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HOUSE OF REPRESENTATIVES

REPORT
No. 408

THE AGRICULTURAL CRISIS AND ITS CAUSES

REPORT OF THE JOINT COMMISSION OF AGRICULTURAL INQUIRY

IN FOUR PARTS

PART I

SUBMITTED BY MR. ANDERSON

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JOINT COMMISSION OF AGRICULTURAL INQUIRY,

UNITED STATES CONGRESS.

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LETTER OF TRANSMITTAL.

DECEMBER 9, 1921.

The PRESIDENT OF THE SENATE, and
The SPEAKER OF THE HOUSE OF REPRESENTATIVES:

In accordance with the provisions of Senate concurrent resolution 4, I transmit herewith Part 1 of the Report of the Joint Commission of Agricultural Inquiry, entitled, "The Agricultural Crisis and Its Causes."

It is expected that the remainder of the Report will be issued in three parts, as follows: Part 2, Credit; Part 3, Transportation; Part 4, Distribution and Marketing.

Respectfully submitted.

SYDNEY ANDERSON, *Chairman.*

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THE AGRICULTURAL CRISIS AND ITS CAUSES.

INTRODUCTION.

The Joint Commission of Agricultural Inquiry was created by Senate Concurrent Resolution 4 and directed to investigate and report to Congress upon the following subjects:

1. The causes of the present condition of agriculture.
2. The cause of the difference between the prices of agricultural products paid to the producer and the ultimate cost to the consumer.
3. The comparative condition of industries other than agriculture.
4. The relation of prices of commodities other than agricultural products to such products.
5. The banking and financial resources and credits of the country, especially as affecting agricultural credits:
6. The marketing and transportation facilities of the country.

The resolution was passed by the Senate May 31, 1921, and by the House, June 7, 1921, and required the commission to report within 90 days after the passage of the resolution. The time was subsequently extended to the first Monday in January, 1922, by House Concurrent Resolution 26, passed by the House August 1, 1921, and by the Senate on August 4, 1921.

The Senate members of the commission were appointed on the 10th day of June, 1921, and the House members of the commission on the 15th day of June, 1921. Owing to unavoidable difficulties in securing the necessary working space for the commission and organizing its personnel, the commission did not get under way until July 1, 1921.

It was clear at the outset that the subjects of investigation as stated in the resolution covered such a broad field that the commission could not hope to report upon all of the possible lines of inquiry which the resolution suggested or made possible, and an effort was therefore made to reduce the lines of inquiry to the major subjects upon which it seemed possible for the commission to report within the time fixed. The inquiry was divided into four major subjects, as follows:

1. The condition of agriculture and the factors which caused it.
2. The adequacy and effectiveness of the credit machinery and resources of the country.
3. Transportation.
4. Marketing and distribution.

In the consideration of the entire problem which the resolution presented to the commission, it was impossible to wholly separate each of these subjects from every other, because of the necessary relation which obviously exists between them.

The primary purpose of this report is to deal finally with the first of the major subjects, viz, the condition of agriculture, and the factors that caused it. The report deals partially with the second

and third major subjects of transportation, and marketing and distribution, but a full report upon these subjects is reserved for a later date.

It was apparent from the beginning that the commission could not hope to make the original investigation necessary to a conclusive report upon the wide range of subjects suggested by the resolution, nor could it hope to secure this information through the usual congressional method of hearings. The time required and the difficulty of coordinating information obtained by either of these methods precluded a reliance upon either one of them alone. Hearings, however, were held beginning July 11, 1921, and a great deal of information secured in this way, but in the main the purpose of holding hearings was to establish the background for the statistical data upon which the conclusions of the commission primarily rest.

The method pursued by the commission in securing the data necessary for its conclusions was to set up contacts with the various Government and private agencies through which the information could be obtained, in such form as the commission desired for its purposes; that is to say, the commission so far as possible made use of the personnel and the information of various departments of the Government, the various private agencies and associations, and individuals. The commission wishes to acknowledge with appreciation the cooperation and assistance of the Department of Agriculture, the Department of Commerce, the Interstate Commerce Commission, the Federal Trade Commission, the United States Chamber of Commerce, the American Farm Bureau Federation, the National Board of Farm Organizations, the Federal Reserve Board, and the various Federal reserve banks, as well as the assistance and cooperation of numerous private corporations and individuals.

The report relates to the immediate period ending June 30, 1921, except where otherwise indicated.

SUMMARY.

The commission recommends:

(1) That the Federal Government affirmatively legalize the cooperative combination of farmers for the purpose of marketing, grading, sorting, processing, or distributing their products.

(2) That the farmer's requirements for credit corresponding to his turnover and having maturity of from six months to three years, which will enable payment to be made from the proceeds of the farm, be met by an adaptation of the present banking system of the country, which will enable it to furnish credit of this character. It is expected that a concrete proposal to carry out this recommendation will be made in part 2 of this report.

(3) That there should be a warehousing system which will provide a uniform liability on the part of the warehousemen and in which the moral and financial hazards are fully insured. To this end the commission suggests the extension of the existing Federal warehouse law and the passage by the several States of uniform laws regulating the liability of warehousemen and the services rendered by them.

(4) The commission believes that an immediate reduction of freight rates on farm products is absolutely necessary to a renewal of normal agricultural operations and prosperity and recommends

prompt action by the railroads and constituted public authority to that end.[1]

(5) That there should be an extension of the statistical divisions of the Department of Agriculture, particularly along the lines of procurement of live-stock statistics.

(6) That provision should be made by Congress for agricultural attachés in the principal foreign countries producing and consuming agricultural products.

(7) The development by trade associations and by State and Federal sanction of more accurate, uniform and practical grades of agricultural products and standards of containers for the same.

(8) That adequate Federal appropriations should be made for the promotion of better book and record keeping of the cost of production of farm products on the basis of the farm plant unit, as a basis for the development of more efficient methods of farm management.

(9) Provision for an extended and coordinated program of a practical and scientific investigation through State and National departments of agriculture and through agricultural colleges and universities directed toward reducing the hazards of climate and weather conditions and of plant and animal diseases and insect pests.

(10) More adequate wholesale terminal facilities, particularly for handling perishables at primary markets and a more thorough organization of the agencies and facilities of distribution of the large consuming centers of the country.

(11) The development of better roads to local markets, joint facilities at terminals connecting rail, water, and motor transport systems and more adequate facilities at shipping points with a view to reducing the cost of marketing and distribution.

(12) That greater effort be directed to the improvement of community life.

(13) The renewal of conditions of confidence, and industrial, as well as agricultural prosperity is dependent upon a readjustment of prices for commodities to the end that prices received for commodities will represent a fair division of the economic rewards of industry, risk, management, and investment of capital. These conditions can not be brought about by legislative formulas but must be the result for the most part of the interplay of economic forces. The Government and the States within their respective spheres should do by legislative and administrative action what it may be possible to do, based upon sound principles to facilitate this readjustment.

In making the foregoing recommendations it must be understood that the jurisdiction of the Federal Government is limited and that it can not directly regulate production, marketing, or, transportation, not the subject of interstate commerce. Therefore the foregoing recommendations contemplate, in addition to legislation within the jurisdiction of Congress, action by State authorities within their respective jurisdictions and local and private interests, in order to achieve the objects sought.

Business cycles of alternating great prosperity and succeeding great depression, such as that from which we are now emerging, have occurred in a more or less regular way among all modern highly organized nations. These cycles vary greatly in phenomena, inten-

[1] Since this recommendation was agreed to, certain reductions in freight rates upon agricultural products have been made.

sity, and duration, and among the countries and localities affected by them, but are substantially similar in their principal characteristics.

Various theories have been advanced as to the causes of these cycles, but the consensus of opinion, we think, supports the view that the primary cause of the arrest of optimism, expansion, speculation, and prosperity, and the beginnings of the phenomena of depression, is the exhaustion of credit and money capital, which is followed by the loss of either foreign or domestic markets or both.

The cycle runs from the end of a period of depression, when confidence begins slowly to return, when surplus stocks of goods have been worked off and shelf stocks are generally reduced; when the lowered demand accompanying unemployment begins to overtake supply, when money is easy, interest rates are down, and prices, especially for raw materials, are low. At this period business begins to revive; more and more people are employed, and more and more goods are consumed. Business expands at an increasing tempo, unemployment disappears, and wages increase. As prices rise, a fever of speculation sets in, and there develops a veritable scramble for goods, stocks, and properties. Paper profits are large. People spend freely, extravagantly, and finally beyond their current income. Orders for present and future deliveries pile up and an apparent shortage of goods develops a seller's market. Industrial plants are extended to meet this supposed demand, interest rates rise, and bank loans and currency issues expand to meet the expansion of business. All the economic and psychological factors conspire to produce an era of intense business activity and prosperity.

In these periods of great activity and prosperity, a heavy volume of debts is made for plant extensions, for production, and consumption. These debts accumulate faster than production and savings. Greater and greater difficulty is encountered in meeting debts and interest currently due with current production and savings. As interest and debts currently due overtake and pass current production and savings, a curious reversal of direction occurs in the economic and psychological forces and phenomena which combine to produce prosperity. Bankers, whose expanding loans have depleted their reserves, are forced to stop further lending and then to call loans; banks of issue raise discount rates; speculation rapidly diminishes; manufacturers and merchants begin to place surplus stocks on the markets; prices begin to fall; consumers curtail purchases and spending in anticipation of still lower prices; orders for goods are canceled, and it becomes apparent that the orders representing demand were more or less of fictitious proportions; more and more goods are put on the market, while demand grows less and less; building slows down; debts are liquidated as far as possible from current receipts; the buyers' strike develops; production falls off in consequence of lowered demand; and unemployment develops; prices continue to fall, and the decline is usually more rapid than the rise.

This process is continued until some portion of the debts made in the period of prosperity is liquidated and until stocks are reduced to a point where such demand as exists, even in times of unemployment, finally overtakes supply. Prices and interest rates are down, wages are lower, money is easy, and the beginning of the new era of prosperity is at hand; all of which we have seen in this country and in many others in a highly condensed and most spectacular form in the last two and

a half years. Rarely has a cycle swept through all its familiar features more swiftly and dramatically than that which followed the close of the Great War. The most distant nations were equally involved, and most of them followed through the successive phases in almost identical times. Far-distant Java and Japan were affected in much the same way, at much the same times, as the United States, Canada, and Great Britain.

In the United States every industry and every class of people were involved in the avalanche of descending prices. The turn in the tide from optimism, expansion, speculation, and extravagance to the reaction of deflation and depression occurred about the middle of 1920 and at about the time when the grain crop of the United States was beginning to go on the market. The prices of live stock and live-stock products had already begun to decline, and these facts together, coupled with a failing export demand, were undoubtedly responsible for earlier and more rapid decline in the prices of agricultural products compared with the prices of other groups of commodities.

It is to the determination of the present condition of agriculture as a result of the influences, psychological and economic, which brought about the crisis of 1920 and 1921 and the causes of these conditions that this part of the report is devoted.

In arriving at an understanding of the condition of the farmer resulting from the debacle of prices in 1920 and 1921 and in the economic periods which preceded it, the commission has undertaken to measure the well-being of the farmer by four standards. These standards were:

1. The purchasing power of the farmer's dollar.
2. The absolute prices of farm products as compared with the absolute prices of other groups of commodities.
3. The quantity production of agriculture as compared with the quantity production of other industries.
4. The income or reward for capital invested and labor employed in the agricultural industry as compared with the income or reward for capital invested or labor employed in other industries.

THE FARMER'S DOLLAR.

Measured in terms of purchasing power, the farmer's dollar in 1920 was worth 89 cents. In May, 1921, it was worth 77 cents. During the past 12 months it has been worth less than in any preceding 12 months in 30 years.

The prices of farm products during the war period were higher than the prices of some groups of commodities and lower than others. On the whole, they about kept pace with the prices of all commodities combined. In the recent perpendicular decline, the prices of farm products declined more rapidly and went to a lower level than the prices of other commodities. This fact increased the disadvantage of the farmer during the period of deflation by increasing the margin between the prices of what he had to sell and the prices of the commodities he had to buy. Inflation has the effect of taking money from some groups and giving it to others. Deflation does the same, but deflation does not necessarily take money from those who profited by inflation. In the rise and fall of commodity prices during the cycle through which we have just passed the

farmers profited but little in a few years and lost heavily in recent months. The profits made by the farmer during the war were only slightly greater than those of 1913 and were swept away by the decline in prices of 1920 and 1921.

THE RELATIVE GROWTH OF AGRICULTURE AND OTHER INDUSTRIES IN QUANTITY PRODUCTION.

The quantity production of agriculture as an industry has not kept pace with quantity production in other industries. It has just about kept pace with population. From 1899 to 1909 the quantity output of agricultural products in the United States increased 10 per cent while the population increased 21.5 per cent. From 1909 to 1919 the quantity output of farms increased 10.5 per cent while population increased 14.5 per cent. This increase in farm output was largely due to an increase in acreage and to a slight degree only to an increase in output per acre. Quantity output of other industries, such as mining and manufacturing, increased more rapidly than did population and has also increased more rapidly than the quantity output of agriculture. Measured by quantity output the well-being of agriculture has lagged behind other industries.

WAGES AND INCOMES.

Agriculture has produced from 16 per cent to 23 per cent of the national income of the United States and normally about 17 per cent or 18 per cent, although approximately 30 per cent of the persons gainfully employed in the United States are engaged in agriculture. The average income received by a farmer for his labor, after deducting the return of 5 per cent on his property investment, is below the average earnings of employees in many other industries. The average reward per farmer for labor, risk, and management, after allowing 5 per cent return on the value of his investment, in 1909 was $311. In 1918 it was $1,278, and in 1920 it was $465. Measured in terms of purchasing power, the farmer's reward in 1909 was $326; in 1918, it was $826; and in 1920, $219. The average reward of employees in the mining industry in 1909 was $590; in 1918 it was $1,280. Measured in purchasing power, it was $618 in 1909 and $808 in 1918. The average yearly earnings of employees in railway transportation in 1909 was $773, and in 1918, $1,532. Measured in terms of purchasing power, the earnings of employees in rail transportation was $682 in 1909 and $882 in 1918. If a farmer in 1918 had been employed in the mining industry, he would have received a wage of $1,280, or about what he received for labor, risk, and management on the farm. Had he worked as an employee of a railway or of a bank and obtained the average wages of an employee in either industry, he would have received more for his labor than he received for risk, management, and labor in 1918 on the farm.

While the income and reward for capital invested and labor employed in agriculture have been improving in recent years, as compared with other industries, they are still relatively lower and in 1920 were far below the rewards of other industries.

Measured by the standard of purchasing power of his products, by the absolute prices of farm products as compared with the prices

of other commodities, by the test of quantity output or the test of income and rewards for capital invested and labor employed, agriculture in 1920 and thus far in 1921 is relatively worse off than other industries.

PRODUCTION IN 1920.

In summating the causes which brought about the debacle of prices in 1920 and 1921 it is necessary to marshal them in such a way that their relation to the crisis may be fully understood and their influences properly assessed. These factors are normally the factors which go to make prices of farm products which in their relation to the prices of other groups of commodities are in a sense a measure of the relative well-being of agriculture as compared with other industries. These factors are total production, including imports, per capita production, total consumption including exports and per capita consumption.

Was the decline of agricultural prices in the crop year 1920–21 induced by overproduction in 1920? The total production of grain in 1920 was greater than in any other year since 1915 but less than in 1915, 1912, or 1906. In none of these years did a production greater than that of 1920 produce anything like the same decline in prices. The production of wheat and corn in 1920 was somewhat larger than the average for 1909–1913, while the production of cotton was relatively less.

The number of beef, cattle, and sheep on farms in 1920 was less than on the average for the period of 1909–1913, while the number of hog farms was somewhat greater. The slaughter of cattle and sheep in 1920 was markedly below the average slaughter in the years 1909–1913, while the slaughter of hogs was slightly greater than the years 1909–1913 and the slaughter of calves markedly so. On the whole, however, it can not be said that overproduction or overmarketing of farm products in 1920 was in any considerable measure a moving factor in the decline of prices 1920–21.

EXPORTS AND IMPORTS OF FARM PRODUCTS.

If the decline in prices of agricultural products can not be attributed to overproduction, can it be attributed to a decline of consumption as reflected in a falling off of exports of farm products?

In assessing the importance of exports as a factor in determining the price of the domestic product, it must be remembered that agricultural products for the most part are produced in surplus quantities and that a relatively inconsiderable increase or decrease in exports has more than a correspondingly great influence upon the prices. The great economist, Gregory King, has estimated that a deficiency of one-tenth will increase the price three-tenths and that a deficiency of two-tenths will increase the price eight-tenths. The same law applies to surpluses. Excess production, therefore, unless absorbed by exports, tends to depress the price in much the same ratio. With the exhaustion of the credits extended by the United States Government to European Governments during the war, of which there was a balance of $2,500,000,000 at the close of the war, the purchasing power of European peoples began to decline. This failing purchasing power was immediately felt in a decline of exports

from this country. Production of wheat in 1920, as has been seen, was slightly above the average. Exports of wheat and wheat flour in the fiscal year 1920–21 was greatly in excess of the average and larger than either of the fiscal years 1918–19 or 1919–20, and the decline of the price of wheat was relatively less than the decline in the price of any other grain except rye, production of which in 1920 was largely above the average as were exports. Production of corn in 1920 was also above the average, while exports of corn and corn meal for the fiscal year 1920–21 were also above the average. The price of corn for the crop of the year 1920, however, declined more than the price of either wheat or rye. The production of oats in 1920 was likewise above the average. While exports of oats were above the average 1909–1913 they were far below the average of the preceding five years.

On the whole exports of all grains in the fiscal year 1920–21 were greatly in excess of the 1909–1913 average and about equal to the average of the preceding five years. Excepting wheat and rye, exports of other farm grains are normally not a large factor in determining prices; exports of grain other than wheat and rye are normally almost an insignificant part of the total production. Exports of cotton were markedly less in 1920 than the average. The decline in exports of cotton began in March, 1919, and was promptly reflected in a decline in prices. Approximately two-thirds of the cotton crop is exported, although exports of cotton in recent years have shown a marked tendency to decrease. Consumption of cotton in 1920 was lower than in any year since 1915, and this failure of consumption, coupled with the lack of export demand, was undoubtedly a major factor in producing the tremendous decline in the prices which occurred in this commodity.

Exports of beef and veal declined rapidly during 1920 and 1921. This decline in exports was coincident with the decline in prices and doubtless was a major factor in inducing it. The failure of export demand was accompanied by a sharp decline in prices. Consumption of beef in this country bears a very close relation to urban employment or unemployment, and with the progress of the period of business depression and consequent unemployment, consumption of beef and beef products diminished.

The exports of pork began to fall off as early as May, 1919, and declined rapidly thereafter. Domestic consumption of pork, which is essentially a poor man's food, was relatively maintained during 1920. The first influence, therefore, which induced the decline in prices of pork and pork products must be assigned to the diminishing export demand. The decline in the prices of dairy products was preceded by both a failure of exports and an increase of imports. On the whole, it may be said that the first downward impulse was given prices of live stock, live-stock products and cotton by diminishing export demand, and that while large exports of wheat and rye served to maintain the level of prices of these commodities above those of other agricultural products they did not serve to wholly prevent decline of prices of these commodities. Consumption of wheat, beef, mutton and dairy products have all declined during the period of depression and this decline in consumption undoubtedly contributed to and accelerated the decline in the prices of these commodities.

THE BREAK IN PRICES.

The crisis was not confined to this country. The avalanche of declining prices and its attending hardships, sacrifices, and losses involved the whole world. It began in distant Japan with the break in the silk market and the Chinese boycott of Japanese goods. It traveled the circle of the Far East, Australia, India, Java, England, France, Italy, the whole of Europe, South America, Canada, and the United States. It embraced all countries and all industries, though not to the same extent or in the same way.

PRODUCTION AND CONSUMPTION OF FARM PRODUCTS.

In the United States the decline of prices began with live stock and ran the course of farm products. Prices of clothing, metals and metal products, lumber, shoes, steel, fuel, house-furnishing goods, copper, gasoline, and commodities of all descriptions followed in the train of the prices of agricultural products, but the prices of these commodities did not decline to the same degree or at the same time or with the same rapidity as the prices of agricultural products. Some of them declined only very slightly as compared with agricultural products. All of this served to diminish the purchasing power of farm products during the period and to intensify the farmers difficulties. As the failing purchasing power of the world began to make itself felt in the lessening of export demand for farm products, the prices of agricultural products began to decline. As prices of agricultural products declined, the purchasing power of the agricultural population, representing nearly 40 per cent of the total purchasing power of the country, began to diminish. As the purchasing power of the American farmer diminished, the production of industries that produced the commodities of commerce began to decline, and unemployment, resulting in diminishing consumption, gave further impulse to the avalanche of prices. Influential and important as these economic forces are in their effect upon prices of commodities, the psychology and attitude of 100,000,000 people, once directed either by optimism and the influences of expansion or by pessimism and the influences of depression, must not be overlooked.

PER CAPITA PRODUCTION AND CONSUMPTION OF FARM PRODUCTS.

A constructive and general program of permanent agricultural development can not be predicated upon the abnormal phenomena of a period of expansion or depression. It must proceed from a consideration of the course of agriculture over a long period of development in order that the wisdom of experience and a consideration of the organized knowledge of agriculture may be the guide and director of future development. It is therefore necessary to marshal the facts of production and consumption in such a way that the relation of the various factors which influence prices and therefore, in a degree at least, determine the welfare of agriculture may be thoroughly considered and the course of agricultural development properly appraised. A summation of these factors on the basis solely of total production would lead to wholly erroneous conclusions. The development of

agriculture must be measured in terms of increase of population—that is, in terms of production per inhabitant. The total production of wheat shows marked fluctuations from year to year, but on the whole has about kept pace with the increase in population.

The consumption of wheat, while varying widely and showing a great tendency to decline in periods of industrial depression and unemployment, has, nevertheless, on the whole, shown a tendency to increase. While there is at times an apparent relation between consumption as expressed by domestic consumption and exports and the price of wheat and wheat flour, the relationship is extremely irregular and apparently modified greatly by the method of selling wheat on the exchanges of the country, which introduces among the price-determining factors rumors of every sort, including the weather, crop failures, industrial and economic conditions of more or less temporary and indefinite character. The domestic consumption of wheat in 1920, as compared with 1919, dropped from 6.9 bushels to 4.6 bushels. This decline in consumption was no doubt due to failing purchasing power resulting from unemployment and the general depression which came upon the country during the last half of 1920.

Production of corn has about kept pace with population, and consumption has been about equal to production from year to year. The relation of prices to per capita production has been an irregular one, but on the whole a large per capita production of corn has resulted in a decreasing price and a small production in an increase of price. Corn can be carried over from year to year, and the carry over has had the effect of somewhat stabilizing the price of corn from year to year.

Production of cotton in the United States in recent years has shown a tendency to decline. Exports which constitute normally from one-half to two-thirds of the crop have likewise declined in recent years. There appears to be a close relation between production and consumption of cotton including export demand and prices. In general, large crops have resulted in declining prices and small crops in increased prices. It seems probable that statistics of crop conditions and of crop production, which for cotton are probably more accurate than for any other farm product, have had an influence in establishing a closer relation between the factors of production and consumption, and price in the case of cotton than in any other farm product.

The total number of milch cows on farms has increased in recent years, but the number of milch cows per 1,000 of population has decreased. The increase in total number has not been sufficient to maintain the per capita ratio of milch cows to population. The value of milch cows has increased steadily since 1890 and apparently without regular relation to the increase or decrease in the number of head per 1,000 of population, although on the whole the decline in the ratio of milch cattle to population has apparently tended to support a slight increase of milch cows in recent years. There has been a marked revolution in the dairy industry in recent years. The production of butter and cheese has markedly declined since 1899 while the production of milk and the number of gallons of milk sold has increased. In other words, the increasing quantity of milk required by increasing urban populations has been obtained at the cost of decreased production of butter and cheese.

The number of cattle other than milch cows on farms during the last decade was less than in the preceding decade. The number of cattle on farms per thousand of population has decreased in the last decade at a rapid rate. The price of cattle has borne a rather close relation to the increase or decrease of the number of cattle per thousand of population. Seven years of large production of cattle per capita were accompanied by seven years of low prices. Three years of low production beginning in 1897 resulted in three years of high prices. Eleven years of large production resulted in 11 years of low prices, while 10 years of low production brought 10 years of relatively high prices.

On the whole, consumption of meat in the United States is declining and it may be inferred that consumption of meat in this country is following the trend of consumption of meat in Europe—that is to say, that with declining herds and increasing cost of production the prices of meat seem likely to continue to increase, with resulting decreases in consumption. This decrease in consumption of meats is probably a factor in the increasing consumption of wheat and bread grains. In other words, we are gradually changing from a meat-eating nation to a bread-eating nation. Consumption of veal in this country has rapidly increased in recent years and if continued at the same or an increasing rate, is certain to result in a decrease in the supply of beef in the future.

The tendency toward increased slaughter of calves and consumption of veal is a real menace to the future production of beef in the country and presages an increase in the price of beef in the relatively immediate future.

The actual number of sheep on farms in the decade ending 1920 was lower than in the decade ending 1910. The average number of sheep per thousand of population in the last decade was below the average of either of the two preceding decades. The marked decline in the price of sheep which occurred in 1920 and 1921 seems likely to increase the rate at which flocks of sheep in this country are diminished. Unless some way can be found to introduce sheep and wool production in the scheme of husbandry of small farms, the diminishing acreage for pasture in the mountain States, coupled with the increases in the cost of production, seem likely to further diminish the total number of sheep on the farms.

On the whole, agricultural production in the United States has barely kept pace with consumption. Production of wheat and grains have about kept pace with increase in population, while production of cattle other than beef cattle and sheep has not kept pace with increase in population. The prices received for farm products have not been such as to induce an increase in farm production on the whole. While prices of agricultural products have borne a more or less irregular relation to the factors of supply and demand, these relationships are not as close as they should be or would be if more accurate agricultural statistics of production and supply could be made available.

COSTS OF PRODUCTION.

The costs of production for the 1920 crop were greater than the costs of any preceding crop in the history of the country. During 1919 and the first half of 1920 costs of production of agricultural

products rose more rapidly than prices of agricultural products and since June, 1920, costs of production have declined less rapidly than prices of agricultural products. Considerable data upon costs of production of farm products have been gathered by the United States Department of Agriculture and State departments of agriculture but this data is not sufficiently comprehensive nor accurate nor does it cover a sufficiently long period of time to constitute a safe basis for definite conclusions with respect to the profit or lack of profit in farming operations in recent years. In general, however, it can be safely assumed that the crop of 1920 was sold at less than the cost of production. Changes in farming methods as well as the lack of skilled help and the development of farm machinery have introduced a number of new elements into the cost of production and at the same time investment in land, buildings, and equipment has very materially increased. The quantity of fertilizers used in the production of farm crops, as well as the total expenditure for farm fertilizer has more than doubled in the last 10 years.

Wages of employees in agriculture, while relatively lower than in any other industries, have increased in later years. This is due to the necessity of meeting industrial competition and the more skilled character of the labor which must now be employed in farming operations.

FARM MORTGAGES.

In the last 10 years the total number of mortgages on farm lands and buildings owned by their operators has more than doubled and has increased proportionately more than the value of lands and buildings. The increase in the amount of farm mortgages is greatly in excess of the increase in quantity production of farm products and it would seem that the payment of the added interest and principal of the farm debt can only be paid out of increased prices. It is difficult to see how it can be paid out of prices such as have existed during the past 12 months. The decline in prices of agricultural products in the last 12 months has been equivalent to 53 per cent of the prices at the peak. This decline in the price of agricultural products has the effect of again doubling the farmers' debt, already doubled as compared with 1910.

TENANCY.

Tenancy in the United States has increased but slightly in the last decade, principally in the States west of the Mississippi River and south of the Mason and Dixon line. It is impossible to accurately predict the effect of the recent avalanche of descending prices upon tenancy in this country but it is probable that tenancy will increase rather than diminish.

TRANSPORTATION.

The pyramided advances in freight rates which have been made since 1913 have resulted in the highest level of freight rates during the period when agricultural products were at the lowest point they have been for 30 years in terms of purchasing power. These increases have had the effect of diminishing the net price received by the farmer, as the price of farm products is usually the price at the terminal or the price at the place where the product of one locality

or one country comes in direct competition with the product of another locality or another country, less the freight from the local market to that terminal.

Railroad service, like any other service or commodity, must be sold at a price within the reach of the people who pay for it. Freight rates, therefore, must bear some relation to the prices which it is possible to obtain for the commodities transported.

Numerous instances were brought to the attention of the commission in which it was shown that the total receipts from shipments, especially of fruits and vegetables, were absorbed by railroad charges in transporting them to market, leaving the producer nothing for his time, labor, and investment in producing them.

In other cases commodities could not be moved at all because the price at the terminal would be entirely absorbed by the freight charges in transporting them.

No industry can survive or prosper under such conditions.

An immediate reduction in freight rates from the farmer's standpoint both as a producer and consumer is absolutely essential to anything approximating a normal return of profits for farming operations. The commission believes that an immediate reduction of freight rates on farm products is absolutely necessary to a renewal of normal agricultural operations and prosperity, and recommends prompt action by the railroads and the constituted public authority controlling transportation rates, looking to a scientific readjustment downward of existing tariffs on agricultural products.[2]

WHOLESALE AND RETAIL PRICES.

During the period of price decline the wholesale prices of other commodities lagged behind the prices of farm products, and retail prices lagged far behind wholesale prices. Wholesale and retail prices of other commodities did not come down as fast as prices of farm products. This had the effect of widening the margin between the price which the farmer received for the products he had to sell and the prices which he paid for the products he had to buy. In general, retail margins have shown a tendency to decline as wholesale prices rose and to increase as wholesale prices declined. Retail margins in the first half of 1921 when farm products were at the lowest level were very much above retail margins in 1913.

The commission is now engaged in gathering data from which it expects to make an exhaustive analysis of the processes of distribution and the relation of prices of farm products, wholesale prices and retail prices. The conclusions and recommendations which it is expected will result from this investigation are reserved for another part of this report.

ACREAGE AND VALUE OF FARM LANDS.

At the close of the War between the States the unappropriated public domain consisted of 1,470,098,812 acres. In the 50 years since 1870 this acreage has been reduced by settlement 554,330,545 acres, and there remains of the public domain, including Alaska, unappropriated 542,511,252 acres.

[2] Since this recommendation was agreed to, certain reductions in freight rates upon agricultural products have been made.

There is no classification from which an estimate can be made of the proportion of these lands which is suitable for agricultural development, but it is safe to say, in general, that the remaining public lands are probably suitable for grazing and forestry except in those localities where land may be reclaimed by either irrigation or drainage.

From 1870 to 1920 the total value of land in farms and on farm buildings increased from $7,444,054,462 to $66,316,002,602. The value of land in farms in 1920 was $54,829,563,059 and the value of buildings on farms, $11,486,439,543. In the period from 1870 to 1920, the value per farm of land and buildings increased from $2,799 to $10,284. The total sum invested in farm equipment and machinery increased in the same period from $270,913,678 to $3,594,772,928. The total value of live stock on farms in the same period increased from $1,229,889,609 to $8,013,324,808. The rural population, that is, the population outside of incorporated places having 2,500 or over, decreased from 71.4 per cent to 48.6 per cent. The per acre production of grains has increased at the rate of about one-half of 1 per cent per acre per annum in the last 30 years.

NEED OF AGRICULTURAL PROGRAM.

It is clear that there is an imperative necessity for the formulation of a definite program looking to the permanent development of agriculture with a view of relating agriculture with the various agencies of distribution in such a way as to avoid duplication, waste, and loss in the common purpose to deliver the products of the farm to the consumer in the most economical and efficient way. The first essential of such a program is a conscious appreciation not only on the part of the farmer but also on the part of the country as well, that such a program is necessary. The second essential involves the proper organization of the knowledge of agriculture with particular reference to the marketing and distribution of agricultural products and the establishment of a sound, accurate, and current basis of agricultural statistics. This is suggested without reflection or criticism upon the statistical divisions of the Department of Agriculture. The agricultural statistics of this country are better than those of any other country in the world. They can and ought to be better than they are.

STATISTICS OF AGRICULTURE.

The statistics now available are neither sufficiently accurate, comprehensive, nor current, nor are they established upon a sufficiently definite and uniform basis to be completely comparable from year to year over a long period. There is not sufficient coordination of agricultural statistics with statistics of production and consumption, exports and imports procured by other departments. There should be an expansion of the statistical divisions of the Department of Agriculture, particularly along lines of procurement of live-stock statistics. Sound, accurate, current statistics are essential, not only to a conscious program of agricultural development but to the correlation of agriculture with the agencies of manufacture and distribution.

Agricultural statistics should include not only statistics of production and consumption, exports and imports from and to this country, but similar data with reference to crops in foreign countries. The commission is of the opinion that the United States should be represented by agricultural attachés in the principal countries producing agricultural products and consuming them. Foreign agricultural statistics, both of production and consumption, are seldom available from foreign Government sources in time to be of value to the farmers or dealers in grain in this country. It is desirable that agencies should be set up in the principal centers of foreign production and consumption of farm products in order that those interested in the United States can be currently advised as to world crop production and consumption conditions.

STANDARDS OF AGRICULTURAL PRODUCTS AND CONTAINERS.

One of the elements which is now lacking in considerable measure at least in the procurement of agricultural statistics is a basis of standardization of agricultural products and containers. Standardization of agricultural products and containers is likewise essential to any adequate scheme of marketing and distributing farm products if unnecessary waste and losses in the process of marketing and distribution are to be avoided. The process of distribution will be greatly facilitated by sound and practical standards and grades applied to agricultural products in commerce. Standardization will likewise increase the opportunity of the consumer to secure the exact thing for which he bargains and to measure the quality of the product which he buys.

NEED OF ORGANIZATION AND COOPERATION IN PRODUCTIVE MARKETING AND DISTRIBUTION OF FARM PRODUCTS.

In recent years there has been a marked development of farm organizations upon cooperative lines for the purpose of selling, sorting, grading, marketing, and processing farm products. Losses to the farmer incident to his failure to properly sort, grade, and bulk his product are by no means inconsiderable. Individual farmers, however, can not economically purchase and operate the necessary machinery and maintain the necessary agencies for this purpose. It must be done cooperatively, if the farmer is to do it, or the farmer must turn this phase of the function of marketing over to some one else, in which case the profits incident to the better sorting, grading, and packing of the product go to the sorter, grader, or packer instead of to the farmer. The appropriate place and the proper functions of farmers' cooperative organizations will be fully discussed in connection with the report on distribution of farm products to be issued later, but the investigation of the commission has proceeded far enough to justify it in recommending legislation by Congress affirmatively recognizing the right of the farmer to combine with other farmers for the purpose of selling, sorting, grading, marketing, and processing his product.

AGRICULTURAL CREDIT.

The need of adapting the banking machinery of the country to the farmer's turnover and business requirements will be discussed in part 2 of this report and recommendations to accomplish this result will be therein made. It is sufficient to say here that the creation of

adequate banking machinery fully adapted to the farmer's requirements is an integral part of a comprehensive program of agricultural development.

WAREHOUSE SYSTEM.

The warehouse system of the United States is a decentralized and disintegrated system, subject to the widest variations of regulation of the warehouseman's liability in the different States. This situation does not lend itself to systematic marketing or orderly financing of farmers' crops. There should be a national warehouse system which would provide uniform liability on the part of the warehouseman and in which the moral and financial hazards are fully insured. To this end the commission recommends the extension of the existing Federal warehouse law and the passage by the several States of uniform laws regulating the liability of warehousemen and the services rendered by them. The farmer can not hope to adequately control the marketing of his product or to have influence in proportion to his number and importance in the absence of a warehouse system which will enable him to hold or sell his crops as his own judgment, or the judgment of the cooperative association of which he may be a member, dictates.

READJUSTMENT OF PRICES.

The orderly development of production, marketing, and distribution of farm products must be predicated upon the establishment of price levels representing a fair degree of equality of purchasing power between agricultural products and other commodities and economic rewards for investment and labor in agriculture equivalent to the property and labor returns in other industries.

It is perfectly obvious that agriculture can not prosper on the basis of a price level for its products substantially below the price level of other commodities. The exodus from the farm to the city has been attributed in the most part to the social advantages which the city is supposed to offer over the country. A careful investigation of the economic condition of the farmer leads to the conclusion that this exodus has been in a larger measure due to the greater economic rewards offered by urban employment than is offered for the risk, management, and labor on the farm and the greater income for capital invested in industry as compared with the income of capital invested in agriculture.

AGRICULTURAL SCIENCE AND EDUCATION.

Agriculture is subject to exceptional hazards resulting from the weather and climatic conditions, animal and plant diseases, and insect pests. These hazards reduce farming to a gigantic gamble. But methods of production can be adapted to the end of reducing losses from climatic and weather conditions to the minimum. Plant and animal diseases and insect pests can, to a certain degree, be controlled. But the means and the method of reducing or controlling these hazards can not be worked out on the farm by the individual farmer. The investment even of the largest is not sufficient to permit the maintenance of the organization necessary for the study

and formulation of these means and methods. A program of agricultural development therefore must include provisions for an expanded and coordinated program of practical scientific investigation through State and National departments of agriculture, and through agricultural colleges and universities directed toward reducing the hazards of climatic and weather conditions and of plant and animal diseases and insect pests. It should include the extension of instruction in the sciences and economics of agriculture in the public schools.

COST ACCOUNTING.

Considerable progress has been made in recent years in promoting better book and record keeping of the costs of production of farm products on individual farms. Better bookkeeping methods, including more adequate and complete cost records by farmers are essential to the development of more efficient farm management methods. The efforts of farmers in this direction should be promoted by State and Federal departments of agriculture and supported by adequate Federal appropriations.

WHOLESALE TERMINAL FACILITIES.

Wholesale terminal facilities in most of the cities of the United States are archaic and ill adapted to efficiently and economically distribute farm commodities, particularly perishables. Better wholesale terminal facilities of primary markets and a more thorough knowledge of organization of distribution agencies and facilities in large cities is essential to carrying out any constructive agricultural program.

GREATER SOCIAL AND COMMUNITY SATISFACTION.

Good roads to local markets, joint facilities at terminals connecting rail, water, and motor transport systems and more adequate facilities at shipping points will materially contribute to a reduction in the costs of marketing and distribution to the mutual benefit of producer and consumer.

While it is considered that greater economic rewards will constitute the greatest incentive to maintaining agricultural production and particularly keeping on the farm the people already there and their children, a program of agricultural development should be directed toward greater social and community satisfactions, and more convenient and improved social and community institutions.

Chapter I.

THE FARMER'S DOLLAR IN 1920–21.

An understanding of the condition of agriculture is clearly precedent to a study of the causes which were instrumental in bringing about that condition. In general, the condition of agriculture as a whole, as distinguished from the condition that characterizes the condition of individuals in agriculture, may be measured by the prices which the farmer receives for the products he has to sell, in their relation to the prices of other commodities. In other words, the condition of agriculture, in general, is good or bad in proportion to the purchasing power of the farmer's dollar. The farmer's condition is not an absolute condition, but a relative one, and that relation is determined by the amount which the products he raises will buy of other products. It is, therefore necessary, in order to ascertain the relative position of the farmer, to ascertain the purchasing power of farm products during the crisis through which we have just passed as related to the purchasing power of the farmer's dollar in other years.

In order to arrive at the purchasing power of a farmer's dollar in any given month or year, reference is had to an index showing the relative prices of groups of commodities at a given time. The price at the given time may be the average price for a year, or the average price for a period of years. Taking this average as representing 100, a series of figures is established which indicates the relative increase or decrease in the price compared with the established base. In establishing the index for a group of commodities, weights are given to the prices on the commodities making up the group in proportion to the production or relative importance of the commodities in the group.

The purchasing power—that is, the value of any given group of commodities or any given commodity in terms of any other commodity—is arrived at by dividing the price index for the given group of commodities, or the given commodity, by the price index of another group of commodities or of another given commodity.

To illustrate, if the index of farm products on the basis of 1913 in January, 1921, is 136, and the index of all commodities for the same month is 177, the purchasing power of farm products as compared with all commodities would be arrived at by dividing 136 by 177, the result of which is 0.76. By this method it is determined that in January, 1921, as compared with 1913 the farmer's dollar was worth 76 cents.

As foods and farm products are not purchased by farmers to the same extent as by other groups, the purchasing power of the farmer's dollar is sometimes determined by excluding from the "all-commodity" index foods and farm products. The purchasing power of the farmer's dollar by months from 1913 to date is shown in Table A–1, on page 27, and Table A–2, on page 28.

TABLE A–1.—*The purchasing power of all farm products, in terms of all commodities, excluding food and farm products.*

	1913	1914	1915	1916	1917	1918	1919	1920	1921
January	95	103	109	99	96	119	116	100	66
February	95	105	110	97	99	118	113	92	66
March	99	105	112	96	102	118	122	90	67
April	97	106	115	96	111	119	127	90	63
May	98	108	114	98	116	116	128	87	.....
June	99	108	112	96	111	115	117	88	.....
July	101	108	112	100	109	116	12[illegible]	[illegible]3	.....
August	101	114	113	106	115	119	112	81	.....
September	104	112	107	105	117	120	102	78	.....
October	100	111	107	113	125	114	102	70	.....
November	102	110	101	104	126	111	104	70	.....
December	104	105	98	96	121	113	103	65	.....
Average	100	107	109	100	113	117	113	84	.....

The purchasing power of farm products, including both crops and live stock, is shown graphically in the chart which follows:

CHART A–1.

TABLE A–2.—*The purchasing power of all farm products, in terms of all commodities, including food and farm products.*

	1913	1914	1915	1916	1917	1918	1919	1920	1921
January	97	101	103	98	98	111	109	99	76
February	97	103	103	97	96	111	111	95	77
March	100	104	106	97	101	113	113	94	77
April	99	105	107	97	105	114	115	92	74
May	100	106	108	98	108	112	115	89	77
June	99	105	106	97	106	112	111	90	.....
July	101	104	107	99	106	113	112	90	.....
August	100	106	107	102	111	113	107	88	.....
September	102	103	104	102	111	114	103	86	.....
October	102	104	104	105	114	109	103	80	.....
November	100	103	99	101	115	107	104	79	.....
December	102	101	97	97	112	107	103	76	.....
Average	100	103	103	98	107	112	110	89	.....

The basic indexes upon which the purchasing power is arrived at are given in Table A–3.

TABLE A–3.—*Index numbers of wholesale prices.*

BY GROUPS OF COMMODITIES AND BY MONTHS, 1913 TO 1920 (1913 EQUALS 100).

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1913.										
Average for year	100	100	100	100	100	100	100	100	100	100
January	97	99	100	103	107	100	101	100	100	100
February	97	98	101	103	105	101	101	100	100	100
March	99	97	100	102	102	101	101	100	99	99
April	97	96	100	98	102	101	101	100	98	98
May	98	95	100	98	102	101	100	100	98	98
June	99	99	99	100	100	101	100	100	100	100
July	101	102	100	99	98	101	99	100	101	100
August	101	104	100	100	99	99	99	100	102	101
September	104	105	100	100	99	99	99	100	102	102
October	103	102	100	100	99	98	100	100	100	101
November	101	105	100	99	96	98	100	100	100	101
December	101	101	99	99	92	98	100	100	100	99
1914.										
Average for year	103	103	98	96	87	97	101	99	99	100
January	101	102	98	99	92	98	100	99	99	100
February	102	100	99	99	92	99	100	99	100	99
March	103	97	99	99	92	99	100	99	101	99
April	103	95	99	98	91	99	100	99	101	98
May	104	96	99	95	87	98	100	99	101	98
June	104	100	99	94	86	98	100	99	99	99
July	104	104	99	95	85	97	99	99	97	100
August	109	112	99	94	85	97	99	99	98	103
September	108	116	98	95	86	96	104	99	99	104
October	103	107	97	93	83	96	105	99	96	99
November	101	106	96	93	81	95	105	99	96	98
December	99	105	96	94	83	94	104	99	98	98
1915.										
Average for year	105	104	100	93	97	94	114	99	99	101
January	102	106	96	93	83	94	103	99	100	99
February	105	108	97	92	87	95	102	99	100	101
March	105	104	97	92	89	94	102	99	99	99
April	107	105	99	89	91	94	102	99	99	100
May	109	105	99	89	96	94	102	99	98	101
June	105	102	99	89	100	93	104	99	97	99
July	108	104	99	90	102	93	108	99	98	101
August	107	102	99	92	100	92	112	99	97	100
September	103	100	100	94	100	92	116	99	97	99
October	105	103	103	96	100	93	124	99	99	101
November	102	107	105	98	104	94	142	99	100	103
December	103	111	107	100	114	97	153	99	103	106

TABLE A–3.—*Index numbers of wholesale prices*—Continued.

BY GROUPS OF COMMODITIES AND BY MONTHS, 1913 TO 1920 (1913 EQUALS 100)—Contd.

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1916.										
Average for year	122	126	128	119	148	101	159	115	120	124
January	108	113	110	105	126	99	150	105	107	110
February	109	114	113	106	132	100	170	105	106	112
March	111	115	117	108	141	101	175	106	109	114
April	114	117	119	108	147	101	172	108	110	117
May	116	119	122	107	151	102	166	112	113	118
June	116	119	124	108	149	101	166	112	119	119
July	118	121	126	108	145	99	156	121	120	119
August	126	128	128	110	145	100	146	122	122	123
September	131	133	131	115	148	100	147	122	125	128
October	136	140	138	133	151	101	150	124	132	134
November	146	150	146	155	160	104	155	123	135	144
December	142	145	155	170	185	106	159	124	137	146
1917.										
Average for year	189	176	181	175	208	124	198	144	155	176
January	148	150	161	176	183	106	159	132	138	151
February	151	159	162	185	190	108	160	132	141	156
March	163	160	164	188	199	110	165	132	143	161
April	181	182	169	184	208	114	170	139	149	172
May	197	190	173	194	217	117	179	139	150	182
June	197	187	179	201	239	127	180	144	152	185
July	199	181	187	192	257	132	198	152	153	186
August	205	180	193	165	249	133	209	152	156	185
September	204	178	193	160	226	134	223	152	155	183
October	208	183	193	146	182	134	252	152	163	181
November	212	184	198	155	174	134	240	155	166	183
December	205	185	202	158	174	135	238	155	170	182
1918.										
Average for year	220	189	239	163	181	151	221	196	193	196
January	207	187	211	157	174	136	232	161	178	185
February	208	186	216	157	176	138	232	161	181	186
March	212	177	223	158	176	144	232	165	184	187
April	217	178	232	157	177	146	229	172	191	190
May	214	177	237	160	178	148	223	173	194	190
June	217	179	245	159	178	150	219	198	196	193
July	224	184	249	166	184	154	216	199	190	198
August	230	191	252	166	185	157	222	221	191	202
September	237	199	255	167	184	159	220	226	194	207
October	224	201	257	167	187	158	218	226	196	204
November	221	206	256	171	188	164	215	226	203	206
December	222	210	250	171	184	164	195	227	204	206
1919.										
Average for year	234	210	261	173	161	192	179	236	217	212
January	222	207	234	170	172	161	191	218	212	203
February	218	196	223	169	168	163	185	218	208	197
March	228	203	216	168	162	165	183	218	217	201
April	235	211	217	167	152	162	178	217	216	203
May	240	214	228	167	152	164	179	217	213	207
June	231	204	258	170	154	175	174	233	212	207
July	246	216	282	171	158	186	171	245	221	218
August	243	227	304	175	165	208	172	259	225	226
September	226	211	306	181	160	227	173	262	217	220
October	230	211	313	181	161	231	174	264	220	223
November	240	219	325	179	164	236	176	299	220	230
December	244	234	335	181	169	253	179	303	220	238
1920.										
Average for year	218	236	302	238	186	308	210	337	236	243
January	246	253	350	184	177	268	189	324	227	248
February	237	244	356	187	189	300	197	329	227	249
March	239	246	356	192	192	325	205	329	230	253
April	246	270	353	213	195	341	212	331	238	265
May	244	287	347	235	193	341	215	339	246	272
June	243	279	335	246	190	337	218	362	247	269
July	236	268	317	252	191	333	217	362	243	262
August	222	235	299	268	193	328	216	363	240	250
September	210	223	278	284	192	318	222	371	239	242
October	182	204	257	282	184	313	216	371	229	225
November	165	195	234	258	170	274	207	369	220	207
December	144	172	220	236	157	266	188	346	205	189

TABLE A–3.—*Index numbers of wholesale prices*—Continued.

BY GROUPS OF COMMODITIES AND BY MONTHS, 1913 TO 1920 (1913 EQUALS 100)—Contd.

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1921.										
Average for year:										
January	136	162	208	228	152	239	182	283	190	177
February	129	150	198	218	146	221	178	277	180	167
March	125	150	192	207	139	208	171	275	167	162
April	115	141	186	199	138	203	168	274	154	154
May	117	133	181	194	138	202	166	262	151	151
June	113	132	180	187	132	202	166	250	150	148
July	115	134	179	184	125	200	163	235	149	148

BY GROUPS OF COMMODITIES, 1890 TO 1920.

[1913=100.]

1890	68	89	94	69	114	72	90	72	92	81
1891	73	89	91	68	102	70	92	72	92	82
1892	66	89	91	66	93	67	91	71	88	76
1893	67	87	88	66	85	68	90	68	91	77
1894	59	77	78	61	72	66	83	67	86	69
1895	60	74	78	67	77	64	88	62	82	70
1896	54	67	75	69	80	63	91	58	80	66
1897	58	71	75	62	71	62	89	56	80	67
1898	61	76	79	61	71	65	93	61	79	69
1899	62	75	82	71	108	71	96	62	82	74
1900	69	79	88	80	106	76	97	69	91	80
1901	73	80	82	78	98	73	98	69	90	79
1902	81	85	84	92	97	77	97	73	92	85
1903	75	82	88	105	96	80	96	74	94	85
1904	80	87	89	91	88	80	97	73	94	86
1905	77	86	91	87	98	85	96	71	95	85
1906	78	84	97	90	113	94	94	74	97	88
1907	85	89	104	93	120	97	96	80	101	94
1908	85	94	94	91	94	92	100	78	97	91
1909	97	99	98	88	92	97	101	77	109	97
1910	103	100	99	84	93	101	102	80	116	99
1911	93	99	96	82	89	101	103	85	104	95
1912	101	108	98	89	99	100	101	91	101	101
1913	100	100	100	100	100	100	100	100	100	100
1914	103	103	98	96	87	97	101	99	99	100
1915	105	104	100	93	97	94	114	99	99	101
1916	122	126	128	119	148	101	159	115	120	124
1917	189	176	181	175	208	124	198	144	155	176
1918	220	189	239	163	181	151	221	196	193	196
1919	234	210	261	173	161	192	179	236	217	212
1920	218	236	302	238	186	308	210	366	236	243

Chart A–1 on page 27 shows that during the entire period beginning with January, 1920, the purchasing power of the farmer's dollar constantly declined until in April, 1921, it was 63 per cent of 1913 by one index and 77 per cent by the other.

Including food and farm products with all other products, the purchasing power of the farmer's dollar since 1890 is indicated by the following table (A–4):

TABLE A–4.

1890	83	1906	88
1891	89	1907	90
1892	87	1908	93
1893	87	1909	100
1894	85	1910	96
1895	85	1911	97
1896	81	1912	101
1897	86	1913	100
1898	88	1914	103
1899	83	1915	103
1900	86	1916	98
1901	92	1917	107
1902	95	1918	112
1903	88	1919	110
1904	93	1920	89
1905	90		

As indicated by this table, the farmer's condition in 1920, as measured by the purchasing power of his dollar, was worse than in any other year since 1901, with the exception of 1903 and 1906.

The following table, A–5, compares the purchasing power of 31 different farm commodities in April and May of this year on the basis of the 5-year average for the same product in the same month for five successive years ending in 1914:

TABLE A–5.—*The price and the purchasing power of stated farm products, in April and May of 1921.*[1]

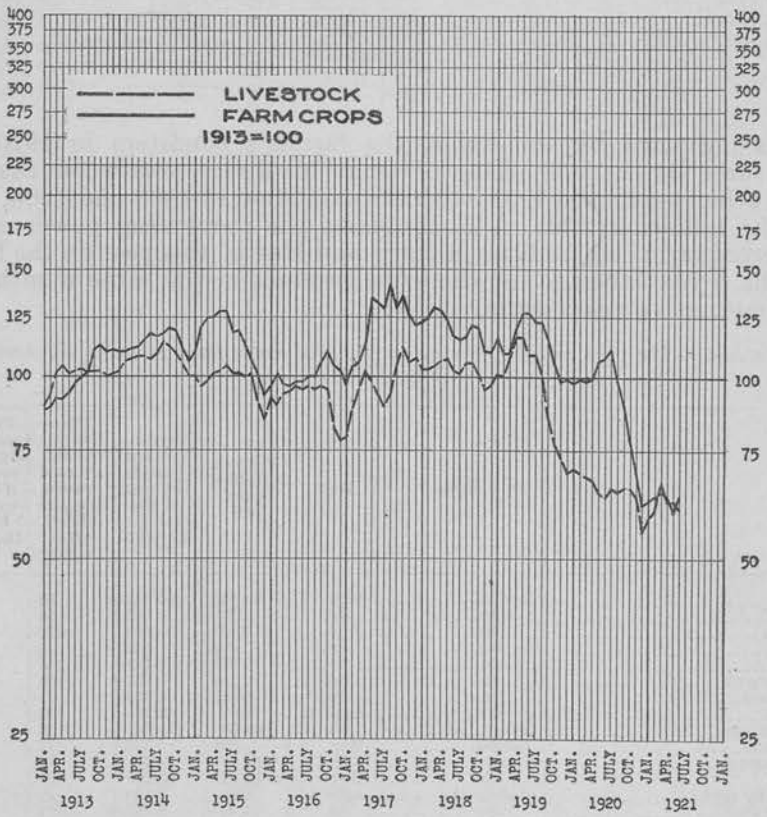
	Unit.	Date.	Price on specified date, 1921.	5-year average before the war for the same month.	Price index, 5-year average before the war (1909–1914) =100.	Present purchasing power on basis of 5-year average before the war=100.
Corn	Bushel	May 1	$0.595	$0.647	92	59
Oats	do	do	.368	.412	89	57
Wheat	do	do	1.107	.898	123	78
Barley	do	do	.492	.649	76	48
Rye	do	do	1.053	.721	146	93
Buckwheat	do	do	1.159	.731	159	101
Flaxseed	do	do	1.257	1.763	71	45
Beans	do	Apr. 15	2.69	2.19	123	78
Broom corn	Ton	do	69.00	105.00	66	42
Cotton	Pound	May 1	.094	.126	75	48
Cottonseed	Ton	Apr. 15	17.23	22.70	76	48
Hay	do	May 1	13.08	12.23	107	68
Timothy seed	Bushel	Apr. 15	2.84	4.12	69	44
Clover seed	do	do	10.80	9.73	111	71
Cabbage	Hundredweight	do	2.03	2.04	100	64
Onions	Bushel	do	.98	1.27	77	49
Potatoes	do	May 1	.68	.696	98	62
Sweet potatoes	do	do	1.272	.978	130	83
Peanuts	Pound	Apr. 15	.035	.05	70	45
Apples	Bushel	May 1	1.422	1.226	116	74
Chickens	Pound	do	.217	.118	184	117
Eggs	Dozen	do	.202	.167	121	77
Butter	Pound	do	.386	.247	156	99
Milch cows	Head	Apr. 15	64.35	49.42	130	83
Beef cattle	Hundredweight	do	6.08	5.50	111	71
Veal calves	do	do	7.73	6.76	114	73
Sheep	do	do	5.11	5.07	101	64
Lambs	do	do	7.55	6.46	117	75
Wool	Pound	do	.179	.18	99	63
Hogs	Hundredweight	do	7.96	7.59	105	67
Horses	Head	do	100.00	146.00	68	43
Average, 31 products					[2] 106	67
United States Bureau Labor, wholesale prices "*All commodities*," April [1]				100	157	

[1] Prepared by Prof. G. F. Warren, of Cornell University.
[2] The weighted average according to amounts usually sold is practically the same (index 110).

The following chart, A–2, shows graphically the purchasing power of live stock as compared with the purchasing power of farm crops. The chart shows that during the entire period from 1913 to date the returns from crops as measured in terms of the purchasing power were relatively greater than those from live stock.

CHART A–2.

THE PURCHASING POWER OF LIVESTOCK AND OF FARM CROPS FROM JANUARY 1913 TO APRIL 1921 BY MONTHS



The following tables, A–6 and A–7, on page 33, show the purchasing power of farm products in terms of all commodities other than food and farm products, and in terms of all commodities including food and farm products, respectively, for the first six months of the crop year compared with the last six months of the crop year and with the average for the crop year. In the eight crop years shown the purchasing power of farm crops was greater in the last six months than in the first six months in three out of the eight years, greater in the first six months than in the last six months in four out of the eight years, and in one year the purchasing power was the same in both the first and last six months of the crop year.

A careful interpretation of these tables also indicates that while the purchasing power of farm products was relatively high in

five of the eight years and relatively low in three, that the decline in purchasing power was relatively greater in the three years than the increase in the five years and that the relative increases in purchasing power are largely offset by the declines. Notwithstanding the high absolute prices for farm products during the war period, the relative gain of the farmer as expressed in purchasing power was small and has been fully wiped out by the declines which have subsequently taken place.

TABLE A-6.

	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
July 1 to Dec. 31.....	102	110	106	104	119	115	107	75
Jan. 1 to June 30.....	106	112	97	106	117	120	91	[1] 65
Average for crop year.....	104	111	101	105	118	118	99	71

[1] For four months.

TABLE A-7.

	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
July 1 to Dec. 31.....	101	104	103	101	112	111	105	83
Jan. 1 to June 30.....	104	106	97	102	112	112	93	[1] 76
Average for crop year.....	103	105	100	102	112	111	99	80

[1] For five month .

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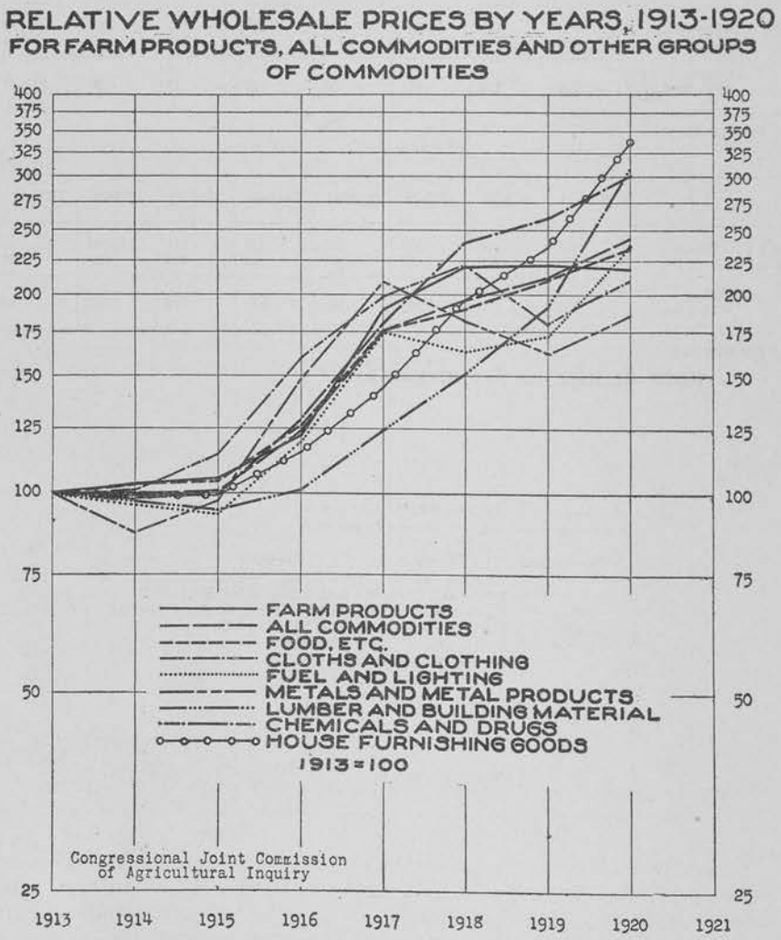
Chapter II.

THE RELATION OF PRICES OF AGRICULTURAL COMMODITIES TO PRICES OF OTHER COMMODITIES.

If the price of all commodities rose in exactly the same proportion, the relative welfare of the producers of the different commodities would remain the same, notwithstanding the increase in the general price level, and the purchasing power of one group of commodities

CHART B–1.



would remain constant in its relation to all other commodities, but the prices of commodities do not rise or fall in exactly the same proportion, nor do they rise and fall at exactly the same time. The

welfare of one group of producers as compared with another is, therefore, increased or diminished somewhat in the relation to the disproportionate rate and degree of increase or decline in the price of commodities which it produces as compared with the price of other commodities.

CHART B–2.

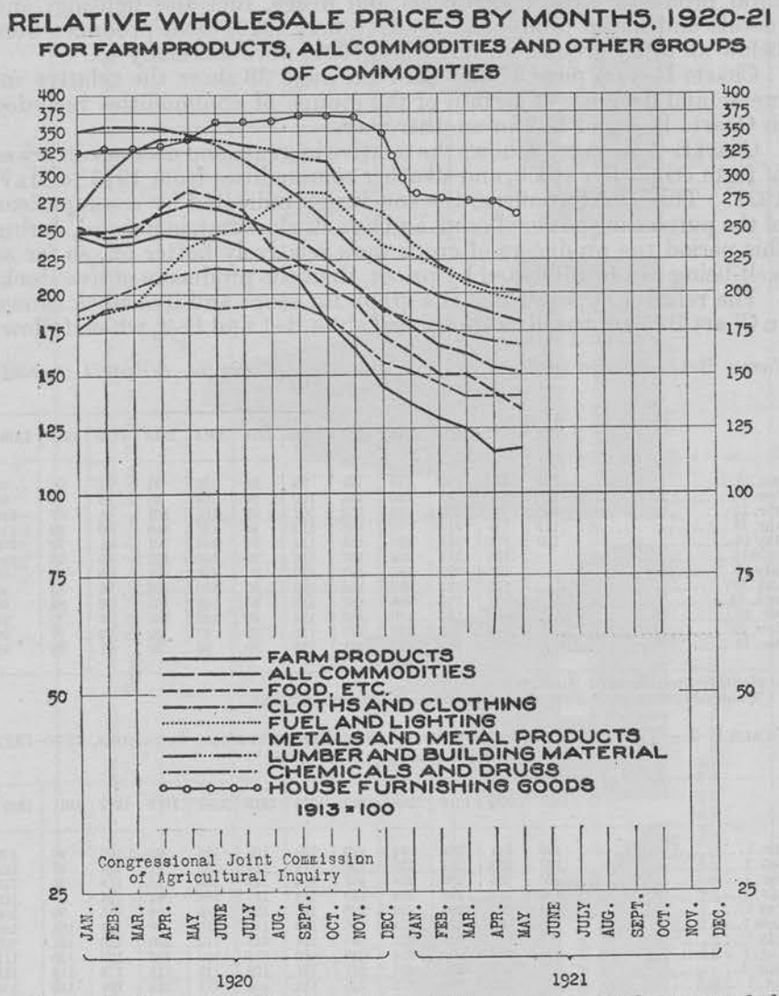


Chart B–1 on page 34 shows the relative increase or decrease of the price ofdifferent groups of commodities in their relation to each other during the period 1913 to 1920, inclusive, on the base of the index figures shown in Table A–3 on page28. This chart covers the period of inflation of prices.

Chart B–2 shows the relation of prices of different groups of commodities by months on the same base from January, 1920, to June, 1921. This is the period of deflation of prices.

In general, the prices of farm products rose proportionately to the prices of other commodities until January 1918, and remained relatively on the level reached at that time, while the prices of other groups of commodities either fell slightly during the early part of 1919 and then rose again or continued to rise without material decline. By January, 1920, the prices of all groups were above those for agricultural products, except chemicals and drugs, fuel and lighting, and metals and metal products. By October, 1920, farm products were below all other groups, and by May, 1921, were markedly so.

