price relative of linseed oil in New York for the 10 years, 1921 to 1930, was 187.

White lead did not rise as much relatively during the inflation period as did linseed oil (Table 6, Columns 7 and 8). It averaged higher following the deflation of 1920-21 than the other building materials that have been discussed. The price relatives for the 10-year period, 1921 to 1930, averaged 199.

Because of the increase in transportation rates and costs of handling, the margins between the New York wholesale price of linseed oil and white lead and Nebraska retail prices were wider from 1921 to 1931 than during pre-war years. The cost of paint was about double pre-war costs.

Glass approximately trebled and No. 1 plain white oak boards more than quadrupled in price between 1914 and 1920. Shellac, which is largely used in the manufacture of varnishes, increased in price at foreign ports from 13.9 cents per pound in 1913 to 80.8 cents in 1920. It averaged nearly 46 cents per pound for the ensuing 10 years. The increase in the retail price in the United States was larger than the increase at point of export.

TABLE 6.—*Price relatives of all lumber, and prices and price relatives of No. 2 common yellow pine boards, raw linseed oil, and white lead, wholesale prices, by years, 1913 to 1931 (1913=100)*<sup>1</sup>

Year	Lumber price rels. <sup>2</sup>	Yellow pine boards No. 2 common		Linseed oil, raw, New York		White lead, carbonate of, in oil, New York	
		Av. price per 1,000	Price relatives	Av. price per lb.	Price relatives	Av. price per lb.	Price relatives
1913	100	\$12.73	100	\$0.062	100	\$0.068	100
1914	83	11.22	88	.067	108	.068	100
1915	90	11.85	93	.075	121	.070	103
1916	102	14.62	115	.100	161	.093	137
1917	134	21.48	169	.148	239	.112	165
1918	155	26.00	204	.213	344	.127	187
1919	209	32.12	252	.236	381	.131	193
1920	221	37.20	292	.195	315	.152	224
1921	165	16.75	132	.093	150	.127	187
1922	184	21.61	170	.113	182	.120	176
1923	207	23.62	186	.132	213	.120	176
1924	184	22.68	178	.131	211	.148	218
1925	186	22.65	178	.139	224	.156	229
1926	185	22.31	175	.112	181	.152	224
1927	171	20.71	163	.105	169	.140	206
1928	167	22.48	177	.100	161	.133	196
1929	173	22.00	173	.123	198	.138	203
1930	158	.....	.....	.110	177	.139	204
1931	129	.....	.....	.084	135	.133	196
1932	108	.....	.....	.....	.....	.....	.....
1933	131	.....	.....	.....	.....	.....	.....

<sup>1</sup> Bulletin of the Bureau of Labor Statistics, U. S. Department of Labor: years 1913-28 (No. 494) pp. 15-19, 130, 175-180; 1929 (No. 521) pp. 44-51, 60-61; 1930 (No. 543) pp. 57-63, 70-72; 1931 (No. 572) pp. 44-50, 62-63.

<sup>2</sup> Years 1929-33, Monthly Labor Review, Vol. XXVIII, No. 2, p. 475.

The high price of nearly all kinds of building materials used by Nebraska farmers placed them under a serious handicap. The index of Nebraska farm products ranged from as low as 108 to as high as 150 per cent of pre-war during the 10 years beginning with 1921 and dropped to 58 in 1932. Thousands of farmers who wished to modernize their homes and provide better shelter for their livestock were unable to carry out their plans. The men who built paid a high price for their improvements as measured in terms of farm products.

**Farm and home supplies.**—Leather goods of all kinds rose in price from 1913 to 1920 and remained relatively high following the deflation of 1920-21. The rise was particularly rapid from 1917 to 1920. This was in part the result of the unusual demand for leather created by the war. Price indices for harness, boots and shoes, and gloves are given in Table 7.

A comparison of Columns 2, 3, and 4 of Table 7 with Column 4 of Table 5 shows that in every year the price indices

of the leather products given in Table 7 were higher than the price index for hides and leather products. The explanation for this apparent inconsistency is that during a part of this period, hides were unusually cheap. For example, in 1922 when the price relative of boots and shoes was 180, the price relative of No. 1 country calfskin at Chicago was 85.<sup>3</sup> The price relative of harness in 1924 was 228, and the price relative of packer's heavy native hides at Chicago was 80.<sup>4</sup> The price of gloves remained at 250 per cent of the 1913 price from 1921 to 1931. During this period, hide prices were far from steady and were below pre-war part of the time. Glove prices were apparently stabilized and not in the interest of either the men who produced the hides or those who wore the gloves.

Farmers of necessity use more leather goods than persons in many other industries. The maintenance of high prices for shoes, harness, and gloves during a period when the price of farm products was but little above pre-war decreased the volume of other goods that farmers could purchase.

Price relatives for union suits are given in Table 7, Column 6. The average of the price relatives for the 11-year period, 1921 to 1931, was 287. The average of the index numbers of Nebraska farm products during this same period was only 126. The price relative of calico (Column 8) was higher than the price index of farm products, but not as far out of line as the price index of union suits.

Bleached lonsdale, a well-known brand of muslin, increased from an average price of 8.2 cents per yard in 1913 to 34.4 cents in 1920. It remained at approximately double pre-war levels until 1931.

Ordinary carpenter's hammers were more than double the pre-war price from 1918 to 1929, inclusive.<sup>5</sup> Files did not reach double pre-war during the inflation period.<sup>6</sup> The high price did not come until 1925. The price index remained at 189 per cent of the 1913 base from 1925 to 1931, inclusive.

Sugar was one of the foods which showed an unusually large price increase during inflation. The average retail price increased from 5.5 cents per pound in 1913 to 19.4 cents in 1920, and during a part of 1920 it retailed at 30 cents or more per pound in Nebraska and other states in the Middle-west. The price dropped very rapidly in the latter part of 1920, but remained materially higher than pre-war for sev-

<sup>3</sup> Statistical Abstract of the United States, 1924, p. 304.

<sup>4</sup> *Ibid.*, 1924, p. 304.

<sup>5</sup> Bureau of Labor Statistics, U. S. Department of Labor, Bul. No. 494, p. 142; No. 512, pp. 54 and 55; No. 521, pp. 58 and 59; No. 572, pp. 86, 152, and 153.

<sup>6</sup> *Ibid.*

TABLE 7.—*Wholesale price relatives of selected commodities purchased by Nebraska farmers, and prices for leather gloves and calico, by years, 1913 to 1933 (1913=100)*<sup>1</sup>

Year	Harness price relatives	Boots and shoes, price relatives	Leather gloves		Union suits, price relatives	Calico	
			Price per doz. pairs	Price relatives		Price per yd.	Price relatives
1913	100.0	100.0	\$13.50	100.0	100.0	\$0.051	100.0
1914	101.9	103.3	13.50	100.0	100.0	.049	96.1
1915	109.1	107.5	16.50	122.0	100.0	.049	96.1
1916	115.6	126.7	21.00	155.6	110.8	.064	125.5
1917	158.3	167.9	27.00	200.0	163.8	.094	184.3
1918	174.5	179.3	30.00	222.2	239.6	.160	313.7
1919	279.3	247.0	36.66	271.6	239.6	.152	298.0
1920	308.8	277.2	39.48	292.4	470.9	.144	282.4
1921	246.0	204.6	33.84	250.7	262.0	.088	172.5
1922	231.1	180.0	33.84	250.7	284.5	.087	170.6
1923	227.8	181.8	33.84	250.7	299.6	.100	196.1
1924	227.8	180.5	33.84	250.7	307.1	.098	192.2
1925	220.6	184.4	33.84	250.7	309.6	.093	182.4
1926	217.3	183.5	33.84	250.7	309.6	.083	162.7
1927	228.0	187.2	33.84	250.7	281.4	.085	166.7
1928	245.2	201.6	33.84	250.7	279.5	.092	180.4
1929	236.0	195.2	33.84	250.7	288.8	.093	182.4
1930	229.9	187.0	33.84	250.7	288.8	.....	.....
1931	191.5	171.9	33.84	250.7	250.1	.....	.....
1932	.....	158.0	.....	.....	.....	.....	.....
1933	.....	165.5	.....	.....	.....	.....	.....

<sup>1</sup> Bulletin of the U. S. Bureau of Labor Statistics: years 1913-28 (No. 494) pp. 11, 108-130; 1929 (No. 521) pp. 24 and 25, 44-59; 1930 (No. 543) pp. 57-65; 1931 (No. 572) pp. 36-49. For the years 1929-33, Monthly Labor Review. Vol. XXXVIII, No. 2, p. 475.

eral years. In the early months of 1934 it was lower than in 1913.

The prices of a few commodities remained relatively stable through the inflation period. The price of phenol increased but little and the price of crude rubber was lower throughout the war than from 1910 to 1913.

**Iron and steel on the farm.**—The use of iron and steel in the manufacture of farm equipment has increased very materially during the past 20 years. Steel and iron prices are, therefore, of direct interest to Nebraska farmers. The prices and price relatives of barbed wire, wrought iron pipe, and mortise locks are given in Table 8.

The price relative of barbed wire is more nearly in line with the price index of farm products than the price index of either wrought iron pipes or mortise locks. It is somewhat surprising to find that the price of some products remained at from 200 to 300 per cent of pre-war throughout the period 1921 to 1931.

The prices quoted for barbed wire and wrought iron are wholesale prices at Pittsburgh. The price relative of post-war

retail prices in Nebraska is unquestionably higher because of the increase in freight rates and increased handling charges. Mortise locks at retail are also relatively higher than mortise locks at wholesale. Nebraska farmers buy at retail and are therefore affected by the failure of iron and steel products to fall in price as rapidly as farm products.

TABLE 8.—*Prices and price relatives of barbed wire, wrought iron pipe, and common mortise locks—1914=100 for barbed wire and 1913=100 for wrought iron pipe and mortise locks*<sup>1</sup>

Year	Barbed wire		Wrought-iron pipe 1½ to 2 inch <sup>2</sup>		Mortise locks, N. Y. (wholesale) <sup>3</sup>	
	Price per cwt., Pittsburgh	Price relatives	Price per ton, Pittsburgh	Price relatives	Price per lock	Price relatives
1913	.....	.....	\$50.65	100	\$0.120	100
1914	\$2.00	100	51.30	101	.120	100
1915	1.95	98	52.88	104	.128	107
1916	2.95	148	70.67	140	.210	175
1917	3.85	193	110.24	218	.321	268
1918	3.95	198	122.27	241	.365	304
1919	4.35	218	111.65	220	.373	311
1920	4.45	223	119.16	235	.477	393
1921	4.10	205	116.55	230	.363	303
1922	3.15	158	107.50	212	.332	277
1923	3.45	173	129.67	256	.360	300
1924	3.80	190	131.10	259	.385	321
1925	3.53	177	128.37	253	.348	290
1926	3.35	168	127.82	252	.333	278
1927	3.35	168	127.82	252	.327	273
1928	3.25	163	127.82	252	.350	292
1929	3.30	165	118.56	234	.381	318
1930	3.05	153	118.56	234	.286	238
1931	2.55	128	118.56	234	.243	203
1932	2.60	130	116.71	230	.....	.....

<sup>1</sup> The Iron Age, various numbers from 1914 to 1933.

<sup>2</sup> *Ibid.*

<sup>3</sup> Bureau of Labor Statistics, U. S. Department of Labor; Bulletin No. 494, p. 142; No. 512, pp. 54 and 55; No. 521, pp. 58 and 59; No. 572, pp. 86, 152, and 153.

### Steel rails, Portland cement, window glass, and coal.—

The average yearly prices at which four important commodities sold at wholesale are given in Table 9. Farmers do not buy steel rails. They are, nevertheless, interested in the price of steel rails, because of their influence on transportation costs.

The price of steel rails was \$28 per ton for many years preceding 1914, when it was increased to \$30 per ton. They reached a peak of \$57 or 201 per cent of pre-war in 1918. They were \$40.75 in 1922, increased to \$43 per ton in 1923, and remained at that price until 1932, when there was a slight decrease. It is difficult to understand why one product should remain at a fixed price for many years when condi-

TABLE 9.—Prices and price relatives of steel rails, Portland cement, window glass, and coal for household use for the years 1910 to 1932—for steel rails and Portland cement, 1910-14=100; for window glass, 1910, 1911, 1913, and 1914=100; for coal, 1913-14=100

Year	Steel rails		Portland cement		Window glass		Coal for household use	
	Price per ton <sup>1</sup>	Price relatives	Price per barrel <sup>2</sup>	Price relatives	Price of 50 sq. ft. <sup>3</sup>	Price relatives	Price at Omaha <sup>4</sup> per ton	Price relatives
1910	\$28.00	99	\$1.45	96	\$2.93	122	.....	.....
1911	28.00	99	1.46	97	2.25	94	.....	.....
1912	28.00	99	1.49	99	.....	.....	.....	.....
1913	28.00	99	1.58	104	2.22	93	6.62	104
1914	30.00	106	1.58	104	2.17	91	6.12	96
1915	30.00	106	1.34	88	2.42	101	6.08	95
1916	34.00	120	1.67	110	2.56	107	6.04	95
1917	40.00	141	2.12	140	3.42	143	7.86	123
1918	57.00	201	2.60	172	5.70	238	7.95	124
1919	49.29	174	3.25	215	6.20	259	8.47	132
1920	54.42	192	2.04	135	6.56	274	10.11	158
1921	45.69	161	1.93	128	5.61	235	13.70	215
1922	40.75	143	1.80	119	3.52	147	11.86	186
1923	43.00	152	1.88	124	3.61	151	11.94	187
1924	43.00	152	1.84	122	3.46	145	10.17	160
1925	43.00	152	1.79	118	3.10	130	10.04	157
1926	43.00	152	1.74	115	3.11	130	10.33	162
1927	43.00	152	1.69	112	2.98	125	10.19	159
1928	43.00	152	1.67	110	3.08	129	10.26	161
1929	43.00	152	1.60	106	3.42	143	9.50	149
1930	43.00	152	1.60	106	3.42	143	9.69	152
1931	43.00	152	1.39	92	2.07	87	9.68	151
1932	42.38	150	1.36	90	2.15	90	8.77	138

<sup>1</sup> Statistical Abstract of the United States: 1931, p. 784; 1932, p. 302; 1933, p. 283.

<sup>2</sup> Years 1910 and 1911, Bulletin of the Bureau of Labor, No. 99, p. 644; 1912, Statistical Abstract of the United States, 1914, p. 496; years 1913 to 1919, *ibid.*, 1920, p. 575; years 1920 to 1924, *ibid.*, 1924, p. 306; years 1925 to 1930, *ibid.*, 1931, p. 338; year 1931, *ibid.*, 1932, p. 303; and year 1932, *ibid.*, 1933, p. 284.

<sup>3</sup> Years 1910 and 1911, Bulletin of Bureau of Labor, No. 99, p. 649; years 1913 to 1919, Statistical Abstract of United States, 1920, p. 575; years 1920 to 1924, *ibid.*, 1924, p. 306; years 1925 to 1930, *ibid.*, 1931, p. 338; year 1931, *ibid.*, 1932, p. 303; and year 1932, *ibid.*, 1933, p. 284.

<sup>4</sup> Years 1913 to 1919, Monthly Labor Review, Vol. IX, No. 3, p. 84; year 1920, *ibid.*, XII, No. 2, p. 40; years 1921 and 1922, *ibid.*, XVI, No. 2, p. 88; year 1923, *ibid.*, XX, No. 2, p. 40; years 1924 and 1925, *ibid.*, XXII, No. 2, p. 34; year 1926, *ibid.*, XXIV, No. 3, p. 144; years 1927 and 1928, *ibid.*, XXVIII, No. 2, p. 164; year 1929, *ibid.*, XXXII, No. 2, p. 199; years 1930 and 1931, *ibid.*, p. 288; years 1932 and 1933, *ibid.*, XXXVI, No. 3, p. 693.

tions of demand, supply, and labor costs are changing, unless the price fixed represents a monopoly price.

Cement reached a high point in 1919, but by the close of 1931 had fallen to less than the pre-war average.

The price of window glass rose to 274 per cent of pre-war in 1920. It dropped to 235 per cent of pre-war in 1921, to 147 per cent in 1922, and ranged from as low as 125 per cent to as high as 151 per cent of pre-war from 1923 to 1930. It fell below the pre-war level in 1931. Very important improve-



ments have been made in the method of manufacturing window glass since the pre-war base years.

The peak of coal prices at Omaha and other places in Nebraska was not reached until 1921. This was probably due to the fact that there was not a large increase in freight rates until the latter half of 1920. Omaha coal prices were from 49 per cent to 87 per cent above pre-war from 1922 to 1931. They dropped to 38 per cent above pre-war in 1932 and to 31 per cent above in 1933. During the period many improvements were made in coal mining which reduced the amount of man labor required.

**Summary.**—The commodities for which prices are given in this chapter are representative of the many commodities that Nebraska farmers purchase. It must also be remembered that farmers have an indirect as well as a direct interest in the price of many commodities. Portland cement, for example, is used for highway construction and in the building of factories and warehouses. The cost of coal enters into the price which farmers pay for every article which is transported by rail and probably into the cost of every manufactured product. Nebraska farmers have been affected by the changes in the prices of hundreds of commodities during inflation and deflation. The prices of nearly all goods purchased by Nebraska farmers remained relatively higher during and following the deflation of 1920-21 than did the prices of farm products. This decreased the purchasing power of farmers and was the primary cause of the prolonged agricultural depression.

**CHAPTER IV—PRICES AND PURCHASING POWER OF  
NEBRASKA FARM PRODUCTS, 1914 TO 1932**

The wholesale price index of farm products rose from 110 in June, 1916, to 220 in September, 1918. It stood at 232 in December, 1918. The price index of commodities purchased by farmers rose more slowly than the price index of farm products during 1916, 1917, and 1918, but rose rapidly during 1919 and the early months of 1920. Because of this rapid increase in the price of other commodities, farm products were back to pre-war purchasing power even before deflation began in the summer of 1920. Yearly index numbers of the various groups are given in Table 5.

**Some prices lag.**—Prices of manufactured goods, if produced under conditions of free competition, ordinarily lag behind the prices of raw materials in periods of inflation and deflation. The price of raw materials is only a part, and sometimes only a relatively small part, of the retail price of the finished product. Wages, interest on invested capital, and rent are other items which enter into the costs of transportation agencies, manufacturers, wholesalers, and retailers. Wages usually lag behind the price of raw materials. The lag was noticeable during the war-time and post-war inflation, and during the deflation periods of 1920 to 1921 and 1930 to 1932. The capital investment in buildings increased but slowly during the early part of the inflation period. Land rent also increased slowly. The cost of building materials fell rapidly during 1921, but wages in the building trades remained high. Rents came down slowly and transportation costs were higher from 1921 to 1932 than during the years of rapid inflation.

**Wheat, wheat flour, and bread.**—The relationship which exists between the rise in the prices of raw materials and manufactured goods during inflation and the fall of prices during deflation is easily illustrated by giving the prices at which some raw material sold from 1910 to 1932 and the prices at which some product manufactured from the raw material sold during the same period. Wheat and wheat flour are good commodities to use, since the flour is made entirely from the wheat, and contains a large proportion, about 70 per cent, of the wheat berry; and the manufacturing process is not particularly expensive. Bread is a fairly satisfactory commodity to compare with wheat, although bread contains other ingredients than wheat flour. Statistics for wheat, wheat flour, and bread are given in Table 10.

In the five-year period, 1910 to 1914, the average price of wheat at Nebraska shipping points was 81 cents per bushel;

TABLE 10.—*Local prices of wheat in Nebraska; price relatives of wheat, wheat flour, and bread; and purchasing power of wheat when used for buying wheat flour, bread, and commodities usually purchased by farmers—(1910-14=100, except that for bread, which is 1913-14=100)*

Year	Wheat		Price relatives <sup>3</sup>		Purchasing power of wheat in buying		Index nos. of prices paid by farmers <sup>4</sup>	Purchasing power of Nebr. wheat
	Price <sup>1</sup>	Price relatives <sup>2</sup>	Flour	Bread	Flour	Bread		
1910	\$0.87	107	102	.....	105	.....	98	109
1911	.80	99	97	.....	102	.....	102	97
1912	.85	104	109	.....	95	.....	99	105
1913	.73	90	94	94	96	96	101	89
1914	.80	99	98	106	101	93	100	99
1915	1.08	133	119	117	112	114	105	127
1916	1.14	141	127	123	111	115	124	114
1917	2.06	254	199	155	128	164	149	175
1918	1.98	244	192	165	127	148	175	139
1919	2.05	253	206	169	122	150	200	126
1920	2.09	258	232	194	111	133	194	133
1921	1.07	132	166	167	80	79	150	88
1922	.97	120	146	147	82	82	146	82
1923	.90	111	134	147	83	76	149	74
1924	1.00	123	140	148	88	83	150	82
1925	1.44	177	174	158	102	112	154	115
1926	1.31	162	172	158	94	103	153	106
1927	1.15	142	157	157	90	90	151	94
1928	1.07	132	154	153	85	85	153	96
1929	.97	120	146	152	82	79	152	79
1930	.74	91	134	147	68	62	144	63
1931	.44	54	103	123	52	42	124	44
1932	.33	41	91	114	45	36	107	38

<sup>1</sup> H. C. Filley and A. M. Hauke, Local Prices of Farm Products in Nebraska, 1895-1932, Nebr. Exp. Sta. Bul. 284, p. 13.

<sup>2</sup> *Ibid.*, p. 24.

<sup>3</sup> Monthly Labor Review, Vol. XII, No. 2, p. 19; XXIX, No. 5, p. 153; XXXVI, No. 2, p. 411.

<sup>4</sup> The Agricultural Situation, U. S. Department of Agriculture, Vol. XVII, No. 11, p. 20.

the average price in 1920 was \$2.09 per bushel, and in June of that year the average price was \$2.46. The price dropped rapidly during the major part of 1921, falling to 82 cents a bushel in November, which was only one cent above the average 1910-14 price. It rose in 1924 and averaged \$1.00 or more per bushel from August, 1924, to July, 1928. The average price in 1925 was \$1.44. Wheat was low in price during the later months of 1930, and continued low throughout 1931, 1932, and the early months of 1933. The average shipping-point price in December, 1932, was only 27 cents, and the average for the year was only 33 cents.

The price relatives of wheat for the years 1910 to 1932, using the average price for the years 1910 to 1914 as a base,

are given in Column 3 of Table 10. Price relatives for flour are given in Column 4 and for bread in Column 5. In computing the price relatives for bread, the average price for only two years, 1913 and 1914, is used, because average bread prices for the years 1910, 1911, and 1912 are not given by the Bureau of Labor Statistics.

A comparison of the price relatives of wheat, wheat flour, and bread shows clearly that during the early part of the inflation period the price of wheat rose more rapidly than the price of flour, and the price of flour rose more rapidly than the price of bread. During deflation the price of wheat fell more rapidly than the price of flour, and the price of flour fell more rapidly than the price of bread.

**Purchasing power.**—If the price relative of one commodity for a given year is divided by the price relative of another commodity for the same year, the quotient is the relative amount of the commodity used as the divisor that can be purchased by a given amount of that commodity used as a dividend compared with the amount that could be purchased in the base period. In order to determine the relative amount of wheat flour that could be purchased with a bushel of wheat in 1932, for example, compared with the amount that could be purchased in 1910 to 1914, the price relative of wheat is divided by the price relative of flour. The price relative of wheat was 41, and the price relative of flour was 91. The purchasing power of wheat for wheat flour in 1932 was, therefore, 45 per cent of the five pre-war years (41 divided by 91=.45 or 45 per cent).

The relative amounts of wheat flour which could have been purchased with a bushel of wheat (1910-14 base) for the years 1910 to 1932, are given in Column 6, Table 10. Similar data are given for bread in Column 7 except that, as has been previously explained, only a two-year base was used for bread.

During the years when the price of wheat rose more rapidly than the price of flour, a bushel of wheat would buy more flour than during the preceding years. This happened in 1914, 1915, 1917, and 1918. Wheat did not reach its maximum price until 1920, but since the price of flour rose more during the year than did the price of wheat, the amount of flour that a bushel of wheat would purchase declined. In only one year (1925) from 1921 to 1932 could as much flour be purchased with a bushel of wheat as could be purchased on the average during the five base years. The low point for the period was reached in 1932 when only 45 per cent as much flour could be purchased.

Since bread rose in price more gradually from 1914 to 1917 than did wheat, the amount which a bushel of wheat would purchase increased. This is clearly indicated in Column 7. The price of bread declined much more slowly during deflation than did the price of wheat. In 1931 a bushel of wheat at Nebraska shipping points would purchase 42 per cent as much bread as in 1913 and 1914, and in 1932 only 30 per cent as much.

Nebraska farmers are usually more interested in buying farm machinery, clothing, house furnishings, building materials, and a hundred other articles with the money that they receive from the sale of wheat, than in buying either flour or bread. The index of prices paid by farmers for commodities used in living and production which is given in Table 4, Column 4, is repeated in Table 10, Column 8. The base period used in this index, August, 1909, to July, 1914, differs slightly from the 1910-14 base used in preparing the price relatives used in Columns 3, 4, and 5 of Table 10 and used also as a base in preparing most of the other price relatives and index numbers used in this study. Since prices were not identical in the last five months of 1909 with the last five months of 1914, the index numbers prepared by the Bureau of Agricultural Economics differ slightly from index numbers of the same group of commodities on the 1910-14 base. The prices used by the Bureau were the average prices in the United States. Prices actually paid by Nebraska farmers doubtless varied somewhat from these national averages.

In order to determine the purchasing power of wheat for any year, it is necessary to divide the price relative of wheat for that year by the index number of the commodities purchased by farmers. The results obtained by this division are given in Column 9. Because of the two discrepancies that have been mentioned, it is evident that the actual purchasing power of the wheat sold by Nebraska farmers doubtless differed somewhat from the figures presented in the table. They are given because it is probable that they are the most nearly accurate figures available, and not because they are absolutely accurate.

The average purchasing power of wheat for the years 1910 to 1914 was 100. Because the price of wheat rose more rapidly from 1914 to 1917 than the prices of the commodities purchased by farmers, the purchasing power of the wheat rose. It reached the high point of 175 in 1917. Wheat averaged higher in 1920 than in any other year, but the purchasing power was less than in either 1917 or 1918 because of the rise in the price of commodities purchased. The purchasing power of wheat was only 74 per cent of the five pre-war

years in 1923. It increased to 115 in 1925, and with the exception of 1928 it fell each year from 1926 to 1932 to a point lower than the average of the preceding year. In 1932 the purchasing power was only 38 per cent of the pre-war average.

**Corn and cornmeal.**—The spread between the price of corn and the price of cornmeal was even wider during a part of the deflation period than the spread between wheat and flour. Prices are given in Table 11.

During the period of inflation a bushel of corn would purchase more cornmeal than during the base period. The price of corn started to fall in midsummer, 1920. In no year from 1920 to 1932 would a bushel of corn purchase as much corn-

TABLE 11.—*Local prices of corn in Nebraska, average retail price of corn meal, price relatives of corn and corn meal, the relative amount of corn meal which could be purchased with a bushel of corn, price index of goods purchased by farmers, and purchasing power of corn by years, 1910 to 1932—(1910-14=100)*

Year	Local price of corn per bushel <sup>1</sup>	Price relatives of corn <sup>2</sup>	Retail price of corn meal per pound <sup>3</sup>	Price relatives of corn meal	Rel. amt. of corn meal purchased with a bu. of corn	Index nos. of prices paid by farmers <sup>4</sup>	Purchasing power of corn
1910	\$0.48	88	\$0.028	96	91	98	90
1911	.47	86	.028	94	91	102	84
1912	.60	110	.031	103	107	99	111
1913	.55	101	.030	101	100	101	100
1914	.63	115	.032	106	108	100	115
1915	.61	112	.033	109	103	105	107
1916	.66	121	.034	114	106	124	98
1917	1.34	245	.058	194	126	149	164
1918	1.38	253	.068	229	110	175	145
1919	1.44	264	.064	215	123	200	132
1920	1.16	212	.065	218	97	194	109
1921	.34	62	.045	151	41	150	41
1922	.44	81	.039	131	62	146	55
1923	.65	119	.041	138	86	149	80
1924	.76	139	.047	158	88	150	93
1925	.89	163	.054	181	90	154	106
1926	.64	117	.051	171	68	153	76
1927	.74	135	.052	175	77	151	89
1928	.78	143	.053	178	80	153	93
1929	.77	141	.053	178	79	152	93
1930	.65	119	.053	178	67	144	83
1931	.39	71	.046	155	46	124	57
1932	.24	44	.038	128	34	107	41

<sup>1</sup> H. C. Filley and A. M. Hauke, *Local Prices of Farm Products in Nebraska*, Nebr. Exp. Sta. Bul. 284, p. 16.

<sup>2</sup> *Ibid.*, p. 26.

<sup>3</sup> Years 1913 to 1919, *Monthly Labor Review*, Vol. XI, No. 4, p. 31; 1920 to 1927, *ibid.*, XXVI, No. 2, p. 170; 1928 to 1932, *ibid.*, XXXVI, No. 3, p. 688.

<sup>4</sup> *The Agricultural Situation*, U. S. Department of Agriculture, XVII, No. 11, p. 20.

meal as in the five years preceding the war; in 1931 it would purchase less than half as much cornmeal and in 1932 only a little more than one-third as much as in 1910 to 1914. The explanation for this wide divergence in recent years is the same as for the wide divergence between the price of wheat and the price of products manufactured from wheat.

The purchasing power of corn for commodities purchased by farmers reached a maximum of 164 in 1917. It fell to 41 in 1921 and rose to 106 in 1925. It fell rapidly in 1931 and 1932, averaging only 41 in the latter year.

**Dairy cows and dairy products.**—The price of dairy cows depends primarily on the margin between the price received for dairy products and the cost of production. If the cost of feed, labor, shelter, and all other items entering into the cost of producing milk, except the cost of the cow (interest on capital invested in cow and depreciation), remained stationary, the value of cows would change very quickly whenever there was a change in the price of milk.

Because of these other costs the effect of a change in the price of milk upon the price of cows is not always particularly noticeable. Then, too, there is a lag between the time when the product falls in price and the time when the owners of cows decide that the lower price is likely to continue, and as a result are willing to sell their cows for less. Yearly changes in the price of dairy cows and some of the more important dairy products are given in Table 12.

Most city consumers voice more strenuous objections to a rise in the price of milk than to a rise in the price of almost any other commodity. Strange as it may seem, they have almost always objected more vigorously to a rise that increased the gross return to the producer than to a rise that increased the gross return to the distributor. There has apparently been a failure to realize that when wages, feed cost, and the cost of equipment rise, the cost of producing milk necessarily rises. The city press has been prone to express concern over an increase in the price of milk, even at a time when wages, clothing, building materials, and various other commodities are rising even faster.

As a result of effective consumer resistance, the average retail price of milk (Table 12, Column 4) was only 4 per cent higher in 1916 than the average of the five-year period, 1910 to 1914. The Food Administration also attempted to hold down the price of milk, and succeeded so well that in 1917 it averaged only 28 per cent higher and in 1918 only 60 per cent higher than during the base period. This was a small increase compared with the increase in the cost of the labor and feed entering into milk production.

TABLE 12.—*Farm values of dairy cows in the United States and price relatives; price relatives of milk at retail; local prices paid producers for butter and butterfat in Nebraska and price relatives; average retail price of butter in the United States and margin between local price paid farmers for butter and butterfat; average retail price of butter; and purchasing power of butter and butterfat, 1910 to 1932—price relatives on 1910-14 base*

Year	Dairy cows		Price relatives of milk at retail <sup>2</sup>	Butter and butterfat, local price <sup>3</sup>		Av. butter price at retail <sup>4</sup>	Margin <sup>5</sup>	Purchasing power, butter and butterfat
	Price <sup>1</sup>	Price relatives		Price	Price relatives			
1910	\$33.70	83	97	\$0.24	104	\$0.37	\$0.13	106
1911	38.17	94	98	.19	83	.34	.15	81
1912	37.62	92	99	.24	104	.38	.14	105
1913	42.99	105	102	.25	109	.38	.13	108
1914	51.51	126	102	.23	100	.36	.13	100
1915	52.84	130	101	.24	104	.36	.12	99
1916	51.49	126	104	.28	123	.39	.11	99
1917	56.95	140	128	.37	161	.49	.12	108
1918	67.37	165	160	.45	197	.58	.13	113
1919	74.68	183	178	.58	252	.68	.10	126
1920	81.51	200	202	.53	231	.70	.17	119
1921	61.20	150	168	.32	141	.52	.20	94
1922	48.69	119	158	.28	125	.48	.20	86
1923	48.68	119	159	.39	172	.55	.16	116
1924	49.94	122	161	.35	154	.52	.17	103
1925	48.38	119	161	.36	158	.55	.19	103
1926	54.73	134	162	.37	161	.53	.16	105
1927	59.24	145	164	.40	175	.56	.16	116
1928	73.47	180	165	.43	188	.56	.13	123
1929	83.99	206	165	.42	183	.55	.13	120
1930	82.80	203	161	.31	135	.46	.15	94
1931	57.11	140	142	.22	97	.35	.13	78
1932	39.61	97	126	.16	69	.27	.11	64

<sup>1</sup> Value per head on January 1. Yearbook of Agriculture, 1932, p. 825.

<sup>2</sup> Price relatives computed from prices published in Monthly Labor Review: years 1910 to 1919, Vol. XI, No. 3, p. 73; 1920 to 1927, XXVI, No. 2, p. 171; years 1928 to 1932, XXXVI, No. 3, p. 686.

<sup>3</sup> H. C. Filley and A. M. Hauke, Local Prices of Farm Products in Nebraska, 1895-1932, Nebr. Exp. Sta. Bul. 284, pp. 20 and 32.

<sup>4</sup> Monthly Labor Review, years 1913 to 1919, Vol. XI, No. 3, p. 30; years 1920 to 1927, XXVI, No. 2, p. 169; years 1928 to 1932, XXXVI, No. 3, p. 687.

<sup>5</sup> Margin between price paid producers for butter and butterfat and average retail price of butter.

Because of the low price, milk production was not profitable, and as a result many farmers decreased the size of their dairy herds. The war ended, the Food Administration relinquished its control, and the price of milk increased to an average of 178 per cent of pre-war in 1919, and 202.5 per cent in 1920. Even after these increases, milk production was not particularly profitable, because the cost of feed and labor had risen even more than had the price of milk on the farm.



Because the supply of milk was relatively short, and also because the costs of handling the milk after it left the farm decreased but little, the retail price of milk fell relatively less in 1920 than the prices of many other products. The consumption of milk as a beverage and also the consumption of butter and ice cream increased from 1921 to 1929. This was due in part to the very great decrease in the use of beer and other alcoholic beverages, to some extent to a better knowledge of the food value of milk, and to various other minor factors. Because of these various forces, milk prices remained comparatively stable from 1921 to 1930.

Column 5 of Table 12 gives the average price paid producers for country butter in Nebraska in the years 1910 to 1919, and the average local price of butterfat for the years 1920 to 1932. The reason for presenting the quotations for these two closely related commodities in one table is that statistics are not available for either for the entire period. During the early days no quotations were published for butterfat, and during the later years local prices for country butter are not available. For a few years it is possible to obtain prices for the two commodities, and for these years the price quotations are surprisingly close together.

The prices paid farmers for butter and butterfat rose somewhat more rapidly from 1916 to 1920 than did the retail price of milk. This was doubtless due in part to the fact that there was less organized resistance to an increase in the price of butter. Butter dropped more in price in 1919 than did milk. It was easier to do without it or to purchase a substitute. The price that farmers received for butter and butterfat from 1910 to 1932 was far less stable than the retail price of milk, as can easily be seen by comparing Column 4 with Column 6 of Table 12.

The price of dairy cows rose during the war. This was due in part to the rise in the price of beef. The 1920 price relative of dairy cows was not as high as the price relative of either butterfat (local prices) or milk at retail. The price of cows dropped in 1921 and 1922 because of the drop in the price of butterfat, milk, and beef.

Most farm products were relatively lower in price than manufactured goods from 1921 to 1930, and went lower during 1931 and 1932. Dairy products did not fall as much in price as most other farm products. As a result there was a continued demand for dairy cows, which resulted in a price increase from 1925 to 1929; the price was maintained at more than double the pre-war level in 1930. The profits from the production and sale of whole milk and butterfat were not

remarkably large during this period, but they were larger than those received from most other farm products.

The price paid farmers for butterfat during the period was governed very largely by the price which consumers were willing to pay for butter and by the variation in the margin between producer and consumer. The average yearly margin varied materially from year to year. From 1910 to 1919 the lowest margin was 10 cents per pound (1919) and the largest was 15 cents (1911). The margin rose to 17 cents in 1920 and averaged 20 cents during the unsettled conditions of 1921 and 1922. The margin did not fall below 13 cents until 1932. As a matter of course the spread in cents per pound is not the total spread, since a pound of creamery butter ordinarily contains only about 82 per cent of a pound of butterfat. The average retail price of butter is given in Column 7, and the margin between the local price of butterfat and the retail price of butter in Column 8 of Table 12.

The purchasing power of butter and butterfat for goods purchased by farmers is given in Column 9. Because of the efforts of the Food Administration and the resistance of consumers to an increase in the price of butter, the purchasing power of butterfat was less during the war-time and post-war boom than the purchasing power of most other farm products. For reasons which have already been discussed the purchasing power of butterfat was higher than the purchasing power of most other farm products from 1921 to 1930. It dropped to 64 per cent of the base period in 1932, and was even lower during 1933. The legalizing of beer decreased the consumption of milk, and as a result butter production has increased.

**Cattle and beef prices.**—The price which consumers will pay for beef at any given time depends primarily upon demand and supply. The demand for beef is influenced by the supply of other meats, economic conditions, and various other factors. The price is also influenced by the general price level. The price of fat cattle is largely dependent upon the price which the packer thinks that he can obtain for the slaughtered carcasses and the by-products; the price of feeder cattle depends primarily upon the price which the cattle feeder thinks he can get for the cattle after they have been fattened. When beef is high, feeder steers are high. High-priced steers are not necessarily followed by high-priced beef. Price relatives for beef steers and two popular cuts of beef are given in Table 13.

The price of beef rose from 1910 to 1920. The retail price of rib roasts in 1920 was 180 per cent and the price of sirloin steak 190 per cent of the price in pre-war years. The

TABLE 13.—*Price relatives of feeder steers (top prices) and beef steers (top prices) at Omaha, and relatives of average prices of rib roast and sirloin steak for the years 1910 to 1932—(1910-14=100)*

Year	Feeder steers, Omaha top <sup>1</sup>	Beef steers, Omaha top <sup>1</sup>	Rib roast average U. S. <sup>2</sup>	Sirloin steak, average U. S. <sup>2</sup>
1910.....	95	88	91	88
1911.....	78	85	91	89
1912.....	101	110	101	100
1913.....	111	102	107	110
1914.....	115	114	110	112
1915.....	112	106	108	111
1916.....	120	122	114	119
1917.....	189	178	135	137
1918.....	215	196	166	168
1919.....	219	207	176	181
1920.....	182	186	180	190
1921.....	120	122	157	168
1922.....	115	141	149	162
1923.....	136	136	154	170
1924.....	124	141	156	172
1925.....	142	162	160	176
1926.....	125	138	164	179
1927.....	164	189	169	185
1928.....	208	197	189	207
1929.....	185	176	198	217
1930.....	179	164	185	201
1931.....	130	138	156	171
1932.....	96	117	130	144

<sup>1</sup> Price relatives computed from prices published in Omaha Daily Journal-Stockman, Nov. 1, 1933.

<sup>2</sup> Price relatives computed from prices published in Monthly Labor Review: years 1910 to 1919, Vol. XIII, No. 3, p. 27; 1920 to 1929, XXIX, No. 3, p. 226; 1930 to 1932, XXXVI, No. 3, p. 685.

percentage increase of the price of both feeder steers and beef steers from 1900 to 1919 was greater than the percentage increase in the price of roasts and steaks. One reason for this was that processing and other handling charges increased more slowly during this period than did the demand for meat. Meat prices were higher in 1920 than in 1919, but cattle prices were lower because the cost of handling meat rose very rapidly during 1919 and 1920. These costs have remained relatively high since 1920, and as a result the price relatives of rib roasts and sirloin steaks were higher comparatively from 1920 to 1932 than the price relatives of either feeder steers or beef steers. A single exception was in the price of feeder steers in 1928, which was carried to a high point because of the high price paid for fat cattle during the major part of 1927. Nearly all the men who bought feeder cattle at this high price and fattened them lost money on the transaction.

The price of rib roast in 1932 averaged 30 per cent higher and the price of sirloin steak 44 per cent higher than during the five pre-war years. The top price of feeder steers averaged 4 per cent lower, and the top price of beef steers 17 per cent higher. If cattle feeders had received as large a share of the beef consumer's dollar in 1932 as in 1910, they would have been relatively prosperous. The farmer was not injured by the low price which the consumer paid for meat but by the increase in costs that entered between cattle in the feed lot and meat on the butcher's block.

**Hogs and pork prices.**—The price of hogs and of all pork products was unusually high in 1910. Prices for the years 1910 to 1932 are given in Table 14. Increased production in 1911 and 1912 quite naturally resulted in lower prices. Prices rose again during the war years and reached a peak in 1918 and 1919. The price of hogs rose more rapidly during 1917, 1918, and 1919 than did the price of pork for the same reasons that beef cattle and other raw materials rose more rapidly in price than finished products. Hog prices fell rapidly during the later months of 1920, and even more rapidly in 1921. During the four-year period, 1921 to 1924, hogs averaged only one per cent higher than from 1910 to 1914, but lard averaged 17 per cent higher and pork chops 62 per cent higher. Hogs rose in price in 1925 and 1926, and remained relatively high until 1930. It is interesting to note that during this period pork chops, lard, and other pork products were much higher relatively as compared with the price of hogs than in the years before the war. During 1932 a thousand pounds of hogs, live weight, would buy only about four-fifths as much lard and only about two-fifths as much pork chops as during the base period. Hog producers were seriously handicapped during this period by the high costs of transporting, processing, and marketing hogs and pork products, since they received a smaller part of the consumers' dollar than in pre-war years.

The purchasing power of Nebraska hogs is given in Column 7 of Table 14. In 1917 and 1918 the purchasing power of hogs was larger than the average of the five pre-war years. The purchasing power of hogs was largest in 1917, 36 per cent above the base years, but hog production was not particularly profitable that year because corn and other feeds were higher relatively than hogs. In only one year from 1920 to 1932, 1926, was the purchasing power of Nebraska hogs at local shipping points as high as the average of the years 1910 to 1914. In 1923 and 1931 it was only 62 per cent and in 1932 only 40 per cent of the base period.

TABLE 14.—*Hog prices at local markets in Nebraska, price relatives for hogs and average retail prices of lard and pork chops, price index of goods purchased by farmers, and purchasing power of Nebraska hogs for the years 1910 to 1932—(1910-14=100)*

Year	Hog prices, local markets, Nebr. <sup>1</sup>	Price relatives			Index nos. of prices paid by farmers <sup>4</sup>	Purchasing power of Nebr. hogs
		Hogs, Nebr. <sup>2</sup>	Lard, retail U. S. <sup>3</sup>	Pork chops, retail U. S. <sup>3</sup>		
1910	\$8.02	112	107	97	98	114
1911	5.98	84	91	90	102	82
1912	6.76	95	97	96	99	95
1913	7.48	105	103	106	101	104
1914	7.52	105	102	111	100	105
1915	6.38	89	96	102	105	85
1916	8.50	119	114	114	124	96
1917	14.52	203	180	161	149	136
1918	16.22	227	218	197	175	130
1919	16.68	233	188	212	200	116
1920	12.62	176	192	213	194	91
1921	7.11	99	117	176	150	66
1922	8.64	112	111	166	146	77
1923	6.59	92	116	153	149	62
1924	7.13	100	124	155	150	67
1925	10.87	152	152	184	154	99
1926	11.54	161	143	199	153	105
1927	9.31	130	126	185	151	86
1928	8.56	120	121	175	153	78
1929	9.33	131	119	186	152	86
1930	8.62	121	111	181	144	84
1931	5.49	77	87	146	124	62
1932	3.07	43	58	107	107	40

<sup>1</sup> H. C. Filley and A. M. Hauke, Local Prices of Farm Products in Nebraska, 1895-1932, Nebr. Exp. Sta. Bul. 284. p. 19.

<sup>2</sup> *Ibid.*, p. 30.

<sup>3</sup> Price relatives computed from prices published in Monthly Labor Review: years 1910 to 1919, Vol. XIII, No. 3, p. 27; 1920 to 1929, XXIX, No. 3, p. 226; 1930 to 1932, XXXVI, No. 3, pp. 686 and 687.

<sup>4</sup> The Agricultural Situation, U. S. Department of Agriculture, Vol. XVII, No. 11, p. 20.

**Oats, potatoes, and eggs.**—In Table 15 are given the average yearly prices, price relatives, and purchasing power of three unrelated farm products—oats, potatoes, and eggs. They are given in the one table primarily to provide an opportunity for comparison. The prices for the commodities are the average prices paid at local shipping points in Nebraska. In Column 2 are given the price relatives for products purchased by farmers.

The average purchasing power of oats was lower each year from 1916 to 1932, than during the base years. There were a few months during this seventeen-year period, the major part being in 1918, when the purchasing power was above pre-war. Oats were not only an unprofitable crop during the major part of this period, but they lacked more of being a

profitable crop than did any of the other products for which data have been given. Oats reached their lowest level of the period in 1932.

Potatoes fluctuated more in price and purchasing power than any of the other farm products mentioned. They averaged high in purchasing power in 1917, 1920, 1926, and 1927. The low point in price and purchasing power was in 1932. The principal reason for the wider variation in potato prices

TABLE 15.—*Price index of goods purchased by farmers, and prices, price relatives, and purchasing power of oats, potatoes, and eggs by years, 1910 to 1932—(1910-14=100)*

Year	Goods purchased by farmers <sup>1</sup>	Oats <sup>2</sup>			Potatoes <sup>3</sup>			Eggs <sup>4</sup>		
		Price (dosc.)	Price relatives	Purchasing power	Price (bu.)	Price relatives	Purchasing power	Price (bu.)	Price relatives	Purchasing power
1910	98	\$0.35	96	98	\$0.74	84	86	\$0.20	106	108
1911	102	.33	91	89	1.14	129	126	.16	86	84
1912	99	.41	113	114	1.01	115	116	.19	102	103
1913	101	.35	96	95	.67	76	75	.19	101	100
1914	100	.38	104	104	.85	96	96	.20	106	106
1915	105	.40	110	105	.64	73	70	.19	101	96
1916	124	.38	105	85	1.00	114	92	.21	117	94
1917	149	.57	157	105	1.93	219	147	.31	165	111
1918	175	.69	190	109	1.25	142	81	.35	187	107
1919	200	.65	178	89	1.64	186	93	.40	213	106
1920	194	.69	189	97	2.86	324	167	.42	223	115
1921	150	.27	74	49	1.15	131	87	.27	144	96
1922	146	.29	80	54	.92	104	71	.22	117	80
1923	149	.36	99	67	.71	81	54	.23	126	85
1924	150	.42	115	77	.86	97	65	.25	133	89
1925	154	.43	118	77	1.16	132	86	.29	154	100
1926	153	.39	107	70	1.94	220	144	.27	144	94
1927	151	.43	118	78	1.49	169	114	.24	127	84
1928	153	.44	121	79	.76	86	56	.25	135	88
1929	152	.40	110	72	.82	93	61	.27	144	95
1930	144	.32	88	61	1.19	135	94	.19	103	72
1931	124	.24	66	53	.79	90	73	.14	75	60
1932	107	.17	48	43	.46	52	49	.13	67	63

<sup>1</sup> The Agricultural Situation, U. S. Department of Agriculture, Vol. XVII, No. 11, p. 20.

<sup>2</sup> H. C. Filley and A. M. Hauke, Local Prices of Farm Products in Nebraska, 1895-1932, Nebr. Exp. Sta. Bul. 284, pp. 18 and 28.

<sup>3</sup> *Ibid.*, pp. 23 and 36.

<sup>4</sup> *Ibid.*, pp. 22 and 34.

than in the prices of cereals is the greater perishability of the product. Cereals are carried over from season to season. A part of the abundant harvest of one year is used to supply the deficit caused by the short crop of some succeeding years. Potatoes cannot be carried in storage from year to year, and therefore the size of the crop is more fully reflected in the price.

The highest average annual egg price was in 1920, when the average price received by farmers was 42 cents per dozen. The price relative was 223 and the purchasing power was 115. The purchasing power of eggs did not rise as high during the war as did the purchasing power of wheat and corn. Neither did it average as low from 1921 to 1932. The low point was in 1932. The unweighted average monthly price received by Nebraska farmers was 13 cents; the price relative was 67 and the purchasing power was 63. During the months of abundant production, the purchasing power fell as low as 35 per cent of the pre-war base years.

**Effects of changes in the purchasing power of Nebraska farm products.**—When Nebraska farmers produce an abundance of corn, wheat, hogs, butterfat, and other commodities and sell them for a favorable price as compared with the price of the goods which they purchase, they are able to buy more goods of the merchants than when exchange values are unfavorable to them. Instead of buying only meager necessities they are able to buy more and better clothing and invest in new farm equipment, and many are able to enlarge or modernize their homes, thus furnishing labor to carpenters, plumbers, and other mechanics.

The dollars which come to the farmer in exchange for his products are, therefore, important not only to him but to many others. In the typical Nebraska community practically everyone—merchant, mechanic, banker, doctor, lawyer, preacher, and teacher—is dependent for his or her income upon the purchasing power of farm products.

Nebraska farmers were prosperous from the closing months of 1916 to the late spring of 1920. Crops were comparatively good, with the exception of the 1917 wheat crop, and the prices of the products which they sold were higher relatively than the prices of the goods which they purchased. Their prosperity was a material factor in the prosperity of nearly all other residents of the state.

Nebraska farmers were less prosperous from 1921 to the close of 1933 than in pre-war years. Because the price of their products fell relatively more than the prices of most commodities which they purchased, they could buy less. Their inability to buy freely eventually had an effect upon the workers in other industries. The reasons why farmers are less able to protect themselves during deflation than are persons engaged in many other industries are discussed in Chapter V. Information concerning the incomes of a considerable number of Nebraska farmers is given in Chapter VIII.

## CHAPTER V—ADJUSTMENTS DURING INFLATION AND DEFLATION

Some persons gain by inflation and other persons lose. Some persons gain by deflation and other persons lose. Some industries are better able to protect themselves from the losses incident to either inflation or deflation than are other industries. When a period of inflation has been followed by a period of rapid deflation, some industrial groups have secured a permanent gain in the share of the national income which they have received. Agriculture is one of the industries which has not been able to make adjustments that would protect it from the effects of deflation and, as a result, has suffered more severely since the beginning of deflation in 1920 than many other industries.

### **Debtors gain during inflation and lose during deflation.—**

Since the purchasing power of a given unit of money, such as a dollar, is decreased during inflation the actual value of the money decreases. A dollar was worth much less in the spring of 1920 when prices were high than in 1932 when prices were relatively low. The Nebraska farmer who contracted a debt in 1911 when the farm price of wheat was about 80 cents per bushel and the farm price of hogs less than 6 cents per pound gained a material advantage if he was able to pay back any considerable part of that debt when wheat sold for \$2.00 per bushel and hogs for \$16.00 or more per hundredweight as they did in 1919.

Men who utilize their credit when prices are high and dollars are cheap, and pay their debts when prices are low and dollars are dear, pay a very high price for what they receive. Farmers who bought land or automobiles or constructed buildings in the inflation period, and delayed payment until after the price of farm products fell, are in a position to offer convincing evidence of the difficulty of paying for high-priced commodities with high-priced dollars.

**Creditors lose during inflation but do not always gain during deflation.—**Since debtors gain when they pay for dear goods with cheap money, it naturally follows that the creditors lose. Under such conditions the money or capital loaned will buy a smaller amount of desirable goods at the time the debt is paid than when it was contracted. Thrifty persons who invested their savings in notes, bonds, and life insurance saw their accumulations decrease more than one-half in actual purchasing power during the war time and post-war inflation.

Creditors gain during deflation if their debtors are able to pay. Unfortunately in every period of serious depression, many debtors are not able to meet their obligations and as a



result their creditors lose. Sometimes adjustments are made. The creditor accepts a part of the loan and the loss due to deflation is thus divided between debtor and creditor. The creditor may receive either greater or less purchasing power than he loaned.

**Price decreases during deflation not uniform.**—Farm products have invariably dropped more rapidly in price during deflation than have manufactured goods. As a result the farmer has had to pay for high-priced goods with low-priced products. For example, in the last six months of 1920 the price of farm products in the United States decreased nearly 50 per cent and the fall in Nebraska was even greater. Commodities purchased by farmers decreased during the same period only about 15 per cent.

**Manufacturers are able to adjust production to demand.**—When the demand for goods decreases and a price drop is anticipated the manufacturer immediately restricts production so that supply will correspond to the decreased demand. He does not continue to produce high-cost goods for which the market is uncertain. By regulating the supply, he exerts a measure of control over the market. For example, the production of pig iron decreased from 36,415,000 tons in 1920 to 16,544,000 tons in 1921. The average price of pig iron in 1920 was \$44.47 per ton; in 1921 it was \$26.68 per ton. Production decreased 55 per cent; price decreased 40 per cent.

Manufacturers reduce their operating costs by reducing the amount of materials purchased and the hours of labor hired. Usually some employees are "laid off" and the working week of those retained is materially shortened. The employees bear a part of the cost of deflation by reduced hours of labor rather than by a large reduction in the rate of pay per hour.

**Industrial profits.**—Profits in most industries were relatively satisfactory during the major part of the period from 1898 to 1920. There were, to be sure, some short business depressions and a few industries, such as the manufacture of buggies and carriages, which failed to share in the general prosperity. Most industries were expanding and expansion is usually an indication of prosperity. Probably the greatest activity occurred and the greatest profits were made in 1919 and the first half of 1920 except in those industries which profited from the manufacture of war supplies.

The prices of industrial stocks are one index of industrial prosperity. The prices of stocks are gauged primarily by profits—present and anticipated. The price of any specific

stock will rise either when present profits are large or when large future profits are anticipated. Exceptionally high prices for high-grade investment stocks are usually the result of large present profits and an anticipation of such large future profits that speculation is encouraged.

The *New York Times* has compiled prices for 25 representative stocks since 1911. Their prices take into consideration dividends of stocks. If, for example, the outstanding capital stock of a company has been doubled by giving new shares of stock to present holders, a price of \$125 per share for the stock now outstanding is considered as \$250 per share for each original share. Price data compiled from the *New York Times* are presented in Table 16.

Stock prices slipped in 1914 at the outbreak of the World War but rose in 1915 and 1916 (Table 16, Column 2). They receded moderately in 1917 and 1918 and were high in 1919 and the first half of 1920. They dropped in 1921 but before the end of 1922 were back above the average price of 1919 and 1920. The average price in 1923 was almost as high as the average price in 1919. The average price of these 25 industrial stocks increased each year from 1921 to 1929, and in the latter year reached a high point on September 19 which was nearly 340 per cent of the high point reached in 1919.

The very high prices of 1929 were not justified by profits earned even though profits had been large. Future profits would have had to be much larger than past profits in order that the companies might have returned a fair rate on the sale price of their stock. The lure of speculative gain blinded many persons to the probable earning power of the stocks that they purchased.

The price of stocks must not be confused with the price of commodities. The commodity price level remained relatively stable from 1922 to 1930. The price of stocks rose rapidly because of large profits, an anticipation of larger future profits, and the most remarkable stock speculation craze that ever occurred in the United States.

The industries which these stocks represented were prosperous. The prosperity was the result of several causes. Agricultural raw materials were relatively cheap. New inventions enabled many manufacturers to decrease the labor required per unit of product. The volume of business increased and quantity production helped to reduce production costs per unit. Factory, wholesale, and retail prices were maintained.

Industry was able to adjust production to demand in 1921 and prevent prices from dropping to low levels. When business revived, price levels were maintained, costs reduced in some instances, and the supply adjusted to the increasing

TABLE 16.—Average annual prices<sup>1</sup> and annual price range<sup>2</sup> of 25 industrial stocks. (The average annual prices are averages of the monthly closing prices—original data published by the New York Times.)

Year	Average price	Annual range			
		High	Date	Low	Date
1911	\$63.98	\$69.76	Jan. 5	\$ 54.75	Sept. 25
1912	68.90	74.50	Sept. 30	61.74	Feb. 1
1913	58.71	67.08	Jan. 2	50.27	June 10
1914	55.85 <sup>3</sup>	61.71	Mar. 23	48.48	July 30
1915	77.87	109.97	Oct. 22	51.85	Feb. 24
1916	98.72	119.30	Nov. 20	86.60	July 15
1917	84.86	99.74	Jan. 4	62.81	Dec. 20
1918	81.15	91.55	Oct. 16	71.31	Jan. 15
1919	107.52	138.12	Nov. 5	80.37	Feb. 10
1920	105.01	129.83	April 8	76.55	Dec. 22
1921	79.81	90.60	May 6	66.24	Aug. 25
1922	99.18	116.24	Oct. 18	79.86	Jan. 10
1923	107.29	118.44	Mar. 6	99.05	Oct. 27
1924	115.84	135.11	Dec. 31	103.26	April 22
1925	153.59	185.36	Nov. 6	128.83	March 30
1926	157.05	186.03	Feb. 13	137.65	March 30
1927	215.08	247.48	Sept. 16	171.49	Jan. 25
1928	275.86	332.58	Dec. 31	233.42	Feb. 20
1929	364.57	469.49	Sept. 19	220.95	Nov. 13
1930	284.75	358.16	April 10	196.67	Dec. 17
1931	182.41	251.22	Feb. 24	110.73	Dec. 17
1932	91.01	129.16	Feb. 19	57.62	July 18
1933 <sup>4</sup>	118.36	150.21	July 17	75.39	March 2
To Feb. 5, 1934 <sup>4</sup>		153.18	Feb. 5	133.41	Jan. 8

<sup>1</sup> The Annalist, April 10, 1931, May 6, 1932, Sept. 2, 1932, and March 3, 1933.

<sup>2</sup> *Ibid.*, June 9, 1933, p. 801.

<sup>3</sup> Stock Exchange closed four months in 1914.

<sup>4</sup> The Annalist, Feb. 16, 1934.

demand. Anyone who thinks that either competition or cost of production was a dominant factor in determining the exact price which manufacturers received for leather gloves, wrought iron, and steel rails should consult Tables 7, 8, and 9. These are given as representative of many commodities which sold at relatively high prices because industry was in a position to control production and therefore was in a position to influence price. Nebraska farmers either paid the high prices or did without the goods.

**Farmers are unable to adjust production to rapid changes in demand.**—The farmer, because of the nature of his business, is not able to adjust production quickly to meet changes in demand. Agricultural production is necessarily a slow process. More than six months intervenes between the planting of corn and the harvesting of the crop. Many things can happen in six months. The 1920 corn crop was planted in the height of inflation. It was harvested when the country was almost panic stricken. The crop was pro-

duced when labor, farm equipment, food, clothing, and practically everything else purchased by the farmer were very high in price; in fact prices averaged higher, measured in dollars, than in any other period of which we have a record. In December when the corn was husked and ready for market, it was worth only one-fifth to one-fourth as much per bushel as was corn during the spring and summer. In the spring farmers expected that the price of corn would be relatively high the following winter. The time of maturity and marketing was, however, so far removed from the time of planting and cultivation that conditions changed. The producer was compelled either to sell his crop at a low price or else place it in storage for an indefinite period with no certainty of ever securing a price that would give him a better net return. In the production of winter wheat the ground is prepared for sowing almost a year before the crop can be marketed and in the raising of livestock, the time from planning production until the animals are ready for market is considerably longer.

The total production of any crop depends to a considerable extent upon weather conditions, and farmers can neither control the weather nor obtain long-time forecasts which are reliable. They must base their production plans upon normal temperature and normal rainfall. The 1920 corn acreage was the smallest of any year since 1909 with but one exception. Weather conditions were unusually favorable that year in the major part of the Corn Belt. As a result the average yield of corn per acre was the highest ever recorded in the United States, and the total yield has been exceeded only once. Until farmers can control growing conditions they will be unable to control production. As a matter of course, a farmer can influence the production of any particular crop on his own farm by increasing or decreasing the acreage planted, by cultural methods, by applying or failing to apply fertilizer, and in other ways.

Natural forces are always at work. The farmers of the United States do not have a natural monopoly upon the production of a single product. The price which American farmers receive for the major part of their products is influenced materially by the volume of production in other parts of the world. This is particularly true of those products of which we produce an exportable surplus.

**Production on any one farm and price.**—Reducing the production on a single farm makes little difference in the cost of operating the farm but usually increases the cost of production per unit. A farmer cannot reduce his labor cost by "laying off" his employees, if the major part of the farm

labor is performed by himself and his family. According to the 1920 census, there were only 36,199 hired men on the 125,000 farms in Nebraska. Labor costs, payment for materials, and even overhead costs on the average farm would not be very greatly reduced by reducing production to 50 per cent of normal. Because so small a part of any commodity is produced on one farm, the production of a single farm has no appreciable effect on price. As a result of these conditions, a single year of low prices has little effect on agricultural production. The farmer continues to plow and plant, to cultivate and harvest because he wishes to utilize his time, his farm land, and his equipment, and there is nothing else that he can do. His fruit trees continue to bear and he is inclined to increase rather than decrease his production of milk and eggs.

**Farm products must move to market.**—Nearly all farm products are perishable or semi-perishable. Fruit, vegetables, eggs, and milk deteriorate very quickly in ordinary storage. Livestock can be kept on a farm after it is ready for market only at a heavy cost. The storage of such products as grain, hay, and cotton is expensive and such products are likely to deteriorate under farm storage. The farmer is practically forced to sell on a fast-moving market subject to rapid fluctuations. Among all producers he doubtless finds it hardest to wait before selling until readjustment reaches the point where he will sustain the least loss.