Charts B–3 on page 37 and B–4 on page 38 show the relative increase and decrease of certain of the groups of commodities included in Charts B–1 and B–2 in another way.

Chart B–5 on page 39 shows the relative increase and decrease in prices of farm crops, live stock, and all other commodities from 1919 to May, 1921. This chart confirms the conclusion indicated by a comparison of the purchasing power of crops and live stock—that, in general, during this period the producers of crops were relatively better off, so far as well-being can be indicated by prices, than the producers of live stock.

The relatives upon which the graph for crops and live stock shown in Chart B–5 are based as shown in Tables B–1 and B–2, which follow:

TABLE B–1.—*Relative wholesale prices of live stock, by months, 1910–1921 (monthly average, 1913=100).*[1,2]

	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
Jan. 15	120	173	192	179	121	92	94	100	91	77	91	95
Feb. 15	117	177	192	180	134	100	92	103	95	78	88	95
Mar. 15	123	178	200	186	152	107	92	105	101	81	87	105
Apr. 15	112	181	214	193	166	112	94	105	104	90	82	110
May 15	109	177	218	197	168	114	97	104	101	91	79	105
June 15	.....	175	213	194	167	114	98	103	102	89	78	104
July 15	.....	176	222	195	163	114	97	105	103	89	79	99
Aug. 15	.....	172	221	202	168	114	96	109	102	93	84	95
Sept. 15	.....	174	191	206	182	119	96	108	102	96	84	98
Oct. 15	.....	166	174	196	186	114	99	102	102	98	79	97
Nov. 15	.....	147	169	190	177	115	92	97	99	92	77	92
Dec. 15	.....	121	164	191	181	116	89	94	98	91	76	88

[1] Monthly Crop Reporter, June, 1921.
[2] Wholesale prices are computed average prices at terminal markets.

TABLE B–2.—*The relative wholesale prices of 10 leading farm crops, by months, 1910–1921 (monthly average, 1913=100).*[1]

	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
Jan. 1	129	241	221	214	149	105	103	108	90	109	96	109
Feb. 1	123	252	211	220	159	114	114	107	91	114	97	112
Mar. 1	120	255	209	234	168	112	117	109	92	118	96	114
Apr. 1	113	271	220	234	183	114	117	109	92	124	96	113
May 1	104	294	238	229	228	116	122	110	94	135	99	108
June 1	109	309	249	221	236	118	120	113	98	137	104	108
July 1	.....	304	252	222	235	118	113	112	100	130	111	108
Aug. 1	.....	268	267	228	250	120	113	112	102	120	120	111
Sept. 1	.....	239	258	238	227	131	108	115	111	112	115	111
Oct. 1	.....	202	235	235	225	133	104	111	113	104	112	105
Nov. 1	.....	163	227	219	212	145	101	103	109	96	110	99
Dec. 1	.....	135	230	215	205	152	98	100	108	90	108	104

[1] Wholesale prices are computed average prices at terminal markets.

The relative wholesale prices for farm products, all commodities, and other groups of commodities for the month of May, 1921, are shown in Chart B–6 on page 40, and the relative wholesale prices of all farm products, all commodities, and specified farm products for the same month are shown in Chart B–7 on page 41.

CHART B–3.

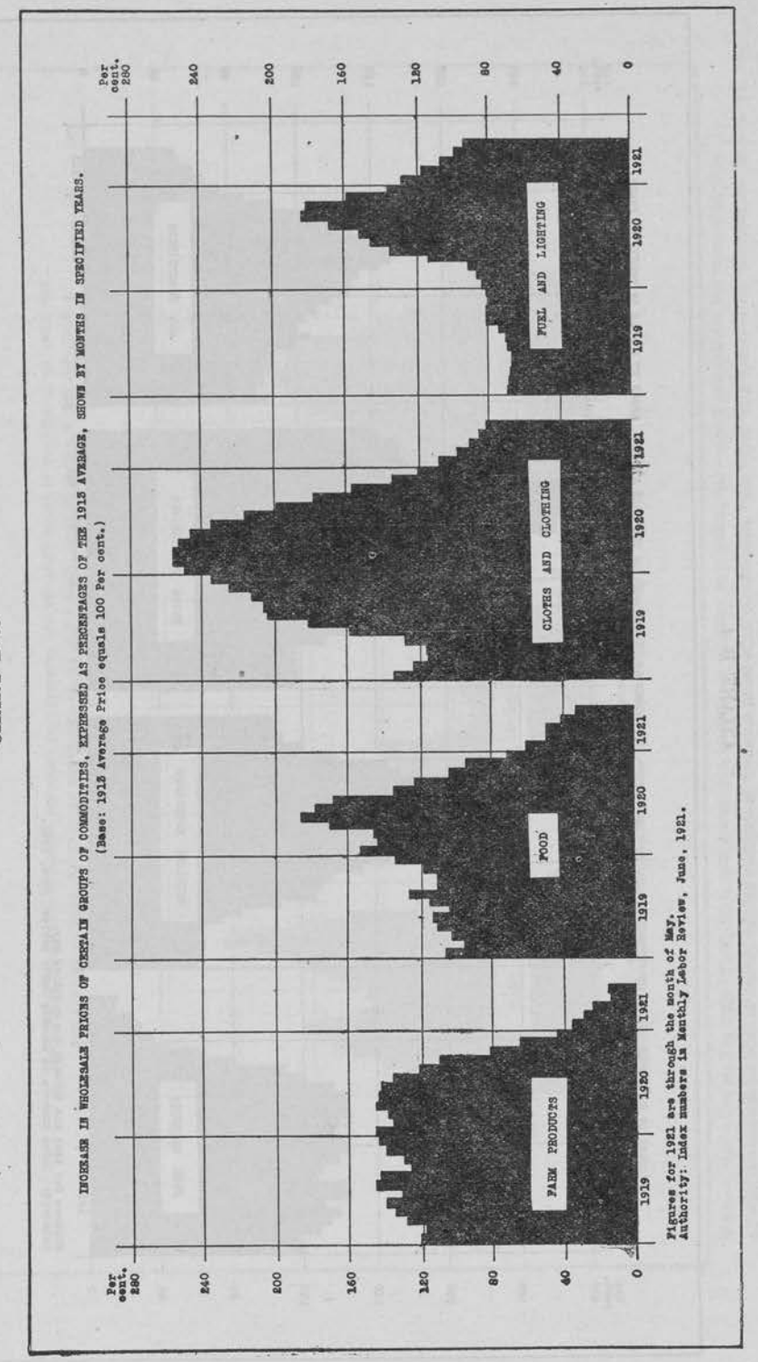


CHART B–4.

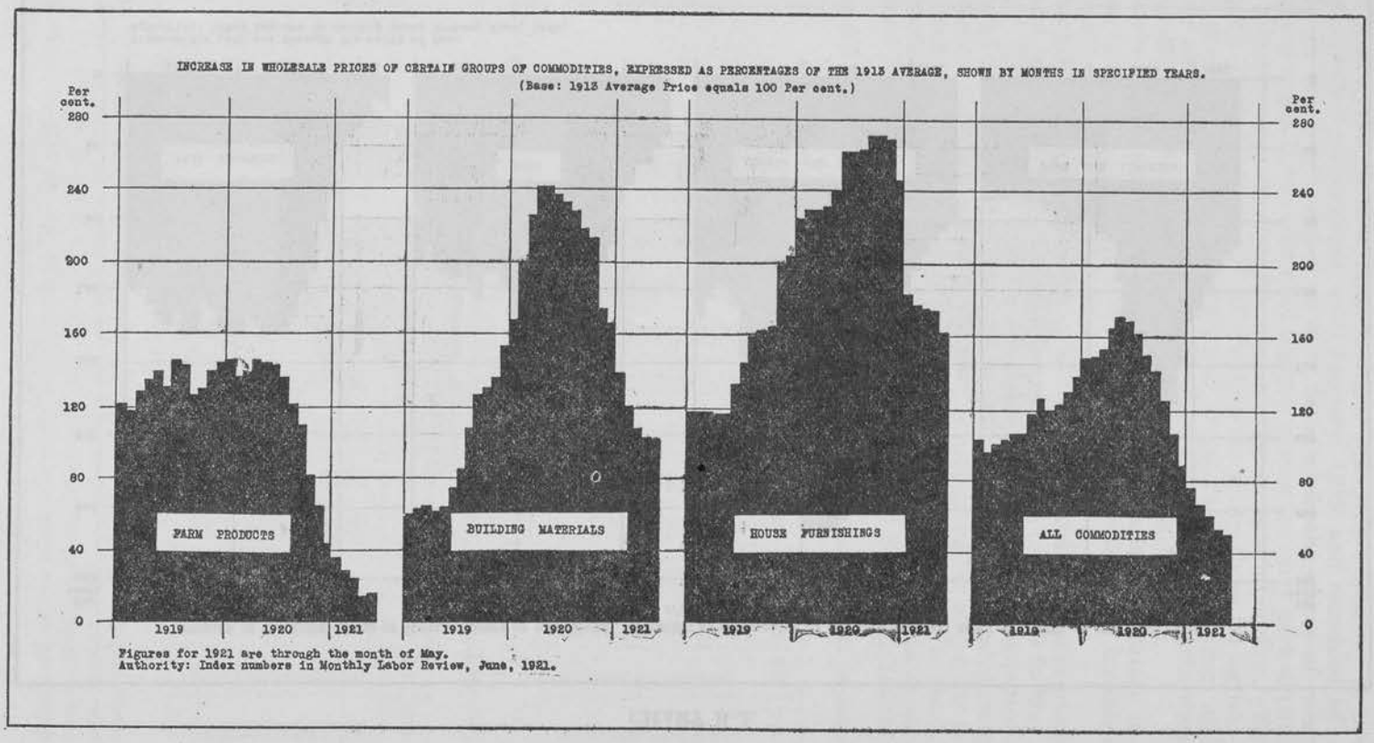
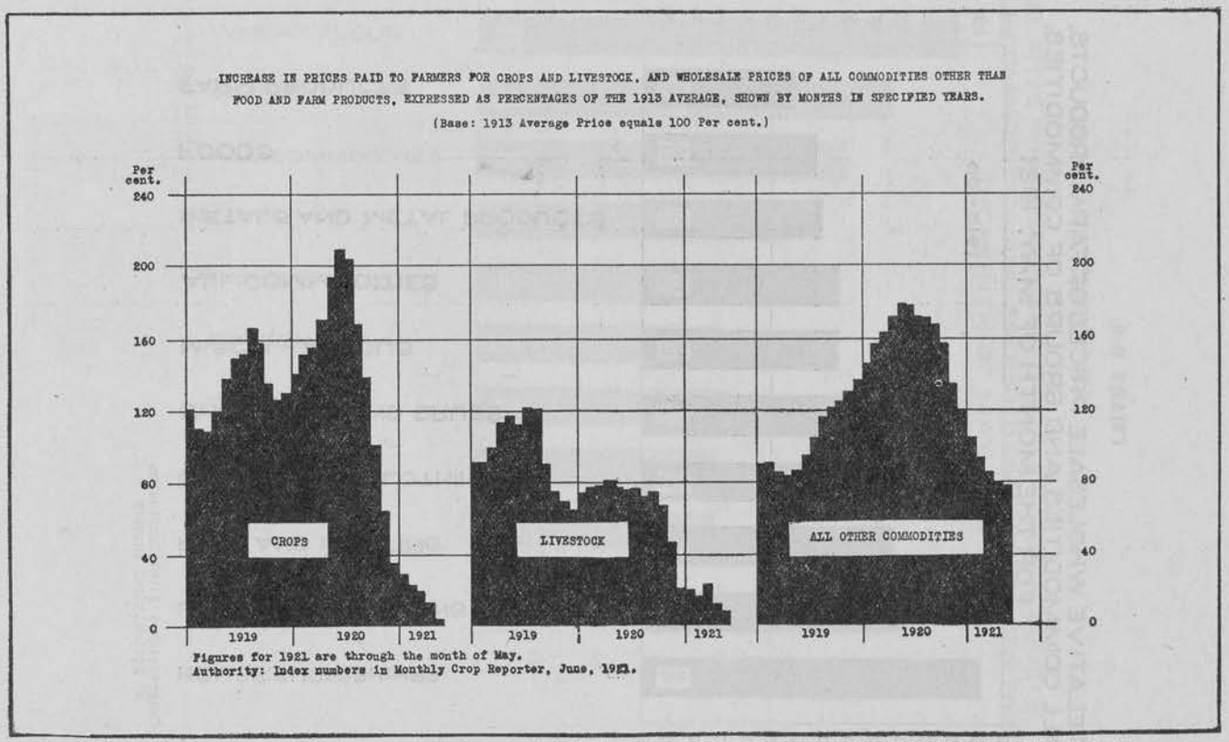


CHART B–5.

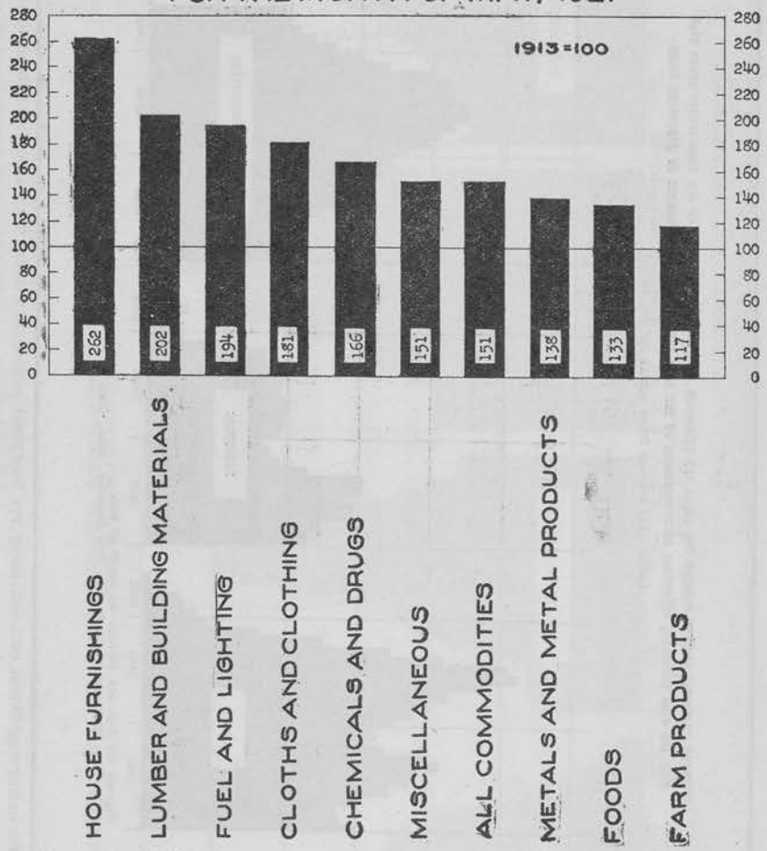


NOTE.—*Crops.*—Ten leading crops (wheat, corn, oats, barley, rye, buckwheat, potatoes, hay, cotton, flax)—about four-fifths of the value of all crops.

All other commodities (Bureau of Labor).—Index numbers of wholesale prices of all commodities, from which were deducted the commodities representing the foods, and farm products group.

CHART B-6.

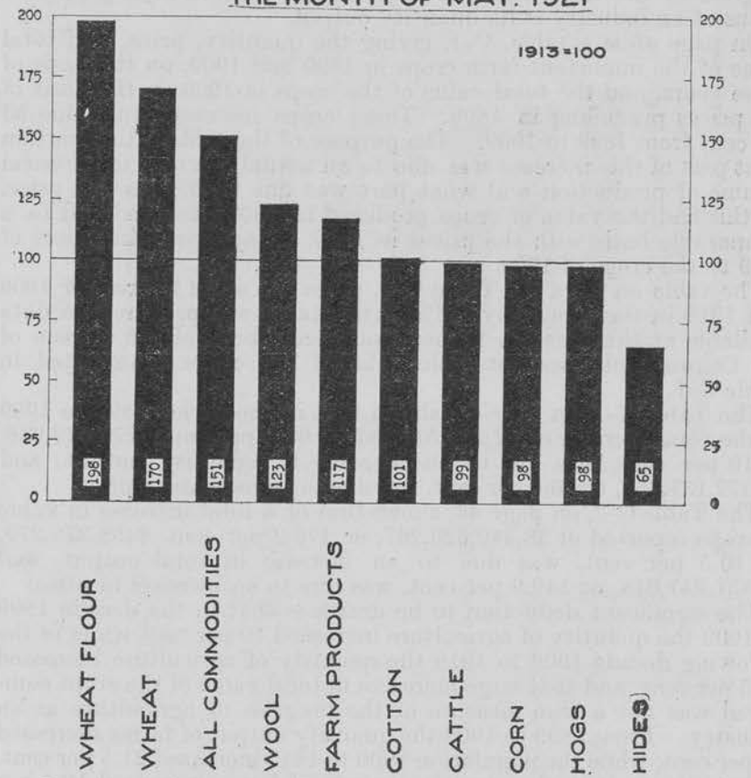
RELATIVE WHOLESALE PRICES OF FARM PRODUCTS, ALL COMMODITIES, AND GROUPS OF COMMODITIES, FOR THE MONTH OF MAY, 1921



Congressional Joint Commission of Agricultural Inquiry

CHART B-7.

RELATIVE WHOLESALE PRICES OF ALL FARM PRODUCTS, ALL COMMODITIES, AND SPECIFIED FARM PRODUCTS FOR THE MONTH OF MAY, 1921



Congressional Joint Commission of Agricultural Inquiry

Chapter III.

THE RELATIVE GROWTH OF AGRICULTURE AND OTHER INDUSTRIES IN QUANTITY PRODUCTION.

Prices and values, while indicative of the condition of one industry as compared with another, are not accurate measures of the relative progress of the industries. A better measure of the progress and status of an industry is its quantity output.

On page 43 is a table, C–1, giving the quantity, price, and total value of the important farm crops in 1899 and 1909, on the basis of those years, and the total value of the crops in 1909 on the basis of the prices prevailing in 1899. These crops increased in value 83 per cent from 1899 to 1909. The purpose of the table is to ascertain what part of this increase was due to an actual increase in physical volume of production and what part was due to increase in price. To this end the value of crops produced in 1909 were reduced to a comparable basis with the prices in 1899, by applying the prices of 1899 to the crops of 1909.

The table on page 44, Table C–2, gives the same figures for 1909 and 1919 in the same way. The latter table was prepared on data available at the time the request was made for it of the Bureau of the Census and does not include all of the crops enumerated in Table C–1.

The Table C–1, on page 43, shows that in the period 1899 to 1909 of the total increase of $2,242,511,287, or 83.3 per cent, $270,379,936, or 10 per cent, was due to an increase in quantity output, and $1,972,131,351, or 66.6 per cent, was due to an increase in price.

The Table C–2, on page 44, shows that of a total increase in value of crops reported of $8,349,626,297, or 176.2 per cent, $498,379,279, or 10.5 per cent, was due to an increase in total output, and $7,851,247,018, or 149.9 per cent, was due to an increase in price.

The significant deduction to be drawn is that in the decade 1899 to 1909 the quantity of agriculture increased 10 per cent while in the following decade 1909 to 1919 the quantity of agriculture increased 10.5 per cent, and that large increases in total value of the crops compared was not a true measure of the progress of agriculture as an industry. From 1899 to 1909 the quantity output of farms increased 10 per cent, while the population 1900 to 1910 increased 21.5 per cent. From 1909 to 1919 the quantity output of farms increased 10.5 per cent, while the population increased 1910 to 1920, 14.5 per cent.

Moreover, the increase of 10.5 per cent in farm output from 1909 to 1919 was largely due to an increase in acreage and to a slight extent only to an increase in output per acre. The acreage of the groups compared in the tables C–1 and C–2 increased in this period 12.4 per cent, as shown by Table C–3 on page 45.

TABLE C–1.—*Quantity, value, and prices of crops: 1909 and 1899.*

Crops.	Unit.	Average value per unit.				Value of crops.			Increase 1899–1909.[1]				Excess of actual values of crops of 1909 over values computed for 1909 on basis of prices of 1899.	
		1909	1899	Increase, 1899 to 1909.		As reported, 1909.	Computed for 1909 on basis of prices of 1899.	As reported, 1899.	On basis of values as reported.		On basis of prices of 1899 for crops of 1909.			
				Amount.	Per cent.				Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
All crops						$5,487,161,223		$2,998,704,412	$2,488,456,811	83.0				
Crops compared						4,934,489,828	$2,962,358,477	2,691,978,541	2,242,511,287	83.3	$270,379,936	10.0	$1,972,131,351	66.6
Crops not compared						552,671,395		306,725,871	254,945,524	80.2				
Cereals						2,665,839,714	1,510,529,214	1,482,693,049	1,182,936,665	79.8	27,926,105	1.9	1,155,010,500	76.5
Corn	Bushel	$0.56965	$0.31061	$0.25904	81.5	1,438,553,919	792,735,621	825,192,388	610,361,531	73.7	−35,456,767	−4.3	645,818,298	81.5
Oats	do	.41176	.18163	.23013	78.9	414,697,422	231,773,814	217,098,584	197,508,838	91.0	14,675,230	6.8	182,923,608	78.9
Wheat	do	.96286	.56177	.40059	71.3	657,656,801	383,901,966	369,945,320	287,711,481	77.8	13,966,646	3.8	273,754,835	71.3
Barley	do	.53338	.34799	.18539	53.3	92,458,571	60,322,062	41,631,702	50,826,869	122.1	18,690,290	44.9	32,136,519	53.3
Buckwheat	do	.51167	.11668	.39499	338.4	9,330,592	7,597,958	5,747,853	3,582,739	62.3	1,850,105	32.2	1,732,634	22.8
Rye	do	.69179	.49069	.20110	43.9	20,421,812	14,190,188	12,290,540	8,131,272	66.2	1,899,648	15.5	6,231,624	43.9
Kafir corn and milo maize	do	.61469	.26446	.35023	132.4	10,816,940	4,653,783	1,367,040	9,449,900	691.3	3,286,743	240.4	6,163,157	132.4
Rice (rough)	do	.73355	.70306	.03049	4.3	16,019,607	15,353,832	6,329,562	9,690,045	153.1	9,024,270	142.6	665,776	4.3
Emmer and spelt	do	.43960				5,584,050			5,584,050				5,584,050	
Dry edible beans	do	1.93504	1.50729	.42775	28.5	21,771,482	16,958,761	7,633,636	14,137,846	185.2	9,325,125	122.2	4,812,721	28.4
Other beans	do	1.34121	.93511	.40610	43.4	241,060	168,070	134,064	106,976	79.8	33,986	25.3	72,990	43.4
Dry peas	do	1.53784	.88780	.70004	83.6	10,963,739	5,972,923	7,905,966	3,054,773	38.6	−1,996,043	−24.5	4,990,816	83.6
Peanuts	do	.94108	.60769	.33339	54.9	18,271,929	11,798,797	7,270,515	11,001,414	151.3	4,528,282	62.3	6,473,132	54.9
Flaxseed	do	1.48470	.98225	.50245	51.2	28,970,554	19,166,412	19,624,901	9,345,653	47.6	−458,489	−2.3	9,804,142	51.2
Grass seed	do	2.20906	1.69132	.57774	34.2	15,137,683	11,283,384	8,228,417	6,909,266	84.0	3,054,967	37.1	3,854,299	34.2
Hay and forage	Ton	8.55324	6.11035	2.44499	38.4	824,004,877	595,476,430	484,254,703	339,750,174	70.2	111,221,727	23.0	228,528,447	38.4
Tobacco	Pound	.09879	.06565	.03314	50.5	104,302,856	69,310,930	56,987,902	47,314,954	83.0	12,323,050	21.6	34,991,896	50.5
Cotton	Bale	66.07208	33.95575	32.11633	94.6	703,619,303	361,603,852	323,758,171	379,861,132	117.3	37,845,711	11.7	342,015,421	94.6
Cotton seed	Ton	22.73902	9.84835	12.89067	130.9	121,076,984	52,488,859	46,950,575	74,126,409	157.9	5,488,284	11.7	68,638,125	130.9
Sugar beets	do	5.05503	4.18885	.86618	20.7	19,880,724	16,474,148	3,323,240	16,557,484	498.2	13,150,908	395.7	3,406,576	20.7
Sorghum cane	do	6.17659	3.19526	2.98133	93.3	10,174,457	5,263,430	6,105,102	4,071,355	66.7	−839,672	−13.8	4,911,027	93.3
Broom corn	Pound	.06503	.02557	.03946	154.3	3,134,434	3,115,760	3,588,414	1,546,020	43.1	−472,654	−13.2	2,018,674	64.8
Hemp	do	.05515	.04649	.00866	18.6	412,699	347,898	646,338	−133,639	−20.5	−198,440	−36.3	64,801	18.6
Hops	do	.19266	.08295	.10971	132.3	7,844,745	3,377,020	4,081,929	3,762,816	92.2	−704,309	−17.3	4,467,125	132.3
Potatoes	Bushel	.42761	.35995	.06766	18.8	166,423,910	140,060,728	98,380,110	68,043,800	69.2	41,710,618	42.4	26,333,182	18.8
Sweet potatoes and yams	do	.59814	.46733	.13081	28.0	35,429,176	27,680,923	19,869,923	15,559,336	78.3	7,811,083	39.3	7,748,253	28.0
Small fruits	Quart	.07027	.05403	.01624	30.1	29,974,481	23,047,354	25,029,757	4,944,724	19.8	−1,982,403	−7.9	6,927,127	30.1
Orchard fruits	Bushel	.39437	.25754	.13683	53.1	140,807,347	85,216,927	83,750,961	57,116,386	68.2	1,465,966	1.8	55,650,420	65.3
Nuts	Pound	.07136	.04871	.02265	46.5	4,447,674	3,035,997	1,949,931	2,497,743	128.1	1,086,066	55.7	1,411,677	46.5

[1] A minus sign (−) denotes decrease.

Source: Summary for all crops, Thirteenth Census of the United States, 1910, Vol. V, page 535, Agriculture, General Report and Analysis.

TABLE C–2.—*Quantity, value, and prices of principal crops in the United States: 1919 and 1909.*

Crop.	Unit.	Average value per unit.				Value of crops.			Increases, 1909–1919.			Excess of actual values of crops of 1919 over values computed for 1919 on basis of prices of 1909.	
		1919	1909	Increase, 1909–1919.		As reported, 1919.	Computed for 1919 on basis of prices of 1909.	As reported, 1909.	On basis of values as reported.		On basis of prices of 1909 for crops of 1919.		
				Amount.	Per cent.				Amount.	Per cent.		Amount.	Per cent.
Crops for which 1919 figures are available.						$13,087,767,743	$5,236,520,725[1]	$4,738,141,446	$8,349,626,297	176.2	$498,379,279	10.5	$7,851,247,018	149.9
Cereals:														
Corn	Bushels.	$1.49541	$0.56365	165.3	3,513,174,543	1,324,183,974	1,438,553,919	2,074,620,624	144.2	−114,369,945	−8.0	2,188,990,569	165.3
Wheat	do	2.19386	1.22150	128.0	2,074,078,801	909,515,238	657,696,801	1,416,422,000	215.4	252,161,457	38.3	1,164,260,563	128.0
Oats	do	.81053	.39877	96.8	855,255,468	434,432,069	414,697,422	440,558,046	106.2	19,734,647	4.8	420,773,399	96.8
Barley	do	1.31471	.53338	146.5	160,427,255	65,085,573	92,438,571	67,968,684	73.5	−27,372,998	−29.6	95,341,682	146.5
Rye	do	1.53355	.69179	121.7	116,537,965	52,570,660	20,421,812	96,116,153	470.7	32,138,848	157.4	63,967,305	121.7
Buckwheat	do	1.55356	.62835	147.2	19,715,295	7,973,999	9,380,592	10,384,703	111.3	−1,356,593	−14.5	11,741,296	147.2
Peanuts	do	2.28604	.94108	142.9	62,751,701	25,832,580	18,271,929	44,479,772	243.4	7,560,651	41.4	36,919,121	142.9
Hay and forage, not including corn cut for forage.	Ton	18.01803	8.45534	113.1	2,317,057,894	1,087,328,103	824,004,877	1,493,053,017	181.2	263,323,226	32.0	1,229,729,791	113.1
Tobacco	Pounds	.32303	.09879	227.0	445,366,926	136,205,141	104,302,856	341,064,070	327.0	31,902,285	30.6	309,161,785	227.0
Cotton	Bales	176.45985	66.07208	167.1	2,007,430,242	751,644,571	703,619,303	1,303,810,939	185.3	48,025,268	6.8	1,255,785,671	167.1
Cotton seed	Tons	65.29077	22.73002	187.0	347,739,123	121,147,154	121,076,984	226,662,139	187.2	70,170	.1	226,591,969	187.0
Sugar beets	do	11.02077	5.05403	118.0	66,051,989	30,286,862	19,880,724	46,171,265	232.2	10,416,138	52.4	35,755,127	118.0
Potatoes	Bushels.	2.20183	.42761	414.9	640,192,621	124,329,566	166,423,910	473,768,711	284.7	−42,094,344	−25.3	515,863,055	414.9
Sweet potatoes	do	1.59869	1.00655	167.3	124,844,475	46,709,897	35,429,176	89,415,299	252.4	11,280,721	31.8	78,134,578	167.3
Apples	do	1.70398	1.19638	210.6	241,573,577	77,785,144	83,231,492	158,342,085	190.2	−5,446,348	−6.5	163,788,433	210.6
Peaches	do	1.88552	.81141	132.4	95,569,868	41,127,194	28,781,078	66,788,790	232.1	12,346,116	42.9	54,442,674	132.4

[1] Total value of all crops in 1909, whose production was reported in definite units, was $4,934,489,828.

TABLE C–3.—*Acreage and production of principal crops in the United States: 1919 and 1909.*

ACREAGE.

Crops.	1919	1909	Increase.	
			Amount.	Per cent.
Crops for which 1919 figures are available	336,854,642	[1] 299,740,628	37,114,014	12.4
Cereals:				
Corn	87,774,579	98,382,665	−10,608,086	−10.8
Wheat	73,099,421	44,262,592	28,836,829	65.1
Oats	37,991,002	35,159,441	2,831,561	8.1
Barley	6,472,948	7,698,706	− 1,225,758	−15.9
Rye	7,679,005	2,195,561	5,483,444	249.8
Buckwheat	742,627	878,048	− 135,421	−15.4
Peanuts	1,125,100	869,887	255,213	29.3
Hay and forage, not including corn cut for forage	81,661,209	72,280,776	9,380,433	13.0
Tobacco	1,870,312	1,294,911	575,401	44.4
Cotton	33,740,106	32,043,838	1,696,268	5.3
Sugar beets	636,414	364,093	272,321	74.8
Potatoes	3,258,192	3,668,855	− 410,663	−11.2
Sweet potatoes	803,727	641,255	162,472	25.3
TREES OF BEARING AGE.				
Apples	115,309,165	151,322,840	−36,013,675	−23.8
Peaches	65,646,101	94,506,657	−28,860,556	−30.5

[1] Total acreage of all crops with acreage report in 1909 was 311,293,382.

PRODUCTION.

Crops.	Unit.	1919	1909	Increase.	
				Amount.	Per cent.
Cereals:					
Corn	Bushel	2,349,301,825	2,552,189,639	−202,887,805	− 7.9
Wheat	do	945,403,215	683,379,259	262,023,956	38.3
Oats	do	1,055,182,798	1,007,142,980	48,039,818	4.8
Barley	do	122,024,773	173,344,212	− 51,319,439	− 29.6
Rye	do	75,992,223	29,520,457	46,471,766	157.4
Buckwheat	do	12,690,378	14,849,332	− 2,158,954	− 14.5
Peanuts	do	27,449,930	19,415,816	8,034,114	41.4
Hay and forage, not including corn cut for forage.	Ton	128,596,615	97,453,735	31,142,880	32.0
Tobacco	Pound	1,378,734,095	1,055,764,806	322,969,289	30.6
Cotton	Bale	11,376,130	10,649,268	726,862	6.8
Cotton seed	Ton	5,327,721	5,324,634	3,087	.1
Sugar beets	do	5,903,409	3,932,857	2,060,552	52.4
Potatoes	Bushel	290,754,580	389,194,965	− 98,440,385	− 25.3
Sweet potatoes	do	78,091,913	59,232,070	18,859,843	31.8
TREES OF BEARING AGE.					
Apples	Bushel	136,560,997	145,412,318	− 8,851,321	− 6.1
Peaches	do	50,686,082	35,470,276	15,215,806	42.9

In general, the output of agriculture has not only lagged behind the growth in population, but to a much larger degree has failed to keep the pace of the output of other industries, as is shown by the following Table C–4, prepared by Dr. Edmund E. Day, which gives his estimate of the physical volume of production by years from 1899 to 1919 of different manufactured products, on the one hand, and the products of mines and agriculture on the other, as compared with the growth in population.

TABLE C–4.—*Index numbers of the growth of population and the physical volume of production of manufactured products and of mining and agriculture, 1899 to 1919.*

Year.	Growth of population.	Manufactured products.											Mining.	Agriculture.
		Lumber.	Food.	Textiles.	Tobacco.	Liquors.	Stone, clay, and glass.	Iron.	Chemicals and allied products.	Metal products other than iron and steel.	Vehicles.	All products.		
1899	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1900	101.8	98.1	100.7	100.6	106.5	105.7	105.4	95.5	102.6	102.3	117.4	101.0	105.7	100.6
1901	103.8	96.2	123.1	101.5	112.9	112.9	125.2	117.5	115.5	113.1	147.2	112.4	114.6	89.3
1902	106.0	94.3	117.3	116.0	118.1	120.9	142.0	133.3	130.2	145.8	183.3	123.5	122.7	113.7
1903	108.1	92.4	124.5	116.1	126.0	125.6	143.1	130.2	138.6	142.4	210.3	125.5	135.0	105.0
1904	110.3	90.7	125.0	115.8	124.8	129.4	146.8	120.4	146.6	141.4	186.5	123.2	136.3	116.0
1905	112.4	97.4	141.3	129.2	128.4	137.6	165.3	164.2	165.5	163.9	284.4	144.4	161.6	117.5
1906	114.5	109.1	142.1	130.4	138.2	149.4	178.4	178.7	180.4	184.7	356.7	155.0	169.9	125.0
1907	116.7	115.8	132.2	131.9	141.8	153.6	177.4	179.7	184.4	161.8	430.5	156.3	185.9	112.4
1908	118.9	112.4	136.2	121.5	136.3	149.3	155.3	107.7	182.0	148.5	286.8	132.7	154.2	118.8
1909	121.0	126.2	144.3	149.2	143.6	151.5	192.6	171.8	199.2	192.6	354.5	163.4	189.4	118.1
1910	123.1	123.2	134.3	141.2	150.7	161.6	200.7	183.2	189.6	198.4	522.2	166.0	201.6	123.2
1911	125.3	116.1	140.4	130.3	153.7	165.6	193.2	159.6	208.3	199.0	377.6	158.3	194.4	117.0
1912	127.4	118.7	149.5	148.4	158.6	168.5	204.0	201.0	233.4	216.3	650.6	181.4	216.7	138.1
1913	129.6	113.4	151.0	155.8	169.1	173.4	211.2	211.2	240.6	223.9	769.8	187.1	227.2	122.1
1914	131.6	101.8	152.7	157.3	165.0	164.5	193.8	161.3	238.8	200.3	657.8	171.4	202.6	135.0
1915	133.2	95.6	169.7	167.8	158.8	158.3	208.6	205.3	247.8	248.1	747.4	187.2	227.6	141.0
1916	134.8	100.6	150.8	207.6	173.4	163.8	238.1	268.9	294.8	319.0	1304.6	218.6	267.0	124.9
1917	136.5	90.5	159.5	201.4	188.8	151.2	227.5	262.7	299.0	305.0	1483.3	215.2	277.2	135.0
1918	138.1	80.4	194.2	202.7	183.0	105.0	200.5	267.9	353.8	343.5	1019.5	214.0	279.6	133.2
1919	139.7	85.5	191.1	190.7	176.0	.....	178.8	212.7	282.2	296.1	1373.8	195.3	228.4	137.6

In Table C–5, on page 47, Dr. Walter W. Stewart makes an estimate as to the quantity production of (1) all commodities, (2) materials (3) manufactures, and (4) transportation. The "materials" includes products of the farm and of the mines, separately listed; "all materials" adds to the materials from farms and mines those produced in forests and by fisheries; "manufactures" include manufactures of farm products and of mineral products, separately listed in the table, while the column marked "Total manufactures" includes these two items plus forestry products and fishery products. "Transportation" is based on the freight-ton miles and on passenger miles. "All commodities" includes "transportation," "manufactures" and "materials:"

A comparison of the table prepared by Dr. Day with the table prepared by Dr. Stewart shows a marked degree of agreement with respect to the output of agriculture. The Day table shows an increase in agricultural output of 37.6 per cent, and the Stewart table shows an increase in the output of agricultural products of 30 per cent based upon the average production of 1911–1913 as 100. Both tables show that in quantity output agriculture lagged far behind other industries.

TABLE C–5.—*The relative production of farm products, mineral products, manufactured products, transportation, and all commodities, by years, 1890–1919.*

[Average production 1911–1913=100.]

Years.	Materials.			Manufacture.			Total transportation.	All commodities.	Price, all commodities.
	Products of—		Total materials.	Manufactured from—		Total manufactures.			
	Farms.	Mines.		Farm products.	Mineral products.				
1890	57	30	52	61	17	42	29	45	82
1891	73	32	66	68	16	46	31	54	83
1892	62	34	58	67	19	47	34	50	77
1893	63	34	58	61	16	42	36	49	78
1894	62	33	57	61	17	43	32	48	70
1895	74	37	68	75	23	53	32	57	71
1896	79	39	72	65	20	46	35	57	67
1897	78	40	72	87	26	61	35	62	67
1898	84	43	77	78	32	58	48	66	70
1899	82	48	77	70	38	57	44	65	75
1900	82	52	78	74	35	57	50	66	81
1901	73	55	71	87	44	69	52	67	80
1902	92	57	87	87	50	71	57	77	86
1903	86	64	83	83	49	68	62	75	86
1904	94	66	89	91	52	74	63	80	87
1905	94	74	90	98	71	86	68	86	87
1906	100	77	96	97	83	90	77	91	90
1907	89	86	90	98	82	91	84	89	95
1908	95	79	91	94	57	78	77	84	92
1909	95	87	95	102	88	96	86	94	98
1910	98	94	98	95	92	93	95	96	101
1911	93	93	93	97	85	92	92	93	96
1912	111	101	109	102	107	104	101	106	102
1913	96	106	98	101	108	104	106	101	101
1914	108	100	106	103	85	95	99	101	101
1915	116	108	113	110	110	111	106	112	102
1916	101	123	106	117	145	131	123	117	126
1917	110	131	113	118	148	135	135	124	178
1918	108	132	111	126	145	137	141	125	199
1919	112	112	110	120	118	126	138	120	215

NOTE.—The commodities included are as follows:
Materials from:
1. Farms—Apples, barley, corn, raw cotton, hay, oats, peaches, white potatoes, sweet potatoes, rice, rye, beet sugar, cane sugar, tobacco, wheat, raw wool.
2. Mines—Anthracite coal, bituminous coal, copper, gold, iron ore, lead, petroleum, pyrites, quicksilver, salt, silver, sulpher ore, zinc.
3. Forests—Douglas fir, hemlock, oak, spruce, western yellow pine, white pine, yellow pine.
4. Fisheries—Cod, haddock, mackerel.
Manufactures:
1. Manufactured from farm products—Coffee used in manufacture, cotton used in manufacture, cotton seed, cotton-seed oil, cotton cake and meal, cotton hulls, cotton linters, manila hemp used in manufacture, jute used in manufacture, sisal grass used in manufacture, molasses, cigarettes, cigars, tobacco and snuff, wheat used in manufacture, beef, mutton, pork, hides, cattle, skins, sheep, silk used in manufacture, wool used in manufacture.
2. Manufactured from mineral products—Common brick, front brick, vitrified brick, cement, coke, copper used in manufacture, gold used in manufacture, pig iron, steel ingots and castings, merchant bars, plates and sheets, rails, structural shapes, skelp, wire rods, tin plate, cut nails, wire nails, lead used in manufacture, lime, silver used in manufacture, tin used in manufacture, and zinc used in manufacture.
3. Manufactured from forest products—Lath, shingles, turpentine, rubber used in manufacture.
4. Manufactured from fishery products—Salmon, canned.
Transportation:
1. Transportation—Freight, ton-miles; passenger, passenger miles.

Judged by the standard of quantity output agriculture has lagged far behind other industries. It is safe to conclude also that prices for agricultural products have not been sufficient to induce an increase in quantity production of these products comparable with the increase in output of the products of other industries.

Chapter IV.

WAGES AND INCOMES IN AGRICULTURE AND OTHER INDUSTRIES

In order to get accurate and inclusive data as to the economic status of the farmers in this country, as compared with the wages and incomes in other of our industries, the commission called as a witness Dr. Willford I. King.

Dr. King and his coworkers had just completed a detailed and scientific analysis of the distribution of the national income of the United States from 1909 to 1919, inclusive, for the National Bureau of Economic Research (Inc.).

Dr. King estimates the aggregate income of the American people to range in dollars from $28,800,000,000 in 1909, to $60,900,000,000 in 1918.

Reducing this income in dollars to purchasing power, on the basis of prices in 1913, he finds that the aggregate income of the American people in purchasing power moved from $30,100,000,000 in 1909, to $39,400,000,000 in 1918, reaching its peak in 1917 at $41,800,000,000.

Different members of the staff of the National Bureau of Economic Research made two independent estimates as to our aggregate income—one by sources of production (by W. I. King) and one by incomes received (by Dr. O. W. Knauth). A third estimate was then made by checking each of these against the other. The estimates for each year by each method, at the prices of each year, and for all years, at the prices of 1913, and the relative change by years in the income based on the national income of 1913 as equal to 100, all are given in Table D–1, on page 49.

It is clear from this table that the gains in money income after the United States entered the war were largely nominal, due to price inflation. The increase in the real national income—that is, in the quantity of serviceable goods available for use by the population—flows either from larger harvests or from a larger output in industrial activities. As Dr. Wesley C. Mitchell, of the National Bureau of Economic Research, has pointed out: "From the dull year 1911 to the busy year 1912, and still more from the exceedingly depressed year 1914 to the exceedingly active year 1916, the gain is great. But once the factories and workshops, the mines and railways, the ships and shops are working at full capacity, further increases of output slow down to the rate made possible by current increase in population, development of natural resources, construction of new equipment, and improvement in methods. And when a large number of the most effective workers are drafted into new activities, as they were in 1918, it is difficult if not impossible to prevent production in physical terms from falling off, however large a money premium is offered for intense effort."

TABLE D–1.—*The national income in money of variable and in money of constant purchasing power, by years, 1909–1919.*

[Source: National Bureau of Economic Research.]

(In billions of dollars.)

Years.	At prices of each year.			At prices of 1913.		
	Estimate by sources of production.	Estimate by incomes received.	Most probable estimate.	Estimate by sources of production.	Estimate by incomes received.	Most probable estimate.
1909	28.8	.....	28.8	30.1	.....	29.9
1910	31.8	31.1	31.4	32.5	31.8	32.2
1911	31.2	31.2	31.2	31.7	31.7	31.7
1912	33.6	32.4	33.0	33.7	32.6	33.2
1913	35.6	33.3	34.5	35.6	33.3	34.5
1914	33.9	32.5	33.2	33.6	32.3	33.0
1915	36.4	35.9	36.2	35.6	35.0	35.3
1916	45.8	45.5	45.6	41.6	40.1	40.4
1917	53.8	53.9	53.8	41.8	39.6	40.7
1918	60.9	61.7	61.3	39.4	38.4	38.9
1919	.....	66.0	.....	.....	37.3	.....
RELATIVE FIGURES ON THE BASE, NATIONAL INCOME IN 1913=100.						
1909	81.0	.....	84.0	85.0	.....	87.0
1910	89.0	93.0	91.0	91.0	95.0	93.0
1911	88.0	94.0	91.0	89.0	95.0	92.0
1912	94.0	97.0	96.0	95.0	98.0	96.0
1913	100.0	100.0	100.0	100.0	100.0	100.0
1914	95.0	98.0	97.0	94.0	97.0	96.0
1915	102.0	108.0	105.0	100.0	105.0	102.0
1916	129.0	137.0	133.0	117.0	120.0	117.0
1917	151.0	162.0	156.0	118.0	119.0	118.0
1918	171.0	185.0	178.0	111.0	115.0	113.0
1919	.....	198.0	.....	.....	112.0	.....

Thus there was only a very slight gain registered in quantity production in 1917 over 1916 (118 over 117), while there was a large gain in 1912 over 1911 (96 over 92).

The gain in purchasing power of the products of agriculture do not differ very materially from the gain in purchasing power of all commodities during the war period.

Our national job is to utilize all our equipment to as nearly 100 per cent as possible every year.

More significant than the nominal and actual increase in our national income from 1909 to 1919 is the income per capita at the prices of each year and at the prices of 1913 as given in Table D–2, on page 50.

Our per capita income has not increased as rapidly as did the national income. Our per capita income, based on the prices of 1913, was largest in 1916 and was back to a 1913 level in 1919.

Both the national income and the income per capita in the United States was larger at the outbreak of the war in 1914 than was either the national income or the per capita income of any other country. (See Table D–3, page 50.)

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TABLE D–2.—*Per capita estimate of the national income in money of variable and in money of constant purchasing power, by years, 1909-1919.*

[Source: National Bureau of Economic Research.

[In dollars per annum.]

Years.	At prices of each year.			At prices of 1913.	
	Population in millions.	Income in billion dollars.	Per capita income in dollars.	Income in billion dollars.	Per capita income in dollars.
1909	90.4	28.8	319	29.9	331
1910	92.2	31.4	340	32.2	349
1911	93.8	31.2	333	31.7	338
1912	95.3	33.0	346	33.2	348
1913	97.3	34.5	355	34.5	355
1914	99.2	33.2	335	33.0	333
1915	100.4	36.2	360	35.3	351
1916	101.7	45.6	448	40.4	397
1917	103.1	53.8	522	40.7	395
1918	104.2	61.3	588	38.9	373
1919	104.8	(66.0)	(630)	(37.3)	(358)
RELATIVE FIGURES ON THE BASE PER CAPITA INCOME, IN 1913=100.					
1909		84	90	87	93
1910		91	96	93	98
1911		91	94	92	95
1912		96	98	96	98
1913		100	100	100	100
1914		97	95	96	94
1915		105	102	102	99
1916		133	127	117	112
1917		156	148	118	111
1918		178	166	113	105
1919		(198)	(178)	(112)	(100)

TABLE D–3.—*The estimated national and per capita income of various countries at the outbreak of war in 1914, and the approximate accuracy of the respective estimates.*

Adapted from the Summary by Sir Josiah Stamp, Journal of the Royal Statistical Society, July, 1919.]

Country.	Estimates based upon the work of—	Approximate accuracy, grade.[1]	National income, millions of dollars.	Per capita income, dollars.
United States	National Bureau of Economic Research.	I	33,500	335
United Kingdom	Bowley, Stamp	I	10,950	243
Germany	Helfferich	I	10,460	146
France	Pupin	II	7,300	185
Italy		IV	3,890	112
Austria-Hungary		IV	5,350	102
Spain	Barthe	IV	1,120	54
Australia	Official, Knibbs	I	1,260	263
Canada	Giffen	IV	1,460	195
Japan	Stamp	III	1,580	29

[1] Grade I. Estimate is not likely to be inaccurate to a greater extent than 10 per cent.
Grade II. Estimate is not likely to be inaccurate to a greater extent than 20 per cent.
Grade III. Estimate is not likely to be inaccurate to a greater extent than 30 per cent.
Grade IV. Estimate may be inaccurate to a greater extent than 40 per cent.

Dr. King has made an estimate of the "net value" of the products of agriculture in this country. To arrive at this net value, the total value of the products of agricluture was first estimated. This is the total value of all crops and live stock either sold off the farm to the market, or consumed on the farm without duplication. To this is added the increase in land values due to improvements by farmers.

And then deductions are made for payments made by farmers for such items as implements, fertilizers, automobiles, harness, saddles, insurance against fire and wind, and interest paid to banks for loans. The resulting "net value product" of agriculture is given in the following table, D–4:

TABLE D–4.—*An estimate of the total net value product of agriculture in the continental United States, 1909–1920.*

[Source: National Bureau of Economic Research.]

A.	B.	C.	D.	E.	F.
Calendar year.	Value of animal products (millions).	Net value of crops consumed or sold off farm (millions).	Increase in land value due to improvements by farmers (millions).	Business expenditure for products of other industries (millions).	Net value product of agriculture (millions), B+C+D−E.
1909	$2,218	$2,762	$25	$319	$4,686
1910	3,277	2,696	139	384	5,728
1911	2,968	2,585	219	404	5,368
1912	2,585	2,816	290	405	5,286
1913	2,989	2,971	376	449	5,887
1914	3,359	2,820	328	467	6,040
1915	3,106	3,347	310	446	6,376
1916	3,041	4,541	218	551	7,249
1917	3,902	6,429	174	785	9,720
1918	6,189	7,119	405	1,031	12,682
1919	7,228	8,362	520	1,276	14,835
1920	5,882	5,094	177	[a] 1,300	[a] 9,853

[a] Rough preliminary figures only.

The net value of agricultural products increased rapidly in 1918 and in 1919, with rising prices, but slumped badly in 1920.

The per cent that the net value product originating in agriculture bears to the total net value product of all our industries in dollars, is shown in Table D–5. Agriculture has produced from 16 to 23 per cent of the national income of the United States, normally about 17 or 18 per cent, and yet about 30 per cent of the persons gainfully employed in the United States are engaged in agriculture.

TABLE D–5.—*The per cent of the net value product of all industries in the United States, produced by agriculture.*

[Source: National Bureau of Economic Research.]

Year.	Total net value product of all industries (millions).	Net value product of agriculture (millions).	Per cent of the net value product originating in agriculture.
1909	$28,775	$4,686	16.3
1910	31,766	5,728	18.0
1911	31,188	5,368	17.2
1912	33,555	5,286	15.8
1913	35,579	5,887	16.5
1914	33,936	6,040	17.8
1915	36,425	6,376	17.5
1916	45,761	7,249	15 8
1917	53,762	9,720	18.1
1918	60,857	12,682	20.8
1919	65,000	14,835	22.8
1920	.....	9,853	.....

The percentages of the net value product received by the employees in various industries from 1909 to 1918 is shown in Table D–6. The proportion taken by employees increased during this period in factories, in transportation by land, in public utilities, and most markedly in banking; was fairly constant in the hand trades and for all industries, but decreased in transportation by water, in the production of minerals, in unclassified industries, and most markedly in agriculture.

TABLE D–6.—*The percentages of net value product of various branches of industry, received by employees as payment for services, 1909–1918.*

[Based upon the estimate by sources of production.]

[Caution: These figures show neither the "share of labor" in the value product nor the total income of the employees.]

Year.	All industries.	Agriculture.[1]	Production of minerals.	Manufacturing.	
				Factories.[2]	Hand trades.[3]
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
1909	52.3	15.3	71.0	72.2	57.3
1910	51.6	12.5	73.7	71.5	58.9
1911	53.3	14.1	73.8	76.5	58.6
1912	54.4	14.4	71.4	74.6	59.3
1913	55.0	13.4	73.4	74.5	66.7
1914	54.1	12.6	72.7	77.8	58.9
1915	53.4	12.3	67.4	75.5	58.7
1916	51.8	11.7	60.9	68.6	57.8
1917	51.1	10.8	63.1	71.0	61.6
1918	53.9	9.8	70.6	78.1	59.6
1919	.....	10.1	.....	.....	.....

TRANSPORTATION.

Year.	Railway, express, sleeping-car, switching and terminal companies.	Street railways, electric light and power, telegraph, and telephone companies.	Transportation by water.	Banking.	Government.[4]	Unclassified industries.
1909	59.6	50.3	83.5	26.4	93.3	60.6
1910	60.3	50.7	75.0	24.3	92.1	61.7
1911	62.8	51.5	81.7	26.5	91.6	62.3
1912	64.2	51.7	77.7	28.6	91.7	63 0
1913	66.4	52 9	79.0	31.6	91.7	64.0
1914	66.3	53.2	85.6	31.9	91.5	64.0
1915	61.5	51.1	79.2	34.5	91.2	62.8
1916	60.9	52.5	72.2	35.5	91.4	58.2
1917	67.4	55.4	79.1	34.8	90.8	54.4
1918	78.2	62.8	83.2	36.7	90.4	54 8

[1] Includes stock raising, market gardening, etc.
[2] Includes lumbering and shipbuilding.
[3] Includes building and construction other than shipbuilding.
[4] Includes schools and Government-operated enterprises under all States and local as well as national Government; the share of the employees includes pensions (paid for the services of ex-employees). Table prepared by Dr. Willford I. King.

In the following table D–7 is given the distribution of net personal incomes reported to the Bureau of Internal Revenue in 1917 and in 1918, before and after deduction of Federal income taxes:

TABLE D–7.—*Distribution of net personal incomes reported to the Bureau of Internal Revenue in 1917 and in 1918, before and after deduction of Federal income taxes.*

Income classes.	Average rate of tax.	Average tax per individual.	Average income before deducting tax.	Average income after deducting tax.	Percentage of total reported income.	
					Before deducting tax.	After deducting tax.
1917.	*Per cent.*				*Per cent.*	*Per cent.*
$1,000–$2,000	0.66	$10	$1,500	$1,490	18.04	18.86
$2,000–$3,000	.44	11	2,462	2,451	15.12	15.86
$3,000–$5,000	.36	33	3,773	3,740	15.50	16.19
$5,000–$10,000	2.41	163	6,752	6,589	13.39	13.76
$10,000–$25,000	4.78	717	14,997	14,279	12.36	12.40
$25,000–$50,000	7.34	2,520	34,297	31,777	7.33	7.45
$50,000–$100,000	10.04	6,836	68,084	61,248	6.20	5.88
$100,000–$150,000	13.92	16,889	121,288	104,399	2.93	2.66
$150,000–$300,000	18.27	36,949	202,238	165,289	3.48	2.99
$300,000–$500,000	25.93	89,853	375,501	285,648	1.54	1.23
$500,000–$1,000,000	27.83	188,410	681,369	492,959	1.57	1.20
$1,000,000 and over	35.65	776,064	2,176,141	1,400,077	2.24	1.52
1918.						
$1,000–$2,000	1.19	17	1,472	1,454	14.02	14.91
$2,000–$3,000	.98	24	2,423	2,399	22.78	24.27
$3,000–$5,000	2.35	89	3,792	3,703	22.20	23.33
$5,000–$10,000	4.34	291	6,719	6,427	13.47	13.87
$10,000–$25,000	8.20	1,222	14,897	13,675	10.90	10.76
$25,000–$50,000	13.32	4,563	34,267	29,704	6.14	5.73
$50,000–$100,000	21.69	14,749	67,999	53,251	4.27	3.60
$100,000–$150,000	33.68	40,577	120,486	79,910	1.78	1.27
$150,000–$300,000	44.64	89,872	201,470	111,598	1.92	1.14
$300,000–$500,000	54.77	227,238	378,391	171,153	.91	.44
$500,000–$1,000,000	58.65	392,327	668,964	276,637	.75	.33
$1,000,000 and over	64.65	1,326,646	2,052,043	725,398	.86	.33

Dr. King, in the following table, D–8, on page 54, makes an estimate as to the amount received by the farmers of the country as a whole as returns on capital on the one hand, and as rewards for labor on the other hand. Dr. King assumed an interest rate on the value of farm property at 5 per cent, save for 1919 and 1920, in which years he assumed an interest rate of 5½ per cent and 6½ per cent, respectively. Had the same interest rate been assumed for 1919 and 1920 as for preceding years, the returns to farmers for labor and management would have been greater and the returns to property correspondingly less.

With this table as a base, Table D–9, on page 54, was prepared to show the average reward per farmer as return to property and as return for labor, risk, and management.

It will be noted from the table:

1. That rewards to property on the one hand, and for labor, risk, and management, on the other hand, were not very different in prewar years, but that the returns from labor, risk, and management increased over the returns for property during the war years.

2. The purchasing power per farmer for labor, risk, and management averaged but $219 in 1920, as compared with $833 in 1919 and $444 in 1913. Assuming an interest rate of 5 per cent in 1919 and in 1920 (instead of 5½ and 6½ per cent, respectively, as assumed in Table D–8), the purchasing power for labor, risk, and management per farmer in this country would have been $864 and $304 in 1919 and 1920, respectively.

TABLE D–8.—*An estimate of the rewards for labor, risk, and management received by the farmers of the continental United States, 1909–1920.*

A	B	C	D	E	F	G	H	I	J
Year.	Total value of farm property [1] (millions).	Assumed interest rate on investment.	Rewards ascribable to property (millions) B. C.	Total returns to entrepreneurs and other property owners (millions).	Reward for farmers' risk, management, and labor (millions) E–D.	Number of farmers (thousands).	Average reward per farmer $\frac{F}{G}$ exclusive of returns on property.	Index of prices of goods consumed by farmers.	Average reward per farmer at prices of 1913 $\frac{H}{I}$ exclusive of returns on property.
1909	[2] $40,059	0.05	$2,003	3,969	$1,966	6,330	$311	$0.955	$326
1910	[3] 41,400	.05	2,070	5,012	2,942	6,362	462	.978	472
1911	[3] 42,225	.05	2,111	4,612	2,501	6,376	392	.984	398
1912	[3] 42,917	.05	2,146	4,525	2,379	6,388	372	.995	374
1913	[3] 45,227	.05	2,261	5,101	2,840	6,400	444	1.000	444
1914	[3] 46,619	.05	2,331	5,273	2,942	6,410	459	1.011	454
1915	[3] 48,199	.05	2,410	5,590	3,180	6,418	495	1.023	484
1916	[3] 52,687	.05	2,635	6,401	3,767	6,425	586	1.097	534
1917	[3] 57,110	.05	2,855	8,661	5,805	6,432	903	1.280	705
1918	[3] 64,122	.05	3,206	11,432	8,226	6,438	1,278	1.547	826
1919	[3] 71,848	.055	3,951	13,335	9,383	6,443	1,456	1.747	833
1920	[4] 78,707	.065	5,116	8,111	2,995	6,448	465	2.124	219

[1] Includes a small allowance for cash resources used as working capital.
[2] Interpolated.
[3] Abstract of Census of 1910, p. 265.
[4] Estimated from preliminary census reports for 25 States.

TABLE D–9.—*Rewards from labor and management, and from property, with total rewards received by the farmers of the United States, 1909–1920.*

L	M	N	P	Q
Year.	Property return produced per farmer [1] $\frac{D}{G}$ [2]	Average reward per farmer for labor risk and management H	Property return produced per farmer at 1913 prices $\frac{M}{I}$ [2]	Average reward per farmer for labor at 1913 prices J [2]
1909	$316	$311	$332	$326
1910	325	462	332	472
1911	331	392	337	398
1912	336	372	338	374
1913	353	444	353	444
1914	363	459	358	454
1915	376	495	366	484
1916	410	586	373	534
1917	444	903	346	705
1918	499	1,278	322	826
1919	614	1,456	351	833
1920	795	465	374	219

[1] Much of this does not go to farmers but is paid to nonfarmer landlords and to mortgage holders.
[2] See Table D–8.

Table D–10, on page 56, compares the average annual earnings of employees normally engaged in the main industries of this country, by years, from 1909 to 1918, by current money, and at the prices of 1913, and the relative increase in purchasing power over 1909. The earnings for agriculture are for farm hands actually employed and not for owners or tenants.

The average earnings shown represent the actual earnings of all employees who normally make their living by working in the specified industry. Since there is always considerable unemployment, these averages are somewhat lower than the amounts received by employees of average ability who worked full time throughout the year.

It will be noted from the table:

1. The average annual earnings by farm hands employed in agriculture were below that of any other industry. The earnings given include an estimate for board and lodging. These figures are based on the reports of the United States Department of Agriculture.

2. The purchasing power of average earnings in mines, factories, and banks, and in most phases of transportation, rose very materially through the past decade, but the employees of Government, public utilities, and unclassified industries were distinctly worse off in 1918 than in 1909.

3. Earnings by farm hands and their purchasing power increased more from 1909 to 1918 than did those of employees in Government, in public utilities, in the hand trades, or in unclassified industries, but increased less rapidly than did the average earnings in banking, in transportation by water or by rail, in factories, or in mining. It must be noted that average earnings are not equivalent to average wage rates. Thus the fall in average earnings in public utilities was doubtless due in part to an increase in the proportion of female employees and in Government to the large number of soldiers. Average earnings are reduced by unemployment, which does not necessarily affect average wage rates.

In Table D–11, on page 57, is summarized the averaged reward per farmer (excluding his payments for hired help but including family labor) and the average annual earnings of employees in stated industries. The table indicates that the average income received by a farmer in pay for his labor, after deducting a return of 5 per cent on his property, is far below the average earnings of employees in other industries. And many employees also have an income from property in addition to that recorded as their average annual earnings.

If we consider that the farmer could make 5 per cent on his total property by investing it elsewhere and that only the residue of his income is payment for his efforts, the following conclusions follow for the year 1913: Had the farmer gone to work as a farm laborer, his average labor income would have been $328, instead of $444, as it was. Had he worked instead in the mining industry at the average earnings of the employee in that industry, he would have received $755 or about 70 per cent more than his actual labor income.

TABLE D–10.—*The average annual earnings of employees normally engaged in the given industries.*

Denominator of earnings and calendar year.	All industries.[1]	Agriculture.[1]	Manufacturing.		Transportation.				Banking.	Government.[3]	Unclassified industries.
			Production of minerals.[2]	Factories.[2]	Hand trades.[2]	All transportation.[1]	Railways,[1] express, Pullman Co., switching and terminal company.	Street railways,[1] electric light and power, telegraphs, and telephones.	Transportation by water.[3]			
Current money:												
1909	$622	$302	$590	$571	$699	$857	$651	$623	$773	$770	$739	$716
1910	656	301	645	618	681	688	690	638	758	797	763	743
1911	648	317	647	610	657	697	705	641	773	843	778	715
1912	692	319	685	655	714	731	747	652	808	887	798	772
1913	723	328	755	705	748	762	782	678	825	930	823	779
1914	674	321	650	617	640	721	723	683	807	921	842	768
1915	708	330	655	653	693	727	728	666	880	1,017	861	779
1916	843	357	815	872	840	842	849	732	1,081	1,170	891	866
1917	957	463	1,025	1,022	945	1,017	1,063	790	1,306	1,238	940	909
1918	1,094	590	1,280	1,147	1,194	1,282	1,394	878	1,532	1,461	895	1,055
Value, at prices of 1913:												
1909	656	316	618	599	732	688	682	653	810	806	774	750
1910	671	308	660	632	696	703	705	653	806	815	780	739
1911	659	322	655	620	667	709	716	652	755	857	791	727
1912	696	321	689	660	719	736	751	656	813	892	803	777
1913	723	328	755	705	748	762	782	678	825	930	823	779
1914	688	318	643	611	634	714	716	676	799	912	834	760
1915	688	320	636	634	713	706	707	647	854	987	836	757
1916	766	325	742	703	763	765	772	665	983	1,064	810	788
1917	742	359	796	703	732	789	824	613	1,012	960	729	705
1918	683	373	808	725	756	811	882	556	999	925	566	668
Indices of the purchasing power of annual earnings, base, 1913:												
1909	90.7	96.3	81.9	85.0	97.9	90.3	87.2	96.3	98.2	86.7	94.0	96.3
1910	92.8	93.9	87.4	88.6	93.0	92.3	90.2	96.3	97.7	87.6	94.8	97.4
1911	91.1	98.2	86.8	87.9	89.2	93.0	91.6	96.2	95.2	96.2	96.1	93.3
1912	96.3	97.9	91.3	93.6	96.1	96.6	96.0	96.8	98.5	95.9	97.6	90.7
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914	92.4	97.0	85.2	86.7	84.8	93.7	91.6	98.7	96.8	98.1	101.3	97.6
1915	95.2	97.6	84.2	89.9	95.3	92.7	90.4	95.4	103.5	106.1	101.6	97.2
1916	105.9	99.1	98.3	112.5	102.0	100.4	98.7	98.1	119.2	114.4	98.4	101.2
1917	102.6	109.5	105.4	112.5	97.9	103.5	105.4	90.4	122.7	103.2	88.6	90.5
1918	95.9	113.7	107.0	102.8	101.1	106.4	112.8	82.0	117.5	99.5	68.8	85.8

[1] Includes small amounts paid for pensions and compensation for injuries. [2] Includes payments for work done by contract. [3] Includes subsistence, but not pensions.