**Rate of turnover of farm capital limited.**—Another reason why the farmer cannot readjust his business quickly to meet conditions is that he cannot regulate the rate of turnover on his capital. His income is derived largely from the sale of crops and from livestock and livestock products which have been produced upon crops. Since ordinarily only one crop can be produced on a farm in a year, the income of most farms is limited by the amount and price of the annual crop. Farms which buy feed for the production of livestock and livestock products are an exception to this general rule. The farmer's problem is distinctly different from that of the manufacturer who can in many instances secure several turnovers each year, and can adjust his business more quickly to put his commodity on the market at the most favorable time.

**Agricultural adjustments to inflation and deflation a slow development.**—In the United States as a whole there has been a decrease in the per capita production of feed and food crops since pre-war years. Total production has increased slightly but not as rapidly as population. There have been shifts in production in various regions to meet changed conditions.

Despite the regional changes, the fact remains that Nebraska farmers are not able to control the production of any single product. There is little likelihood that all farmers of the United States could unite on a plan of voluntary control without government aid. Because farmers were not able to protect themselves, the prices of their products dropped in 1920 and 1921, and because some other groups were able to exercise some measure of protection, Nebraska farmers have continued to pay relatively high prices for the goods they purchase.

Material changes have taken place in Nebraska agriculture since 1914. Some of the changes which are due primarily to inflation and deflation are described in Chapter IX.

## CHAPTER VI—THE EFFECT OF WAGES ON NEBRASKA AGRICULTURE

Labor is the largest single element in the cost of producing nearly all commodities. It is the largest item in the cost of producing cereal crops in Nebraska and the largest item in the cost of fattening hogs and cattle if we consider the labor used in producing the feed. The more intensive the type of farming, the larger the proportionate share of the cost of production that is due to labor.

Farmers are affected very materially by the wages paid in the industries, because labor is one of the principal elements of cost entering into nearly everything that the farmer purchases. Farmers pay indirectly the wages of the men employed in manufacturing farm machinery, in transporting farm products, in building factories, and in producing overalls, sugar, furniture, and a thousand other commodities which they buy. The effects of inflation and deflation upon Nebraska agriculture have been closely related to the wages paid in the industries which are connected either directly or indirectly with handling farm products or manufacturing or merchandising goods purchased by farmers, or transporting commodities either produced by farmers or purchased by farmers.

**How wages behave during inflation and deflation.**—Wages ordinarily lag behind prices. During periods of inflation prices rise faster than wages, and as a result labor is at a disadvantage. During deflation, commodity prices fall faster than wages, and labor which is employed has an advantage. Unfortunately, unemployment always increases during deflation.

The wages of various groups of laborers do not rise and fall uniformly. As a general thing, the wages of unskilled labor rise first, then the wages of skilled labor and fees paid for professional service, and last of all the salaries paid to public employees. The process is reversed during deflation except that the salaries of public employees are usually reduced more rapidly than the fees charged for professional service and the wages paid some groups of highly organized skilled laborers.

Wage rates in some of the essential war industries increased very rapidly between 1914 and 1919. The purchasers of war supplies could not haggle over costs. Time was essential. Competition among employers of labor was keen because each employer wished to increase his output and secure as many lucrative contracts as possible. After the United States entered the war and began making contracts at "cost plus ten per cent", employers gave even less heed to

wages because profits increased with increased production costs. The shipyards provided some of the largest increases. According to the Bureau of Applied Economics, the advance in shipyard wage rates amounted to 400 per cent for rivet heaters, 300 per cent for hand riveters, 300 per cent for holders-on, 212 per cent for pattern makers, 263 per cent for blacksmiths, 332 per cent for boiler makers, and 228 per cent for boiler ship drillers.<sup>7</sup>

**Importance of wages.**—According to the best information available, hired employees received as wages, salaries, and pensions, 57.5 per cent of the total national income for the nine years, 1920 to 1928.<sup>8</sup> In addition to the money income, many employees received an imputed income from the ownership of the homes in which they lived and from the production of vegetables, fruits, and other products for home use.

The professional fees of lawyers, doctors, dentists, and real estate agents and any income which a farm operator may receive as a reward for his labor are not included under "salaries and wages". That part of the national income remaining after deducting the direct payments to employees is divided among all owners of property and all entrepreneurs, or persons who conduct a business for themselves instead of receiving a fixed wage or salary. The total imputed income, a part of which was received by wage earners, amounted to about 6.75 per cent of the total national income. Rent of land was about 12 per cent of the national income in the years 1922 to 1928, and capital return (not including land investment) about 15 per cent of the total income. This leaves 8.75 per cent of the total income to be divided among all men who work for themselves instead of for someone else. It includes all the income of farm operators except that part which is received as rent for land or returns from capital. It includes all fees collected by professional men such as doctors, lawyers, and real estate agents. And finally it includes all profits made by any business man in addition to a regular salary and a normal rate of return on his investment. It is possible that the 15 per cent allowed for capital returns is a little large and the 8.75 per cent allowed for all entrepreneurial returns is a little small.

**Farm wages.** — Wages paid farm laborers increased gradually during the years which followed the depression of 1893 to 1896. The rate of increase was accelerated during

<sup>7</sup> Bureau of Applied Economics, Inc., *Wages of Various Industries, A Summary of Wage Movements During the War.*

<sup>8</sup> Wilford I. King, *The National Income and Its Purchasing Power*, p. 80, National Bureau of Economic Research.



the inflation years. Nebraska farm wages with board increased 136 per cent from 1915 to 1920 (Table 17). The rise was due to the increased demand for labor and to the rapid increase in the price of farm products. An increased number of workers were being hired in the industries and wages were rising. Farming was profitable because of the rapid increase in the price of farm products, and farmers were able and willing to pay high wages for competent help. Farm wages dropped in 1921 because of the decrease in the price of farm products and a decrease in the number of men employed in other industries. Farmers attempted to reduce production costs during and following the war by purchasing tractors, combines, two-row cultivators, and other labor-saving machinery. As a result, fewer men are needed on Nebraska farms than were needed a generation ago.

Because of the low prices of farm products in 1931 and 1932, farmers used every means available to cut production costs. In order to avoid hiring any more labor than was absolutely necessary, many farmers and their families worked harder than under ordinary conditions. Crops were too low in price to pay normal wages to hired labor. Men who had been accustomed to work on farms could not turn to some other occupation because of the decreased demand for labor in the industries. Despite the low price of farm products, there was a distinct trend of population from cities to farms. Many men were willing to work for low wages in order to have employment and because they recognized the economic condition of agriculture. Many farm-reared men who had difficulty in obtaining work in cities returned to the farm home where food and shelter were assured even if the income was small.

In 1932 industrial wages for the United States as a whole averaged 178 per cent of pre-war. Farm wages rose a little faster than industrial wages from 1914 to 1920, but fell more rapidly in 1921. At no time since 1922 have farm wages been as high relatively as industrial wages. In 1932 farm wages with board averaged only 75 per cent of the wages paid during the four pre-war years.

**Salaries of rural teachers.**—Approximately 48 per cent of the funds raised in Nebraska by the general property tax in recent years was used for the support of the public schools. About 60 per cent of all school expenditures within the state are for teachers' salaries. In many rural districts the percentage which the teachers' salaries form of the total cost of school operation is considerably more than 60. Farmers are, therefore, very directly interested in the salaries paid to rural teachers.

According to data presented in Table 17, the wages of women teachers in one-room rural schools in Gage county rose slowly during the inflation period. During these years women quit teaching to enter many other occupations. In order to induce competent young women to train themselves to teach school, it was necessary to increase teachers' salaries. Wages continued to rise during the years of stabilized deflation and reached a peak in 1930. Teachers' wages declined rapidly in 1931-32 and even more rapidly in 1932-33. Few other groups of workers have received such drastic salary cuts during 1931, 1932, and 1933 as teachers in rural and village schools. The principal cause of these cuts was a desire to reduce taxes.

TABLE 17.—*Nebraska farm wages with board per month and annual salary of women teachers in one-room rural schools in Gage county, 1913-33*

Year	Nebraska farm wages with board per month for year	Annual salary of women teachers in one-room rural schools in Gage county <sup>2</sup>
1913.....	\$26.90	\$379.00
1914.....	27.00	408.00
1915.....	27.50	412.00
1916.....	35.00	405.00
1917.....	40.00	409.00
1918.....	49.00	435.00
1919.....	56.80	485.00
1920.....	66.00	602.00
1921.....	35.00	771.00
1922.....	34.50	774.00
1923.....	40.34	706.00
1924.....	39.25	701.00
1925.....	40.72	698.00
1926.....	40.92	706.00
1927.....	42.85	714.00
1928.....	43.15	725.00
1929.....	44.31	744.00
1930.....	40.84	748.00
1931.....	30.75	743.00
1932.....	21.06	696.00
1933.....	21.05	597.00

<sup>1</sup> Farm wages for years 1914 to 1917 are estimates based on data collected by the Department of Rural Economics, University of Nebraska; wages for 1913 and years 1918 to 1922 are from Yearbooks of the U. S. Department of Agriculture; wages for 1923 to 1933 are weighted averages of the wages reported quarterly by the U. S. D. A.

<sup>2</sup> For school year ending in June of designated year, from reports of the county superintendent of schools of Gage county.

**Railway wages and agriculture.**—A very large part of the farm products of Nebraska which are shipped outside of the state is consumed in the industrial districts of the Eastern states. Some of our products are shipped abroad. The prices which Nebraska farmers receive for wheat, hogs fat cattle, eggs, and poultry are ordinarily the prices paid at

eastern terminal markets for the products less processing and packaging costs, and transportation and handling charges.

Nearly all Nebraska farm products are bulky and the freight charges often amount to a very considerable part of the seaboard selling price. The freight on wheat from central Nebraska points to New York City has been about 36 cents per bushel in recent years. When Nebraska wheat sells for one dollar a bushel in New York, the transportation agencies receive on the average not less than 36 per cent of the selling price. Hay is so bulky in proportion to its value that it cannot be shipped long distances. Hogs, fat cattle, poultry, eggs, and many other farm products sell for materially less in Nebraska than in eastern markets because of the cost of transportation.

TABLE 18.—*Employees of railways—average hourly wage paid in specified occupations for the years 1914-33*<sup>1</sup>

Year	Car repairers or car men	Section men	Telegraph clerks	Road passenger engineers and motormen
1914.....	\$0.265	\$0.150	\$0.240	\$0.805
1915.....	.272	.155	.245	.878
1916.....	.284	.164	.253	.876
1917.....	.338	.192	.276	.914
1918.....	.555	.288	.298	.992
1919.....	.682	.383	.569	1.164
1920.....	.....	.....	.....	.....
1921.....	.....	.....	.....	.....
1922.....	.695	.343	.597	1.098
1923.....	.673	.348	.589	1.103
1924.....	.687	.353	.599	1.129
1925.....	.....	.....	.....	.....
1926.....	.703	.354	.616	1.163
1927.....	.721	.355	.625	1.193
1928.....	.723	.355	.641	1.253
1929.....	.759	.357	.649	1.268
1930.....	.765	.360	.654	1.269
1931.....	.759	.360	.659	1.265
1932.....	.686	.324	.604	1.156
1933.....	.683	.319	.598	1.151

<sup>1</sup> Statistical Abstract of the United States, 1914 to 1931; and monthly report of Interstate Commerce Commission, 1932 and 1933.

Nebraska farmers pay more for many kinds of manufactured goods than do the residents of the industrial states farther east. Automobiles and farm machinery are sold "f.o.b. factory", coal "f.o.b. mine", and steel "Pittsburgh plus".

The position of Nebraska agriculture has been affected adversely by freight rate increases. Railway freight rates rose gradually from 1916 to 1919, and very rapidly during the next two years. They have fallen gradually since 1921. The average revenue per ton mile was 80 per cent above 1916 in

1921, 52 per cent above in 1929, and 48 per cent above in 1932.<sup>9</sup> The reductions in rates were made possible by increased efficiency in operation.

The largest item in the cost of railway transportation is wages. From 1922 to 1931, inclusive, the railways paid out approximately 44 per cent of their gross earnings as wages. During the same years 6.6 per cent of their gross income was spent for locomotive fuel, and 18.7 per cent for materials, supplies, and miscellaneous expenses. Labor is one of the large items in the cost of fuel and in nearly all materials and supplies used by railways.

Railway wages rose gradually from 1914 until 1919. They lagged behind prices throughout this entire period and as a result railway rates lagged behind prices.

Railway wage rates increased very materially in 1919 and 1920. There was a slight decrease during the post-war depression, but the higher wage rates were soon restored, and wages continued to advance until a high period was reached in 1930 and 1931. A ten per cent decrease became effective February 1, 1932. After this decrease, the average hourly wage rates of all railway employees was approximately 231 per cent of pre-war. The hourly wage rates paid railway employees in representative occupations is given in Table 18.

During the entire period from 1921 to 1933, transportation costs exerted a greater influence on the price of most of the products bought and sold by farmers than in pre-war years. As a result of this influence, important changes were made in systems of farming. A discussion of some of these changes is given in Chapter IX.

**Wages paid in factories and agriculture.**—The cost of labor enters into the price which farmers pay for manufactured goods. If certain essential items of farm equipment sell for a high price because of the cost of the labor used in their production, it is obvious that the amount of luxuries and comforts which the farmer can purchase is decreased. In the long run, farm and farm home expenditures cannot be greater than farm receipts.

If the wages of a group of laborers increase without a proportionate increase in the general level of prices, their purchasing power is increased. When wages in industries are high and the price of farm products is low, the industrial workers can purchase a larger amount of desirable products than can farmers.

It is sometimes suggested that farmers prosper when industrial wages are high because of the increase in food consumption. It is true that high wages increase expenditures

<sup>9</sup> Yearbook of Railway Information, 1933 edition, p. 36.

for food, but it is also true that expenditures for food do not increase in proportion to increases in wages or income. In other words, the family with a small income ordinarily spends a larger portion of its income for food than does a family with a large income. As an income increases a larger and larger part of it is spent for manufactured goods and amusements. Wages may be very high and the price of farm products so low that farmers are unable to buy any very large volume of manufactured goods.

The index numbers of weekly earnings in New York state factories are given in Table 19, Column 2. Industrial workers who were regularly employed received not only higher money wages but materially higher real wages from 1920 to 1932, than in 1913 and 1914.

**Wages paid in building trades and in mines affect agriculture.**—The prices of products purchased by farmers are affected not only by the wages paid to the men who manufacture the products, but are affected indirectly by the wages paid carpenters, plumbers, plasterers, electricians, miners, and a host of other workers. The workers in a single industry sometimes increase their wages at the expense of other groups. Many groups have increased their wages at the ex-

TABLE 19.—*Index numbers of industrial wages and wage rates paid carpenters and inside wiremen in Omaha, 1913 to 1933*

Year	Index numbers of industrial wages <sup>1</sup>	Carpenters per hour, Omaha <sup>2</sup>	Inside wiremen per hour, Omaha <sup>3</sup>
1913.....	.....	\$0.500	\$0.500
1914.....	100	.500	.500
1915.....	101	.500	.500
1916.....	114	.500	.575
1917.....	129	.500	.575
1918.....	160	.600	.700
1919.....	175	.750	.875
1920.....	222	1.125	1.125
1921.....	203	1.013	1.125
1922.....	197	.900	1.000
1923.....	214	1.000	1.125
1924.....	218	1.000	1.125
1925.....	223	1.000	1.125
1926.....	229	1.000	1.125
1927.....	231	1.000	1.250
1928.....	232	1.000	1.250
1929.....	236	1.000	1.250
1930.....	226	1.000	1.250
1931.....	207	1.000	1.250
1932.....	178	.800	1.000
1933.....	172	.800	1.000

<sup>1</sup> Average weekly earnings New York state factories. June, 1914 = 100.

<sup>2</sup> Monthly Labor Review: years 1913-21, Vol. XIII, No. 3, p. 99; 1922-31, Vol. XXXV, No. 3, p. 641; 1932 and 1933, Vol. XXXVII, No. 3, p. 663.

<sup>3</sup> *Ibid.*, Vol. XIII, No. 3, p. 104; XXXV, No. 3, p. 650; and XXXVII, No. 3, p. 667.

pense of agriculture. It is impossible for all groups to increase their real wages without an increase in the efficiency of production. Wages paid carpenters and inside wiremen per hour in Omaha for the years 1913 to 1933, are given in Table 19, Columns 3 and 4.

**Wages and prosperity.**—It may be said that in general high wages are not the prime cause of either national prosperity or farm prosperity. National prosperity is a result of a large national production of desirable goods, and a wide distribution of these goods among all classes of people. National prosperity makes possible the payment of wages which have a high purchasing power.

The prosperity of agriculture is affected by the wages paid in other industries. The demand for meat, eggs, milk, fruit, and other farm products would be decreased if the wages in other industries were low. On the other hand, very high wages in manufacture, transportation, and trade increase the price of many products until farmers cannot buy them. This results in a decreased volume of business.

## CHAPTER VII—TAXES

Nearly everyone is interested in public expenditures for two reasons: because of the services which he receives from the government, and because of the contribution which he is compelled to make to pay for the services rendered. The first reason is more nearly universal than the second, because many people who receive very great services from the government pay very little taxes to the support of the government. Taxes are usually paid from income but are sometimes paid in part or in whole from capital, because the income is less than the amount of the tax.

**Why ordinary public expenditures have increased.**—Public expenditures—national, state, and local—increased from year to year and decade to decade with but few interruptions from the early years of our national life until our entry into the World War. These increases in ordinary expenditures can be ascribed primarily to three causes: a constantly increasing population, an increase in the services performed by the government, and an increase in the price level. These three causes will be discussed in order.

**Our increasing population has increased our public expenditures.**—It is but natural that the expenditures for governing a large city, or a populous state, or a great nation, should be larger than for governing a small town or a sparsely settled state or an unimportant country.

**Governmental services have increased.**—As the wealth of the United States has increased and standards of living have risen, the demands made by the people upon the government have steadily increased. Perhaps the gradual transfer of the cost of education from the individual citizen to the public treasury is as typical an example as can be given.

In colonial days there were no tax-supported public schools. Parents who desired that their children should be taught reading, spelling, writing, and arithmetic either hired a teacher or joined with their neighbors in maintaining a subscription school. For those who could afford more than a common school education, there were private academies and colleges. There were no school taxes, but the cost of education per pupil was high.

The idea of a free public school that would offer to every child the opportunity of learning the common branches developed rapidly during the early years of the nineteenth century. The cost at first was low, but better school equipment, free text books, and other educational improvements soon increased the cost. What had been a private expense became a public expenditure.

The first American high school was established in Boston in 1821. The establishment of other high schools proceeded very slowly. It is estimated that even as late as 1870 there were only about 500 free high schools in the United States which gave full preparatory work for entrance to college. The number increased to about 800 in 1880 and to 2,526 in 1890. The years of prosperity which followed the depression of 1893 to 1896 saw a rapid bridging of the gap between the tax-supported elementary schools and tax-supported universities.

In Nebraska in 1890 there were only 18 four-year high schools, and only 52 in 1900. The number of communities supporting four-year high schools fully accredited to the state university increased to 125 in 1910, to 340 in 1920, and to 418 in 1932.

A very large part of the high schools in Nebraska are located in the cities and villages. A large percentage of the farm population live in school districts which support only a one-teacher school. Districts which support a high school have always charged tuition to non-resident pupils. For many years the tuition was paid by the pupils or their parents, and was thus a personal expense. The legislature in 1907 passed a free high-school tuition law which, in its present form, requires that tuition shall be paid from a county-wide tax on property located outside of districts maintaining a high school. Some rural communities have solved the high-school problem by consolidating two or more small districts, transporting their pupils, and maintaining a well-equipped high school. Increased high-school attendance has necessitated more commodious school buildings. The increase in attendance, and as a result, the increase in building capacity was particularly rapid from the close of the war to about 1929.

An increased regard for safety and sanitation and increased prosperity during the first 30 years of the twentieth century naturally resulted in the erection of fire-resistant buildings, well lighted and well equipped. New buildings have been constructed since the close of the war to supply needs that existed long before the war. Many of these buildings should endure for at least one hundred years, but the cost of construction increased public expenditures. The cost of public education has been increased by the installation of scientific equipment and by including music and other subjects in the school curriculum which formerly were paid for by the persons who received the instruction. The transfer from private expenditure to public expenditure has been gradual. The increase in the number of students attending



school and the modernizing of buildings and equipment have been in keeping with the spirit of the times, which regards the education of youth as a profitable investment.

Tax funds are now appropriated in every one of the 48 states for maintaining one or more institutions giving work of collegiate grade. Nebraska supports a university and four normal schools quite largely from tax funds. Increased attendance since 1919 has been followed by increased appropriations.

The pure-food laws of the federal government and of the several states, the provisions for regulating commerce, the park funds of the cities, good-roads legislation, and a score of other measures are among the causes which have contributed to constantly increasing public expenditures. Whether for good or ill, the people of the United States have insisted upon an increase in the services performed by governmental agencies, and each of these services adds to the amount of money that must be obtained by taxation. The government can perform many services at a lower cost than that at which an individual can perform them for himself, but nevertheless each transfer of what was a personal expense to the public treasury increases the tax burden.

**Public expenditures have increased because of an increase in the price level.**—The trend in prices has been distinctly upward during the major part of our national existence. The gradual upward trend from 1896 to 1915 and the rapid upward movement from 1916 to 1920 have been discussed in a previous chapter.

The expenditures of any governmental agency must increase in the long run about as rapidly as the living expenses of the average person. The government must hire labor, construct buildings, purchase food and clothing, and in general must make about such expenditures as are made by the average citizen. When prices rise rapidly, as they did from 1916 to 1920, governmental expenditures and tax levies must necessarily increase.

**The growth of governmental expenditures.**—The growth of all governmental expenditures since 1903 is shown in Table 20.

**The World War increased expenditures of government.**—The extraordinary expenses of the government were very large in 1917, 1918, and 1919. Winning the war was a more essential consideration than costs, because it was quite generally believed that if the Allies lost, the United States would have to pay a war indemnity to the Central Powers much larger than any probable war costs. The increase in federal

TABLE 20.—*Public expenditures, all governments, for selected years since 1903*

Year	Federal <sup>1</sup>	State <sup>2</sup>	Local <sup>3</sup>	Total
1903.....	\$ 517,006,000	\$ 185,740,000	\$ 913,000,000	\$ 1,615,746,000
1913.....	724,512,000	382,551,000	1,844,000,000	2,951,063,000
1922.....	3,372,600,000	1,280,319,000	4,493,000,000	9,145,919,000
1924.....	3,048,700,000	1,513,628,000	5,421,000,000	9,983,328,000
1927.....	2,974,000,000	1,726,989,000	6,454,000,000	11,154,989,000
1929.....	3,298,900,000	2,061,017,000	6,813,000,000	12,172,917,000
1930.....	3,440,400,000	2,290,270,000	9,039,000,000	13,769,670,000

<sup>1</sup> Annual Report of the Secretary of the Treasury on the Current Cash Basis, except for 1903 and 1913, where the warrant basis is used.

<sup>2</sup> Financial Statistics of States and Wealth, Debt, and Taxation, 1913, Census Bureau.

<sup>3</sup> The National Industrial Conference Board, Cost of Government in the United States, 1929 and 1930, p. 17. The expenditures for 1922 and 1930 are estimated.

expenses since the war as compared with pre-war years has been due not only to the causes previously discussed but in part to causes growing out of the war. For the year ending June 30, 1930, which was a fairly representative year, the interest on the public debt amounted to \$658,602,000. The

TABLE 21.—*Expenditures for all branches of the government service, including payments from postal revenues, fiscal year 1931, on basis of treasury statement of June 30, 1931* <sup>1</sup>

Item	Amount	Per cent of total
Veterans' Administration.....	\$1,040,378,715	21.33
Shipping Board and Emergency Fleet Corporation.....	33,961,996	0.70
Interstate Commerce Commission.....	9,875,056	0.20
Panama Canal.....	9,299,057	0.19
Federal Board for Vocational Education.....	9,100,114	0.18
Miscellaneous Executive Offices.....	24,201,497	0.50
Retirement of Debt.....	440,082,000	9.02
Interest on Debt.....	611,559,704	12.54
Treasury Department exclusive of Public Debt.....	295,398,237	6.05
Federal Farm Board.....	191,894,214	3.93
Postoffice Department and Postal Service		
Paid from Treasury.....	145,725,911	2.99
Paid from Postal Receipts.....	657,364,970	13.48
War Department.....	479,942,779	9.84
Navy Department.....	354,071,004	7.26
Department of Agriculture.....	296,865,945	6.09
Interior Department.....	71,516,109	1.46
Department of Commerce.....	61,477,118	1.26
Department of Justice.....	44,819,253	0.92
Department of State.....	16,024,646	0.33
Department of Labor.....	12,255,622	0.25
District of Columbia.....	48,368,647	0.99
Legislative Establishment.....	23,978,413	0.49
Total.....	\$4,878,143,007	100.00
Miscellaneous deductions.....	827,698	
Actual expenditures.....	\$4,877,315,309	

<sup>1</sup> Annual Report of the Secretary of the Treasurer on the State of the Finances for the fiscal year ended June 30, 1931, p. 448. This table is on the basis of Daily Treasury Statements (unrevised). The Daily Treasury Statement is a current report compiled from the latest available information and by reason of the promptness with which the information is obtained and made public it has come into general use as reflecting the financial condition of the government covering a given period. The unrevised figures are the basis of the budget estimates submitted to congress by the president. They are not absolutely accurate because of delayed reports.

United States Veterans' Bureau (World War only) expenditures were \$600,906,000, and public debt retirements chargeable against ordinary receipts totaled \$553,884,000. When these expenditures, which were due almost entirely to the war, are compared with the total ordinary expenditures of the government in the years before the war, totaling \$741,997,000 in 1916, one reason for the increase in federal taxes is clearly evident.

**Federal expenditures.** — An analysis of federal expenditures for 1931 is given in Table 21. The expenditures of the Department of Agriculture are worthy of special analysis even though they comprise only a small part of the total. The total expenditures of this department in 1931 were 6.09 per cent of the total expenditures of the federal government. Nearly 58 per cent of the amount expended by the department was for roads. Since federal funds are spent upon main highways, farmers derive less benefit from these expenditures than persons who travel upon business or for pleasure. The forest roads and trails and the Mount Vernon Highway are of even less benefit to agriculture than the federal highway aid to states.

TABLE 22.—*Classification of total expenditures charged to the United States Department of Agriculture for the fiscal year ending June 30, 1931*<sup>1</sup>

Item	Amount	Total amount	Per cent
Road funds.....			57.98
Federal aid to states.....	\$158,322,940		
Forest roads and trails.....	18,831,020		
Mount Vernon highway.....	3,392,959		
Total for roads, as above.....		\$180,546,919	
Emergency drouth loans.....		48,824,743	15.68
Items of general public interest.....			11.04
Weather bureau .....	\$ 3,987,461		
Meat inspection .....	5,592,190		
Food and drug laws.....	1,614,666		
Forest service .....	14,979,336		
Biological survey .....	1,956,515		
Tuberculosis eradication .....	6,252,744		
Total above items.....		34,382,912	
Research and miscellaneous activities.....		31,201,357	10.02
Payments to states .....			5.28
State experiment stations.....	4,340,000		
Extension work .....	8,650,229		
Forest fire prevention.....	3,434,033		
Total payment to states, as above.....		16,424,262	
		\$311,380,193	100.00

<sup>1</sup> Annual Report of the Secretary of the Treasury on the State of the Finances for the fiscal year ended June 30, 1931, p. 437. This table is on the basis of Daily Treasury Statements, revised. The total amount of expenditures charged to the Department of Agriculture as given is not identical with the amount given in Table 21, because Table 21 is on the basis of Daily Treasury Statements, unrevised.

Many of the activities administered by the Department of Agriculture are of general public interest. Certainly the enforcement of the food and drug laws, meat inspection, and other similar activities cannot be considered of greater interest to agriculture than to persons in other industries.

The total expenditures for research and other activities of direct interest to agriculture amounted in 1931 to only about 10 per cent of the total expenditures charged to the Department and to only .64 of one per cent of the total expenditures of the federal government. The federal grants to the several states for aiding the agricultural experiment stations, for agricultural extension, and for forest fire prevention totaled less than one-third of one per cent of the federal expenditures for 1931. Aid to agriculture was certainly not an important cause for the increase in federal taxes between 1916 and 1933.

**Expenditures of the State of Nebraska.**—The expenditures of the state government of Nebraska rose gradually from territorial days until our entry into the World War. The "all commodities" price index rose from 100 in March, 1915, to 157 in March, 1917. As a result of this rapid rise and in anticipation of future rises the legislature of 1917 increased the ordinary appropriations for state institutions. Before the legislature of 1919 passed the general appropriations bill, wholesale prices were nearly double pre-war. Legislative appropriations were of necessity larger than for any preceding biennium. Tax levies were increased to meet the increased expenditures. At later legislative sessions further increases were made in appropriations, due primarily to the urge for improved highways.

The levy for the new state capitol was authorized by the legislature of 1919 and affected the tax receipts for 1920. The final levy under this act was made in 1932. The tax receipts and total revenue receipts of the state government by years from 1914 to 1932 are given in Table 23.

In 1928, 1930, and 1931 the tax receipts were more than five times as great as in 1914. The increase in population during these years was not large and in no one of the years of large receipts was the general price level as much as 50 per cent higher than in 1914.

**Sources of Nebraska tax receipts.**—An analysis of the sources of tax receipts for the years 1914 to 1932 is given in Table 24. Nebraska obtained the major part of its revenues for many years from the general property tax. The income obtained from this tax has decreased slightly during the past

TABLE 23.—*Taxes and other revenue receipts of the State of Nebraska by fiscal years, 1914 to 1932*<sup>1</sup>

Year	Total taxes and revenue receipts	Total tax receipts	Receipts from sources other than taxes (all other revenues)
1914.....	\$ 6,523,088	\$ 3,133,949	\$3,389,139
1915.....	7,385,832	4,525,993	2,859,839
1916.....	7,048,535	4,123,341	2,925,198
1917.....	6,127,907	3,654,494	2,473,413
1918.....	8,275,338	4,474,376	3,800,962
1919.....	8,766,002	4,567,958	4,198,044
1920.....	14,521,765	9,910,378	4,611,387
1921.....	16,419,425	10,587,425	5,832,000
1922.....	15,132,858	10,573,077	4,559,781
1923.....	13,424,061	9,168,967	4,255,094
1924.....	12,276,885	7,397,821	4,879,064
1925.....	12,498,432	7,220,556	5,277,876
1926.....	17,363,619	11,743,970	5,619,649
1927.....	17,249,929	11,414,148	5,835,781
1928.....	23,373,105	16,899,517	6,473,588
1929.....	19,868,381	14,818,016	5,050,365
1930.....	23,024,159	16,411,181	6,612,978
1931.....	23,272,715	16,769,630	6,503,085
1932.....	23,844,409	15,143,025	8,701,384

<sup>1</sup> Years 1914 to 1921 from county reports in state auditor's office, Receipts Book No. 11; 1922 to 1932 from Annual Reports of the State Tax Commissioner and the State Board of Equalization and Assessment.

few years, but a greatly increased income has been secured from other sources.

The automobile license fee has been an important source of revenue since 1920. The counties were given all of these license fees from 1922 to 1925, except 2½ per cent, which was turned over to the state "for administration of the motor vehicle license law together with the cost of all automobile license plates". Since January 1, 1926, the state has received an additional 30 per cent of all license fees to be used for the maintenance of the state highway system.

The state has had a tax on gasoline since 1925. The tax rate has been 4 cents per gallon since 1929. From 1929 to 1933, one-fourth of the sum remaining after paying the cost of administering the tax was remitted to the county treasurers for the road fund of the several counties and the remaining three-fourths was retained by the state for highway uses. The three-fourths of the gasoline tax retained by the state in 1932 exceeded the amount received from the general property tax. The legislature of 1933 changed the division of gasoline tax receipts, apportioning 1½ cents per gallon to the counties and the remainder to the state.

The motor vehicle license fee and the gasoline tax are special taxes levied for a special purpose. They may very properly be classed as additional taxes. The demand for highway

improvement has come very largely from the drivers of motor cars, who are the persons who pay the major part of these additional taxes. It may be said that many persons have insisted that they be taxed in order to decrease their own transportation costs.

In Column 6 of Table 24 are compiled the revenues received by the state from a variety of sources. Business taxes such as hotel and restaurant permits, cream tester permits, the tax on the gross receipts of express companies, and the tax on insurance premiums are included. Hunting and fishing licenses are a non-business tax which has contributed over \$200,000 in some years.

TABLE 24.—*Sources of state tax receipts in Nebraska, 1914 to 1932*<sup>1</sup>

Year	Total tax receipts	Amt. received from general property tax	Auto license <sup>2</sup>	Gasoline tax	Others <sup>3</sup>
1914	\$ 3,134,000	\$ 2,788,000	.....	.....	\$ 346,000
1915	4,526,000	4,146,000	\$ 4,000	.....	376,000
1916	4,123,000	3,651,000	42,000	.....	430,000
1917	3,654,000	3,127,000	56,000	.....	471,000
1918	4,474,000	3,885,000	72,000	.....	517,000
1919	4,568,000	3,853,000	136,000	.....	579,000
1920	9,910,000	6,927,000	2,034,000	.....	949,000
1921	10,587,000	7,929,000	1,572,000	.....	1,086,000
1922	10,573,000	9,748,000	110,000	.....	715,000
1923	9,169,000	8,230,000	119,000	.....	820,000
1924	7,398,000	6,475,000	125,000	.....	798,000
1925	7,221,000	5,807,000	141,000	\$ 434,000	839,000
1926	11,744,000	6,824,000	1,051,000	2,899,000	970,000
1927	11,414,000	6,156,000	1,125,000	3,091,000	1,042,000
1928	16,900,000	10,584,000	1,202,000	4,000,000	1,114,000
1929	14,818,000	7,619,000	1,354,000	4,721,000	1,124,000
1930	16,411,000	7,327,000	1,414,000	6,468,000	1,202,000
1931	16,770,000	7,403,000	1,214,000	6,877,000	1,276,000
1932	15,143,000	5,808,000	1,107,000	7,008,000	1,220,000

<sup>1</sup> Years 1914 to 1921 from county reports in state auditor's office, Receipts Book No. 11; 1922 to 1932 from Annual Reports of the State Tax Commissioner and the State Board of Equalization and Assessment.

<sup>2</sup> From 1922 to 1925 the state received only 2½ per cent of auto license fees. Beginning with 1926 an additional 30 per cent of the auto license fees was turned over to the state to be used for road maintenance.

<sup>3</sup> Business and non-business license, special taxes and fines, forfeits, and escheats.

The large increase in the amount received from the general property tax in 1928 was a result of the failure of the State Board of Equalization and Assessment to make a large enough levy in some of the preceding years to raise sufficient money to pay all legislative appropriations. The legislature of 1927 prescribed the process for determining the levy, so there is little likelihood that another deficit will be incurred as a result of too small a levy.

**Assessed valuation of tangible property.** — The total assessed valuation of all tangible property in Nebraska for

the years 1913 to 1932, and the assessed valuation of some of the more important classes of property are given in Table 25.

TABLE 25.—*The total assessed valuation of tangible property in Nebraska and the valuation of principal classes and rate of state levy, 1913 to 1932*<sup>1</sup>

Year	Total assessed valuation of property	Assessed valuation of				Rate state levy in mills
		Farm land	Lots and improvements	Railroad property	Personal and all other tangible property	
(Thousands of dollars)						
1913	\$ 470,690	\$ 251,244	\$ 71,388	\$ 55,829	\$ 92,229	7.80
1914	471,940	252,887	73,088	55,945	90,020	7.80
1915	481,931	255,219	73,481	55,945	97,286	6.80
1916	500,827	266,460	79,567	56,833	97,967	6.10
1917	528,891	269,926	82,132	56,855	119,978	7.83
1918	567,948	271,284	84,059	56,828	155,777	7.78
1919	568,922	273,977	85,455	56,831	152,659	13.00
1920	762,285	428,895	111,303	60,851	160,060	10.39
1921	3,312,737	1,831,049	535,499	307,695	650,259	3.30
1922	3,202,706	1,753,312	539,731	315,999	546,117	2.30
1923	3,202,926	1,787,277	556,434	315,645	539,278	2.00
1924	3,186,489	1,773,564	568,257	314,467	528,567	1.80
1925	3,159,386	1,774,884	582,079	313,421	484,388	2.35
1926	3,177,159	1,775,232	600,788	313,154	487,986	1.80
1927	3,141,147	1,778,440	613,082	281,126	468,498	3.75
1928	3,125,855	1,780,033	620,581	258,441	466,801	2.06
1929	3,167,489	1,782,761	627,008	260,002	497,718	2.40
1930	3,102,051	1,736,633	620,909	261,222	483,287	2.34
1931	3,045,794	1,736,538	621,762	252,842	434,652	2.04
1932	2,521,001	1,435,384	530,321	220,957	334,338	2.37

<sup>1</sup> Years 1913 to 1920 from Biennial Reports of Auditor of Public Accounts; 1921 to 1932 from Annual Report of State Tax Commissioner and the State Board of Equalization and Assessment.

The large increase in the value of property in 1921 is due to a change in the basis of assessment. Prior to 1921 the law required that property should be assessed at one-fifth of actual valuation. For 1921 and subsequent years the basis has been actual valuation. Railroad property was the only important class of property which was assessed at more than five times the value in 1921 that it was assessed at in 1920. The decline in actual value of some of the other groups was doubtless due to the deflation which began in the summer of 1920. The rate of the state tax levy declined materially with the change in the basis of assessment in 1920.

In only two years of the twenty for which data are presented in Table 25 was the assessed valuation of farm land less than one-half of the total assessed valuation of all property in the state. In these years, 1918 and 1919, there was a large increase in the value of livestock, farm equipment, and other

tangible property without a corresponding increase in land values. In no year since 1922 has the total assessed value of farm lands and improvements in Nebraska been less than 55.6 per cent of the total assessed valuation of all property in the state.<sup>10</sup> Although the assessed valuation of different classes of property varies from year to year and therefore the percentage which any one class of property constitutes of the total assessed value is variable, nevertheless the changes have not been so large in recent years that any one year is not fairly representative. An analysis of taxable assessed valuations of tangible property for 1932 is given in Table 26.

TABLE 26.—*Analysis of taxable assessed valuation of tangible property in Nebraska in 1932<sup>1</sup>*

Item	Valuation	Per cent
Farm lands under lease or contract.....	\$ 8,688,981	.34
Farm lands and improvements.....	1,435,384,208	56.94
Town lots .....	530,821,240	21.04
Livestock .....	80,158,952	3.18
Poultry .....	3,157,228	.12
Grains .....	11,322,135	.45
Farm machinery .....	30,301,441	1.20
Industrial machinery .....	4,436,157	.18
Automobiles and trucks, Special "D" .....	42,093,759	1.67
Goods and merchandise, Special "C" .....	45,548,202	1.81
Household goods.....	18,381,692	.73
Telegraph companies.....	1,574,141	.06
Telephone companies .....	18,349,744	.73
Pipe line companies.....	7,180,948	.28
Electric light, heat, and power companies.....	10,641,078	.42
Fire insurance companies.....	5,238,000	.21
Franchise valuation .....	4,726,832	.19
Railroad property .....	220,957,282	8.76
All other property <sup>2</sup> .....	42,548,961	1.69
Total.....	\$2,521,000,981	100.00

<sup>1</sup> Annual Report of the State Tax Commissioner, 1932, p. 68.

<sup>2</sup> This does not include the valuation of intangible property.

(The valuation used above is that reported by the county assessors.)

From Table 26 it is apparent that real estate, Lines 1, 2, and 3, paid 78.32 per cent of the property tax levied by the state in 1932. Farm property paid more than three-fifths of the general property tax levied by the state although the exact amount cannot be determined. If we add Lines 1 and 2, which are entirely farm property, Lines 4, 5, 6, and 7, which are almost entirely farm property, and one-third the valuation of Lines 9, 11, and 19, the sum is 63.96 per cent of the total assessed valuation of tangible property in Nebraska in 1932. This gives an indication of the large share of the general property tax which is paid by the owners of farm property. Additional information concerning the tax burden on agriculture is given in the discussion of school taxes.

<sup>10</sup> Annual Reports of State Tax Commissioner, Nebraska.



**Non-tax revenue receipts.**—The State of Nebraska receives very considerable revenue receipts from sources other than taxes. A brief analysis of the sources of these receipts is given in Table 27. The total receipts from sources other than taxes is given in Column 2. These receipts have increased somewhat irregularly but were more than  $2\frac{1}{4}$  times as large in 1932 as in 1914. The greatest increase is from subventions and grants from the United States government (Column 3).

The Hatch Act passed by Congress in 1887 provided for the payment of \$15,000 to each state or territory to carry on agricultural experiments and to print and distribute the results. The Adams Act, which was supplementary to the

TABLE 27.—*State revenue receipts from sources other than taxes, Nebraska, 1914 to 1932*<sup>1</sup>

Year	From sources other than taxes	Subventions and grants, U. S. govt.	Charitable and penal institutions	Educational institutions	Trust funds	From minor sources
(Thousands of dollars)						
1914	\$3,389	\$ 116	\$276	\$ 296	\$ 718	\$1,983
1915	2,860	119	271	279	612	1,579
1916	2,925	121	260	368	783	1,393
1917	2,473	138	357	337	872	769
1918	3,801	170	630	725	894	1,382
1919	4,198	232	736	1,203	920	1,107
1920	4,611	797	609	1,168	1,045	992
1921	5,832	1,648	583	1,838	1,057	706
1922	4,560	1,477	364	903	1,082	734
1923	4,255	1,404	272	1,045	1,141	393
1924	4,879	1,328	266	1,300	1,122	863
1925	5,278	1,832	299	1,123	1,093	931
1926	5,520	2,164	319	1,343	1,094	700
1927	5,836	2,724	308	1,278	1,070	456
1928	6,474	3,003	342	1,427	1,129	573
1929	5,050	1,614	354	1,444	1,102	536
1930	6,613	2,380	387	1,683	1,136	1,047
1931	6,503	2,932	334	1,543	1,107	587
1932	8,701	5,212	257	1,499	988	645

<sup>1</sup> Years 1914 to 1921 from county reports in state auditor's office; 1922 to 1932 from Annual Report of State Tax Commissioner and the State Board of Equalization and Assessment.

Hatch Act, granted additional funds for agricultural research. Since 1911 each state has received an annual appropriation of \$15,000 under this act.

Under the terms of the Second Morrill Act passed by Congress in 1890 and the Nelson amendment passed in 1907, each state receives \$50,000 of federal funds each year for instruction in the Land Grant colleges. A considerable part of the remainder of the \$116,000 received from the federal government in 1914 was for the support of the soldiers' and sailors' homes at Grand Island and Milford.

The Smith-Lever Act provides federal aid for agricultural extension work. Each state received \$10,000 in 1914. The law provided for an increased appropriation each year for seven years. These additional funds are allotted to the several states in the proportion which the rural population of each state bears to the total rural population of all the states, and are conditioned upon the state's appropriating for agricultural extension activities an amount at least equal to the federal appropriation. Nebraska received Smith-Lever funds for the fiscal year 1931-32 amounting to \$104,022.23. The state also received \$28,253 for agricultural extension under the Capper-Ketcham Act and \$23,200 from the Additional Co-operative fund. Additional aid was provided for agricultural research by the Purnell Act, which was passed in 1926. Each state received \$60,000 from this fund in 1931-32.

The Smith-Hughes Act of 1917 provides federal aid for vocational education in high schools. Nebraska received \$75,163 from this fund in 1931-32 and \$16,366 under an act passed in 1920 for the "vocational rehabilitation for persons disabled in industry or otherwise", and \$26,718 from the George Reed Fund.

The big increase in federal contributions has been to aid road construction. The state received \$4,782,852 for its highways in 1931-32, which was 91.7 per cent of all federal grants to the state. The road fund is probably the only fund in the group that was influenced materially by either inflation or deflation. The policy of appropriating federal funds to aid the states in highway construction originated during the inflation period. It has been continued during deflation in an effort to relieve unemployment. The Purnell Act would probably not have been passed in a period of serious depression. Its enactment was due primarily to a recognition of the benefits of agricultural research, and to the admitted need for more specific information in agricultural economics and home economics, two branches of knowledge for which specific provision had not been made in the Hatch and Adams Acts. Agriculture has undoubtedly been benefited by the Purnell Act, but its enactment was not due either to inflation or deflation.

Agriculture has undoubtedly been aided by federal aid for road construction. The need for better highways has been almost universally recognized and state taxes for highway construction would doubtless have been higher had there not been federal aid. Since the funds for federal aid have been secured quite largely from a tax on incomes, the direct contributions of Nebraskans to the funds appropriated for roads have been much less than the grants received. Agriculture has also gained from federal aid to road construction during

the deflation, because it has provided employment for farmers and other laborers who would otherwise have been idle.

**Charitable and penal institutions.**—The charitable and penal institutions of the state return to the state treasury an income from products sold. The state hospital at Ingleside, for example, produces more hogs than are required for use by the institution. Any receipts from products sold are placed in the state treasury. They are expended for the purchase of commodities needed by the institution, and any profit from their production reduces by that amount the tax money that must be appropriated for the support of the institution. All funds secured from the sale of products must be appropriated by the legislature before they can be used by the institution which produces them. From 1929 to 1932 these institutions turned in to the state treasury \$257,540. The amounts turned into the treasury increased during inflation and decreased during deflation (Table 27, Column 4).

**Receipts from educational institutions.**—The University of Nebraska, the four State Normal Schools, and the State Superintendent of Public Instruction had combined receipts in the fiscal year, July, 1931, to June, 1932, which totaled \$1,499,459. Some of the more important sources of income are student fees, dormitory room rent, meals, sale of products produced by the Experiment Station, and certification fees received by the State Superintendent.

The receipts from the State University and State Normal Colleges increased about five-fold from 1914 to 1932 (Table 27, Column 5). This increase is a result of several causes. The attendance increased and in consequence larger sums were collected as student fees. Fees were increased as an aid in meeting constantly increasing expenses. The increased appropriations for agricultural research made possible an increased amount of experimental work and as a result there was an increased volume of products sold.

Products sold at much higher prices during the years of large receipts than in 1914 and 1915. On the other hand, expenses were higher when receipts were large. Under Nebraska statutes, all money taken in by the state institutions is deposited in the state treasury and can be paid out only in accordance with a legislative appropriation. These funds decrease rather than increase the amount of tax money needed for the proper support of the state institutions.

**Trust funds.**—The largest items of income from trust funds are from school-fund bond interest and school-fund land lease. Smaller sums are derived from university and normal-school land leases, and bond interest and soldiers' relief bond interest. The income is somewhat higher during periods of

inflation than in periods of deflation. The income from trust fund holdings relieves the tax payers by that amount.

**Receipts from minor sources.**—Income received by the state from several sources is combined under this heading for the sake of brevity. Some of the sources included are the interest on state funds, Supreme Court fees, and fees collected by the various state departments. Most of these fees are for performing some service and are fixed with some relation to the cost of the service. The Department of Agriculture, for example, receives fees for inspecting nurseries, potatoes, and cold-storage warehouses.

**Local taxes.**—Local levies under the general property tax are of much greater importance to property owners than the state tax levy. In recent years the state has received only about 12 or 13 per cent of the total amount secured by the general property tax. The amount levied by the state and by local subdivisions in selected years is given in Table 28.

The tax levies of local subdivisions increased during the period of inflation primarily because of the increase in the price level. All commodities purchased by a county or city or school district cost more than in 1913 and wages and salaries were higher. The salaries paid county officials lagged behind the cost of living and the salaries paid in industry, because maximum salaries are fixed by legislative action.

Local expenditures tended to increase from 1922 to 1929 because of an increase in the services performed. County expenditures for roads and bridges increased. Cities made needed improvements. School districts built new school houses and hired more teachers in order to care better for the increased number of children attending school. The great increase in attendance was in the high school, which is the most expensive part of the public school system. The expenditures of the local subdivisions increased more than did the tax levies because school houses, courthouses, and other public buildings were built quite largely from the proceeds of bond issues.

Tax levies by the local subdivisions have increased more since 1913 than the state levy. In other words, the taxes which have increased most are the taxes which people vote upon themselves. This is surprising because of the general feeling among tax payers that taxes are too high and should be reduced.

Nebraska property owners paid a smaller part of their income for taxes from 1914 to 1920 than in the years preceding the World War. The price of farm products and wages and salaries as a whole rose more rapidly than the

TABLE 28.—*Taxes levied under the general property tax by the State of Nebraska and local subdivisions in selected years*<sup>1</sup>

Year	Taxes levied					Total
	State	County	Schools	Cities and villages	Township	
(Thousands of dollars)						
1913	\$ 3,671	\$ 5,671	\$ 9,000 <sup>2</sup>	\$ 3,181 <sup>2</sup>	\$ 965	\$22,488
1919	10,931	11,959	24,360	9,172	1,652	58,074
1923	6,404	9,976	24,218	8,383	1,353	50,334
1924	5,737	10,110	24,273	8,858	1,440	50,418
1925	7,457	10,119	25,270	8,650	1,523	53,019
1926	5,758	9,722	25,562	9,505	1,554	52,101
1927	11,863	11,017	30,361	9,061	1,622	63,924
1928	6,567	11,141	26,445	9,970	1,621	55,744
1929	7,879	11,456	27,127	9,164	1,599	57,225
1930	7,461	10,894	26,895	9,589	1,686	56,525
1931	6,394	10,311	25,902	10,695	1,593	54,895
1932	6,128	8,696	22,625	9,707	1,150	48,306

<sup>1</sup> Both tangible and intangible property were included in 1913 and 1919, but only tangible property in the later years. The revenue received from intangible property was relatively small. The data for the state, county, township, and total levy for 1913 were obtained from the Report of the Special Commission on Revenue and Taxation (1914). The data for 1919 are from Analysis of 1921 Taxes in Nebraska, compiled by the State Department of Taxes. Data for 1923 and later years are from the Annual Reports of the State Tax Commission for the years specified.

<sup>2</sup> Approximation. The division of \$12,181,340 between schools and cities could not be obtained with absolute accuracy.

expenditures of the state and its local subdivisions. The rise in the salaries of public officials and employees was more gradual than the rise in prices of farm products, or wages in general, or retail prices. Tax payers benefited also from using public buildings constructed when prices were lower.

As has been previously stated, the prices of farm products dropped precipitately in the fall of 1920 and continued to decline throughout 1921. They rose in 1922. The average farm price index for the United States from 1922 to 1929 was 35 per cent above pre-war. The average for Nebraska was somewhat lower. For the same period the Bureau of Labor wholesale price index averaged about 44 per cent and the cost of living about 60 per cent above pre-war. In no year from 1919 to 1931, was the amount of the levies under the general property tax less than 122 per cent higher than in 1913. In 1927 it was 184 per cent higher and in two other years more than 150 per cent higher. The tax bore down heavily upon the owners of farm property. As has been stated previously, the assessed value of farm property in 1932 was nearly 64 per cent of the assessed value of all tangible property in the state. It was even higher in some of the preceding years. The purchasing power of farm products was lower than in pre-war years since retail prices had risen higher relatively than the prices of farm products. After

paying taxes, farmers as a group could buy less goods than before the war.

Business and professional men and laborers in cities who had jobs were prosperous from 1922 to 1929. Profits, fees, and wages had risen more than the cost of living. Taxes consumed a smaller part of the total income of the city residents than of that of the farm landowners.

**Taxes in consolidated school districts.**—The increase in the taxes on farm property has been unevenly distributed. In some communities local expenditures have been but little higher than pre-war; in other communities current expenditures have been high and debts for public buildings have been incurred. Some of the consolidated school districts furnish good examples of how local expenditures have increased.

The major part of the consolidated school districts in Nebraska were organized during the war time and post-war boom. Many of these districts built school houses in 1919 and 1920 when building costs were at their peak. The cost of operating a twelve-grade school is more than the cost of operating an eight-grade school. Consolidated schools furnish transportation. Nearly all of these schools are paying interest on a heavy bonded debt and making some reduction in the debt itself. Building costs had declined in January, 1933, to about one-half of the 1920 peak. One school district that had paid off one-half of a building debt which was incurred in 1920 had a school house which could be replaced in the spring of 1933 for just about the amount of the unpaid bonds.

Summarized tax statistics for nine consolidated school districts are given in Table 29. Of the nine districts selected for study, two were consolidated previous to 1914, two in 1917, two in 1918, two in 1919, and one in 1921. For the schools consolidated since 1914, the data for the years preceding consolidation were obtained by combining the data for the districts consolidated.

The increase in the assessed value of property in 1920 was the result of changing the base of assessed value from one-fifth value to actual value. With a single exception each school house is located in a small village. Farm real estate, however, forms a large part of the assessed value of all tangible property in every district. In 1918 because of the rapid rise in the value of livestock, grain, and other commodities, farm real estate comprised only a little more than 52 per cent of the total assessed valuation. In no year from 1926 to 1932 was the value of farm real estate less than 75 per cent of the value of all tangible property in the nine districts.

TABLE 29.—*Assessed valuation, taxes levied, and other tax data of nine consolidated school districts in Nebraska, 1914 to 1932*<sup>1</sup>

Year	Assessed value of		Amount levied on		Per cent on farm real estate	Compos- ite rate in mills
	All property	Farm real estate	All property	Farm real estate		
1914	\$ 2,501,385	\$ 1,834,811	\$ 77,841	\$ 56,353	72.40	31.12
1915	2,613,065	1,875,541	93,659	58,992	62.99	32.02
1916	2,618,241	1,891,000	80,132	56,276	70.23	30.60
1917	2,753,969	1,879,044	102,287	69,155	67.61	37.14
1918	3,157,598	1,826,318	136,357	77,748	57.02	43.18
1919	2,911,255	1,826,895	178,880	117,023	65.42	61.44
1920	3,929,341	2,810,872	252,728	178,943	70.80	64.32
1921	15,301,728	11,494,267	253,421	189,004	74.58	16.56
1922	16,097,817	11,652,811	231,581	165,597	71.51	14.38
1923	16,319,324	11,983,255	208,270	159,979	76.81	12.76
1924	16,363,924	12,160,785	224,502	165,358	73.66	13.72
1925	16,363,861	12,009,190	228,172	164,131	71.93	13.94
1926	16,328,534	12,263,255	221,593	172,035	77.64	13.57
1927	16,026,975	12,213,120	257,032	194,624	75.72	16.04
1928	15,902,764	12,194,315	231,716	175,864	76.33	14.57
1929	15,785,355	12,120,370	237,018	180,527	76.17	15.12
1930	15,607,447	12,014,810	232,500	177,164	76.20	14.90
1931	15,407,235	11,738,220	213,948	162,779	76.09	13.89
1932	12,424,057	9,434,945	186,192	139,657	75.00	14.99

<sup>1</sup> These data were compiled from the records in the offices of nine county treasurers. The counties and districts are as follows: Adams, District 42; Gage, District 166; Lancaster, District 145; Madison, District 83; Otoe, District 10; Pawnee, District 69; Saunders, District 72; Seward, District 96; and Wayne, District 76.

Tax levies increased as inflation progressed and increased following consolidation in every one of the nine districts that consolidated during the period for which statistics were obtained. The amount of taxes levied for all purposes in 1920 was approximately 325 per cent of the amount levied in 1914, and for the 11 years, 1920 to 1930, the levies averaged more than three times the 1914 levy. In some of the districts the amount levied in a part of the years following consolidation was more than four times as great as in 1914. In order to show the wide variation in tax levies, data were tabulated for a one-teacher school in each of the counties from which data for a consolidated school were obtained. These data are given in Table 30.

The amount of taxes levied in this group of school districts was largest in 1927. The high levy of that year was due to an unusually high state levy. For the 11-year period, 1920 to 1930, the levies averaged 188 per cent of pre-war.

The total mill rate levied in the group of districts for which data are presented in Table 29 was about 11 per cent higher in the four years, 1914 to 1917, than in the group of districts for which data are presented in Table 30. In the 10-year

TABLE 30.—Assessed valuation, taxes levied, and other tax data for nine school districts in Nebraska employing but one teacher each, 1914 to 1932<sup>1</sup>

Year	Assessed value of		Amount levied on		Per cent on farm real estate	Composite rate in mills
	All property	Farm real estate	All property	Farm real estate		
1914	\$ 643,886	\$ 530,574	\$18,987	\$15,616	82.25	29.49
1915	652,395	539,625	19,151	15,773	82.36	29.35
1916	691,924	573,625	19,018	15,726	82.69	27.48
1917	705,771	562,068	22,247	17,657	79.37	31.52
1918	759,094	562,568	24,163	17,405	72.03	31.83
1919	714,797	557,674	29,024	22,139	76.28	40.60
1920	1,026,236	826,162	36,872	29,305	79.48	35.93
1921	4,160,436	3,530,846	41,237	34,998	84.87	9.91
1922	4,123,725	3,545,918	32,231	27,692	85.92	7.82
1923	4,030,512	3,549,122	31,328	27,531	87.88	7.72
1924	4,109,950	3,586,767	34,079	25,391	74.51	8.29
1925	4,101,394	3,590,410	34,391	30,132	87.62	8.38
1926	4,164,520	3,679,460	32,106	28,287	88.11	7.71
1927	4,120,520	3,663,340	41,552	36,907	88.82	10.13
1928	4,246,620	3,698,205	36,710	31,867	86.81	8.64
1929	4,250,527	3,715,490	37,666	32,846	87.20	8.86
1930	4,144,214	3,619,060	34,858	31,207	89.53	8.41
1931	4,076,633	3,672,530	33,316	29,992	87.64	8.17
1932	3,333,280	3,044,580	30,023	28,109	93.62	9.01

<sup>1</sup> These data were compiled from the records in the offices of nine county treasurers. The counties and districts are as follows: Adams, District 23; Gage, District 5; Lancaster, District 30; Madison, District 41; Otoe, District 61; Pawnee, District 4; Saunders, District 42; Seward, District 58; and Wayne, District 15.

period, 1921 to 1930, after all the districts in the first group had been consolidated the mill rate was more than 70 per cent higher than for the one-teacher school districts during the same years.

The lowest percentage of total tax levy which was levied on farm real estate in the one-teacher school districts was 72 per cent in 1918. In only one year from 1926 to 1932 was the value of farm real estate less than 87 per cent of the value of all tangible property in these nine districts.

**Conclusions.**—Public expenditures necessarily increased during the war times and post-war inflation period. Because people felt prosperous, new projects were sometimes undertaken which entailed great increases in public expenditures. A very large part of the increases in state and county expenditures was borne by farm property. In most rural school districts practically all of the increased expenditures were borne by farm property. In many school districts which centered in a village the farm property within the district had a greater assessed valuation than the village property.

The expenditures of consolidated school districts are much higher relatively than the expenditures of one-room schools. As a matter of course, the children in the consolidated school



districts have educational advantages not possible in one-teacher schools. Taxes have been a heavy burden on farm property since the price decline in 1920, and have been particularly heavy since 1930. Data concerning farm earnings and the influence of taxes on net earnings are presented in Chapter VIII.

## CHAPTER VIII—NEBRASKA FARM INCOME

When crops are good and farm products sell at high prices, the gross income of farmers is relatively high. When crops are poor or prices low, the gross income of farmers is low. The smallest gross incomes are the result of a combination of poor crops and low prices.

Nebraska farmers are not interested primarily in gross income. Their chief interest is in net farm income, that is, in the difference between gross farm income and all operating costs. It is obviously true that if a farmer has only a small gross income he cannot have a large net income. It is likewise true that no matter how large the gross income, the net income cannot be large if operating costs are excessive.

The net profits of any farmer depend primarily on two things: the relationship between the price of products sold and the expenses of production, and the volume of sales. Farmers must buy equipment and materials, and must provide labor. They must pay rent or take into account the capital invested in land and in improvements. Even if a farmer uses only family labor, and thus avoids hiring other help, the labor is nevertheless an important item in the cost of production because the amount that the labor of the farmer and other members of his family would have earned, had they been engaged in some alternative enterprise, should be regarded as a cost.

Farmers are prosperous when the amount received for the product is considerably more than the out-of-pocket or actual money costs of production. They are receiving a satisfactory return upon their investment, relatively high wages for their labor, and some reward for their risk and managerial ability.

**How information concerning income of farmers can be secured.**—The best method of obtaining accurate information upon the income of farmers is to get data from account books kept by farmers. The next best way is by conducting a farm-management survey, that is, by visiting each farmer and obtaining from him definite information concerning his crop yields, sales of products, farm expenditures, and his grain, feed, livestock, and equipment inventories at the beginning and the end of the year. The data obtained by this method are not quite as accurate as those secured from farm account books, because men are likely to forget small expenditures and minor receipts. It has been found, however, that when a survey covers a considerable number of farms the average net farm income secured by this method does not vary materially from the net farm income obtained from carefully kept farm records. The overestimates tend to bal-

ance the under-estimates, and sales omitted approximately equal expenditures omitted.

The Nebraska College of Agriculture completed its first farm-management survey in 1911.<sup>11</sup> Other surveys were made in later years. Since 1919 the college has co-operated with farmers in the keeping of farm account books. The number of account books from which data are available is not large for the earlier years, but is 800 for 1931.

In the discussion of farm income that is given in the pages which follow, no distinction is made as to the source of the data. For the earlier years they are entirely from survey records, for the later years entirely from farm account books, and for a few of the intermediate years in part from survey records and in part from account books.

Unfortunately the records are not those of a single group of farmers for the entire period. A few farmers have submitted records for each of the past ten years, and many farmers have submitted records for the major part of the ten-year period. There has been, however, a considerable shifting. This shifting is inevitable. The majority of the men who were farming in Nebraska in 1914 are not farming today. There is in fact a very material change from year to year. Some men find the keeping of accounts irksome, and others become discouraged because the results are not satisfactory. For these and various other reasons the farm account book co-operators are a rather rapidly changing group.

Since the men who keep the accounts are not all the same men from year to year, and since there is naturally an even greater change of farms than of men, the year-to-year data are not strictly comparable. It is believed, however, that the farms from which records are obtained in any given year are a fairly representative sample of the farms in the communities from which the records were obtained.

In one Nebraska county in 1929, 45 tenant farmers had an average net farm income of \$1,731, and 34 farm owners had an average net farm income of \$3,031. It seems safe to assume that the average net income of all the farmers in the county was quite satisfactory.