TABLE D–11.—*Average annual reward of farmers engaged in agriculture (exclusive of hired help), compared with the average annual earnings per employee in stated industries, for continental United States, 1909–1918, at current money rates, and at prices of 1913.*

I. AT CURRENT MONEY RATES.

Year.	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Average return to property produced per farmer[1]	$316	$325	$331	$336	$353	$363	$376	$410	$444	$499	$614	$795
Average reward per farmer for labor, risk, and management	311	462	392	372	444	459	495	586	903	1,278	1,466	465
Average yearly earnings by employees in mining industry	590	645	647	685	755	650	655	815	1,025	1,280	.....	.....
Average yearly earnings by factory employees	571	618	610	655	705	617	653	872	1,022	1,147	.....	.....
Average yearly earnings of employees in railway transportation	651	690	705	747	782	723	728	849	1,063	1,394	.....	.....
Average yearly earnings of employees in water transportation	773	788	773	808	825	807	880	1,081	1,306	1,532	.....	.....
Average yearly earnings of banking employees	770	797	843	887	930	921	1,017	1,170	1,288	1,461	.....	.....
Average yearly earnings of Government employees	737	763	778	798	823	842	861	891	940	895	.....	.....
Earnings of employees in all industries, including hired help on farms	626	656	648	692	723	674	708	843	957	1,094	.....	.....

II. AT PRICES OF 1913.

Year.	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Average return to property produced per farmer[1]	$332	$332	$337	$338	$353	$358	$366	$373	$346	$322	$351	$374
Average reward per farmer for labor, risk, and management	326	472	398	374	444	454	484	534	705	826	833	219
Average yearly earnings by employees in mining industry	618	660	655	689	755	643	636	742	796	808	.....	.....
Average yearly earnings by factory employees	599	632	620	660	705	611	634	793	793	725	.....	.....
Average yearly earnings of employees in rail transportation	682	705	716	751	782	716	707	772	824	882	.....	.....
Average yearly earnings of employees in water transportation	810	806	785	813	825	799	854	983	1,012	969	.....	.....
Average yearly earnings of banking employees	806	815	857	892	930	912	987	1,064	960	925	.....	.....
Average yearly earnings of Government employees	774	780	791	803	823	834	836	810	729	566	.....	.....
Earnings of employees in all industries, including hired help on farms	656	671	659	696	723	668	688	766	742	693	.....	.....

[1] This goes to farm owners (whether farmers or not) and to mortgage holders.

Let us next see how matters stood in 1918. The farmer that year had an income of $1,278 resulting from his labor, risks, and management. Had he worked in the mining industry for the average earnings of the employees in that industry, he would have received a wage of $1,280 or almost exactly the amount of his actual earnings. Had he worked as an employee in the railway or banking field, he would have made materially more for his labor than he did on the farm, but he would have been worse paid had he received the average earnings of those employed in factories, in public utilities (see Table D–10), in Government, or in unclassified industries.

Wages and incomes in agriculture have been below those in other industries, and hence the greater increase in the quantity output of other industries as compared with agriculture.

CHAPTER V.

BREAK IN PRICES IN DIFFERENT COUNTRIES AND INDUSTRIES.

The crisis through which the country has just passed, the principal phenomena of which was a perpendicular break in prices was not confined to this country, The world-wide character of the crisis and of the break in prices which accompanied it is indicated by Table E–1, which follows:

TABLE E–1.—*Index numbers of wholesale prices (all commodities) in 11 countries.*

[1913=100.]

Date.	Japan, Bank of Japan, for Tokyo (56 commodities.)[1]	United Kingdom, London Economist (44 commodities).[2]	France, Bulletin de la Statistique générale (45 commodities).[3]	Italy, Prof. Bachi (38 commodities until 1920, 76 thereafter).[3]	United States, Bureau of Labor Statistics (315 quotations).[1]	Germany, Frankfurter Zeitung (77 commodities).[4]	India, Calcutta department of statistics (75 commodities).[3]	Canada department of labor (277 quotations).[5]	Sweden Svensk Hondeestidning (47 quotations).[5]	Netherlands, Central bureau voor de Statistiek (49 commodities).	Australia Commonwealth, bureau of census and labor statistics (92 commodities).
1913	100	100	100	100	100	.....	.....	100	[6] 100	100	.....
1914	96	99	101	95	100	[7] 100	[8] 100	101	116	106	[9] 100
1915	97	123	137	133	101	.....	.....	110	145	149	141
1916	117	160	187	202	124	.....	.....	135	185	233	132
1917	147	204	262	299	176	.....	.....	177	244	298	[10] 155
1918	192	225	339	409	196	.....	.....	206	339	398	170
1919	236	235	357	364	212	.....	.....	217	330	306	180
1920	259	283	510	624	243	1,522	204	246	347	.....	218
1919.											
January	214	217	348	325	203	.....	.....	211	369	.....	171
February	213	216	340	321	197	.....	.....	206	358	.....	167
March	206	212	337	325	201	.....	.....	205	354	.....	168
April	207	214	332	332	203	.....	.....	206	339	.....	171
May	215	222	325	338	207	.....	.....	210	330	.....	172
June	228	230	330	358	207	.....	.....	210	324	.....	173
July	247	240	349	362	218	.....	.....	217	320	.....	176
August	251	242	347	369	226	.....	.....	222	321	.....	182
September	257	245	360	372	220	.....	.....	223	319	.....	185
October	271	252	382	390	223	.....	.....	221	307	.....	200
November	280	259	405	439	230	.....	.....	227	308	.....	199
December	288	273	423	457	238	.....	.....	238	317	.....	197
1920.											
January	301	288	487	508	248	.....	218	250	319	293	203
February	313	303	522	557	249	.....	209	254	342	289	206
March	321	310	554	602	253	1,615	198	258	354	290	209
April	300	306	588	664	265	1,604	200	261	354	296	217
May	272	304	550	660	272	1,714	210	263	361	297	225
June	248	291	493	632	269	1,473	206	258	366	297	233
July	239	293	496	604	262	1,473	209	256	363	301	234
August	235	288	501	625	250	1,582	209	244	365	289	236
September	230	284	526	655	242	1,604	208	241	362	288	230
October	226	266	502	659	225	1,670	206	234	346	283	215
November	221	245	460	670	207	1,681	194	225	331	261	208
December	206	220	435	655	189	1,626	180	214	299	233	197
1921.											
January	201	209	407	642	178	1,083	178	208	267	213	196
February	195	192	377	613	167	1,473	174	199	250	201	192
March	191	189	360	604	162	1,419	.....	194	237	.....	181
April	190	183	347	584	154	1,410	183	187	229	.....	171
May	191	182	329	547	151	1,428	184	183	218	.....	166
June	192	.....	325	509	148	1,376	178	179	218	.....	162
July	196	.....	332	.....	148	1,467	183	176	211	.....	.....

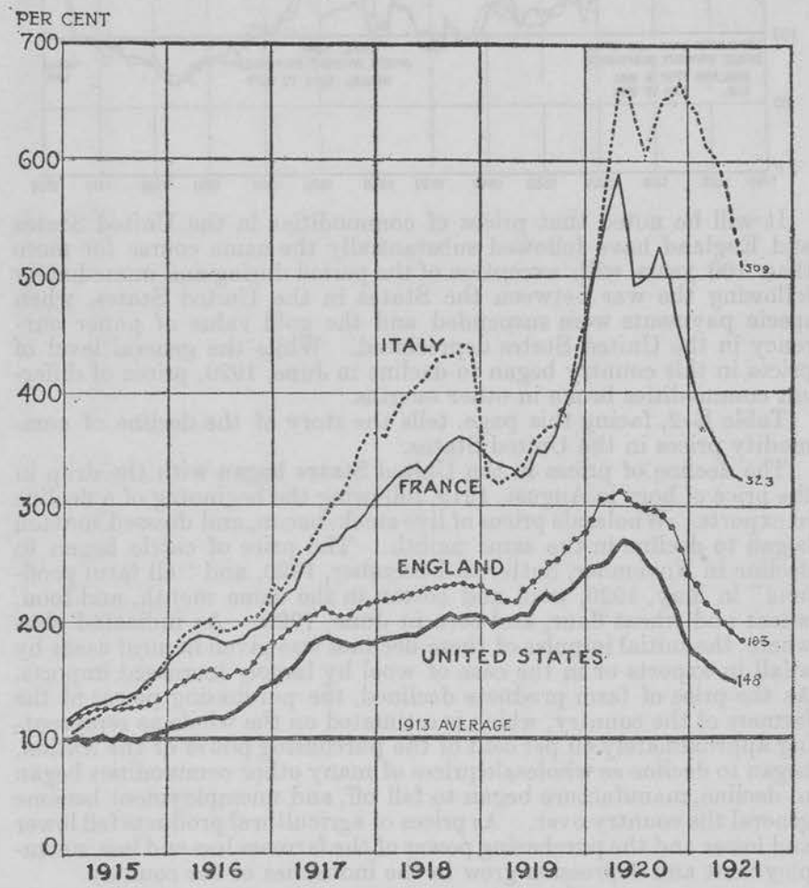
[1] Average for the month.
[2] Index number of last month.
[3] End of month.
[4] Beginning of month, but not always the 1st.
[5] Middle of month.
[6] July 1, 1913, to June 30, 1914=100.
[7] Middle of 1914=100.
[8] End of July, 1914=100.
[9] July, 1914=100.
[10] Last 6 months of 1914.

This table gives the indexes of relative wholesale prices on the 1913 base for all commodities in the United States, the United Kingdom, France, Italy, Japan, Germany, India, Canada, Sweden, Netherlands, and Australia. The crisis of 1920–21 began in Japan in the latter part of 1919 with the break in the price of silk, resulting from overproduction and the Chinese boycott of Japanese goods. The price level of all commodities began to decline in Japan in April; in the United Kingdom, in the same month; in France and Italy, in May; in the United States, Germany, India, and Canada, in June; in Sweden, in July; in the Netherlands, in August; and in Australia, in September.

The following chart shows the course of commodity prices in Italy, France, England, and the United States. The price in France and Italy rose much higher than in England and the United States, probably due to issues of paper money of depreciated gold value.

CHART E–1.—Relative wholesale commodity prices in Italy, France, England, ard the United States, 1915–1921.

NOTE.—From Department of Labor index for the United States, Statist index for England, index of the Bulletin de Statistique General for France, and the index of Prof. Bachi for Italy.

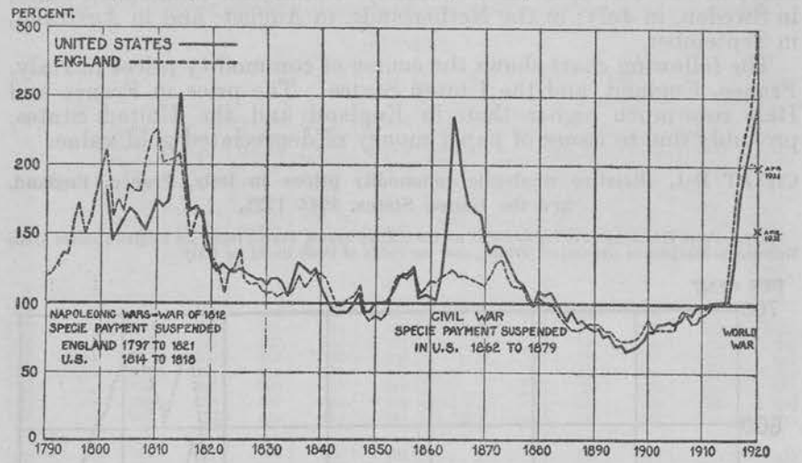


The relation between wholesale prices in the United States and England from 1800 to 1920 is shown by the following chart:

CHART E–2.—Wholesale commodity prices in the United States and England, 1790 to 1920.

[Average prices each year in currency. 1913 figures=100 per cent.]

NOTE.—Source of information: United States index compiled by Federal Reserve Bank of New York from indices prepared by A. H. Hansen (1801–1840), C. H. Juergens (1825–1863), R. P. Falkner (1840–1891), and the United States Department of Labor (1891–1920), and computed for England from indices of W. Stanley Jevons (1782–1817) and the Sauerbeck-Statist index (1818–1920).



It will be noted that prices of commodities in the United States and England have followed substantially the same course for more than 100 years with exception of the period during and immediately following the war between the States in the United States, when specie payments were suspended and the gold value of paper currency in the United States depreciated. While the general level of prices in this country began to decline in June, 1920, prices of different commodities broke in other months.

Table E–2, facing this page, tells the story of the decline of commodity prices in the United States.

The decline of prices in the United States began with the drop in the price of hogs in August, 1919, following the beginning of a decline in exports. Wholesale prices of live stock, bacon, and dressed mutton began to decline in the same month. The price of cattle began to decline in November, butter in December, 1920, and "all farm products" in May, 1920, wool and cotton in the same month, and food, wheat and wheat flour, and corn in June, 1920. As indicated elsewhere, the initial impulse of these declines was given in most cases by a fall in exports or in the case of wool by largely increased imports. As the price of farm products declined, the purchasing power of the farmers of the country, which is estimated on the whole as representing approximately 40 per cent of the purchasing power of the Nation, began to decline as wholesale prices of many other commodities began to decline, manufacture began to fall off, and unemployment became general the country over. As prices of agricultural products fell lower and lower and the purchasing power of the farmers less and less, unemployment and depression grew in the industries of the country.

PRICES OF COMMODITIES OTHER THAN FARM PRODUCTS.

The price of cloths and clothing began first to decline in April, 1920, metals and metal products and pig tin in May, lumber and building materials in June, shoes in the same month, structural steel in July, yellow-pine flooring in August, coke in September, and fuel and Bessemer pig iron in October, house furnishings in November, newsprint paper in December, 1920, coal (bituminous), cement, and zinc spelter in January, 1921, gasoline and refined petroleum in February, and anthracite coal in April, 1921.

CONSUMPTION AND PRODUCTION OF SPECIFIC COMMODITIES OTHER THAN FARM PRODUCTS.

This commission is primarily concerned with the more rapid decline of farm products; but in order to fully appreciate the force of declining prices of farm products it is necessary to consider the break in prices of commodities produced by other industries.

The production of coal reached its maximum in 1918, as indicated by Table E–6, on pages 63 and 64; but the production in 1920 was second to that of 1918 and the next largest since 1913. The production of 1919 was a little below that of 1913. Production of soft coal reached its peak in October, 1919. Production dropped more than 50 per cent in November, 1919, and increased again until October, 1920, when it reached 52,000,000 tons. This production was maintained throughout the remainder of 1920. The price of soft coal began to decline in January, 1921, and production began to decline in the same month. The monthly production the first six months of 1921 was below the monthly production for the same months in either 1919 or 1920.

The following table, E–3, shows the relative price and the relative production of coal from 1913 to 1920:

TABLE E–3.—*The relative price and the relative production of bituminous coal, 1913–1920 (calendar years).*

Year.	1913	1914	1915	1916	1917	1918	1919	1920
Price (at Pittsburgh)	100	100	100	122	208	177	187	121
Production	100	88	93	105	115	121	96	116

The total annual exports of coal were slightly higher, relatively, in 1919 and 1920 than in preceding years. The exports by years from 1913 to 1920 were as follows:

TABLE E–4.—*Exports of bituminous coal from the United States for years ending June 30, 1913 to 1920.*

Year.	1913	1914	1915	1916
Exports (long tons)	16,083,000	15,705,000	14,413,000	18,750,000
Per cent of products exported	4.00	3.68	3.82	4.74

Year.	1917	1918	1919	1920
Exports (long tons)	19,534,000	21,052,000	18,152,000	22,976,000
Per cent of products exported	4.35	4.27	3.51	5.02

COKE.

The average monthly production of coke, as indicated in Table E–6, on pages 63 and 64, reached its peak of postwar production in October, 1920. The price of coke began its decline, as indicated in Table E–2, facing page 60, in August, 1920. As the prices declined in the latter part of 1920 and the early part of 1921, the production of coke fell off with marked rapidity.

It is interesting to note that a marked rise in the price of coke (from $6 to $10.50) in April, 1920, occurred concurrently with a marked reduction in production.

PIG IRON.

The average monthly production of pig iron, as shown by Table E–6, on pages 63 and 64, was about equal in 1919 to the production in 1913. The peak of postwar pig-iron production was reached in March, 1920, but the peak of wholesale prices of pig iron was not reached until in September of that year. Production was well maintained until October, 1920, but fell off in November and continued to fall off rapidly during the remainder of that year and until June, 1921. The production of pig iron for the first four months of 1921 averaged 70 per cent of the monthly average production in 1913.

CRUDE STEEL.

The production of crude steel began to fall off in April, 1920, but did not fall off markedly until November of that year, and in April, 1921, was less than one-third of the monthly production of 1920. The production of crude steel in the United Kingdom began to decline about the same time and in about the same proportion until the coal strike practically closed British factories in April, 1921. (See Table E–6.)

The earnings of employees of the iron and steel industry are considered a fairly accurate index of the activities in that industry. The average earnings of steel employees reached their height in October, 1920, immediately preceding a drop in crude-steel production. By June of 1921 earnings of steel and iron employees had dropped to a relative of 67 as compared with a relative of 122 in the preceding October, as shown by the following table, E–5, which gives the actual and relative earnings of the iron and steel employees:

TABLE E–5.—*Average earnings of employees in the iron and steel industry.*

[Source: Bureau of Labor Statistics. The figures on earnings were obtained by dividing the total pay roll by the total number of employees as reported by the bureau. Inasmuch as the firms reporting in successive months were not always identical, some irregularities are introduced.]

	Actual earnings per one-half week.	Relative earnings (1919 monthly average =100).		Actual earnings per one-half week.	Relative earnings (1919 monthly average =100).
1918	$59.20	90	1920—Continued.		
1919	65.53	100	September	$77.54	118
1920	75.30	115	October	80.05	122
			November	79.08	121
1920.			December	74.41	114
January	70.81	108	1921.		
February	73.52	112	January	75.10	115
March	77.95	119	February	64.75	99
April	73.32	112	March	61.11	93
May	74.21	113	April	53.11	81
June	76.69	117	May	48.77	74
July	71.83	110	June	43.90	67
August	74.23	113			

TABLE E–6.—*Actual and relative production of coal, coke, pig iron, crude steel, copper, and zinc.*

	Production in tons.[1]												Relative production, 1913=100.									
	Coal.			Bee-hive coke (million short tons).[2]	Pig iron (thousand long tons).[3]	Crude steel.		Copper (pounds).[7]	Zinc (tons).[8]	Coal.			Bee-hive coke (million short tons).	Pig iron (thousand long tons).	Crude steel.		Copper (pounds).	Zinc (tons).
	Anthracite (million short tons).[2]	Bituminous (million short tons).[2]	Total (million short tons).[2]			United States (thousand short tons).[4,5]	United Kingdom (thousand short tons).[6]			Anthracite (million short tons).	Bituminous (million short tons).	Total (million short tons).			United States (thousand short tons).	United Kingdom (thousand short tons).		
1913	7.63	39.87	47.50	2,799	2,560	2,523	639	135,203,486	28,890	100	100	100	100	100	100	100	100	100
1914	6.76	35.22	41.98	1,945	1,921	1,902	652	95,844,766	29,420	89	88	88	69	75	75	102	71	102
1915	6.62	36.89	43.51	2,292	2,472	2,607	712	115,667,461	40,738	87	93	92	82	97	104	111	86	141
1916	6.32	41.88	48.40	2,955	3,252	3,450	786	160,654,212	55,621	85	105	102	106	127	137	120	119	193
1917	7.41	45.98	53.19	2,704	3,182	3,635	817	157,176,726	55,798	97	115	112	99	124	144	128	116	193
1918	7.35	48.28	55.63	2,540	3,209	3,588	799	150,044,466	43,160	96	121	117	91	125	142	125	118	149
1919	6.55	38.17	44.72	1,638	2,548	2,808	638	107,436,575	38,250	86	96	90	59	100	112	103	79	132
1920	7.43	46.38	53.80	1,769	3,035	[9] 3,394	755	112,130,318	39,981	97	116	113	63	118	135	118	83	138
1919.																		
January		41.86		2,402	3,302	4,143	805	135,733,511	.....	.....	105	.....	86	127	164	126	.....	.....
February	.....	31.57	.....	1,823	2,940	3,607	822	111,949,512	.....	.....	79	.....	65	115	143	129	.....	.....
March	.....	33.72	.....	1,768	3,090	3,550	849	102,040,460	.....	.....	85	.....	63	121	141	133	.....	.....
April	.....	32.16	.....	1,317	2,478	2,996	750	98,808,998	.....	.....	81	.....	47	97	119	117	.....	.....
May	.....	37.55	.....	1,136	2,108	2,573	846	92,652,975	.....	.....	94	.....	41	82	102	132	.....	.....
June	.....	37.06	.....	1,170	2,114	2,959	707	95,856,570	.....	.....	93	.....	42	82	117	111	.....	.....
July	7.80	42.76	.....	1,512	2,428	3,345	692	100,269,247	.....	102	107	.....	54	95	133	108	.....	.....
August	7.92	42.88	.....	1,733	2,743	3,663	531	107,994,040	.....	104	108	.....	62	107	145	83	.....	.....
September	7.33	47.40	.....	1,790	2,488	(8)	805	108,703,075	.....	96	119	.....	64	97	(8)	126	.....	.....
October	8.46	54.58	63.04	1,582	2,364	(8)	485	115,143,143	.....	111	137	133	56	73	(8)	76	.....	.....
November	7.87	20.30	28.17	1,681	2,202	(8)	778	.....	.....	103	51	.....	60	93	(8)	122	.....	.....
December	8.09	36.61	44.70	1,721	2,633	(8)	775	.....	.....	106	92	94	62	103	(8)	121	.....	.....

[1] Average monthly production 1913 to 1920.
[2] Weekly Reports U. S. Geological Survey (Federal Reserve Bulletin).
[3] Federal Reserve Bulletin.
[4] Iron Age.
[5] Ingots only.
[6] London Economist.
[7] Engineering and Mining Journal represents domestic production plus imports. Total represents the crude copper content of blister copper in pounds.
[8] American Bureau of Metal Statistics.
[9] Data not collected by Iron and Steel Institute.

TABLE E-6.—*Actual and relative production of coal, coke, pig iron, crude steel, copper, and zinc*—Continued.

	Production in tons.									Relative production, 1913=100.								
	Coal.			Beehive coke (million short tons).	Pig iron (thousand long tons).	Crude steel.		Copper (pounds).	Zinc (tons).	Coal.			Beehive coke (million short tons).	Pig iron (thousand long tons).	Crude steel.		Copper (pounds).	Zinc (tons).
	Anthracite (million short tons).	Bituminous (million short tons).	Total (million short tons).			United States (thousand short tons).	United Kingdom (thousand short tons).			Anthracite (million short tons).	Bituminous (million short tons).	Total (million short tons).			United States (thousand short tons).	United Kingdom (thousand short tons).		
1920.																		
January	7.59	48.69	56.28	1,982	3,015	3,530	754	121,903,744	43,441	99	122	119	71	118	140	118	90	150
February	6.52	40.18	46.70	1,731	2,979	3,410	798	117,450,000	43,921	86	101	98	62	116	135	125	87	152
March	7.86	46.83	54.74	2,025	3,376	3,925	840	120,309,316	48,256	103	118	115	72	132	156	131	89	167
April	6.22	37.94	44.16	1,602	2,740	3,140	794	116,078,871	45,399	82	95	93	57	107	125	124	86	157
May	7.96	38.99	46.95	1,689	2,986	3,431	845	114,964,207	45,415	104	98	99	60	116	136	132	85	157
June	8.17	45.11	53.28	1,710	3,044	3,549	846	116,107,856	41,009	107	113	112	61	119	141	132	86	142
July	8.26	45.01	53.27	1,693	3,067	3,297	790	109,729,510	40,194	108	113	112	60	120	131	124	81	139
August	8.02	48.91	56.93	1,776	3,147	3,530	709	116,460,654	38,226	105	123	119	63	123	140	111	86	132
September	4.65	49.17	53.82	1,820	3,129	3,524	885	104,919,262	36,819	61	124	113	65	122	140	139	78	127
October	8.07	52.14	60.21	2,065	3,293	3,543	544	105,231,571	35,335	106	131	127	74	129	140	85	78	122
November	7.45	51.46	58.91	1,622	2,935	3,100	505	106,700,178	33,318	98	129	124	58	115	123	79	79	115
December	8.32	52.12	60.44	1,515	2,704	2,749	745	95,709,009	28,439	109	131	127	54	106	109	117	71	98
1921.																		
January	9.42	40.27	49.69	1,075	2,416	[19] 2,590	493	90,586,597	25,916	123	101	105	38	94	103	77	67	90
February	7.85	30.85	38.70	864	1,937	2,055	484	86,632,941	17,769	103	78	81	31	76	82	76	64	62
March	7.60	30.33	37.93	587	1,596	1,846	359	91,046,345	15,741	100	76	80	21	62	73	56	67	54
April	7.98	28.39	36.35	327	1,193	1,442	68	46,946,523	16,550	105	72	77	12	47	57	11	35	57
May	7.68	33.26	40.94	288	1,221	.....	.....	25,310,511	18,026	101	84	86	10	48	.....	.....	19	62
June	8.25	33.85	42.10	245	1,065	.....	.....	.....	.....	108	85	89	9	42	.....	.....	.....	.....

[19] Estimates for 1920 are based upon returns of 30 establishments where aggregate production amounts to about 85 per cent of the total output of the United States.

TABLE E–2.—*Relative wholesale prices of groups of commodities and of specific commodities, by months, 1919–1921.*

[The black line indicates the months in which the break in prices came for the various groups.]

[1913=100.]

	Hogs, heavy.	Live-stock, index number of farm prices.[1]	Bacon, short clear sides.	Mutton, dressed.	Cattle, steers, choice and prime.	Butter, creamery, extra, Chicago.	Cloths and clothing, index number.[2]	Farm products index.[2]	Cotton, upland middling.	Wool.	Metals and metal products.	Tin, pig.	Foods, index number.	Wheat, No. 1 northern.	Wheat flour.	Lumber and building materials index.[2]	Douglas fir, No. 1.	Corn, No. 2 mixed.	All commodities index.[2]	Shoes, Goodyear welt.	Steel, structural.	Farm crops index.[1]	Yellow pine flooring.	Coke, furnace.	Fuel and lighting index.[2]	Pig iron, Bessemer.	House furnishing goods.[2]	Paper, newsprint.	Coal, bituminous.	Crude petroleum, Kansas, Oklahoma.	Cement, Portland.	Zinc, spelter.	Gasoline, motor.	Refined petroleum.	Coal, anthracite.	
1919.	*100 lbs.*	*100 lbs.*	*Pound.*	*Pound.*	*100 lbs.*	*Pound.*			*Pound.*	*Pound.*		*Pound.*		*Bushel.*	*Barrel.*		*Mfect.*	*Bushel.*		*Pair.*	*Pound.*		*Mfect.*	*Shortton.*		*Longton.*			*Shortton.*	*Barrel.*	*Barrel.*	*Pound.*	*Gallon.*	*Gallon.*	*Short ton.*	1919.
January	209.6	192	226	172	223	199	234	222	231	280	172	159	207	254	247	161	190	224	203	208	192	221	141	237	170	196	218	188	186	241	.....	127	145	142	152	January.
February	[2] 210.8	192	222	187	221	158	223	218	206	236	168	161	196	256	248	163	190	207	197	208	192	211	144	214	169	196	218	188	181	241	.....	115	145	142	152	February.
March	226.6	200	239	209	222	193	216	228	213	245	162	162	203	267	253	165	190	238	201	208	186	209	144	183	168	189	218	188	181	241	.....	112	145	147	151	March.
April	245.1	214	256	223	222	198	217	235	226	254	152	162	211	296	292	162	190	257	203	208	170	220	144	160	187	171	217	186	181	241	.....	112	145	150	151	April.
May	248.2	218	260	199	213	179	228	240	242	245	152	162	214	297	306	164	201	284	207	216	170	238	146	158	167	171	217	188	181	241	.....	111	145	150	152	May.
June	[4] **247.0**	213	[4] **261**	161	178	165	258	[4] **231**	256	285	154	160	204	281	[4] **286**	175	277	283	207	228	170	249	153	164	170	171	233	188	181	241	.....	117	145	162	155	June.
July	265.7	222	264	155	195	164	282	246	274	289	158	156	216	307	268	186	310	307	218	240	170	252	164	168	171	171	245	188	181	241	.....	135	145	166	156	July.
August	254.9	221	261	151	[4] **207**	171	304	243	250	298	165	141	227	289	264	208	342	310	226	249	170	267	175	173	175	171	259	.....	181	241	.....	135	145	177	158	August.
September	203.2	191	215	115	196	183	306	226	243	298	160	124	211	290	268	227	353	248	220	285	170	258	213	188	181	171	262	.....	204	241	.....	130	145	178	160	September.
October	175.2	174	178	123	209	208	313	230	277	315	161	125	211	301	279	231	353	224	223	289	170	235	224	198	181	171	264	.....	[3] 204	241	.....	136	145	178	160	October.
November	175.1	169	181	127	[3] 215	221	325	240	309	324	164	121	219	323	292	236	353	240	230	291	170	227	224	243	179	182	299	.....	186	252	.....	140	145	178	161	November.
December	163.7	164	178	137	215	219	335	244	308	324	169	123	234	347	332	253	364	237	238	297	170	230	251	248	181	216	303	.....	186	268	.....	150	145	178	160	December.
1920.																																				1920.
January	180.4	173	174	153	198	203	350	246	307	341	177	142	253	336	338	268	407	240	248	298	169	241	251	236	184	235	324	.....	186	311	170	167	153	182	160	January.
February	173.5	177	173	200	182	201	356	237	303	350	189	134	244	308	305	300	407	232	249	305	181	252	312	236	187	250	329	.....	186	321	170	159	157	195	160	February.
March	172.6	178	166	190	172	214	356	[4] **239**	234	350	192	138	246	315	318	325	407	253	253	308	[3] 206	255	312	236	192	253	329	292	186	375	170	153	166	203	160	March.
April	177.0	181	172	244	163	206	353	246	[4] **331**	[5] 359	195	138	270	344	325	341	407	273	265	308	219	271	359	414	213	254	331	278	250	375	170	[6] 148	169	211	160	April.
May	167.1	177	171	189	150	184	347	244	323	354	193	124	287	352	349	341	407	[6] 319	272	308	219	294	359	473	235	257	339	278	272	375	170	140	175	211	171	May.
June	176.0	175	167	167	182	177	335	243	307	263	190	109	279	332	333	337	320	296	259	292	219	309	359	607	246	261	362	278	272	375	170	138	178	211	178	June.
July	177.6	176	163	165	184	178	317	236	321	258	191	109	268	324	323	333	320	248	262	292	200	304	359	680	252	275	362	278	272	375	185	141	178	211	180	July.
August	180.9	172	158	135	189	174	299	222	281	254	193	105	235	292	303	328	320	247	250	292	194	268	352	694	268	286	363	278	272	375	194	143	178	211	183	August.
September	197.8	174	159	115	195	183	278	210	235	219	192	99	223	285	304	318	277	210	242	292	200	239	352	655	284	294	371	292	322	375	200	135	185	224	198	September.
October	176.6	166	171	111	194	183	257	182	177	197	184	90	204	[4] **241**	[3] 265	313	266	142	225	255	200	202	341	596	282	287	371	306	322	375	200	129	185	236	198	October.
November	144.9	147	150	120	185	190	234	165	148	171	170	82	195	201	218	274	178	129	207	249	194	163	279	319	258	240	369	322	322	375	200	117	185	236	198	November.
December	114.0	121	129	105	151	164	220	144	121	136	157	76	172	192	215	266	179	121	189	249	175	135	279	232	236	215	346	286	322	375	200	103	185	236	199	December.
1921.																																				1921.
January	111.2	120	113	110	118	155	208	136	131	136	152	79	162	205	216	239	168	109	177	233	[4] **175**	129	.....	200	278	198	283	278	254	364	199	102	185	236	200	January.
February	109.5	117	113	91	112	153	198	129	109	140	146	73	150	191	207	221	136	106	167	233	175	123	.....	177	218	183	277	275	232	208	177	93	173	224	200	February.
March	113.1	123	121	113	115	148	192	125	92	136	139	64	150	185	208	208	136	104	162	233	163	120	.....	171	207	164	275	266	221	187	175	90	160	212	200	March.
April	98.3	112	109	130	103	145	186	115	95	131	138	68	141	161	181	203	136	93	154	225	163	113	.....	138	199	157	274	266	221	187	175	90	155	207	191	April.
May	98.0	109	106	132	99	94	181	117	101	123	138	72	133	171	193	202	125	99	151	225	163	104	.....	128	194	153	262	266	221	161	175	93	155	195	193	May.
June	97.1	.....	109	90	95	103	180	113	94	.....	132	65	132	172	.....	202	125	98	148	225	156	109	.....	116	187	144	250	266	209	127	175	85	155	179	195	June.
July	116.3	.....	111	102	99	126	179	115	97	.....	125	62	134	165	.....	200	125	98	148	225	146	.....	.....	111	184	133	235	257	209	107	175	82	140	179	198	July.

[1] Department of Agriculture, Monthly Crop Reporter, June, 1921.
[2] Department of Labor index number. Average prices to farmer. Crop index is composed of prices paid for the 10 leading crops.
[3] Peak of production; in the case of cattle and hogs, peak of receipts at primary market.
[4] Bold-faced type indicates the month in which the peak of exports was reached
[5] Peak of imports
[6] Beginning of marked increase in corn imports.

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FABRICATED STRUCTURAL STEEL.

The tonnage of fabricated structural steel, as shown by Table E–13 on page 78, reached the peak of postwar production in February, 1920, when fabricated steel shops were operating at 95 per cent of capacity.

The output of structural steel ranged from 12 to 26.5 per cent of capacity in the first four months of 1919 on account of shutdown of war factories. Production was resumed at about half capacity in the following months and gradually increased until February, when as previously stated it reached 95 per cent of capacity. The peak of structural-steel prices had been reached in July and August of 1917, when the price index stood at 386.9 as compared with 100 in 1913. The price then fell to 201 in October and rose again to 244.4 in September of 1918. Price of structural steel sagged to 170 in April, 1919, where it remained until 1920, when the index rose to 219 in April, where it remained until June. Beginning with July, 1920, the price again began to decline and has declined continuously since. This decline was accompanied by a marked decline in production as indicated in Table E–13 on page 78.

The following table, E–7, gives the actual and relative prices of structural steel, by years, from 1913 to 1920 and by months from January, 1917, to July, 1921:

TABLE E–7.—*Actual and relative prices of structural steel.*

[1913=100.]

BY YEARS, 1913 TO 1921.

	1913	1914	1915	1916	1917	1918	1919
Actual price per pound	$0.016	$0.013	$0.015	$0.028	$0.043	$0.032	$0.028
Relative price per pound	100	83	93	177	269	202	174

BY MONTHS, 1917-1921.

	Actual.					Relative.				
	1917	1918	1919	1920	1921	1917	1918	1919	1920	1921
January	$0.035	$0.032	$0.031	$0.027	$0.028	215.6	201.3	191.9	168.8	175.0
February	.036	.032	.031	.029	.028	222.5	201.3	191.9	181.3	175.0
March	.037	.032	.030	.033	.026	233.1	201.3	186.3	206.3	162.5
April	.040	.032	.027	.035	.026	249.4	201.3	170.0	218.8	162.5
May	.045	.032	.027	.035	.026	283.8	201.3	170.0	218.8	162.5
June	.056	.032	.027	.035	.025	351.9	201.9	170.0	218.8	156.3
July	.062	.033	.027	.032	.023	386.9	204.4	170.0	200.0	146.3
August	.062	.033	.027	.031	.....	386.9	206.4	170.0	193.8	.....
September	.047	.033	.027	.032	.....	293.1	244.4	170.0	200.0	.....
October	.032	.033	.027	.032	.....	201.3	204.4	170.0	200.0	.....
November	.032	.033	.027	.031	.....	201.3	200.9	170.0	193.8	.....
December	.032	.032	.027	.028	.....	201.3	194.4	170.0	175.0	.....

Source: Bureau Labor Statistics Price Bulletins.

PETROLEUM PRODUCTS.

The production of gasoline in the postwar period, as shown by Table E–14, on page 80, did not begin to decline until January, 1921, and wholesale prices of gasoline began to decline in the following month. Kerosene reached its peak of postwar production in November, 1920 (Table E–14), and prices of refined petroleum began to decline in February, 1921. The production of lubricating oil reached its peak in the postwar period in October, 1920, and the production of gas and fuel oil in December, 1920 (Table E–14, on p. 80). The price of crude petroleum began to decline in January, 1921. Zinc production, as indicated in Table E–6, on page 63, reached its maximum production in March, 1920, while the price of zinc smelter began to fall in January.

TIN DELIVERIES.

Production of pig tin reached its peak in July, 1920, and the peak price of pig tin was reached, as shown by Table E–2, facing page 60, in April, 1920, after which both the price and the production declined rapidly.

LUMBER.

Postwar production of lumber reached its peak in May, 1920—southern pine in April and Douglas fir in May, 1920. The price of Douglas fir began to decline in June, 1920, and yellow-pine flooring in August of the same year. The tables E–8, E–9, E–10, and E–11, following, give the estimates of F. W. Dodge Co. of contracts awarded for buildings of all kinds in 25 Northeastern states east of the Mississippi River and north of the Ohio. These tables indicate that contracts for business buildings reached their peak in April, 1920; industrial buildings in March, 1920; and residential buildings in April, 1920. Since these months contracts for business, industrial, and residential buildings have constantly declined. On the other hand, contracts for educational buildings reached their peak in July, as did contracts for hospitals and institutions, public works and public utilities, and social and recreational buildings. Contracts for public buildings and religious buildings reached the maximum in August, 1920. Contracts for educational buildings, hospitals, public buildings, public works and public utilities, social and recreational buildings, and religious and memorial buildings have shown a marked tendency to increase in 1921, after a period of considerable decline in the last half of 1920. In other words, contracts for buildings for business, industrial, and residential purposes have declined rapidly as industrial depression has increased, but while industrial depression temporarily diminished contracts for public buildings of various kinds, contracts for these buildings have shown a marked tendency to increase in recent months.

TABLE E–8.—*Building contracts awarded.*[1]

NUMERICAL DATA.

[Base year in bold-faced type.]

Year and month.	Business buildings.			Industrial buildings.			Residential buildings.			Educational buildings.			Hospitals and institutions.		
	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.
		(000 omitted.)			(000 omitted.)			(000 omitted.)			(000 omitted.)			(000 omitted.)	
1919 monthly average	**1,092**	**9,240**	**$33,806**	**636**	**12,772**	**$42,744**	**3,999**	**20,157**	**$70,767**	**166**	**1,915**	**$9,960**	**49**	**368**	**$3,266**
1920 monthly average	895	6,870	26,638	511	10,652	49,080	2,414	11,460	47,177	170	2,190	14,358	49	523	3,962
1920.															
January	805	7,325	34,117	599	18,879	88,991	1,942	11,599	47,055	80	2,320	10,440	27	281	1,868
February	776	8,234	42,035	540	14,352	65,680	1,618	9,511	38,307	86	1,447	8,214	21	281	2,341
March	1,147	10,182	50,902	665	22,796	96,083	2,640	15,945	62,575	158	2,976	17,939	42	653	2,973
April	1,245	10,816	54,722	663	13,473	55,121	3,711	20,872	90,933	194	3,039	18,946	47	824	4,222
May	1,117	7,908	40,201	617	11,111	47,511	3,218	17,104	65,362	234	2,719	17,047	50	821	4,712
June	1,022	9,499	47,529	529	10,639	45,275	2,691	10,891	44,330	274	3,061	19,674	61	466	3,011
July	907	7,325	36,128	465	6,768	36,458	2,334	8,607	40,811	284	2,507	19,808	68	531	8,200
August	924	5,005	28,985	493	6,972	31,733	2,384	10,803	41,627	270	2,832	18,972	58	476	4,850
September	799	5,371	26,944	427	8,273	40,440	2,410	8,222	36,015	175	1,834	12,762	57	484	3,166
October	817	4,823	23,804	443	5,392	26,932	2,206	11,173	43,433	118	1,779	14,258	60	742	6,186
November	683	3,611	20,218	407	5,264	33,330	2,035	7,264	32,158	79	1,045	6,950	54	417	2,573
December	510	2,336	14,068	289	3,911	21,399	1,777	5,534	23,516	85	719	7,288	42	302	3,441
1921.															
January	506	3,262	20,598	250	2,359	15,437	1,573	6,724	30,732	73	1,257	6,905	31	782	4,779
February	549	3,277	17,020	197	1,786	9,037	2,085	8,319	36,294	81	1,625	8,647	16	94	1,146
March	870	4,424	22,776	296	2,341	10,640	3,833	14,382	60,701	160	2,969	19,031	35	587	2,698
April	880	5,084	29,176	288	3,497	12,919	4,556	17,948	75,006	228	3,328	22,640	54	660	4,482
May	896	5,632	24,494	275	3,543	20,404	4,083	18,804	82,952	287	4,663	24,462	55	645	3,288
June	952	5,645	24,494	244	3,551	18,502	4,758	18,227	75,175	355	3,731	23,441	79	1,507	12,762

[1] Covers territory of 25 northeastern states, east of the Mississippi and north of the Ohio Rivers. Supplied by the F. W. Dodge Co.

TABLE E–9.—*Building contracts awarded.*[1]

INDEX NUMBERS.

[Base year in bold-faced type.]

Year and month.	Business buildings.			Industrial buildings.			Residential buildings.			Educational buildings.			Hospitals and institutions.		
	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.
	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.
1919 monthly average	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1920 monthly average.	81	74	79	80	83	115	60	57	67	102	114	144	100	142	121
1920.															
January	74	79	101	94	148	208	49	58	66	48	121	105	55	76	57
February	71	89	124	85	112	154	40	47	54	52	76	82	43	76	72
March	105	110	151	105	178	225	66	79	88	95	155	180	86	177	91
April	114	117	162	104	105	129	93	104	128	111	159	190	96	224	129
May	102	86	119	97	87	111	80	85	92	141	142	171	102	223	144
June	94	103	141	83	83	106	67	54	63	165	160	198	124	127	92
July	83	79	107	73	53	85	58	43	58	171	131	199	139	144	251
August	85	54	86	78	55	74	60	54	59	163	148	190	118	129	149
September	73	58	80	67	65	95	60	41	51	105	96	128	116	131	97
October	75	52	70	70	42	63	55	55	61	71	93	143	122	201	189
November	63	39	60	64	41	78	51	36	45	48	55	70	110	113	79
December	47	25	42	45	31	50	44	27	33	51	38	73	86	82	105
1921.															
January	46	35	61	39	18	36	39	33	43	44	66	69	63	212	146
February	50	35	50	31	14	21	52	41	51	49	85	87	33	25	35
March	80	48	67	47	18	25	96	71	88	96	155	191	71	159	83
April	81	55	86	45	27	30	114	89	106	137	174	227	110	179	137
May	82	61	87	43	28	48	117	93	117	173	244	246	112	175	101
June	87	61	75	38	28	43	119	90	106	214	195	235	161	410	391

[1] Covers territory of 25 northeastern states, east of the Mississippi and north of the Ohio Rivers. Supplied by the F.W. Dodge Co. From the Survey of Current Business, Bureau of Census, July 1, 1921, pp. 36–39.

TABLE E–10.—*Building contracts awarded.*[1]

NUMERICAL DATA.

[Base year in bold-faced type.]

Year and month.	Public buildings.			Public works and public utilities.		Social and recreational buildings.			Religious and memorial buildings.			Grand total.[2]		
	Number of projects.	Square feet.	Value.	Number of projects.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.
		(000 omitted.)			(000 omitted.)		(000 omitted.)			(000 omitted.)			(000 omitted.)	
1919 monthly average	**47**	**172**	**$1,119**	**654**	**$41,834**	**111**	**1,265**	**$6,964**	**91**	**444**	**$3,127**	**6,862**	**46,333**	**$214,990**
1920 monthly average	45	236	2,218	534	47,195	109	1,030	7,594	79	422	3,446	4,821	33,383	211,102
1920.														
January	31	130	782	295	33,018	76	1,177	5,609	39	241	1,484	3,906	41,952	226,116
February	29	186	4,060	336	35,124	66	832	4,223	24	71	615	3,504	34,914	200,757
March	32	126	967	517	58,412	111	1,436	8,623	49	381	2,813	5,367	54,495	302,133
April	40	136	1,323	626	63,873	135	1,417	11,198	75	385	3,695	6,742	50,962	304,974
May	55	107	1,476	654	56,086	146	1,075	9,551	94	461	4,579	6,193	41,306	246,935
June	61	751	8,087	670	77,805	144	1,191	8,327	103	481	5,040	5,584	36,979	260,111
July	58	356	1,637	724	46,367	145	1,004	8,572	119	647	4,478	5,131	27,745	204,498
August	67	148	1,819	674	60,459	122	1,484	9,363	123	500	4,309	5,129	28,220	202,652
September	46	365	2,751	620	43,392	113	734	6,394	91	549	4,389	4,758	25,832	178,179
October	42	315	1,433	565	47,900	86	661	5,108	103	584	5,041	4,449	25,469	177,758
November	32	87	895	369	21,848	83	785	6,839	82	329	2,774	3,839	18,802	128,966
December	43	124	1,418	356	21,972	81	564	4,310	48	436	2,137	3,249	13,926	100,145
1921.														
January	27	113	1,079	237	24,186	69	495	4,274	56	367	2,261	2,834	15,359	111,608
February	23	324	2,482	264	13,547	91	979	5,328	48	368	2,253	3,361	16,772	100,677
March	32	202	2,271	558	33,958	124	1,368	9,461	67	430	2,487	5,981	26,703	164,092
April	47	404	2,781	812	48,043	173	2,723	19,533	129	827	6,138	7,176	34,471	220,886
May	51	273	1,846	977	64,999	164	1,451	9,975	135	715	4,497	7,530	35,731	242,094
June	61	152	1,402	1,130	52,967	166	1,710	10,202	155	1,161	7,075	7,919	35,738	227,711

[1] Covers territory of 25 northeastern states, east of the Mississippi and north of the Ohio Rivers. Supplied by the F. W. Dodge Co.
[2] Grand total includes military and naval buildings and miscellaneous, in addition to the groups listed.

TABLE E–11.—*Building contracts awarded.*[1]

INDEX NUMBERS.

[Base year in bold-face type.]

Year and month.	Public buildings.			Public works and public utilities.		Social and recreational buildings.			Religious and memorial buildings.			Grand total.[2]		
	Number of projects.	Square feet.	Value.	Number of projects.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.	Number of projects.	Square feet.	Value.
	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.	Relative to 1919.
1919 monthly average	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1920 monthly average	96	137	198	82	113	98	81	109	87	95	110	70	72	98
1920.														
January	66	76	70	45	79	68	93	81	43	54	47	57	91	105
February	62	108	363	51	94	59	66	61	26	16	20	51	75	93
March	68	73	86	79	140	100	114	124	54	86	90	78	118	141
April	85	79	118	96	153	122	112	161	82	87	118	98	110	149
May	117	62	132	100	134	132	85	137	103	104	146	90	89	115
June	130	436	723	102	186	130	94	120	113	108	161	81	80	121
July	123	207	146	111	111	131	79	123	131	145	143	75	60	95
August	143	86	163	103	145	110	117	134	135	112	138	75	61	94
September	98	212	246	95	104	102	58	92	100	124	140	69	56	88
October	89	183	128	86	115	77	52	116	113	131	161	65	55	83
November	68	50	80	56	52	75	62	98	90	74	89	56	41	60
December	91	72	127	54	53	73	45	62	53	98	68	47	30	47
1921.														
January	57	66	96	36	58	62	39	61	62	83	72	41	33	52
February	49	188	222	40	44	82	77	77	53	83	72	49	36	47
March	68	117	203	85	81	112	108	136	74	97	80	57	53	76
April	100	294	249	124	115	156	215	280	142	186	196	105	74	103
May	109	158	105	149	155	148	115	143	148	161	144	110	77	113
June	130	88	125	173	127	150	136	146	170	261	226	115	77	106

[1] Covers territory of 25 northeastern States, east of the Mississippi and north of the Ohio Rivers. Supplied by the F. W. Dodge Co.

[2] Grand total includes military and naval buildings and miscellaneous, in addition to the groups listed.

STOCK OF NEWSPRINT PAPER.

Stocks of newsprint paper (see Table E–14 on p. 80) reached their peak in February, shipments in April, and production in March of 1920. Prices of newsprint paper reached their peak in March of 1920, to rise again to a higher peak in November of that year. Stocks began to accumulate in the early part of 1921. The production of wood pulp reached its peak in May of 1920 and stocks in the month following, though stocks began to accumulate in the early months of 1921.

SHOES.

Eight New England shoe factories reached their maximum output in March of 1920 (see Table E–13, p. 78), with a sharp decline in August of 1920. After nine months of low output production increased in June of 1921, but not to the output of June of either 1919 or 1920.

The average wholesale price of Goodyear welt vici calf shoes reached its peak in March of 1920 at a point of 308, as compared with 100 in 1913. This price was maintained for three months, and the first decline was in June of 1920, three months after the peak of production had been passed.

Chart E–3, on page 72, reflects the relative wholesale price of shoes of this grade, by months, from 1913 to 1921 in their relation to the relative wholesale prices of hides, leathers, all commodities, and farm products.

The price relation of hides, leather, and shoes is shown in Chart E–4, on page 73, which gives the same data by years, on the same base, from 1890 to 1920.

It will be noted that shoes were above the relative wholesale price of hides, of leather, of farm products, and of all commodities from 1890 to 1896. From 1896 to 1909 the prices of these classes of commodities stayed on relatively close relations to each other. In 1919, however, the price of shoes began to rise and in 1920 was over 100 points above hides, leather, and all commodities and farm products.

EMPLOYMENT AND LIVING COSTS.

A general guide as to production and consumption is reflected in the fact that the number of employees in representative manufacturing establishments in New York State reached its height in March of 1920, two months before the general price level began to decline (see Table E–13, p. 78).

Chart E–5, on page 74, shows the relation in recent months between prices of certain groups of commodities that play a large part in the cost of living.

Chart E–6, on page 75, shows that the cost of living (July, 1914 = 100) caught up with the general level of all wholesale prices, for the first time, in January of 1921.

As a general guide to the quantity of our exports, the tonnage of vessels cleared (see Table E–15, p. 81) reached its peak in August of 1920, but from April of 1919 to April of 1920 the tonnage cleared exceeded the average tonnage cleared in 1913.

The total monthly value of our exports (see Table E–16, p. 82) had reached their height in June of 1919. The value of our exports for

CHART E-3.

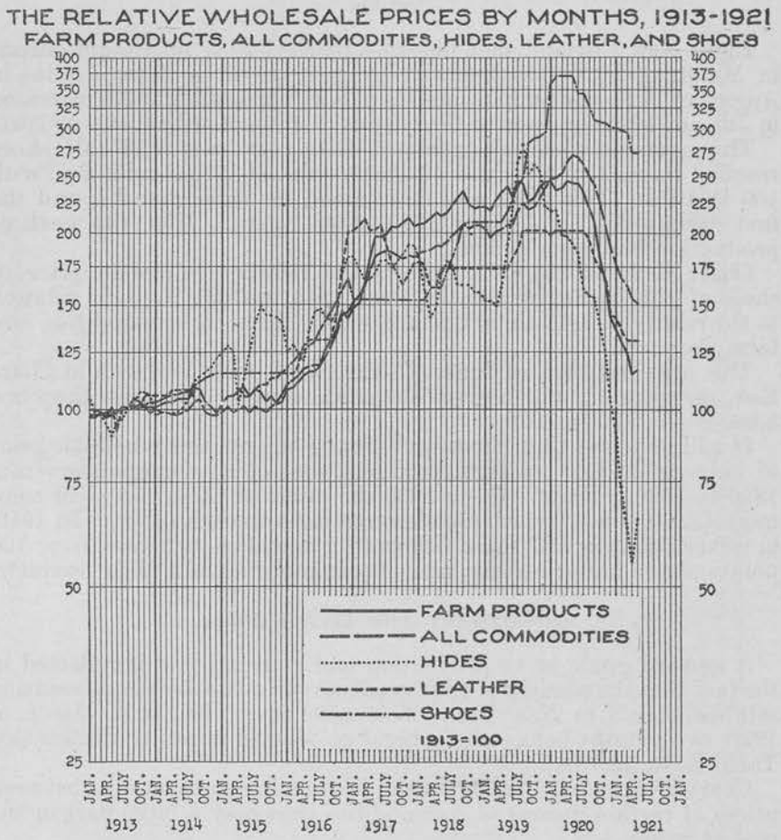


CHART E-4.

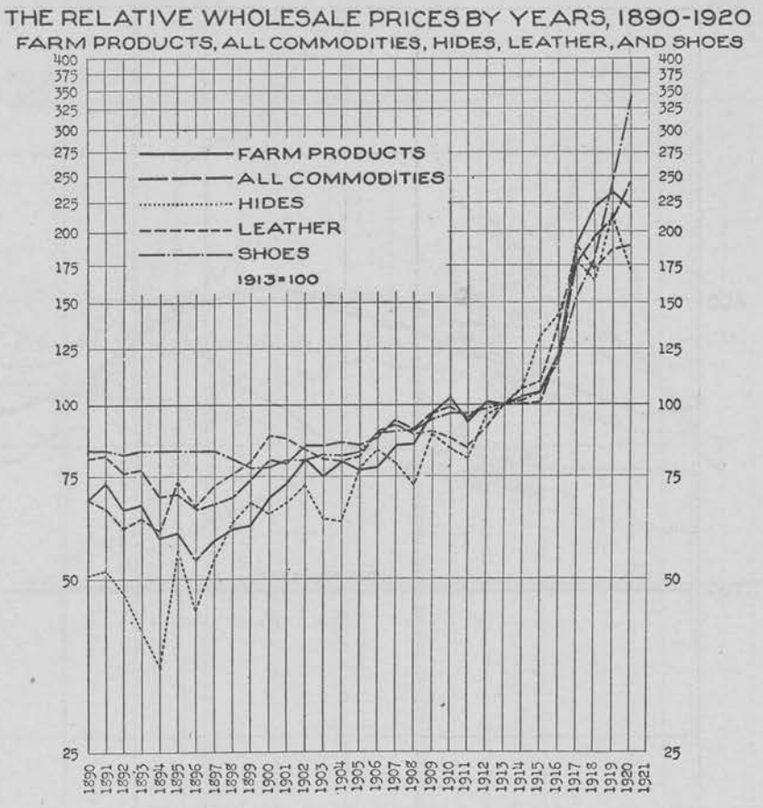


CHART E–5.—The relative prices of different groups of commodities in the cost of living on the basis of July, 1914.

[July, 1914=100.]

(Source of information: National Industrial Conference Board.)

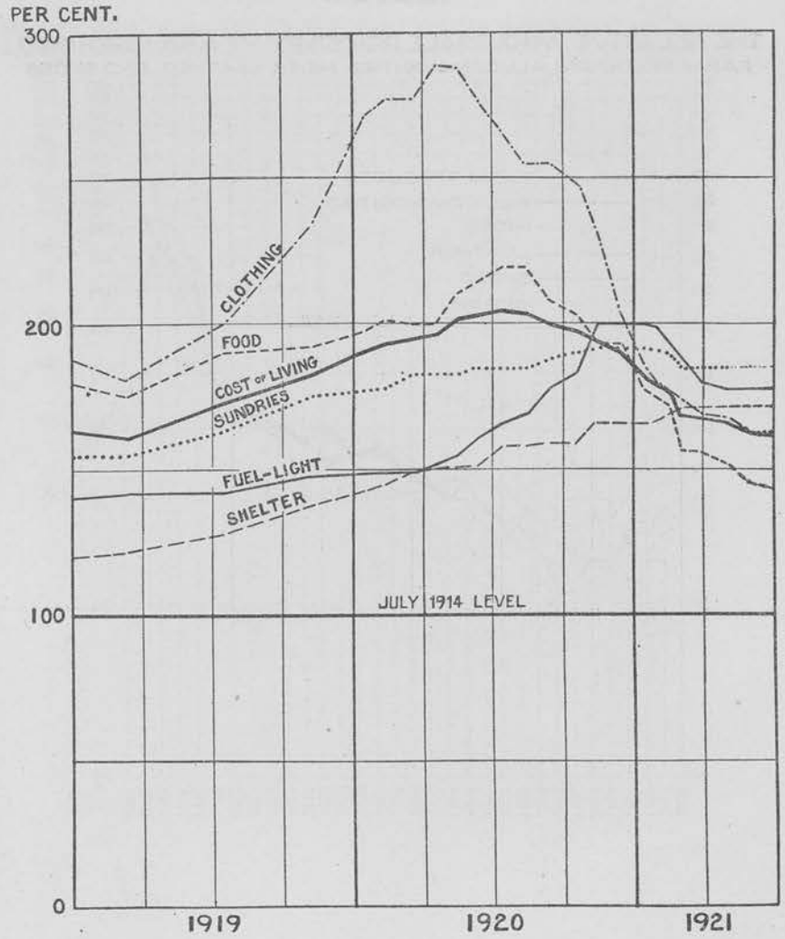
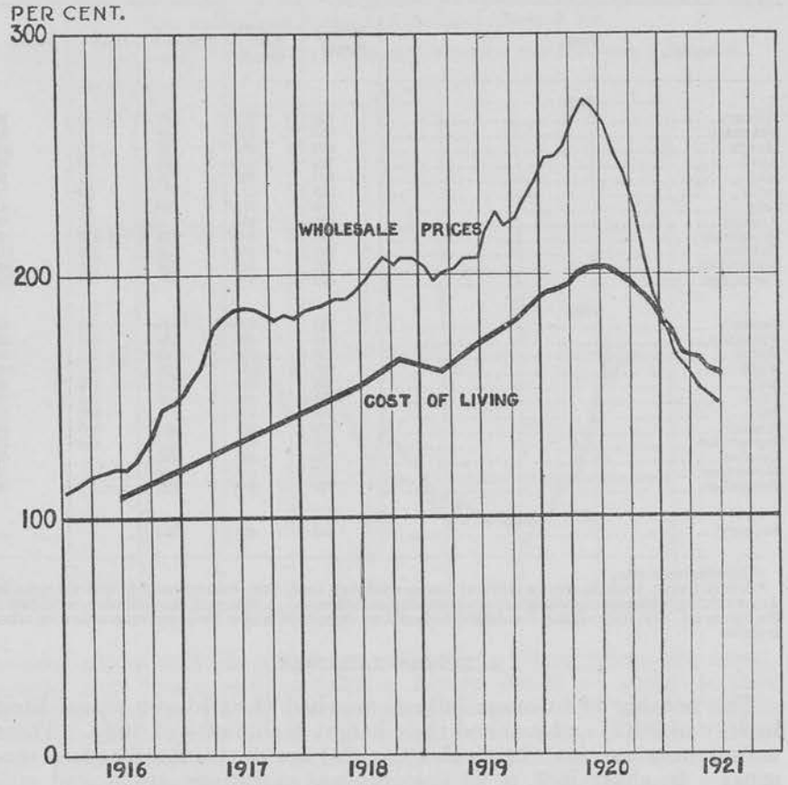


CHART E–6.—The relative wholesale prices of all commodities and the relative wholesale prices of the main commodities entering into the cost of living.

[July, 1914=100.]

NOTE.—Source of information: Monthly Labor Review and National Industrial Conference Board.



the year 1920 were greater than for the year 1919; hence the exports of March, 1920, may be taken as the high point in the value of our export trade. On a gold parity basis the high tide of the values of exports from the United Kingdom was reached in July of 1920; of France in August, 1920; of Italy in June of 1920; and of Japan in December of 1919, with another rise, though not so high, in April of 1920.

The value of our imports was greater in 1920 than in 1919, reaching their high point in June of 1920.

TABLE E–12.—*Exports of the United States, United Kingdom, France, Italy, and Japan, 1919–1921.*

[In millions of dollars at gold parity.]

Year.	United States.	United Kingdom.[1]	France.[2]	Italy.	Japan.
1919.					
January	623	253	67	44	56
February	585	253	68	51	62
March	603	302	93	60	67
April	715	350	82	59	71
May	604	369	98	57	78
June	928	372	113	79	75
July	569	375	119	72	90
August	646	438	.....	83	98
September	595	400	134	110	86
October	631	480	139	124	112
November	741	523	134	113	109
December	682	570	.....	147	138
1920.					
January	733	528	139	83	88
February	646	636	255	103	87
March	820	616	259	115	98
April	685	579	266	131	109
May	746	664	233	128	96
June	631	664	349	145	91
July	651	756	.....	100	77
August	579	624	464	103	87
September	605	637	415	110	77
October	752	625	450	.....	67
November	677	645	363	.....	52
December	721	532	321	.....	43
1921.					
January	655	451	363	.....	.....

[1] Includes reexports.

[2] French foreign trade figures for 1919 and January through June, 1920, are expressed in 1918 value units; August through December, 1920 figures are calculated at 1919 rates. A change in the methods of calculating the values for July, August, and December, 1919, and for July, 1920, makes them incomparable with other months.

BUSINESS FAILURES.

The number of business failures reached their lowest actual limit in July of 1919, and reached their height in January of 1921. These actual numbers (see Table E–13, p. 78) are misleading because seasonal. In chart E–7, p. 77 the seasonal variations are ironed out. Since 1866 an average of about 1 per cent of the firms in business have failed each year. In 1915 failures were above normal, then they declined but began to increase with 1920, and have reached normal in 1921.

As a rule, a drop in price of commodities other than agricultural products was followed by a decline in production or consumption. The production of agricultural products, however, was for the most part fixed before declines in price began.

Employment, as indicated by Table E–13, page 78, reached its maximum in the number of weeks work in March, 1920, two months before the break in the general price level. The decline in industrial production and the decline in unemployment resulted in declining consumption in cities and in industries, and this decline in consumption in most cases, took place before the break in prices in May, 1920. However important and effective economic factors may have been in influencing a decline in prices, it would be unsound to assume that economic factors were the only influences affecting the decline. Psychological factors, while exceedingly difficult to measure, are nevertheless of impelling force in times of price declines. After a period of prosperity and rise in prices there occurs a curious change in the public attitude

CHART E–7.—Percentage of firms failing to the number in business in terms of the annual rate, seasonal variation allowed for.

NOTE.—From the Monthly Review of the Federal Reserve Bank in New York, Aug. 1, 1921, p. 11.

toward prices and the purchase of goods. When prices are rising, people buy freely and anticipate future needs in order to take advantage of the rise in prices, but when prices fall, people refrain from buying in order to take advantage of the drop in prices. Thus once a decline in prices begins, the buyers' strike promptly develops and this buyers' strike extends not only to the consumer but to retailers, wholesalers, and manufacturers. The strike of the buying public soon finds a reflection in decreased production and increased unemployment which further decrease public purchasing power. The buyers' strike, which was at first a matter of choice on the part of the public, soon became a matter of necessity. High prices and over expansion of stocks and of credit sow the seeds of their own destruction.