In the same county in 1930, the average net farm income of 31 tenant farmers was \$444, and of 34 owner-operators it was \$1,047. Even though some of the 1929 co-operators did not submit records in 1930, and a few new co-operators sent in their books, the evidence is conclusive that farm returns were much less satisfactory in this county in 1930 than in 1929. It is probable that the average income of the men

<sup>11</sup> Results of this survey and others conducted in 1912, 1913, and 1914 are given in Bulletin 157, Farm Management Studies in Eastern Nebraska, Nebraska Agricultural Experiment Station.

who keep records in any county is somewhat higher than the average for all farms in the county, because the less successful farmers are not likely to keep records.

**Definitions.**—The following definitions explain the particular sense in which certain words and terms are used in this study.

*Farm capital.*—The farm capital is the estimated total value (at the beginning of the year) of all real estate, machinery, livestock, feed, and supplies. Prior to 1928 the value of the farm house was included in the real estate inventory, but has since been omitted for the reason that the home is not a part of the farm business. Money owed by the farmer is not subtracted, and property owned by him outside of that used in the farm business is not added.

The estimated values given in a farm inventory are usually very conservative. This is particularly true of land values. Land would probably have sold for more in 1919 and 1920 than the price at which it is listed in the inventories. On the other hand, estimated land values in 1931 and 1932 were undoubtedly higher than the amounts the properties would have sold for at a forced sale. Since the owners were not selling at a forced sale they were probably justified in inventorying their property at what they considered a fair normal value.

*Gross income.*—The gross income of the farm is the sum of all farm receipts including produce paid for "in trade" plus any increase in livestock, feed, and equipment inventory. It includes nothing from outside the farm such as interest on bank stock or money loaned, and does not include any increase in land values.

*Operating expenses.*—The operating expenses include all business expenses of operating the farm. Depreciation on buildings and machinery and any decrease in feed inventory are included in the expenses. The cost of the board furnished hired labor is considered a part of the expense of the labor. Unpaid family labor used in any of the farm operations is also considered as an expense. Household and personal expenses are not included.

*Farm income or net income.*—The farm income or net income is the amount remaining after the operating expenses are subtracted from the gross income.

*Interest on investment.*—Interest on investment is the interest on the total farm investment computed at some specified rate. In Table 31. interest is computed at 5 per cent. This rate is lower than the rate commonly charged by banks for short-time loans and higher than the rate paid by the federal government for either long-time or short-time credit.

It was the most common rate paid for conservative loans on Nebraska farm land during the period covered by this study.

*Labor income.*—Labor income is the farm income less interest on the investment. It is what remains for the labor of the operator after paying all expenses and allowing a definite interest rate for the use of capital. In addition to the labor income, the operator received whatever fruit, vegetables, milk, butter, eggs, meat, and fuel the farm furnished toward the family living. The farmer also had the use of a house in which to live, but this was not entirely an addition to income. Prior to 1928, "interest on investment" included interest on the value of the house. For the years 1928 to 1932 the value of the house was not included in the business investment and repairs and upkeep of the house were not included in farm expense.

*Farm owner.*—The man who operates his own farm is called a farm owner or owner-operator.

*Owner-additional.*—The owner-additional is an owner-operator who rents additional land.

*Landlord.*—The landlord is the owner of land farmed by a tenant.

*Tenant farmer.*—The farmer who rents all the land that he operates is a tenant.

Tenant farmers are sometimes divided into classes in accordance with the type of contract under which the land is operated. The tenant who pays a fixed sum for the use of land is a *cash tenant*. If a share of each crop produced is paid for the use of the land, the operator is a *share tenant*. If a definite proportion of some crops is paid for the use of the land on which they are produced, and cash paid for the use of other land, the lease is a *share-cash* lease. This is the most common type of lease in Nebraska, but the exact terms of such leases vary widely. One of the more common forms is for the tenant to pay share rent for land planted to cereals and cash for meadow and pasture land.

The 50-50, or *stock-share* lease, is increasing in popularity. Under this lease the land owner retains an interest in the productive livestock and usually has an interest in the horses and machinery.

**Farms operated by owners.**—During the 19 years, 1914 to 1932, more records were obtained from farms operated by owners than from owner-additional or tenant farms. Relatively few records were obtained for some of these years, and unfortunately the number of farms from which continuous records were obtained was even smaller. The general trend of the income during these years that was received

from the few farms for which records were kept throughout the entire period was quite similar to the trend for the average of all farms of the group. The data for the group are given in Table 31.

Gross income in 1914 was slightly larger than in 1915. The average prices paid farmers for hogs at local Nebraska shipping points was \$7.52 in 1914 and \$6.38 in 1915 (Table

TABLE 31.—Average size of farms in acres, gross income, operating expense, farm income, capital value, interest on investment, and labor income for farms operated by owners, by years, 1914 to 1932

Year	No. of reports	Acres	Gross income	Operating expense	Farm income	Capital value	Interest at 5 per cent	Labor income
1914	91	247	\$2,733	\$1,056	\$1,677	\$24,880	\$1,244	\$ 433
1915	195	347	2,630	1,030	1,600	23,488	1,174	426
1916	85	319	4,035	1,187	2,848	22,404	1,120	1,728
1917	23	311	4,771	1,375	3,396	26,053	1,303	2,093
1918	22	279	6,602	2,191	4,411	38,721	1,936	2,475
1919	18	243	7,129	2,541	4,588	41,671	2,084	2,504
1920	17	182	5,939	4,019	1,920	33,987	1,697	223
1921	49	169	3,072	2,073	999	23,803	1,190	—191
1922	23	217	2,229	1,339	890	29,956	1,500	—610
1923	35	201	3,102	2,049	1,053	30,351	1,518	—465
1924	64	283	2,790	1,320	1,470	20,016	1,001	469
1925	18	178	5,346	3,183	2,163	32,522	1,626	537
1926	35	191	4,324	2,284	2,040	33,126	1,656	384
1927	74	231	4,344	2,222	2,122	35,428	1,771	351
1928	102	246	4,847	2,381	2,466	36,586	1,829	637
1929	145	337	5,856	3,031	2,825	34,297	1,715	1,110
1930	230	332	3,813	3,105	708	32,897	1,645	—937
1931	225	302	2,176	2,695	—519	31,306	1,565	—2,084
1932	192	309	1,571	2,136	—565	24,930	1,246	—1,811

14). Fat cattle and eggs averaged slightly higher in 1914 than in 1915. On the other hand, wheat was materially higher in 1915 than in 1914 (Table 10) and farms from which records were secured which produced considerable wheat showed a larger gross income in 1915 than in 1914.

Gross farm income increased rapidly from 1915 to 1919. The average gross income for 18 farms from which records were received in 1919 was 271 per cent of the average gross income returned by 195 farms in 1915. The average price index for the state was only about 225 per cent higher in 1919 than in 1915. The large gross income shown was due not only to the high prices and good crops but to the inclusion of several farms which carried on extensive feeding operations in 1919.

Operating expenses increased rapidly from 1915 to 1919. Hired labor, threshing, shelling, repairs, and practically every other farm expense more than doubled during the period.

The advance in prices was particularly rapid in 1918 and 1919.

The Nebraska farm income increased during the period because the prices of farm products which are represented by gross income increased more rapidly than products and labor purchased and represented by operating expenses.

Capital values, particularly land values, surged upward in 1918 and 1919.<sup>12</sup> Because of the larger capital, the allowance for interest on investment was larger. Although the average gross farm income was materially higher in 1919 than in 1918, the labor income was but little higher because of increased costs of operation and a larger allowance for interest. Gross farm income was somewhat smaller in 1920 than in 1919. Hogs averaged nearly 25 per cent lower in 1920 than in 1919, and cattle were materially lower. Corn and wheat were much lower at the close of 1920 than at the beginning of the year.

The 1920 crop was produced at the highest cost of any crop ever produced in the United States. Farmers who had hogs, cattle, corn, or wheat on hand at the beginning and end of the year, suffered heavy inventory losses. Hogs were worth only about two-thirds as much per pound at the end as at the beginning of the year and corn only about one-third as much per bushel. Net farm income was much lower in 1920 than in 1918 and 1919 and the labor income for the year was relatively small.

Prices paid for farm products averaged materially lower in 1921 than in 1920. Farm operating expenses decreased but not as much as gross farm income. Few farmers received a satisfactory labor income and thousands of Nebraska farmers received no returns for their labor and less than 5 per cent on their investment. The actual decrease in capital values was less than is indicated in Table 31 because the reports for that year included farms in Sioux, Garden, and Morrill counties which had a relatively low valuation.

The prices of farm products strengthened somewhat from 1925 to 1929 and as a result farmers received a somewhat larger farm income than in 1921, 1922, and 1923. The labor income was relatively small each year.

Gross incomes of farmers were small in 1931 and 1932 because of the decline in the price of farm products. Operating expenses declined much less than gross income. This was due primarily to the large decrease in the inventory value of feed and livestock. Farmers reduced their out-of-pocket expenses to the lowest possible minimum. Some expenditures

<sup>12</sup> Tables 46 and 47 give average land values by years.

over which the individual farmer had no control, such as taxes, were reduced but little.

Although the farm income shows a loss in 1931 and 1932, the actual cash receipts of most farmers were greater than their farm business expenditures. This apparent inconsistency

TABLE 32.—*Financial statement of 48 Cass county farms for 1932 (averages)*

Items	Amount
<b>Cash income</b>	
Livestock and their products.....	\$2,005
Feed, grain, and supplies.....	465
Machinery and equipment.....	41
Farm improvements.....	1
Labor off farm.....	14
Miscellaneous.....	8
<b>Total</b> .....	<b>\$2,534</b>
<b>Cash expenditures</b>	
Livestock bought.....	\$ 506
Feed bought.....	260
Machinery expense.....	224
Farm improvements.....	41
Livestock expense.....	23
Crop expense.....	81
Hired labor.....	142
Taxes.....	312
Miscellaneous.....	16
<b>Total</b> .....	<b>\$1,605</b>
<b>Net cash gain</b> .....	<b>\$ 929</b>
<b>Inventory losses</b>	
Livestock.....	\$ 442
Feed, grain, and supplies.....	358
Machinery and equipment.....	227
Farm improvements.....	153
<b>Total net inventory loss</b> .....	<b>\$1,180</b>
Less net cash gain.....	929
<b>Net loss</b> .....	<b>\$ 251</b>

ency is explained by the decline in the farm inventory (exclusive of the decline in land value). The way in which this worked out in a representative county is given in Table 32.

In spite of the fact that these Cass county farmers received no interest on their investment and no labor income in 1932, and actually lost an average of \$251 on their farm operations as a whole, most of them were, nevertheless, able to withdraw some money from the farm business to meet household and personal expenses. An increase in the price of livestock and feeds to the 1930 level will not equalize the losses of these farmers because a part of the loss is due to the depreciation of machinery, equipment, and buildings. Because of the relatively large amount of capital invested in livestock and equipment used in production and because of the time which necessarily elapses between seed time and



harvest and while livestock is growing or being fattened for market, a farmer has greater difficulty in avoiding losses due to inventory changes than have men engaged in most other lines of endeavor.

**Effect of taxes on farm income.**—As was pointed out in Chapter VII, the increases in tax revenues under the gen-

TABLE 33.—*Average income of owner-operated farms after deducting all expenses except taxes, average amount of taxes per farm, average net farm income, and the percentage which taxes constitute of the income of the farms after deduction of all expenses except taxes*

Year	Number of farms	Av. net income plus taxes	Average taxes per farm	Net farm income	Per cent which taxes constitute of Col. 3
1914	91	\$1,777	\$100	\$1,677	5.63
1915	195	1,691	91	1,600	5.38
1916	85	2,956	108	2,848	3.73
1917	23	3,531	135	3,396	3.82
1918	22	4,579	168	4,411	3.67
1919	18	4,781	193	4,588	4.04
1920	17	2,178	258	1,920	11.85
1921	49	1,235	236	999	19.11
1922	23	1,117	227	890	20.41
1923	35	1,291	238	1,053	18.44
1924	64	1,699	229	1,470	13.48
1925	18	2,394	231	2,163	9.65
1926	35	2,275	235	2,040	10.33
1927	74	2,343	221	2,122	9.43
1928	102	3,758	292	2,466	10.59
1929	145	3,094	269	2,825	8.69
1930	230	962	254	708	26.35
1931	225	—270	249	—519	.....
1932	192	—321	244	—565	.....
1920-32	.....	1,597	245	1,352	15.34

eral property tax since 1919 have been borne quite largely by farm property. The effect which this has had on the net income of farmers can be easily seen by comparing the taxes paid by Nebraska farmers with the incomes which they received. A comparison of this kind is given in Table 33. The farms are those for which information concerning income and expenses was given in Table 31.

The amount of taxes paid per farm increased each year from 1915 to 1920, but the percentage which taxes constituted of income was smaller for the years 1916 to 1919 than for the years 1914 and 1915. It was also smaller for these years for a limited number of farms for which exact records of income and taxes are available than for the five pre-war years. As has previously been explained, the prices of farm products rose more rapidly from 1915 to 1919 than costs of production, and therefore net farm incomes increased. Tax increases lagged behind prices.

A larger tax increase occurred in 1920 than in any previous year, but farm incomes were smaller than for any of the four preceding years. Nearly 12 per cent of the income of this group of farmers was required to pay the general property tax in 1920 and more than 19 per cent in 1921. This does not include any taxes either direct or indirect paid to the federal government.

In 1931 and 1932, most of the farmers from whom records were obtained had no net income and therefore paid their taxes from capital. For the 13 years 1920 to 1932, these farmers paid more than 15 per cent of the income remaining after deducting all expenses except taxes, to the treasurers of their respective counties for the support of state and local government. A few of the men also paid federal income taxes, all paid indirect federal taxes, nearly all paid auto license fees, and during the later years those who purchased gasoline paid a tax on every gallon.

All corporations, nearly all partnerships, and many individual business men deduct salaries paid the management as a part of the expense. This is good accounting practice. It is not ordinarily done in farm accounting and was not done in computing the incomes of the co-operating farmers. If the common business practice is followed and a normal wage is allowed the farm operator, the percentage of the farm returns paid out for taxes is larger. If each farm operator were allowed wages 50 per cent larger than was paid to hired men in Nebraska (Table 17, Column 2), 35.84 per cent of the remaining income would be required to meet general property tax payments for the years 1920 to 1932.

Data received from 352 tenant farms in 1930, 357 tenant farms in 1931, and 526 tenant farms in 1932 indicated that the landowners turned over to state and local governments 20.6 per cent of their net incomes in 1930, 35.5 per cent in 1931, and 61.6 per cent in 1932. Many landowners did not have sufficient income from their farms in 1932 to pay taxes, insurance, and other necessary expenses.

**Income of owners, owners-additional, and tenants.**—As has been previously stated, data were secured from owners, owners-additional, and tenants. The average labor income of the farmers of these three classes is given in Table 34.

The trends of the labor income of farmers from 1914 to 1932 are not materially changed by combining the incomes of the owners-additional and tenants with the incomes of the owners. The labor income rose rapidly during the war and post-war boom, dropped precipitately in 1920, and remained very low until 1924. It rose materially from 1924 to 1929 and dropped during the depression of 1930 to 1932. The

TABLE 34.—*Labor income received by Nebraska farmers, 1914 to 1932—data from owners, owners-additional, and tenants*

Year	Number of farms	Average labor income
1914.....	375	\$ 876
1915.....	660	909
1916.....	257	1,874
1917.....	42	1,910
1918.....	27	2,479
1919.....	24	1,984
1920.....	18	185
1921.....	71	—108
1922.....	41	—58
1923.....	100	270
1924.....	171	604
1925.....	45	980
1926.....	112	641
1927.....	221	1,032
1928.....	338	1,245
1929.....	511	1,259
1930.....	794	—119
1931.....	800	—1,455
1932.....	698	—1,135

labor income is influenced by the price of farm products, wages, taxes, and other expenses of farm operations and by the inventory value assigned to land. The relationship between labor income and land values is discussed in Chapter XI.

**Farm and non-farm income.**—The National Bureau of Economic Research has published the results of a series of very comprehensive studies of income. In one of these publications estimates are given of the income of the farm and non-farm population by states for the years 1919, 1920, and 1921.<sup>13</sup> Part of the data for Nebraska have been rearranged and are given in Table 35.

The income of the farm population decreased rapidly during deflation. The 1921 farm income was less than 8 per cent of the 1919 farm income. The non-farm income decreased slightly in 1920 but was nearly 16 per cent larger in 1921 than in 1919. This is an excellent example of the power of the non-farm population to protect itself from accepting its proportionate share of the loss caused by deflation.

The estimated per capita income of the farm and non-farm population of Nebraska and the income per farm family is given in the first part of Table 36. The income per farm family is smaller than for the farms from which records were secured. This is not surprising, because, as has been previously stated, the less successful farmers are not likely to keep records.

<sup>13</sup> Maurice Leven, *Income in the Various States*, National Bureau of Economic Research, 1925.

TABLE 35.—*Income of farm and non-farm population in Nebraska, 1919, 1920, and 1921*<sup>1</sup>

Year	Income of farm population	Income of non-farm population
1919.....	\$392,701,000	\$601,800,000
1920.....	207,801,000	575,751,000
1921.....	31,045,000	696,027,000

<sup>1</sup> Maurice Leven, *Income in the United States*, National Bureau of Economic Research, p. 259.

The distribution of income in the Middle Atlantic states (Table 36) in 1919, 1920, and 1921, differs very materially from the distribution of income in Nebraska. The income of the farm population was reduced, but the reduction was much less proportionately than in Nebraska. This can be accounted for in part at least by the difference in the products sold. Prices paid for milk, eggs, and vegetables in eastern markets fell much less than the prices paid for cereals, hogs, and cattle in Nebraska. The increase in transportation charges affected eastern farmers less than Nebraska farmers because of their proximity to market.

TABLE 36.—*Distribution of total current income of farm and non-farm population in Nebraska and in middle-Atlantic states, 1919, 1920, and 1921*<sup>1</sup>

Year	Per capita entire population	Per capita non-farm population	Per capita farm population	Per farmer (and family)
NEBRASKA				
1919.....	\$598	\$694	\$483	\$1,901
1920.....	534	738	284	987
1921.....	417	690	99	171
MIDDLE-ATLANTIC STATES				
1919.....	\$781	\$812	\$507	\$1,731
1920.....	889	926	489	1,847
1921.....	775	811	422	1,299

<sup>1</sup> Maurice Leven, *op. cit.*, pp. 260, 262, and 264.

The estimated farm income for other middle-western states was much smaller for 1921 than for 1919, but in no other states was the drop as great as in Nebraska. The decrease in the per capita income of the farm population in the continental United States from 1919 to 1921 was much greater than the non-farm population decrease per capita. This is additional evidence in proof of the statement made in Chapter V that farmers cannot make adjustments rapidly enough to protect themselves during deflation.

### CHAPTER IX—CHANGES IN TYPES OF FARMING IN NEBRASKA, 1914 TO 1932

There has been no time in the past hundred years when agriculture could be considered a static industry. New varieties of crops, improved breeds of livestock, better methods of livestock feeding, labor-saving machinery, and expanding crop acreages have resulted from the advances made by science, from the creations of inventive genius, and from the needs of an ever-expanding population. It would be surprising if the effects of inflation and deflation had not accelerated the natural rate of change during the past two decades. To be sure, no one can say definitely what changes would have occurred at a stationary price level, or to what extent the changes which have taken place have been the result of inflation or deflation. It is possible, however, to chronicle the trends in Nebraska agriculture and to mention economic forces which may logically have aided in bringing about the more important changes.

**Wheat.**—During the entire period 1914 to 1932, wheat was the most important cash crop grown in Nebraska. Corn occupied a larger acreage and the total value of the crop was

TABLE 37.—*Wheat: acreage and production in Nebraska and acreage in six southeastern<sup>1</sup> and five western<sup>2</sup> counties, by years, 1914-32*

Year	Nebraska <sup>3</sup>		Six southeastern counties— <sup>1</sup> acres	Five western counties— <sup>2</sup> acres
	Acreage	Production, bushels		
1914	3,668,000	68,116,000	291,056	113,737
1915	3,876,000	71,018,000	252,945	143,018
1916	3,540,000	68,550,000	203,701	130,055
1917	997,000	13,764,000	56,345	133,053
1918	3,828,000	43,141,000	180,168	355,069
1919	4,384,000	60,675,000	267,456	381,476
1920	3,593,000	60,480,000	225,898	373,508
1921	3,967,000	59,875,000	227,077	455,677
1922	4,177,000	59,838,000	310,054	375,688
1923	3,174,000	31,388,000	256,353	234,933
1924	3,061,000	58,519,000	188,502	289,296
1925	2,676,000	34,150,000	134,764	389,072
1926	3,077,000	40,085,000	129,542	351,951
1927	3,630,000	73,826,000	157,263	556,764
1928	3,672,000	69,919,000	171,253	584,438
1929	3,548,000	56,555,000	168,122	602,417
1930	3,810,000	73,275,000	133,738	754,465
1931 <sup>4</sup>	3,462,523	58,376,000	103,303	722,943
1932 <sup>4</sup>	2,168,579	26,620,000	90,345	336,559

<sup>1</sup> Douglas, Sarpy, Cass, Otoe, Nemaha, and Richardson counties.

<sup>2</sup> Cheyenne, Deuel, Keith, Kimball, and Perkins counties.

<sup>3</sup> Annual Reports of the State Board of Agriculture, years 1914 to 1918; Nebraska Agricultural Statistics (annual reports), years 1919 to 1930.

<sup>4</sup> Division of State and Federal Statistics, State House, Lincoln.

larger, but in most years cash sales were smaller. Data upon wheat acreage and production are given in Table 37.

The small acreage of wheat in 1917 was the result of winterkilling, the large acreage of 1919 may be attributed to the high price and the government urge to grow more wheat, and the large acreage of 1922 to the low price of corn in the summer and autumn of 1921. Contrary to the commonly accepted opinion, the wheat acreage in Nebraska has not been larger in recent years than in pre-war years. The acreage of 1915 has been exceeded only three times—in 1919, 1921, and 1922. The 1914 acreage, the major part of which was harvested before the war began, exceeded by 649,000 acres the average annual acreage for the ten years, 1923 to 1932.

Wheat acreage has increased in the western part of the state, but this increase has been more than counter-balanced by a decrease in the eastern counties. The acreage by years in six southeastern counties bordering the Missouri river and five western counties is given in Table 37, Columns 4 and 5.

The wheat acreage in the five southeastern river counties has decreased from an average of 249,234 acres in the three years, 1914 to 1916, to 132,252 in the five years, 1928 to 1932. The acreage in the western Nebraska counties increased from 128,937 acres to 600,164 acres for the same periods. The decrease in wheat production in eastern Nebraska has been general and the increase in western Nebraska has been important in the areas adapted to wheat growing.

One reason for the increased wheat acreage in western Nebraska is the lower cost of production. Cost-of-production records kept by farmers for the six years, 1927 to 1932, gave the following average production costs per bushel: Douglas county, 79 cents; Cass county, 76 cents; Saunders county, 74 cents; Fillmore county, 72 cents; and Perkins county on non-fallowed ground, 53 cents.<sup>14</sup> The acreage yields have averaged lower in the western-Nebraska counties but hours of man labor and equipment costs per bushel have been less.

The combine is commonly used in western Nebraska, and but little in the counties bordering the Missouri river. Its use in the region to which it is adapted reduces the cost of harvesting and threshing by about one-half as compared with the use of a binder and threshing machine.

**Corn, oats, and barley.**—During the years in which the acreage of wheat has been decreasing, the acreage of feed crops has gradually increased. The acreages of corn, oats, and barley for the years 1910 to 1932 are given in Table 38.

<sup>14</sup> Arthur G. George, Cost of Producing Winter Wheat in Six Nebraska Counties, Nebraska Agricultural Extension Circular 839, 1932.

Corn plantings have exceeded in every year since 1919 the acreage planted in 1914 and 1915. The average increase for the ten years, 1923 to 1932, over the five pre-war years was 1,745,900 acres. This was an increase of nearly 23 per cent. The large increase in corn acreage in 1917 was a direct result of the widespread killing of winter wheat.

The average annual acreage of oats was smaller in every year from 1912 to 1916 than in 1910 and 1911. In later years there has been an increase. The average acreage for the ten years, 1923 to 1932, exceeded that of 1910 to 1914 by 124,600 acres.

TABLE 38.—*Acreage of corn, oats, and barley in Nebraska, by years, 1910 to 1932*<sup>1</sup>

Year	Corn	Oats	Barley
1910.....	7,610,000	2,532,000	135,000
1911.....	7,609,000	2,500,000	120,000
1912.....	7,425,000	2,275,000	113,000
1913.....	7,425,000	2,250,000	110,000
1914.....	7,100,000	2,175,000	113,000
1915.....	7,100,000	2,200,000	105,000
1916.....	7,400,000	2,250,000	110,000
1917.....	9,240,000	3,038,000	213,000
1918.....	6,954,000	2,531,000	343,000
1919.....	7,030,000	2,133,000	217,000
1920.....	7,560,000	2,400,000	256,000
1921.....	7,419,000	2,585,000	199,000
1922.....	7,256,000	2,408,000	242,000
1923.....	8,244,000	2,456,000	255,000
1924.....	8,716,000	2,456,000	251,000
1925.....	9,100,000	2,699,000	233,000
1926.....	8,994,000	2,537,000	227,000
1927.....	8,805,000	2,441,000	246,000
1928.....	8,937,000	2,392,000	480,000
1929.....	9,144,000	2,480,000	647,000
1930.....	9,171,000	2,485,000	725,000
1931.....	10,042,000	2,311,000	820,000
1932.....	10,644,000	2,473,000	918,000
1933.....	10,042,000	2,226,000	799,000

<sup>1</sup> Nebraska Agricultural Statistics: 1925, for years 1910 to 1914, p. 81; 1930, for years 1915 to 1930, p. 95. The Nebraska Crop Reporter, December, 1933, for years 1931 to 1933.

It was at one time thought by many persons that the enactment of the 18th Amendment would result in the abandonment of the production of barley in the United States. The average acreage harvested in Nebraska for the ten years, 1923 to 1932, was more than four times as large as the acreage for the five years, 1910 to 1914, and the acreage harvested in the second five years of the latter period was more than six times as large as the acreage harvested in the years 1910 to 1914. The most important use of barley is for livestock feed.

**Hay.**—The total acreage of wild and tame hay in Nebraska was somewhat smaller from 1920 to 1923 than in preceding years. The acreage of wild hay cut in 1924 was much larger than for several preceding years and has been consistently larger in the years following. The hay acreage for the six years, 1927 to 1932, was slightly larger than for the six years, 1914 to 1919. Acreage statistics for hay are given in Table 39.

TABLE 39.—*Acreage of tame hay, wild hay, and total hay in Nebraska, by years, 1914 to 1932*<sup>1</sup>

Year	Tame hay	Wild hay	Total hay
1914.....	1,500,000	2,822,000	4,322,000
1915.....	1,750,000	2,900,000	4,650,000
1916.....	1,850,000	2,845,000	4,695,000
1917.....	1,590,000	3,072,000	4,662,000
1918.....	1,701,000	2,588,000	4,289,000
1919.....	1,769,000	2,771,000	4,540,000
1920.....	1,619,000	2,315,000	3,934,000
1921.....	1,585,000	2,256,000	3,821,000
1922.....	1,553,000	2,208,000	3,761,000
1923.....	1,556,000	2,296,000	3,852,000
1924.....	1,751,000	3,100,000	4,851,000
1925.....	1,672,000	2,976,000	4,648,000
1926.....	1,761,000	2,530,000	4,291,000
1927.....	1,727,000	3,056,000	4,783,000
1928.....	1,560,000	2,903,000	4,453,000
1929.....	1,532,000	3,048,000	4,580,000
1930.....	1,611,000	3,078,000	4,689,000
1931.....	1,661,000	2,728,000	4,389,000
1932.....	1,680,000	3,055,000	4,735,000
1933.....	1,671,000	2,933,000	4,604,000

<sup>1</sup> Nebraska Agricultural Statistics: 1930, for years 1914 to 1930, p. 97. The Nebraska Crop Reporter, December, 1933, for years 1931 to 1933.

**Livestock marketings.**—The annual marketings of cattle, sheep, and hogs from Nebraska for the years 1914 to 1933 are given in Table 40. Cattle marketings were small in 1914 primarily because of the short corn crop in a large part of the state in 1913. Fewer cattle were placed on feed in Nebraska than usual because the price of corn was higher here than in Iowa and other cattle feeding states. The number marketed in 1918 was the largest for any one of the years for which data are available except 1926. This was due primarily to the large corn crop of 1917, a part of which did not mature well and had to be fed during the winter months. On the whole, cattle marketings averaged a little larger during the later than during the earlier years of the period.

Few sheep are raised in Nebraska, but the state ranks second in number of sheep fed. The number fattened yearly is influenced by the size of the corn crop and other factors. The number of sheep marketed has increased somewhat in



recent years, the average marketings for the five years, 1928 to 1932, exceeding by nearly eight per cent the number marketed in the four years, 1914 to 1917.

Hog production in Nebraska was abnormally large in 1918 (Table 40, Column 4) because of the large corn crop of 1917 and the urgent demands of the Food Administration for an increase in pork production. The price of hogs dropped following the signing of the Armistice and the 1918 marketings were not closely approached until 1922.

TABLE 40.—*Marketings of cattle, sheep, and hogs from Nebraska, by years, 1914 to 1933*<sup>1</sup>

Year	Cattle	Sheep	Hogs
1914.....	978,382	1,115,660	3,032,648
1915.....	1,510,211	1,534,054	3,582,493
1916.....	1,194,305	1,807,076	3,074,116
1917.....	1,202,197	1,061,310	3,714,325
1918.....	1,712,071	1,069,366	4,242,309
1919.....	1,460,812	1,183,652	3,795,983
1920.....	1,394,510	1,014,192	3,437,479
1921.....	1,200,025	1,035,461	3,584,180
1922.....	1,390,825	1,104,147	4,166,418
1923.....	1,446,979	1,360,663	5,796,055
1924.....	1,694,828	1,288,276	6,470,973
1925.....	1,622,789	1,115,980	5,651,998
1926.....	1,863,825	1,245,395	4,870,920
1927.....	1,364,766	1,200,101	4,444,206
1928.....	1,429,101	1,362,467	5,688,528
1929.....	1,403,274	1,503,887	5,823,029
1930.....	1,449,163	1,589,668	5,321,026
1931.....	1,581,736	1,641,212	5,639,845
1932.....	1,296,132	1,406,258	5,750,983
1933.....	1,431,770	1,514,669	5,568,117

<sup>1</sup> 1914, Fifteenth Biennial Report, State Department of Labor, p. 91; 1915, *ibid.*, p. 92; 1916, Sixteenth Biennial Report, State Department of Labor, p. 173; 1917 to 1919, Nebraska Agricultural Statistics, 1923-1924, p. 117; 1920 to 1930, Nebraska Agricultural Statistics, 1930, p. 136; 1931 to 1933, State and Federal Division of Agricultural Statistics, State House, Lincoln.

The average number of Nebraska hogs marketed per year from 1923 to 1932 exceeded by nearly 2,200,000 the average number marketed in the years 1914 to 1917. This was an increase of more than 65 per cent. It represents an unusual increase in one of the important industries of the state. For many years Nebraska ranked third in hog production; in recent years the state has been second only to Iowa.