TABLE E–13.—*Business conditions other than agricultural.*

Date.	Tin deliveries (long tons).[1]	Index of employment in New York State (number employed in 1914 =100).[2]	Number of business failures in United States.[3]	Sales and selling value of stocks of 56 department stores in second Federal reserve district.[4]				Receipts and shipments of lumber, Chicago and St. Louis.[5]				Fabricated structural steel contracted for throughout country.[5]		Tonnage of vessels cleared in foreign trade.[5]		Report of 8 manufacturers on New England shoe production (number of pairs).[6]
								Receipts.		Shipment.						
				Net sales (000 omitted).	Index (average sales 1919 =100).	Stocks on hand close of month (000 omitted).	Index (1919=100).	M feet.	Index (1911–1913 =100).	M feet.	Index (1911–1913 =100).	Tonnage.	Per cent of shops' capacity.	Net tonnage.	Index (1911–1913 =100).	
1919.																
January	1,850	113	673	$18,657	76.9	$65,712	271.1	134,604	63	47,922	62	21,600	12.0	3,062,514	78	.....
February	2,450	112	602	16,332	67.3	68,512	282.6	97,511	49	45,585	64	22,500	12.5	2,933,557	75	.....
March	2,070	111	629	20,064	82.7	73,277	302.3	124,040	59	46,902	61	32,300	17.5	2,898,587	75	.....
April	[7] 36	111	543	24,430	100.8	73,919	304.9	144,253	68	59,055	77	48,100	26.5	2,802,973	98	1,307,193
May	[7] 20	110	531	23,760	98.0	71,778	296.1	162,365	77	66,001	86	88,200	49.0	4,894,031	126	1,442,559
June	[7] 68	110	485	22,976	94.8	70,196	289.6	184,862	87	80,762	105	117,000	65.0	4,850,821	125	1,190,305
July	[7] 132	113	452	17,815	73.5	73,558	303.5	200,148	94	90,134	118	133,200	74.0	5,282,818	136	1,260,329
August	4,345	115	468	17,027	70.2	83,461	344.3	170,385	80	87,953	115	141,000	78.5	5,755,067	148	1,530,823
September	4,825	116	473	22,973	94.7	94,420	389.5	205,909	97	93,120	121	141,000	78.5	5,109,156	131	1,588,156
October	2,875	115	463	31,459	129.8	100,759	415.7	208,638	98	95,674	125	139,500	77.5	4,719,338	121	1,718,793
November	6,665	118	551	30,914	127.5	104,933	432.9	176,972	83	70,175	92	124,200	69.0	4,162,360	107	1,439,446
December	6,965	122	581	44,422	183.2	92,695	382.4	226,617	107	79,553	104	153,000	85.0	3,777,598	97	1,520,489
1920.																
January	3,910	123	569	26,873	110.8	94,351	389.3	403,604	87	219,783	87	135,000	75.0	3,883,183	100	1,642,941
February	5,200	122	492	21,015	86.7	103,959	428.9	421,692	94	224,286	91	171,000	95.0	3,300,619	92	1,228,041
March	5,130	125	566	29,685	122.4	115,717	477.4	500,230	108	296,047	117	150,400	83.5	3,877,254	100	1,728,720
April	3,305	124	504	28,374	117.0	117,241	483.7	236,975	51	131,933	52	122,250	68.0	4,464,672	115	1,625,478
May	3,550	122	547	31,437	129.7	110,463	455.7	313,447	67	195,965	77	110,700	61.5	5,166,037	133	1,576,814
June	6,500	121	674	29,511	121.7	105,724	436.2	393,738	85	212,339	84	90,400	50.0	6,341,187	163	1,471,305
July	5,530	121	681	21,451	88.5	104,631	431.7	399,615	86	184,767	73	90,400	50.0	6,918,590	169	1,219,137
August	3,745	118	673	19,166	79.0	111,076	458.3	370,352	80	220,368	87	72,000	40.0	7,545,869	184	1,365,454
September	4,860	117	677	24,764	102.1	119,484	493.0	375,456	81	242,857	96	77,400	43.0	6,935,130	170	928,698
October	3,415	115	923	32,805	135.3	120,370	496.6	398,333	86	220,116	87	45,600	25.5	7,256,824	177	634,913
November	3,395	108	1,050	34,635	142.9	114,525	472.5	342,971	74	190,282	75	49,200	27.5	6,170,661	151	519,318
December	2,580	100	1,525	44,895	185.2	91,994	379.5	351,695	76	192,072	76	47,000	26.0	5,735,031	140	566,619
1921.																
January	1,555	93	1,895	25,649	105.8	80,834	333.5	263,001	57	165,308	65	32,000	18.0	4,645,818	114	710,710
February	1,585	94	1,641	21,413	88.3	84,952	350.5	269,632	62	169,843	72	25,600	14.0	4,166,603	109	823,529
March	1,683	95	1,336	28,429	117.3	91,339	376.8	349,426	75	215,760	85	52,300	29.0	4,494,152	110	865,829
April	1,590	94	1,487	28,037	115.6	93,500	385.7	345,798	74	213,359	84	55,800	31.0	5,009,543	122	738,564
May	1,225	92	1,356	27,496	113.4	91,735	378.5	354,992	76	242,452	95	50,800	28.0	5,024,222	123	829,324
June	1,590	90	1,320	27,403	113.0	86,644	357.5	372,453	80	253,848	100	66,900	37.0	6,153,131	150	1,025,577
July	1,525	.....	1,444	.....	.....	.....	.....	328,129	71	216,908	85	.....	.....	.....	.....	.....

[1] New York Metal Exchange.
[2] Employment in representative manufacturing establishments in New York State—New York State Industrial Commission.
[3] Dun's Review.
[4] Reports to Federal Reserve Bank of New York.
[5] Federal Reserve Bulletin.
[6] Federal Reserve Bank of Boston.
[7] Import embargo.

TABLE E-14.—*Production of manufactures (in United States unless otherwise indicated).*

[Source: Harvard Review of Economic Statistics, March, 1921.]

Date.	Railroad cars (10 cars).	Locomotives [1] (1 locomotive).	Vessels [2] (thousand gross tons).	Petroleum products.				Lumber, total cut, 5 varieties [3] (million feet).	Lumber cut, southern pine (million feet).	Lumber cut, Douglas fir (million feet).	Paper.						
				Gasoline (million gallons).	Kerosene (million gallons).	Lubricating oil (million gallons).	Gas and fuel oil (million gallons).				Wood pulp.		Newsprint paper.			Book paper (thousand short tons).	Wrapping paper (thousand short tons).
											Production (thousand short tons).	Stocks (tons).	Production (thousand short tons).	Shipments (tons).	Stocks (tons).		
1913 (average)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	108.8	.....	.....	.....	.....
1914 (average)	.....	.....	.....	122.2	.....	.....	.....	.....	.....	.....	.....	.....	106.9	.....	.....	.....	.....
1915 (average)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	103.2	.....	.....	.....	.....
1916 (average)	.....	.....	.....	171.6	121.3	52.04	388.6	.....	.....	.....	.....	.....	112.9	.....	.....	74.33	.....
1917 (average)	.....	.....	.....	237.5	143.9	62.81	542.8	.....	.....	.....	281.0	.....	113.2	.....	.....	74.75	60.67
1918 (average)	819	463	227	297.5	152.1	70.12	610.1	868	371	329	261.8	.....	105.0	.....	.....	76.23	59.50
1919 (average)	1,337	231	355	329.8	195.1	70.56	635.6	838	384	301	282.1	207,976	114.5	.....	.....	78.05	57.85
1920 (average)	539	190	238	406.9	193.5	87.22	738.5	888	378	321	317.3	153,709	126.0	.....	.....	92.04	69.32
1919.																	
October	1,416	144	358	363.5	227.1	78.66	680.2	1,034	.....	.....	308.7	.....	125.2	.....	.....	89.44	67.11
November	1,159	62	347	338.7	214.8	75.96	663.3	854	.....	.....	324.5	.....	116.6	.....	.....	84.08	63.39
December	693	145	294	335.7	229.5	72.04	685.1	671	.....	.....	306.6	.....	122.8	.....	.....	88.78	62.29
1920.																	
January	656	70	254	336.7	196.0	75.88	617.6	847	386	328	302.5	154,517	129.7	128,098	16,934	96.42	70.11
February	503	128	267	322.6	194.5	74.24	589.7	849	383	333	266.2	145,352	114.2	103,214	27,955	85.53	61.57
March	509	104	280	367.1	191.1	81.82	686.9	984	437	343	327.1	145,864	127.8	128,238	27,564	95.85	68.40
April	425	132	251	355.6	184.5	85.57	643.1	1,025	438	360	350.2	160,515	128.3	134,160	21,673	95.25	75.35
May	419	195	185	381.1	180.9	89.25	707.2	1,067	430	425	363.8	183,876	129.2	128,080	22,823	92.86	70.51
June	351	171	267	415.2	173.6	94.96	689.9	967	385	344	337.1	180,711	130.4	129,213	23,990	94.96	72.99
July	316	176	217	423.4	172.2	92.37	751.2	864	386	243	312.3	163,322	129.9	131,821	22,022	95.53	73.49
August	462	239	259	444.1	189.0	91.08	834.3	987	384	366	306.0	142,009	128.8	126,129	24,711	94.42	75.23
September	506	195	262	453.9	199.1	86.23	836.7	911	377	299	293.9	121,338	121.0	121,123	24,593	94.14	70.92
October	699	304	227	465.8	213.7	93.23	823.1	906	344	356	319.9	128,462	124.8	126,815	22,596	93.85	73.10
November	723	277	214	452.6	214.8	91.18	822.3	722	315	263	326.0	146,968	123.0	125,323	20,266	89.56	65.92
December	897	291	177	464.4	210.7	90.89	859.1	526	265	189	302.5	172,649	124.9	120,360	24,763	76.09	54.31
1921.																	
January	801	225	216	460.4	205.4	85.91	836.7	499	290	153	275.4	200,817	123.8	116,176	32,417	64.38	44.62
February	.....	.....	121	388.2	163.1	72.43	732.5	547	331	160	243.8	216,606	103.0	96,281	39,176	56.69	46.35
March	.....	.....	155	419.8	169.2	73.00	758.3	655	388	192	262.3	242,516	107.5	104,919	41,789	59.83	49.88
April	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	268.8	274,292	115.4	122,091	35,106	51.38	51.71
May	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	288,216	.....	82,776	31,198	.....	.....
June	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	91,339	26,629	.....	.....

[1] Includes those shipped for domestic use and those completed on foreign orders.
[2] Vessels built in the United States and officially numbered by Bureau of Navigation, including those for foreign nations.
[3] Includes southern pine, western pine, Douglas fir, eastern white pine, and North Carolina pine.

TABLE E–15.—*Monthly average net tonnage of vessels cleared from ports of selected countries.*

Date.	Tonnage cleared (millions of tons).					Relative tonnage cleared (monthly average, 1913=100).				
	United States of America.[1] [3]	Japan proper.[1] [4]	United Kingdom.[2] [4]	France.[2] [4]	Netherlands.[2] [4]	United States of America.	Japan proper.	United Kingdom.	France.	Netherlands.
1913	4,483	2,075	5,652	2,176	918	100	100	100	100	100
1914	4,017	1,963	4,664	1,635	746	90	94	82	76	81
1915	4,164	1,654	3,294	827	302	93	80	58	38	33
1916	4,433	1,717	2,966	713	182	99	83	53	33	20
1917	4,133	1,625	2,173	550	70	92	79	38	25	7
1918	3,748	1,524	1,895	438	75	85	73	34	20	8
1919	4,271	1,927	2,880	782	286	95	93	51	36	31
1920	5,652	.....	3,049	1,412	527	126	.....	54	65	57
1919.										
January	3,063	1,454	2,415	555	230	68	70	43	26	25
February	2,934	1,572	2,368	581	120	65	76	42	27	13
March	2,899	1,923	2,725	593	199	65	93	49	27	22
April	3,803	2,087	2,673	658	176	85	101	47	30	19
May	4,902	1,971	3,323	675	229	109	95	59	31	25
June	4,851	1,984	2,845	714	241	108	95	50	33	26
July	5,283	2,063	2,931	838	259	118	99	52	39	28
August	5,755	1,874	2,635	892	339	129	90	47	41	37
September	5,109	1,884	3,070	878	344	114	91	54	40	38
October	4,719	2,033	3,131	1,027	435	105	98	55	47	47
November	4,162	2,308	3,111	970	409	93	111	55	45	45
December	3,778	1,967	3,328	1,010	447	84	95	59	46	49
1920.										
January	3,883	2,362	3,254	1,081	474	87	114	58	50	52
February	3,331	2,086	3,100	1,045	[5] 335	74	101	55	48	[5] 37
March	4,081	2,319	3,168	1,303	[5] 128	91	112	56	60	[5] 14
April	4,465	2,402	2,673	1,117	[5] 192	100	116	47	51	[5] 21
May	5,166	2,858	2,924	1,005	584	115	138	52	46	64
June	6,341	2,417	3,089	1,390	594	142	117	55	64	65
July	6,918	2,296	3,360	1,643	680	154	111	59	76	74
August	7,546	2,041	2,942	1,543	583	169	98	52	71	64
September	6,935	2,023	3,019	1,623	664	155	97	53	75	72
October	7,257	1,944	2,646	1,749	707	162	93	47	80	77
November	6,171	2,036	3,135	1,676	672	138	98	56	77	73
December	5,735	.....	3,260	1,766	708	128	.....	58	81	77
1921.										
January	4,646	.....	2,617	.....	.....	104	.....	46	.....	.....
February	4,167	.....	.....	.....	.....	93	.....	.....	.....	.....
March	4,494	.....	.....	.....	.....	100	.....	.....	.....	.....

[1] With cargo and in ballast.
[2] With cargo only.
[3] Monthly Summary of Foreign and Domestic Commerce of the United States.
[4] Monthly Bulletin of Statistics, Supreme Economic Council.
[5] Decrease due to strike of dock workers in the Netherlands.

TABLE E–16.—*Exports and imports by groups of commodities.*[1]

[Unit: $1,000,000.]

Month.	Exports.								Imports.						
	Total domestic and foreign.	Domestic merchandise.						Foreign merchandise.	Total imports.	Crude material for use in manufacturing.	Foodstuffs in crude condition.	Foodstuffs partly or wholly manufactured.	Manufactures for further use in manufacturing.	Manufactures ready for consumption.	Miscellaneous.
		Crude material for use in manufacturing.	Foodstuffs in crude condition and food animals.	Foodstuffs partly or wholly manufactured.	Manufactures for further use in manufacturing.	Manufactures ready for consumption.	Miscellaneous.								
1913 (average)	207.0	64.1	14.1	27.1	33.1	65.0	0.7	3.0	149.4	50.4	18.4	16.5	28.4	34.4	1.2
1914 (average)	176.1	40.9	22.9	25.7	28.8	52.4	1.9	3.6	149.1	49.8	19.6	21.4	23.0	33.9	1.5
1915 (average)	296.2	47.2	33.7	50.6	39.1	109.6	10.2	5.1	148.2	58.0	20.2	22.8	21.8	24.3	1.1
1916 (average)	456.9	60.1	35.1	54.0	76.0	218.8	7.9	5.0	199.3	84.1	21.7	28.2	34.8	28.8	1.6
1917 (average)	519.5	65.1	42.4	67.2	109.7	225.4	4.3	5.3	246.0	105.7	32.1	29.3	45.1	32.3	1.5
1918 (average)	512.4	79.4	45.6	117.2	87.8	172.4	1.6	8.4	252.6	101.7	28.8	33.1	54.1	33.7	1.1
1919 (average)	660.1	134.2	56.5	163.6	76.8	213.7	1.1	14.3	225.4	139.5	45.4	46.3	50.9	41.0	2.2
1920 (average)	685.7	155.9	76.5	93.1	79.9	267.0	1.0	12.3	440.0	146.1	48.1	103.2	66.8	73.1	2.6
1919.															
January	622.5	137.8	48.5	143.1	86.5	194.3	1.5	11.0	213.0	77.8	28.4	28.6	42.7	34.3	1.1
February	585.1	102.3	36.7	156.4	71.0	205.7	1.9	10.8	235.1	83.3	27.9	47.9	44.4	30.0	1.5
March	603.1	101.1	47.0	183.8	64.6	194.2	1.6	10.7	267.6	99.8	41.0	43.9	50.8	30.0	2.1
April	714.8	94.7	66.2	226.5	73.8	217.8	1.0	34.4	273.0	125.7	34.6	54.1	30.5	26.5	1.4
May	604.0	96.8	72.4	155.0	59.3	208.5	.5	10.9	328.9	146.2	45.1	66.6	36.4	33.6	.9
June	928.4	161.3	80.7	275.4	98.3	291.6	.7	20.6	292.9	135.2	37.1	48.6	38.5	32.5	.8
July	568.7	128.3	37.9	157.7	67.1	166.5	.3	10.7	343.7	152.1	54.1	48.4	50.9	37.1	1.1
August	646.0	130.3	60.0	145.1	87.6	210.8	.5	11.6	307.2	131.7	46.6	37.4	54.7	35.2	1.5
September	595.2	89.3	66.9	124.5	92.5	206.6	.7	14.4	435.4	201.5	62.9	53.4	59.0	54.5	4.0
October	631.6	117.0	55.9	134.2	78.1	234.2	1.1	11.1	401.8	171.0	55.5	49.1	68.3	53.6	4.3
November	740.0	230.0	58.6	135.6	73.8	229.5	1.3	11.0	424.8	183.6	59.3	45.0	71.1	62.4	3.5
December	681.4	221.1	47.5	125.0	69.4	203.6	1.7	13.1	380.7	166.4	52.4	32.6	62.6	62.9	3.8
1920.															
January	722.7	237.5	44.4	137.0	79.5	218.9	1.8	13.5	473.9	215.5	52.7	67.6	67.9	65.5	4.6
February	645.8	175.0	34.9	110.8	77.8	232.1	1.6	13.5	467.6	196.6	42.3	90.5	70.8	62.8	4.6
March	819.8	225.1	49.8	136.4	100.3	289.5	1.8	16.6	523.9	216.6	52.5	97.4	79.9	73.0	4.5
April	684.7	174.9	38.7	105.9	86.9	265.2	.9	11.9	495.7	193.3	57.4	93.0	72.3	76.8	2.8
May	745.9	132.2	67.8	120.5	96.3	309.4	.5	18.9	431.0	149.3	38.3	99.2	68.5	74.3	1.3
June	629.4	107.6	64.3	92.5	82.5	269.5	.6	13.2	552.9	164.4	48.2	177.6	74.2	87.2	1.1
July	651.4	121.0	101.1	75.0	78.9	263.9	.5	11.0	537.2	136.5	52.2	188.1	69.5	88.7	2.1

August	579.0	104.4	104.4	49.9	75.6	236.7	.4	7.4	513.5	140.9	48.1	162.1	74.0	86.7	1.7
September	605.2	119.2	108.2	58.7	68.1	240.4	.5	10.2	363.7	102.3	38.1	82.9	63.6	73.7	2.9
October	751.7	173.9	118.7	77.4	75.7	295.5	.8	9.7	334.3	86.0	56.2	59.2	62.2	68.3	2.2
November	676.7	150.3	94.2	75.3	67.2	278.8	.8	10.0	321.2	83.4	49.2	68.9	53.6	64.2	1.9
December	720.8	149.9	91.8	88.6	71.8	306.1	1.3	12.2	266.1	68.6	42.6	53.1	44.3	55.6	1.8
1921.															
January	654.7	112.3	75.4	85.4	68.9	299.1	1.1	12.4	208.8	63.0	28.7	32.0	32.3	51.2	1.5
February	489.3	85.2	60.7	63.3	45.3	218.3	.9	15.6	214.5	73.7	27.3	38.1	28.9	44.8	1.8
March	386.8	69.2	52.7	56.5	32.6	157.6	.8	17.3	252.0	81.4	29.4	51.6	31.2	55.8	2.4
April	339.9	57.4	50.1	50.8	28.3	142.6	.5	10.0	254.6	82.5	34.5	51.9	32.0	53.4	1.2
May	329.7	74.4	59.3	48.0	50.1	90.5	.2	.....	204.9	65.9	26.7	35.6	24.1	51.7	.8
June	336.9	74.0	62.8	52.6	26.9	113.2	.3	7.1	185.7	68.1	19.1	21.3	26.0	40.0	1.1

[1] Source: Monthly Summary, Foreign and Domestic Commerce.

Chapter VI.

WAS THE BREAK IN FARM PRICES DUE TO OVER-PRODUCTION OF FARM PRODUCTS?

The answer to this question must be obtained from a study of the per capita consumption of different farm commodities and of farm crops and live stock as a whole over a period of years. If a production in prior years, equal to or greater than the production of 1920, failed to produce a drop in price proportionate to that which occurred in 1920 and 1921, it would seem that the conclusion might be drawn that the break in price in 1920 and 1921 was not due to over-production.

Production is large or small in any given year in comparison with any other year not in proportion to the increase or decrease in the total production of one year as compared with the other, but in the proportion that the total crop in one year bears to the population in that year as compared with the proportion that the total production in another year bears to the population in that year. Therefore, to determine whether production is actually greater or less in one year than in another, it must be reduced to a per capita basis.

In Table F–1, on page 85, is given the actual and relative per capita production of wheat, corn, and cotton, and the number of sheep, hogs, cattle, and milk cows, per 1,000 population, by years from 1890 to 1920 on the basis of the average 1909–1913 inclusive, as 100.

An examination of this table shows that in 1920 the number of milk cows per capita is equal to the 5-year average, the number of hogs somewhat in excess of the average, as was the production of wheat and corn, while the production of cotton and the number of sheep and cattle was somewhat below the average. The production of wheat, corn, and cotton, and the number of sheep, hogs, cattle, and milk cows per 1,000 population was exceeded in each case in a number of years from 1890 to 1920, and in no case during that period was there a decline of the price in the commodities proportionate to the decline which took place in 1920 and 1921.

Table, F–2, on page 86, shows the number of animals slaughtered annually under Federal inspection plus the estimated number slaughtered otherwise in the United States, per 1,000 population, and the relative number slaughtered per 1,000 of population.

TABLE F–1.—*Actual and relative per capita production of wheat, corn, and cotton, and the number of sheep, hogs, cattle, and milk cows per 1,000 population, by years, 1890 to 1920.*

[1909–1913=100.]

	Production.								Relative production.							
	Wheat (bushels per capita).	Corn (bushels per capita).	Cotton (bales per 1,000 population).	Sheep (number per 1,000 population).	Hogs (number per 1,000 population).	Cattle (number per 1,000 population).	Milk cows (number per 1,000 population).	Wheat.	Corn.	Cotton.	Sheep.	Hogs.	Cattle.	Milk cows.
Average 1909–1913	7.3	28.9	139	569	653	436	.....	.....	.....	.....	.....	.....	.....	.....
1890	6.3	23.7	138	708	916	538	264	86	82	100	124	140	123	118
1891	9.6	22.2	141	679	791	576	250	131	111	102	119	121	132	112
1892	7.9	24.9	101	688	802	567	251	108	86	73	121	123	130	113
1893	5.9	24.3	112	709	691	526	246	81	84	81	125	106	121	110
1894	6.8	17.8	139	669	660	539	243	93	62	101	118	101	124	109
1895	6.7	31.3	102	610	637	496	238	92	108	74	107	98	114	107
1896	6.0	32.3	121	542	606	454	228	82	112	87	95	93	104	102
1897	7.3	26.4	151	511	564	423	221	100	91	109	90	86	97	100
1898	9.2	26.2	152	513	541	399	216	126	91	110	90	83	92	97
1899	8.8	27.8	125	523	517	374	214	121	96	91	92	79	86	96
1900	6.8	27.7	131	551	827	665	225	93	96	95	97	127	153	101
1901	9.6	19.6	122	769	734	586	216	132	68	88	135	112	134	97
1902	8.4	31.8	134	783	614	565	211	115	110	97	138	94	130	95
1903	7.8	27.7	122	791	583	552	212	107	96	83	139	89	127	95
1904	6.7	28.9	162	626	570	516	211	92	98	117	110	87	118	95
1905	8.2	22.2	127	557	563	519	209	112	111	92	94	86	119	94
1906	8.5	34.1	154	590	607	549	231	116	118	112	104	93	126	104
1907	7.2	29.6	127	609	627	590	240	99	102	92	107	96	135	108
1908	7.4	30.0	148	614	636	563	238	101	104	107	108	97	129	107
1909	7.5	28.1	110	619	608	545	239	103	97	80	109	93	125	107
1910	6.8	31.3	125	569	631	446	224	93	108	91	100	97	102	100
1911	6.6	27.0	167	573	701	424	223	90	93	121	101	107	97	100
1912	7.6	32.9	144	551	689	392	218	104	114	104	97	106	90	98
1913	7.9	25.4	147	534	636	374	213	108	88	107	94	97	86	96
1914	9.1	27.3	165	509	604	367	212	125	94	120	89	92	84	95
1915	10.3	30.2	113	504	653	374	214	141	104	82	89	100	86	96
1916	6.3	25.5	114	494	676	396	220	86	88	83	85	104	91	99
1917	6.2	30.1	111	468	663	410	225	85	104	80	82	102	94	101
1918	8.9	24.2	117	471	689	428	226	122	84	85	83	106	98	101
1919	8.9	27.3	109	468	714	452	224	122	94	79	82	109	99	101
1920	7.4	30.5	123	445	678	420	223	101	106	89	78	104	96	100
1921	.....	.....	.....	425	627	.....	220	.....	.....	.....	75	96	.....	99

TABLE F–2.—*Animals slaughtered in the United States, 1907–1920.*

TOTAL NUMBER OF ANIMALS SLAUGHTERED.[1]

Years.	Cattle.	Calves.	Sheep and lambs.	Goats.	Swine.
1907	13,469,900	6,026,800	13,300,600	161,000	55,737,900
1908	12,845,000	5,829,900	13,368,800	121,900	65,496,800
1909	13,611,422	6,515,976	14,724,699	285,553	53,219,568
1910	13,540,600	6,552,600	14,800,200	284,800	44,073,500
1911	12,958,100	6,264,500	18,189,500	110,300	58,022,000
1912	11,979,000	6,348,000	19,433,400	206,800	56,022,000
1913	11,477,600	5,284,500	18,689,400	214,600	57,973,500
1914	11,004,500	4,661,400	18,460,500	499,000	55,148,100
1915	10,822,100	4,639,500	15,843,000	435,000	65,064,000
1916	12,026,700	5,773,900	15,492,200	564,300	73,035,600
1917	13,723,900	7,030,700	12,123,800	470,000	57,483,800
1918	15,750,400	7,767,200	13,385,100	390,100	69,854,700
1919	13,635,100	9,041,000	16,460,600	247,500	70,867,500
1920	12,176,400	9,662,800	14,247,800	120,500	64,449,400

NUMBER OF ANIMALS SLAUGHTERED PER 1,000 POPULATION.

1907	154	69	152	2	638
1908	144	66	150	1	736
1909	150	72	163	3	588
1910	147	71	161	3	478
1911	139	67	194	1	620
1912	126	67	205	2	590
1913	119	55	194	2	602
1914	113	48	189	5	565
1915	109	47	160	4	658
1916	120	58	154	6	728
1917	135	69	119	5	566
1918	153	75	130	4	678
1919	131	87	158	2	679
1920	115	91	135	1	610

RELATIVE NUMBER OF ANIMALS SLAUGHTERED PER 1,000 POPULATION.

[1909–1913=100.]

1907	113	105	83	100	111
1908	106	100	82	50	128
1909	110	109	89	150	102
1910	108	108	88	150	83
1911	102	102	106	50	108
1912	93	102	112	100	103
1913	87	83	106	100	105
1914	83	73	103	250	98
1915	80	71	87	200	114
1916	88	88	84	300	127
1917	99	105	65	250	98
1918	112	114	71	200	118
1919	96	132	86	100	118
1920	85	138	74	50	106

[1] Includes number of animals slaughtered annually under Federal inspection and estimated number slaughtered otherwise, including farms. Bureau of Animal Industry, Department of Agriculture.

In the following table, F–3, page 87, the total number of acres of corn, oats, wheat, barley, rye, and buckwheat, and the total production of these crops in pounds, and the production in pounds per acre and the pounds per capita, is given, together with a table of relatives showing the relative increase or decrease in acreage, total production, production per acre, and production per capita, on the basis of the average 1909–1913 as 100.

TABLE F–3.—*Production of grain in the United States.*

[Pounds of corn, oats, wheat, barley, rye, and buckwheat.[1]]

Year.	Acres (000 omitted).	Pounds (000,000 omitted).	Pounds per acre.	Pounds per capita.	Year.	Acres (000 omitted).	Pounds (000,000 omitted.)	Pounds per acre.	Pounds per capita.
1866	61,682	69,110	1,120	1,948	1894	144,216	134,972	936	1,996
1867	64,972	68,249	1,050	1,885	1895	163,052	199,984	1,227	2,901
1868	66,715	75,679	1,134	2,047	1896	167,272	204,973	1,225	2,918
1869	69,458	77,271	1,112	2,047	1897	169,591	189,699	1,119	2,650
1870	69,254	85,945	1,241	2,229	1898	175,199	207,208	1,183	2,841
1871	64,999	80,116	1,233	2,025	1899	184,374	213,157	1,156	2,868
1872	68,280	87,401	1,280	2,153	1900	184,101	212,298	1,153	2,794
1873	74,112	80,496	1,086	1,931	1901	184,630	170,634	924	2,199
1874	80,052	76,573	957	1,789	1902	183,777	233,884	1,273	2,952
1875	86,864	106,094	1,221	2,414	1903	181,671	207,615	1,143	2,568
1876	93,920	102,987	1,097	2,282	1904	181,391	219,516	1,210	2,662
1877	93,205	113,424	1,217	2,447	1905	184,265	242,362	1,315	2,882
1878	100,956	120,245	1,191	2,526	1906	184,577	252,737	1,369	2,949
1879	118,632	150,898	1,272	3,088	1907	183,674	215,647	1,174	2,470
1880	120,927	143,706	1,188	2,865	1908	185,901	219,975	1,183	2,473
1881	123,389	106,830	866	2,082	1909	188,577	232,131	1,231	2,563
1882	126,569	140,985	1,114	2,686	1910	198,052	248,844	1,256	2,700
1883	130,634	134,753	1,032	2,510	1911	203,718	218,946	1,075	2,341
1884	136,293	155,067	1,138	2,824	1912	201,302	277,853	1,380	2,929
1885	135,875	154,619	1,138	2,754	1913	205,264	230,265	1,122	2,393
1886	141,859	145,464	1,025	2,534	1914	206,316	252,216	1,222	2,585
1887	141,822	134,439	948	2,291	1915	218,708	293,560	1,342	2,967
1888	146,281	163,960	1,121	2,734	1916	211,893	235,025	1,109	2,344
1889	140,219	169,563	1,209	2,767	1917	219,546	275,278	1,254	2,709
1890	138,993	128,386	924	2,040	1918	225,155	262,864	1,167	2,553
1891	146,732	184,072	1,254	2,883	1919	232,991	273,474	1,174	2,621
1892	147,227	156,557	1,063	2,405	1920	218,971	291,315	1,330	2,756
1893	147,726	149,150	1,010	2,248					

RELATIVE PRODUCTION, ACREAGE, AND YIELD OF GRAIN IN THE UNITED STATES, 1866–1920.

[1909–1913=100.]

Year.	Acres (000 omitted).	Pounds (000,000 omitted).	Pounds per acre.	Pounds per capita.	Year.	Acres (000 omitted).	Pounds (000,000 omitted).	Pounds per acre.	Pounds per capita.
1866	31	28	92	75	1894	72	56	77	77
1867	33	28	87	73	1895	82	83	102	112
1868	34	31	93	79	1896	84	85	102	113
1869	35	32	92	79	1897	85	79	93	102
1870	35	36	102	86	1898	88	86	98	110
1871	33	33	102	78	1899	93	88	96	111
1872	34	36	106	83	1900	92	88	95	108
1873	37	33	89	75	1901	93	71	76	85
1874	40	32	79	69	1902	92	97	105	114
1875	44	44	101	93	1903	91	86	94	99
1876	47	43	90	88	1904	91	91	100	103
1877	47	47	100	95	1905	92	100	109	111
1878	51	50	98	98	1906	93	105	113	114
1879	60	62	105	119	1907	92	89	97	95
1880	61	60	98	111	1908	93	91	98	95
1881	62	44	72	80	1909	95	96	102	99
1882	64	58	92	104	1910	99	103	104	104
1883	66	56	85	97	1911	102	90	89	90
1884	68	64	94	109	1912	101	115	114	113
1885	68	64	94	106	1913	103	95	93	92
1886	71	60	85	98	1914	104	104	101	100
1887	71	55	78	88	1915	110	121	111	115
1888	73	68	93	105	1916	106	97	92	90
1889	70	70	100	107	1917	110	114	103	105
1890	70	53	76	79	1918	113	109	97	98
1891	74	76	103	111	1919	117	113	97	101
1892	74	65	88	132	1920	110	120	110	107
1893	74	62	83	87					

[1] Grain as reported by the Bureau of Crop Estimates, converted to pounds by multiplying corn and rye by 56, wheat by 60, oats by 32, barley and buckwheat by 48. For the years 1879 and 1889 to 1909 ,revised figures as given in the Yearbook for 1919 are used.

It will be seen from this table that the per capita production of these products in 1920 was exceeded in a number of years during the period 1890 to 1920, including 1912 and 1915. In none of these years, so far as the records show, was the drop in price of these products proportionate to the drop in price which occurred in 1920 and 1921.

In the table which follows, F–4, the estimate of the National Bureau of Economic Research of the output of agricultural products per inhabitant and per persons engaged in agriculture in continental United States is given for the years 1909 to 1920:

TABLE F-4.—*An estimate for the Continental United States of the output of agricultural products per inhabitant and per person engaged in agriculture.*

[Prepared by the National Bureau of Economic Research.]

A	B	C	D	E	F	G	H
Year.	Thousands of persons engaged in agriculture.			Estimated population of United States [4] June 30 (millions).	Value of output at prices of 1913.		
	Farmers.	Employees.	Total.		Total (millions).	Per person engaged in agriculture (F÷D).	Per inhabitant of United States (F÷E).
1909	[3] 6,330	2,376	8,706	90.4	$5,375	$614	$59
1910	[1] 6,362	2,379	8,741	92.2	6,359	726	68
1911	[3] 6,376	2,388	8,764	93.8	6,084	694	64
1912	[3] 6,388	2,390	8,778	95.3	5,998	681	63
1913	[3] 6,400	2,394	8,794	97.3	5,960	678	61
1914	[3] 6,410	2,393	8,803	99.2	6,481	784	65
1915	[3] 6,418	2,382	8,800	100.4	6,737	764	68
1916	[3] 6,425	2,373	8,798	101.7	5,590	685	55
1917	[3] 6,432	2,288	8,720	103.1	5,642	646	55
1918	[3] 6,438	2,121	8,559	104.2	6,732	786	64
1919	[3] 6,443	2,220	8,664	104.8	7,117	823	68
1920	[2] 6,448	2,366	8,814	106.6	[5] 6,815	774	63

[1] Abstract of Census of United States, 1910, p. 265. Number of farms identical with number of farmers.
[2] Press bulletin of Bureau of Census, June 22, 1921.
[3] Interpolated along a smooth curve.
[4] Interpolated between census estimates by means of a special study elsewhere recorded.
[5] Rough estimate only.

An examination of this table discloses the fact that the output per person engaged in agriculture in 1920 was exceeded only in 1918 and 1914, but the output per inhabitant of the United States, or per capita, had been equaled or exceeded in 1910, 1911, 1912, 1914, 1915, 1916, and 1918, or 8 out of the preceding 11 years. This table supports the conclusion indicated by tables F–1, F–2, and F–3, that the drop in prices in 1920 and 1921 was not due to overproduction in the crop year of 1920, as the crop in 1920 was not relatively greater than it has been in many preceding years.

In general it may be concluded that, on the basis of the tables of output it has been possible for the commission to secure, the decline in prices in 1920 and 1921 was not in any large measure due to overproduction in the crop year of 1920.

CHAPTER VII.

THE EXPORTS AND IMPORTS OF FARM PRODUCTS AND THEIR EFFECT UPON PRICES.

In the preceding chapter, "Was the break in farm prices due to overproduction of farm products?" the general question of whether the decline in prices was due to overproduction was considered. A true picture of the situation, however, can not be obtained solely from a consideration of quantity production without at the same time considering imports as a part of the supply and exports as a part of the effective demand, as of course the domestic price is made by the net production remaining after adding imports and deducting exports.

In this chapter the influence of imports and exports and their relation to production and prices is considered.

In order to arrive at the relative influence of these factors in determining the price it is necessary to marshal them in such a way that their relation to each other is plainly established in order that conclusions can be adequately drawn.

WHEAT.

The production of wheat in 1920 was 787,000,000 bushels—8,000,000 bushels above the average of the 10 preceding years.

The total supply of wheat in 1920, including carry over, was 902,000,000 bushels—40,000,000 bushels above the 10-year average. Notwithstanding this relatively large supply of wheat the price remained above the average of farm products throughout 1920 and thus far in 1921. It was also above the average monthly price in 1913. In May, 1921, the wholesale price of wheat was 70.8 per cent above and the wholesale price of flour was 98.2 per cent above the monthly average in 1913.

The actual production of wheat and the relative production of wheat on base 1910–1914 are shown in the following table:

TABLE G–1.—*Production of wheat and relative production, by years 1910-1920.*

[Base, 1910-1914. 000 omitted.]

Years.	Actual total domestic production.	Relative total domestic production.	Years.	Actual total domestic production.	Relative total domestic production.
1910	635,121	87	1916	636,318	87
1911	621,338	85	1917	636,655	87
1912	730,267	100	1918	921,438	126
1913	763,380	105	1919	934,265	128
1914	891,017	122	1920	787,128	108
1915	1,025,801	140			

The price of wheat began to decline rapidly in May, 1920, following a short period of declining exports and continued to decline rapidly; notwithstanding exports of wheat continued to be made on a very high level. While this increase in the exports of wheat in 1920–1921 did not serve to maintain the price of wheat at the 1919 level, it undoubtedly was influential in maintaining the price of wheat relatively above the price of other grains and farm animals notwithstanding the decline in consumption of wheat which occurred in 1920.

The following table shows the actual and relative export, import, reexport and net export of wheat, with the weighted index of the wholesale prices of wheat in the United States:

TABLE G–2.—*The actual and relative export, import, reexport, and net export of wheat, 1909-1921.*

[1909–1913=100.]

[Source: Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.		Weighted index number of wholesale prices of wheat, monthly average (1909–1913 =100).[1]
	Bushels.	Relative	Bushels.	Relative.		Bushels.	Relative	
1909–10	46,679,876	82	164,201	13	136,519	46,652,194	83	.....
1910–11	23,729,302	42	599,439	41	1,361	23,221,224	42	.....
1911–12	30,160,212	53	2,699,130	219	872	27,461,954	49	.....
1912–13	91,602,974	161	798,028	65	78,690	90,883,636	163	.....
1913–14	92,393,775	162	1,978,937	161	746,492	91,161,330	464	.....
1914–15	259,642,533	456	426,469	35	181,072	259,397,136	464	.....
1915–16	173,274,015	304	5,703,078	464	575,471	168,146,408	301	.....
1916–17	149,831,427	263	24,138,817	1,963	53,863	125,746,473	225	.....
1917–18	34,118,853	60	28,177,281	2,291	1,053,744	6,995,316	13	.....
1918–19	178,582,673	314	11,121,461	904	498,762	167,959,974	301	.....
1919–20	122,430,724	215	4,779,764	389	94,000	117,744,960	211	.....
1920–21	293,267,637	515	51,004,024	4,147	.....	242,263,613	434	.....
1919								
January	9,942,992	210	796,265	776	.....	9,146,727	196	236
February	5,991,688	126	420,538	410	.....	5,571,150	120	235
March	10,208,355	215	381,568	372	.....	9,826,787	211	243
April	17,337,897	366	1,049,746	1,024	.....	16,288,151	350	328
May	14,028,479	296	1,527,748	1,490	.....	12,500,731	268	271
June	16,389,853	346	1,896,331	371	792	14,494,314	303	253
July	5,834,154	123	380,443	1,850	.....	5,453,711	117	252
August	12,940,581	273	28,697	28	.....	12,911,884	277	242
September	17,089,923	360	143,298	140	.....	16,946,625	364	245
October	13,686,675	289	569,068	555	94,000	13,211,607	284	253
November	15,116,167	319	407,817	398	.....	14,708,350	316	269
December	9,519,706	201	309,182	301	.....	9,210,524	198	288
1920								
January	8,480,072	179	756 228	738	.....	7,723,844	166	293
February	4,938,122	104	534,692	522	.....	4,403,430	95	268
March	6,939,484	146	665,154	649	2,116	6,276,446	135	272
April	4,175,876	88	227,284	221	.....	3,948,592	85	298
May	10,864,059	229	474,891	463	.....	10,389,168	223	310
June	12,845,905	271	283,010	276	.....	12,562,895	270	298
July	23,837,541	503	100,334	98	.....	23,737,207	510	289
August	27,569,982	581	364,827	355	.....	27,205,155	584	258
September	30,770,796	649	1,842,397	1,797	10	28,928,409	621	255
October	35,802,977	755	9,802,149	9,563	.....	26,000,828	558	219
November	26,035,147	549	9,522,578	9,291	.....	16,512,569	355	188
December	25,896,270	546	11,275,104	11,000	167,545	14,788,711	318	180
1921								
January	21,344,873	450	4,504,856	4,395	124,116	16,964,133	364	185
February	18,468,711	389	4,403,712	4,297	2,000	14,066,999	302	175
March	14,599,481	308	2,671,043	2,606	71,644	12,000,082	258	164
April	17,641,424	372	4,451,304	4,343	557,777	13,747,897	295	141
May	25,932,292	547	1,902,667	1,856	42,909	24,072,534	517	154
June	25,235,351	532	89,807	88	.....	25,145,544	540	148

[1] Weighted index computed from monthly average wholesale prices of No. 1 Northern Spring Cash, Chicago; No. 2 Red Winter, Chicago; No. 2 Hard Winter, Kansas City; No. 1 Northern Spring Cash, Minneapolis; and Bluestem, Portland.

WHEAT FLOUR.

Production of wheat flour as indicated by the following Table G–3, began to decline as early as February, 1920, and was below the 1919 monthly average production in every month thereafter until June, 1921, with the exception of August, 1920.

TABLE G–3.—*Production of wheat flour, 1914–1921.*[1]

Year and month.	Wheat flour, production.	Wheat flour, relative production (relative to 1914).	Year and month.	Wheat flour, production.	Wheat flour, relative production (relative to 1914).
	Bushels.		1920—Continued.	*Bushels.*	
1914 monthly avearge	10,794,000	100	July	8,200,000	76
1915 monthly average	9,748,000	90	August	10,200,000	94
1916 monthly average	10,285,000	95	September	9,450,000	88
1917 monthly average	.....	.....	October	9,650,000	89
1918 monthly average	9,615,000	89	November	9,500,000	88
1919 monthly average	10,094,000	94	December	9,600,000	89
1920 monthly average	9,157,000	85	1921.		
1920.			January	8,767,000	81
January	12,572,000	116	February	8,087,000	75
February	9,252,000	86	March	9,103 000	84
March	9,036,000	84	April	8 510,000	79
April	7,375,000	68	May	8,175,000	76
May	8,244,000	76	June	7,745,000	72
June	6,800,000	63			

[1] Figures prior to July, 1920, compiled by U. S. Grain Corporation; recent months from Russel's Commercial News. In calendar years; remaining averages are for crop years ending June 30 of the year indicated.

The price of wheat flour, however, did not begin to decline until June, 1920, in which month the exports of wheat flour began definitely to fall off, as indicated by the following table, G–4. Imports of flour during this period were quite large.

TABLE G–4.—*The actual and relative export, import, reexport, and net export of wheat flour, 1909–1921.*

[Source: Commerce Reports.]

[1909–1913=100.]

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.		Weighted index number of wholesale prices of wheat flour (1910–1914 =100).[1]
	Bushels.	Relative.	Bushels.	Relative.		Bushels.	Relative.	
1909–10	9,040,987	85	144,759	112	31	8,896,259	84	.....
1910–11	10,129,435	95	141,582	110	8	9,987,861	95	.....
1911–12	11,006,489	103	158,777	123	93	10,847,805	103	.....
1912–13	11,394,805	109	107,558	84	966	11,288,213	107	.....
1913–14	11,821,461	111	89,911	70	1,376	11,732,926	111	.....
1914–15	16,182,765	152	64,200	50	1,533	16,120,097	153	.....
1915–16	15,520,669	145	329,905	257	10,171	15,200,935	144	.....
1916–17	11,942,778	112	174,704	136	2,241	11,770,315	112	.....
1917–18	21,879,951	205	675,096	525	79,505	21,284,360	202	.....
1918–19	24,181,979	226	37,140	29	816	24,145,655	229	.....
1919–20	21,651,261	203	159,056	124	12,148	21,504,353	204	.....
1920–21	16,183,234	152	1,420,884	1,105	.....	14,762,350	140	.....

[1] Price series used in computing the index taken from wholesale prices Bulletins of Bureau of Labor Statistics.

TABLE G–4.—*The actual and relative export, import, reexport, and net export of wheat flour, 1909–1921*—Continued.

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.		Weighted index number of wholesale prices of wheat flour (1910–1914 =100).
	Bushels.	Relative.	Bushels.	Relative.		Bushels.	Relative.	
1919.								
January	2,702,218	303	2,163	18	.....	2,700,056	307	221
February	2,189,007	246	431	4	.....	2,188,576	249	224
March	2,245,791	253	548	5	.....	2,245,243	255	230
April	3,064,670	344	425	4	100	3,064,245	349	252
May	2,728,159	307	2,432	22	700	2,726,427	310	262
June	3,613,714	406	1,740	16	10	3,611,984	411	249
July	1,731,017	195	1,740	16	1	1,729,278	197	243
August	1,637,668	184	770	7	.....	1,636,898	186	238
September	1,764,283	198	451	4	9,697	1,773,529	202	236
October	1,620,492	182	882	8	.....	1,619,610	184	246
November	1,839,880	207	1,252	12	.....	1,838,628	209	262
December	1,312,982	148	3,789	35	.....	1,309,193	148	287
1920.								
January	843,018	95	29,011	270	.....	814,007	93	297
February	1,254,081	141	27,362	255	.....	1,226,719	139	273
March	2,209,202	248	11,524	108	.....	2,197,678	250	272
April	2,121,266	238	22,044	205	.....	2,099,222	239	290
May	3,338,379	375	20,948	196	.....	3,317,431	378	308
June	1,979,493	223	39,283	367	334	1,940,544	221	292
July	2,403,822	270	26,397	246	200	2,377,625	270	282
August	1,106,707	124	17,722	165	.....	1,088,985	124	256
September	938,530	105	14,556	136	100	924,074	105	261
October	1,606,770	181	163,327	1,524	626	1,444,069	164	231
November	1,100,754	124	201,667	1,883	373	899,460	102	193
December	951,730	107	226,798	2,118	206	725,138	82	186
1921.								
January	1,279,945	144	220,443	2,058	7,967	1,067,469	121	196
February	1,023,666	115	202,324	1,889	11,142	832,484	95	188
March	1,369,680	154	174,464	1,628	6,870	1,202,086	137	180
April	1,591,095	179	118,944	1,111	3,749	1,475,900	168	163
May	1,264,818	142	47,851	448	3,260	1,220,227	139	177
June	1,545,984	174	6,287	59	.....	1,539,697	175	181

The net export of wheat flour during the crop year of 1920–21 was relatively less than during any crop year since 1914, with the exception of the crop year 1916–17.

WHEAT AND WHEAT FLOUR.

A real picture of the situation with respect to wheat can not be obtained, however, on the basis of the production, consumption, and export of either wheat or wheat flour separately. In the following table, G–5, the exports, imports, and reexports of wheat and wheat flour are combined for the fiscal years 1909–10 to 1920–21, and by months beginning with January, 1919. The combined exports by months are compared with the weighted index of wholesale prices of wheat and wheat flour.

TABLE G–5.—*The actual and relative export, import, reexport, and net export of wheat and wheat flour, 1909–1921.*[1]

[Source: Commerce Reports.

[1909–1913=100.]

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.		Weighted index of wholesale prices of wheat (1910–1914 =100).
	Bushels	Relative.	Bushels.	Relative.		Bushels.	Relative.	
1909–10	87,384,317	88	815,616	64	136,658	86,705,359	89	.....
1910–11	69,311,759	70	1,146,558	90	1,397	68,166,598	70	.....
1911–12	49,529,191	50	714,496	56	418	48,815,113	50	.....
1912–13	142,879,597	144	1,282,039	101	83,037	141,680,595	145	.....
1913–14	845,590,350	147	2,383,537	187	752,684	143,959,497	146	.....
1914–15	332,464,976	336	715,369	56	187,971	331,937,578	339	.....
1915–16	243,117,026	246	7,187,651	566	621,241	236,550,616	242	.....
1916–17	203,573,928	206	24,924,985	1,964	63,948	178,712,891	183	.....
1917–18	132,578,633	134	31,215,213	2,461	411,517	101,774,937	104	.....
1918–19	287,401,579	290	11,288,591	890	1,502,434	277,615,422	284	.....
1919–20	219,861,399	222	5,495,516	433	148,666	214,514,549	220	.....
1920–21	366,092,190	370	51,398,002	4,053	984,840	305,679,028	312	.....
1919.								
January	22,102,973	267	805,999	763	.....	21,296,974	261	236
February	15,842,220	194	422,478	399	.....	15,419,742	189	235
March	20,314,415	246	384,034	363	.....	19,930,381	244	243
April	31,128,912	378	1,051,659	995	450	30,077,703	368	328
May	26,305,195	319	1,538,692	1,456	3,150	24,769,653	303	271
June	32,651,566	396	1,904,161	1,801	837	30,748,242	376	253
July	13,623,731	165	388,273	367	5	13,235,463	162	252
August	20,310,087	246	32,162	30	.....	20,277,925	248	242
September	25,029,197	303	145,328	137	43,637	24,927,506	305	245
October	20,978,889	254	573,037	542	94,000	20,499,852	251	253
November	23,395,627	284	413,451	390	.....	22,982,175	282	269
December	15,428,125	187	326,233	308	.....	15,101,892	185	288
1920.								
January	12,273,653	149	886,778	839	.....	11,386,875	140	293
February	10,581,487	129	657,821	622	.....	9,923,666	121	268
March	16,880,893	205	717,012	678	2,116	16,165,997	198	272
April	13,721,573	166	326,648	309	.....	13,394,925	164	298
May	25,887,665	314	569,157	538	.....	25,318,508	310	289
June	21,753,624	264	459,784	435	1,503	21,295,341	261	350
July	34,654,740	421	219,121	207	900	34,436,519	421	298
August	32,550,164	395	444,576	421	.....	32,105,588	393	289
September	34,994,181	425	1,907,899	1,805	460	33,086,741	405	258
October	43,033,442	522	10,537,121	9,968	2,817	32,499,130	398	255
November	30,988,540	376	10,430,080	9,867	1,679	20,560,138	252	219
December	30,179,055	366	12,295,690	11,632	168,472	18,051,836	222	188
1921.								
January	27,104,626	329	5,496,850	5,200	159,954	21,767,720	267	185
February	23,075,208	280	5,314,170	5,027	52,139	17,813,176	218	175
March	20,763,041	252	3,456,131	3,270	102,559	17,409,469	213	164
April	24,801,352	301	4,998,552	4,719	574,648	20,389,448	250	141
May	31,623,973	383	2,117,997	2,003	57,336	29,563,312	362	154
June	32,192,279	391	118,099	117	984,440	33,058,620	429	148

[1] Wheat flour converted to bushels by multiplying barrels by 4½.

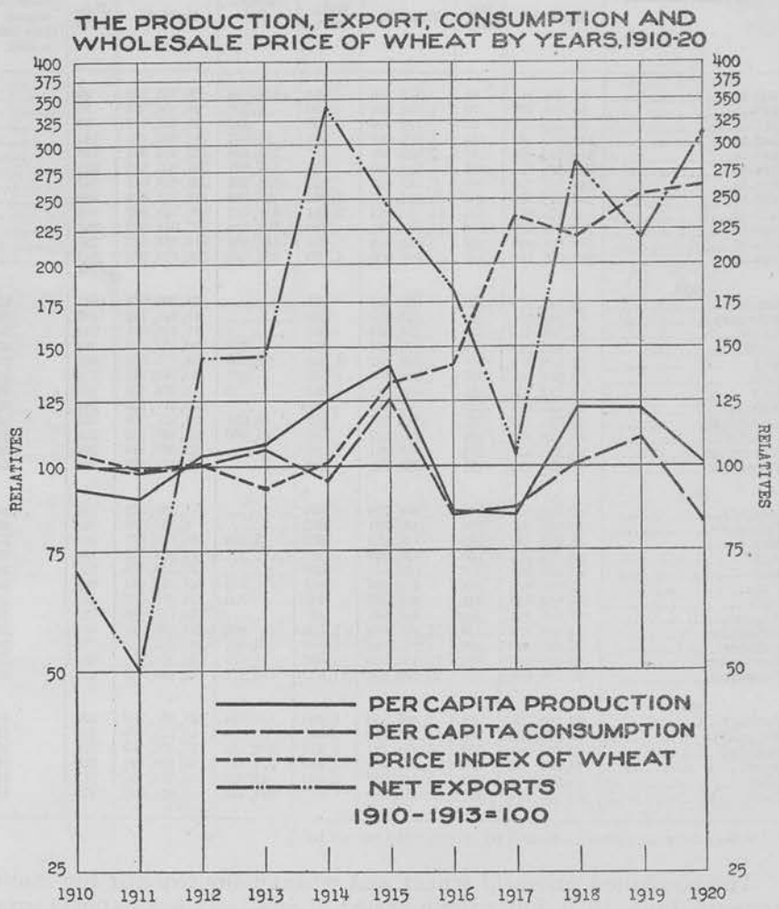
The combined prices of wheat and wheat flour reached the maximum in June, 1920, following a period of relatively low exports compared with the monthly average of 1919. The peak of exports of wheat and wheat flour was reached in July, 1920, and exports of wheat and wheat flour combined declined rapidly thereafter until May, 1921, when they began again to increase.

On the whole, the exports of wheat and wheat flour in the fiscal year ending June 1, 1921, were greater than in any of the preceding 10 years, except 1915, when the crop was the largest in the history of the country and, this relatively large export served to retard the

decline in the prices of wheat and wheat flour as compared with other farm commodities.

The following chart, G–1, shows graphically in their relations to each other the per capita production of wheat, the per capita consumption of wheat and wheat flour, net exports of wheat and wheat flour, and the price of wheat and wheat flour combined, by years, from 1910 to 1920:

CHART G–1.



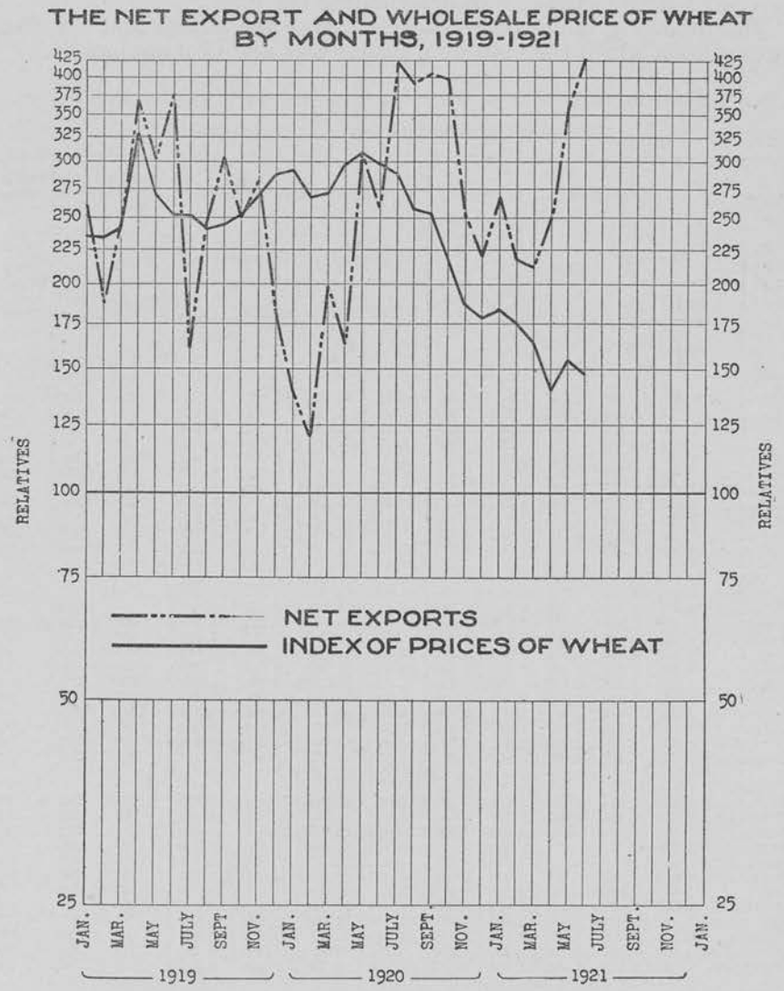
Chart, G–2, page 95, shows graphically the relations between the exports of wheat and the price of wheat by months, beginning with January, 1919, and concluding June, 1921.

Exports of wheat began to rise rapidly in 1913, reaching the peak in 1914, dropping again to a low point in 1917, which was a year of small production in the United States, rising again in 1918, falling slightly in 1919, and rising again in 1920.

The price of wheat has not borne a very consistent relation to exports. The greatest rise in the price of wheat did not take place until

1917, during which exports of wheat were relatively low. This increase in price was probably due to the small crop in 1917 which was below normal The price of wheat apparently bears a closer relation to the general level of prices than it does to fluctuations of exports. In other words, the increased price of wheat was apparently due in

CHART G–2.



a larger measure to factors which caused a general increase in prices in 1916, 1917, 1918, and 1919 than to either of the factors of production or export.

Examination of Chart G–2 again demonstrates the lack of definite relation of prices of wheat flour and wheat to exports. While in a general way exports and prices declined together and rose together

during these months, the peak of prices was apparently reached before the peak of exports and the bottom of the decline after the low point was reached in exports.

Examination of all of the data touching upon the factors of supply and demand, which should normally be reflected in the price, seems to lead to the conclusion that other factors than those indicated in the charts and tables which the commission has been able to compile has had a larger influence in determining the price.

The following tables, G–6 and G–7, give the actual and relative figures upon which the preceding charts G–1 and G–2 are based:

TABLE G–6.—*Actual price series composing the price index of wheat and wheat flour.*

[Wholesale Price Bulletin, Bureau of Labor Statistics.]

Date.	Wheat (price per bushel).					Wheat flour (price per barrel).				Weighted index (1910–1914=100) of prices of—		
	Chicago.		Kansas City, No. 2 hard winter.	Minneapolis, No. 1 northern spring.	Portland, blue stem.	Kansas City.		Minneapolis.		Wheat.	Wheat flour.	Wheat and wheat flour.
	No. 1 northern spring.	No. 2 red winter.				Winter patent flours.	Winter straight flours.	Standard patents.	Second patents.			
1910	$1.097	$1.053	$0.956	$1.047	$1.050	$4.50	$4.691	$5.495	$5.252	105	107	106
1911	.984	1.000	.940	.947	1.009	4.200	3.984	5.078	4.952	99	98	99
1912	1.049	1.009	.946	.984	1.039	4.412	4.686	5.271	5.152	101	104	102
1913	.874	.986	.877	.874	.929	4.012	4.308	4.544	4.422	93	91	92
1914	1.003	1.005	.939	1.003	1.009	4.363	4.125	5.096	4.939	101	100	101
1915	1.306	1.307	1.290	1.306	1.116	4.861	5.612	6.663	6.503	133	132	133
1916	1.411	1.351	1.329	1.411	1.175	6.364	6.091	7.264	7.090	140	144	141
1917	2.325	2.278	2.296	2.325	2.059	10.950	10.551	11.391	11.230	237	234	236
1918	2.191	2.209	2.159	2.191	2.159	11.334	10.304	11.694	10.141	213	236	219
1919	2.566	2.357	2.418	2.566	2.398	11.719	10.695	11.998	11.982	255	247	253
1920	2.563	2.523	2.455	2.558	2.575	12.524	11.580	12.713	12.266	260	262	261
1919.												
January	2.223	2.379	2.313	2.223	2.200	10.490	9.513	10.275	12.013	236	221	232
February	2.238	2.345	2.278	2.235	2.200	10.490	9.525	10.550	12.013	235	224	232
March	2.328	2.358	2.378	2.328	2.320	10.490	9.740	11.213	12.013	243	230	240
April	2.589	2.630	2.605	2.589	2.340	11.938	11.225	12.215	12.013	328	252	307
May	2.598	2.780	2.611	2.598	2.340	12.990	11.780	12.419	12.044	271	262	268
June	2.458	2.361	2.489	2.458	2.340	12.006	11.019	12.013	11.488	253	249	252
July	2.680	2.258	2.310	2.680	2.200	11.113	10.294	12.155	11.665	252	243	250
August	2.525	2.239	2.213	2.525	2.235	10.695	10.155	12.006	11.256	242	238	241
September	2.535	2.239	2.269	2.535	2.330	10.981	10.319	11.620	11.213	245	236	243
October	2.625	2.239	2.363	2.625	2.488	11.556	10.738	12.031	11.669	253	246	251
November	2.825	2.288	2.489	2.825	2.733	12.065	11.240	12.950	12.581	269	262	267
December	3.030	2.449	2.662	3.030	2.968	13.519	12.781	14.025	13.510	288	287	288
1920.												
January	2.931	2.634	2.766	2.931	3.200	14.075	12.985	14.444	13.969	293	297	294
February	2.688	2.490	2.461	2.688	3.000	12.644	11.744	13.538	12.969	268	273	269
March	2.755	2.500	2.545	2.755	2.800	13.000	12.213	13.165	12.690	272	272	272
April	3.006	2.773	2.789	3.006	2.938	13.519	12.494	14.281	13.750	298	290	296
May	3.075	2.975	2.929	3.075	2.913	14.520	13.425	15.031	14.538	310	308	309
June	2.900	2.895	2.805	2.900	2.960	13.875	12.813	14.160	13.815	298	292	295
July	2.831	2.805	2.748	2.831	2.813	13.450	12.410	13.669	13.319	289	282	287
August	2.550	2.474	2.452	2.550	2.480	12.400	11.644	12.235	11.855	258	256	257
September	2.490	2.492	2.450	2.490	2.363	12.544	11.694	12.594	12.238	255	261	257
October	2.106	2.205	2.079	2.106	2.175	11.075	10.205	11.206	10.888	219	231	222
November	1.753	2.057	1.793	1.753	1.630	9.281	8.400	9.295	9.055	188	193	189
December	1.681	2.013	1.701	1.681	1.575	9.144	8.256	8.944	8.525	180	186	182
1921.												
January	1.788	1.961	1.723	1.788	1.633	9.260	8.295	9.625	9.300	185	196	188
February	1.671	1.919	1.619	1.671	1.563	8.950	7.963	9.181	8.844	175	188	178
March	1.614	1.680	1.545	1.614	1.448	8.694	7.994	8.730	8.310	164	180	169
April	1.406	1.387	1.313	1.406	1.295	7.740	6.980	7.950	7.631	141	163	147
May	1.492	1.568	1.471	1.492	1.360	8.219	7.625	8.745	8.365	154	177	160
June	1.499	1.438	1.378	1.499	1.303	8.294	7.700	9.006	8.694	148	181	157
July	1.438	1.229	1.220	1.438	1.140	7.445	8.895	8.900	8.613	135	173	145

TABLE G–7.—*Wheat and wheat flour production, exports, imports, consumption, and price.*

ACTUAL FIGURES, BY YEARS.

Years.	Total domestic production (000 omitted).[1]	Export of domestic product.[2]	Imports.	Net exports.[3]	Amount available for consumption, allowing for carrying over (000 omitted).[4]	Per capita production.	Per capita consumption after adjusting carry over.	Per cent of domestic crop exported.	Weighted index of prices of wheat and wheat flour (1910–1914=100).	Weighted index of prices of wheat per bushel (1910–1914=100).[5]	Weighted index of price of wheat flour per barrel (1910–1914=100).[6]
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*		*Bushels.*	*Bushels.*				
1910	635,121	69,311,759	1,146,558	68,166,598	568,563	6.8	6.13	10.9	106	105	107
1911	621,338	49,529,191	714,496	48,815,113	555,255	6.6	5.94	12.8	99	99	98
1912	730,267	142,879,597	1,282,039	141,680,595	576,947	7.6	6.08	19.6	102	101	104
1913	763,380	845,590,350	2,383,537	143,959,497	622,699	7.9	6.47	19.1	92	93	91
1914	891,017	332,464,976	715,369	331,937,578	562,344	9.1	5.77	37.3	101	101	100
1915	1,025,801	243,117,026	7,187,651	236,550,616	743,491	10.3	7.62	23.7	133	133	132
1916	636,318	203,573,928	24,924,985	178,712,891	516,725	6.3	5.15	32.0	141	141	144
1917	636,655	132,578,633	31,215,213	101,774,937	541,428	6.2	5.32	20.8	236	236	234
1918	921,438	287,401,579	11,288,591	277,615,422	633,568	8.9	6.15	31.8	219	219	236
1919	934,265	219,861,399	5,495,516	214,514,549	691,793	8.9	6.66	23.5	253	253	247
1920	787,128	366,092,190	51,398,002	305,679,028	532,800	7.4	5.04	45.4	261	261	262

RELATIVE FIGURES, BY YEARS. (1910–1914=100.)

1910	87	[7] 70	[7] 90	[7] 70	98	93	101	55			
1911	85	50	56	50	96	90	98	64			
1912	100	144	101	145	100	104	100	98			
1913	105	147	187	146	108	108	106	96			
1914	122	336	56	339	97	125	95	187			
1915	140	246	566	242	129	141	125	119			
1916	87	206	1,964	183	89	86	85	161			
1917	87	134	2,461	104	94	85	87	105			
1918	126	290	890	284	110	122	101	157			
1919	128	222	433	220	120	122	110	118			
1920	108	370	4,053	312	92	101	83	228			

[1] Department of Agriculture estimates, Year Book of Agriculture.
[2] Wheat flour converted to bushels by multiplying barrels by 4½.
[3] Exports after subtracting imports and adding reexports. For fiscal years beginning July 1. Wheat reduced to wheat equivalent at the rate of 4½ bushels to a barrel.
[4] Domestic production plus imports, minus exports and reexports, after allowing for carry over each year.
[5] Index based upon price of wheat; No. 1 northern spring, Minneapolis; No. 1 northern spring, Chicago; No. 2 red winter, Chicago; No. 2 hard winter, Kansas City; Bluestena, Portland.
[6] Index based on prices of winter patent, Kansas City; winter straights, Kansas City; standard patents, Minneapolis; second patents, Minneapolis.
[7] Average for fiscal years 1909–1913=100.

TABLE G–7.—*Wheat and wheat flour production, exports, imports, consumption, and price*—Continued.

ACTUAL FIGURES, BY MONTHS.

	Export of domestic product.	Imports.	Net exports.[3]	Relative exports, (average, fiscal years 1909–1913 = 100).	Weighted index of prices of wheat and wheat flour (1910–1914 = 100).	Weighted index of prices of wheat (1910–1914 = 100).[5]	Weighted index of prices of wheat flour (1910–1914 = 100).[6]
	Bushels.	*Bushels.*	*Bushels.*				
1919—January	22,102,973	805,999	21,296,974	261	232	236	221
February	15,842,220	422,478	15,419,742	189	232	235	224
March	20,314,415	384,034	19,930,381	244	240	243	230
April	31,128,912	1,051,659	30,077,703	368	307	328	252
May	26,305,195	1,538,692	24,769,653	303	268	271	262
June	32,651,566	1,904,161	30,748,242	376	252	253	249
July	13,623,731	388,273	13,235,463	162	250	252	243
August	20,310,087	32,162	20,277,925	248	241	242	238
September	25,029,197	145,328	24,927,506	305	243	245	236
October	20,978,889	573,037	20,499,852	251	251	253	246
November	23,395,027	413,451	22,982,175	282	267	269	262
December	15,428,125	326,233	15,101,892	185	288	288	287
1920—January	12,273,653	880,778	11,386,875	140	293	293	297
February	10,581,487	657,821	9,923,666	121	269	268	273
March	16,880,893	717,012	16,165,907	198	272	272	272
April	13,721,573	326,648	13,394,925	164	296	298	290
May	25,887,665	569,157	25,318,508	310	309	310	308
June	21,753,624	459,784	21,293,841	261	295	298	292
July	34,654,740	219,121	34,435,619	421	287	289	282
August	32,550,164	444,576	32,105,588	393	257	258	256
September	34,994,181	1,907,899	33,086,741	405	257	255	261
October	43,033,442	10,537,121	32,499,130	398	222	219	231
November	30,988,540	10,430,080	20,560,138	252	189	188	193
December	30,179,555	12,295,690	18,051,836	222	182	180	186
1921—January	27,104,626	5,496,860	21,707,720	267	188	185	196
February	23,075,208	5,314,170	17,813,176	218	178	175	188
March	20,763,041	3,456,131	17,409,469	213	169	164	180
April	24,801,352	4,986,552	20,389,448	250	147	141	163
May	31,623,973	2,117,997	29,563,312	362	160	154	177
June	32,192,279	115,099	38,058,620	429	157	148	181

[3] Exports after subtracting imports and adding reexports. For fiscal years beginning July 1. Wheat reduced to wheat equivalent at the rate of 4½ bushels to a barrel.
[5] Index based upon price of wheat; No. 1 northern spring, Minneapolis; No. 1 northern spring, Chicago; No. 2 red winter, Chicago; No. 2 hard winter, Kansas City; Bluestem, Portland.
[6] Index based on prices of winter patent, Kansas City; winter straights, Kansas City; standard patents, Minneapolis; second patents, Minneapolis.

CORN.

The following table gives the actual and relative production of corn on the 1909–1913 base:

TABLE G–8.—*Production of corn.*

[Base: 1909–1913=100.]

[Source: Yearbook of Department of Agriculture, 1920.]

Years.	Actual production, bushels (000 omitted).	Relative production, bushels.	Years.	Actual production, bushels (000 omitted).	Relative production, bushels.
1909	2,552,190	94	1915	2,994,793	111
1910	2,886,260	107	1916	2,566,927	95
1911	2,531,488	93	1917	3,065,233	113
1912	3,124,746	115	1918	2,502,665	92
1913	2,446,988	90	1919	2,858,509	106
1914	2,672,804	99	1920	3,232,367	119

The actual and relative exports and imports of corn and corn meal and the weighted index of corn prices is shown in the following table, G–9.

TABLE G–9.—*The actual and relative exports, imports, reexports, and net exports of corn and corn meal,*[1] *1909–1921.*

[1909–1913=100.]

[Source: Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.[2]		Weighted index number of wholesale prices of corn (monthly average 1910–1914 =100).[3]
	Bushels.	Relative.	Bushels.	Relative.		Bushels.	Relative.	
1909–10	37,520,520	91				37,520,520	97	
1910–11	65,614,522	159				65,614,522	170	
1911–12	41,797,291	101	53,425	1	77	41,743,943	108	
1912–13	50,780,143	123	903,062	20	35,887	49,912,968	129	
1913–14	10,725,819	26	12,367,369	278	4,011	−1,637,539		
1914–15	50,668,303	123	9,897,939	223	46,938	40,817,302	106	
1915–16	39,896,928	97	5,208,497	117	74,752	34,763,183	113	
1916–17	66,753,294	162	2,267,299	51	608,688	65,094,683	169	
1917–18	49,073,263	119	3,196,420	72	73,540	45,950,382	119	
1918–19	23,018,822	56	3,311,211	75	10,712	19,718,323	51	
1919–20	16,728,746	41	10,229,249	230	62,818	6,562,315	17	
1920–21	70,905,781	172	5,743,384	129		65,162,397	169	
1919.								
January	2,344,399	68	18,607	5		2,325,792	72	220
February	1,618,434	47	8,002	2		1,610,432	50	204
March	1,391,476	40	20,607	6		1,370,869	42	233
April	1,144,801	33	13,399	4		1,131,402	35	254
May	1,226,913	36	1,740,471	470		− 513,558		280
June	1,257,907	37	1,353,763	366	2,162	− 93,694		280
July	739,043	22	1,988,247	537	5,200	−1,243,998		304
August	1,101,202	32	949,642	257	28,267	179,827	6	306
September	1,371,857	40	1,959,102	529	11,317	− 598,562		245
October	1,069,645	31	1,208,759	327	6,804	− 145,918		221
November	1,085,406	32	1,350,746	365	11,221	− 276,561		237
December	1,651,181	48	601,372	162		1,049,809	32	232

[1] Corn meal reduced to bushels of corn at the rate of 4 bushels to 1 barrel.
[2] When there were net imports during the base period, the net imports were subtracted from the net exports and the remainder divided by 5 to get the average net export for the period.
[3] Weighted index of monthly average wholesale prices of corn.

TABLE G–9.—*The actual and relative exports, imports, reexports, and net exports of corn and corn meal, 1909–1921*—Continued.

Years and months.	Exports.		Imports.		Reexports (bushels).	Net exports.		Weighted index number of wholesale prices of corn (monthly average 1910–1914 =100).
	Bushels.	Relative.	Bushels.	Relative.		Bushels.	Relative.	
1920.								
January	2,320,661	67	408,293	110	.....	1,912,368	59	239
February	1,925,375	56	156,945	42	1,030	1,769,460	54	230
March	1,992,412	58	139,429	38	.....	1,852,983	57	251
April	1,336,380	40	291,465	79	.....	1,044,915	32	271
May	992,195	29	238,045	64	9	754,159	23	317
June	1,143,232	33	937,204	253	.....	206,028	6	294
July	1,294,479	37	2,343,445	633	.....	1,048,966	.....	246
August	1,292,915	37	1,299,418	351	.....	6,503	0.2	245
September	2,516,718	73	1,066,449	288	4,442	1,454,711	45	209
October	2,046,352	60	608,064	164	18,783	1,457,071	45	141
November	2,167,466	63	126,951	34	399,233	2,439,748	75	128
December	3,625,751	106	126,133	34	519,077	4,018,695	124	120
1921.								
January	5,753,114	167	8,226	2	25,529	5,770,417	178	108
February	8,561,054	249	8,256	2	34,047	8,586,845	264	106
March	13,680,949	398	7,379	2	2	13,673,572	421	103
April	10,558,336	307	41,707	11	7	10,516,636	324	92
May	8,694,457	253	52,100	14	.....	8,642,356	266	98
June	12,138,887	353	17,615	5	.....	12,121,272	373	98

The net exports of corn and corn meal combined averaged about 37,000,000 bushels in the 10 years ending June 30, 1920. The net exports of the fiscal year 1921 were 65,000,000 bushels, about two-fifths more than the 10 year average. The net exports of corn were large during the period beginning September, 1920, and ending with June 30, 1921, but were not of sufficient proportions, as compared with the total production, to materially influence the decline in the price of corn as compared with other farm crops. The price of corn in June, 1921, was below 1910–1914 average. This low price was no doubt due to the large crop in 1920 and the general depression which affected the price of all commodities.

OATS.

The following table, G–10, shows the actual and relative production of oats on 1909–1913 base:

TABLE G–10.—*Actual and relative production of oats.*

[Base, 1909–1913=100.]

[Source: Yearbook of Department of Agriculture, 1920.]

Years.	Actual production (bushels) (000 omitted).	Relative production (bushels).	Years.	Actual production (bushels) (000 omitted).	Relative production (bushels)
1909	1,007,143	89	1915	1,549,030	137
1910	1,186,341	105	1916	1,251,837	111
1911	922,298	82	1917	1,592,740	141
1912	1,418,337	125	1918	1,538,124	136
1913	1,121,768	99	1919	1,231,754	109
1914	1,141,060	101	1920	1,526,055	135

The actual and relative exports and imports of oats and oatmeal are shown in the following table, G–11.

TABLE G–11.—*The actual and relative exports, imports, reexports, and net exports of oats and oat meal, 1909–1921.*

[1909–1913=100.]

[Source: Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports.	Net exports.[1]	
	Bushels.	Relative.	Bushels.	Relative.	Bushels.	Bushels.	Relative.
1909–10	2,494,772	27	1,034,511	19	218,287	1,678,548	44
1910–11	2,733,291	29	107,318	2	1,504	2,627,477	69
1911–12	2,218,963	24	2,622,357	49	4,750	398,643	.....
1912–13	36,287,765	390	723,899	14	4,750	35,568,616	928
1913–14	2,693,460	29	22,273,624	416	726,297	20,306,460	.....
1914–15	100,372,929	1,081	630,722	12	218,928	99,961,135	2,607
1915–16	98,771,294	1,064	665,314	12	407,750	98,513,730	2,570
1916–17	94,722,465	1,020	761,644	14	82,862	94,043,633	3,166
1917–18	123,893,056	1,334	2,591,077	48	96,970	121,398,949	2,808
1918–19	108,218,292	1,165	551,355	10	500	107,667,437	960
1919–20	42,845,638	461	6,043,835	113	6,335	36,808,138	138
1920–21	9,074,576	98	3,795,638	71	.....	5,278,938	.....
1919.							
January	10,992,254	1,420	10,985	2	.....	10,981,269	3,437
February	6,539,121	845	5,664	1	.....	6,533,457	2,045
March	3,198,479	413	4,993	1	.....	3,193,486	999
April	2,986,066	386	11,608	3	.....	2,974,458	931
May	4,465,792	577	277,671	62	.....	4,188,121	1,301
June	6,723,976	869	115,913	26	.....	6,608,063	2,068
July	5,407,811	699	39,270	9	.....	5,368,540	1,680
August	6,278,400	811	30,386	7	.....	6,248,014	1,956
September	7,006,694	906	16,583	4	.....	6,990,111	2,188
October	4,978,907	643	20,424	4	.....	4,958,483	1,552
November	4,090,236	529	11,680	3	.....	4,078,555	1,277
December	4,191,204	542	63,951	14	.....	4,127,253	1,292
1920.							
January	2,173,522	281	311,413	70	.....	1,862,109	583
February	1,584,734	205	410,145	92	.....	1,174,589	368
March	3,326,299	430	722,355	162	1,000	2,604,944	815
April	1,463,488	189	876,265	196	50,000	637,223	196
May	1,686,590	218	2,104,407	471	5,335	412,481	.....
June	657,752	85	1,436,956	322	.....	779,204	.....
July	495,770	64	353,915	79	500	142,355	44
August	720,349	93	173,856	39	500	546,993	177
September	969,141	125	45,066	10	.....	924,075	289
October	774,387	100	10,926	2	.....	763,461	239
November	1,152,727	149	62,845	14	1,250	1,091,132	595
December	1,307,273	169	220,052	49	120	1,087,341	340
1921.							
January	976,841	126	201,200	45	200,027	975,667	305
February	574,575	74	190,839	43	37,548	421,234	132
March	413,194	53	409,209	92	.....	3,985	0.9
April	493,889	64	887,271	199	.....	393,382	.....
May	627,509	81	1,055,346	237	.....	427,837	.....
June	568,619	74	298,351	67	.....	270,268	85

[1] When there were net imports during the base period, the net imports were substracted from the net exports and the remainder divided by five to get the average net export for the period.

Exports of oats and oat meal exceeded imports in the fiscal year 1920–21 by only 5,278,938 bushels. The net exports of oats and ota meal were relatively less in 1920–21 than in any year since 1914–15. Production of oats in 1920 was about 400,000,000 bushels above the average production of 1909–1913.

RYE.

The following table, G–12, shows the production of rye and the relative production on 1909–1913 base. The production of rye in 1920, which was 69,000,000 bushels, was considerably above the 1910–1914 average and below the crop of 1918–19.

TABLE G–12.—*Rye.*

[Base: 1909–1913=100.]

[Source: Yearbook of Department of Agriculture, 1920.]

Years.	Actual production (bushels) (000 omitted).	Relative production (bushels).	Years.	Actual production (bushels) (000 omitted).	Relative production (bushels).
1909	29,520	85	1915	54,050	155
1910	34,897	100	1916	48,862	140
1911	33,119	95	1917	62,933	180
1912	35,664	102	1918	91,041	261
1913	41,381	119	1919	88,909	255
1914	42,779	123	1920	69,318	199

The following table, G–13, shows the actual and relative exports of rye and rye flour by fiscal years beginning 1909–10, and by months beginning with January, 1919:

TABLE G–13.—*The actual and relative exports of rye and rye flour,*[1] *1909–1921.*

[1909–1913=100.]

[Source: Commerce Reports.]

By years and months.	Actual exports (bushels).	Relative exports.	Weighted index number of wholesale price of rye and rye flour.	By years and months.	Actual exports (bushels).	Relative exports.	Weighted index number of wholesale price of rye and rye flour.
1909–10	242,262	27	.....	1920.			
1910–11	40,123	5	100	January	1,115,793	1,508	228
1911–12	31,384	3	116	February	2,132,806	2,882	203
1912–13	1,854,738	209	104	March	4,646,554	6,278	226
1913–14	2,272,692	256	83	April	5,076,184	6,859	261
1914–15	13,026,778	1,467	95	May	10,280,085	13,889	282
1915–16	15,250,151	1,717	137	June	6,382,615	8,624	286
1916–17	13,703,499	1,543	142	July	7,890,846	10,661	286
1917–18	17,186,417	1,935	240	August	5,651,853	7,636	252
1918–19	36,467,450	4,106	249	September	2,650,494	3,580	249
1919–20	41,530,961	4,676	199	October	2,936,512	3,968	223
1920–21	47,337,466	5,329	243	November	4,855,431	6,559	206
1919.				December	5,634,017	7,612	210
January	1,206,035	1,629	209	1921.			
February	2,610,131	3,526	180	January	5,480,204	7,404	218
March	4,198,922	5,673	204	February	3,835,984	5,183	196
April	3,250,404	4,391	229	March	1,764,689	2,385	189
May	7,992,856	10,799	207	April	2,127,141	2,874	175
June	9,339,074	12,617	194	May	2,054,561	2,776	189
July	2,370,918	3,203	199	June	2,455,958	3,318	168
August	886,248	1,197	199	July	.....	.....	161
September	3,141,676	4,245	183				
October	1,215,080	1,641	179				
November	1,770,282	2,391	181				
December	2,512,720	3,395	216				

[1] There were no imports or reexports.

Exports of rye have increased greatly in recent years, particularly since 1914. Exports of rye in the fiscal year 1920–21 were larger than those of any preceding year. The price of rye reached the peak in June–July, 1920, and fell rapidly after that month. Exports of rye reached their peak in May, 1920, and after that month fell rapidly until December, 1920, and January and February, 1921, when there was a slight recovery, followed by a further decline. In general, the course of the price of rye followed very closely the course of the price of wheat; the course of exports of rye followed very closely the course of exports of wheat, and the general conclusions applicable to wheat are applicable to rye. In other words, the price of rye like the price of wheat has apparently been sustained by large exports above the price of rice and other grain and farm products.

RICE.

The following table, G–14, shows the production of rice and the relative production on 1909–1913 base.

TABLE G–14.—*Rice.*

[Base: 1909–1913=100.]

[Source: Year Book of the Department of Agriculture, 1920.]

Year.	Actual production (bushels, 000 omitted).	Relative production (bushels).	Year.	Actual production (bushels, 000 omitted).	Relative production (bushels).
1909	21,839	91	1915	28,947	121
1910	24,510	102	1916	40,861	170
1911	22,934	95	1917	34,739	145
1912	25,054	104	1918	38,606	161
1913	25,744	107	1919	42,790	178
1914	23,649	98	1920	53,710	224

The production of rice in 1920 was larger than in any preceding year and greatly exceeded the 1909–1913 average. Exports of rice, however, fell off 43,000,000 bushel as compared with 1919–20, while imports fell off 83,000,000 bushel.

Table G–15, page 104, gives the actual and relative exports, imports, reexports, net imports, and net exports of rice on 1909–1913 base.

TABLE G–15.—*The actual and relative exports, imports, reexports, and net exports and net imports of rice, 1909–1921.*

[1909–1913=100.]

[Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports.	Net exports.	Net imports.	Price of rice, Honduras, head per pound.	Relative price of rice, Honduras, head per pound.
	Pounds.	Relative.	Pounds.	Relative.					
					Pounds.	*Pounds.*	*Pounds.*		
1909–10	7,049,597	38	225,400,544	99	8,160,452		210,190,495		
1910–11	15,575,271	84	208,774,795	92	6,192,579		187,006,945	$0.055	100
1911–12	26,797,535	145	190,063,331	84	10,410,424		152,855,372	.050	91
1912–13	24,801,280	134	222,103,547	98	12,681,158		184,621,109	.055	100
1913–14	18,223,264	99	290,194,917	128	17,787,031		254,184,622	.055	100
1914–15	75,448,635	408	277,191,472	122	9,186,431		192,556,406	.059	107
1915–16	120,695,213	653	264,324,005	116	71,794,527		71,834,265	.048	87
1916–17	181,371,560	981	216,048,858	95	44,356,242	9,678,944		.045	82
1917–18	196,363,268	1,062	456,058,608	201	92,301,857		167,393,483	.065	118
1918–19	193,128,001	1,045	363,726,263	160	216,253,657	45,655,395		.089	162
1919–20	483,385,259	2,614	179,919,961	79	96,554,804	400,020,102		.106	193
1920–21	440,855,398	2,384	96,804,612	43	61,599,311	344,050,786			
1919.									
January	34,691,941	2,252	7,327,344	39	4,376,304	31,740,901		.091	165
February	12,743,749	827	23,268,804	123	8,012,539		2,512,516	.091	165
March	24,741,711	1,605	15,502,872	82	8,553,539	17,792,378		.091	165
April	19,410,961	1,260	10,551,357	56	11,040,157	19,899,761		.089	162
May	30,394,068	1,973	20,977,132	111	15,506,976	24,923,912		.088	160
June	32,881,459	2,134	9,165,689	48	19,667,209	43,382,979		.091	165
July	26,706,910	1,733	17,933,279	95	6,195,441	14,969,072		.117	213
August	42,524,944	2,760	31,528,801	166	9,570,054	20,566,197		.143	260
September	32,455,622	2,106	14,274,623	75	6,817,859	24,998,858		.127	231
October	25,185,232	1,635	9,037,282	48	12,054,861	28,202,811		.121	220
November	33,943,125	2,203	5,732,547	30	6,730,916	34,941,494		.127	231
December	61,195,849	3,972	9,296,394	49	11,173,896	63,073,351		.124	225
1920.									
January	59,079,945	3,834	6,861,001	36	8,415,069	60,634,013		.127	231
February	56,422,757	3,662	9,728,183	51	8,471,749	55,166,323		.128	233
March	62,260,513	4,041	12,000,384	63	3,409,449	53,669,578		.125	227
April	40,128,989	2,604	26,065,840	138	4,554,163	18,617,312		.123	224
May	29,641,854	1,924	20,214,228	107	10,694,856	20,122,482		.122	222
June	13,839,519	898	16,291,098	86	8,470,491	6,018,912		.123	224
July	17,818,104	1,156	13,740,536	73	10,513,060	14,590,628		.125	227
August	10,322,640	670	18,926,307	100	4,878,838		3,724,829	.102	185
September	4,599,974	299	6,704,861	35	4,928,447	2,823,560		.095	173
October	12,269,590	796	2,154,246	11	8,471,352	18,586,696		.079	144
November	33,676,275	2,186	4,694,592	25	6,430,605	35,412,288		.068	124
December	52,556,395	3,411	4,573,553	24	2,809,545	50,792,387		.066	120
1921.									
January	39,902,043	2,590	7,463,276	39	5,873,821	38,312,588		.046	84
February	39,032,585	2,533	5,373,791	28	4,060,595	37,719,389		.048	87
March	45,579,217	2,958	5,153,319	27	2,249,445	42,675,343		.045	82
April	58,907,643	3,823	8,903,235	47	1,661,284	51,665,692		.040	73
May	52,425,254	3,402	9,086,807	48	2,341,858	45,680,305		.035	64
June	73,769,678	4,788	10,000,089	53		63,768,689		.039	71

The net exports of rice in 1920–21 were 56,000,000 bushels less than in 1919–20. The price of rice reached its maximum in August, 1919, and declined steadily from that time on until June, 1921. On the whole, exports of rice have been fairly well maintained.

ALL GRAINS.

The production of grain—oats, wheat, barley, rye, and buckwheat—combined in 1920, was, as shown in Table F–3, on page 87, relatively above the average, and in the last 10 years was exceeded only in 1915 and 1912. While this production was clearly not sufficient to account for the perpendicular decline which occurred in the price of grain in the latter half of 1920 and the first half of 1921, it doubtless contributed somewhat to that decline.

The following table, G–16, gives the exports and imports of all grains for 1909–1921, and by months from January, 1919, to June, 1921.

TABLE G–16.—*The actual and relative export, import, reexport, and net export of all grains,*[1] *1909–1921.*

[1909–1913=100.]

[Source: Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports.	Net exports.	
	Bushels.	Relative.	Bushels.	Relative.	Bushels.	Bushels.	Relative.
1909–10	131,953,437	83	1,850,127	20	354,947	130,458,257	87
1910–11	148,099,041	93	1,253,876	14	2,901	146,848,066	98
1911–12	95,162,071	60	3,390,278	37	6,118	91,777,911	61
1912–13	249,338,946	157	2,909,000	31	123,674	246,553,619	165
1913–14	167,927,068	106	37,024,530	399	1,482,992	132,385,529	88
1914–15	523,287,508	330	11,244,030	121	453,837	512,497,314	343
1915–16	424,508,559	268	13,061,462	141	1,103,743	412,580,840	276
1916–17	395,134,263	249	27,953,928	301	755,498	367,935,833	246
1917–18	349,016,747	220	37,002,710	398	582,027	312,596,063	209
1918–19	478,729,155	302	15,151,157	163	1,513,646	465,091,644	311
1919–20	347,723,445	220	21,768,600	234	217,819	261,172,663	175
1920–21	513,867,265	324	66,937,024	721		446,930,241	299
1919.							
January	37,686,105	285	835,591	108		36,850,514	296
February	27,062,224	205	436,144	56		26,626,080	214
March	31,192,807	236	409,634	53		30,783,173	247
April	41,969,785	318	1,076,666	139	450	40,893,569	329
May	44,863,037	340	3,556,834	462	3,150	41,309,453	331
June	56,046,368	424	3,373,837	436	2,999	39,675,530	318
July	27,630,592	209	2,415,790	312	5,205	25,220,006	202
August	35,090,224	266	1,012,190	131	28,267	34,106,300	274
September	41,060,188	311	2,121,013	274	54,954	38,994,129	313
October	30,825,831	233	1,802,220	233	100,804	29,124,414	233
November	31,825,833	241	1,775,877	230	11,221	30,061,177	241
December	24,217,134	183	991,556	128		23,225,578	186
1920.							
January	19,147,948	145	1,606,484	208		17,541,464	140
February	17,178,792	130	1,224,911	158	1,030	15,954,911	128
March	28,289,703	214	1,578,796	204	3,116	28,292,819	227
April	22,484,664	170	1,494,378	193	50,000	21,040,286	168
May	39,481,297	299	2,911,609	377	5,344	36,575,032	294
June	30,494,237	231	2,833,944	366	1,503	27,661,796	222
July	45,348,478	343	2,916,481	377	14,000	42,445,997	340
August	42,591,823	323	1,917,850	248	500	40,674,472	326
September	43,196,906	327	3,019,414	392	4,902	40,182,394	322
October	51,305,477	388	11,156,111	1,442	21,600	40,170,966	322
November	40,786,898	309	10,619,876	1,372	402,162	30,569,184	245
December	43,266,287	328	12,641,875	1,634	687,669	31,312,081	251
1921.							
January	42,305,955	320	5,706,276	737	385,510	36,985,189	297
February	37,371,309	283	5,508,265	712	143,734	32,006,778	257
March	38,189,276	289	3,872,719	501	102,561	34,419,118	276
April	38,611,765	292	5,915,530	765	574,655	33,270,887	267
May	43,458,725	329	3,225,443	417	57,336	40,290,618	323
June	48,727,396	369	434,065	56		48,293,331	387

[1] Includes corn and corn meal, wheat and wheat flour, rye and rye flour, oats and oatmeal, barley and barley flour.

Exports of all grains were relatively high for the fiscal year 1920–21; in fact were higher than in any of the preceding 10 years except 1918–19 and 1914–15. This relatively large export is accounted for by the sustained exports of wheat and rye. It is notable, however, that exports of all grains reached their peak in July, 1920, and from that time declined more or less steadily until May, 1921.

On the whole, it seems probable that the first influence reacting to depress prices of grains was the falling off of exports, beginning in May, June, and July, 1920.

COTTON.

The following table, G–17, gives the production in bales and the relative production of cotton by years from 1890 to 1920.

It will be noted that the crop of 1920, while relatively below the 1910–1914 average, was larger than any crop since 1914.

TABLE G–17.—*Cotton.*

[1910–1914=100.]

Year.	Production in bales.	Relative production (1910–1914=100).	Year.	Production in bales.	Relative production (1910–1914=100).
1890	8,674,000	61	1906	13,274,000	93
1891	9,018,000	63	1907	11,107,000	78
1892	6,664,000	47	1908	13,242,000	93
1893	7,493,000	53	1909	10,005,000	70
1894	9,476,000	66	1910	11,609,000	81
1895	7,161,000	50	1911	15,693,000	110
1896	8,533,000	60	1912	13,703,000	96
1897	10,898,000	76	1913	14,156,000	99
1898	11,189,000	78	1914	16,135,000	113
1899	9,345,000	66	1915	11,192,000	78
1900	10,123,000	71	1916	11,450,000	80
1901	9,510,000	67	1917	11,302,000	79
1902	10,631,000	75	1918	12,041,000	84
1903	9,851,000	69	1919	11,421,000	80
1904	13,438,000	94	1920	12,987,000	91
1905	10,575,000	74			

The following table, G–18, gives the actual and relative exports and imports of cotton by years 1909–10 to 1920–21, and by months from January, 1919, to June, 1921, combined with an index of the actual and relative prices of middling upland cotton at New York:

TABLE G–18.—*Exports and imports of unmanufactured cotton.*

[Base: 1910–1914.]

Year and month.	Domestic exports.	Imports	Foreign exports.	Net exports.	Relative domestic exports.	Relative net imports.	Relative net exports.	Actual price middling upland, New York.	Relative price.
	Bales.	*Bales.*	*Bales.*	*Bales.*				*Pound.*	
1909–10	6,263,293	172,075	11,063	6,102,281	72	78	72		
1910–11	7,829,036	227,536	4,665	7,606,165	90	103	90	$0.151	$0.117
1911–12	10,675,445	219,560	2,353	10,458,238	123	99	124	.130	.101
1912–13	9,124,591	227,645	1,742	8,898,688	105	103	105	.115	.89
1913–14	9,521,881	260,988	3,996	9,264,889	110	118	109	.128	.99
1914–15	8,807,157	382,286	27,141	8,452,012	101	172	100	.121	.94
1915–16	6,168,140	437,574	18,853	5,749,419	71	198	68	.102	.79
1916–17	6,176,162	291,957	3,922	5,888,127	71	132	70	.145	.112
1917–18	4,641,023	221,216	3,598	4,423,405	53	100	52	.235	.182
1918–19	5,525,893	201,585	4,500	5,328,808	64	91	63	.318	.247
1919–20	7,087,487	700,214	16,983	6,404,256	82	316	76	.325	.252
1920–21	5,409,102	251,878	.....	5,157,224	62	114	61	.339	.263

TABLE G–18.—*Exports and imports of unmanufactured cotton*—Continued.

Year and month.	Domestic exports.	Imports.	Foreign exports.	Net exports.	Relative domestic exports.	Relative net imports.	Relative net exports.	Actual price middling upland, New York.	Relative price.
1919.	*Bales.*	*Bales.*	*Bales.*	*Bales.*				*Pound.*	
January	658,143	11,194	593	647,542	91	60	92	$0.296	$0.229
February	449,523	9,640	406	440,289	62	52	62	.263	.204
March	504,239	15,561	102	488,780	70	85	69	.273	.212
April	411,916	36,463	479	375,932	57	198	53	.290	.225
May	444,718	36,812	107	408,013	62	200	58	.309	.240
June	690,169	17,269	147	673,047	95	94	95	.328	.254
July	528,902	19,403	123	509,622	73	105	72	.351	.272
August	479,058	14,070	364	465,352	66	76	66	.320	.248
September	236,694	54,342	154	182,506	33	295	26	.311	.241
October	352,231	35,281	291	317,241	49	192	45	.355	.275
November	924,751	52,088	55	872,718	128	283	124	.395	.306
December	876,843	48,594	1,095	829,344	121	264	118	.394	.305
1920.									
January	929,671	104,485	514	825,700	129	565	117	.393	.305
February	640,320	123,880	2,221	518,661	88	674	74	.388	.301
March	794,460	133,727	6,708	667,441	110	726	95	.414	.321
April	546,125	69,357	1,770	478,538	75	374	68	.424	.329
May	364,904	15,767	1,684	350,821	50	87	50	.413	.320
June	241,449	19,635	621	222,435	33	108	31	.393	.305
July	211,841	28,988	443	183,296	29	157	26	.410	.318
August	146,668	23,106	1,824	125,386	20	125	18	.360	.279
September	228,068	20,004	3,700	211,764	32	108	30	.301	.233
October	583,725	13,825	1,356	571,256	81	76	81	.226	.175
November	683,323	22,513	1,870	662,680	95	122	94	.190	.147
December	788,578	25,890	271	762,959	110	141	108	.155	.120
1921.									
January	605,381	24,024	879	582,236	84	130	82	.167	.129
February	493,426	28,055	1,491	466,862	68	152	66	.139	.108
March	375,180	27,282	1,482	349,380	52	146	49	.118	.91
April	319,933	18,731	717	301,919	44	103	43	.121	.94
May	477,389	10,542	1,552	468,399	66	57	66	.129	.100
June	495,590	10,105	.....	485,485	69	54	69	.120	.93
July	.....	.....	.....	.....	.....	.....	.....	.124	.96

Exports of cotton have been declining with more or less regularity since 1912 and in 1920–21 were less than in any preceding year since 1917–18. The peak of net exports of cotton since January, 1919, was reached in November, 1919, since which time it has declined very rapidly. The peak in price of cotton as indicated by the index in the table was reached in April, five months after the peak of exports was reached. From April, 1920, to June, 1921, which is the last month covered by the table, the price of cotton has declined very rapidly in very close relation to the decline in cotton exports.

Exports of cotton declined in marked contrast to the increase in exports of wheat and wheat flour, and the price of cotton fell relatively below the price of wheat and wheat flour.

The rapid decline in exports was apparently a major factor in bringing about the declining price. To this factor, however, must be added declining domestic consumption in the United States as indicated by Table G–19, on page 108.

TABLE G–19.—*The consumption of cotton*[1] *in the United States, 1913–21.*

[Service: Cotton Production and Distribution Bulletin, United States Department of Commerce:]

Date.	Bales.	Date.	Bales.	Date.	Bales.
1913	465,000	1919—Continued.		1920—Continued.	
1914	454,000	June	474,000	June	555,000
1915	501,000	July	510,000	July	526,000
1916	552,000	August	497,000	August	483,000
1917	568,000	September	491,000	September	458,000
1918	515,000	October	556,000	October	400,000
1919	493,000	November	491,000	November	332,000
1920	487,000	December	511,000	December	295,000
1919.		1920.		1921.	
January	557,000	January	592,000	January	366,000
February	433,000	February	516,000	February	396,000
March	433,000	March	576,000	March	438,000
April	476,000	April	567,000	April	409,000
May	488,000	May	541,000		

[1] Running bales, excluding linters.

Cotton consumption in 1920 was lower than in any year since 1915. Cotton consumption reached its highest point in January, 1920, and from that time declined rapidly until December, 1920, since which time it has risen steadily.

The consumption of cotton in the factories of 12 leading manufacturing states was as follows for each year from 1913 to 1920, inclusive:

TABLE G–20.—*Average monthly cotton consumption in typical mills in the United States, by years.*

	Bales.		Bales.
1913	465, 000	1917	568, 000
1914	454, 000	1918	515, 000
1915	501, 000	1919	493, 000
1916	552, 000	1920	487, 000

The production of manufactured cotton goods in United States reached its peak in 1917 and has declined in succeeding years, manufactured cotton goods in 1920 being markedly below production in 1917.

The following table, G–21, shows the world's supply and consumption of cotton by crop years from 1910–11 to 1919–20:

TABLE G–21.—*Supply and consumption of cotton, 1910–1920, linters excluded, in bales of 500 pounds each, gross weight.*

Season.	World commercial crop.[1]	World total consumption.[2]	World supply at end of season.	Season ending—
1919–20	17, 964, 000	17, 555, 000	5, 846, 000	July 31, 1920
1918–19	16, 962, 000	15, 689, 000	5, 436, 000	July 31, 1919
1917–18	16, 786, 000	17, 100, 000	4, 163, 000	July 31, 1918
1916–17	18, 023, 000	18, 925, 000	4, 477, 000	July 31, 1917
1915–16	17, 371, 000	20, 344, 000	5, 379, 000	July 31, 1916
1914–15	19, 579, 000	18, 747, 000	8, 352, 000	Aug. 31, 1915
1913–14	20, 915, 000	19, 858, 000	7, 519, 000	Aug. 31, 1914
1912–13	19, 198, 000	19, 544, 000	6, 463, 000	Aug. 31, 1913
1911–12	20, 530, 000	18, 566, 000	6, 809, 000	Aug. 31, 1912
1910–11	16, 863, 000	16, 750, 000	4, 845, 000	Aug. 31, 1911

[1] United States, India, Egypt, and other countries from which reliable information can be secured.
[2] Great Britain, European Continent, United States, India, Japan, and Canada.

It appears from this table that the world's consumption of cotton has markedly declined since 1915–16, while the world production has remained on about the 1915–16 level.

The taking of American cotton by foreign spinners from August 1 to April 29 was but little over half in 1920–21 the amount taken in 1913–14,[1] as shown in the following table:

TABLE G–22.—*Foreign spinners' takings of American cotton from Aug. 1 to Apr. 29.*

Countries.	1920–21	1919–20	1913–14
	Bales.	*Bales.*	*Bales.*
Great Britain	1,346,000	2,315,000	2,389,000
Continent	2,182,000	1,852,000	3,843,000
Japan and Mexico	400,000	752,000	370,000
Total	3,928,000	4,919,000	6,602,000

While British spinners were taking[1] more American cotton in the year 1920–21 than other cotton, their total takings of American cotton in the nine months ending in April, 1921, were about half their takings in the same period in 1913–14.

TABLE G–23.—*Deliveries to spinners in Great Britain from Aug. 1 to Apr. 29.*

Descriptions.	1920–21	1919–20	1913–14
	Bales.	*Bales.*	*Bales.*
American	1,346,000	2,261,000	2,389,000
Brazilian	31,000	21,000	176,000
Egyptian	157,000	370,000	347,000
Peruvian	62,000	163,000	133,000
West Indian, etc	3,700	3,800	10,000
African	16,000	28,200	37,000
East Indian, etc	54,300	84,000	52,000
Total	1,670,000	2,931,000	3,144,000

WOOL.

Table G–24 gives the annual actual domestic production of wool and the relative production on the 1910–1914 base for the years 1910 to 1920, inclusive

TABLE G–24.—*Production of wool.*

[1910–1914=100.]

[Source: Department of Commerce; Statistical Abstract, 1920.]

Years.	Production (pounds).	Relative.	Years.	Production (pounds).	Relative.
1910	321,362,750	105	1916	288,490,000	94
1911	318,547,900	104	1917	281,892,000	92
1912	304,043,400	99	1918	298,870,000	98
1913	296,175,300	97	1919	313,638,000	102
1914	290,192,000	95	1920	308,507,000	101
1915	285,726,000	93			

[1] The Market Reporter, United States Department of Agriculture, May 28, 1921, p 351.

The production of wool in the United States in 1920 was slightly above the 1910–1914 average, and slightly below the crop of 1919. The following table, G–25, exhibits the actual exports, imports, reexports, and net imports of wool and the relative imports and net imports, the price per pound and the relative price by years from 1909 to 1920, and by months from January, 1919, to August, 1921.

TABLE G–25.—*The actual and relative export, import, reexport, and net import of wool, January, 1909, to August, 1921.*

[Source: Bureau of Foreign and Domestic Commerce.]

Years and months.	Exports, pounds.	Imports.		Reexports, pounds.	Net imports.		Farm price per pound.[1]	
		Pounds.	Relative (1909–1913=100).		Pounds.	Relative (1909–1913=100).	Price per pound (cents).	Relative price (1910–1914=100).
1909	(2)	312,131,171	150	1,083,682	311,047,489	153		
1910	(2)	180,134,981	87	9,056,226	171,078,755	84	20.7	116
1911	(2)	155,922,510	75	3,510,715	152,411,795	75	15.9	89
1912	(2)	238,118,350	115	1,816,258	236,302,092	116	18.0	101
1913	(2)	151,813,703	73	3,859,929	147,953,774	73	16.7	94
1914	(2)	260,164,525	125	6,425,922	253,738,603	125	17.6	99
1915	(2)	412,721,292	199	2,097,951	410,623,341	202	22.5	126
1916	3,918,992	449,189,924	216	2,155,776	443,115,156	217	27.6	155
1917	1,827,324	420,994,547	203	1,421,028	417,746,195	205	47.2	265
1918	406,944	453,727,372	219	515,411	452,805,017	222	58.0	326
1919	2,839,980	445,892,834	215	5,624,208	437,428,646	215	51.0	287
1920	8,845,270	259,617,641	125	12,635,929	238,136,442	117	38.1	214
1919.								
January	26,813	28,140,834	163		28,114,021	166	55.2	310
February	75,088	20,415,225	118	72,899	20,267,238	119	51.1	287
March	95,426	21,436,636	124	353,352	20,987,858	124	51.3	288
April	107,568	36,781,569	213		36,674,001	216	47.9	269
May	17,261	44,897,920	259		44,880,659	264	48.0	270
June	29,400	56,282,110	327	140,371	56,112,339	330	50.5	284
July	151,364	36,577,684	211	146,735	36,279,585	214	51.8	291
August	203,535	50,074,655	289	200,295	49,670,825	293	52.2	293
September	270,568	49,036,804	283	349,649	48,416,587	285	51.3	288
October	458,327	45,066,633	260	374,148	44,234,158	261	50.6	284
November	749,379	38,174,490	221	1,027,568	36,397,543	214	51.0	287
December	655,251	19,008,274	110	3,023,556	15,329,467	90	51.6	290
1920.								
January	480,293	41,950,071	242	201,399	41,268,379	243	53.5	301
February	392,613	26,103,165	151	1,096,565	24,613,987	145	52.5	295
March	683,029	33,031,931	191	1,372,267	30,976,635	182	51.5	289
April	1,132,994	54,085,770	313	779,257	52,173,519	307	51.3	288
May	613,104	13,388,934	77	2,423,086	10,352,744	61	50.3	283
June	1,200,212	21,079,627	122	2,247,970	17,631,445	104	38.6	217
July	781,898	9,444,610	55	717,855	7,944,857	47	29.5	166
August	683,320	14,447,810	83	572,871	13,191,619	78	28.3	159
September	863,316	11,736,534	68	1,178,680	9,694,538	57	28.0	157
October	915,056	8,706,292	50	698,893	7,092,343	42	27.5	154
November	716,348	12,250,505	71	473,593	11,160,564	65	24.9	140
December	604,437	13,392,392	77	652,143	12,135,812	71	21.9	123
1921.								
January	359,192	21,169,480	122	58,730	20,351,558	120	19.6	110
February	69,639	42,885,968	248	32,205	42,784,124	252	19.8	111
March	104,942	98,103,098	567	370,812	97,627,344	575	18.9	106
April	200,357	65,402,831	378	147,102	65,055,372	383	17.9	100.1
May	213,510	14,744,598	85	37,542	14,493,546	85	16.0	90
June	293,004	5,951,755	34	26,353	5,632,398	33	15.4	87
July	193,574	9,396,864	54	95,854	9,107,436	54	15.5	87
August	92,702	15,866,744	92	41,561	15,732,481	93		

[1] From United States Department of Agriculture Year Book, 1920; Monthly Crop Reporter, January-August, 1921.

[2] Included in "All other articles" prior to Jan. 1, 1916. No deduction of exports has therefore been made prior to 1916.

The net imports of wool in 1920 was somewhat above the 1909–1913 average and about 200,000,000 pounds below the average of 1915 to 1920. The peak of post-war imports was reached in June, 1919, and began to decline very rapidly after January, 1920. The peak of prices of wool was reached in January, 1919, but the price remained relatively high during all of that year. It began to decline definitely in January, 1920, at the same time that imports began definitely to fall off.

The following table, G–26, gives the consumption of wool, by years, from 1918 to 1920 and by months from January, 1919, to April, 1921.

TABLE G–26.—*The consumption of wool in the United States, 1913–1921.*

[Source: Market Reporter, United States Department of Agriculture.]

Wool.[1]		Wool.[1]		Wool.[1]	
Years and months.	Millions of pounds.	Years and months.	Millions of pounds.	Years and months.	Millions of pounds.
1913		1919—Continued.		1920—Continued.	
1914		June	48.8	June	40.6
1915		July	54.9	July	32.3
1916		August	48.9	August	32.8
1917		September	52.9	September	30.9
1918	61.8	October	60.0	October	33.7
1919	52.2	November	52.4	November	24.1
1920	48.2	December	55.5	December	20.8
1919.		1920.		1921.	
January	32.5	January	63.0	January	26.3
February	23.1	February	55.2	February	31.4
March	29.3	March	58.3	March	40.8
April	39.1	April	57.8	April	40.8
May	45.0	May	50.6		

[1] Grease equivalent.

The peak of consumption of wool in the United States was reached in January, 1920, since which time it has steadily declined. This decline in consumption was doubtless a factor in reducing the price, although the enormous surplus stock of wool in this country as well as in the world was a major factor in bringing about that result.

The following estimates of the United States Department of Agriculture show the world's position with respect to wool as of May, 1921:

	Pounds.
British Government old stock, May 1	700,000,000
New clip, Southern Hemisphere (Oct.–Dec., 1920)	1,500,000,000
United States (old wool)	750,000,000
European stocks (except British Government stocks)	300,000,000
New clip, Northern Hemisphere (excluding Asia and Eastern Europe)	750,000,000
Total	4,000,000,000

The consumption of 1920 was summed up as follows:

	Pounds.
Western Europe	1,200,000,000
North America	600,000,000
Southern Hemisphere	100,000,000
Total	1,900,000,000

The world stock of wool is generally estimated at 2,000,000,000 pounds, or two-thirds of a year's clip. The world had, therefore, in 1920 about a two years' supply of wool.

Most of the governments engaged in the war had bought up large surplus stocks of wool in anticipation of war demands, and with the decline of this demand, consumption rapidly fell the world over. This, coupled with the surplus stocks which came on the market in 1920, was without doubt the major factor in inducing the rapid and disastrous decline in wool prices which occurred the latter half of 1920 and the first half of 1921.

BEEF AND VEAL.

Table G–27, on page 113, brings together the factors of beef and veal production, storage, imports, exports, consumption, and price. The post-war production of beef and veal reached their peak in October, 1919. Storage of beef and veal reached the high point in January, 1920. Imports of beef, while only a small per cent of beef and veal production, reached their peak in September, 1920. Total supplies of beef and veal including storage reached the high point in October, 1919. Exports of beef reached the high point in October, 1919, but did not begin to fall off definitely until June, 1920. During the last five months of 1920 exports of beef and veal were about one-third what they had been in the preceding six months, and during the first six months in 1921 were about one-fifth of what they had been in the last six months of 1919.

Imports of beef in the last six months of 1920, with the exception of July and December, 1920, exceeded exports. Consumption of beef and veal fell off definitely in November, 1919. Prices of beef and veal combined began to decline in August, 1919, recovering slightly in the four months beginning June, 1920. The price began to decline again in October, 1920, and has continued to decline until June, 1921.

TABLE G-27.—*Meat production, distribution and supply, beef and veal, July, 1919–May, 1921.*

[Department of Agriculture.]

	Storage at the beginning of the month.	Beef and veal production.	Imports.[1]	Total supplies.	Apparent consumption.	Exports.[1]	Storage at the end of the month.	Total utilization.	Weighted index of wholesale prices of beef and veal (monthly average 1910–1914=100).[2]
1919—July	191,883,108	509,978,535	2,794,176	704,655,819	497,064,986	17,869,115	190,221,718	704,655,819	174
August	190,221,718	503,305,660	3,055,116	696,582,494	485,521,367	13,465,820	197,595,307	696,582,494	191
September	197,595,307	493,227,688	3,356,870	694,177,865	478,732,461	11,874,003	203,571,401	694,177,865	185
October	203,571,401	595,925,557	3,158,175	802,655,133	544,497,616	36,366,455	221,791,062	702,655,133	188
November	221,791,062	547,170,749	3,576,785	772,538,596	493,459,707	20,221,214	258,857,675	772,538,596	190
December	258,857,675	519,135,548	3,365,971	781,359,194	471,411,504	11,083,673	298,864,017	781,359,194	190
1920—January	298,864,017	491,917,267	2,717,415	793,498,699	479,122,205	25,624,366	288,752,128	793,498,699	185
February	288,752,128	382,993,099	2,276,408	674,021,635	398,477,725	15,397,382	260,146,528	674,021,635	172
March	260,146,528	438,177,179	2,981,915	701,305,622	460,193,738	9,174,398	231,937,486	701,305,622	169
April	231,937,486	412,312,229	5,195,400	649,445,115	427,121,310	21,535,503	200,788,302	649,445,115	176
May	200,788,302	417,307,423	4,138,798	622,234,523	451,626,367	13,336,980	157,271,176	622,234,523	165
June	157,271,176	382,244,897	5,819,305	545,335,378	401,805,480	21,877,993	121,651,905	545,335,378	186
July	121,651,905	380,452,778	2,778,844	504,883,527	391,099,734	12,697,654	101,086,139	504,883,527	207
August	101,086,139	381,929,585	5,618,896	488,634,620	395,185,974	3,727,314	89,721,332	488,634,620	203
September	89,721,332	440,289,533	5,808,068	535,818,933	453,941,918	3,822,461	78,054,554	535,818,933	206
October	78,054,554	434,714,575	5,251,153	518,020,282	426,280,569	2,724,793	89,014,920	518,020,282	195
November	89,014,920	447,986,206	5,437,271	542,438,397	425,316,237	5,052,747	112,069,413	542,438,397	186
December	112,166,060	369,177,688	2,158,633	483,502,381	335,760,540	5,037,343	142,704,498	483,502,381	166
1921—January	142,812,694	387,869,840	4,273,228	534,955,762	383,726,066	8,352,402	142,877,294	534,955,762	147
February	142,891,255	302,991,809	1,167,706	447,050,770	297,681,531	4,463,515	144,905,724	447,050,770	133
March	146,408,568	375,696,163	1,741,384	523,846,115	382,542,332	3,259,133	138,044,650	523,846,115	140
April	138,344,733	347,569,475	2,571,947	488,486,155	364,440,333	1,945,468	122,100,354	488,486,155	143
May	122,187,869	345,784,107	3,293,252	471,265,228	358,963,215	2,340,208	109,961,805	471,265,228	139
June	109,552,746	391,686,605	1,855,874	503,095,225	404,187,853	2,358,101	96,549,271	503,095,225	135

[1] Imports and exports are of all beef excluding beef products, as tallow, etc.

[2] Index includes monthly average wholesale prices of beef, fresh carcass, good native steers, Chicago; beef, fresh native sides, New York; beef, salt, extra mess; veal, city dressed; steer, rounds No. 2, Chicago; steer, loins No. 2, fresh.

RECEIPTS AND SHIPMENTS OF LIVE STOCK.

Receipts of cattle and calves at the 15 principal live-stock markets reached their highest point in October, 1919, shortly after the peak of prices was reached in that year, as shown by Table G–28.

TABLE G–28.—*Receipts and shipments of live stock at 15 western markets.*[1]

[Monthly average, 1911–1913=100.]

[Bureau of Markets.]

RECEIPTS.

Year and month.	Cattle and calves.		Hogs.		Sheep.	
	Head.	Relative.	Head.	Relative.	Head.	Relative.
1919—January	1,656,046	164	4,603,335	209	1,079,377	79
February	1,096,118	116	3,451,894	168	774,881	61
March	1,094,614	109	2,842,663	129	847,842	62
April	1,255,379	125	2,823,484	128	970,070	71
May	1,262,065	125	3,049,223	139	934,613	68
June	1,122,782	111	3,061,838	139	1,116,003	82
July	1,527,881	152	2,411,539	110	1,558,767	114
August	1,541,133	153	1,595,759	73	2,200,229	162
September	1,871,042	186	1,704,944	78	2,890,831	212
October	2,317,487	230	2,160,079	98	2,405,511	176
November	2,046,664	203	2,715,955	124	1,743,189	128
December	1,650,315	164	3,785,870	172	1,589,237	116
1920—January	1,400,031	139	3,912,449	178	1,035,591	76
February	1,068,092	114	2,440,154	119	948,116	74
March	1,203,499	119	2,910,909	132	900,299	66
April	1,040,903	103	2,150,281	98	928,191	68
May	1,209,656	120	3,128,249	152	796,160	58
June	1,290,265	128	2,746,390	125	1,006,528	74
July	1,188,019	118	2,115,639	96	1,301,458	95
August	1,459,565	145	1,818,245	83	1,688,719	124
September	1,736,009	172	1,597,622	73	1,893,312	139
October	1,628,564	162	1,836,748	84	1,865,330	136
November	1,781,261	177	2,624,185	119	1,542,477	113
December	984,309	98	2,932,052	133	942,858	69
1921—January	1,191,814	118	3,339,419	152	1,112,024	81
February	835,686	89	2,902,107	141	972,647	76
March	1,119,548	118	2,390,480	109	1,161,549	85
April	994,916	89	2,279,495	104	1,077,806	79
May	1,062,988	105	2,401,246	109	1,097,976	80
June	1,117,111	111	2,671,462	122	1,130,874	83

SHIPMENTS.

1919—January	589,362	145	988,035	204	357,386	71
February	404,296	107	881,507	195	240,815	51
March	423,819	104	925,802	191	289,742	58
April	506,835	125	748,437	154	319,625	63
May	530,153	130	787,009	162	290,803	58
June	503,354	124	1,005,505	208	465,776	93
July	515,071	127	691,283	143	694,942	138
August	650,252	160	455,705	94	1,352,252	269
September	872,043	214	501,856	104	1,849,958	367
October	1,154,995	284	654,755	135	1,382,419	275
November	993,148	244	788,107	163	945,992	188
December	686,325	169	1,003,682	207	682,439	136
1920—January	548,841	135	1,026,763	212	403,382	80
February	427,608	113	814,253	180	334,012	71
March	418,310	103	923,526	191	298,878	59
April	414,967	102	712,087	147	373,381	74
May	515,062	127	822,907	170	316,002	63
June	528,273	130	797,946	165	399,613	79
July	508,199	125	737,923	152	644,357	128
August	640,295	157	627,670	130	899,342	179
September	819,371	202	540,812	112	1,027,510	204
October	866,327	213	584,742	121	1,192,912	237
November	810,284	199	784,468	162	952,159	189
December	472,748	116	943,515	195	384,646	76
1921—January	426,887	105	1,078,679	223	316,068	63
February	334,113	88	869,718	192	324,311	69
March	447,682	110	825,944	170	406,705	81
April	415,153	102	694,067	143	392,061	78
May	424,558	104	644,788	133	415,569	83
June	414,814	102	703,724	145	403,748	80

[1] Markets are: Chicago, Kansas City, Oklahoma City, Omaha, East St. Louis, St. Joseph, St. Paul, Sioux City, Cincinnati, Cleveland, Denver, Fort Worth, Indianapolis, Louisville, and Wichita.

Receipts during all of 1920 declined relatively as compared with 1919. There was, however, a seasonal increase in receipts during the latter half of 1920 which was doubtless somewhat augmented by increases in price during that period.

The total slaughter of beef and veal declined markedly in 1920 as did the relative per capita production of beef as indicated by slaughter. There was also a marked decline in the per capita consumption of beef in 1920. The decline in slaughter was undoubtedly due in part at least to the decline in price, while the fall in per capita consumption contributed to the price decline.

The slaughter of veal has markedly increased in recent years, both as indicated by total slaughter and relative per capita slaughter. This increase in slaughter has been accompanied by a marked increase of consumption, which has in its turn contributed to maintaining the price of veal relatively to the price of beef.

The increase noted in the slaughter of calves constitutes a menace to the food supply of the country which can not be viewed complacently. This marked increase in the slaughter of calves means that a smaller number of calves will be raised to maturity and the total supply of the country consequently diminished. The slaughter of calves during 1920 and 1921 was no doubt in part due to pressure for liquidation of loans which forced on the market a large number of calves and immature cattle. This results in depletion both of the herds and of the future meat supply of the country. The number of calves calved in 1920 was probably 2,600,000 less than in 1919 and 5,000,000 less than in 1918. Continuance of slaughter at this rate unless checked will lead to a marked decrease of cattle on farms and available meat supply in the future, with inevitably higher prices resulting. Not only have prices of cattle been inadequate to maintain production of beef cattle on a basis equivalent to the increase in consumption, but they have also resulted in slaughter of calves which otherwise might have been raised to increase the meat supply.

Table G–29, page 116, shows the actual and relative slaughter, exports, imports, and consumption of beef:

Tables G–30 and G–31, on pages 117–118, give the actual and relative exports, imports, and net exports of beef and beef products compared with weighted index of wholesale prices of beef and veal (monthly average price), 1910–1914 base, and the weighted index of price of cattle and steers per 100 pounds on the same base.

TABLE G–29.—*Estimated annual production, exports, imports, and consumption of beef and veal in the United States.*

[United States Department of Agriculture, Bureau of Animal Industry.]

BEEF.

Calendar year.	Slaughter.								Exports (million pounds).	Imports less re-exports (million pounds).	Consumption.		
	Actual number.	Relative increase in number.	Federally inspected (million pounds).	Other (million pounds).	Total (million pounds).	Relative increase in pounds slaughtered.	Pounds per capita.	Relative per capita.			Total (million pounds).	Per capita pounds).	Relative per capita average 1907–1916=100 (pounds).
1907	13,469,900	109	4,336	2,984	7,320	112	84	122	352	.....	6,968	79.7	117
1908	12,845,000	104	3,955	2,721	6,676	102	75	107	228	.....	6,448	72.4	106
1909	13,611,422	110	4,189	2,882	7,071	108	78	113	163	.....	6,908	76.2	112
1910	13,540,600	109	4,240	3,083	7,323	112	79	113	110	.....	7,213	78.1	115
1911	12,958,100	105	4,137	2,899	7,036	107	75	107	92	.....	6,944	73.9	109
1912	11,979,000	96	3,938	2,571	6,509	99	69	99	56	.....	6,453	67.5	99
1913	11,477,600	92	3,595	2,318	5,913	90	61	88	47	38	5,904	60.8	89
1914	11,004,500	89	3,601	2,038	5,639	86	58	84	95	265	5,809	58.9	87
1915	10,822,100	87	3,979	1,837	5,816	89	59	84	399	110	5,527	55.6	82
1916	12,026,700	97	4,362	1,756	6,118	93	61	88	287	20	5,851	58.1	85
1917	13,723,900	111	5,169	1,517	6,686	102	66	94	376	29	6,339	62.0	91
1918	15,750,400	127	5,885	1,756	7,641	117	74	107	728	112	7,025	67.8	100
1919	13,635,100	110	4,993	1,578	6,571	100	63	91	314	43	6,300	60.0	88
1920	12,176,400	97	4,451	1,660	6,111	93	58	84	164	53	6,000	56.4	83
VEAL.													
1907	6,026,800	104	210	416	626	108	7.1	117	.....	.....	626	7.1	115
1908	5,829,900	101	203	402	605	104	6.8	111	.....	.....	605	6.8	110
1909	6,515,976	113	230	454	684	118	7.5	123	.....	.....	684	7.5	121
1910	6,552,600	113	235	452	687	118	7.4	121	.....	.....	687	7.4	120
1911	6,264,500	108	229	428	657	113	7.0	115	.....	.....	657	7.0	113
1912	6,348,000	110	239	429	668	115	7.0	115	.....	.....	668	7.0	113
1913	5,284,500	91	176	312	488	84	5.0	82	.....	.....	488	5.0	81
1914	4,661,400	81	158	275	433	75	4.4	72	.....	.....	433	4.4	71
1915	4,639,500	81	168	260	428	74	4.3	71	.....	.....	428	4.3	70
1916	5,773,600	100	220	316	536	92	5.3	87	.....	.....	536	5.3	86
1917	7,030,700	121	296	366	662	114	6.5	107	.....	.....	662	6.5	105
1918	7,767,200	134	323	403	726	125	7.0	115	.....	.....	726	7.0	113
1919	9,041,000	156	373	478	851	146	7.9	130	.....	.....	851	8.1	131
1920	9,662,800	167	382	527	909	156	8.5	139	.....	.....	909	8.5	138

TABLE G–30.—*Exports, imports, reexports, and net exports of beef and beef products.*

Year and month.	Total beef and beef products.				Total beef.[1]				Total beef products.[2]			Weighted index number of wholesale prices of beef and veal (monthly average prices, 1910–1914 =100).[4]	Relative price of cattle, and steers, good to choice, per 100 pounds (1910–1914 =100).[5]
	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Net exports (pounds).[3]		
1909–10	282,877 242	.....	.....	282,877,242	127,405,575	.....	.....	127,405,575	155,471,667	.....	155,471,667	.....	.....
1910–11	262,128,044	.....	.....	262,128,044	93,618,984	.....	.....	93,618,984	168,509,060	.....	168,509,060	.....	.....
1911–12	230,297,201	.....	.....	230,297,201	64,378,658	.....	.....	64,378,658	165,918,543	.....	165,918,543	.....	.....
1912–13	163,495,762	.....	.....	163,495,762	40,059,655	.....	.....	40,059,655	123,436,107	.....	123,436,107	.....	.....
1913–14	145,955,007	180,137,183	118,313	34,182,176	33,125,111	180,137,183.	118,313	146,893,759	112,829,896	.....	112,829,896	.....	.....
1914–15	378,280,872	184,490,759	854,236	194,644,349	277,558,938	184,490,759	854,236	93,922,415	100,721,934	.....	100,721,934	.....	.....
1915–16	439,067,104	71,101,756	26,115,014	394,080,362	320,132,447	71,101,756	26,115,014	275,145,705	118,934,657	.....	118,934,657	.....	.....
1916–17	405,086,373	15,217,118	4,779,940	394,649,195	322,766,893	15,217,118	4,779,946	312,329,721	82,319,480	.....	82,319,480	.....	.....
1917–18	583,462,445	25,451,655	4,776,280	562,787,070	521,844,093	25,451,655	4,776,280	501,168,718	61,618,352	.....	61,618,352	.....	.....
1918–19	561,194,720	47,479,116	1,231,168	514,946,762	485,730,477	36,670,374	1,231,168	450,391,271	75,464,233	10,808,742	64,655,491	.....	.....
1919–20	324,537,382	53,187,770	743,060	272,092,672	217,110,962	42,436,333	743,060	175,417,689	107,426,420	10,751,437	96,674,983	.....	.....
1920–21	178,441,033	52,081,739	.....	126,359,294	55,182,365	40,319,240	.....	14,863,125	123,258,668	11,762,499	111,496,169	.....	.....
1919.													
January	42,077,116	3,817,533	27,980	38,287,563	36,103,492	3,658,790	27,980	32,472,682	5,973,624	158,743	5,814,881	196	232
February	30,686,052	4,008,910	24,007	26,701,149	25,534,317	3,744,631	24,007	21,813,693	5,151,735	264,279	4,887,456	196	233
March	27,163,781	3,348,217	.....	23,815,564	21,859,643	3,140,331	.....	18,719,312	5,304,138	207,886	5,096,252	200	234
April	39,558,429	4,579,658	.....	34,978,771	27,198,800	3,355,283	.....	23,843,517	12,359,629	1,224,375	11,135,254	201	231
May	28,990,359	3,917,702	122,276	25,194,933	23,469,190	3,718,029	122,276	19,873,437	5,521,169	199,673	5,321,496	198	224
June	43,962,937	4,895,982	663,683	39,730,638	26,553,328	1,537,601	663,683	25,679,410	17,409,609	3,358,381	14,051,228	169	195
July	25,496,381	3,162,766	34,670	22,368,285	17,369,115	2,794,176	34,670	14,609,609	8,127,266	368,590	7,758,676	174	213
August	28,185,135	3,188,972	379,284	25,375,447	13,465,820	3,055,116	379,284	10,789,988	14,719,315	133,856	14,585,459	191	222
September	25,399,717	4,342,339	.....	21,057,378	11,874,003	3,356,870	.....	8,517,133	13,525,714	985,469	12,540,245	185	212
October	45,744,954	4,032,799	.....	41,712,155	36,366,455	3,158,175	.....	33,208,280	9,378,499	874,624	8,503,875	188	222
November	28,662,350	5,649,705	.....	23,012,645	20,221,214	3,576,785	.....	16,644,429	8,441,136	2,072,920	6,368,215	190	221
December	19,710,786	5,613,364	.....	14,097,422	11,083,673	3,365,971	.....	7,717,702	8,627,113	2,247,393	6,379,720	190	215
1920.													
January	30,576,199	3,383,121	.....	27,193,078	25,624,366	2,717,414	.....	22,906,952	4,951,833	665,707	4,286,126	185	201
February	20,520,379	2,425,528	.....	18,094,851	15,397,382	2,276,408	.....	13,120,974	5,142,997	149,120	4,993,877	172	189
March	17,807,355	3,984,781	6,720	13,829,294	9,174,398	2,981,915	6,720	6,199,203	8,632,957	1,002,866	7,630,091	169	182

[1] Total beef includes canned, fresh, and pickled.