During the years 1920 to 1932 hog production also increased in Iowa, Minnesota, North Dakota, South Dakota, and to a slight extent in some other states which lie west of the Mississippi river and north of Oklahoma. It decreased in every state east of the Mississippi river, in every state which lies entirely south of the southern boundary of Kansas, and in Nevada and California. This shift in hog production

was undoubtedly due in major part to the increase in freight rates, which was an indirect result of inflation. It costs less to ship a carload of hogs or of dressed pork than to ship the corn required to produce the hogs or pork. Nebraska farmers are producing more corn, more oats, and more barley than in pre-war years. They are feeding more cattle, sheep, and hogs. Shipments of corn to destinations outside the state have decreased.

The records kept by several hundred Nebraska farmers indicate that in the major part of the state the farms which secure two-thirds or more of their income from the sale of livestock and livestock products show a larger labor income on the average than the farms which depend more largely upon crop sales.

**Cattle, milk cows, and butter.**—The total number of cattle in Nebraska averaged about 16 per cent greater from 1923 to 1932 than in the five pre-war years. This increase in cattle numbers was merely a part of the general trend toward livestock production. The number increased by 363,000 between January 1, 1932, and January 1, 1934. This was prob-

TABLE 41.—*Number of cattle of all kinds, number of milk cows in Nebraska on January 1,<sup>1</sup> and pounds of creamery butter produced in Nebraska by years,<sup>2</sup> 1910 to 1933*

Year	Total cattle	Milk cows	Butter
1910.....	2,932,000	614,000	.....
1911.....	2,851,000	626,000	.....
1912.....	2,615,000	613,000	.....
1913.....	2,509,000	607,000	.....
1914.....	2,496,000	613,000	36,343,424
1915.....	2,659,000	625,000	.....
1916.....	2,887,000	650,000	51,431,419
1917.....	3,201,000	676,000	55,661,000
1918.....	3,616,000	676,000	62,477,000
1919.....	3,560,000	620,000	60,467,000
1920.....	3,154,000	535,000	56,661,000
1921.....	2,953,000	540,000	66,651,000
1922.....	3,026,000	594,000	74,809,000
1923.....	3,224,000	606,000	76,748,000
1924.....	3,386,000	612,000	81,423,000
1925.....	3,314,000	625,000	83,930,000
1926.....	3,191,000	625,000	90,882,000
1927.....	2,819,000	613,000	95,004,000
1928.....	2,925,000	613,000	96,472,000
1929.....	2,931,000	676,000	97,109,702
1930.....	3,016,000	680,000	85,484,491
1931.....	3,167,000	680,000	86,084,000
1932.....	3,138,000	700,000	85,660,000
1933.....	3,326,000	735,000	.....

<sup>1</sup> 1910 to 1931, Nebraska Agricultural Statistics, 1930, pp. 120 and 121; 1932 and 1933, Nebraska Annual Livestock Report as of January 1, 1934.

<sup>2</sup> 1914 to 1921, E. T. Rector, Nebraska as a Butter State, p. 6; 1922 to 1930, Nebraska Agricultural Statistics, 1930, p. 86; 1931 and 1932, State and Federal Division of Agricultural Statistics, State House, Lincoln.

ably due largely to the holding back of feeder steers on the ranches in the hopes that prices would advance. Data by years are given in Table 41.

The number of milk cows increased slightly and the quality of the cows milked increased materially during this period. Butter production in creameries increased approximately 89 per cent from 1916 to 1929. The decrease in production in 1931 was probably due to the low price of butterfat.

During the years when the production of creamery butter in Nebraska increased, the production in some other areas decreased. Production decreased nearly 67 per cent in the New England group of states and nearly 16 per cent in the Middle Atlantic states from 1918 to 1931. It costs less to transport butter from Nebraska to the eastern states than to transport the feed required to produce the butter.

**Poultry.**—The number of hens in Nebraska decreased from 12,856,000 in 1915 to 10,441,000 in 1917. The explanation is very simple. The price relative of eggs in January, 1917, on a 1910-14 base, was 130, of corn 161, and of wheat 194. Labor was high. Egg production was less profitable than various other farm enterprises. The number of hens increased 39 per cent, over 4,100,000, from 1917 to 1933. The increase was the result of low feed prices and the desire of families to find remunerative employment for family labor. Concentrated products had an advantage over grains because of the high costs of handling and transportation.

While it is impossible to secure production records of all farm flocks in the state, the records which are available and the increase in egg marketings indicate that production per hen has increased at least 30 per cent during the past twenty years. Better breeding, better feeding, the culling out of non-layers, and better care are responsible for the increased production.

**Decrease in feed shipments from country points.**—The acreage of feed crops harvested in Nebraska, the number of livestock grown, and the volume of livestock products sold have increased since pre-war years. One check of the shift from the sale of corn to the sale of livestock and livestock products in any given area is to obtain a record of actual shipments. Because of the rapid increase in the use of trucks, accurate records of livestock shipments are not easy to secure. Corn is usually shipped by rail if transported any distance. A record of all corn shipments from three counties for twenty-four years is given in Table 42.

Burt, Cuming, and Thurston counties are three of the best corn-producing counties in Nebraska. Alfalfa yields well in normal seasons and helps to make this an ideal livestock

TABLE 42.—*Carloads of corn shipped out of selected counties and total carloads of grain and grain products shipped into the same counties in Nebraska, 1910 to 1933*<sup>1</sup>

Year	Corn shipped out			Total corn shipped out	Total grain and grain products shipped in
	Thurston county	Burt county	Cuming county		
1910	1,504	793	774	3,071	321
1911	1,648	974	843	3,465	101
1912	1,648	900	385	2,933	187
1913	1,359	586	138	2,083	114
1914	1,557	701	343	2,601	106
1915	1,778	595	586	2,959	125
1916	1,193	264	200	1,193	192
1917	519	345	318	1,182	155
1918	945	389	349	1,683	120
1919	465	166	67	698	152
1920	553	365	129	1,047	60
1921	796	600	228	1,624	79
1922	1,341	792	512	2,645	135
1923	800	373	65	1,241	102
1924	523	164	4	691	440
1925	418	136	8	562	431
1926	556	382	36	974	200
1927	668	718	191	1,577	161
1928	417	452	32	901	362
1929	314	267	7	588	385
1930	814	471	74	1,359	185
1931	63	55	2	120	232
1932	5	10	.....	15	295
1933	387	146	28	561	73

<sup>1</sup> Compiled from station reports in office of Nebraska State Railway Commission.

feeding region. The out-shipments of corn from the three counties decreased from an average of 2,835 cars for the years 1910 to 1914 to 803 cars for the years 1923 to 1932. The in-shipments of feed increased during the same years from 166 to 191 cars.<sup>15</sup> Nebraska farmers, and particularly the farmers of the northeastern part of the state, have shifted very noticeably to livestock production in recent years.

**Sugar beets and other crops.**—The acreage of sugar beets more than quadrupled from 1913 to 1929. It decreased slightly in later years. More than half of the sugar beets are grown in Scotts Bluff county. The acreage of sweet clover cut for hay increased more than six-fold from 1922 to 1930 and the acreage cut for seed increased four-fold from 1921 to 1931. The production of certified seed potatoes has developed in western Nebraska since 1920 and the production of pop corn has increased about four-fold since 1915.

**Farm equipment and horses.**— The number of farm trucks increased from 5,233 in 1920 to 20,473 in 1930 and the number of gas tractors increased during the same years from 1,600 to 38,524.<sup>16</sup> The number of horses on farms in the state

<sup>15</sup> Nebraska State Railway Commission, Lincoln (unpublished records).

<sup>16</sup> State and Federal Division of Agricultural Statistics, State House, Lincoln.

decreased from 961,396 in 1920 to 754,296 in 1930, and the downward trend has apparently continued.<sup>17</sup> Changes in farm equipment have increased the efficiency of man labor and the size of the family farm. Agricultural production has increased but the number of men required on farms has decreased.

**Summary.**—While it is impossible to state definitely the extent to which the changes in Nebraska agriculture are the result of inflation and deflation, certain facts stand out clearly.

1. The increased production of livestock and livestock products has been due primarily to the increase in freight rates which makes it necessary to market our agricultural surpluses in a concentrated form. The high freight rates were the result of high wages, which in turn were the result of inflation. Wages affecting railway rates did not drop materially during deflation.

2. High wages hastened the purchase of labor saving machinery.

3. The low purchasing power of farm products made it necessary for the farmers to provide labor for themselves for as large a part of the year as possible. The increase in the number of cows milked in winter, the greater care given to poultry, and the increase in livestock production and feeding aided in the distribution of labor throughout the year. On many farms these enterprises provided remunerative employment for members of the family who would otherwise have been idle.

4. The shift in acreage from wheat to feed crops in eastern Nebraska counties is a part of the livestock program. Because of the low price of wheat, it cannot be grown extensively in eastern Nebraska in competition with feed crops. The fact that it can be produced at a low cost in western Nebraska and other similar areas will help to keep the price low. Wheat production in areas of low rainfall was developed during inflation years. Wheat production has not been profitable on these lands in some years, but the farmers continue to grow wheat because after sod has been broken the land is better for wheat production than for any other important crop.

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<sup>17</sup> Fifteenth Census, Agriculture, Vol. II, p. 1,223.

## CHAPTER X—THE BANKING SITUATION

Country banks usually furnish a fairly accurate reflection of agricultural conditions. The bulk of deposits in most country banks are made by farmers. A part of the loans are made to farmers, but another part, and sometimes the larger part, are made to the business men of the country towns. An increase in the deposits of country banks is usually considered as an indication of an increase in agricultural prosperity; a large decrease in deposits is usually believed to indicate a decrease in agricultural prosperity.

A series of years in any agricultural region when crops are poor or farm products are low in price is usually followed by an increase in the number of failures of local banks. Under such conditions farmers cannot reduce their loans at the bank or pay their accounts due the business men and are compelled to limit their purchases to the barest of necessities; the small-town business men cannot pay their notes because there is little new business and collections are slow. The bank deposits are reduced because the expenditures of the depositors are greater than their incomes. If the bank is compelled to close, the more conservative members of the community lose a part or all of their current reserve. Knowledge of the banking situation in Nebraska helps to explain the condition of agriculture. The two are closely related.

TABLE 43.—*Capital stock, deposits, and other information concerning national banks in Nebraska for the years 1914 to 1932*<sup>1</sup>

Year	No. of national banks	Capital stock	Surplus and net undivided profits	Total deposits	Loans and discounts
(Thousands of dollars)					
1914	233	\$16,280	\$11,235	\$ 94,932	\$101,453
1915	214	15,870	11,561	91,934	100,802
1916	198	14,645	11,956	102,624	112,758
1917	191	14,645	12,542	134,943	143,847
1918	191	15,420	12,745	159,599	162,556
1919	191	16,350	13,218	166,926	169,076
1920	189	16,740	14,119	183,699	192,386
1921	188	17,317	16,212	136,127	150,057
1922	182	17,320	15,269	192,615	153,877
1923	183	17,460	14,186	154,900	161,073
1924	176	16,750	13,338	197,618	152,028
1925	172	16,370	11,374	216,313	147,493
1926	168	16,215	11,497	202,735	144,348
1927	159	14,475	10,223	192,778	128,582
1928	157	14,255	10,701	217,708	134,221
1929	156	14,110	9,436	210,502	131,991
1930	167	14,585	10,244	225,089	136,480
1931	167	14,590	9,917	224,325	123,951
1932	158	13,985	8,923	163,778	89,960

<sup>1</sup> Annual Reports of the Comptroller of the Currency for the years 1914 to 1932.

**The Nebraska "bank guaranty law".**—In 1909 the Nebraska legislature enacted a law requiring state banks to contribute to a fund to be used for paying depositors in any bank that failed. The operation of the law was delayed by a federal suit to test its constitutionality and it did not become effective until July 1, 1911. The statute was commonly called the "bank guaranty law" although it was in reality a depositors' guaranty law.

The years immediately following 1911 were relatively prosperous. Only five small state banks with aggregate liabilities of \$235,000 and two national banks were suspended from July 1, 1911, to June 30, 1920. The depositors in the failed state banks were paid promptly, and, as a result, the "bank guaranty law" increased in popularity. State banks advertised that their deposits were protected by the State of Nebraska.

**Number of banks in Nebraska.**—Deposits in state banks increased rapidly not only because of the guaranty law but because of increased prosperity which was largely the result of the rise in the price of farm products. The number of state banks increased from 647 in 1911 to 714 in 1914 and to 1,012 in 1920. The number of national banks increased from 231 in 1911 to 233 in 1914 and decreased to 189 in 1920. The major part of this decrease occurred before 1917 and was due to national banks' surrendering their charters and reincorporating as state banks in order to come under the provisions of the popular guaranty law.

Information upon national banks is given in Table 43 and upon state banks in Table 44. The figures given in these two tables do not apply to the same date for the reason that federal and state authorities do not call for reports to be made out upon the same day. With a single exception the reports for the national banks were made in March or April. The 1933 report gives the status of the banks as of June 30. The reports of the state banks were made in November or December, except the 1914 report, which is dated October 21. For the years 1921 to 1932, the reports give the condition of the state banks on the last business day of the year.

In spite of the fact that the national and state banks did not report business conditions on the same day, the reports nevertheless furnish a basis for comparing the development of the two systems of banking. The data given in Tables 43 and 44 are combined in Table 45.

The number of state and national banks increased from 952 in 1914 to 1,201 in 1920. A smaller number of banks were in operation at the end of each year beginning with 1921 than at the end of the preceding year. In December,

TABLE 44.—*Capital stock, deposits, and other information concerning state banks in Nebraska for the years 1914 to 1932*<sup>1</sup>

Year	No. of state banks	Capital stock	Surplus and net undivided profits	Total deposits	Loans and discounts
(Thousands of dollars)					
1914	719	\$15,798	\$ 5,665	\$ 91,394	\$ 92,755
1915	762	17,119	6,405	111,120	111,765
1916	809	18,461	7,342	158,240	136,656
1917	842	21,056	8,309	204,176	189,418
1918	928	22,211	9,191	231,561	207,453
1919	937	24,882	11,198	270,050	251,967
1920	1,012	26,350	11,917	248,604	250,377
1921	1,010	25,700	9,006	210,628	208,617
1922	986	24,755	8,490	231,582	214,771
1923	938	24,301	8,582	237,552	220,021
1924	928	24,109	8,706	262,132	221,792
1925	903	23,338	7,430	272,584	227,135
1926	883	23,049	7,239	267,391	218,142
1927	855	22,264	6,949	266,708	205,357
1928	726	19,001	8,976	244,660	180,410
1929	647	17,122	8,755	187,394	136,409
1930	580	15,112	8,375	138,106	102,547
1931	472	11,865	4,862	87,189	65,179
1932	430	10,896	4,245	63,296	48,163

<sup>1</sup> Report of the Bureau of Banking for 1931 for years 1914 to 1931. Data for 1932 from office sheets in Department of Trade and Commerce.

TABLE 45.—*Data for state and national banks in Nebraska, 1914 to 1932*<sup>1</sup>

Year	No. of banks	Capital stock	Surplus and net undivided profits	Total deposits	Loans and discounts	Bills payable and rediscounts
(Thousands of dollars)						
1914	952	\$32,078	\$16,900	\$186,326	\$194,208	\$ 4,328
1915	976	32,989	17,966	203,054	212,567	5,053
1916	1,007	33,106	19,298	260,864	249,414	2,812
1917	1,033	35,701	20,851	339,119	333,265	3,471
1918	1,119	37,631	21,936	391,160	370,009	7,176
1919	1,128	41,232	24,416	436,975	421,043	22,812
1920	1,201	43,090	26,036	432,303	442,763	26,336
1921	1,198	43,017	25,218	346,755	358,674	26,775
1922	1,168	42,075	23,759	424,197	368,648	24,006
1923	1,121	41,761	22,768	392,452	381,094	22,789
1924	1,104	40,859	22,044	459,750	373,820	13,657
1925	1,075	39,708	18,804	488,897	374,628	10,153
1926	1,051	39,264	18,736	470,126	362,490	15,263
1927	1,014	36,739	17,172	459,486	333,939	8,321
1928	883	33,256	19,677	462,368	314,631	6,472
1929	803	31,232	18,191	397,396	268,400	12,983
1930	747	29,697	18,619	363,195	239,027	7,182
1931	639	26,455	14,779	311,514	189,150	5,680
1932	588	24,881	13,168	227,074	138,123	8,404

<sup>1</sup> Data for national and state banks are not available for identical dates. This is explained in the text.



1932, only 588 banks were in operation in the state, which was less than 49 per cent of the number in operation in 1920. The greatest change was in the number of state banks, which decreased 58 per cent. The changes in the number of banks are shown graphically in Figure 2.

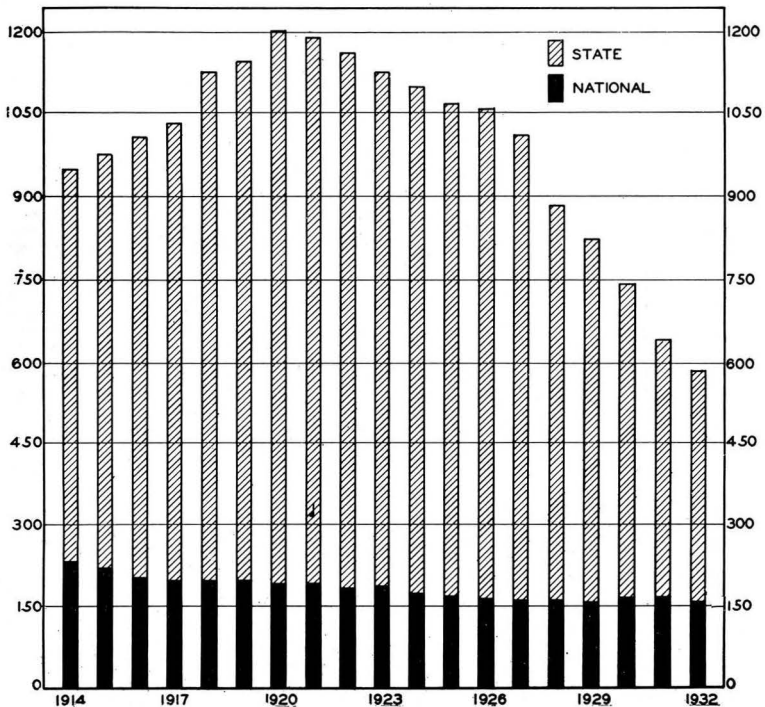


FIG. 2.—The number of banks in Nebraska, 1914 to 1932.

**Capital stock, surplus, and undivided profits.**—The total capital stock of Nebraska banks and also the average capital stock per bank increased from 1914 to 1920. The total capital stock has decreased since 1920 but the average capital per bank has increased. This is because the banks with ample capital have been better able to weather the depression than the smaller banks. Surplus and undivided profits increased from an average of \$17,752 per bank in 1914 to \$22,178 in 1920 and to \$22,395 in 1932. The banks were prosperous during the World War and post-war boom and wisely provided against possible losses. The slight increase since 1920 is accounted for by the larger average capitalization of the banks now in operation. The amounts of capital stock and

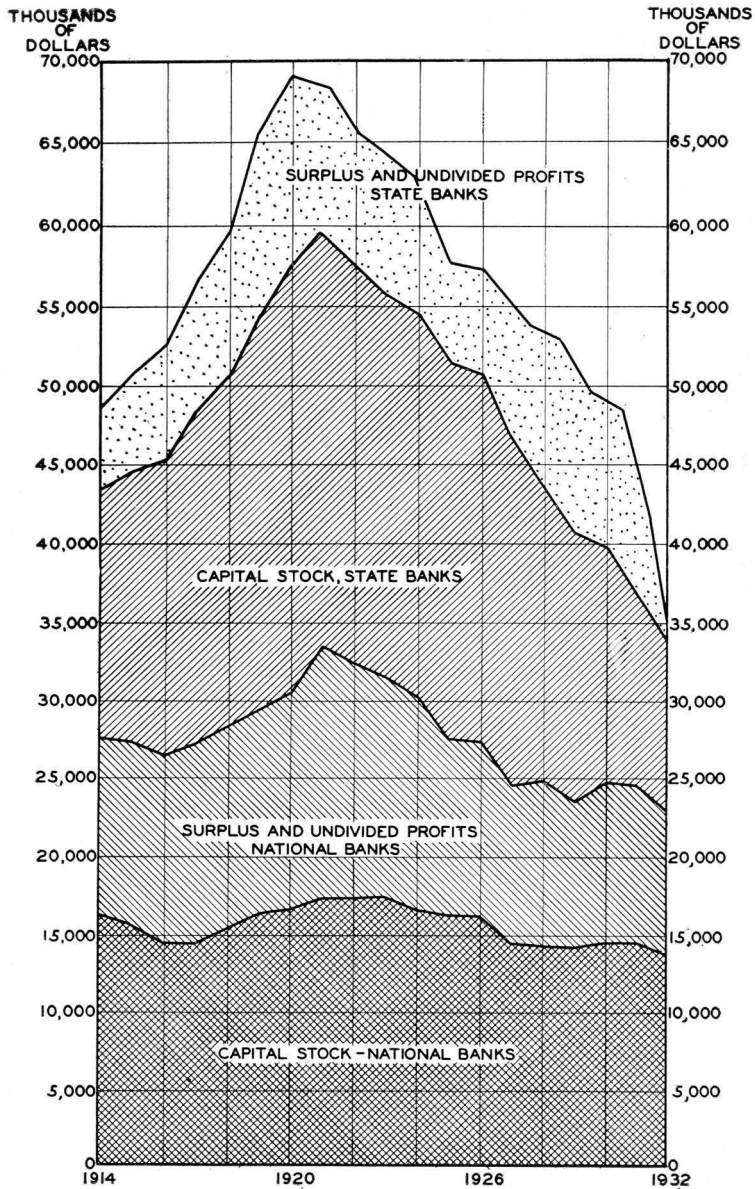


FIG. 3.—Capital stock and surplus and undivided profits of state and national banks in Nebraska, 1914 to 1932.

surplus and undivided profits of national banks are given in Table 43, of state banks in Table 44, and are presented graphically for both state and national banks in Figure 3.

**Deposits.**—Deposits in state and national banks increased from \$186,326,000 in 1914 to \$436,975,000 in 1919—an increase of nearly 135 per cent in five years. Although there was a large increase in the number of banks during this period, the average total deposits in state banks increased from \$127,112 in 1914 to \$288,207 in 1919, and the average total deposits in national banks increased from \$407,433 to \$873,958. The increase in the general level of prices, the increase in prices paid for farm products, and the increase in loans and discounts were three of the more important reasons for the increase in deposits. Some deposits came in from outside the state because of the bank guaranty law.

Total bank deposits decreased slightly in 1920 and nearly 20 per cent in 1921. In 1924 bank deposits were larger than in 1919 in spite of the decline in the general level of prices and the great decline in the prices paid for farm products. The high point was reached in 1925. The decline was rapid from 1929 to 1932. The total deposits in 1932 were less than half of the 1928 deposits.

The average deposits in state banks decreased to \$147,200 in 1932, which was about 43 per cent less than in 1920. National banks apparently gained in strength during the period, as average deposits increased to \$1,036,570 in 1932, which was an increase of more than 6 per cent over 1920. Increases and decreases in the deposits of state and national banks from 1914 to 1932 are presented graphically in Figure 4.

**Loans and discounts.** — The increase in bank deposits from 1914 to 1920 was quite naturally accompanied by an increase in loans and discounts. The bankers did not wish to keep a large amount of idle capital. They wished quite naturally for the deposits to return a revenue to the bank that would help to pay operating costs and dividends. Many farmers wished larger loans because of the high price of livestock and the high cost of feed and equipment. Merchants wished larger loans, not only because the wholesale price of goods had more than doubled but because fear of a shortage caused them to carry larger stocks. As has been previously stated, the increase in loans increased deposits, because most borrowers immediately deposit the proceeds of a loan and check it out gradually in payment of obligations.

The loans and discounts of all Nebraska banks increased from \$194,208,000 in 1914 to \$442,763,000 in 1920. State banks reached their maximum "end of the year loans" in

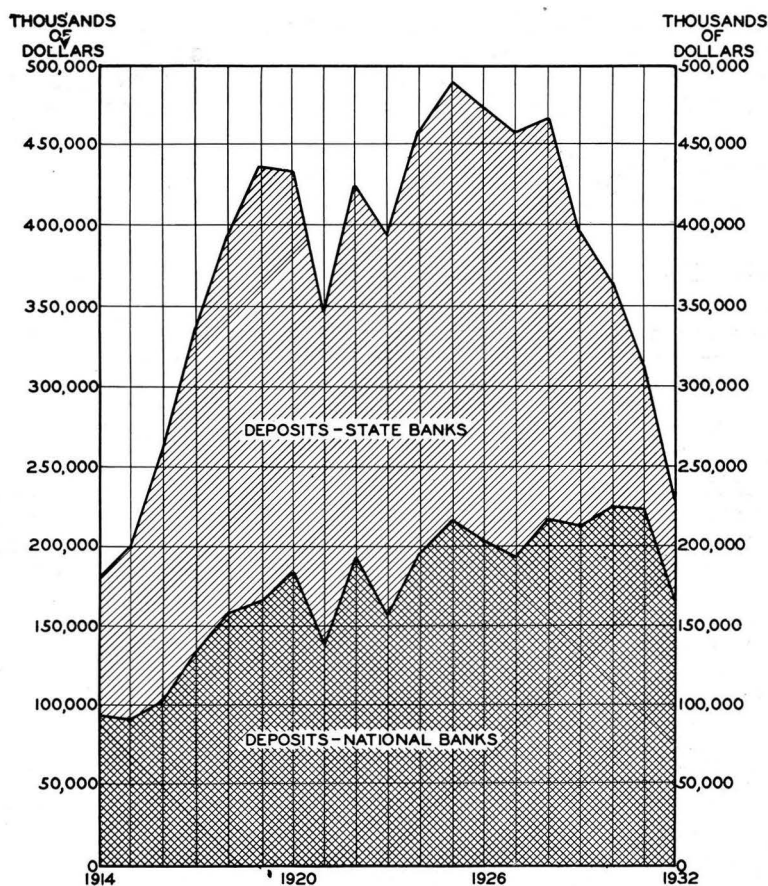


FIG. 4.—Deposits in state and national banks in Nebraska, 1914 to 1932.

1919. The decrease in their loans from November 15, 1919, to November 13, 1920, was undoubtedly due primarily to an even larger decrease in deposits.

In order to meet the demands of borrowers, many state and national banks were compelled to make liberal use of the rediscount facilities of the Federal Reserve System from 1919 to 1923. Depositors were drawing on their reserves and borrowers had difficulty in meeting their obligations because of the declining price level. Feeder steers sold in Omaha for \$13.70 in November, 1920, and for \$7.00 a year later. The price of farm products dropped faster than the cost of production. Farmers who had heavy interest payments to meet

because of land purchases were particularly unfortunate. Banks which could not collect from borrowers rapidly enough to meet the demands of depositors and which were unable to rediscount their notes with other banks were compelled to close. The number of banks in December, 1924, was 97 less than in November, 1920.

Although bank deposits increased during 1924 and 1925, and remained higher than in 1920 until sometime during 1929, bank loans and discounts did not rise materially. The banks paid back the major part of the loans which they had obtained from the Federal Reserve Bank and established a liquid reserve through the purchase of bonds. In many communities the bankers invested so large a part of their deposits in bonds that they were unable to take care of the ordinary credit needs of their regular patrons.

Some farmers who owned considerable property and had no outstanding indebtedness reported difficulty in obtaining relatively small sums of money to meet some emergency, such as an unexpected trip into another state. Many bankers were afraid to increase their outstanding local loans even when the loans were good. Some of the men who had loaned the most freely "when times were good" became panic stricken during deflation. They were interested only in collecting. This was doubly hard on the debtors. Many of these men would not have used borrowed money for cattle feeding and other enterprises had the loans not been offered to them.

Loans and discounts of all Nebraska banks decreased from \$314,631,000 in 1928 to \$138,123,000 in 1932. The decrease was due not only to a decrease in the total amount of bank deposits, which decreased the amount of loanable funds, but, as has been stated previously, to the desire of the banks that were in a good financial position to keep their assets liquid in order to be able to meet any possible withdrawals. Bills payable and rediscounts decreased from \$26,775,000 in 1921 to \$5,680,000 in 1931. These items increased during 1932. Information upon the loans and discounts of national and state banks in Nebraska from 1914 to 1932 is presented graphically in Figure 5.

**Some results of inflation and deflation.**—Banks are apparently prosperous during inflation. Deposits, loans, and profits increase. If inflation could continue indefinitely and the borrowers could all profit and could pay their loans when due, the banks would continue to increase in numbers and in prosperity. Such conditions actually prevailed from 1914 to 1920. Unfortunately many of the bankers and borrowers knew little about periods of inflation and depression and

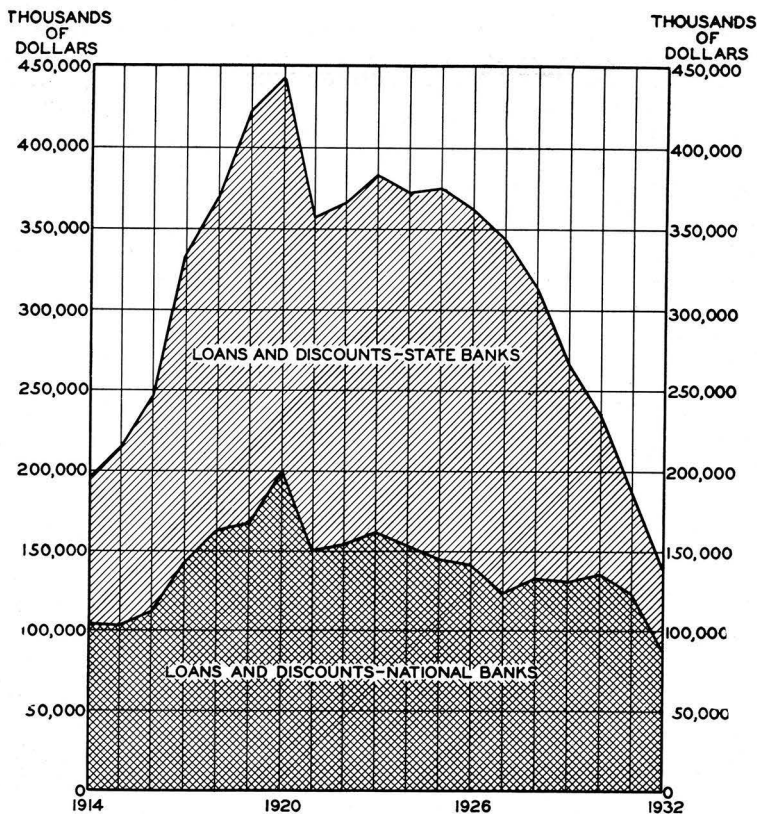


FIG. 5.—Loans and discounts of state and national banks in Nebraska, 1914 to 1932.

optimistically supposed that prices would continue high and that everyone would become more prosperous. They believed that the war had wrought a great change. As late as the spring of 1920 some Nebraska bankers urged patrons to increase their loans. Nearly one hundred of the banks which had loaned most unwisely were compelled to suspend business before the close of 1924. Nearly all of the banks which closed were state banks. The payment of guaranty fund assessments was a heavy drain on the state banks. These assessments totaled \$7,340,567 during the four years 1921 to 1924. Each bank as long as it remained open had to meet its own losses and continue making payments to the guaranty fund. In 1923 the state legislature created the Guaranty Fund Commission with power to decide whether crippled banks should

be operated, in an endeavor either to place them again in good condition or to postpone their liquidation so as to cut down current claims on the fund, or whether they should be placed in receivership for liquidation. Bank officials and the members of the legislature were optimistic and believed that better times would come and that most borrowers would be able to pay their obligations. But the purchasing power of farm products remained low and as a result the condition of many banks grew gradually worse. During the year that ended June 30, 1926, 23 banks failed and at the end of the year the Guaranty Fund Commission was operating 38 banks which would have been closed under ordinary conditions. Nineteen banks were suspended in 1927, 44 in 1928, and 106 in the year ending June 30, 1929.