[2] Total beef products includes oleo oil and tallow.

[3] There were no reexports of beef products during this period.

[4] Index includes monthly average wholesale prices of beef, fresh carcass, good native steers, Chicago; beef, fresh native sides, New York; beef, salt, extra mess; veal, city dressed; steer, rounds No. 2, Chicago; steer, loins, No. 2, fresh.

[5] Price series from Bureau of Labor Statistics. For actual data see Table 3a. (Note table on prices.)

TABLE G-30.—*Exports, imports, reexports, and net exports of beef and beef products*—Continued.

Year and month.	Total beef and beef products.				Total beef.				Total beef products.			Weighted index number of wholesale prices of beef and veal (monthly average prices, 1910–1914 =100).	Relative price of cattle and steers, good to choice, per 100 pounds (1910–1914 =100).
	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Net exports (pounds).		
1920.													
April	29,852,198	5,418,327	20,363	24,454,234	21,535,503	5,195,400	20,363	16,360,466	8,316,695	222,927	8,093,768	176	175
May	24,936,558	5,032,075	182,600	20,087,083	13,336,980	4,138,798	182,600	9,380,782	11,599,578	893,277	10,706,301	165	159
June	27,841,410	6,953,993	119,423	21,006,840	21,877,993	5,819,305	119,423	16,178,111	5,963,417	1,134,688	4,828,729	186	189
July	18,858,149	4,019,176	51,890	14,890,863	12,697,654	2,778,844	51,890	9,970,700	6,160,495	1,240,332	4,920,163	207	194
August	9,348,251	7,999,311	.....	1,348,940	3,727,314	5,618,896	.....	1,891,582	5,620,937	2,380,415	3,240,522	203	193
September	10,588,766	7,459,822	.....	3,128,944	3,822,461	5,808,068	.....	1,985,607	6,766,305	1,651,754	5,114,551	206	192
October	13,802,484	9,063,519	.....	4,738,965	2,724,793	5,251,153	.....	2,526,350	11,077,691	3,812,366	7,265,325	195	185
November	14,203,760	5,682,704	.....	8,521,056	5,052,747	5,437,271	.....	384,524	9,151,013	245,433	8,905,580	186	184
December	15,177,371	3,694,385	.....	11,482,986	5,037,343	2,158,633	.....	2,878,710	10,140,028	1,535,752	8,604,276	166	152
1921.													
January	24,766,863	4,274,766	.....	20,492,097	8,352,402	4,273,228	.....	4,079,174	16,414,461	1,538	16,412,923	147	124
February	14,547,123	1,205,050	1,398,669	14,740,742	4,463,515	1,167,706	1,398,669	4,694,478	10,083,608	37,344	10,046,264	133	117
March	12,626,892	1,766,968	.....	10,859,924	3,259,133	1,741,384	.....	1,517,749	9,367,759	25,584	9,342,175	140	121
April	14,624,230	2,622,505	.....	12,001,725	1,945,468	2,571,947	.....	−626,479	12,678,762	50,558	12,628,204	143	110
May	15,911,294	3,416,284	51,705	12,546,715	2,340,208	3,293,252	51,706	−901,338	13,571,086	123,032	13,448,054	139	106
June	13,088,588	2,574,373	.....	10,514,215	2,358,101	1,855,874	.....	502,227	10,730,487	718,491	10,011,996	135	102

TABLE G-31.—*Relative exports, imports, reexports, and net exports of beef and beef products, based on Table G-30.*

Year and month.	Total beef and beef products.				Total beef.[1]				Total beef products.[2]			Monthly average prices (1910–1914=100).	
	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Net exports (pounds).[3]	Weighted index of wholesale prices.	Relative price of cattle, steers (per 100 lbs.).
1909–10	130	.....	.....	156	178	.....	.....	357	107	.....	107	.....	.....
1910–11	120	.....	.....	145	131	.....	.....	262	116	.....	116	.....	.....
1911–12	106	.....	.....	127	90	.....	.....	181	114	.....	114	.....	.....
1912–13	75	.....	.....	90	56	.....	.....	112	85	.....	85	.....	.....
1913–14	67	100	.....	.....	46	.....	.....	.....	78	.....	78	.....	.....
1914–15	174	102	.....	108	387	.....	.....	263	69	.....	69	.....	.....
1915–16	202	39	.....	218	446	.....	.....	770	82	.....	82	.....	.....
1916–17	187	8	.....	218	450	.....	.....	875	57	.....	57	.....	.....
1917–18	269	14	.....	311	728	.....	.....	1,403	42	.....	42	.....	.....
1918–19	258	26	.....	285	677	.....	.....	1,261	52	.....	44	.....	.....
1919–20	150	29	.....	150	303	.....	.....	491	74	.....	67	.....	.....
1920–21	82	29	.....	70	77	.....	.....	42	85	.....	77	.....	.....
1919.													
January	232	25	.....	253	604	.....	.....	1,091	49	.....	48	196	232
February	171	27	.....	177	427	.....	.....	733	43	.....	40	196	233
March	150	22	.....	158	366	.....	.....	629	44	.....	42	200	234
April	219	31	.....	231	455	.....	.....	801	102	.....	92	201	231
May	160	26	.....	166	393	.....	.....	668	46	.....	44	198	224
June	243	33	.....	263	442	.....	.....	863	144	.....	116	169	195
July	141	21	.....	148	290	.....	.....	491	67	.....	64	174	213
August	155	21	.....	168	225	.....	.....	362	122	.....	120	191	222
September	140	29	.....	139	199	.....	.....	286	112	.....	104	185	212
October	252	27	.....	277	608	.....	.....	1,116	77	.....	70	188	222
November	158	37	.....	153	338	.....	.....	559	70	.....	53	190	221
December	109	37	.....	93	185	.....	.....	259	71	.....	53	190	215
1920.													
January	169	23	.....	180	429	.....	.....	769	41	.....	35	185	201
February	113	16	.....	119	258	.....	.....	441	42	.....	41	172	189
March	98	27	.....	92	153	.....	.....	208	71	.....	63	169	182
April	165	36	.....	162	360	.....	.....	550	69	.....	67	176	175
May	138	33	.....	133	223	.....	.....	315	96	.....	88	165	159
June	154	47	.....	139	366	.....	.....	543	49	.....	40	186	189
July	104	27	.....	98	212	.....	.....	335	51	.....	41	207	194
August	52	53	.....	9	62	.....	.....	.....	46	.....	27	203	193
September	58	50	.....	21	64	.....	.....	.....	56	.....	42	206	192
October	76	61	.....	31	46	.....	.....	.....	91	.....	60	195	185
November	79	38	.....	57	84	.....	.....	.....	76	.....	74	186	184
December	84	25	.....	76	84	.....	.....	97	84	.....	71	166	152
1921.													
January	137	29	.....	135	140	.....	.....	137	136	.....	136	147	124
February	80	8	.....	97	75	.....	.....	158	83	.....	83	133	117
March	70	12	.....	72	54	.....	.....	51	77	.....	77	140	121
April	81	17	.....	80	32	.....	.....	.....	105	.....	104	143	110
May	87	23	.....	83	39	.....	.....	.....	112	.....	111	139	106
June	72	17	.....	70	39	.....	.....	17	89	.....	17	135	102

[1] Total beef includes canned, fresh, and pickled. [2] Total beef products includes oleo oil and allow. [3] There were no reexports of beef products during this period.

Exports of beef were highest in 1918–19 and fell off rapidly in succeeding years. The exports in 1920–21 were but a small fraction of those in 1917–18 and 1918–19. Exports of beef products, however, reached their peak in June, 1919, and have been maintained relatively with considerable increase in the first six months of 1921. Exports of beef and beef products combined were highest in 1917–18, declining rapidly in the succeeding three years. In 1920–21 they were about one-fourth of those of 1917–18. The peak of postwar exports was reached in June, 1919, and from that point, allowing for seasonal fluctuations, fell rapidly. The weighted index of beef and veal prices shows the price of beef and veal combined reached the peak in April, 1919, and declined steadily until May, 1920, when there was a sharp rise for four months, after which it declined continuously. The price of cattle (steers, good and choice) reached its peak in March, 1919, after which it declined steadily until May, 1920, when there was a slight recovery and then a constant decline until June, 1921. As previously indicated, the initial impulse in the direction of decline in the price of beef cattle was given by a decline in exports due in a large measure to falling off of war requirements and later by the declining purchasing power among city workers consequent to industrial depression.

The following Table G–32 gives the detailed export of beef and beef products:

TABLE G–32.—*The actual export of beef and beef products, 1909–1921.*

[Monthly Summary of Foreign and Domestic Commerce.]

Year and month.	Canned.	Fresh.	Pickled.	Oleo oil.	Tallow.	Total.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
1909–10	14,804,596	75,729,666	36,871,313	126,091,675	29,379,992	282,877,242
1910–11	10,824,504	42,510,731	40,283,749	138,695,906	29,813,154	262,128,044
1911–12	11,026,431	15,264,320	38,087,907	126,467,124	39,451,419	230,297,201
1912–13	6,840,348	7,362,388	25,856,919	92,849,757	30,586,350	163,495,762
1913–14	3,464,733	6,394,404	23,265,974	97,017,065	15,812,831	145,955,007
1914–15	75,243,261	170,440,934	31,874,743	80,481,946	20,239,988	378,280,872
1915–16	50,803,765	231,214,000	38,114,682	102,645,914	16,288,743	439,067,104
1916–17	67,536,125	197,177,101	58,053,667	67,110,111	15,209,369	405,086,373
1917–18	97,343,283	370,032,900	54,467,910	56,603,388	5,014,964	583,462,445
1918–19	108,459,660	332,205,176	45,065,641	59,292,122	16,172,111	561,194,710
1919–20	31,166,814	153,560,647	32,383,501	74,529,394	32,897,026	324,537,382
1920–21	10,785,306	21,084,203	23,312,856	106,414,800	16,843,868	178,441,033
1919.						
January	12,636,060	17,436,495	6,030,937	5,552,790	420,834	42,077,116
February	8,149,204	13,749,993	3,635,120	4,452,805	698,930	30,686,052
March	3,458,973	14,641,276	3,759,394	4,154,644	1,149,494	27,163,781
April	2,896,729	21,628,390	2,673,681	7,667,229	4,692,400	39,558,429
May	5,639,420	14,872,987	2,956,783	2,819,365	2,701,804	28,990,359
June	6,574,766	15,212,094	4,766,468	12,366,500	5,043,109	43,962,937
July	5,392,104	8,675,947	3,301,064	3,737,120	4,390,146	25,496,381
August	2,894,361	8,077,346	2,494,113	8,188,148	6,531,167	28,185,135
September	1,152,616	7,249,366	3,472,021	6,730,818	6,794,896	25,399,717
October	1,793,784	31,170,249	3,402,422	6,810,457	2,568,042	45,744,954
November	1,392,475	15,651,087	3,177,652	7,096,636	1,344,500	28,662,350
December	1,886,835	6,061,769	3,135,069	6,008,652	2,618,461	19,710,786
1920.						
January	1,081,643	22,872,223	1,670,500	3,816,303	1,135,530	30,576,199
February	735,132	13,010,793	1,631,457	3,258,343	1,884,654	20,520,379
March	847,397	6,036,166	2,290,835	6,550,578	2,082,379	17,807,355
April	1,606,737	17,687,306	2,241,460	7,704,030	612,665	29,852,198
May	5,976,493	4,304,038	3,056,449	10,592,846	1,006,732	24,936,558
June	6,787,622	12,526,669	2,563,702	4,035,563	1,927,854	27,841,410
July	5,217,838	5,506,812	1,973,004	3,833,162	2,327,333	18,858,149
August	1,231,070	343,352	2,152,892	3,660,931	1,960,006	9,348,251
September	244,261	1,964,543	1,613,657	5,819,421	946,884	10,588,766
October	207,503	522,251	1,995,039	10,580,005	497,686	13,802,484
November	282,761	3,091,895	1,678,091	7,492,012	1,659,001	14,203,760
December	399,916	1,583,434	3,053,993	6,943,277	3,196,751	15,177,371

TABLE G–32.—*The actual export of beef and beef products, 1909–1921*—Continued.

Year and month.	Canned.	Fresh.	Pickled.	Oleo oil.	Tallow.	Total.
1921.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
January	548,227	6,078,550	1,725,625	15,088,402	1,326,059	24,766,863
February	1,733,678	979,081	1,750,756	9,250,483	833,125	14,547,123
March	504,356	508,230	2,246,547	8,348,238	1,019,521	12,626,892
April	366,682	214,193	1,364,593	12,219,737	459,025	14,624,230
May	326,459	191,366	1,822,383	13,145,292	425,794	15,911,294
June	186,647	167,318	2,004,136	9,951,967	778,520	13,088,588

During the period of the European war the export of fresh beef constituted a very large proportion of the total export of beef and beef products. This export was highest in the fiscal year 1917–18 and declined slightly in 1918–19. It declined about 50 per cent in 1919–20, and to almost the negligible quantity of 21,000,000 pounds in 1920–21. The export of canned beef was also large during the period of the European war, reaching its peak in 1919 with 108,000 000 pounds. It declined to 31,000,000 pounds in 1919–20 and to 10,000,000 pounds in 1920–21. Exports of oleo oil and tallow in general declined during the period of the European war and have somewhat increased during the two postwar years.

Examination of the figures month to month shows that the average monthly export of fresh beef in 1918–19 was approximately 30,000,000 pounds. The monthly export of fresh beef in 1919, as indicated by monthly figures, exceeds the monthly average of 1918–19 only in the month of October, 1919.

Beginning with February, 1920, the exports began to fall off without again recovering anything like the proportions existing even in the early part of 1919. The exports of canned beef began to fall off in February, 1919, and continued to fall off more or less constantly until May, 1921. Altogether, there can be no doubt that the falling off of exports, particularly of fresh and canned beef, was a large factor in the perpendicular decline in the price of beef and cattle which began early in 1919.

Chart G–3, page 122, shows graphically the course of per capita production, per capita consumption and total exports of beef and veal in their relation to the weighted prices of beef and veal and the price of steers (good and choice), by years, 1910 to 1920.

Chart G–4, page 123, is based on the same data by months, beginning with July, 1919, to June, 1921.

The chart shows a fairly normal relation between all of these factors in 1910 to 1914.

With the war demand, which began in 1914, exports of beef products rose with great rapidity. It was not until in 1916, however, that this increase in exports appeared to have a marked effect upon the price of beef and cattle. The larger part of this increase, however, was probably due to the general influences of expansion of the period.

Examination of chart G–4 shows the detail of the factors enumerated by months. Beginning with October, 1919, exports of beef and beef products began to decline with great rapidity, and during this decline the price of cattle and of beef also declined. Beginning with January, 1920, the available supply of beef, including slaughter, storage, and imports, began to decline, doubtless as a result of the descending price. This decline in supply resulted in a

CHART G–3.

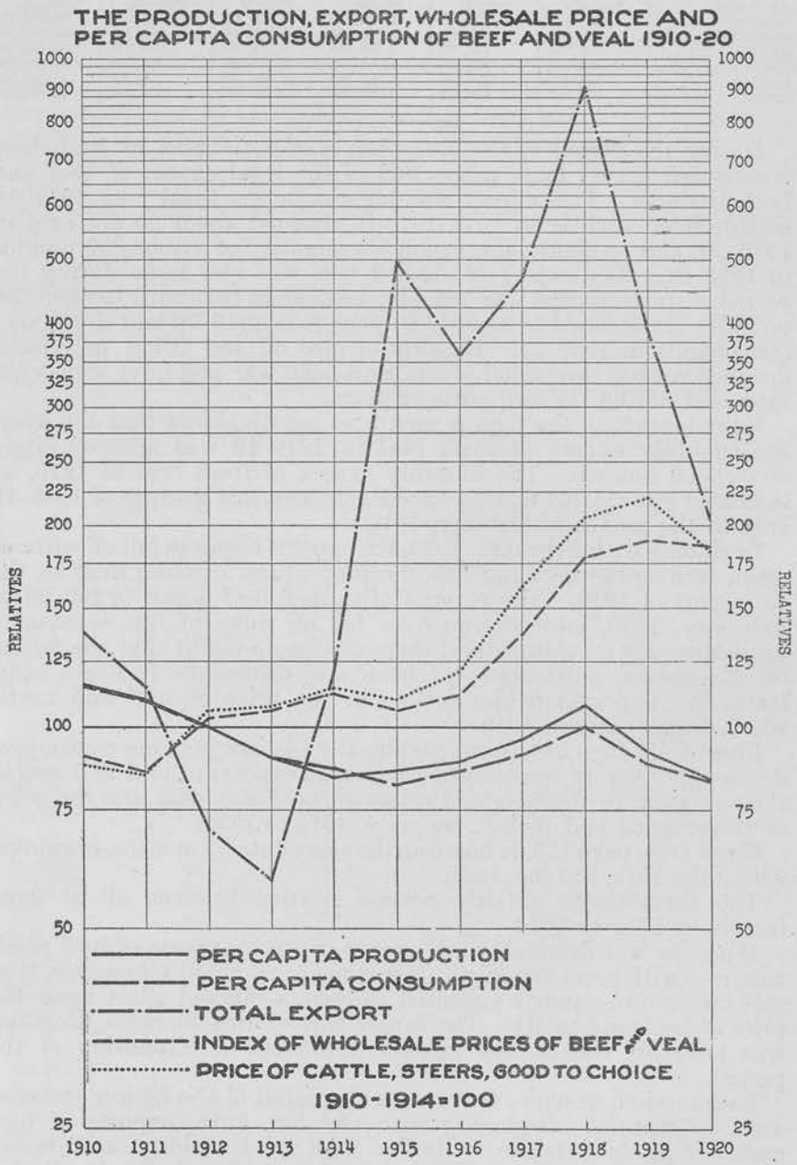
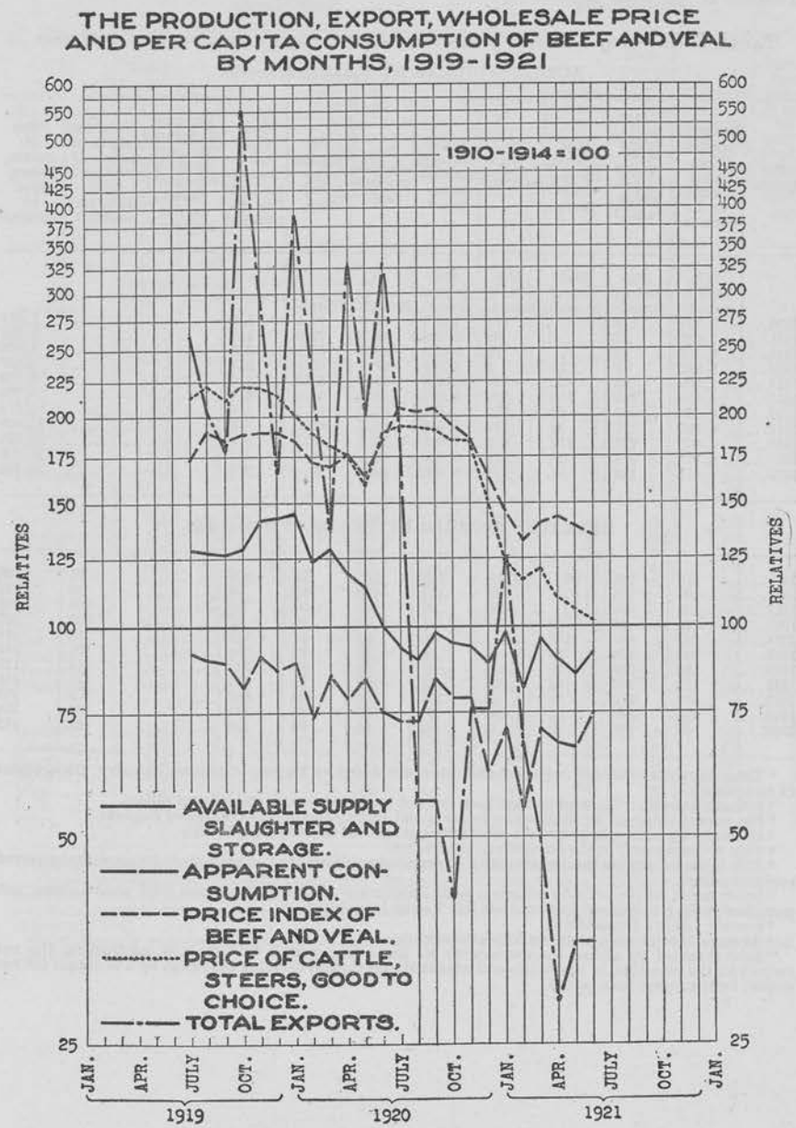


CHART G–4.



recovery of price between May and September, 1920. During this period exports of beef further declined, resulting in a further decline of price between September and February, 1921.

The details upon which the charts are based will be found in Tables G–33 and G–34.

TABLE G–33.—*Beef and veal production, export, import, consumption, and price.*

ACTUAL FIGURES BY YEARS, 1910–1920.

By years.	Domestic production, total slaughter in pounds.[1]	Export of domestic for calendar years.[2]	Net import, for calendar years.	Net export.[3]	Total amount for consumption.[4]	Per capita production.	Per capita consumption.	Per cent of domestic production exported.[5]	Per cent of domestic production exported, based on net exports.[6]	Weighted index of prices of beef and veal (1910–1914 =100).[7]	Price of cattle, steers, good to choice.[8]
	Millions of pounds.	*Millions of pounds.*	*Millions of pounds.*	*Millions of pounds.*	*Millions of pounds.*	*Pounds.*	*Pounds.*				
1910	7,323	110	.....	110	7,213	79.6	78.1	1.5	1.5	.....	7.017
1911	7,036	92	.....	92	6,944	75.2	73.9	1.3	1.3	.....	6.727
1912	6,509	56	.....	56	6,453	68.6	67.5	0.8	0.8	.....	8.402
1913	5,913	47	38	9	5,904	61.4	60.8	0.7	0.1	.....	8.507
1914	5,539	95	365	−170	5,809	57.7	58.9	1.6	−3.0	.....	9.039
1915	5,816	399	110	289	5,527	58.8	55.6	6.7	4.9	.....	8.702
1916	6,118	287	20	267	5,851	61.0	58.1	4.6	4.4	.....	9.573
1917	6,686	376	29	347	6,339	65.7	62.0	5.5	5.1	.....	12.809
1918	7,641	728	112	616	7,025	74.1	67.8	9.5	8.0	.....	16.424
1919	6,571	314	43	271	6,300	62.9	60.0	4.7	4.0	.....	17.496
1920	6,111	164	53	111	6,000	57.8	56.4	2.6	1.8	.....	14.518

RELATIVE FIGURES BY YEARS (1910–1914=100).

1910	113	138	(9)	[10] 550	112	116	115	109	.....	91	88
1911	109	115	(9)	460	107	110	109	94	.....	88	85
1912	100	70	(9)	280	99	100	100	58	.....	103	106
1913	91	59	19	45	91	90	90	51	.....	106	107
1914	87	119	182	.....	90	84	87	116	.....	112	114
1915	90	498	55	1,445	86	86	82	485	.....	106	110
1916	94	359	10	1,335	91	89	86	333	.....	112	121
1917	103	470	14	1,735	98	96	91	399	.....	137	161
1918	118	910	56	3,030	109	108	100	688	.....	179	207
1919	101	393	21	1,355	98	92	88	341	.....	190	221
1920	94	205	26	555	93	84	83	188	.....	185	183

[1] Total slaughter, federally inspected and other, estimated by Bureau of Animal Industry, Department of Agriculture.
[2] Includes canned, fresh, and pickled beef, but not beef products, as oleo oil and tallow.
[3] Net export obtained by subtracting imports and adding reexports—Commerce Reports.
[4] Obtained by adding imports and subtracting exports of domestic and foreign.
[5] This is the per cent of the domestic crop exported.
[6] This is the per cent of the domestic crop exported after allowance has been made for amounts imported and reexported.
[7] Index based on the prices of following beef: Fresh, native sides; fresh carcass, good native steers; salt mess beef; veal, city dressed; steer rounds No. 2; steer loins No. 2.
[8] Source: Labor Department.
[9] Average 1913–14=100, since no imports previous.
[10] Base obtained by adding the net exports for the 4-year period 1910–13, and subtracting the net import for the year 1914, in which imports exceeded exports and dividing the result by 5 to obtain the net export for the 5-year base period.

TABLE G–33.—*Beef and veal production, export, import, consumption, and price*—Continued.

ACTUAL AND RELATIVE FIGURES, BY MONTHS, 1919–1921 (MONTHLY AVERAGE. 1910–1914=100).

By months.	Actual figures.					Relative figures.				
	Total supplies (storage products and imports).[11]	Total exports of domestic.[2]	Net exports.	Apparent consumption (total supplies, minus exports and storage).[12]	Per cent of supply exported.	Relative increase, total supply (monthly average, 1910–1914 =100).	Relative increase in apparent consumption (1910–1914 =100).	Relative increase, total export (base calendar years 1910–1920=100).	Weighted index of price of beef and veal (1910–1914 =100).[7]	Relative price of cattle steers, good to choice. 1910–1914=100.
	Millions of pounds.	*Millions of pounds.*	*Millions of pounds.*	*Millions of pounds.*						
1919.										
January	.....	.....	.....	.....	.....	.....	.....	.....	196	232
February	.....	.....	.....	.....	.....	.....	.....	.....	196	233
March	.....	.....	.....	.....	.....	.....	.....	.....	200	234
April	.....	.....	.....	.....	.....	.....	.....	.....	201	231
May	.....	.....	.....	.....	.....	.....	.....	.....	198	224
June	.....	.....	.....	.....	.....	.....	.....	.....	169	195
July	705	17.3	14.5	497	2.4	129	92	262	174	213
August	697	13.4	10.4	486	1.8	128	90	203	191	222
September	694	11.8	8.5	479	1.7	127	89	179	185	212
October	703	36.3	33.2	444	5.1	129	82	550	188	222
November	773	20.2	16.6	493	2.6	142	91	306	190	221
December	781	11.0	7.7	471	1.4	143	87	167	190	215
1920.										
January	793	25.6	22.9	479	3.2	145	89	388	185	201
February	674	15.3	13.1	398	2.2	124	74	232	172	189
March	701	9.1	6.1	460	1.2	129	85	138	169	182
April	649	21.5	16.3	427	3.3	119	79	326	176	175
May	622	13.3	9.1	452	2.1	114	84	202	165	159
June	545	21.8	16.0	402	4.0	100	75	330	186	189
July	505	12.6	9.9	391	2.4	93	73	191	207	194
August	489	3.7	− 1.8	395	0.7	90	73	56	203	193
September	536	3.8	− 1.9	453	0.7	98	84	56	206	192
October	518	2.7	− 2.5	426	0.5	95	79	41	195	185
November	512	5.0	− 0.3	425	1.0	94	79	76	186	184
December	484	5.0	2.8	336	1.0	89	62	76	166	152
1921.										
January	535	8.3	3.5	384	1.5	98	71	126	147	124
February	447	4.4	3.2	298	0.9	82	55	67	133	117
March	523	3.2	1.4	383	0.6	96	71	49	140	121
April	488	1.9	− 0.6	364	0.3	90	68	29	143	110
May	471	2.3	− 0.9	359	0.4	86	67	35	139	106
June	503	2.3	0.5	404	0.4	92	75	35	135	102
July	.....	.....	.....	.....	.....	.....	.....	.....	.....	106

[2] Includes canned, fresh, and pickeled beef, but not beef products, as oleo oil and tallow.
[7] Index based on the prices of following beef: Fresh, native sides; fresh carcass, good native steers; salt mess beef; veal, city dressed; steer rounds No. 2; steer loins No. 2.
[11] Monthly production plus storage stocks plus imports. See Table, Production, distribution, and supply of beef and veal.
[12] Total supply as obtained under note (7), minus exports and amount remaining in storage at end of month. See table as in (7).

TABLE G-34.—*Actual price series composing the price index of beef and beef products.*[1]

[Quantities used as weight were those used by Department of Labor in their index of prices, and appear on page 175 of Wholesale Price Bulletin No. 269.]

Year and month.	Beef and veal.						Beef products.		Weighted index number of beef prices.	Weighted index number of price of beef products.	Weighted index number of price of beef and beef products.
	Beef, fresh carcass, good native steers, Chicago (average per pound).	Beef, fresh native sides, New York (average per pound).	Beef, salt, extra mess (average per pound).	Veal, city dressed (average per pound).	Steer, rounds, No. 2, Chicago (average per pound).	Steer, loins, No. 2 (average per pound).	Oleo oil (average per pound).	Tallow, packer's prime, Chicago (per pound).			
1910	$0.115	$0.103	$14.589	$0.136	$0.119	$0.151	$0.117	$0.073	91	106	92
1911	.112	.098	12.909	.129	.113	.145	.109	.065	88	97	88
1912	.133	.121	15.793	.146	.128	.150	.106	.062	103	93	103
1913	.130	.125	18.923	.181	.131	.158	.115	.071	106	104	106
1914	.136	.135	19.755	.185	.133	.184	.109	.069	112	100	112
1915	.129	.126	18,639	.182	.124	.171	.122	.069	106	106	106
1916	.138	.134	18,939	.190	.130	.181	.140	.099	112	135	113
1917	.167	.164	28,250	.226	.162	.217	.217	.156	137	211	140
1918	.221	.209	33,049	.274	.221	.299	.257	.179	179	246	182
1919	.233	.215	31,080	.302	.224	.366	.506	.154	190	253	192
1920	.230	.206	18,062	.316	.213	.371	.214	.131	185	193	185
1919.											
January	.245	.230	35.500	.297	.220	.358	.313	.110	196	226	198
February	.245	.228	35.500	.290	.220	.380	.302	.101	196	215	197
March	.245	.231	35.500	.293	.233	.390	.283	.103	200	207	201
April	.245	.231	35.500	.270	.246	.385	.294	.126	201	228	202
May	.245	.226	35.500	.255	.250	.366	.317	.149	255	198	200
June	.208	.198	35.500	.275	.225	.290	.329	.160	169	268	172
July	.208	.199	34.300	.305	.225	.296	.338	.205	174	303	179
August	.235	.211	31.250	.323	.238	.350	.308	.193	191	280	194
September	.228	.201	26.700	.335	.230	.850	.303	.170	185	245	187
October	.229	.213	23.250	.329	.208	.387	.283	.187	188	264	191
November	.235	.212	22.833	.325	.193	.435	.308	.172	190	266	193
December	.235	.213	22.100	.325	.200	.419	.305	.162	190	258	193
1920.											
January	.232	.210	18.625	.325	.200	.370	.294	.180	185	265	188
February	.213	.189	17.000	.325	.195	.358	.279	.160	172	244	175
March	.205	.193	17.000	.325	.190	.335	.260	.161	169	235	172
April	.209	.209	17.000	.339	.190	.344	.240	.157	176	223	177
May	.195	.192	17.000	.300	.190	.325	.210	.141	165	197	166
June	.223	.220	17.000	.280	.215	.373	.196	.120	186	176	185
July	.255	.221	18.125	.296	.276	.430	.182	.122	207	171	206
August	.255	.217	18.500	.320	.250	.418	.168	.128	203	168	202
September	.260	.228	19.250	.320	.240	.413	.195	.134	206	185	205
October	.252	.210	19.500	.320	.216	.406	.205	.120	195	181	194
November	.240	.202	19.500	.320	.205	.371	.178	.087	186	145	184
December	.222	.174	18.250	.320	.186	.307	.160	.065	166	122	164
1921.											
January	.174	.169	17.000	.315	.160	.300	.133	.068	147	111	146
February	.160	.146	17.000	.300	.143	.278	.129	.065	133	107	132
March	.163	.164	17.000	.300	.150	.288	.125	.058	140	100	139
April	.165	.164	17.000	.300	.160	.302	.100	.056	143	86	141
May	.165	.153	17.000	.300	.158	.293	.102	.060	139	90	137
June	.160	.149	13.750	.300	.155	.280	.097	.055	135	84	133
July	.149	.140	13.000	.300	.160	.280	.093	.056	130	83	128

[1] The price series and the amount of each commodity consumed used for weighting figure are from Bureau of Labor Statistics Wholesale Price Bulletin No. 269.

LEATHER.

Leather production in the year 1920 was materially below that of 1919. The monthly production thus far in 1921 has been below the monthly production of 1920. This decline in leather production was another factor in the decline of the wholesale prices of beef cattle.

The following table, G–35, gives the actual and relative production of leather from 1918 to 1921:

TABLE G–35.—*The actual and relative production of leather products, 1918–1921.*[1]

[Base year in bold-faced type.]

Year and month.	Relative to 1919.			Sole leather produced (sides).	Skivers produced. (dozens).	Oak and union harness (stuffed sides).
	Sole leather produced.	Skivers produced.	Oak and union harness.			
	A.—Index numbers.			B.—Numerical data.		
1918 monthly average	88	107	214	1,653,073	16,039	203,596
1919 monthly average	**100**	**100**	**100**	**1,876,285**	**15,032**	**95,244**
1920 monthly average	82	88	102	1,535,290	13,274	96,974
1920.						
January	91	99	100	1,704,269	14,837	95,457
February	82	74	107	1,532,115	11,140	101,989
March	94	82	116	1,764,387	12,347	110,606
April	85	80	116	1,589,756	12,014	110,830
May	91	108	111	1,706,003	16,229	105,568
June	95	103	106	1,786,466	15,535	100,718
July	81	84	105	1,513,844	12,563	99,748
August	70	88	102	1,322,594	13,275	97,580
September	73	92	100	1,375,763	13,788	95,204
October	78	97	101	1,459,073	14,626	96,243
November	70	87	77	1,315,631	13,034	73,265
December	72	66	70	1,353,581	9,896	66,482
1921.						
January	63	95	44	1,190,950	14,234	42,236
February	63	93	60	1,177,888	13,987	56,971
March	72	112	74	1,351,140	16,867	70,194
April	76	90	73	1,422,727	13,484	69,922
May	83	96	60	1,561,220	14,499	57,480
June	81	98	60	1,521,521	14,753	57,196

[1] From the Survey of Current Business, Bureau of Census, July, 1921. Supplied by the Tanner's Council.

PORK.

The production of pork in 1920 as indicated by Table G–36, on page 129, was relatively less than in 1918 or 1919 and larger than the prewar average of 1909–1914, as was also the per capita production. Exports of pork in 1920 were about one-half the exports in 1918–19, while consumption of pork in 1920 was slightly higher than in 1919 and lower than 1918.

The monthly production of pork reached its peak in January, 1920, and allowing for seasonal fluctuations, fell off rapidly thereafter. See Table G–37, page 130.

Exports of pork and pork products combined reached their peak in June, 1919, as did exports of pork and pork products separately. The price of pork reached its peak in July, 1919, and the price of hogs in the same month. Thereafter the price declined rapidly, with some recovery during the first 10 months of 1920, after which it began to decline with greater rapidity than before. The recovery during the early part of 1920 was apparently the result of reduced production and slaughter, as indicated in Table G–37, on page 130.

TABLE G–36.—*Estimated annual production, exports, imports, and consumption of pork in the United States.*

[United States Department of Agriculture, Bureau of Animal Industry.]

Year.	Slaughter.								Exports (million pounds).	Imports, less re-exports (million pounds).	Consumption.		
	Actual number.	Relative increase in number.	Federally inspected (million pounds).	Other (million pounds).	Total (million pounds).	Relative increase in pounds slaughtered.	Pounds per capita.	Relative per capita.			Total (million (pounds)	Per capita (pounds).	Relative per capita average 1907–1916=100 (pounds).
1907	55,737,900	95	4,420	3,071	7,491	101	86	109	1,014	.....	6,477	74.1	102
1908	65,496,800	112	4,853	3,373	8,226	111	92	116	619	.....	7,607	85.4	118
1909	53,219,568	91	3,946	2,744	6,690	90	74	94	472	.....	6,218	68.6	95
1910	44,073,500	75	3,470	2,411	5,881	79	64	81	313	.....	5,568	60.3	83
1911	58,022,000	99	4,481	3,080	7,511	101	80	101	456	.....	7,055	75.1	104
1912	56,022,000	96	4,242	2,947	7,189	97	76	96	440	.....	6,749	70.6	97
1913	57,973,500	99	4,420	3,072	7,492	101	78	99	456	3	7,039	72.5	100
1914	55,148,100	94	4,264	2,964	7,228	97	74	94	377	38	6,889	69.9	97
1915	65,064,000	111	4,749	3,801	8,050	109	81	103	906	7	7,151	72.0	99
1916	73,035,600	125	5,196	3,448	8,634	116	86	109	1,011	2	7,625	75.7	105
1917	57,488,800	98	4,071	2,830	6,901	93	68	86	943	10	5,968	58.4	81
1918	69,854,700	119	5,391	3,746	9,137	123	89	113	1,724	97	7,510	73.5	100
1919	70,867,500	121	5,469	3,800	9,269	125	89	113	1,897	11	7,383	70.3	97
1920	64,449,400	110	4,996	3,474	8,470	114	80	101	925	6	7,551	71.0	98

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TABLE G-37.—*Meat production, distribution and supply, pork, July, 1919–May, 1921.*

[Estimates by Bureau of Animal Industry, Department of Agriculture.]

	Storage at the beginning of month.	Production.	Imports.	Total supplies.	Apparent consumption.	Exports.	Storage at end of month.	Total utilization.	Weighted index of wholesale prices of pork (monthly average prices 1910–1914=100).[1]
1919—July	959,386,552	508,448,811	192,959	1,468,028,322	415,392,984	170,187,335	882,448,003	1,468,028,322	261
August	882,448,003	346,020,808	238,155	1,228,706,966	329,776,228	128,426,987	770,503,751	1,228,706,966	260
September	770,503,751	346,006,064	298,645	1,116,808,460	345,537,121	79,356,361	691,914,978	1,116,808,460	240
October	691,914,978	445,129,741	209,961	1,137,254,680	493,140,654	75,193,369	568,920,659	1,137,254,680	212
November	568,920,659	537,518,172	251,620	1,106,690,451	504,422,839	88,286,048	513,981,564	1,106,690,451	209
December	513,981,564	803,677,523	166,264	1,317,825,351	639,328,334	80,858,956	597,638,061	1,317,825,351	196
1920—January	597,638,061	877,517,644	127,155	1,475,282,860	600,497,301	98,022,290	776,763,269	1,475,282,860	190
February	776,763,269	528,251,841	234,013	1,305,249,123	291,930,814	109,968,321	903,349,988	1,305,249,123	194
March	903,349,988	601,077,235	45,249	1,504,472,472	423,306,085	112,437,421	968,728,966	1,504,472,472	196
April	968,638,966	433,315,896	69,611	1,402,024,473	397,372,456	43,945,805	960,706,212	1,402,024,473	212
May	960,706,212	578,870,436	148,410	1,539,725,058	506,321,972	74,065,359	959,337,727	1,539,725,058	209
June									
July	982,453,938	469,560,345	33,877	1,452,048,160	473,740,357	45,280,032	933,027,771	1,452,048,160	205
August	933,027,771	387,402,877	47,959	1,320,478,607	477,964,598	35,502,557	807,011,452	1,320,478,607	206
September	807,011,452	335,887,476	50,560	1,142,949,488	472,234,759	54,273,928	616,440,801	1,142,949,488	211
October	616,440,801	406,316,257	539,355	1,023,296,413	483,153,611	67,345,078	472,797,724	1,023,296,413	215
November	472,797,724	544,131,637	68,810	1,016,998,171	512,888,160	74,308,556	429,801,455	1,016,998,171	187
December	426,676,730	663,403,759	125,114	1,090,205,603	461,374,989	95,839,711	532,990,903	1,090,205,603	152
1921—January	533,980,299	744,128,368	37,492	1,278,146,159	542,139,055	81,884,584	654,122,520	1,278,146,159	151
February	669,831,693	664,634,168	33,183	1,334,499,044	437,955,450	56,650,984	839,892,610	1,334,499,044	147
March	837,158,377	531,629,685	138,539	1,368,926,601	468,982,794	59,484,893	840,458,914	1,368,926,601	159
April	842,906,257	521,521,309	39,341	1,364,466,907	499,641,297	63,753,089	801,072,521	1,364,466,907	160
May	802,190,132	560,757,505	30,207	1,362,977,844	472,233,107	89,733,872	801,010,865	1,362,977,844	149

[1] Weighted index number calculated from the monthly average prices of bacon, rough sides; bacon, short clear sides; hams, smoked loose; salt, mess pork; pork loins, fresh, Chicago; and pork loins, western, New York. Prices supplied by Bureau of Labor Statistics.

TABLE G-38.—*Actual and relative export, import, reexport, and net export of pork and pork products.*

[1909–1913=100.][1]

	Total pork and pork products.[2]				Total pork.[3]				Total pork products,[4] exports (pounds).	Weighted index number of wholesale prices of pork (monthly average 1910–1914=100).[5]	Relative increase in price of hogs, heavy (1910–1914=100).
	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).			
1909–10	707,110,062	.....	.....	707,110,062	344,182,391	.....	.....	344,182,391	362,927,671	.....	.....
1910–11	879,455,006	.....	.....	879,455,006	365,480,337	.....	.....	365,480,337	513,974,669	.....	.....
1911–12	1,071,951,724	.....	.....	1,071,951,724	477,377,950	.....	.....	477,377,950	594,573,774	.....	.....
1912–13	984,696,710	.....	.....	984,696,710	420,893,634	.....	.....	420,893,634	563,803,076	.....	.....
1913–14	921,913,029	4,624,799	168	917,288,398	411,131,451	4,624,799	168	406,506,820	510,781,578	.....	.....
1914–15	1,106,180,488	16,250,514	.....	1,089,929,974	604,627,526	16,250,514	.....	588,377,012	501,552,962	.....	.....
1915–16	1,459,532,294	2,169,084	195,960	1,457,559,170	998,094,366	2,169,084	195,960	995,925,282	461,437,928	.....	.....
1916–17	1,499,478,795	1,651,227	2,784	1,497,830,352	1,037,133,015	1,651,227	2,784	1,035,677,748	462,345,780	.....	.....
1917–18	1,691,437,435	1,847,733	170	1,689,589,702	1,294,672,551	1,847,733	170	1,292,827,602	396,764,884	.....	.....
1918–19	2,704,076,328	2,744,412	19,290	2,701,351,206	1,961,909,057	2,744,412	19,290	1,959,164,815	742,167,271	.....	.....
1919–20	1,761,716,951	2,132,944	118,966	1,759,702,973	1,151,290,375	2,132,944	118,966	1,149,176,721	610,426,576	.....	.....
1920–21	1,521,459,919	1,212,495	.....	1,520,247,424	752,758,260	1,212,495	.....	751,664,731	768,701,659	.....	.....
1919.											
January	197,963,757	305,914	34	197,657,877	160,032,259	305,914	34	159,726,379	37,931,498	.....	.....
February	236,420,008	227,161	10	236,192,857	167,294,674	227,161	10	167,067,523	69,125,334	.....	.....
March	341,296,151	314,032	28	340,982,147	240,493,664	314,032	28	240,179,660	100,802,487	.....	.....
April	348,039,703	174,869	19,118	347,883,952	255,910,871	174,869	19,118	255,755,120	92,128,832	.....	.....
May	180,889,959	240,745	.....	180,649,214	124,036,100	240,745	.....	123,795,355	56,853,859	.....	.....
June	400,392,306	59,030	55	400,333,330	283,199,094	59,030	55	283,140,119	117,193,712	.....	.....
July	258,960,492	192,959	39,430	258,806,963	170,187,335	192,959	39,430	170,033,806	88,773,157	.....	.....
August	179,503,253	238,155	113	179,265,211	128,426,987	238,155	113	128,188,945	51,076,266	.....	.....
September	117,762,778	498,645	90	117,264,223	79,356,361	498,645	90	78,857,806	38,406,417	.....	.....
October	117,943,823	209,961	.....	117,733,862	75,193,367	209,961	.....	74,983,406	42,750,456	.....	.....
November	131,163,740	251,620	60,572	130,912,691	88,286,048	251,620	60,572	88,095,000	42,877,692	.....	.....
December	144,797,994	166,264	100	144,631,830	80,858,956	166,264	100	80,692,792	63,939,038	.....	.....

[1] The monthly average for the 5-year period (obtained by dividing the total import for 5 years by the total number of months, usually 12) was used as the base for calculating the monthly relative figures.

[2] Includes bacon, hams, and shoulders, canned, fresh, and pickled; lard and neutral lard.

[3] Includes bacon, ham, and shoulders, canned and pickled.

[4] Total pork products includes neutral lard and lard which was 93 per cent of the total pork product exported in 1920; there were no imports or reexports of pork products during this period.

[5] Weighted index number calculated from monthly average prices of bacon, rough sides; bacon, short clear sides; hams, smoked; salt mess pork; fresh loins, Chicago; fresh loins, western, New York.

TABLE G-38.—*Actual and relative export, import, reexport, and net export of pork and pork products*—Continued.

	Total pork and pork products.				Total pork.				Total pork products, exports (pounds).	Weighted index number of wholesale prices of pork (monthly average 1910–1914 =100).	Relative increase in price of hogs, heavy (1910–1914 =100).
	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).	Exports (pounds).	Imports (pounds).	Reexports (pounds).	Net exports (pounds).			
1920.											
January	137,741,589	127,155	335	137,314,169	98,022,290	127,155	335	97,895,470	39,419,299	.....	.....
February	147,138,406	234,013	.....	146,904,393	109,968,321	234,013	.....	109,734,308	37,170,085	.....	.....
March	185,438,822	45,249	1,942	185,395,515	112,437,421	45,249	1,942	112,394,114	73,001,401	.....	.....
April	87,642,333	69,611	1,548	87,574,320	43,945,805	69,611	1,548	43,877,742	43,696,578	.....	.....
May	134,208,331	148,410	275	134,060,195	74,065,359	148,410	275	73,917,224	60,142,972	.....	.....
June	137,366,546	50,896	14,561	137,330,211	90,193,331	50,896	14,561	90,156,996	47,173,215	.....	.....
July	94,224,946	33,877	188	94,191,257	45,280,032	33,877	188	45,246,343	48,944,914	.....	.....
August	67,700,855	47,959	80	67,652,976	35,502,557	47,959	80	35,454,678	32,198,298	.....	.....
September	102,472,050	50,560	32	102,421,521	54,273,928	50,560	32	54,223,400	48,198,122	.....	.....
October	123,191,310	539,355	43	122,651,998	67,345,078	539,355	43	66,805,766	55,846,232	.....	.....
November	132,717,677	68,810	215	132,649,081	74,308,556	68,810	215	74,239,961	58,409,121	.....	.....
December	187,127,496	125,114	163	187,002,545	95,803,711	125,114	163	95,714,760	91,287,785	.....	.....
1921.											
January	161,694,263	37,492	5	161,656,776	81,884,584	37,492	5	81,847,097	79,809,679	.....	.....
February	151,335,856	33,183	101	151,302,774	56,650,984	33,183	101	56,617,902	94,684,872	.....	.....
March	143,168,389	138,539	532	143,030,382	59,484,893	138,539	532	59,346,886	83,683,496	.....	.....
April	118,191,654	39,341	116	118,152,429	63,753,089	39,341	116	63,713,864	54,438,565	.....	.....
May	141,041,345	30,207	38	141,011,176	89,733,872	30,207	38	89,703,703	51,307,473	.....	.....
June	128,908,358	68,058	.....	128,840,300	59,015,256	68,058	.....	58,947,198	69,893,102	.....	.....

[Yearly average, 1909–1913=100, for the period 1909–1913 to 1920–21, by years; monthly average, 1909–1913=100, for the period 1919–1921, by months.]

1909–10	77	.....	.....	78	85	.....	.....	85	71	.....	.....
1910–11	96	.....	.....	96	91	.....	.....	91	101	.....	.....
1911–12	117	.....	.....	118	118	.....	.....	118	117	.....	.....
1912–13	108	.....	.....	108	104	.....	.....	104	111	.....	.....
1913–14	101	100	.....	101	102	.....	.....	101	100	.....	.....
1914–15	121	352	.....	120	150	.....	.....	146	98	.....	.....
1915–16	160	48	.....	160	247	.....	.....	247	91	.....	.....
1916–17	164	37	.....	164	257	.....	.....	257	91	.....	.....
1917–18	185	39	.....	185	321	.....	.....	321	78	.....	.....
1918–19	296	58	.....	296	486	.....	.....	486	146	.....	.....
1919–20	193	45	.....	193	285	.....	.....	285	120	.....	.....
1920–21	167	26	.....	167	186	.....	.....	187	151	.....	.....
1919.											
January	260	79	.....	260	475	.....	.....	476	89	225	219
February	310	59	.....	310	497	.....	.....	497	163	220	220
March	448	81	.....	449	714	.....	.....	715	238	226	237
April	457	45	.....	458	760	.....	.....	762	217	244	256
May	238	63	.....	238	369	.....	.....	368	134	252	259
June	526	15	.....	526	842	.....	.....	843	276	249	258
July	340	50	.....	341	505	.....	.....	506	209	261	278
August	237	62	.....	236	382	.....	.....	382	120	260	266
September	155	129	.....	154	236	.....	.....	235	90	240	212
October	155	54	.....	155	223	.....	.....	223	101	212	183
November	173	65	.....	172	262	.....	.....	262	101	209	183
December	191	43	.....	190	240	.....	.....	240	151	196	171
1920.											
January	181	33	.....	181	291	.....	.....	291	93	190	189
February	193	61	.....	193	327	.....	.....	327	88	194	181
March	243	12	.....	243	334	.....	.....	334	172	196	180
April	116	18	.....	116	130	.....	.....	130	103	212	185
May	176	38	.....	176	220	.....	.....	220	142	209	175
June	180	13	.....	180	268	.....	.....	268	111	200	184
July	124	9	.....	124	135	.....	.....	135	115	205	186
August	89	12	.....	89	105	.....	.....	105	76	206	189
September	134	13	.....	134	161	.....	.....	161	114	211	207
October	162	140	.....	162	200	.....	.....	199	132	215	185
November	175	18	.....	174	221	.....	.....	221	138	187	151
December	246	32	.....	246	285	.....	.....	285	215	152	119
1921.											
January	213	10	.....	213	243	.....	.....	244	188	151	116
February	198	9	.....	199	168	.....	.....	169	223	147	114
March	188	36	.....	188	177	.....	.....	177	197	159	118
April	155	10	.....	155	189	.....	.....	190	128	160	103
May	185	8	.....	186	267	.....	.....	267	121	149	102
June	170	18	.....	168	175	.....	.....	175	165	144	101

The following Table G–39 gives details of exports of pork products by fiscal years, 1909–1910 to 1920–21, and by months beginning January, 1919, and concluding January, 1921.

TABLE G–39.—*The actual export of pork and pork products from the United States, 1913–1921.*

[Commerce Reports.]

Years and months.	Bacon.	Hams and shoulders.	Canned.	Fresh.
1909–10	152,163,107	146,885,385	4,062,022	1,040,278
1910–11	156,675,310	157,709,316	4,010,862	1,355,378
1911–12	208,574,208	204,044,491	5,839,902	2,597,880
1912–13	200,993,584	159,544,687	4,148,343	2,457,997
1913–14	193,964,252	165,881,791	3,074,303	2,668,020
1914–15	346,718,227	203,701,114	4,664,418	3,908,193
1915–16	579,808,786	282,208,611	9,610,732	63,005,524
1916–17	667,151,972	266,656,581	5,896,126	50,435,615
1917–18	815,294,424	419,571,869	5,194,468	21,390,288
1918–19	1,238,247,321	667,240,022	5,273,329	19,644,388
1919–20	803,666,917	275,455,931	3,261,967	27,224,941
1920–21	489,298,109	172,011,676	1,118,967	57,043,446
1919.				
January	102,679,002	54,846,433	237,728	31,583
February	114,840,110	49,283,053	391,865	868,684
March	151,086,397	85,712,462	816,325	737,008
April	141,814,255	109,569,968	827,723	1,238,471
May	67,663,813	49,099,877	809,033	4,368,255
June	172,441,100	96,854,552	480,928	10,291,375
July	117,679,193	47,452,834	249,374	2,413,319
August	84,150,798	40,147,727	466,423	1,544,243
September	57,209,378	18,209,239	638,506	536,803
October	56,462,312	13,090,972	392,479	1,443,469
November	65,288,382	16,840,285	310,771	1,411,914
December	58,982,754	15,688,297	170,501	1,891,854
1920.				
January	77,501,002	13,905,923	92,427	2,271,751
February	75,891,195	24,217,706	167,604	5,981,508
March	75,002,410	31,088,859	218,507	2,967,189
April	24,356,349	15,640,236	110,400	1,054,285
May	50,412,388	17,896,764	323,127	1,616,923
June	60,730,935	21,277,089	130,975	4,091,683
July	31,562,761	8,385,089	339,045	2,066,890
August	23,333,156	9,360,469	154,428	396,993
September	41,371,561	8,997,124	77,935	547,406
October	49,838,768	8,787,853	66,573	5,102,428
November	57,934,259	11,197,880	55,571	2,515,415
December	68,784,322	14,491,763	76,817	9,795,357
1921.				
January	43,202,486	16,869,341	31,192	18,691,971
February	31,612,140	15,847,799	125,796	5,914,797
March	35,350,774	19,102,633	42,732	2,964,420
April	32,851,837	24,925,807	31,997	3,937,597
May	68,464,256	15,508,520	29,533	3,173,520
June	35,011,966	18,536,898	89,389	2,039,244

TABLE G–39.—*The actual export of pork and pork products from the United States, 1913–1921*—Continued.

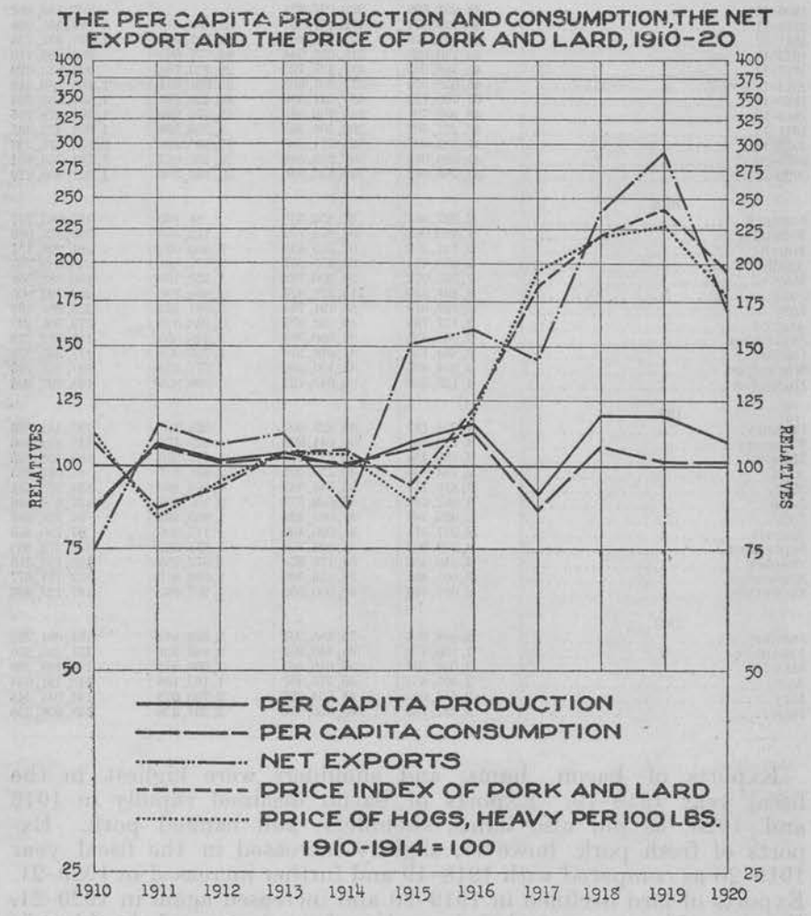
Years and months.	Pickled.	Lard.	Neutral lard.	Total pork and pork products.
1909–10	40,031,599	362,927,671		707,110,062
1910–11	45,729,471	476,107,857	37,866,812	879,455,006
1911–12	56,321,469	532,255,865	62,317,909	1,071,951,724
1912–13	53,749,023	519,025,384	44,777,692	984,696,710
1913–14	45,543,085	481,457,792	29,323,786	921,913,029
1914–15	45,655,574	475,531,908	26,021,054	1,106,180,488
1915–16	63,460,713	427,011,338	34,426,590	1,459,532,294
1916–17	46,992,721	444,769,540	17,576,240	1,499,478,795
1917–18	33,221,502	392,506,355	4,258,529	1,691,437,435
1918–19	31,503,997	724,771,383	17,395,888	2,704,076,328
1919–20	41,680,619	587,224,549	23,202,027	1,761,716,951
1920–21	33,286,062	746,157,356	22,544,303	1,521,459,919
1919.				
January	2,237,513	37,850,338	81,160	197,963,757
February	1,910,962	68,972,779	152,555	236,420,008
March	2,141,508	97,239,435	3,563,052	341,296,151
April	2,460,454	86,555,951	5,572,881	348,039,703
May	2,095,072	55,000,729	1,353,130	180,889,959
June	3,131,139	114,328,824	2,864,888	400,392,806
July	2,392,615	86,191,734	2,581,423	258,960,492
August	2,117,796	49,032,878	2,043,388	179,503,253
September	2,762,435	36,960,364	1,446,053	117,762,778
October	3,804,135	41,016,518	1,733,938	117,943,823
November	4,934,696	42,106,339	771,353	131,163,740
December	4,125,550	63,645,722	293,316	144,797,994
1920.				
January	4,251,187	38,823,902	595,397	137,441,589
February	3,710,308	36,644,906	525,179	147,138,406
March	3,160,456	69,429,785	3,571,616	185,438,822
April	2,784,535	40,758,401	2,938,177	87,642,383
May	3,816,157	55,544,483	4,598,489	134,208,331
June	3,962,649	45,069,517	2,103,698	137,366,546
July	2,926,247	47,061,422	1,883,492	94,224,946
August	2,257,511	31,020,802	1,177,496	67,700,855
September	3,279,902	46,326,353	1,871,769	102,472,050
October	3,549,456	54,173,979	1,672,253	123,191,310
November	2,605,431	57,316,309	1,092,812	132,717,677
December	2,691,452	90,080,092	1,207,693	187,127,496
1921.				
January	3,089,094	76,185,237	3,624,442	161,694,263
February	3,150,452	91,840,951	2,843,921	151,335,856
March	2,024,334	82,616,583	1,066,913	143,168,389
April	2,005,851	53,275,457	1,163,108	118,191,654
May	2,558,043	48,604,395	2,703,078	141,041,345
June	3,337,759	67,655,776	2,237,326	128,908,358

Exports of bacon, hams, and shoulders were highest in the fiscal year 1918–19. Exports of bacon declined rapidly in 1919 and 1920, as did also hams, shoulders, and canned pork. Exports of fresh pork, however, slightly increased in the fiscal year 1919–20 as compared with 1918–19 and further increased in 1920–21. Exports of lard declined in 1919–20 and increased again in 1920–21. Exports of bacon reached their peak in June, hams and shoulders in April, canned pork in April, fresh pork and lard in June, 1919. The decline in exports of pork products in the latter half of 1919 and during 1920 was doubtless in a large measure due to the failure of war demands for the supply of armies abroad and the failing purchasing power of European population.

Pork is essentially a poor man's food and consumption of pork maintains itself relatively well in periods of industrial depression. Consumption of beef, on the other hand, bears a very close relation to urban employment or unemployment and declines rapidly in periods of industrial depression.

Chart G–5 shows graphically the relation between the per capita production, per capita consumption, and net exports of pork and pork products and lard, and the price of hogs and the combined price of pork and lard.

CHART G–5.



The following Table, G–40, gives the statistical data in actual figures and indexes upon which the chart was based.

TABLE G–40.—*Pork and lard.*

Year.	Production.			Relative production, 1910–1914=100.[1]	Per capita production.[1]	Exports of pork and lard.[1]	Net imports of pork and lard.[1]	Net exports of pork and lard.[1]
	Pork.[1]	Lard.[1]	Total pork and lard.[1]					
1910	5,881	1,344	7,225	83	78	692	.....	692
1911	7,511	1,717	9,228	106	99	1,061	.....	1,061
1912	7,189	1,643	8,832	102	93	993	.....	993
1913	7,492	1,713	9,205	106	96	1,031	3	1,028
1914	7,228	1,652	8,880	102	91	837	38	799
1915	8,050	1,840	9,890	114	100	1,393	7	1,386
1916	8,634	1,973	10,607	122	106	1,465	2	1,463
1917	6,901	1,577	8,478	98	83	1,326	10	1,316
1918	9,137	2,089	11,226	129	109	2,279	97	2,182
1919	9,269	2,119	11,388	131	109	2,681	11	2,670
1920	8,470	1,936	10,406	120	100	1,561	6	1,556

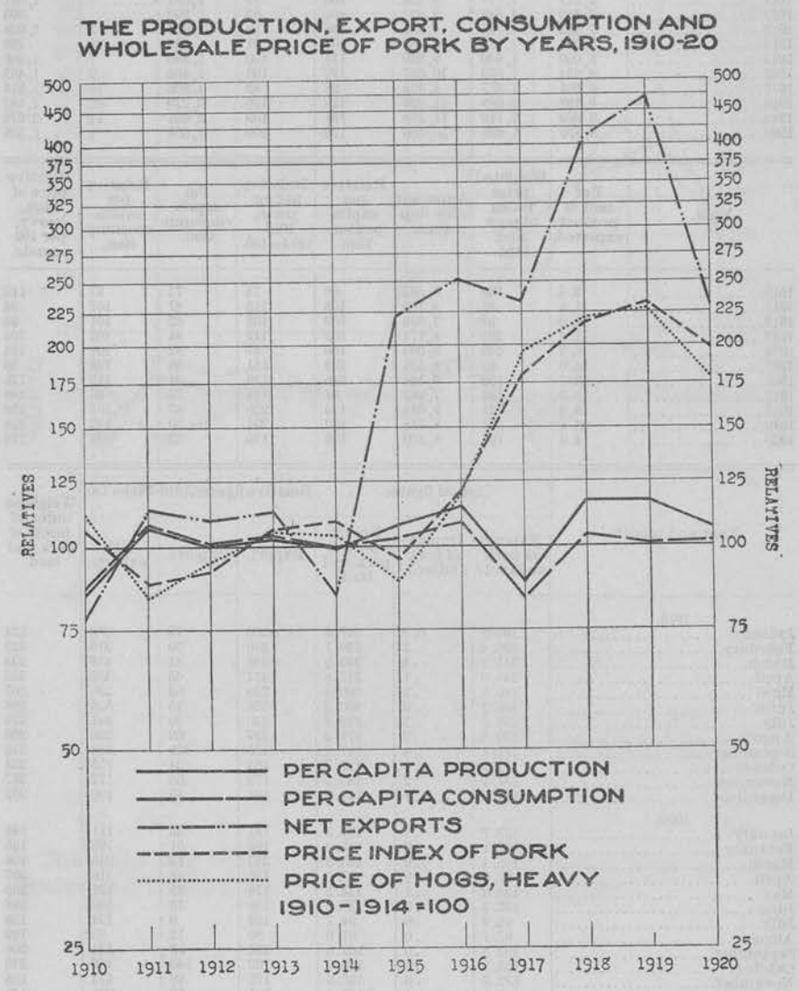
Year.	Per cent of product exported.	Weighted price index of pork and lard.	Apparent consumption.[1]	Relative per capita production.	Relative net exports, 1910–1914=100.	Per capita consumption.	Relative per capita consumption.	Relative price of hogs, heavy, per 100 pounds.
1910	9.5	108	6,533	86	75	71	87	112
1911	11.0	87	8,169	108	115	87	107	84
1912	11.0	93	7,839	102	108	82	101	95
1913	11.0	105	8,171	105	112	84	103	105
1914	8.9	106	8,084	100	87	82	101	104
1915	14.0	94	8,504	109	151	86	106	89
1916	13.7	122	9,144	116	159	91	112	120
1917	15.5	186	7,162	91	144	70	86	196
1918	19.4	221	9,044	119	238	87	107	220
1919	23.4	241	8,718	119	291	83	102	228
1920	14.9	195	8,850	109	170	83	102	178

Year and month.	Actual figures.			Relative figures, 1910–1914=100.			Weighted index of prices of pork and lard.
	Exports of pork and lard.[1]	Imports of pork and lard.[1]	Net export of pork and lard.	Export.	Imports.	Net export.	
1919.							
January	197.9	0.3	197.6	260	79	260	224
February	236.4	.2	236.1	310	59	310	223
March	341.2	.3	340.9	446	81	449	234
April	348.0	.1	347.8	457	45	458	255
May	180.8	.2	180.6	238	63	238	267
June	400.3	.0	400.3	526	15	526	266
July	258.9	.1	258.8	340	50	341	276
August	179.5	.2	179.2	237	62	236	266
September	117.7	.4	117.2	155	129	154	243
October	117.9	.2	117.7	155	54	155	223
November	131.1	.2	130.9	173	65	172	217
December	144.7	.1	144.6	191	43	190	202
1920.							
January	137.7	.1	137.3	181	33	181	198
February	147.1	.2	146.9	193	61	193	195
March	185.4	.0	185.3	243	12	243	196
April	87.6	.0	87.5	116	18	116	207
May	134.2	.1	134.0	176	38	176	205
June	137.3	.0	137.3	180	13	180	198
July	94.2	.0	94.1	124	9	124	199
August	67.7	.0	67.6	89	12	89	199
September	102.4	.0	102.4	134	13	134	206
October	123.1	.5	122.6	162	140	162	210
November	132.7	.0	132.6	175	18	174	185
December	187.1	.1	187.0	246	32	246	148
1921.							
January	161.6	.0	161.6	213	10	213	145
February	151.3	.0	151.3	198	9	199	140
March	143.1	.1	143.0	188	36	188	149
April	118.1	.0	118.1	155	10	155	146
May	141.0	.0	141.0	185	8	186	135
June	128.9	.0	128.8	170	18	168	133

[1] In millions of pounds; ciphers omitted.

It will be noted that up to 1913 these lines (chart G–5) ran fairly well together. At the beginning of 1915 exports of pork and pork products and lard began rapidly to rise, but the price of pork and lard and hogs did not begin to rise until nearly a year later. Doubtless a part of this rise in price was due to an increase in exports and the tremendous influence of war demands.

CHART G–6.



If the prices of pork and lard during this period are reduced to a basis of purchasing power, it will be found that only a part of the rise in price can be attributed to exports, and that the major part of the increase must be attributed to the general causes which induced an increase in prices of commodities.

Chart G–6, on page 138, shows the relation between the production of pork and pork products exclusive of lard and the exports of pork and pork products exclusive of lard, the per capita consumption exclusive also of lard, price of hogs, and the price of pork from 1910 to 1920 on the 1910–1914 base.

The general course of these elements as shown by this chart is not much different from the course indicated in chart G–5 on page 136, which is based upon the same products, including lard.

Chart G–7, on page 141, shows the relation of the same factors included in the preceding chart, G–6, page 138, by months, from January, 1919, to June, 1921.

It will be noted that there is apparently a very definite relation between the price of pork and pork products and hogs, and the exports of these products. With some irregularity the price of hogs has fallen in periods of falling exports and has risen as exports have increased.

Both charts G–6 and G–7 indicate the close relation sustained between the price of pork and the price of hogs.

Table G–41 and G–42, page 142, exhibit the statistical data and indexes from which the charts on page 138 and page 141 were drawn.

TABLE G–41.—*Pork.*

ACTUAL FIGURES BY YEARS.

Year.	Million pounds.					Pounds.		Per cent of product exported.	Weighted index of pork price, 1910–1914=100.	Relative price of hogs (heavy) per 100 pounds, 1910–1914=100.
	Total production.[1]	Exports calendar years.[2]	Imports (less reexports) calendar years.	Net exports.	Amount average for consumption.[3]	Per capita production.	Per capita consumption.			
1910	5,881	313	.....	313	5,568	64	60.3	5.3	.....	.....
1911	7,511	456	.....	456	7,055	80	75.1	6.0	.....	.....
1912	7,189	440	.....	440	6,749	75	70.6	6.1	.....	.....
1913	7,492	456	3	453	7,039	77	72.5	6.0	.....	.....
1914	7,228	377	38	339	6,889	74	69.9	4.6	.....	.....
1915	8,050	906	7	899	7,151	81	72.0	11.0	.....	.....
1916	8,634	1,011	2	1,009	7,625	86	75.7	11.6	.....	.....
1917	6,901	943	10	933	5,968	67	58.4	13.5	.....	.....
1918	9,137	1,724	97	1,627	7,510	88	72.5	17.8	.....	.....
1919	9,269	1,897	11	1,886	7,383	88	70.3	20.3	.....	.....
1920	8,470	925	6	919	7,551	80	71.0	10.8	.....	.....
RELATIVE FIGURES, BY YEARS (1910–1914=100).										
1910	83	77	.....	78	84	85	87	95	106	112
1911	106	112	.....	114	106	107	108	107	88	84
1912	102	108	.....	110	101	100	101	109	92	95
1913	106	112	15	113	106	103	104	107	106	105
1914	102	92	190	85	103	99	100	82	109	104
1915	114	222	35	222	107	108	103	196	96	89
1916	122	248	10	252	115	115	109	207	121	120
1917	98	231	50	233	90	89	84	241	181	196
1918	129	422	485	408	113	117	104	318	217	220
1919	131	463	55	470	111	117	101	363	233	228
1920	120	227	30	230	113	107	102	193	198	178

[1] Federally inspected and other slaughter.
[2] Exports of pork, exclusive of lard, includes bacon, hams, shoulders, canned, fresh and pickled pork.
[3] Production minus exports and reexports and plus imports.
[4] Total supply=slaughter Federally inspected and otherwise, plus imports and storage stocks at beginning of month.
[5] Total supplies minus export and storage at end of month.

TABLE G–41.—*Pork*—Continued.
BY MONTHS.

	Actual figures.					
	Total supply [4] (million pounds).	Exports [2] (million pounds).	Imports (million pounds).	Net exports.	Apparent consumption. [5]	Per cent of supply exported.
1919.						
January		160.0	0.3	159.7		
February		167.2	.2	167.0		
March		240.4	.3	240.1		
April		255.9	.1	255.7		
May		124.0	.2	123.7		
June		283.1		283.1		
July	1,468	170.1	.1	170.0	415.3	11.5
August	1,229	128.4	.2	128.1	329.7	10.4
September	1,117	79.3	.4	78.8	345.5	7.0
October	1,137	75.1	.2	74.9	493.1	6.6
November	1,107	88.2	.2	88.0	504.4	7.9
December	1,318	80.8	.1	80.6	639.3	6.1
1920.						
January	1,475	92.0	.1	97.8	600.4	6.2
February	1,305	109.9	.2	109.7	291.9	8.4
March	1,504	112.4		112.3	423.3	7.4
April	1,402	43.9		43.8	397.3	3.1
May	1,540	74.0	.1	73.9	506.3	4.8
June		90.1		90.1		
July	1,452	45.2		45.2	473.7	3.1
August	1,330	35.5		35.4	477.9	2.6
September	1,143	54.2		54.2	472.2	4.7
October	1,023	67.3	.5	66.8	483.1	6.5
November	1,017	74.3		74.2	512.8	7.3
December	1,090	95.8	.1	95.7	461.3	8.7
1921.						
January	1,278	81.8		81.8	542.1	6.9
February	1,334	56.6		56.6	437.9	4.2
March	1,369	59.4	.1	59.3	468.9	4.3
April	1,364	63.7		63.7	499.6	4.6
May	1,363	89.7		89.7	472.2	6.5

	Relative figures.						
	Relative supply.	Relative export.	Relative net export.	Relative consumption.	Relative per cent of supply exported.	Weighted index of prices of pork.	Relative price of hogs (heavy), 1910–1914=100.
1919.							
January		475	476			225	219
February		497	497			220	220
March		714	715			226	237
April		760	762			244	256
May		369	363			252	259
June		842	843			249	258
July	250	505	506	75	221	261	278
August	209	382	382	60	200	260	266
September	190	236	235	62	134	240	212
October	194	223	223	89	127	212	183
November	188	262	262	91	152	209	183
December	224	240	240	115	117	196	171
1920.							
January	251	291	291	108	119	190	189
February	222	327	327	52	162	194	181
March	255	334	334	76	142	196	180
April	238	130	130	72	60	212	185
May	261	220	220	91	92	209	175
June	250	263	268	90		200	184
July	246	135	135	85	60	205	186
August	226	105	105	86	50	206	189
September	194	161	161	85	90	211	207
October	173	200	199	87	125	215	185
November	171	221	221	92	140	187	151
December	185	285	285	83	167	152	119
1921.							
January	215	243	244	98	133	151	116
February	226	168	169	79	81	147	114
March	231	177	177	84	83	157	118
April	231	189	190	90	88	160	103
May	230	267	267	85	125	149	102
June						144	101

See page 139 for footnotes.

CHART G–7.

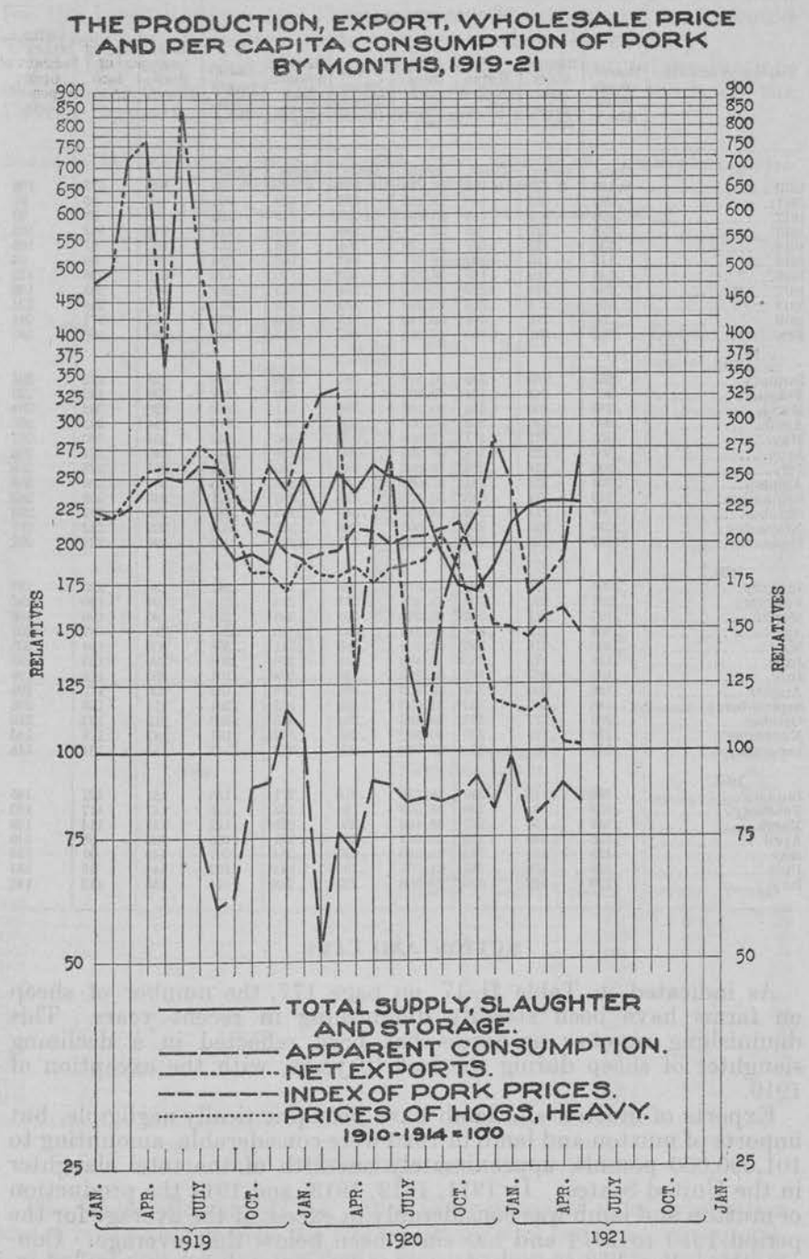


TABLE G–42.—*Price series composing the price index of pork and pork products.*

Years and months.	Monthly average price.							Index of pork prices.	Index of lard prices.	Index of pork and pork products.
	Bacon, rough sides (lbs.).	Bacon, short clear sides (lbs.).	Hams smoked (lbs.).	Salt, mess pork (barrel).	Fresh loins, Chicago (lbs.).	Loins, western New York (lbs.).	Lard, prime contract (lbs.).			
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*			
1910	0.129	0.133	0.164	23.738	0.140	0.142	0.125	106	117	108
1911	.093	.095	.140	19.159	.126	.129	.091	88	85	87
1912	.108	.111	.143	19.285	.129	.132	.105	92	98	93
1913	.124	.127	.166	22.471	.149	.152	.110	106	103	105
1914	.130	.132	.167	22.736	.154	.163	.104	109	97	106
1915	.113	.116	.153	18.317	.143	.148	.094	96	88	94
1916	.146	.149	.185	26.770	.162	.170	.135	121	126	122
1917	.238	.248	.252	41.765	.244	.245	.217	181	203	186
1918	.261	.279	.318	48.240	.295	.312	.255	217	238	221
1919	.266	.291	.343	52.190	.315	.350	.290	233	271	241
1920	.192	.207	.333	37.273	.307	.315	.199	198	186	195
1919.										
January	.263	.289	.349	50.375	.295	.309	.238	225	222	224
February	.266	.283	.334	49.625	.270	.320	.252	220	235	223
March	.282	.305	.338	50.125	.294	.311	.280	226	262	234
April	.295	.326	.360	55.000	.320	.345	.313	244	292	255
May	.305	.331	.377	57.688	.322	.350	.342	252	320	267
June	.302	.333	.381	58.250	.300	.338	.347	249	324	266
July	.303	.337	.384	58.900	.343	.385	.351	261	328	276
August	.303	.333	.384	57.063	.362	.380	.306	260	286	266
September	.249	.274	.348	50.150	.378	.385	.271	240	253	243
October	.208	.227	.290	44.125	.345	.384	.280	212	262	223
November	.216	.232	.286	46.667	.288	.388	.259	209	242	217
December	.207	.226	.289	47.050	.251	.303	.240	196	224	202
1920.										
January	.204	.221	.294	44.875	.244	.276	.241	190	225	198
February	.207	.220	.306	43.438	.273	.278	.210	194	196	195
March	.197	.211	.316	42.300	.293	.283	.210	196	196	196
April	.204	.219	.331	42.813	.342	.345	.200	212	187	207
May	.200	.218	.356	42.250	.283	.341	.208	209	194	205
June	.198	.212	.365	40.400	.278	.276	.206	200	193	198
July	.193	.207	.377	36.250	.328	.299	.191	205	178	199
August	.186	.200	.373	32.900	.368	.318	.189	206	177	199
September	.188	.202	.363	31.000	.403	.363	.201	211	188	206
October	.203	.217	.358	30.500	.384	.405	.206	215	192	210
November	.178	.191	.307	30.800	.293	.353	.191	187	178	185
December	.151	.164	.258	29.750	.206	.253	.143	152	134	148
1921.										
January	.136	.143	.249	29.750	.218	.271	.136	151	127	145
February	.132	.144	.260	31.500	.193	.233	.125	147	117	140
March	.142	.154	.273	30.100	.253	.258	.122	159	114	149
April	.136	.139	.276	28.063	.270	.281	.105	160	98	146
May	.126	.134	.273	25.350	.223	.264	.097	149	91	135
June	.128	.138	.282	24.250	.195	.245	.102	144	95	133
July	.129	.142	.320	24.500	.223	.248	.121	155	113	145

MUTTON AND LAMB.

As indicated in Table H–17, on page 177, the number of sheep on farms have been steadily diminishing in recent years. This diminishing number on farms has been reflected in a declining slaughter of sheep during the last 10 years, with the exception of 1919.

Exports of mutton and lamb have been practically negligible, but imports of mutton and lamb in 1920 were considerable, amounting to 101,000,000 pounds, approximately one-fifth of the total slaughter in the United States. In 1911, 1912, 1913, and 1914 the production of mutton and lamb was considerably in excess of the average for the period 1910 to 1914 and has since been below that average. Consumption has likewise shown a tendency to decrease somewhat,

although higher in 1920 than in 1919. On the whole, production of mutton and lamb has been rapidly decreasing, and had it not been for the large imports of 1920 the price of mutton and lamb would doubtless have remained upon a higher level in this country.

The following table, G–43, gives the estimated annual production, exports, imports, and consumption of mutton and lamb in the United States for the calendar years 1907 to 1920.

TABLE G–43.—*Estimated annual production, exports, imports, and consumption of mutton and lamb in the United States.*

[United States Department of Agriculture, Bureau of Animal Industry.]

Year.	Slaughter.								Exports.	Imports (less re-exports).	Consumption.		
	Actual number.	Relative increase in number.	Federally inspected.	Other.	Total.	Relative increase in pounds slaughtered.	Pounds per capita.	Relative per capita.			Total.	Per capita.	Relative per capita average, 1907–1916=100.
			Million pounds.	*Million pounds.*	*Million pounds.*				*Million pounds.*	*Million pounds.*	*Million pounds.*	*Pounds.*	*Pounds.*
1907	13,300,600	82	431	128	559	85	6.4	93	1	.....	558	6.4	92
1908	13,368,800	82	428	127	555	85	6.2	90	1	.....	554	6.2	89
1909	14,724,699	91	466	138	604	92	6.6	96	2	.....	602	6.6	95
1910	14,800,200	91	463	137	600	92	6.5	94	2	.....	598	6.5	94
1911	18,189,500	112	569	169	738	113	7.8	113	3	.....	735	7.8	113
1912	19,433,400	120	608	180	788	120	8.3	120	5	.....	783	8.2	118
1913	18,689,400	115	569	169	738	113	7.6	110	5	1	734	7.5	108
1914	18,460,500	114	555	165	720	110	7.3	106	4	20	736	7.5	108
1915	15,843,000	98	482	144	626	96	6.3	91	4	12	634	6.4	92
1916	15,492,200	95	472	140	612	94	6.1	88	5	16	623	6.2	89
1917	12,123,800	75	364	109	473	72	4.5	65	3	6	476	4.7	68
1918	13,385,100	82	402	120	522	80	5.0	72	2	1	521	5.0	72
1919	16,460,600	101	482	144	626	96	5.9	86	3	8	631	6.0	87
1920	14,247,800	88	428	128	556	85	5.2	75	4	101	653	6.1	88

TOTAL MEAT PRODUCTION AND CONSUMPTION.

The table following, G–44, gives the volume of meat production and of lard production in the United States, and the exports, imports, and actual and relative per capita consumption of meats and lard in United States by years, 1907 to 1920.

TABLE G-44.—*Estimated annual production, exports, imports, and consumption of lard and all meats in the United States.*

[United States Department of Agriculture, Bureau of Animal Industry.]

LARD.

Calendar year.	Slaughter.			Exports (million pounds).	Imports, less exports (million pounds).	Total (million pounds).	Consumption.	
	Total (million pounds).	Federal inspected (million pounds).	Other (million pounds).				Per capita (pounds).	Relative per capita average, 1907–1916=100 (pounds).
1907	1,693	993	690	589	.....	1,094	12.5	101
1908	1,834	1,094	760	582	.....	1,272	14.3	115
1909	1,506	888	618	458	.....	1,048	11.6	94
1910	1,344	793	551	379	.....	965	10.5	85
1911	1,717	1,013	704	605	.....	1,112	11.8	95
1912	1,643	969	674	553	.....	1,090	11.4	92
1913	1,713	1,011	702	575	.....	1,138	11.7	94
1914	1,652	975	677	460	.....	1,192	12.1	98
1915	1,840	1,086	754	487	.....	1,353	13.6	110
1916	1,973	1,164	809	454	.....	1,519	15.1	122
1917	1,577	930	647	383	.....	1,194	11.7	94
1918	2,089	1,233	856	555	.....	1,534	14.8	119
1919	2,119	1,250	869	784	.....	1,335	12.7	102
1920	1,936	1,142	794	636	.....	1,300	12.2	98
ALL MEATS.[1]								
1907	16,003	9,399	6,604	1,367	.....	14,636	167.4	109
1908	16,067	9,441	6,626	848	.....	15,219	170.9	111
1909	15,060	8,835	6,225	637	.....	14,423	159.0	103
1910	14,502	8,412	6,090	412	.....	14,090	152.5	99
1911	15,946	9,368	6,578	534	.....	15,412	163.9	107
1912	15,162	9,030	6,132	486	.....	14,676	153.5	100
1913	14,640	8,763	5,877	507	41	14,174	145.9	95
1914	14,039	8,585	5,454	475	323	13,887	140.9	92
1915	14,937	9,384	5,553	1,309	129	13,757	138.5	90
1916	15,922	10,248	5,674	1,304	38	14,656	145.5	95
1917	14,740	9,906	4,834	1,322	44	13,462	131.8	86
1918	18,041	12,006	6,035	2,454	210	15,797	152.5	99
1919	17,326	11,320	6,006	2,215	62	15,173	144.5	94
1920	16,051	10,258	5,792	1,093	160	15,118	142.1	92

[1] Includes beef and veal, pork, mutton and lamb, and a very small amount of goat meat.

It will be noted from this table that the output of all meats in 1920 was less than in 1918 or 1919, but greater than in any other year since 1908. Exports of all meats likewise declined in 1920. The production of lard in 1920 was also less than in 1918 or 1919, and somewhat above the average for the 10 years preceding 1918. The per capita consumption of all meats was also less in 1920 than in 1918 or 1919 as was the per capita consumption of lard.

The falling off of exports as well as the falling off of consumption in 1920 of all meat products and lard was doubtless the first cause in the decline in the price of hogs, cattle, and meat products.

The following table, G-45, shows the consumption of different kinds of meats in 1907 to 1920 with index of the relative consumption of each of these classes.

TABLE G–45.—*Live-stock consumption per capita, 1907–1920.*[1]

Year.	Beef.	Veal.	Mutton and lamb.	Pork.	Lard.	All meats.
1907	79.7	7.1	6.4	74.1	12.5	167.4
1908	72.4	6.8	6.2	85.4	14.3	170.9
1909	76.2	7.5	6.6	68.6	11.6	159.0
1910	78.1	7.4	6.5	60.3	10.5	152.5
1911	73.9	7.0	7.8	75.1	11.8	163.9
1912	67.5	7.0	8.2	70.6	11.4	153.5
1913	60.8	5.0	7.5	72.5	11.7	145.9
1914	58.9	4.4	7.5	69.9	12.1	140.9
1915	55.6	4.3	6.4	72.0	13.6	138.5
1916	58.1	5.3	6.2	75.7	15.1	145.5
1917	62.0	6.5	4.7	58.4	11.7	131.8
1918	67.8	7.0	5.0	72.5	14.8	152.5
1919	60.0	8.1	6.0	70.3	12.7	144.5
1920	56.4	8.5	6.1	71.0	12.2	142.1
RELATIVE PER CAPITA CONSUMPTION. [1907–1916=100.]						
1907	117	115	92	102	101	109
1908	106	110	89	118	115	111
1909	112	121	95	95	94	103
1910	115	120	94	83	85	99
1911	109	113	113	104	95	107
1912	99	113	118	97	92	100
1913	89	81	108	100	94	95
1914	87	71	108	97	98	92
1915	82	70	92	99	110	90
1916	85	86	89	105	122	95
1917	91	105	68	81	94	86
1918	100	113	72	100	119	99
1919	88	131	87	97	102	94
1920	83	138	88	98	98	92

[1] Data supplied by U. S. Department of Agriculture.

DAIRY PRODUCTS.

Table G–46 gives the production, storage, and price of butter from May, 1918, to June, 1921, while Table G–47, on page 146, gives the actual and relative exports and imports of butter in the United States.

TABLE G–46.—*Production, storage, and price of butter, May, 1918, to June, 1921.*

	Production.	Storage.	Price.		Production.	Storage.	Price.
1918.	*Pounds.*	*Pounds.*		1920.	*Pounds.*	*Pounds.*	
May	85,563,665	9,536,000	$0.420	January	41,718,672	53,737,000	$0.620
June	104,385,066	12,697,000	.415	February	39,394,307	38,359,000	.630
July	97,440,132	49,140,000	.425	March	47,848,671	22,526,000	.640
August	85,148,447	88,305,000	.435	April	58,935,911	12,521,000	.642
September	72,386,845	99,334,000	.500	May	84,459,757	7,487,878	.575
October	63,885,631	87,883,000	.550	June	111,345,360	12,722,532	.538
November	45,741,353	80,874,000	.610	July	105,113,000	52,363,265	.555
December	45,560,340	65,110,000	.673	August	86,069,000	123,545,670	.....
1919.				September	73,144,000	131,388,414	.....
January	52,189,198	43,910,000	.660	October	64,968,000	121,816,159	.580
February	44,342,568	36,776,000	.455	November	53,398,000	101,728,171	.....
March	54,822,396	24,191,000	.598	December	52,205,000	79,889,352	.490
April	67,487,317	11,909,000	.610	1921.			
May	103,941,021	9,659,000	.555	January	.....	58,752,592	.485
June	119,357,493	29,435,000	.515	February	.....	41,529,601	.450
July	104,751,266	90,158,000	.520	March	.....	26,773,397	.455
August	84,840,310	123,546,000	.530	April	.....	14,737,011	.460
September	69,102,578	131,388,000	.553	May	.....	7,494,426	.....
October	58,722,557	121,834,000	.635	June	.....	21,764,174	.....
November	45,040,656	100,474,000	.678				
December	46,662,021	74,887,000	.718				

TABLE G–47.—*The actual and relative export, import, reexport, and net export of all butter from the United States, 1909–1921.*

[1909–1913=100.]

[Commerce Reports.]

Years and months.	Exports.		Imports.		Reexports (pounds).	Net exports (pounds).	Prices of butter, creamery, extra, Chicago (per pound).
	Pounds.	Relative.	Pounds.	Relative.			
1909–10	5,981,265	140	1,360,245	55	10,194	4,631,214	.....
1910–11	3,140,545	74	1,007,826	41	9,135	2,141,864	.....
1911–12	4,877,797	115	1,025,668	41	40,151	3,892,280	.....
1912–13	3,585,600	84	1,162,253	47	3,432	2,426,779	$0.310
1913–14	3,693,597	87	7,842,022	316	51,935	.....	.....
1914–15	9,850,704	231	3,828,227	154	148,696	6,171,173	.287
1915–16	13,487,481	317	712,998	29	21,265	12,795,748	.284
1916–17	26,835,092	629	523,573	21	2,610	26,314,129	.325
1917–18	17,735,966	417	1,805,925	73	218	15,930,259	.411
1918–19	33,739,960	793	4,131,469	167	3,476	29,611,967	.495
1919–20	27,155,834	638	20,770,959	838	101,697	6,486,572	.586
1920–21	7,829,255	184	34,343,653	1,385	.....	.....	.....
1919.							
January	4,452,371	1,255	644,252	312	.....	3,808,119	.618
February	3,726,840	1,051	363,761	176	.....	3,363,079	.493
March	4,127,635	1,164	661,980	320	.....	3,465,655	.602
April	8,475,618	2,390	219,932	106	3,476	8,259,162	.615
May	759,803	214	893,245	432	.....	.....	.556
June	810,763	229	508,925	246	.....	301,838	.513
July	633,764	179	654,887	317	.....	.....	.512
August	2,395,139	675	961,718	466	13,456	1,446,877	.533
September	1,387,148	391	496,442	240	.....	.....	.569
October	2,918,389	823	2,123,398	1,027	3,400	890,706	.646
November	1,108,896	313	1,553,263	752	605	.....	.686
December	3,760,119	1,060	437,565	211	.....	3,322,554	.681
1920.							
January	1,899,196	535	334,135	162	22,400	1,587,461	.631
February	4,268,360	1,203	1,095,813	530	29,460	3,204,007	.622
March	6,396,823	1,803	3,151,640	1,525	.....	3,245,183	.663
April	779,216	220	5,065,020	2,451	1,000	.....	.639
May	886,552	250	1,710,519	828	31,044	.....	.571
June	696,232	196	3,186,559	1,542	432	.....	.549
July	576,892	163	8,311,404	4,022	146	.....	.553
August	436,214	123	2,736,879	1,325	.....	.....	.540
September	327,482	92	2,595,024	1,256	44,800	.....	.568
October	383,808	108	2,455,315	1,188	.....	.....	.568
November	306,326	86	2,798,684	1,355	10,812	.....	.590
December	504,634	142	4,033,754	1,952	23,734	.....	.508
1921.							
January	575,598	162	3,811,905	1,845	128,061	.....	.483
February	968,803	273	1,896,938	918	122,832	.....	.476
March	1,355,061	382	4,265,581	2,065	472,663	.....	.460
April	1,106,566	312	1,370,222	663	230,227	.....	.450
May	647,118	182	54,637	27	38	592,519	.292
June	640,753	180	33,884	16	.....	606,769	.319

Butter prices started to break at Chicago in December, 1919, and throughout the country generally in January, 1920. Butter in cold storage, as indicated by Table G–46, was 131,000,000 pounds in September, 1919, at the high point. Exports of butter, as indicated by Table G–47, were highest in April, 1919. Total exports of butter in the fiscal year 1920–21 were only 7,000,000 pounds, as against 27,000,000 pounds in 1919–20, and 33,000,000 pounds in 1918–19. Imports of butter in 1920–21 were 34,000,000 pounds, as against 20,000,000 pounds in 1919–20, and imports continued at a very considerable rate during all of that year and until April, 1921.

The following table, G–48, gives the production, storage, and price of full cream cheese at New York monthly from May, 1918, to June, 1921:

TABLE G–48.—*Production, storage, and price of full cream cheese, New York, May, 1918, to June, 1921.*

	Production.	Storage.	Price.		Production.	Storage.	Price.
1918.	*Pounds.*	*Pounds.*		1920.	*Pounds.*	*Pounds.*	
May	33,190,847	24,638,795	$0.223	January	8,761,483	53,342,523	$0.314
June	42,391,489	22,615,267	.231	February	9,731,586	44,401,676	.294
July	36,819,027	32,908,952	.239	March	12,587,526	33,991,787	.285
August	31,695,294	50,893,769	.253	April	19,187,765	23,231,341	.286
September	26,998,447	56,331,927	.268	May	30,157,236	16,690,162	.300
October	19,899,779	42,055,562	.325	June	40,493,728	13,460,491	.280
November	13,028,605	33,538,453	.333	July	32,687,000	29,573,411	.265
December	9,967,360	25,270,797	.363	August	25,418,000	51,334,143	.....
1919.				September	21,884,000	60,530,069	.....
January	11,989,816	20,153,507	.368	October	20,409,000	55,005,878	.278
February	12,524,012	15,990,805	.295	November	13,529,000	48,619,840	.....
March	19,830,742	10,165,300	.321	December	19,530,000	40,096,106	.225
April	22,965,423	7,353,687	.315	1921.			
May	36,624,636	6,614,732	.324	January	.....	34,186,306	.230
June	46,989,500	12,477,707	.308	February	.....	25,191,720	.228
July	37,019,242	37,501,294	.315	March	.....	17,434,880	.255
August	32,179,134	62,645,144	.308	April	.....	14,737,011	.223
September	27,071,290	76,660,790	.298	May	.....	13,413,644	.....
October	23,740,778	81,359,470	.303	June	.....	17,767,752	.....
November	13,586,331	72,888,936	.319				
December	10,499,650	62,297,741	.315				

The following table, G–49, gives the actual and relative export, import, reexport, and net export of cheese from the United States for the fiscal years beginning 1909–10 and ending January, 1921, and by months beginning January, 1919, to and including June, 1921:

TABLE G–49.—*The actual and relative export, import, reexport, and net export of all cheese from the United States, 1909–1921.*

[1909–1913—100.]

[Commerce reports.]

	Exports.		Imports.		Reexports (pounds).	Net exports (pounds).	Prices of cheese, whole milk, New York.
	Pounds.	Relative.	Pounds.	Relative.			
1909–10	6,822,842	136	40,817,524	83	138,754	.....	.....
1910–11	2,846,709	57	45,568,797	93	106,178	.....	$0.157
1911–12	10,366,088	207	46,542,007	95	104,980	.....	.140
1912–13	2,599,058	52	49,387,944	100	101,914	.....	.165
1913–14	2,427,577	484	63,784,313	130	152,244	.....	.154
1914–15	55,362,917	1,105	50,138,520	102	294,776	5,519,173	.152
1915–16	44,394,301	886	30,087,999	61	267,201	14,573,503	.151
1916–17	66,050,013	1,318	14,481,541	29	169,976	51,738,448	.181
1917–18	44,303,706	884	9,839,305	20	122,187	34,586,588	.241
1918–19	18,791,553	375	2,442,306	5	30,825	16,380,072	.268
1919–20	19,378,158	387	17,913,682	36	3,064,316	4,528,792	.315
1920–21	10,825,603	216	16,584,678	34	.....	.....	.....
1919.							
January	384,554	92	106,350	3	1,042	279,246	.368
February	397,016	95	19,382	5	20	377,654	.295
March	963,109	230	16,122	3	4,785	947,772	.321
April	1,722,721	412	166,363	4	4,638	1,560,996	.315
May	1,732,286	415	1,058,462	26	25	673,849	.324
June	2,331,799	558	80,281	2	4,825	2,256,343	.308
July	988,788	237	35,225	8	27,321	980,884	.315
August	805,213	193	1,375,617	34	715	.....	.308
September	671,334	161	1,656,053	40	66,433	.....	.298
October	1,094,041	262	1,787,603	44	121,433	.....	.303
November	1,765,781	423	3,547,276	86	152,704	.....	.319
December	1,303,079	312	1,483,470	36	43,160	.....	315

TABLE G–49.—*The actual and relative export, import, reexport, and net export of all cheese from the United States, 1909–1921*—Continued.

	Exports.		Imports.		Reexports (pounds).	Net exports (pounds).	Prices of cheese, whole milk, New York.
	Pounds.	Relative.	Pounds.	Relative.			
1920.							
January	1,310,430	314	1,155,278	28	51,073	206,225	$0.314
February	1,193,648	286	667,497	16	1,020,627	1,546,778	.294
March	1,793,922	429	1,335,924	33	62,323	520,321	.285
April	1,842,317	441	740,158	18	302,479	1,404,638	.286
May	4,408,948	1,056	2,307,554	56	1,092,535	3,193,929	.300
June	2,119,437	507	1,822,027	44	223,513	520,923	.280
July	550,000	132	1,042,791	25	63,548	.....	.265
August	374,538	90	660,963	16	4,293	.....	.....
September	362,791	87	961,450	23	942	.....	.....
October	608,163	146	1,780,698	43	40,183	.....	.278
November	645,923	155	1,739,351	42	13,599	.....	.....
December	1,002,982	240	1,780,034	43	5,194	.....	.225
1921.							
January	1,219,667	292	1,844,115	45	17,165	.....	.230
February	908,950	218	713,324	17	11,691	207,317	.228
March	672,706	161	1,342,192	33	9,119	.....	.255
April	1,664,287	398	1,558,123	38	12,131	118,295	.223
May	1,962,073	470	1,469,677	36	24,541	516,937	.....
June	856,313	205	1,691,860	41	.....	.....	.....

Imports of cheese exceeded exports of cheese in the years from 1909 to 1914, but from 1914 to 1920 exports of cheese exceeded imports of cheese. In the fiscal year 1920–21 imports of cheese again exceeded exports of cheese. Our largest net exports of cheese were in the fiscal year 1916–17, after which exports declined until in the fiscal year 1919–20, when exports of cheese were but a fraction of what they had been in 1916–17, while, as previously stated, in 1920–21 imports exceeded exports. The break in price of cheese was about simultaneous with the break in price of butter and was doubtless influenced by the same factors.

The real revolution in the character of our dairy export trade during the war period came in condensed and in evaporated milk. In the five-year period ending June 30, 1914, we exported an average of 15,773,900 pounds of condensed milk. In 1918–19 we exported over 700,000,000 pounds. In 1920–21 this export had fallen off to 266,000,000 pounds. Exports of condensed milk reached their peak in June, 1919, and have since rapidly declined. The increase of exports of condensed milk was doubtless largely due to requirements of armies in Europe and the demands of European civilian populations.

Table G–50, on page 149, gives the actual and relative exports, imports, reexports, and net exports of condensed milk from the United States for the fiscal years 1909–10 to 1920–21 and by months from January, 1919, to June, 1921.

TABLE G–50.—*The actual and relative exports, imports, reexports, and net exports of condensed milk* [1] *from the United States, 1909–1921.*

[1909–1913=100.]

[Commerce Reports.]

Years and months.	Exports.		Imports.	Reexports.	Net exports.	
	Pounds.	Relative.			Pounds.	Relative.
1909–10	13,311,318	84	.....	.....	13,311,318	84
1910–11	12,180,445	77	.....	.....	12,180,445	77
1911–12	20,642,738	131	.....	.....	20,642,738	131
1912–13	16,525,918	105	.....	.....	16,525,918	105
1913–14	16,209,082	103	.....	.....	16,209,082	103
1914–15	37,235,627	236	.....	.....	37,235,627	236
1915–16	159,577,620	1,012	.....	.....	159,577,620	1,012
1916–17	259,141,231	1,643	.....	.....	259,141,231	1,643
1917–18	528,759,232	3,352	.....	.....	528,759,232	3,352
1918–19	728,740,509	4,620	20,183,723	189,150	708,745,936	4,492
1919–20	710,533,270	4,504	19,080,642	851,542	692,304,170	4,499
1920–21	266,506,031	1,689	19,272,528	.....	247,233,503	1,567
1919.						
January	40,789,433	3,103	122,634	.....	40,666,799	3,094
February	49,399,574	3,758	818,499	.....	48,581,075	3,696
March	48,703,690	3,705	1,763,279	.....	46,940,411	3,571
April	94,068,780	7,156	2,125,645	.....	91,943,135	6,995
May	76,387,474	5,811	2,755,962	.....	73,631,512	5,602
June	114,835,626	8,736	1,692,706	189,150	113,332,070	8,622
July	64,447,367	4,903	2,363,278	58,200	62,142,289	4,727
August	65,811,556	5,007	1,025,831	121,250	64,906,975	4,938
September	62,558,786	4,759	1,097,974	314,250	61,775,062	4,700
October	88,801,528	6,756	870,055	269,642	88,201,115	6,710
November	70,278,203	5,346	623,934	.....	69,654,269	5,299
December	76,783,397	5,841	1,249,442	.....	75,533,955	5,746
1920.						
January	45,597,523	3,469	2,574,763	.....	43,022,760	3,273
February	43,941,309	3,343	1,689,294	25,500	42,277,515	3,216
March	50,314,617	3,828	1,250,926	62,700	49,126,391	3,737
April	51,617,143	3,927	1,436,055	.....	50,181,088	3,818
May	45,937,320	3,495	702,811	.....	45,234,509	3,441
June	44,459,917	3,382	4,196,279	.....	40,263,638	3,063
July	27,779,258	2,113	4,584,718	5,280	23,199,820	1,765
August	25,638,722	1,950	2,628,895	.....	23,009,827	1,750
September	21,364,536	1,625	1,190,632	.....	20,173,904	1,535
October	20,209,141	1,537	1,560,298	.....	18,648,843	1,419
November	17,287,361	1,315	978,867	.....	16,308,494	1,241
December	20,058,590	1,526	962,242	110,000	19,206,348	1,461
1921.						
January	30,714,688	2,337	162,659	.....	30,552,029	2,324
February	22,071,301	1,680	1,600,135	.....	20,471,166	1,557
March	28,434,365	2,163	1,412,500	.....	27,021,864	2,056
April	21,073,620	1,603	1,152,509	3,738	19,924,849	1,516
May	9,330,493	710	2,684,392	.....	6,646,101	506
June	22,433,806	1,707	354,681	.....	22,079,125	1,680

[1] Includes condensed, evaporated, and powdered milk.

Table G–51, page 150, gives the actual export and import of all dairy products in pounds and in relatives on 1909–1913 base by fiscal years from 1909–10 to 1920–21 and by months from January, 1919, to June, 1921.

TABLE G–51.—*The actual and relative export, import, reexport, and net export of all dairy products*[1] *from the United States, 1909–1921.*

[1909–1913=100.]

[Commerce Reports.]

	Exports.		Imports.		Reexports (pounds).	Net exports (pounds).
	Pounds.	Relative.	Pounds.	Relative.		
1909–10	12,804,107	61	42,177,769	81	148,948	.....
1910–11	19,298,572	92	46,576,623	90	115,313	.....
1911–12	27,424,250	131	47,567,675	92	145,131	.....
1912–13	22,710,576	109	50,550,197	98	105,346	.....
1913–14	22,320,256	106	71,626,335	138	204,179	.....
1914–15	102,449,248	490	53,966,747	104	443,672	48,926,173
1915–16	217,459,402	1,040	30,800,997	60	288,466	186,946,871
1916–17	352,026,336	1,683	15,005,087	29	172,586	337,193,835
1917–18	586,798,274	2,806	11,645,230	22	122,405	575,275,449
1918–19	781,272,022	3,736	26,757,498	52	223,451	654,737,975
1919–20	757,067,262	3,620	57,765,283	112	4,017,555	703,319,534
1920–21	285,160,889	1,363	70,200,859	136	.....	214,960,030
1919.						
anuary	45,626,358	2,618	873,236	20	1,042	44,754,164
February	53,523,430	3,070	1,201,642	28	20	52,321,808
March	53,794,434	3,087	2,441,381	57	785	51,353,838
April	104,267,119	5,979	2,511,940	58	8,114	101,763,293
May	78,879,563	4,527	4,707,669	109	25	74,171,919
June	117,978,188	6,771	2,281,912	53	193,975	115,890,251
July	66,069,919	3,793	3,053,390	71	85,521	63,102,050
August	69,011,908	3,960	3,363,166	78	135,421	65,184,163
September	64,617,268	3,707	3,250,469	75	380,683	61,747,482
October	92,813,958	5,325	4,781,056	111	391,075	88,423,977
November	73,152,880	4,195	5,724,473	133	153,309	67,581,716
December	81,846,595	4,694	3,170,477	74	43,160	78,719,368
1920.						
January	48,807,149	2,800	4,064,176	94	73,473	44,816,446
February	49,403,317	2,835	3,452,604	80	1,075,587	47,026,300
March	58,505,362	3,357	5,738,490	133	125,023	52,891,895
April	54,238,676	3,110	7,241,233	168	303,479	47,300,922
May	51,232,820	2,938	4,720,884	110	1,123,579	47,635,515
June	47,355,586	2,720	9,204,865	214	223,945	38,384,666
July	28,906,150	1,658	13,938,913	324	68,974	15,036,211
August	26,449,474	1,518	6,026,737	140	4,293	20,427,030
September	22,054,809	1,266	4,747,106	110	45,742	17,353,445
October	21,201,112	1,217	5,796,311	135	40,183	15,444,984
November	18,239,610	1,044	5,516,902	128	24,411	12,747,119
December	21,566,206	1,240	6,776,030	157	138,928	14,929,103
1921.						
January	32,509,953	1,865	5,818,679	135	145,226	26,836,500
February	23,949,054	1,371	4,210,397	98	134,523	19,873,179
March	30,462,132	1,744	7,020,273	163	481,782	23,923,641
April	23,844,473	1,368	4,680,854	95	246,096	20,009,715
May	11,939,684	683	4,208,706	98	24,579	7,755,556
June	23,930,872	1,371	2,080,425	99	.....	.....

[1] Includes all cheese, butter, condensed, evaporated, and powdered milk.

The net exports of all dairy products were highest in the fiscal year 1919–20, amounting to 703,000,000 pounds. In the fiscal year 1920–21 net exports declined to 214,000,000 pounds. Imports of all dairy products in 1919–20 were 57,000,000 pounds and increased to 70,000,000 pounds in 1920–21.

The peak of exports of all dairy products was reached in June, 1919, after which they declined rapidly. Imports of dairy products, on the other hand, were highest in July, 1920, during the period of the greatest decline in the prices of dairy products in the United States.

VEGETABLE OILS.

Exports and imports of vegetable oils are considerable factors in determining the price of butter.

The following table, G–52, gives the actual exports and imports of vegetable oils and the relative exports and imports on the 1909–1913 base by fiscal years beginning 1909–10 and including 1920–21, and by months from January, 1919, to June, 1921:

TABLE G–52.—*The total actual and relative exports, imports, reexports, and net exports of vegetable oils,*[1] *1909–1921.*

[1909–1913=100.]

[Commerce Reports.]

Year and month.	Exports.		Imports.		Reexports.	Net exports.	Net imports.
	Pounds.	Relative.	Pounds.	Relative.			
1909–10	407,596,636	139	222,273,108	90	643,064	185,966,592	.....
1910–11	235,254,334	80	203,243,600	82	828,079	32,838,813	.....
1911–12	278,859,025	95	252,690,946	102	1,169,626	27,337,705	.....
1912–13	335,393,852	114	243,197,650	98	751,502	92,947,704	.....
1913–14	211,244,655	72	314,379,361	127	1,549,565	.....	101,585,141
1914–15	336,156,160	115	244,775,555	99	1,178,206	92,558,811	.....
1915–16	275,478,883	94	358,212,888	145	1,876,754	.....	80,857,251
1916–17	167,691,527	57	438,489,562	177	6,067,971	.....	264,730,064
1917–18	102,611,095	35	779,122,543	315	4,944,100	.....	671,567,438
1918–19	179,804,447	61	804,392,682	325	20,556,910	.....	604,031,325
1919–20	396,702,411	135	847,218,948	343	16,952,944	.....	433,563,593
1920–21	306,708,115	104	346,732,851	140	.....	.....	40,023,736
1919.							
January	26,577,729	109	58,722,679	285	1,648,308	.....	30,496,642
February	32,116,441	132	81,449,069	397	784,945	.....	48,547,683
March	19,803,287	81	72,253,193	352	208,437	.....	52,241,469
April	14,172,171	58	41,600,669	202	1,306,172	.....	26,122,326
May	12,936,978	53	64,795,420	315	3,555,305	.....	48,303,137
June	30,875,809	126	48,403,154	235	11,558,112	.....	5,969,233
July	39,779,163	163	123,085,245	597	3,258,758	.....	80,047,324
August	38,957,393	159	89,252,821	433	2,761,421	.....	47,534,007
September	34,637,897	142	69,329,149	336	2,192,616	.....	32,498,635
October	42,026,709	172	76,397,750	370	1,434,815	.....	32,936,226
November	31,739,188	130	57,724,648	280	333,514	.....	25,651,946
December	33,913,505	139	64,782,206	315	322,979	.....	30,545,722
1920.							
January	28,950,639	118	49,892,767	242	2,322,062	.....	18,620,066
February	31,858,800	130	66,270,354	322	592,848	.....	33,818,706
March	34,550,101	141	71,159,125	345	1,773,631	.....	34,835,393
April	35,596,422	145	91,550,563	444	253,884	.....	55,700,257
May	24,028,670	98	49,951,935	243	1,109,723	.....	24,813,542
June	20,665,005	84	50,088,655	243	637,644	.....	28,786,006
July	6,178,148	25	54,866,448	266	395,003	.....	48,293,297
August	4,002,777	16	41,377,055	201	541,658	.....	36,832,620
September	6,339,410	26	37,534,947	182	714,418	.....	30,481,119
October	9,668,737	40	28,894,122	140	274,443	.....	18,950,942
November	26,487,233	108	17,667,944	86	349,170	9,168,459	.....
December	44,523,211	182	20,189,024	98	559,162	24,893,349	.....
1921.							
January	72,902,278	299	21,109,225	102	296,940	52,089,993	.....
February	40,891,390	167	34,405,895	167	497,679	6,983,174	.....
March	37,153,565	152	11,079,690	54	450,604	26,524,479	.....
April	22,104,420	90	45,451,550	221	796,572	.....	22,550,558
May	20,657,831	84	13,872,749	67	110,553	6,895,635	.....
June	15,846,579	65	12,792,112	62	.....	3,054,467	.....

[1] Includes Chinese nut, cocoa butter, coconut, cotton seed, olive oil (edible and inedible), palm, palm kernel, peanut, rapeseed, and soya bean.

During the fiscal years 1909–10 to 1912–13 inclusive, exports of vegetable oils exceeded imports. In 1913–14 we imported 100,000,000 pounds of such oil more than we exported, but the balance

of trade turned again in our favor by approximately the same amount in 1914–15, since which time imports of vegetable oils have largely exceeded exports.

The following tables, G–53 and G–54, give the kinds of oils imported and exported and the per cent that each bears to the total for the years 1910 and 1920 and January–March, 1921:

TABLE G–53.—*Vegetable oils imported into the United States.*

[Market Reporter.]

	January–March, 1921.	1920	1910		January–March, 1921.	1920	1910
	Per cent.	*Per cent.*	*Per cent.*		*Per cent.*	*Per cent.*	*Per cent.*
Chinese nut	6.6	11.08	[1]	Palm kernel	0.2	0.27	[1]
Cocoa butter	.9	.01	2.19	Peanut	.8	15.53	[1]
Coconut	66.1	34.18	15.11	Rapeseed	3.0	2.10	[1]
Cotton seed	.8	1.50	[1]	Soy bean	4.6	17.82	[1]
Linseed	.9	5.78	[1]				
Olive	6.2	5.07	22.65	Total	100	100	100
Palm	9.9	6.66	60.05				

[1] Imports so small that the quantity was not reported.

TABLE G–54.—*Vegetable oils exported from United States.*

[Market Reporter.]

	January–March, 1921.	1920	1910		January–March, 1921.	1920	1910
	Per cent.	*Per cent.*	*Per cent.*		*Per cent.*	*Per cent.*	*Per cent.*
Chinese nut	0.08	[1]	[1]	Olive	0.04	[1]	[1]
Cocoa butter	.48	1.93	[1]	Palm	.04	[1]	[1]
Coconut	.84	9.23	[1]	Peanut	.32	0.51	[1]
Corn	.66	4.33	4.77	Soy bean	.93	15.63	[1]
Cotton seed	95.82	66.37	94.48				
Linseed	.79	2.00	.75	Total	100	100	100

[1] Exports so small that quantity was not reported.

The following table, G–55, shows the production of lard and lard substitutes, of butter and butter substitutes, and oleomargarine in recent years.

TABLE G–55.—*Production of lard and lard substitutes and of butter and butter substitutes in recent years.*

LARD AND LARD SUBSTITUTES.

Year.	Lard.[1]	Lard substitutes.	Total production.	Lard substitutes.[2]
	Pounds.	*Pounds.*	*Pounds.*	
1920	1,936,000,000	[3] 1,000,000,000	2,936,000,000	34
1918	2,089,000,000	[4] 1,146,000,000	3,235,000,000	35
1917	1,577,000,000	[4] 1,173,000,000	2,750,000,000	42
1916	1,973,000,000	[4] 1,027,000,000	3,000,000,000	34
1914	1,652,000,000	[4] 1,137,000,000	2,789,000,000	40
1912	1,643,000,000	[4] 877,000,000	2,520,000,000	35

[1] Figures compiled by Bureau of Animal Industry, U. S. Department of Agriculture.
[2] Per cent of total production.
[3] Estimated.
[4] Supplement to Bulletin 769, U. S. Department of Agriculture.

TABLE G–55.—*Production of lard and lard substitutes and of butter and butter substitutes in recent years*—Continued.

BUTTER AND BUTTER SUBSTITUTES.[1]

Year.	Butter—farm and factory.	Butter substitutes.	Total production.	Butter substitutes.[2]
	Pounds.	*Pounds.*	*Pounds.*	
1920	1,442,458,000	370,730,000	1,813,188,000	20
1919	1,558,900,000	371,317,000	1,930,217,000	19
1918	1,530,700,000	355,536,000	1,886,236,000	18
1917	1,568,890,000	290,902,000	1,856,792,000	15
1916	1,635,000,000	202,444,000	1,837,444,000	10
1914	1,706,000,000	143,900,000	1,849,900,000	7
1909	1,621,700,000	110,000,000	1,731,700,000	6

MARGARINE, 1916–1920.

	1916	1917	1918	1919	1920
UNCOLORED.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Combined animal and vegetable oil	177,264,474	254,440,884	255,196,572	214,759,089	165,178,136
Animal oil exclusively	15,479,588	7,562,741	3,306,671	3,391,206	4,444,924
Vegetable oil exclusively	1,941,932	21,803,482	88,861,472	132,906,154	186,569,182
COLORED.					
Combined animal and vegetable oil	7,198,937	6,958,211	7,056,442	9,302,681	9,426,812
Vegetable oil exclusively	.....	725	112,494	9,792,694	4,969,828
Animal oil exclusively	559,130	136,889	1,002,864	1,165,363	141,167
Total	202,444,061	290,902,932	355,536,515	371,317,187	370,730,049

[1] Estimated. [2] Per cent of total production.

FISH.

The following table, G–56, gives the actual export and import of all fish and the relative export and import of all fish on 1909–1913 base:

TABLE G–56.—*The total actual and relative exports, imports, reexports, and net exports of all fish.*

[1909–1913=100.]

[Commerce Reports.]

Years and months.	Exports.[1]		Imports.[2]		Reexports (pounds).	Net imports.	
	Pounds.	Relative.	Pounds.	Relative.		Pounds.	Relative.
1909–10	72,977,962	96	123,004,001	88	1,819,964	48,206,075	79
1910–11	45,262,408	60	141,144,785	101	2,792,694	93,089,683	153
1911–12	61,214,381	81	130,890,886	94	4,568,633	65,107,872	107
1912–13	85,513,102	112	132,805,185	95	4,876,215	42,415,868	70
1913–14	114,973,036	151	172,103,096	123	2,573,839	54,556,221	90
1914–15	104,004,157	137	159,621,520	114	4,583,147	51,034,216	84
1915–16	187,011,182	246	152,474,573	109	4,552,560	.....	.....
1916–17	155,943,230	205	166,040,558	119	5,884,098	4,213,230	7
1917–18	155,520,857	205	179,231,211	128	6,952,630	16,757,724	28
1818–19	187,626,804	247	191,461,813	137	5,093,675	.....	.....
1919–20	167,509,337	220	219,437,750	157	8,170,342	43,758,071	72
1920–21	78,321,457	103	165,415,540	118	.....	87,094,083	144

[1] Includes fresh, dried, smoked, and cured, and canned salmon.
[2] Includes fresh halibut, salmon, and smelts, cured or preserved cod, haddock, herring, mackerel.

TABLE G-56.—*The total actual and relative exports, imports, reexports, and net exports of all fish*—Continued.

Years and months.	Exports.		Imports.		Reexports (pounds).	Net imports.	
	Pounds.	Relative.	Pounds.	Relative.		Pounds.	Relative.
1919.							
January	32,135,784	507	19,759,895	170	867,085	.....	.....
February	30,899,023	486	17,216,592	148	226,525	.....	.....
March	24,019,023	379	11,375,022	98	1,094,711	.....	.....
April	23,565,285	371	6,726,562	58	407,962	.....	.....
May	8,230,397	130	7,372,353	63	366,130	.....	.....
June	17,018,414	269	5,872,492	50	403,108	.....	.....
July	7,693,966	121	11,580,807	99	225,553	3,661,288	72
August	13,412,859	212	14,285,207	122	362,094	510,254	10
September	14,894,354	234	27,570,128	236	124,285	12,551,489	248
October	13,878,361	218	35,174,510	302	92,994	21,203,155	419
November	20,180,839	318	33,103,819	285	342,516	12,580,464	249
December	22,995,943	362	27,391,680	235	742,247	3,653,490	72
1920.							
January	11,512,129	182	22,555,733	193	1,286,999	9,776,605	193
February	17,387,559	273	12,190,575	105	814,459	.....	.....
March	17,448,108	275	11,104,915	95	1,040,559	.....	.....
April	11,723,203	185	6,344,645	54	821,829	.....	.....
May	9,895,544	156	8,283,798	71	940,658	.....	.....
June	6,529,882	103	9,851,934	84	1,391,029	1,931,023	38
July	4,925,577	78	9,684,548	83	631,450	4,127,531	82
August	3,547,692	56	16,331,570	140	586,830	12,197,048	241
September	6,508,649	103	15,723,817	135	147,982	9,067,186	179
October	12,064,665	191	16,536,922	142	526,901	3,945,356	78
November	8,753,617	138	23,431,624	202	307,134	14,370,873	284
December	8,709,323	138	19,451,096	167	616,341	10,125,432	200
1921.							
January	8,839,228	140	19,315,606	166	1,071,363	9,405,105	186
February	7,996,385	126	11,390,561	98	1,375,607	2,018,569	40
March	4,958,338	78	10,022,333	86	768,880	4,294,515	85
April	5,145,945	81	5,872,476	50	857,185	.....	.....
May	3,109,584	49	7,576,584	65	750,199	3,716,801	73
June	3,919,218	62	8,721,049	75	.....	4,801,831	95

In the five years ending June 30, 1914, we exported an average of 76,000,000 pounds of fish and imported an average of 140,000,000 pounds per year. We have imported more fish in each year since 1914 than we did on the average before 1914. Our exports of fish during the war years have also been higher than the prewar average. Our exports of a little over 78,000,000 pounds in the year ending June 30, 1921, were above the five-year prewar average, though the quantity exported in 1921 had been exceeded in 1913 and 1914. Our exports of canned salmon trebled in the war period, though they fell in the year ending in June, 1921, to below the prewar average.

Table G-57, page 155, shows the exports of fresh fish and canned salmon from the United States by fiscal years 1909 to 1921, and by months beginning with January, 1919, to and including June, 1921.

TABLE G-57.—*Exports of fresh fish and canned salmon from the United States, in pounds, 1909–1921.*

[Commerce reports.]

BY YEARS.

Date.	Fresh fish.	Canned salmon.	Date.	Fresh fish.	Canned salmon.
1909–10	4,703,413	63,860,696	1915–16	8,139,309	152,943,962
1910–11	.....	38,600,799	1916–17	9,998,323	117,962,807
1911–12	5,034,771	43,423,756	1917–18	10,467,321	110,060,480
1912–13	5,517,248	55,290,966	1918–19	10,263,239	130,105,646
1913–14	6,534,460	87,750,920	1910–20	8,380,438	108,292,621
1914–15	7,159,598	83,446,116	1920–21	10,756,960	41,770,058

BY MONTHS.

Date.	Fresh fish.			Canned salmon.		
	1919	1920	1921	1919	1920	1921
January	1,439,541	843,429	1,593,731	23,092,990	7,097,703	3,649,615
February	1,058,346	1,463,430	1,048,979	26,124,213	9,607,097	4,236,307
March	1,816,516	726,944	1,109,682	17,124,849	9,317,862	1,199,464
April	884,643	339,575	642,740	19,688,882	4,380,315	2,459,985
May	474,850	492,347	620,459	4,554,309	4,683,340	997,945
June	453,883	479,896	479,146	8,462,942	2,538,817	1,984,513
July	355,744	340,574	.....	5,155,878	2,498,531	.....
August	189,321	225,524	.....	10,872,071	1,693,405	.....
September	305,176	729,768	.....	12,784,458	4,468,561	.....
October	652,859	629,151	.....	10,094,221	8,964,290	.....
November	830,221	1,306,583	.....	15,840,414	4,778,068	.....
December	1,701,496	2,030,623	.....	15,955,445	4,869,374	.....

The net exports of live stock and of cotton have not been maintained in recent months. The prices of live stock and cotton declined first among agricultural products and declined most rapidly. The net exports of grain on the whole, particularly of wheat and rye and flour, have been well maintained and prices of these grains have been consequently maintained at a level above those of live stock and cotton. Exchange rates have affected exports of agricultural products, as they have exports of other commodities. This has placed the export business on a very speculative basis. Stabilization of foreign exchange would do much to facilitate the exportation of farm products.

CHAPTER VIII.

PRODUCTION AND CONSUMPTION OF FARM PRODUCTS AND THEIR RELATION TO PRICES.

In order to arrive at wise policies touching a program for the future development of agriculture it is necessary to marshal the facts of production and consumption in such a way that the relation of the various factors which have influenced prices may be thoroughly considered and properly appraised. Summation of these factors on the basis of the increase or decrease of total production would lead to wholly erroneous conclusions. Production must be considered on the basis of the supply available per capita after adding imports and subtracting exports. In this chapter an attempt is made to arrive at conclusions on the basis of the factors just enumerated.

The following table, H–1, on page 157, shows the annual and per capita production, relative per capita production, exports, imports, and reexports, the total per capita and relative per capita consumption of wheat, price of winter wheat on December 1, relative farm price per bushel, and relative purchasing power of wheat by years, from 1890 to 1920, while Table H–2 on page 158 shows the per capita consumption arrived at on the basis applied in chart G–1, on page 94, plus the factor of carry over in each year.

It will be noted that the per capita consumption by the second method is substantially the same as per capita consumption under the first method, although the introduction of the carry over in the calculation has the effect of evening up slightly the differences which otherwise exist from year to year.