The losses of the failed banks were so great that it did not seem possible that the solvent banks could pay them. The guaranty law was repealed in March, 1930. At that time the deficit was estimated at about \$20,000,000.

**Why banks failed.**—Financial conditions are serious in any state when the number of banks decrease 51 per cent, bank deposits decrease 48 per cent, and loans and discounts decrease 69 per cent within twelve years. The surprising decrease in the number of banks was due primarily to five causes:

1. The low purchasing power of farm products following 1920.
2. An overliberal loan policy during the inflation period.
3. A larger number of banks than available business justified.
4. Inadequate capital.
5. Investment of funds in second-grade and low-grade bonds in an attempt to maintain a large liquid reserve.

There were 5,284 bank failures in the United States in the 11-year period, 1920 to 1930.<sup>18</sup> Of these banks only 83, a little less than 1.6 per cent, were in the six New England states, the five eastern states lying entirely north of the Potomac and east of the state of Ohio, and the District of Columbia. Only 238, not quite 4.5 per cent, were in the seven states lying entirely west of the Rocky Mountains. More than 48 per cent of the banks that failed, 2,549, were in the seven west-central states—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. Nearly 26 per cent were in the 12 southeastern states. Doubtless the most important reason for the large number of failures

<sup>18</sup> Annual Reports of the Comptroller of the Currency.

in the agricultural regions was the low purchasing power of farm products.

It is noticeable that when the depression hit New England and the other eastern states its progress was marked by many bank failures. In 1931, 5.7 per cent and in 1932 nearly 12 per cent of all bank failures were in New England and five other eastern states. When deflation affected any region its progress was marked by bank failures.

As has been previously stated, many bankers knew little of previous periods of inflation and deflation. Unfortunately many bankers who knew the financial ability of their patrons and were very careful in making loans knew little of bonds. They were advised to reduce local loans and invest in bonds which were listed on the New York Stock Exchange and could be sold on any business day of the year. They bought the bonds that bond houses wished to sell. Many of the bonds declined in value until the surplus, undivided profits, and capital stock of the bank vanished. The bank was then forced to close. It is easy to understand how an optimistic young banker who knew little of financial depressions might have overestimated the financial ability of some of his customers, but it is impossible to understand how the officials of any large bond house, who are supposed to be accustomed to evaluating securities, could have considered some of the foreign loans made from 1922 to 1929 as a satisfactory investment. Many men who make no claim to being financiers are inclined to be somewhat suspicious of new securities issued by a country which has been unable to meet interest payments on previous issues.

The losses which have been suffered by Nebraska banks during recent years must be borne by the people of the state regardless of the causes responsible for the decline in values.

**Significance of bank failures.**—The large number of bank failures and the decline in deposits give some indication of the severity of the depression. They are, however, only an indication and by no means an accurate index. Careful bankers require that a borrower be able to give adequate security or that he have property of much greater value than the amount of the loan. Property could decline materially in value or the borrower could suffer heavy business losses before a bank would lose on the loan. The borrowers undoubtedly suffered much heavier losses than the banks. It is not difficult to estimate the losses of depositors and owners of bank stock, but it is impossible to secure any accurate data upon the indirect losses suffered by debtors, or of the total losses borne by all the residents of Nebraska which can be traced to inflation and deflation.



**CHAPTER XI—NEBRASKA FARM LAND PRICES**

The price of farm land depends primarily on two things: the net return that the land yields or that it is expected to yield and the rate per cent at which the net return is capitalized.

If a landowner can rent a part of his holdings for \$5.00 per acre, and the taxes, upkeep of fences, and other maintenance costs are one dollar per acre, then the net return is \$4.00 per acre. If the owner assumes that the net return will not change materially for many years and considers that 5 per cent is a satisfactory return upon his capital, he will value the land at \$80 per acre. If he believes that he can secure six per cent for his capital in some other investment which he considers fully as safe, he will value the land at only \$66.67 per acre. On the other hand, if he believes that four per cent is a satisfactory return upon the capital invested in this piece of land, he will value it at \$100 per acre.

**Interest rates.**—The rate of interest is determined by the forces of demand and supply acting in the loan market. When the demand for loans is large and loanable capital is scarce, interest rates are high. Such a condition is common in a new, rapidly developing region, and occurs sometimes in an old region when speculation is rampant. When loanable capital is abundant and prospective borrowers are few, interest rates are low.

The rate of interest which borrowers actually pay for loans varies not only with time and place but varies also at any time in any given place. In other words, the contract rate of interest depends not only upon demand and supply but also upon the type of loan transaction. An adequately secured loan usually bears a low rate of interest and a poorly secured loan bears a high rate. The person who lends capital upon questionable security in reality demands not only payment for the use of his capital but payment also for the risk involved. A country with a stable government and a reputation for paying its obligations can usually borrow capital at a low rate. For example, securities issued by Holland, Great Britain, and the United States bear a low rate of interest. A nation or an individual that has a poor credit rating must pay a high interest rate.

Interest rates vary also for other reasons. A small loan usually bears a higher rate of interest than a large loan which is equally well secured. A "call loan", that is, a loan payable on demand, can usually be obtained in a large money center at a very low rate of interest.

**Capitalizing rent.**—Good farm land is usually considered a very desirable investment. Because of this the rent or net

return is ordinarily capitalized at a low interest rate. The reasons for the high esteem in which productive land is held are many and varied and well worthy of enumeration.

Land is a proverbially safe investment. Under ordinary conditions it does not blow away or burn up. Corporations may thrive in good times and go bankrupt in times of depression without leaving any returns to the owners of stock, but land remains land whether times are good or bad. It is true that the value of the land changes, and sometimes quite rapidly, but the farm which is fully paid for seldom loses all of its value within a few months or even within a few years.

Land is tangible. The owner can see it and know that it is his. He feels that he is in actual possession of a part of the wealth of the world. It differs materially from intangible property, such as a bond or share of stock which merely represents a property interest in wealth.

Ordinarily an owner can care for land himself. The minority stockholder or the bondholder must generally rely upon some one else to look out for his interest. Nearly everyone can recall owners of stocks and bonds who believe that their interests have not always been carefully safeguarded.

Many men and particularly men of Anglo-Saxon ancestry feel a pride in land ownership. For generations the landowner has felt a certain independence. He has cared for his land in accordance with his own ideas and paid rent to no man.

The majority of farmers know little of any form of investment except land. It is not surprising, therefore, that they prefer to invest their savings in land even though the return is smaller than the interest rate borne by many kinds of securities.

The ownership of farm land gives an appearance of financial stability and security. It is a form of wealth that can be seen. The Corn Belt banker who owns good farm land which the depositors in his bank know is not mortgaged has an asset which begets confidence even though it is not a liquid security.

Good farm land provides a home and a job. The farmer who owns the land on which he lives never fears eviction for non-payment of rent or that the property may be sold and the new owner wish to occupy it himself. He can utilize time profitably in improving his own farm that he would doubtless waste if he occupied land belonging to someone else. When a period of depression comes he can live quite largely on the products of his own farm. His money income may be small but by reducing expenditures to a minimum he remains independent and avoids becoming an object of charity.

A farm not only provides work for the farmer but if it is large enough it also provides work for his growing sons and possibly some work for his daughters. Almost every father prefers to have his sons work under his supervision where he can teach them and guide them, rather than have them work away from home or meet the temptations that come to the idle boy. The desire to provide profitable employment for the children so that they may be kept under the home roof is one reason why many farmers strive to enlarge their land holdings.

The desire for more land does not cease when the children reach maturity. If the boys, when they marry, can start farming within a few miles of the parental home, they can attend the community church where father and mother can see them often and give them help and encouragement. To many of these men there would seem to be no better way to help a boy get a start than to rent him a farm.

During pre-war years good farm land in the major part of Nebraska was capitalized at about  $3\frac{1}{2}$  per cent. This was a somewhat higher rate than was paid by United States government bonds. The 3 per cent bonds issued to pay for building the Panama canal sold at a premium for many years so they actually returned less than 3 per cent to the investor who bought them a few months after they were issued. Notes secured by farm mortgages usually bear not less than 5 per cent nor more than 6 per cent interest.

**Anticipated income.**—Land value is often influenced by anticipated income. For example, if a person thinks that the selling price of farm products will rise more rapidly than the cost of producing them, he foresees an increased net return from the land. If the owner of land that has averaged \$4.00 per acre net income for many years believes that within a few years the land will yield an average income of \$6.00 per acre and that ultimately it will return \$8.00, he will ask more for the land than if he expected the net return to remain at \$4.00 per acre. Most men who have owned land in a region where the net returns from the land increased gradually over a series of years have anticipated that the returns would continue to increase and have valued the land in accordance with the anticipated rather than the present income.

When owners anticipate that average net income from land is likely to decrease, they quite naturally value the land somewhat lower than the capitalized value of the present income. Land prices did not rise as high in 1916, 1917, and 1918 as was warranted by the net income during those years. Everyone anticipated that prices would drop when the war ended. Prices rose higher, however, in 1919 than they had been in

1918 and as a result many persons decided that they would remain higher permanently and that the land would, therefore, return a larger average net income. As a result, land prices rose rapidly in 1919 and the early months of 1920.<sup>19</sup>

**Unearned increment.**—When land increases in value for any cause other than the expenditure of labor or capital by the owner, the increase is called *unearned increment*. If a pioneer settler increases the value of his land by breaking the sod, or erecting buildings or constructing fences, or setting out trees, the increment in value up to the actual cost of the improvements is earned. On the other hand, if a piece of prairie land increases in value because the owners of adjoining land break up the sod and make other improvements, the increment is unearned.

The early settlers of Nebraska who acquired title to land by homesteading or purchase at a low price and who retained ownership of the land until the rise in land values which occurred during the first two decades of the twentieth century, have often been charged with owing their prosperity to "unearned increment". The charge is worthy of analysis.

Few persons who have had no pioneer experience realize the amount of labor and capital required to improve a farm. The first settlers in a considerable part of Nebraska started with bare prairie. Every board used in construction was necessarily purchased. Many settlers purchased every fence post. Not only the house, barn, and other farm buildings should be considered in listing the improvements which represent an investment of labor and capital, but shrubbery, groves, and fruit trees. The making of improvements under pioneer conditions ordinarily requires more labor than when proper tools and materials are readily available. The actual cost of building materials included not only the price paid for them but the cost of hauling them to the farm. Sand, for example, could sometimes be purchased for as little as 25 or 50 cents a load at a sand bank. The man who hauled the sand ten miles over poor roads could hardly consider it cheap. Production was necessarily very limited until sod could be broken, buildings erected, and fences built. Because most of the early settlers had little capital the period of improvements was lengthened and the amount of labor required was greatly increased.

The first Nebraska settlers did not find improved highways, adequate railway service, commodious churches, modern school buildings, and thriving cities. A few thousand families were living in the eastern counties even before the

<sup>19</sup> H. C. Taylor gives an excellent presentation of the influence of future income on present value in his *Outlines of Agricultural Economics*, pp. 252 and 254.

completion of the Union Pacific Railway. These pioneers demonstrated that the land would produce corn, wheat, and other crops. A few lines of railway were constructed, and a large part of the land was quickly settled. As the land came into fairly full production, branch lines of railway were built, bringing freight service within a few miles of the farms in the major part of the state.

Many of the early railroads in Nebraska were constructed at a relatively low cost per mile. Bonds were often voted by counties, cities, and townships sufficient to pay a considerable part of this first cost. Taxes were levied to pay the bonds. Some of the roads received land grants. The promoters of the roads did not contribute a large amount of new capital. As the shipments of grain and livestock from the state increased, the shipments of lumber, coal, machinery, and other commodities into the state likewise increased. The railroads prospered because "business was good". The business justified improvements. Road beds were raised, curves reduced, new and heavier steel laid, and improved equipment purchased. The major part of these improvements was paid for from earnings.

The major part of the capital which has been used to develop Nebraska towns has not been brought in from outside the state. Most of the pioneer merchants possessed little capital. Very often a part of the rude store building served also as a residence. Stocks of goods in the frontier towns of Nebraska were small, not only because the early settlers had little with which to buy but because the merchants had little capital. New store buildings, new houses, and larger stocks of goods were paid for from profits.

Most of the doctors, dentists, lawyers, carpenters, painters, blacksmiths, and representatives of other professions and trades who came to Nebraska in the early years brought little capital with them. The doctor possessed a few books and instruments, the lawyer a meagre library, and the mechanic a few tools. The fine offices and shops which were equipped later, the libraries which were assembled, and the comfortable homes which were built were paid for from savings.

The replacement of wooden buildings with brick, the paving of streets, and the development of municipal water systems have been a gradual process. Nebraska communities were prosperous before such conveniences as electric current, sanitary plumbing, and the telephone were available. In the final analysis the railroads, factories, residences, business blocks, and other improvements of Nebraska have been built quite largely with Nebraska capital. In all probability the capital taken out of the state exceeds in amount the capital

brought into the state. Unfortunately, no data are available upon this point.

The business and professional men and the mechanics of the cities and towns have contributed by their labor and savings to the accumulation of capital. The fact remains, however, that without productive farms there would have been no towns. The profits made from handling the products of the farms and the goods purchased by farmers have made possible nearly all other developments.

It is sometimes said that society as a whole by building railroads, churches, school houses, and business blocks increased the value of farm land. It is urged that since the increase was due to the social development and not to the improvements made by the farmer on his own farm, a large part of the increased value of Nebraska farm land is unearned increment.

But the development of Nebraska cities was a result of the production of the farms and the increasing price of farm products. Nebraska towns exist primarily to provide a market for farm products and to supply the needs of the farm families. As a matter of course, the needs of those who supply the needs of the farmers must also be cared for. It follows, however, that, since the development of the towns is a result of the development of agricultural production, the farmers are primarily responsible for that part of the increase in the value of their land which is sometimes accredited to social development in this state. This reasoning does not apply to the effect which social development in other regions exerts upon the price of Nebraska farm products.

As a matter of course, the cost of farm and community improvements does not determine the sale price of farm land. The costs are mentioned merely to explain why many pioneers do not believe that any very material part of the increase in land values during the early years should be considered as "unearned increment".

In spite of the difference of opinion regarding the amount of "unearned increment" which accrued to the owners of Nebraska farm land during the early years, nearly everyone will doubtless agree that most of the early settlers did not secure a large average annual net return previous to the rapid rise in land values which occurred in the first two decades of the twentieth century. Most of the men who bought land in the late nineties or early years of the present century and disposed of it during the period of high land prices profited because of increment which they did not earn.

**The influence of speculation on land values.**—When the returns from land in any region increase over a period of

years, the land is certain to rise in price. If the increase continues for several years or if new developments such as an improvement in transportation facilities are imminent, the possibility of future price increases is likely to be anticipated by present owners and prospective buyers and as a result the land sells higher than present income justifies. Sometimes prospective buyers assume that a temporary increase in net income is permanent and buy land in anticipation of the price of land rising to a new level. Such transactions are speculative because the purchases are made in order to secure a profit from a change in price.

There has been speculation in land since the early settlement of the American colonies. There will doubtless always be speculation in land. Some speculators have gained by their foresight and others have lost because things did not turn out as they anticipated. On the whole, the losses have probably about equaled the gains.

Speculation tends to increase land values since it increases the demand for land. Probably city property has been influenced more by speculation than has farm property. One of the best examples of land speculation that can be given is the Florida land boom in 1925 and 1926.

**Speculation in farm land in Nebraska.**—According to a popular theory most Nebraska farm landowners have been land speculators. The early settlers either homesteaded or procured the land at a low price. The land increased in value and the pioneers or their heirs profited from the increase. Land continued to rise in price more or less regularly until 1920 and most of the persons who came into possession of land during this period profited from the increase and are, therefore, according to the theory under discussion, speculators. Even the persons who bought land preceding the depression of the nineties or the depression of more recent years are often classed as land speculators. It is admitted that many persons lost heavily because they purchased before a decline but since it is believed that they purchased in hopes of a rise in price, they receive little sympathy.

The facts are that relatively few Nebraska land owners can be classed as land speculators, because relatively few persons bought land in order to secure a rise in price. The test for land speculation is not found in the profit and loss account but in the reason which prompted the purchase. Nearly every one of our pioneer settlers came here in order to secure a home. Purchases were made later for some one of the reasons, or for some combination of the reasons given in the discussion of capitalizing rent.

**Changes in land values.**—The Bureau of Agricultural Economics of the United States Department of Agriculture has collected considerable information concerning farm real estate values. Some of their findings are summarized in Table 46.

TABLE 46.—*Farm real estate; index numbers of estimated values per acre for Nebraska, for three geographical divisions, and for the United States—1912-24=100*<sup>1</sup>

Year	Nebraska	West North Central	New England	Pacific Coast	United States
1912.....	98	97	99	94	97
1913.....	100	100	101	99	100
1914.....	102	103	100	106	103
1915.....	101	105	99	107	103
1916.....	104	114	102	111	108
1917.....	110	122	112	122	117
1918.....	127	134	117	129	129
1919.....	145	147	123	134	140
1920.....	179	184	140	156	170
1921.....	166	174	135	155	157
1922.....	144	150	134	151	139
1923.....	139	142	130	148	135
1924.....	129	132	128	147	130
1925.....	123	126	127	146	127
1926.....	123	121	128	144	124
1927.....	119	115	127	143	119
1928.....	117	113	127	142	117
1929.....	116	112	126	142	116
1930.....	113	109	127	142	115
1931.....	106	97	126	140	106
1932.....	90	81	116	118	89
1933.....	69	64	105	96	73

<sup>1</sup> B. R. Stauber. The Farm Real Estate Situation, 1932-33, Circular No. 309, U. S. Department of Agriculture, pp. 8 and 9.

The peak of farm land prices in Nebraska and in the nation came in 1920. Prices in Nebraska did not reach as high a point relative to pre-war as in the West North Central group of states taken as a whole and have not fallen as low in recent years. On the other hand the index numbers of Nebraska farm land prices rose higher and have fallen farther than the index numbers of farm land prices in the New England states, in the Pacific Coast states, and in the United States as a whole. The changes in farm land values for New England correspond with the farm income data given in Table 36. Changes in farm land values in other regions for which data are not given in this study correspond quite closely with changes in farm income.

**Sales and prices of farm land in eleven Nebraska counties.**—Every transfer of title to land in Nebraska is a matter of official record. By tabulating the data contained in these records it is possible to obtain a list of the number of land



sales recorded in any county in any year, the amount of land sold, and the consideration entering into each sale. Unfortunately the consideration stated in the record does not always aid in determining the sale value of the land, as the recorded copy of the deed sometimes reads "for one dollar and other valuable consideration" or gives some other equally indefinite statement.

In making a study of the land transfers in any county it is, therefore, necessary to omit many transfers from a tabulation because the record does not give sufficient information. It is possible, however, to omit sales of the type mentioned and yet obtain from the sales remaining a fairly accurate picture of the rapidity of land movement and the prices at which it sold.

No complete study of all Nebraska land transfers has ever been made. The transfers of farm land in 11 representative Nebraska counties has been tabulated. Some of the data secured from this tabulation are presented in Table 47.

The number of sales in each of the four years, 1917 to 1920, is larger than in any other years given in the table. In all probability a considerable number of the sales attributed to each of these years were actually made in the year preceding, because agreements to sell land are not always recorded, and the actual date of transfer of Nebraska farm land is more likely to take place on March 1 following the sale than at any other time. For example, a part of the sales made in 1919 did not become a matter of official record until the settlement was made and possession of the land was given in March, 1920.

Land prices in nine of the eleven counties increased fairly regularly from 1910 to 1920 and decreased every year from 1921 to 1933, inclusive. In one county the peak price did not occur until 1921 and in one other county prices were the same in 1920 and 1921. When the number of sales in a county in any given year is small, the average price per acre may be much higher or lower than for the years immediately preceding or following. The explanation for this variation is that when the number of sales is small, the inclusion of one or two farms which sold at either a very high or a very low price per acre has an undue influence on the average price. A good example of this is found in the data for the sand-hill county for the years 1929, 1930, and 1931.

**Land sales, 1917 to 1920.**—Because of the large number of sales during the years 1917 to 1920, and the rapidly increasing price of land during these years, farmers living in Nebraska and other midwestern states have been charged with indulging in an orgy of land speculation. The demand for

TABLE 47.—*True sales and sales price of farm land in 11 Nebraska counties, 1910 to 1933*<sup>1</sup>

Year	Number of true sales of land				Price per acre of land sold			
	7 southeast cash-crop counties <sup>2</sup>	2 east-central livestock counties <sup>3</sup>	1 sandhill county <sup>4</sup>	1 high-plains county <sup>5</sup>	7 southeast cash-crop counties <sup>2</sup>	2 east-central livestock counties <sup>3</sup>	1 sandhill county <sup>4</sup>	1 high-plains county <sup>5</sup>
1910	995	390	41	211	\$ 91	\$ 82	\$ 12	\$ 17
1911	796	275	54	94	96	85	11	16
1912	737	256	49	114	104	93	11	15
1913	628	195	45	82	106	136	12	14
1914	555	196	33	71	110	100	9	12
1915	481	176	51	77	106	101	8	11
1916	656	194	72	106	109	103	8	14
1917	1,246	293	115	310	119	113	7	18
1918	1,225	357	121	332	128	110	13	23
1919	1,324	349	93	395	152	133	15	31
1920	997	449	75	233	180	165	23	43
1921	485	116	29	48	165	134	29	43
1922	392	100	21	38	136	138	17	36
1923	392	141	10	41	129	119	24	29
1924	406	104	12	26	126	131	11	25
1925	489	145	20	40	126	132	15	27
1926	459	140	17	75	124	127	19	23
1927	398	115	14	92	121	122	16	25
1928	518	153	13	101	124	118	16	29
1929	545	139	17	99	120	118	10	36
1930	466	144	9	67	115	114	21	28
1931	346	112	5	47	99	105	5	31
1932	280	84	10	27	88	78	8	23
1933	135	38	4	10	77	74	6	16

<sup>1</sup> Data assembled by Eleanor Hinman. (See Nebr. Agr. Exp. Sta. Research Bulletin 72.)

<sup>2</sup> Clay, Fillmore, Otoe, Polk, Saline, Seward, and York counties. The cash-crop counties are those in which farms receiving 40 per cent or more of their income for 1929 from sales of grain or crop specialties predominated over farms which gave livestock or livestock products as the principal source of income, as indicated in the U. S. Census of 1930.

<sup>3</sup> Merrick and Platte counties. Livestock farms comprise those classified in the 1930 census as dairy, animal-specialty, stock-ranch, and poultry farms.

<sup>4</sup> Logan county.

<sup>5</sup> Box Butte county.

land as evidenced by the number of sales is sometimes given as the reason for the price increase.

As has been explained in preceding pages, the value of any piece of farm land depends primarily upon the net return that the land yields, or the anticipated net return, and the rate at which the net return is capitalized. If the net return increases and the rate per cent at which the land is capitalized remains the same, it follows naturally that the value of the land has increased.

The net income of representative Nebraska farms for the years 1914 to 1932 is given in Table 31. The income averages much larger for the years 1916 to 1919 than for the years preceding. It would have been surprising, therefore, if land values had not risen.

The largest increase in land values for any single year as compared with the preceding year occurred in 1919. The table indicates that the 1920 increase was greater than the 1919 increase, but it must be remembered that many of the sales recorded in 1920 were actually made in 1919. As long as the war was in progress many men believed that the rise in the price of farm products and in farm income was only temporary. The war ended in November, 1918. Following a slight decline the price of farm products rose during 1919 until the price index for agricultural commodities was higher than at any time during the war. It is not surprising that thousands of Nebraska farmers accepted the popular dictum that the war had changed conditions, that the prices of farm products would remain high, and that higher prices for farm land were therefore justified. The extent to which farm land changed hands in 11 representative Nebraska counties during the years 1917 to 1920 is given in Table 48.

The percentage of the total area of farm land which was sold was not so large as was the percentage of sales of the total number of farms. The explanation is that many of these sales represent less than an entire farm. But even after making allowance for this, the number of land sales in the seven cash-crop counties during the years 1917 to 1920 was about one-third the total number of farms in those counties, and the number of sales in two livestock counties was about two-fifths of the number of farms.

TABLE 48.—*Ratio of the true sales of farm land by warranty deed in 11 Nebraska counties in 1917 to 1920 to the number of farms in those counties in 1920*<sup>1</sup>

Counties	No. of farms in county, 1920	No. of sales in county, 1917-20	Sales, 1917-20, per 100 farms in 1920
Total for 11 counties.....	18,119	7,914	43.7
Seven cash-crop counties.....	13,737	4,792	34.9
Clay .....	1,791	728	40.6
Fillmore .....	1,975	632	32.0
Otoe .....	2,253	606	26.9
Polk .....	1,476	463	31.4
Saline .....	2,070	922	44.5
Seward .....	2,130	658	30.9
York .....	2,042	783	38.3
Two livestock counties .....	3,495	1,448	41.4
Merrick .....	1,364	722	52.9
Platte .....	2,131	726	34.1
One sandhill county: Logan.....	246	404	164.2
One high-plains county: Box Butte.....	641	1,270	198.1

<sup>1</sup> Data assembled by Eleanor Hinman. The number of farms in 1920 was obtained from the Fourteenth Census, Vol. VI, Part 1, pp. 690 to 698, except for Logan county, where the census figures were apparently incomplete. The number of farms reported by precinct assessors in Logan county in 1920 was therefore substituted for the census figure.

If any very large number of persons bought farms during this period for speculation, that is, for the purpose of reselling at a higher price, their plans failed to materialize, because the records show that relatively few of the farms were sold more than once during the four years. In York county, for example, only 14.8 per cent of the tracts which were sold during the period were sold more than once, and only 3.8 per cent were sold more than twice. In Box Butte county 24.7 per cent of the farms which were sold during the four years were sold more than once. As a matter of course not all of the farms which were sold a second time in four years were purchased for speculation.

Many of the men who purchased farms during these years had not previously owned land. They were tenants who had accumulated their working capital and an additional reserve of a few thousand dollars in the hopes of eventually purchasing a farm. The satisfactory returns of 1916 and the years following increased the reserve until it seemed safe to buy a farm. Most of the other men who purchased land in eastern Nebraska were landowners whose farms were paid for and who had accumulated additional capital. They increased the size of their farms, or purchased a separate farm instead of investing in some security of unknown value. A few men foresaw the rise and bought for speculation. Most of the speculators bought after the major part of the rise had taken place.

Although no figures are available by communities, it is a matter of common observation that land values were highest from 1910 to 1930 in those communities where there was the least speculation in land. This fact was so well recognized during the period that mortgage bankers would approve a larger loan on a given type of land in a community where there was little speculation than where speculative buying was relatively common. Mortgage bankers know that farmers of German or Bohemian ancestry, and particularly farmers who were born in Germany or Bohemia, do not buy land for speculation. They do not buy land with any expectation of selling it. The desire to enlarge their holdings is so great, however, that they will pay a price so high that the rate of return on the investment is small.

In the sand-hill region and in the high-plains region there was apparently considerable speculation. In Logan county, which was selected as representative of sand-hill conditions, the true sales during the four years 1917 to 1920, were 240.5 per cent of the number of farms in the county in 1920. If these figures present a true picture, then on the average each farm was transferred 2.4 times within four years.

The number of farms in the county decreased from 339 in 1910 to 168 in 1920, so the turnover was a little less than 120 per cent of the number of farms in 1910. The explanation for the decrease in the number of farms is very simple. The major part of the land in Logan county was homesteaded in 1904 and 1905 under the Kincaid Act. Many of the settlers found that a section of sand-hill land could not produce sufficient crops and livestock to maintain a family. As a result they sold out and the 640 acre farms were combined into larger areas. A large part of this combining took place between 1910 and 1920.

The sand-hill region was prosperous during the period of high prices for beef cattle. Many men bought land and increased the size of their herds in anticipation of continued high prices. Some who had homesteaded were glad to sell at the high prices. Although relatively few men bought land before 1919 for the purpose of selling it at a profit, nevertheless many did sell when prices continued to rise.

In Box Butte county, which was selected as representative of the high-plains area, the number of sales of farms during 1917 to 1920 was 199.7 per cent of the number of farms in 1920. Many of the farms were owned by non-residents at the beginning of the period and were sold to men who wanted to own the land they farmed and could not afford to pay a high price. The increase in the price of cereals, potatoes, and cattle increased the value of land in the high-plains region.

But the fact that so much of the land changed hands more than once and some of it changed hands two or three times in four years is indicative of speculation. Relatively cheap land often yields greater returns to the speculator than high-priced land because a price increase of a few dollars per acre gives a much larger rate of profit on the principal invested. Then, too, less capital is required to make the initial payment on a farm where land is cheap than where it is high in price.

**Farm foreclosure sales.**—When the price of farm products dropped precipitately in 1920, gross farm incomes decreased. The situation would not have been so serious if farm expenditures had decreased as rapidly as farm receipts. Unfortunately the price of goods purchased by farmers declined much less than the price of farm products; some necessary expenses remained practically stationary and taxes and freight rates increased. The net income returned by nearly all farms was small, as is plainly evidenced in Table 31. The major part of the farm income was required to meet interest payments on the farms where the indebtedness was large. There was little or possibly nothing left for the support of

the family. Conversely, if part of the income was expended to meet current family expenses, there was often insufficient remaining to pay taxes, insurance, and interest.

Farm families reduced expenses to a minimum in order to meet interest payments; they sold part of their livestock to pay taxes; they borrowed money from the local bank or from their more fortunately situated relatives or friends in the hopes that conditions would be better the next year. But conditions improved slowly.

Many of the mortgages given as security for land purchased from 1917 to 1920 were for five years. When the notes came due and payment could not be made, part of the borrowers deeded their farms to the mortgage holders. Some of the mortgage holders foreclosed when the borrowers failed to make a satisfactory settlement.

Farm foreclosure sales in eleven Nebraska counties for the years 1920 to 1933 are given in Table 49. Such sales were high in 1922, which was the year in which final payment was

TABLE 49.—*Farm foreclosure sales<sup>1</sup> in 11 Nebraska counties, 1920 to 1933<sup>2</sup>*

Year	Number of foreclosure sales				Ratio of foreclosures to all land transfers (per cent)			
	7 southeast cash-crop counties <sup>3</sup>	2 east-central livestock counties <sup>4</sup>	1 sandhill county <sup>5</sup>	1 high-plains county <sup>6</sup>	7 southeast cash-crop counties <sup>3</sup>	2 east-central livestock counties <sup>4</sup>	1 sandhill county <sup>5</sup>	1 high-plains county <sup>6</sup>
1920	3	2	1	1	0.2	0.3	0.9	0.3
1921	5	0	1	1	0.5	0.0	1.7	0.9
1922	26	10	6	3	2.5	3.5	9.2	2.6
1923	25	20	4	11	2.5	6.0	7.7	8.4
1924	36	26	10	20	3.4	8.3	21.3	16.8
1925	47	16	21	29	3.8	4.7	22.8	18.0
1926	26	15	16	34	2.3	4.0	22.9	16.7
1927	34	5	13	31	3.1	1.5	17.8	15.4
1928	30	26	13	16	2.5	6.5	20.0	7.4
1929	39	13	6	5	2.8	3.7	9.5	2.6
1930	47	25	18	3	3.9	6.4	24.0	2.0
1931	43	25	6	7	4.1	7.6	11.1	4.9
1932	72	39	10	15	6.3	10.6	21.8	13.2
1933	74	18	6	13	10.9	10.2	18.2	19.1
1920-33	507	240	131	189	3.2	4.9	14.5	8.3

<sup>1</sup> Includes all foreclosure sales by sheriffs, receivers, special masters in chancery, and also tax lien foreclosures.

<sup>2</sup> Data assembled by Eleanor Hinman.

<sup>3</sup> Clay, Fillmore, Otoe, Polk, Saline, Seward, and York counties. The cash-crop counties are those in which farms receiving 40 per cent or more of their income for 1929 from sales of grain or crop specialties predominated over farms which had livestock or livestock products as the principal source of income as indicated in the United States Census of 1930.

<sup>4</sup> Merrick and Platte counties. Livestock farms comprise those classified in the 1930 census as dairy, animal-specialty, stock-ranch, and poultry farms.

<sup>5</sup> Logan county.

<sup>6</sup> Box Butte county.

due on many farms purchased in 1917. The number was larger in 1923 and increased very materially in 1924. It continued high until the end of 1933. The largest number of foreclosures in any one year was in 1932. In that year there were 136 farm mortgage foreclosures in the 11 counties for which statistics are available, which was 8.2 per cent of the total number of farm land transfers during the year. In addition there were 691 token transfers during the year, which was 41.5 per cent of all transfers. A token transfer is a transfer the deed for which does not give the true monetary consideration. A part of the token transfers are doubtless gifts, but available evidence indicates that by far the major part of the token transfers in 1932 and other recent years were made because of fear of foreclosure. The number of token transfers in the 11 counties in 1920 was 293, which was only 11 per cent of the total number. Data upon token transfers are given in Table 50.

**The result of deflation.**—The large number of foreclosure sales and token transfers in 1922 and later years is an excellent index of the severity of the effects of the deflation upon Nebraska farmers. The man who accumulates capital gradually over a long period of years in order that he may some day become a farm owner does not regard land ownership lightly. Most men of this type will use every honest effort possible, will work long hours, and will deny themselves and their families every luxury and many comforts in order to avoid losing the farm that was purchased for a home. The farmer who loses his farm through foreclosure usually loses all or practically all of his accumulated capital. Most men who have suffered such a loss have had to start over

TABLE 50.—*All farm land transfers and token transfers in 11 Nebraska counties, 1920 and 1932*<sup>1</sup>

Counties	No. of land transfers <sup>2</sup>		No. of token transfers <sup>3</sup>		Ratio token transfers to all land transfers	
	1920	1932	1920	1932	1920	1932
	<i>Per cent</i>					
Eleven Nebraska counties.....	2,661	1,667	293	686	11.0	41.2
Seven southeastern cash-crop counties <sup>4</sup> .....	1,573	1,139	171	456	10.9	40.1
Two east-central livestock counties <sup>5</sup> .....	627	369	79	168	12.3	45.5
One handhill county <sup>6</sup> .....	110	46	12	14	10.9	30.4
One high-plains county <sup>7</sup> .....	351	113	31	48	8.8	42.5

<sup>1</sup> Data assembled by Eleanor Hinman.

<sup>2</sup> Includes all farm land deeds of five acres and more, whether conveying full title, quit claim, or part interest.

<sup>3</sup> Includes all transfers of full title to farm land for from \$1.00 to \$100 and "other consideration". This class includes gifts, trades, and sales for the value of the mortgage.

<sup>4</sup> Clay, Fillmore, Otoe, Polk, Saline, Seward, and York counties.

<sup>5</sup> Merrick and Platte counties.

<sup>6</sup> Logan county.

<sup>7</sup> Box Butte county.

again as a tenant or hired man or as a day laborer. Many men who owned one farm and had accumulated additional capital purchased a second farm and lost their entire savings. The statistics of foreclosure and token transfers tell only a part of the story. About 43.5 per cent of the farms in Nebraska were not mortgaged in 1920. Most of these owners have carried on. The mortgage foreclosures and most of the token transfers have come from the other 56.5 per cent of the farms.

The long-continued low purchasing power of farm products and the resultant decrease in the price of land has increased the number of losses. Men bought land in 1922 thinking that the bottom of the depression had been reached. Land fell lower each year, and each year other men bought land thinking that a stable level had been reached.

It does not help the situation to say that these men should have known better. They had no personal experience to guide them. They had not previously lived through a period of rapid inflation followed by a period of deflation. They were not students of history or economics and had read no warnings issued by public officials.

No small part of the purchases were made to close an estate. Father and mother passed on. Part of the children were living in town. They wanted to secure their shares of the parents' estate. The son who remained on the home farm and preferred it as a home to any other place on earth paid current prices for the interest of the other heirs. He had to buy then or not at all. Many of these men have lost their farms during the past three years.

It is unfair to say that the mortgagees lost as a result of land speculation. Statistics show that in a considerable part of Nebraska relatively few farms were purchased in the hope of selling at an increase in price. To charge the buyers of land with bidding up the price in anticipation of future increases in income is to make an accusation that is not justified by known facts. The prices paid were based on the income in the preceding years. Nothing is gained by stating that farmers should have capitalized the income at the interest rate paid on farm mortgages or charged by the local bank. High-grade investments, including Corn Belt farm land, have always been capitalized at a lower rate than ordinary commercial loans or farm mortgages.

The losses suffered by the mortgagees of Nebraska farms rest almost entirely on the decrease in the purchasing power of farm products which in its turn was a result of the deflation which was an inevitable outcome of the war-time and post-war inflation.



CHAPTER XII—THE EFFECTS OF INFLATION AND  
DEFLATION UPON NEBRASKA BUSINESS

**Farm prosperity is essential to business prosperity in Nebraska.**—Nearly everyone who lives in Nebraska is interested either directly or indirectly in the price which the farmer receives for his products. The farmer and his family are directly interested because their purchases are necessarily limited by their income. As a matter of course, the farmer is also interested in the price of the goods that he buys, because the amount of his purchases necessarily depends upon the relationship existing between the price of what he sells and the price of what he buys. If this relationship is satisfactory, that is, if the price of what he sells is relatively high compared with the price of what he buys, we say that the farmer is prosperous. Under such conditions he is able to purchase not only the necessities of life but many comforts and possibly some luxuries.

Nearly everyone else is interested indirectly, because agriculture is our greatest source of wealth. If the farmer produces an abundance of corn, wheat, hogs, eggs, butterfat, and other commodities and sells them for a favorable price as compared with the price of goods that he purchases, he will be able to buy more goods of the merchants than if he had but little to sell, or exchange values were unfavorable to him. Instead of buying only meager necessities, he will be able to buy more and better clothing, invest in new farm equipment, and perhaps enlarge or modernize his home, thus furnishing labor to carpenters, plumbers, and other mechanics.

The dollars which come to the farmer in exchange for his products are, therefore, important not only to him but to many others. In the typical Nebraska community practically everyone—merchant, mechanic, banker, doctor, lawyer, preacher, and teacher—is dependent for his or her income upon the purchasing power of farm products. The decrease in Nebraska bank deposits from 1929 to 1932 (Table 45) is an indication of the decrease in Nebraska business and Nebraska prosperity during the deflation period.

**A few men not seriously affected by the depression.**—A few persons have not been seriously affected by the low purchasing power of farm products. The hourly wage rates of railway employees, for example, have been reduced but little (Table 18). It is true that the volume of business of the railways has declined materially and the number of employees has been reduced, but the employees who have been retained and given full-time work have prospered in spite of the low purchasing power of farm products.

The volume of business of the processors of farm products is affected but little by the price of their raw materials. Livestock, poultry, and butterfat go to market when prices are low at about the same rate as when prices are normal. The cost of holding these products for any considerable length of time after they are ready for market is almost prohibitive. The number of the employees in creameries, meat-packing plants, and produce plants has not been seriously reduced during the depression. Wage rate reductions have been less than reductions in the general level of commodity prices.

**Building permits during prosperity and depression.—**

Men build new homes when they are prosperous. Likewise periods of prosperity with their increased demand for goods create a demand for new factories and business blocks. Additional building space is seldom needed during a depression.

Unfortunately a yearly record of all building construction in Nebraska is not available. The number of building permits issued each year in the larger Nebraska cities and the estimated cost of the buildings is a matter of record. Building permit statistics for Omaha and Lincoln are given in Table 51.

The number of building permits issued in Omaha in 1933 was only 26.6 per cent of the number issued in 1925 and the estimated cost of the buildings in 1933 only 7.5 per cent of the estimated cost in 1925. The peak of construction came a year later in Lincoln than in Omaha. The permits issued in Lincoln in 1933 were approximately 40 per cent of the num-

TABLE 51.—*Number of building permits issued in Omaha and Lincoln and the estimated cost of the buildings, by years, 1919 to 1933*<sup>1</sup>

Year	Omaha		Lincoln	
	Number of permits	Estimated cost	Number of permits	Estimated cost
1919.....	1,832	\$ 8,602,907	674	\$ 2,052,452
1920.....	1,361	13,461,970	536	2,110,545
1921.....	1,956	11,385,200	732	1,715,942
1922.....	2,740	11,246,075	1,099	2,940,687
1923.....	2,853	13,008,899	1,320	3,196,611
1924.....	2,852	12,268,858	1,261	3,149,802
1925.....	2,884	14,624,520	1,623	7,006,076
1926.....	1,601	10,052,368	1,196	5,951,265
1927.....	1,036	4,522,218	1,052	4,398,540
1928.....	1,169	9,050,410	1,071	3,221,608
1929.....	1,046	5,554,497	982	2,560,098
1930.....	845	5,121,226	615	1,597,634
1931.....	924	3,535,002	619	1,585,864
1932.....	743	2,196,174	387	296,156
1933.....	769	1,097,556	640	329,932

<sup>1</sup> Compiled by Ross Baumann from The Monthly Review, Federal Reserve Bank of Kansas City.

ber issued in 1926, but the estimated cost of buildings in 1933 was only 4.6 per cent of the estimated cost in 1926. The construction of new farm buildings was far below normal in Nebraska from 1921 to 1933, and was undoubtedly much smaller relatively in 1932 and 1933 than building construction in Omaha and Lincoln.

**Effect of low purchasing power of farm products on retail lumber sales and wholesale furniture sales.**—The low price of farm products has almost paralyzed some lines of business in Nebraska. The retail sales of building materials are closely related to the volume of building permits. Furniture sales fall off during depression because new furniture is seldom an absolute essential. Index numbers of retail lumber sales and wholesale furniture sales in the tenth Federal Reserve District are given in Table 52.

TABLE 52.—*Index numbers of retail lumber sales (1923 to 1933) and wholesale furniture sales (1921 to 1933) in the tenth Federal Reserve District—(1925=100)*<sup>1</sup>

Year	Retail lumber sales	Wholesale furniture sales
1921.....	.....	116
1922.....	.....	84
1923.....	105	85
1924.....	89	52
1925.....	100	100
1926.....	89	96
1927.....	77	94
1928.....	80	99
1929.....	80	107
1930.....	60	80
1931.....	44	53
1932.....	28	28
1933.....	19	29

<sup>1</sup> Compiled by Ross Baumann from The Monthly Review, Federal Reserve Bank of Kansas City.

There is little doubt that sales of lumber and furniture were relatively smaller to farmers than to residents of the larger cities. The fact that a decrease in the purchasing power of farmers affects the purchases of most of the persons in other industries is clearly evident.

**Effect of deflation on department store sales.**—The Federal Reserve Bank of Kansas City has compiled department store sales for the tenth Federal Reserve District beginning with 1924. Conditions in Nebraska have not differed to any very considerable extent from average conditions throughout the district. Index numbers of department store sales in the district are given in Table 53. The data in this table indicate that sales of general merchandise in city stores have declined

very materially during the depression. The major part of this decrease can undoubtedly be attributed to a decrease in earnings, which is one result of the small purchasing power of the farm population. Individual merchants in small towns have reported a greater decrease in sales than that suffered by the department stores of the district.

TABLE 53.—*Department store sales, tenth Federal Reserve District, 1924 to 1934—unadjusted index figures—(1925=100)*<sup>1</sup>

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
1924	84	77	85	96	94	88	70	73	160	107	104	160	95
1925	83	80	97	105	96	94	73	81	100	123	104	164	100
1926	79	73	91	94	92	90	73	76	98	103	107	164	95
1927	80	76	89	98	88	86	68	83	96	106	110	168	96
1928	80	77	93	93	94	84	71	85	102	110	108	169	97
1929	83	76	102	99	96	87	72	85	105	112	113	165	99
1930	74	76	89	98	95	82	69	79	104	110	100	158	94
1931	74	70	80	91	85	77	57	66	79	85	79	125	81
1932	55	59	68	68	61	55	41	50	70	70	62	94	63
1933	45	44	51	62	61	57	45	60	67	72	65	110	62
1934	54	52	....	....	....	....	....	....	....	....	....	....	....

<sup>1</sup> Research Department, Federal Reserve Bank, Kansas City, Missouri.

### Effect of inflation and deflation on life insurance sales.—

Life insurance is the largest depository of savings of the middle classes. With the possible exception of the purchase of a house for a home, it is quite generally considered the safest investment that can be made. It has the added advantage of providing financial protection for dependents and under specified conditions pays to the beneficiary of the policy many times the amount paid by the insured. A careful conservative man whose income is small is likely to purchase a life insurance policy as his first important investment and to protect it longest in times of adversity. A considerable decrease in life insurance sales may be considered, therefore as an indication of severe financial depression.

TABLE 54.—*New paid-for ordinary life insurance sales in Nebraska, 1913 to 1933*<sup>1</sup>

Year	Amount	Year	Amount	Year	Amount	Year	Amount
1913.....	\$23,650,000	1919.....	\$75,267,000	1925.....	\$77,209,000	1931.....	\$72,854,000
1914.....	26,180,000	1920.....	85,099,000	1926.....	80,263,000	1932.....	54,625,000
1915.....	25,923,000	1921.....	60,525,000	1927.....	78,865,000	1933.....	57,488,000
1916.....	34,155,000	1922.....	58,057,000	1928.....	85,030,000		
1917.....	44,354,000	1923.....	69,706,000	1929.....	88,909,000		
1918.....	40,295,000	1924.....	66,429,000	1930.....	89,788,000		

<sup>1</sup> Life Insurance Sales Research Bureau, Hartford, Connecticut. Sales are based upon reports from companies which had 88 per cent of the total legal reserve ordinary life insurance outstanding in the United States from January 1, 1923, to January 1, 1932. On January 1, 1933, the reporting companies had 93 per cent of such reserves.

New paid-for ordinary life insurance sales in Nebraska for the years 1913 to 1933, inclusive, are given in Table 54. Life insurance sales increased 87½ per cent in the four-year period, 1913 to 1917. This is an indication of a great increase in prosperity. Sales dropped slightly in 1918 but increased to 318 per cent of 1913 sales in 1919 and to nearly 360 per cent in 1920. Sales decreased during the depression of 1921 and 1922, but did not fall as low as in pre-war years because wages remained relatively high during these years and men who had jobs were prosperous. Sales were higher in 1923 than in 1922, and although they dropped slightly in 1924 they increased again in 1925 and 1926. A new all-time high for sales of ordinary life insurance in Nebraska was reached in 1929 and surpassed in 1930.

The large volume of life insurance sales in the years 1923 to 1931, when farmers had a lower purchasing power than in previous years, resulted primarily from increased prosperity in the cities and towns and from increased confidence in life insurance. Professional men were apparently more prosperous than at any previous time. Fees rose during inflation and remained at a relatively high level. Salaries and the wages paid skilled labor were higher compared with 1910 to 1914 than was the cost of living.<sup>20</sup> Most business men were prosperous. Real income had increased in the cities and towns. A part of the income was invested in life insurance.

More persons realized the value of life insurance as an investment as well as for protection than at any previous time. Men whose friends had invested in "blue sky" securities during the inflation of 1919 and 1920 bought life insurance because they considered it safe. This was true of many farmers who were able to invest a little of their income as well as of the salaried and professional men.

The 1932 sales were less than 61 per cent of the 1920 sales and lower than during any preceding year since 1918. This decrease in volume, which continued through 1933, indicates that the purchasing power of farm products was so small during these years that it was severely felt in Nebraska cities.

**Complete statistics not available.**—Complete statistics upon Nebraska are not available. The few that have been given represent only a few lines of business, and in general do not represent the types of business enterprise that have felt the depression most keenly. Without doubt the sales of the small-town merchant have decreased more drastically than the sales of city merchants.

<sup>20</sup> Tables 17, 18, and 19.

The statistics that are presented in this chapter can be accepted as an indication of serious conditions, but they are not an accurate index of the severity of the conditions even among business men. They support the statement that the majority of the residents of Nebraska cities and towns are dependent in the long run upon the purchasing power of Nebraska farm products.

## CHAPTER XIII—SUMMARY

Nebraska farmers were more prosperous from the autumn of 1916 until the early months of 1920 than during the years immediately preceding the World War. The cause of this increased prosperity was a change in the ratio between the price level of farm products and the price level of commodities purchased by farmers. Farm products increased in price more rapidly during the early years of the period than did manufactured goods and maintained a price advantage until the spring of 1920. As a result, farm products had a greater purchasing power from 1916 to 1919 than from 1910 to 1914.

Nebraska farmers have been less prosperous since the summer of 1920 than during the five pre-war years. The cause of the decrease in prosperity was a change in the ratio between the price level of farm products and the price level of commodities purchased by farmers. The price index of farm products fell faster and fell farther in the summer and autumn of 1920 and in 1921 than did the price index of commodities purchased by farmers. The average purchasing power of farm products in the United States for the nine years, 1921 to 1929, was only 88 per cent of pre-war.

Since farmers could not buy as large an amount of desirable goods as they had been accustomed to buy in the years before the war, although many other groups were able to purchase much more freely than during the pre-war years, there was almost continuous discussion of "the agricultural situation". This maladjustment of purchasing power resulted in a decreased demand for many kinds of goods and was doubtless one of the causes of the national depression which began in 1929.

**The price of manufactured goods is more stable than the price of farm products.**—When the demand for goods decreased in the autumn of 1920, most manufacturers reduced production to the requirements of the new demand schedule. Prices decreased but not nearly as much as the prices paid farmers for their products. The declines were in part a result of the decline in the price of certain raw materials and in part a result of increased operating efficiency.

The operating expenses of merchants were reduced very gradually. The wages of clerks and other employees had been increased before the beginning of the deflation of 1920-21, but on the whole were not high compared with the wages of many other groups. The cost of fixtures, heating, and advertising remained high. Rents decreased gradually, but some merchants had constructed new buildings at peak prices and others had entered into long-time contracts.

Tariff rates were raised in 1921 and again in 1922. The prices of some commodities increased above post-war boom levels after these rates became effective. Price maintenance was made possible by the aid of the federal government.

Nebraska farmers were unable to protect themselves during deflation. Farmers must plan their production months and sometimes years in advance of the time when a product is ready for market. Corn is planted in May on ground prepared in March or April. But little is sold before December. Ground is prepared for winter wheat in August and the crop cannot be placed on the market for nearly a year. Breeding operations must be planned from one to three years in advance of the sale of the product.

The farmer is seldom able to reduce his operating expense by "laying off" his employees because the major part of the farm labor is performed by himself and his family. The family expenditures for food, clothing, and shelter continue whether the members of the family are busy or idle.

Agricultural products are grown in the United States on more than 6,200,000 farms. It has been quite effectively demonstrated that it is impossible to get all of these widely scattered farm operators to regulate production in accordance with anticipated demands unless the federal government gives material aid.

And last but by no means least, Mother Nature may make very material changes in crop production plans. Until farmers can control the weather and exert a fuller measure of control upon insect pests and plant and animal diseases than has so far been possible, it will be impossible for an individual farmer to gauge his production as accurately as can a manufacturer.

**Wages**—There were few important changes during deflation in the hourly wage rates of any group of workers engaged in manufacture, transportation, or trade. The number of hours worked per day or per week was reduced as demand decreased. This resulted in a temporary reduction of weekly and monthly wages but did not reduce the cost of merchandise. Hourly wage rates in many industries were higher in 1928 and 1929 than during 1919 and 1920. Increased wage rates were in part responsible for the decreased purchasing power of farm products.

**Taxes**.—State and local taxes increased during the period of inflation because of the increases in wages and salaries and in the price of food and fuel, brick and lumber, furniture and furnishings, and the hundreds of other items which enter into the cost of governmental services. Because wages



and the price of manufactured goods fell but little it was not possible to decrease taxes materially without decreasing either the quantity or quality of the services provided at public expense. Governmental services increased instead of decreased and the cost of these additional services more than counterbalanced the slight savings made possible by the decreased cost of former services. The major part of the additional cost was for highway improvement and was paid from motor-vehicle license fees and gasoline tax collections.

The general property tax is the principal source of revenue in Nebraska. In no year from 1919 to 1931 were the general property tax levies less than 224 per cent of pre-war. Since farm property comprises about 64 per cent of the grand assessment roll of the state, farmers and farm land owners felt the effects of increased taxes more than the persons in any other industry.

**Nebraska farm income.**—Nebraska farm income increased from 1914 to 1919. It decreased in 1920 and decreased to an even lower level in 1921 and 1922. The purchasing power of Nebraska farm products improved in 1924, rose to 94 in 1925, and remained above 90 until 1930. Farm income was fairly satisfactory from 1925 to 1929. It did not reach pre-war in any year. This was the period when many groups had a much larger purchasing power than during pre-war years.

The average income of the farmers from whom the Nebraska College of Agriculture obtained farm business records in 1930 was very low, and very few of these farmers received sufficient income to meet farm expenditures and live-stock and equipment losses in 1931 and 1932. In other words they worked hard and received no return for the use of their capital and no wages for their labor. Their personal and living expenses were met from savings. Taxes took a large part of the income of most farmers from 1921 to 1930, and in 1931 and 1932 when there was no farm income they were either not paid or else were paid from capital accumulations.

**Changes in type of farming during inflation and deflation.**—Nebraska farmers made important adjustments between 1914 and 1933. Wheat acreage decreased in eastern Nebraska and increased in western Nebraska. The average annual acreage of corn planted in the ten years, 1923 to 1932, was 23 per cent greater, and the acreage of barley 400 per cent greater than in the five pre-war years. Hay production increased slightly.

The average number of hogs marketed per year from 1923 to 1932 was 65 per cent greater than the number marketed

in the years 1914 to 1917. The number of cattle on farms also increased. The number of milk cows increased, and the amount of butter produced in factories more than doubled between 1914 and 1932. Poultry production increased. Shipments of feed crops from the state decreased.

**The banking situation.**—In the 13 years, 1920 to 1932, the number of banks in Nebraska decreased 51 per cent, bank deposits decreased 48 per cent, and loans and discounts decreased 69 per cent. It is impossible to state definitely the losses suffered by depositors in the failed banks, since many are in process of liquidation, but they will unquestionably be large. Losses of 50 per cent of the deposits have not been unusual, and some have been as high as 90 per cent.

One of the greatest losses caused by the closing of so many banks has been the handicap to business. All the deposits in a failed bank are tied up temporarily. Many communities have been left without a bank. The large number of failures has restricted the granting of local credit. The banks are under the necessity of keeping a large part of their deposits liquid, and as a result are unable to supply the legitimate credit needs of their local communities. Farmers have suffered most heavily from the failures because they were the largest depositors. They have also suffered the most from inadequate banking facilities.

The number of banks increased unduly and credits were extended unwisely during inflation. Many bankers made unwise investments in liquid securities. The losses were due primarily to inflation followed by deflation.

**Nebraska farm land prices.**—The price of farm land depends upon the net returns that it yields, or that it is expected to yield, and upon the rate per cent at which the net return is capitalized. The high returns from Nebraska farm land during the war-time and post-war inflation caused many people to think that farm products would continue to sell at a higher price relatively than commodities used in production. As a result, land prices increased. Many men bought land at the new price level for which they could not make payment in full. The price of land fell very rapidly in 1921 and 1922, and somewhat more slowly in the years which followed, but did not fall below pre-war levels until the later months of 1931. On March 1, 1933, Nebraska farm land averaged about 31 per cent lower in price than from 1912 to 1914.<sup>21</sup>

It has been charged that the depressed conditions of agriculture which began in late 1920 and continued during the

<sup>21</sup> Table 46.

years when many other industries were prosperous was the result of land speculation. It has been impossible to find evidence to substantiate this charge. On the contrary, the available evidence indicates that there was relatively little land speculation in the major part of Nebraska. Furthermore, the depression affected all farmers and not merely those who had purchased land. More than 47 per cent of Nebraska farms were operated by tenants in 1930, and the majority of these tenants rented the tilled land on a crop-share basis. The share of the crop given for the use of land did not vary with the price of land, but remained fairly constant. About 42 per cent of the farms operated by owners were not mortgaged in 1930. Because of these things, it can be stated definitely that land speculation was certainly not a major cause and apparently not even a minor cause of the agricultural depression.

As a matter of course, the farmers who had utilized their credit in the purchase of land and had heavy interest payments to meet felt the depression more seriously than owners and tenants who were free from debt. Many of the men who were deeply in debt lost their farms and accumulated savings either through foreclosure or through voluntary transfer of title.

**The effects of inflation and deflation upon Nebraska business.**—Most Nebraska business men prospered during the period of rapid inflation. The inventory value of stocks of goods increased and the dollar volume of business increased. The physical volume of business was large in nearly all lines in 1919 and early 1920.

Many business men lost heavily when commodity prices fell in the latter half of 1920 and 1921. Stocks of goods were large and values declined, sales decreased, and overhead costs remained high.

Most Nebraska business men were relatively prosperous from 1922 to 1930. Price levels remained relatively stable. Wages, salaries, and professional fees remained at approximately the level reached during the post-war boom for some groups of workers and increased for other groups of employees, although there was not the rise in Nebraska which occurred in some other states. The residents of the cities and towns were nearly all prosperous except common labor, and as a result the volume of business was good.

The volume of business has declined materially since 1929. Some lines such as lumber have declined more than foods. Losses have been suffered because of declines in inventory values and the difficulty of reducing overhead. Merchants in country towns, who are dependent almost entirely upon farm trade, have suffered most. The decline in the pur-

chasing power of farm products was so great that farmers were no longer able to keep up their normal volume of purchases.

Many men were thrown out of employment, and their purchases necessarily declined. Unemployment begets unemployment. Most merchants could not protect themselves from losses by increasing the profit margin because other merchants were striving hard to maintain business volume, and consumers were comparing values and prices.

**Inflation is not a cure-all.**—Because agriculture prospered while prices were rising from 1916 to the early summer of 1920, it has been suggested that another period of inflation, or reflation, as it is more popularly called, would remedy the present agricultural situation. This presupposes two things:

1. The price of goods which farmers buy would either remain stationary or rise more slowly than the price of farm products.

2. The new level of farm product prices would have to be maintained because of the abundant evidence that inflation followed by deflation is disastrous.

In order to keep the price of goods which farmers buy from rising, wage rates, other costs, and profits would have to be held at or near present levels. This might prove a somewhat difficult undertaking considering the present agitation for higher wages and shorter hours, which if granted would result in higher production costs and higher prices. A nation can raise the level of prices, but up to the present time high prices have been somewhat unstable prices.

It is admitted that the condition of farm debtors would be improved by a period of inflation even if the price of goods purchased rose as rapidly as the price of farm commodities. For example, if it costs 50 cents per bushel to produce wheat and the wheat is sold at the farm for 60 cents, the profit that can be applied to reduce the debt is 10 cents per bushel. If prices increase 50 per cent, the cost would be 75 cents per bushel, the selling price 90 cents, and the producer would have 15 cents per bushel to apply toward debt payment.

In the past we have exported rather large amounts of cotton, wheat, pork, lard, and tobacco, and smaller amounts of various other farm products. International trade has been a very material factor in our prosperity. In order to trade extensively with other nations, we must be on a price basis, in terms of gold, which makes such trade possible. In international trade goods are paid for quite largely with other goods, and therefore it is impossible for two nations to trade very extensively with one another if the prices of all pro-

ducts in one country are very high and in the other country are very low.

**A stable price level is essential.**—Ample evidence is presented in this study to prove that no small part of our troubles can be traced back to a changing price level. Had there been no period of inflation from 1916 to 1920, or only a slight inflation, the cost of the World War would have been less, the cost of public and private improvements made since the war would have been less, and the price of land would have risen but little above the 1912-14 level. Had there been no important inflation there could have been no serious deflation, because if prices had not risen so high they could not have fallen so far. The fact is that if prices had not risen as high as they did in 1919 and 1920 they would not have fallen so low in 1931 and 1932 because the reaction would not have been as great. Had there been no inflation, public and private debts would be smaller; there would have been fewer foreclosures, fewer bankruptcies, and less financial distress.

The war-time measures which resulted in inflation and postponed the payment of the major part of the cost of the war until years after the close have caused untold distress and suffering. The "easy money" policy, which resulted in a continuance of a measure of inflation until 1930, increased state, local, and private indebtedness, and placed upon the country a burden that will require many years to remove.

The one outstanding lesson of our experience with inflation and deflation is that an unstable price level handicaps business. Inflation penalizes creditors and people with fixed incomes; deflation penalizes debtors, producers of raw materials, and persons with stocks of goods on hand. A stable price level is essential to the free exchange of goods; it reduces risk to producers; it makes possible the formulation of long-time contracts that are always equitable to the contracting parties.

Nebraska farmers who are in debt would be aided by a return to as high a price level as existed from 1923 to 1929. All Nebraska farmers would be benefited by a return to the price relationships which existed from 1910 to 1914. The ratio existing between the prices of products sold and goods purchased is of more importance to agricultural Nebraska than is the price level.

Nearly everyone who lives in Nebraska will be benefited by a stable price level. The height of the level is of less importance than is its stability. If a low level should be established, it would of course be necessary to scale down debts contracted during the high price period. *Many persons would*

prefer an open and acknowledged scaling of debts to a debt scaling brought about without an admission of the reduction.

**Farm prosperity in Nebraska.**—Nebraska farmers will prosper when they have a satisfactory market for their products and when they can purchase the commodities which they need at a price level which represents wages paid to labor, interest paid for the use of capital, rent paid for the use of land, and profits returned to entrepreneurs in other industries that are fairly commensurate with returns made for the use of land and capital, wages paid to labor, and profits returned to entrepreneurs in the realm of agricultural production.

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