The total production of wheat reached its highest point in 1915 with a crop somewhat in excess of a billion bushels. (See Table H–1.) The crop of 1920 was about three-fourths of the 1915 crop and slightly above the average of 1909 and 1913. The production, while showing wide fluctuations from year to year has nevertheless about kept even with the population. Domestic consumption, however, while subject to somewhat similar fluctuations, has shown a general tendency to increase. It is notable, in this connection, that per capita consumption of wheat has shown a marked tendency to decrease in periods of industrial depression, such as existed in the period 1893 to 1896 and during the latter part of 1920. The decrease in per capita consumption in 1920 has been taken care of in a large measure by increase in exports. In general, the export of wheat may be divided into three periods, first, beginning with 1891 and concluding with 1902, during which the percentage of export of the domestic crop was in excess of 30 per cent; a second period, from 1903 to 1913, during which the exports ranged from 10 to 25 per cent, and a third period, from 1914 to 1920, during which the exports ranged from 20.8 to 45.4 per cent. However, the table seems to indicate that domestic consumption is probably the largest factor in determining the price. In general, with a number of exceptions, the price of wheat has decreased in years of low consumption and increased in periods of high consumption. The purchasing power of wheat has remained fairly constant during the entire period

TABLE H–1.—*Annual and per capita production, relative per capita production, exports, imports, and reexports, the total, per capita, and relative per capita consumption of wheat, price of winter wheat on December 1, relative farm price per bushel, and relative purchasing power of wheat, by years, 1890–1920.*

Year.	Production.[1]	Population of United States.	Per capita production.	Relative per capita production (1909–1913 = 100).	Domestic exports (fiscal year beginning July 1).[2]	Imports (fiscal year beginning July 1).[2]	Reexports of wheat (fiscal year beginning July 1).[2]	Total amount available for consumption.	Per cent domestic crop exported.[1]	Per capita consumption.	Relative per capita consumption (1909–1913 = 100).	Farm price per bushel, Dec. 1.[1]	Relative farm price per bushel (1909–1913 = 100).	Relative purchasing power of wheat.[3]
	Bushels.		*Bushels.*											
1890	399,262,000	62,622,250	6.3	86	106,184,316	583,827	620,679	293,043,832	26.6	4.6	74	83.8	98	118
1891	611,781,000	63,959,482	9.6	131	225,665,811	2,462,365	1,838,829	386,737,724	36.9	6.0	97	83.9	98	117
1892	515,947,000	65,296,714	7.9	108	191,012,635	968,125	672,750	324,429,740	37.2	4.9	79	62.4	73	94
1893	396,132,000	66,633,946	5.9	81	164,283,129	1,182,865	216,420	232,815,316	41.5	3.4	55	53.3	63	80
1894	460,287,000	67,971,178	6.8	93	144,812,718	1,498,399	548,792	316,344,889	31.5	4.6	74	49.1	57	81
1895	467,103,000	69,308,410	6.7	92	126,443,968	2,116,233	2,363,535	340,411,880	27.1	4.9	79	50.9	60	84
1896	427,694,000	70,645,642	6.0	82	145,124,972	1,544,212	1,501,916	282,601,351	33.9	4.0	65	72.6	85	127
1897	530,149,000	71,982,874	7.3	100	217,306,005	2,058,958	1,880,867	313,021,066	41.0	4.3	69	80.8	94	133
1898	675,149,000	73,310,106	9.2	126	222,618,420	1,875,174	1,935,127	452,470,627	33.0	6.1	98	58.2	68	97
1899	635,534,000	74,647,338	8.8	121	185,998,762	320,195	297,359	472,460,074	34.0	5.1	82	58.4	68	80
1900	522,230,000	75,994,575	6.8	93	215,990,073	603,101	669,112	306,173,916	41.4	4.0	65	61.9	72	88
1901	748,460,000	77,612,569	9.6	132	234,772,516	120,502	45,464	513,768,522	31.4	6.6	106	62.4	73	90
1902	670,063,000	79,230,563	8.4	115	202,905,598	1,080,129	1,261,626	466,975,906	30.3	5.8	94	63.0	74	85
1903	637,822,000	80,848,557	7.8	107	120,727,613	217,682	168,761	512,143,308	18.9	6.3	102	69.5	81	93
1904	552,400,000	82,466,551	6.7	92	44,112,910	3,286,190	587,473	510,988,807	8.0	6.2	100	92.4	108	123
1905	692,979,000	84,084,545	8.2	112	97,609,007	261,908	32,972	595,598,929	14.1	7.0	113	74.8	87	100
1906	735,261,000	85,702,533	8.5	116	146,700,425	590,002	588,432	588,552,253	20.0	6.8	110	66.7	78	87
1907	634,087,000	87,320,533	7.2	99	163,043,669	519,786	309,877	471,253,240	25.7	5.4	87	87.4	102	106
1908	664,602,000	88,938,527	7.4	101	114,263,468	456,940	3,772	550,786,700	17.2	6.1	98	92.3	108	116
1909	683,379,000	90,556,521	7.5	103	87,864,318	815,616	136,659	596,693,639	12.8	6.6	106	98.6	115	116
1910	635,121,000	92,174,515	6.8	93	68,311,760	1,146,538	1,397	566,954,401	10.9	6.1	98	88.3	103	102
1911	621,338,000	93,527,941	6.6	90	79,089,404	3,413,627	1,291	545,660,832	12.8	5.8	94	87.4	102	105
1912	730,287,000	94,881,366	7.6	104	142,579,596	1,282,039	83,037	588,389,405	19.6	6.2	100	76.0	89	86
1913	763,380,000	96,234,791	7.9	108	145,530,349	2,383,536	752,854	619,420,603	19.1	6.4	103	79.9	93	91
1914	891,017,000	97,588,216	9.1	125	332,464,975	715,369	187,871	559,079,522	37.3	5.7	92	98.6	115	113
1915	1,025,801,000	98,941,641	10.3	141	243,117,026	7,187,650	621,240	789,250,384	23.7	7.9	127	91.9	107	104
1916	636,318,000	100,295,066	6.3	86	208,573,923	24,924,985	63,948	457,605,109	32.0	4.5	73	160.3	187	147
1917	636,655,000	101,648,491	6.2	85	132,575,633	31,215,213	1,411,517	533,880,063	20.8	5.2	84	200.8	235	131
1918	921,433,000	103,001,916	8.9	122	287,438,087	11,288,591	502,434	644,766,070	31.2	6.2	100	204.2	238	119
1919	934,265,000	104,355,341	8.9	122	219,864,549	5,495,516	148,666	719,792,301	23.5	6.9	111	215.1	251	116
1920	787,125,000	105,708,771	7.4	101	358,000,563	51,398,002	984,840	485,540,599	45.4	4.6	74	144.3	168	68

[1] Yearbook of Department of Agriculture, 1920, p. 550.
[2] Statistical Abstract, 1920, p. 551; compiled from Commerce Reports.
[3] Relative purchasing power obtained by dividing the relative farm price per bushel by the weighted index of all commodities of Bureau of Labor Statistics, on the 1913 base converted to the 5-year base, 1909–1913.

TABLE No. H–2.—*The production and carry over of wheat, the exports and imports of wheat and wheat flour, and the per capita consumption of wheat, 1897–1920, by years.*

[Per capita consumption is arrived at on the basis applied in Chart G–1, plus the factor of carry over in each year.]

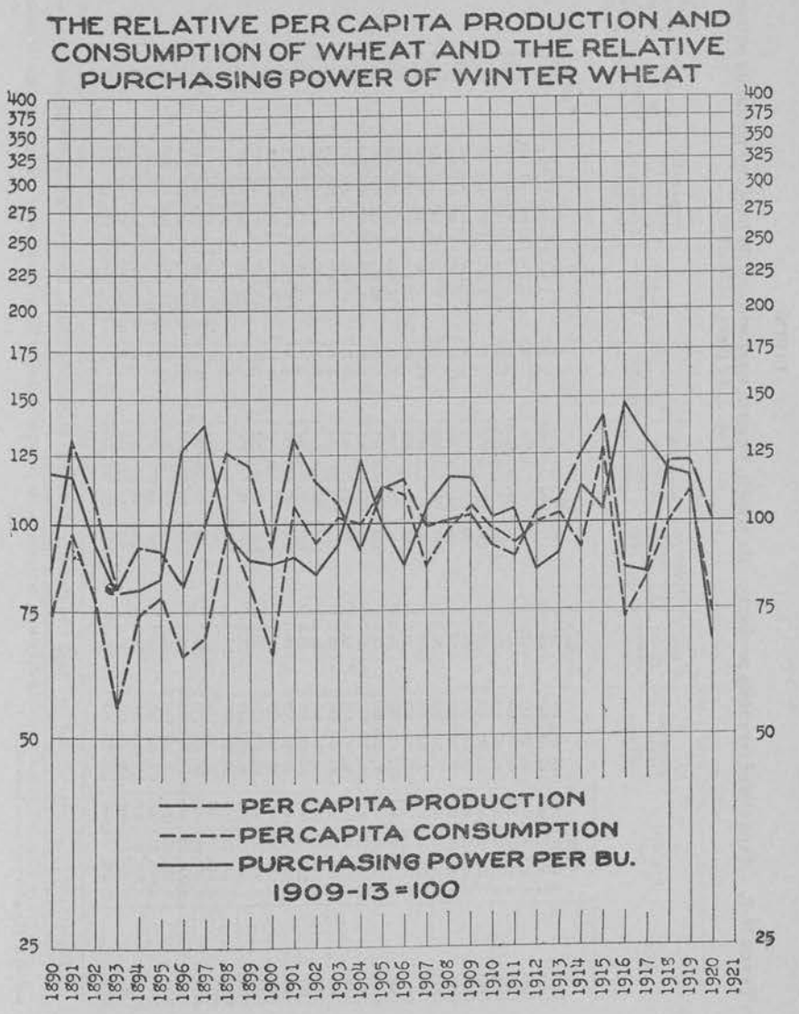
Year.	Production wheat.	Amount of crop carried over to following year.	Amount produced minus amount carried over to following year.	Carried over from previous year.	Amount of domestic crop available.	Population of United States.	Domestic exports (fiscal year beginning July 1).	Imports (fiscal year beginning July 1).	Reexports (fiscal year beginning July 1).	Total amount for consumption.[1]	Per capita consumption.
1897	530,149,000	17,839,000	512,310,000	23,347,000	535,657,000	71,982,874	217,306,005	2,058,938	1,880,867	318,529,066	4.42
1898	675,149,000	64,061,000	611,088,000	17,839,000	628,927,000	73,310,106	222,618,420	1,875,174	1,955,127	406,248,627	5.54
1899	658,534,000	50,900,000	607,634,000	64,061,000	671,695,000	74,641,338	195,096,702	220,195	297,339	495,621,074	6.65
1900	522,230,000	30,552,000	491,678,000	50,900,000	542,578,000	75,994,575	215,900,073	603,101	639,112	326,521,916	4.29
1901	748,460,000	52,437,000	696,023,000	30,552,000	726,575,000	77,612,569	234,772,516	120,502	45,494	491,877,522	6.34
1902	670,063,000	42,540,000	627,523,000	52,437,000	679,960,000	79,230,563	202,905,598	1,080,129	1,261,626	476,872,905	6.02
1903	637,822,000	36,630,000	601,192,000	42,540,000	643,732,000	80,848,557	120,727,613	217,682	108,761	523,093,308	6.47
1904	552,400,000	24,257,000	528,143,000	36,630,000	564,773,000	82,466,551	44,112,910	3,286,190	587,473	523,358,807	6.34
1905	692,970,000	46,053,000	646,926,000	24,257,000	671,183,000	84,084,545	97,609,007	261,908	32,972	573,802,929	6.82
1906	735,261,000	54,853,000	680,408,000	46,053,000	726,461,000	85,702,533	146,700,425	590,092	599,432	579,751,235	6.76
1907	634,087,000	33,797,000	600,290,000	54,853,000	655,143,000	87,320,533	163,043,609	519,786	309,877	492,309,240	5.64
1908	664,002,000	15,062,000	649,940,000	33,797,000	683,737,000	88,938,527	114,268,468	456,940	3,772	569,521,700	6.40
1909	683,679,000	35,680,000	647,999,000	15,062,000	662,701,000	90,556,521	87,364,318	815,616	136,659	576,075,639	6.36
1910	635,121,000	34,071,000	601,050,000	35,680,000	636,730,000	92,174,515	69,311,760	1,146,558	568,563,401	6.13	
1911	621,338,000	23,876,000	597,462,000	34,071,000	631,533,000	93,792,941	79,688,404	3,413,627	1,291	555,255,932	5.94
1912	730,267,000	35,515,000	694,752,000	23,876,000	718,628,000	94,831,506	142,879,396	1,282,069	83,037	576,947,406	6.08
1913	763,380,000	32,236,000	731,144,000	35,515,000	766,659,000	96,234,791	145,590,349	2,383,536	752,984	622,699,603	6.47
1914	891,017,000	28,972,000	862,045,000	32,236,000	894,281,000	97,588,216	352,494,975	715,369	187,871	562,343,523	5.77
1915	1,025,801,000	74,731,000	951,070,000	28,972,000	980,042,000	98,941,641	243,117,026	7,187,650	621,240	743,491,384	7.62
1916	636,318,000	15,611,000	620,707,000	74,731,000	695,438,000	100,295,066	203,573,928	24,924,985	65,948	516,725,109	5.15
1917	636,655,000	8,063,000	628,592,000	15,611,000	644,203,000	101,648,491	192,578,633	31,215,213	1,411,517	541,428,063	5.32
1918	921,438,000	19,261,000	902,177,000	8,063,000	910,240,000	103,001,916	297,438,087	11,208,591	502,434	633,568,070	6.15
1919	934,265,000	47,260,000	892,727,000	19,261,000	906,266,000	104,355,341	219,804,549	5,540,516	148,666	691,793,301	6.66
1920	757,128,000	.....	.....	47,260,000	804,388,000	105,708,771	358,000,563	51,398,000	984,840	592,800,597	5.04

[1] The available supply after adjustment is made for carry over plus imports minus exports and reexports.

covered by the table and has been relatively high in comparison with other farm products, particularly during the period of the war in Europe. Perhaps the most notable fact shown by this table is the tremendous drop in the price of wheat during 1920, notwithstanding an increase in exports. It seems probable that this drop can be attributed almost wholly to the falling off of domestic consumption, which in 1920 was only 4.6 bushels per capita (representing 74 per cent of the average consumption from 1909 to 1913), and the beginning and continuance of industrial depression.

The following chart shows graphically the relative per capita production and consumption of wheat and the relative purchasing power of winter wheat.

CHART H–1.



CORN.

TABLE H–3.—*Annual and per capita production; the exports, imports, reexports, and the total and per capita consumption of corn and price per bushel on Dec. 1, by years, 1890–1920.*

Year.	Production corn.[1]	Population of United States.	Per capita production.	Relative per capita production (1909–1913 =100).	Domestic exports (fiscal year).	Per cent of crop exported.[1]	Net imports.[2]	Total available for consumption, domestic and foreign.[2]	Available for consumption per capita.	Relative per capita consumption (1909–1913 =100).	Average farm price per bushel Dec. 1.[1]	Relative farm price per bushel (1909–1913 =100).	Relative purchasing power.[3]
	Bushels.		*Bushels.*						*Bushels.*				
1890	1,489,970,000	62,622,250	23.7	82	32,041,529	2.2	2,399	1,457,930,870	23.2	80	50.6	89	107
1891	2,060,154,000	63,959,482	32.2	111	76,602,285	3.7	5,785	1,983,557,500	31.0	107	40.6	71	85
1892	1,628,464,000	65,296,714	24.9	86	47,121,894	2.9	2,084	1,581,344,190	24.2	83	39.4	69	88
1893	1,619,496,131	66,633,946	24.3	84	66,489,529	4.1	2,478	1,553,009,080	23.3	80	36.5	64	81
1894	1,212,770,052	67,971,178	17.8	62	28,585,405	2.4	17,024	1,184,201,671	17.4	60	45.7	80	114
1895	2,151,138,580	69,308,410	31.3	108	101,100,375	4.7	4,677	2,050,042,882	38.5	133	25.3	44	62
1896	2,283,875,165	70,645,642	32.3	112	178,817,417	7.8	6,593	2,105,064,341	29.7	102	21.5	38	57
1897	1,902,967,933	71,982,874	26.4	91	212,055,543	11.1	3,493	1,690,915,883	23.4	81	26.3	46	68
1898	1,924,184,660	73,310,106	26.2	91	177,255,046	9.2	2,728	1,746,932,342	23.8	82	28.7	50	71
1899	2,078,143,933	74,647,338	27.8	96	213,123,412	10.3	2,548	1,865,023,069	24.9	86	30.3	53	70
1900	2,105,102,516	75,994,575	27.7	96	181,405,473	8.6	5,353	1,923,702,396	25.3	87	35.7	63	77
1901	1,522,519,891	77,612,569	19.6	68	28,028,688	1.8	17,456	1,494,508,659	19.2	66	60.5	106	131
1902	2,523,648,312	79,230,563	31.8	110	76,638,261	3.0	40,775	2,447,049,826	30.6	106	40.3	71	82
1903	2,244,176,925	80,848,557	27.7	96	58,222,061	2.6	11,898	2,185,966,762	27.0	93	42.5	74	85
1904	2,467,480,934	82,466,551	29.9	98	90,293,483	3.7	15,676	2,377,203,127	28.8	99	44.1	77	87
1905	2,707,993,540	84,084,545	32.2	111	110,893,833	4.4	10,429	2,588,100,136	30.7	106	41.2	72	83
1906	2,927,416,091	85,702,533	34.1	118	86,368,228	3.0	10,184	2,841,058,047	33.1	114	39.9	70	78
1907	2,592,320,000	87,320,533	29.6	102	55,063,860	2.1	19,370	2,537,275,510	29.0	100	51.6	90	94
1908	2,668,651,000	88,938,527	30.0	104	37,665,040	1.4	228,275	2,631,214,235	29.5	102	60.6	106	114
1909	2,552,190,000	90,556,521	28.1	97	38,128,498	1.5	118,215	2,734,365,622	30.1	104	57.9	101	102
1910	2,886,260,000	92,174,515	31.3	108	65,614,522	2.3	52,569	2,820,698,047	30.6	106	48.0	84	83
1911	2,531,488,000	93,527,941	27.0	93	41,797,291	1.7	53,488	2,480,744,197	26.5	91	61.8	108	111
1912	3,124,746,000	94,881,366	32.9	114	50,780,143	1.6	865,254	3,074,831,111	32.4	112	48.7	85	83
1913	2,446,988,000	96,234,791	25.4	88	10,725,819	.4	12,290,498	2,448,552,679	25.4	88	69.1	121	119
1914	2,672,804,000	97,588,216	27.3	94	50,668,303	1.9	9,894,498	2,632,030,195	26.9	93	64.4	113	111
1915	2,994,793,000	98,941,641	30.2	104	39,896,928	1.3	5,212,691	2,960,108,763	29.9	103	57.5	101	98
1916	2,566,927,000	100,295,066	25.5	88	66,753,294	2.6	2,270,079	2,502,443,785	24.9	86	88.9	156	123
1917	3,065,233,000	101,648,491	30.1	104	49,073,263	1.6	3,197,607	3,019,357,344	29.7	102	127.9	224	124
1918	2,502,665,000	103,001,916	24.2	84	23,018,822	.9	3,346,463	2,482,992,641	24.1	83	136.5	238	119
1919	2,858,509,000	104,355,341	27.3	94	16,707,447	.6	10,283,730	2,852,063,984	27.3	94	134.7	236	109
1920	3,232,367,000	105,708,771	30.5	106	66,911,093	2.0	4,742,264	3,170,198,171	29.9	103	67.7	119	48

[1] Exports and imports of corn and corn meal, 1890–1910, from Statistical Abstract for 1910, p. 535; 1911–1920, from Statistical Abstract 1920, p. 551.
[2] Statistics of grain crops, Department of Agriculture, Bulletin No. 861.
[3] Relative purchasing power obtained by dividing the relative farm price per bushel by the weighted index of all commodities of Bureau of Labor Statistics on the 1913 base converted to the five-year base 1909–1913.

The production of corn, while varying widely from year to year, has shown a constant increase during the period from 1890 to 1920 and has just about kept pace with increasing population. Careful examination of Table H–3, on page 160, seems to indicate that exports and imports of corn have not been influential factors in fixing the price, although exports have at times been considerable. In general, a short crop of corn is usually produced at an increase in price and a large crop at a decrease. It will be noticed two succeeding large crops, 1895 and 1896, resulted in a drop of nearly 50 per cent in the price compared with 1894. A short crop in 1901 resulted in an increase from 35.7 cents per bushel in 1900 to 60.5 cents per bushel in 1901, while a large crop in the succeeding year resulted in a drop from 60.5 cents to 40.3 cents per bushel. Again, in 1906 relatively large crops depressed the price and a smaller crop in 1907 increased it. In 1910 a substantial increase in production resulted in a decrease in price from 57.9 to 48 per bushel, while in the succeeding year a smaller production resulted in an increase from 48 to 61.8 per bushel, while a large crop in 1912 resulted in a drop in the price from 61.8 to 48.7 per bushel. A decline in the crop in 1913 as compared with 1912 resulted in an increase in the price from 48.7 cents to 69.1 cents per bushel.

The purchasing power of corn on the whole has been relatively less than that of wheat. In 1920 exports of wheat served to maintain the price relatively somewhat above that of corn, of which we had a large crop in 1920, which an increase in exports did not diminish sufficiently to prevent a tremendous drop in the domestic price.

Table H–4, on page 162, shows the effect of carry over in evening up the per capita consumption from year to year.

This carry over apparently has a stabilizing effect on the price of corn, although the carry over is apparently not sufficient to eliminate great fluctuations in price. Thus the per capita production of 31.8 bushels in 1902, which was very large, was reduced 1 bushel per capita by exports and another bushel by carry over—i. e., a production of 31.8 bushels per capita was reduced by exports in carry over to domestic consumption of 29.5 bushels per capita. Corn is marketed in the form of live stock in the main, hence the price of corn is an important factor to the hog and steer producer. For the country as a whole in no year is more than 25 per cent of the corn shipped out of the country in which it is grown and not to exceed 10 per cent of the crop in any year reaches the 10 primary markets.

Chart H–2, on page 163, shows graphically the relative per capita production and the relative purchasing power of corn. This chart in general indicates that the purchasing power of corn has risen when the per capita production was low and has fallen when per capita production was high.

Table H–6, on page 164, contains the same data for cotton as was given in Tables H–1, page 157, for wheat and H–3, page 160, for corn.

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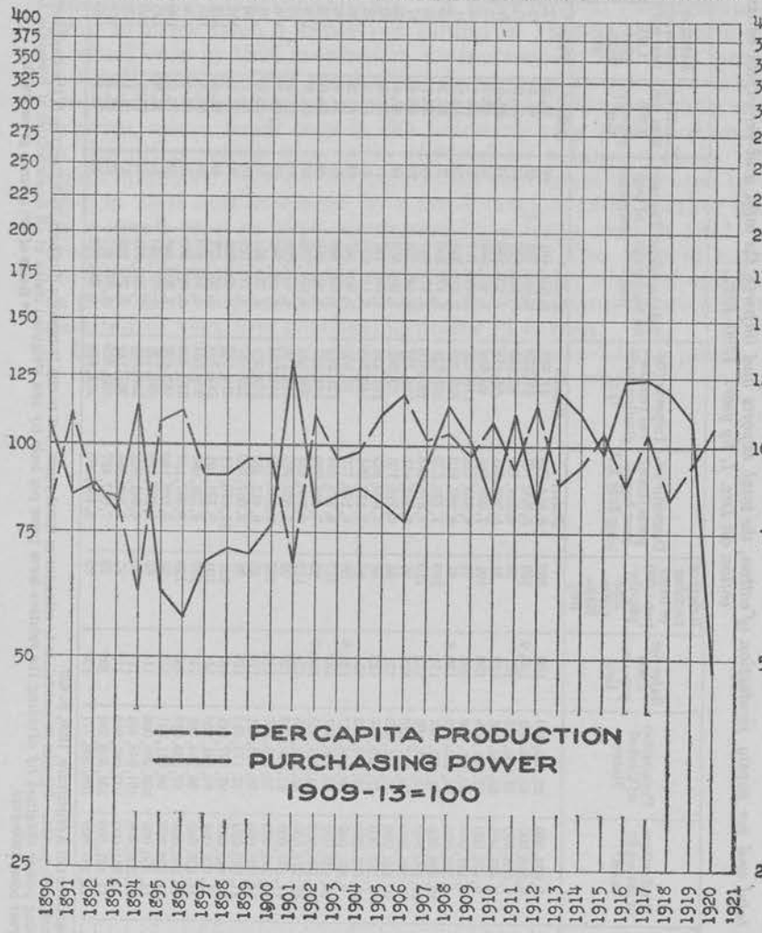
TABLE H-4.—*The production and carry-over of corn, the exports and imports of corn and corn meal, and the per capita consumption of corn, by years, 1897–1920.*

[In thousands of bushels.]

	Production.	Amount of crop carried over to following year.	Amount available out of this year's domestic crop.	Carried over from previous year.	Amount available for consumption.	Population of United States.	Domestic exports corn and corn meal (fiscal year beginning July 1).	Net imports corn and corn meal (fiscal year beginning July 1).	Actual per capita consumption.	Total amount for consumption.
									Bushels.	
1897	1,902,968	137,894	1,765,074	290,934	2,056,008	71,982,874	212,055,543	3,493	25.6	1,843,956
1898	1,924,185	113,644	1,810,541	137,890	1,948,431	73,310,106	177,255,046	2,728	24.1	1,771,179
1899	2,078,144	92,328	1,985,816	113,644	2,099,460	74,647,338	213,123,412	2,548	25.2	1,886,339
1900	2,105,103	95,825	2,009,278	92,328	2,101,606	75,994,575	181,405,473	5,353	25.2	1,920,206
1901	1,522,520	29,207	1,493,253	95,825	1,589,078	77,612,569	28,028,688	17,456	20.1	1,561,067
1902	2,523,648	131,210	2,392,438	27,267	2,419,705	79,230,553	76,638,261	40,775	29.5	2,343,108
1903	2,244,177	80,246	2,163,931	131,210	2,295,141	80,848,557	58,222,061	11,808	27.6	2,236,931
1904	2,467,481	82,285	2,385,196	80,246	2,465,442	82,466,551	90,293,483	15,676	28.8	2,375,164
1905	2,707,904	119,633	2,588,361	82,285	2,670,646	84,084,545	119,893,833	10,429	30.3	2,550,753
1906	2,927,416	120,995	2,806,421	119,633	2,926,054	85,702,533	89,385,228	10,184	33.0	2,820,606
1907	2,592,320	71,124	2,521,196	120,995	2,642,191	87,320,533	35,063,800	19,570	29.7	2,597,147
1908	2,668,651	79,779	2,588,872	71,124	2,659,996	88,938,527	37,995,040	228,275	29.4	2,622,559
1909	2,552,190	115,696	2,436,494	79,779	2,516,273	90,556,521	38,128,498	118,211	27.3	2,478,263
1910	2,886,260	123,824	2,762,436	115,696	2,878,132	92,174,515	65,614,522	52,969	30.5	2,812,570
1911	2,531,488	64,764	2,466,724	123,824	2,590,548	93,527,941	41,797,291	53,488	27.2	2,648,801
1912	3,124,746	137,972	2,986,774	64,764	3,051,538	94,881,366	50,780,143	385,254	31.6	3,001,623
1913	2,446,988	80,046	2,366,942	137,972	2,504,914	96,234,791	10,725,819	12,290,498	26.0	2,506,479
1914	2,672,804	96,009	2,576,795	80,046	2,656,841	97,588,216	50,668,303	9,894,498	26.8	2,616,067
1915	2,991,703	87,908	2,903,855	96,009	3,002,894	98,941,641	39,896,928	5,212,691	29.9	2,968,210
1916	2,596,927	34,448	2,532,479	87,908	2,620,387	100,295,066	66,753,294	2,270,079	25.4	2,555,804
1917	3,065,233	114,678	2,950,555	34,448	2,985,003	101,648,491	49,073,263	3,197,607	28.9	2,939,127
1918	2,502,665	69,835	2,432,830	114,678	2,547,508	103,001,916	23,018,822	3,346,193	24.5	2,527,836
1919	2,853,509	139,906	2,718,603	69,835	2,788,438	104,355,341	16,707,447	10,229,249	26.6	2,781,960
1920	3,232,367			139,906	3,372,273	105,708,771	66,911,033	4,742,304	31.3	3,310,104

CHART H-2.

THE RELATIVE PER CAPITA PRODUCTION AND THE RELATIVE PURCHASING POWER OF CORN



COTTON.

TABLE H–5.—*The total and per capita production of cotton, the total exports and imports, the total and per capita consumption, and the price of cotton on Dec. 1, by years, 1890–1920.*

Year	Production of cotton in bales.[1]	Population of United States.	Bales per 1,000 population.	Relative number of bales per 1,000 population (1909–1913=100).	Domestic exports (fiscal year beginning July 1).[1]	Imports (fiscal year beginning July 1).[1]	Total amount for consumption.[2]	Per cent of crop exported.	Consumption per 1,000 population.	Relative consumption per 1,000 (1909–1913=100).	Farm price per pound Dec. 1.[1]	Relative farm price Dec. 1 (1909–1913=100).	Relative purchasing power.[3]
					Bales.[4]	*Bales.*[4]	*Bales.*[4]		*Bales.*[4]	*Bales.*[4]	*Cents.*		
1890	8,674,000	62,622,250	138	100	5,814,718	41,818	2,604,491	66	41.6	73	8.6	71	86
1891	9,018,000	63,959,482	140.9	102	5,870,440	57,328	2,846,753	65	44.5	78	7.2	59	76
1892	6,664,000	65,296,714	101	73	4,424,230	87,736	2,415,875	66	37.0	65	8.3	68	87
1893	7,493,000	66,633,946	112	81	5,366,565	55,412	2,300,276	71	34.5	61	7.0	57	72
1894	9,476,000	67,971,178	139	101	7,034,866	98,664	2,983,665	74	43.9	77	4.6	38	54
1895	7,161,000	69,308,410	102	74	4,670,453	110,701	2,499,731	65	36.1	63	7.6	62	87
1896	8,533,000	70,645,642	120.8	87	6,207,510	103,798	2,841,394	72	40.2	71	6.7	55	82
1897	10,898,000	71,982,874	151	109	7,725,572	105,321	3,472,398	70	48.2	85	6.7	55	81
1898	11,189,000	73,310,106	152	110	7,575,438	100,316	3,672,097	68	50.1	88	5.7	47	67
1899	9,345,000	74,647,338	125	91	6,252,451	134,797	3,687,253	66	49.4	87	7.0	57	75
1900	10,123,000	75,994,575	131	95	6,718,125	93,263	3,603,516	66	47.4	83	9.2	75	91
1901	9,510,000	77,612,569	122	88	7,059,949	197,431	4,080,287	74	52.6	92	7.0	57	70
1902	10,631,000	79,230,563	134	97	7,138,284	149,749	4,187,076	67	52.8	93	7.6	62	71
1903	9,851,000	80,848,557	121.8	88	6,179,712	97,681	3,980,567	62	49.2	86	10.5	86	99
1904	13,438,000	82,466,551	162	117	8,678,644	121,017	4,523,208	64	54.8	96	9.0	74	84
1905	10,575,000	84,084,545	126.9	92	7,268,090	141,927	4,877,465	68	58.0	102	10.8	89	102
1906	13,274,000	85,702,533	154	112	9,036,434	209,584	4,974,199	68	58.0	102	9.6	79	88
1907	11,107,000	87,320,533	127	92	7,633,997	142,146	4,493,028	68	51.5	90	10.4	85	89
1908	13,242,000	88,938,527	148	107	8,895,970	173,036	5,198,963	67	58.5	103	8.7	71	76
1909	10,005,000	90,556,521	110	80	6,413,416	172,075	4,759,364	64	52.5	92	13.9	114	115
1910	11,609,000	92,174,515	125	91	8,067,882	227,537	4,713,126	69	51.1	90	14.1	116	115
1911	15,693,000	93,527,941	167	121	11,070,251	219,560	5,400,005	70	57.7	101	8.8	72	74
1912	13,703,000	94,881,366	144	104	9,124,591	243,704	5,867,431	66	61.8	108	11.9	98	95
1913	14,156,000	96,234,791	147	107	9,521,881	246,694	5,942,808	67	61.8	108	12.2	100	98
1914	16,135,000	97,588,216	165	120	8,807,157	370,409	6,087,338	54	62.4	109	6.8	56	55
1915	11,192,000	98,941,641	113	82	6,168,140	465,602	7,326,598	55	74.0	130	11.3	93	90
1916	11,450,000	100,295,066	114	83	6,176,162	294,123	7,721,354	53	77.0	135	19.6	161	127
1917	11,302,000	101,648,491	111	80	4,641,023	206,651	7,355,191	41	74.3	130	27.7	227	126
1918	12,041,000	103,001,916	117	85	5,525,894	207,184	6,288,922	45	61.1	107	27.6	226	113
1919	11,421,000	104,353,341	109	79	7,087,487	690,628	6,807,817	62	65.2	114	35.6	292	135
1920	12,987,000	105,708,771	123	89	5,409,102	251,878	7,828,776	42	74.1	130	14.0	115	46

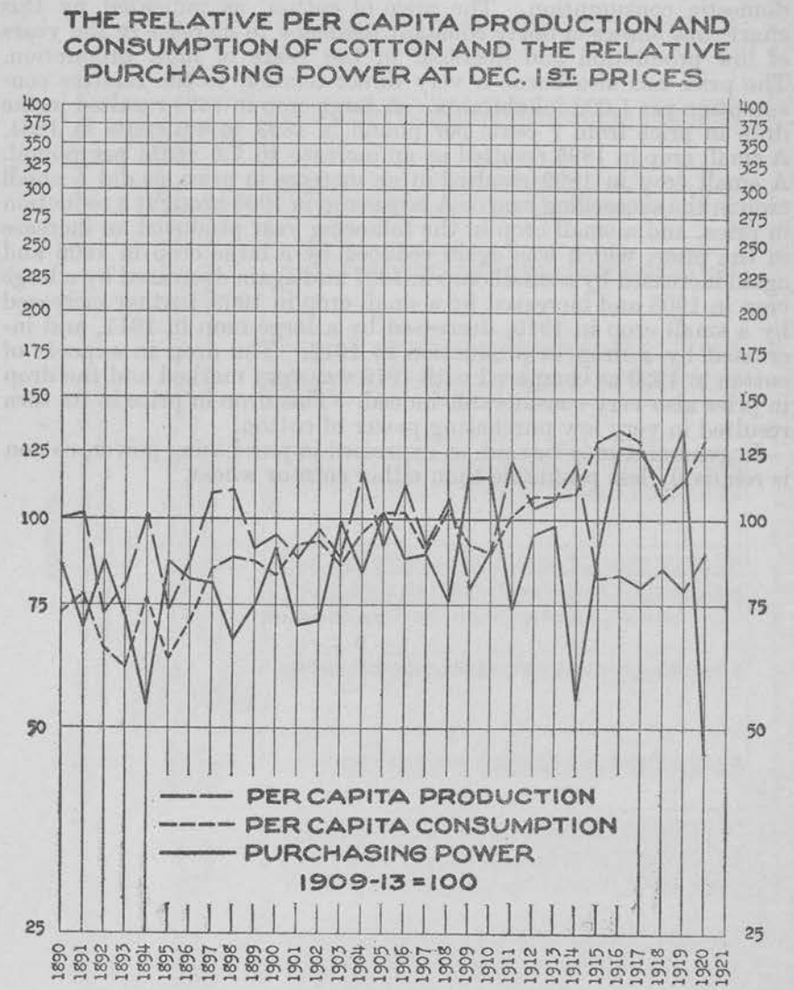
[1] Yearbook of Department of Agriculture, 1920, p. 637.
[2] Statistical Abstract, 1920, p. 554. Figures do not relate to calendar or fiscal years, but to the 12 months during which the crop of the specified year was chiefly marketed.
[3] Relative purchasing power obtained by dividing the relative farm price per bale by the weighted index of all commodities of Bureau of Labor Statistics on the 1913 base, converted to the five-year base, 1909–1913.
[4] Bales of 500 pounds gross weight.

The total production of cotton in the United States tended to increase during the period from 1890 to 1914 and since then tended to decrease. The percentage of the crop exported has remained fairly constant from 1890 to 1912, since which time it has declined. The decline in exports has been compensated for by a relative increase in domestic consumption. The price of cotton, as indicated by this chart, has shown a fairly constant tendency to increase in the years of low production and decrease in the years of high production. The price has also borne a very direct relation to the relative consumption per 1,000 inhabitants. A large crop in 1894 resulted in the drop in price from 7 cents per pound in 1893 to 4.6 cents in 1894. A small crop in 1895 resulted in an increase to 7.6 cents per pound. A small crop in 1899 resulted in an increase in price, as did a small crop in the succeeding year. A large crop in 1904 brought a reduction in price, and a small crop in the following year produced an increase in the price, which was again reduced by a large crop in 1906 and again increased by a small crop in 1907 and again decreased by a large crop in 1908 and increased by a small crop in 1909, further increased by a small crop in 1910, decreased by a large crop in 1911, and increased by a drop in production in 1912. The drop in exports of cotton in 1920 as compared with 1919 was very marked and the drop in price also very considerable indeed. This drop in price in its turn resulted in very low purchasing power of cotton.

In general it may be said, as expressed in purchasing power, cotton is relatively less profitable than either corn or wheat.

The following chart, H–3, shows graphically the per capita production and consumption of cotton and the relative purchasing power of cotton as of December 1, from 1890 to 1920.

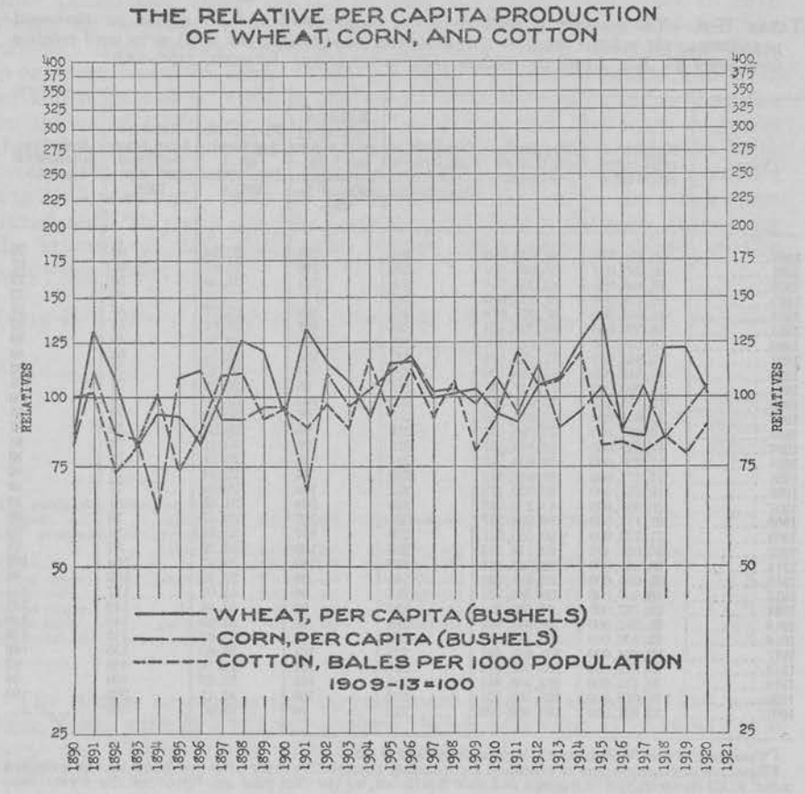
CHART H–3.



It must be borne in mind in considering the relation of per capita consumption, as indicated by these charts and the preceding ones, that per capita consumption does not indicate actual demand, but rather the supply per capita after allowing for exports, imports, and carry over.

The more rapid trend downward in the per capita production of cotton in this country as compared with the per capita production of wheat and corn in recent years is shown in chart H–4, which follows.

CHART H–4.



PRICE OF LIVE STOCK—DAIRY COWS.

The number of dairy cows on farms in the United States has been slowly but steadily increasing during the past 30 years, as indicated by the following table:

TABLE H–6.—*The number of milk cows on farms, total and per capita per thousand population; the relative number per thousand population; the farm price and relative farm price on Jan. 1 and the relative purchasing power, by years, 1890–1920.*

Years.	Number of milk cows on farms.[1]	Population of United States.	Number of milk cows per 1,000 population.	Relative number of milk cows per 1,000 population (1909–1913=100).	Farm price per head Jan. 1 (1909–1913=100).[1]	Relative farm price per head (1909–1913=100).	Relative purchasing power.[2]
1890	16,511,950	62,622,250	264	118	22.14	58	70
1891	16,020,000	63,959,482	250	112	21.62	56	67
1892	16,416,000	65,296,714	251	113	21.40	56	72
1893	16,424,000	66,633,946	246	110	21.75	57	72
1894	16,487,000	67,971,178	243	109	21.77	57	81
1895	16,505,000	69,308,410	238	107	21.97	57	80
1896	16,138,000	70,645,642	228	102	22.55	59	88
1897	15,942,000	71,982,874	221	100	23.16	60	88
1898	15,841,000	73,310,106	216	97	27.45	72	103
1899	15,990,000	74,647,338	214	96	29.66	77	101
1900	17,135,633	75,994,575	225	101	31.60	82	100
1901	16,834,000	77,612,569	216	97	30.00	78	96
1902	16,697,000	79,230,563	211	95	29.23	76	87
1903	17,105,000	80,848,557	212	95	30.21	79	91
1904	17,420,000	82,466,551	211	95	29.21	76	86
1905	17,572,000	84,084,545	209	94	27.44	71	82
1906	19,794,000	85,702,533	231	104	29.44	77	86
1907	20,968,000	87,320,533	240	108	31.00	81	84
1908	21,194,000	88,938,527	238	107	30.67	80	86
1909	21,720,000	90,556,521	239	107	32.36	84	85
1910	20,625,432	92,174,515	224	100	35.29	92	91
1911	20,823,000	93,527,941	223	100	39.97	104	107
1912	20,699,000	94,881,366	218	98	39.39	102	99
1913	20,497,000	96,234,791	213	96	45.02	117	115
1914	20,737,000	97,588,216	212	95	53.94	140	137
1915	21,262,000	98,941,641	214	96	55.33	144	140
1916	22,108,000	100,295,066	220	99	53.92	140	110
1917	22,894,000	101,648,491	225	101	59.63	155	86
1918	23,310,000	103,001,916	226	101	70.54	184	92
1919	23,475,000	104,355,341	224	101	78.20	204	94
1920	23,619,000	105,708,771	223	100	85.11	222	90
1921	23,321,000	106,000,000	220	99	63.97	166	.....

[1] Yearbook of the Department of Agriculture, 1920, p. 729.
[2] Relative purchasing power obtained by dividing the relative farm price per head by the weighted index of all commodities of Bureau of Labor Statistics, on the 1913 base converted to the 5-year base 1909–1913.

This increase has about kept pace with the population, although the number of milk cows per thousand population is relatively less in the last decade than it was in the decade ending in 1900. There were 221 dairy cows per 1,000 people on the average in the 10 years ending in 1920, as compared with 223 in the decade ending in 1910 and 232 in the decade ending in 1900. The value of dairy cows per head has increased quite steadily since 1890 and without much reference to the relative increase or decrease in the number of head per thousand population, although a decline in the number per 1,000 of population since 1906 has apparently resulted in an increased value per head.

The output of milk per cow has likewise increased, and as the grade of dairy cow has improved, the grade of milk has likewise improved;

hence the total production of milk and butter has increased more rapidly than the number of dairy cows. The total production of milk in the United States as reported to the Census Bureau increased 18.5 per cent from 1909 to 1919, as compared with an increase of 14.5 per cent in population from 1910 to 1920. The estimate of milk production made by the Bureau of Census from 1909 to 1919 shows an increase of but 4.5 per cent of milk production in that period. The Census Bureau's estimates of milk production, however, were based on cows "kept for milk," including many that were milked only a short time in the year. The bureau believes that the estimates of 1909 were somewhat too large, and therefore suggests that percentage comparisons should be based preferably on milk production as reported. The increase of milk production as reported was 18.5 per cent. Milk for the larger populations in the cities compared with 20 years ago has been secured chiefly through decreasing the amount of milk made into butter and cheese, as shown in the following table:

TABLE H–7.—*Dairy products of the farms in the United States, 1919, 1909, and 1899.*

[Bureau of the Census.]

Item.	1919	1909	1899	Per cent increase or decrease 1919 over 1909.	Per cent increase or decrease 1919 over 1899.
Milk produced, including estimates.....gallons..	7,805,238,069	7,466,406,384	7,265,804,304	+ 4.5	+ 7.0
Milk produced, as reported .....gallons..	6,893,748,235	5,813,699,474	.....	+18.6	.....
Milk sold.....do....	2,529,380,638	1,937,255,864	2,134,830,207	+30.6	+ 18.4
Butter made.....pounds..	707,666,492	994,650,610	1,071,626,056	−28.9	− 33.9
Butter sold.....do....	207,859,564	415,080,489	518,042,767	−49.9	− 59.8
Cheese made.....do....	6,371,396	9,405,864	16,372,318	−32.3	− 61.08
Cream sold.....gallons..	82,247,580	54,933,583	20,768,662	+49.7	+296.0
Butter fat sold.....pounds..	532,244,072	305,622,587	82,311,511	+74.1	+546.6

The States reporting the largest total sales of milk in 1919 were New York, with 573,161,952 gallons; Wisconsin with 473,816,832 gallons; and Pennsylvania with 250,444,940 gallons. (Shown in Table H–8, on page 170.) These three States together reported one-half (51.3 per cent) of the milk sold from farms in 1919. Wisconsin has increased her production 69.5 per cent, New York 13.2 per cent, and Pennsylvania 13 per cent. In the decade 1909–1919 the largest increase in percentage in milk production was in the Mountain and East North Central States. In the period referred to, the quantity of cheese made on farms decreased 32.3 per cent and the quantity of butter 28.9 per cent. The number of gallons of milk sold increased 30.6 per cent. Cream sold by farmers increased 49.7 per cent in the same period, while the sales of butter fats from farms increased 74.1 per cent. These figures indicate that the change from farm to factory production has brought sharp declines in the butter and cheese made on farms and a marked increase in milk, cream, and butter fats sold from the farm.

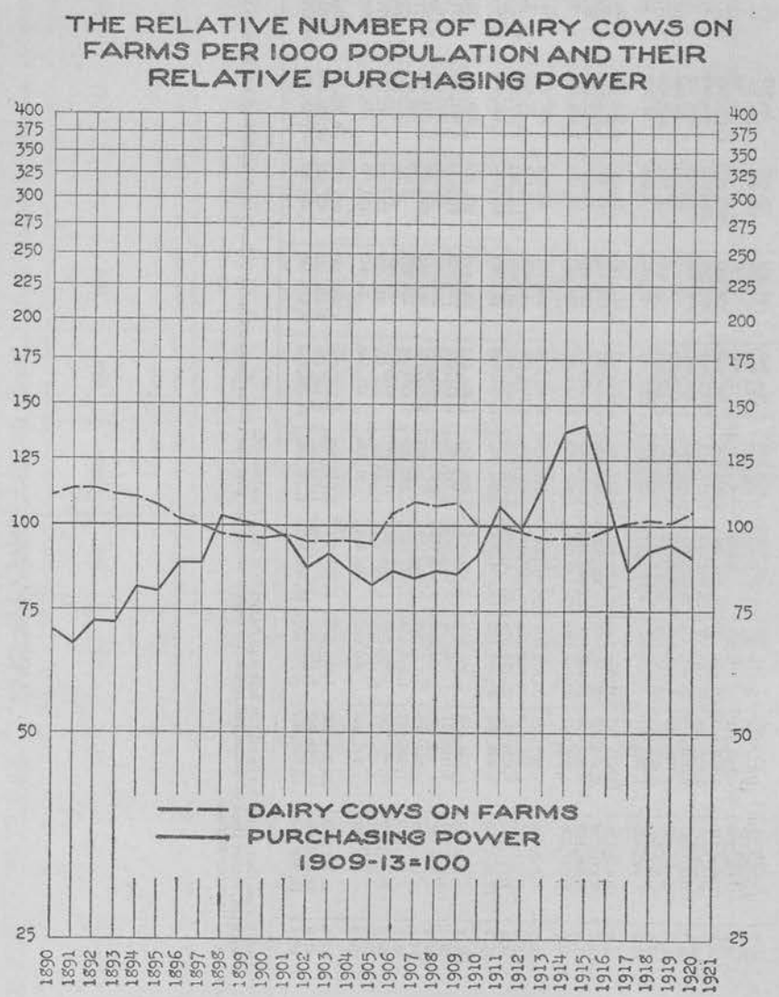
The relative number of dairy cows on farms per 1,000 population and their relative purchasing power is shown graphically in Chart H–5, on page 172.

TABLE H–8.—*Dairy products of farms in the United States, by geographic divisions and States: 1919 and 1909.*

Division and State.	Milk produced.		Milk sold (gallons).		Butter made (pounds).		Butter sold (pounds).		Cream sold (gallons).		Butterfat sold (pounds).	
	Quantity, including estimates, 1919 [1] (gallons).	Per cent of increase, 1909–1919. [2]	1919	1909	1919	1909	1919	1909	1919	1909	1919	1909
United States	7,805,238,069	4.5	2,529,380,638	1,937,255,864	707,666,492	994,650,610	207,859,564	415,080,489	82,247,580	54,933,583	532,244,072	305,662,587
Geographic divisions:												
New England	385,638,607	− 2.0	208,464,058	175,209,759	22,093,227	40,732,783	14,670,830	29,528,001	2,487,936	4,469,060	17,571,096	14,599,436
Middle Atlantic	1,248,168,026	11.9	879,984,088	750,556,634	64,797,058	88,242,228	41,855,538	57,828,247	3,116,194	2,446,696	12,490,752	44,023,628
East North Central	2,246,679,781	28.4	948,491,089	661,302,433	108,093,861	230,966,876	42,377,384	135,159,149	27,654,771	15,272,040	187,178,213	85,099,734
West North Central	1,718,412,734	19.2	129,303,194	144,537,918	130,995,829	201,172,278	28,883,728	88,186,732	31,949,388	22,599,643	214,581,923	123,176,904
South Atlantic	517,728,377	7.4	81,264,102	45,378,866	121,072,533	123,270,552	32,495,022	33,888,871	1,417,055	1,027,441	3,365,410	505,904
East South Central	458,942,467	0.1	32,803,250	22,593,214	120,495,395	136,239,873	19,418,492	22,688,468	2,616,454	368,959	8,548,193	217,860
West South Central	459,391,493	− 4.7	36,808,346	21,070,626	101,443,114	128,188,799	16,421,394	24,321,179	3,243,867	1,064,000	12,431,547	4,465,810
Mountain	260,482,904	98.5	47,870,550	31,108,665	22,840,410	18,115,811	7,196,857	7,635,775	3,952,032	1,549,881	17,884,633	4,799,182
Pacific	509,793,680	55.0	164,391,961	85,497,749	15,835,065	27,721,410	4,540,319	15,844,067	5,809,883	6,135,863	58,192,305	28,774,135
New England:												
Maine	77,676,881	20.1	28,190,733	12,784,866	10,855,560	13,299,229	6,945,411	8,389,817	742,813	737,706	2,705,560	4,060,344
New Hampshire	42,556,285	4.1	23,043,256	21,132,268	3,240,368	5,065,188	2,272,752	3,510,593	264,635	380,944	758,782	566,229
Vermont	122,095,734	− 5.4	55,319,390	33,998,934	3,877,039	15,165,692	2,954,634	12,892,124	928,843	2,353,686	13,072,731	7,756,395
Massachusetts	76,316,309	−20.5	55,676,858	64,496,692	2,019,231	3,364,516	1,282,887	2,220,311	310,918	501,876	506,851	1,148,019
Rhode Island	12,099,111	3.9	9,313,548	8,796,847	174,902	339,607	81,150	177,322	30,022	42,421	15,524	5,347
Connecticut	54,894,287	8.1	36,920,273	34,000,152	1,926,127	3,498,551	1,133,996	2,337,834	210,705	452,427	511,648	1,063,096
Middle Atlantic:												
New York	756,045,942	13.2	573,161,952	524,279,723	24,727,662	23,461,702	15,455,725	12,630,113	1,815,983	1,207,174	6,298,760	36,249,617
New Jersey	70,490,729	− 5.3	56,377,196	56,856,550	1,600,789	3,622,411	674,267	2,003,029	51,114	79,485	61,579	249,557
Pennsylvania	421,631,355	13.0	250,444,940	169,420,361	38,468,607	61,158,115	25,725,546	43,195,105	1,249,097	1,160,037	6,130,413	7,524,454
East North Central:												
Ohio	396,317,787	13.1	139,063,960	99,430,948	30,264,265	63,569,132	14,116,447	39,252,326	7,658,715	2,191,997	29,828,000	7,563,527
Indiana	238,793,861	8.9	45,167,166	32,562,414	18,344,239	43,181,817	6,438,298	24,715,894	5,907,414	1,347,660	25,922,440	6,361,831
Illinois	370,486,981	4.1	159,578,765	158,031,333	25,063,897	46,609,992	8,734,470	24,442,251	5,626,433	2,104,352	17,052,544	4,637,745
Michigan	382,822,631	19.3	130,864,366	74,025,769	25,755,423	50,405,426	10,154,869	30,010,783	4,459,626	2,485,061	31,647,906	18,287,691
Wisconsin	858,258,521	69.5	473,816,832	297,251,969	8,666,037	27,200,509	2,933,300	16,737,895	4,002,583	7,142,970	82,727,323	48,248,940
West North Central:												
Minnesota	475,506,689	42.0	43,151,896	53,181,785	20,205,076	34,708,669	4,392,185	18,016,409	5,888,538	5,756,165	82,412,061	40,414,151
Iowa	361,426,362	2.5	31,355,659	55,241,511	25,422,675	38,679,568	6,463,846	17,917,387	6,784,753	8,062,449	45,411,147	42,917,696
Missouri	228,907,721	10.7	17,900,545	15,733,185	23,470,763	42,105,143	7,022,562	14,646,771	4,836,763	1,390,989	14,853,783	4,927,383
North Dakota	138,606,540	76.1	3,047,096	1,644,150	14,413,180	16,414,439	2,898,998	7,019,169	3,098,421	834,103	14,607,548	2,185,377
South Dakota	124,427,638	37.7	2,697,554	2,385,781	10,267,171	13,629,647	1,493,800	5,941,992	2,841,406	2,232,961	13,615,085	5,776,689
Nebraska	168,083,367	− 5.8	10,181,597	6,500,380	13,761,085	25,986,931	2,338,491	11,652,068	3,631,494	1,952,908	17,621,330	12,371,699
Kansas	221,454,417	14.6	20,968,847	9,851,126	17,455,879	29,647,881	4,273,846	12,993,836	4,868,013	2,361,068	26,060,969	14,583,909
South Atlantic:												
Delaware	11,356,313	19.8	6,876,251	4,425,909	894,883	1,563,161	675,359	1,024,945	34,252	25,809	76,232	18,149
Maryland	58,754,193	26.7	29,842,910	19,424,325	6,162,501	8,739,620	3,925,042	5,682,228	311,436	455,496	448,266	343,148
Dist. of Columbia	512,074	− 9.0	129,170	339,345	6,026	6,155	81	1,800	25		50	
Virginia	110,942,113	5.5	17,009,435	8,577,893	25,476,621	26,651,244	8,007,298	7,983,430	558,583	302,217	1,163,064	97,558
West Virginia	73,690,103	− 5.7	6,778,970	4,050,741	17,715,107	18,969,699	7,155,413	7,077,664	292,106	104,696	581,519	8,421
North Carolina	95,747,638	0.7	7,060,063	2,380,029	25,551,506	26,053,585	5,819,193	5,670,590	100,933	21,329	729,419	9,224
South Carolina	52,954,637	15.5	2,870,607	919,745	13,846,353	12,329,567	1,956,001	1,752,209	18,155	11,282	98,606	10,023
Georgia	101,615,773	12.6	7,389,966	3,872,098	30,257,153	27,246,247	4,728,372	4,385,354	86,908	97,564	240,456	17,286
Florida	12,155,533	17.7	3,306,730	1,388,781	1,162,383	1,705,274	228,263	310,651	16,657	9,048	27,798	2,095
East South Central:												
Kentucky	146,561,464	4.7	12,469,133	10,415,482	34,080,415	38,130,687	5,917,916	8,421,827	1,581,285	159,016	4,238,223	154,427
Tennessee	130,285,644	− 1.7	9,831,349	6,814,209	37,166,063	39,827,906	8,468,929	9,009,307	490,112	145,976	1,862,519	32,345
Alabama	93,903,677	1.0	6,408,962	3,397,426	28,490,181	29,550,595	3,160,572	2,805,021	150,474	28,385	582,858	21,744
Mississippi	88,191,682	− 5.5	4,093,806	1,966,097	20,758,736	28,730,685	1,871,075	2,452,313	394,583	35,582	1,884,593	9,344
West South Central:												
Arkansas	87,623,651	− 8.3	4,332,116	3,952,322	25,571,098	29,907,337	3,182,328	3,694,311	234,791	53,302	897,812	74,607
Louisiana	32,972,720	−15.6	5,334,031	4,501,119	4,252,318	6,232,006	471,596	1,019,420	19,459	32,433	72,455	7,073
Oklahoma	135,820,769	14.0	7,781,754	3,626,217	22,214,546	27,056,242	3,820,173	7,465,824	2,338,859	526,193	8,357,831	3,137,112
Texas	202,974,353	−11.3	19,360,445	8,990,968	49,405,152	64,993,214	8,947,297	12,141,624	650,758	452,072	3,103,449	1,247,018
Mountain:												
Montana	51,251,095	166.5	5,101,542	3,584,689	5,961,336	2,820,574	2,062,541	1,234,263	926,842	274,979	2,909,284	652,097
Idaho	52,365,498	119.3	6,302,891	2,060,111	4,540,364	3,542,135	1,381,995	1,417,663	780,310	319,542	4,951,818	1,191,867
Wyoming	14,613,581	104.1	2,195,815	1,377,607	1,422,822	1,192,122	395,135	461,552	204,273	46,680	1,005,907	67,303
Colorado	79,492,631	114.1	16,086,983	10,037,067	5,775,602	5,856,132	1,739,147	2,914,143	1,381,758	440,257	5,804,055	1,087,681
New Mexico	12,737,649	63.1	1,626,479	1,036,922	1,404,138	1,477,617	332,002	410,634	198,098	9,679	682,973	11,248
Arizona	14,370,833	87.6	6,707,170	3,347,723	593,446	325,980	193,597	120,951	92,089	37,744	762,599	665,850
Utah	29,339,512	25.0	9,051,137	8,471,713	2,876,675	2,497,366	1,040,581	919,581	291,659	270,225	1,049,559	914,133
Nevada	6,312,105	24.2	800,533	1,192,833	266,027	403,885	51,859	156,588	77,003	150,775	718,438	209,003
Pacific:												
Washington	140,524,518	77.0	63,575,339	25,524,209	5,899,678	6,751,575	2,012,530	3,112,326	1,586,806	1,911,261	9,738,94	4,386,283
Oregon	92,844,946	41.9	22,878,290	14,640,108	4,177,628	5,667,964	1,145,803	2,446,158	1,106,341	827,541	10,835,785	5,211,133
California	276,424,216	49.8	77,938,332	45,333,432	5,757,759	15,301,871	1,381,986	10,285,583	3,116,736	3,397,061	37,618,426	19,176,719

[1] Figures include estimates for farms which reported dairy cows on hand but failed to report any milk production.
[2] Percentages based on milk produced, as reported, rather than on estimated totals, by reason of the fact that the 1909 estimates appear to have been somewhat too large to provide a fair basis of comparison. A minus sign (−) denotes decrease.

CHART H–5.



CATTLE OTHER THAN DAIRY COWS.

There have been fewer cattle other than dairy cows on our farms in the past decade than there were in the preceding decade. The number of cattle on our farms per 1,000 population has decreased at a rapid rate. The number of cattle on farms per thousand population averaged 402 in the decade ending 1920, as compared with 543 in the decade ending 1910 and 502 in the decade ending with 1900, as indicated by Table H–9, on page 173.

A study of Table H–9 discloses the fact that the price of beef cattle has borne a rather consistent relation to the relative number per 1,000 of population. Seven years of large relative production of

TABLE H–9.—*The number of cattle other than milk cows (including oxen) on farms, total and per capita, the relative number per thousand population, the number imported and exported, the number available for consumption, the number available for consumption per thousand population, the relative number available for consumption per thousand population, the farm price per head on Jan. 1, and the relative purchasing power of cattle, by years, 1890–1920.*

Years.	Number of cattle on farms.[1]	Population of United States.	Number of cattle per 1,000 population.	Relative number per 1,000 population (1909–1913=100).[1]	Imports of live cattle (fiscal year beginning July 1).[1]	Exports of domestic cattle (fiscal year beginning July 1).[1]	Total number of cattle available for consumption.	Number available for consumption per 1,000 population.	Relative number available per 1,000 population (1909–1913=100).[1]	Farm price per head, Jan. 1.[1]	Relative farm price per head, Jan. 1 (1909–1913=100).	Relative purchasing power.[2]
1890	33,734,128	62,622,250	538	123	30,692	394,838	33,369,934	532	121	15.21	73	88
1891	35,876,000	63,959,482	576	132	12,392	374,679	35,513,713	570	130	14.76	71	85
1892	37,051,000	65,296,714	567	130	3,293	287,004	36,767,199	562	128	15.16	73	94
1893	35,054,000	66,633,946	526	121	1,502	359,278	34,696,314	520	118	15.24	73	92
1894	67,971,178	65,539	124	149,781	765,853	35,991,928	515	117	14.66	70	100	
1895	34,304,000	69,308,410	496	114	217,826	372,461	34,209,365	493	112	14.06	68	96
1896	32,085,000	70,645,642	454	104	228,977	392,190	32,021,787	453	103	15.86	76	113
1897	30,508,000	71,982,874	423	97	291,589	439,255	30,380,324	421	96	16.65	80	118
1898	29,204,000	73,320,106	399	92	190,752	389,490	29,074,262	396	90	20.92	100	143
1899	27,994,000	74,647,338	374	86	181,006	397,286	27,777,720	372	85	22.79	109	143
1900	50,555,777	75,994,575	665	153	145,022	459,218	50,272,581	635	145	24.97	120	146
1901	45,500,000	77,612,509	586	134	96,027	392,884	45,203,143	582	133	19.93	95	117
1902	44,728,000	79,230,563	565	130	66,175	402,178	44,391,997	561	128	18.76	89	102
1903	44,659,000	80,848,557	552	127	16,056	593,409	44,081,547	545	124	18.45	88	101
1904	43,629,000	82,466,551	516	118	27,855	567,906	43,089,949	522	119	16.32	78	89
1905	43,669,000	84,084,545	519	119	29,019	584,239	43,115,780	512	117	15.15	73	84
1906	47,068,000	85,702,533	549	126	22,402	425,051	46,677,351	544	124	15.85	76	84
1907	51,566,000	87,320,533	590	135	92,356	349,210	51,309,146	587	134	17.10	82	85
1908	50,073,000	88,938,527	563	129	139,184	207,542	50,004,642	562	128	16.89	81	87
1909	49,376,000	90,556,521	545	125	195,908	139,430	49,435,908	545	124	17.49	83	84
1910	41,175,434	92,174,515	446	102	182,923	150,100	41,211,257	447	102	19.07	91	90
1911	39,679,000	93,527,941	424	97	315,372	105,506	39,891,866	428	97	20.54	98	101
1912	37,280,000	94,881,366	392	90	421,649	24,714	37,656,935	396	90	21.20	101	98
1913	36,089,000	96,234,791	374	86	993,368	18,376	36,879,992	383	87	26.36	126	124
1914	35,585,000	97,588,216	367	84	538,167	5,484	36,387,683	373	85	31.13	150	147
1915	37,067,000	98,941,641	374	86	439,185	21,666	37,454,519	379	86	33.38	160	155
1916	39,812,000	100,295,066	396	91	374,826	13,387	40,173,439	400	91	33.53	160	126
1917	41,689,000	101,648,491	410	94	239,719	18,213	41,910,506	412	94	35.88	172	96
1918	44,112,000	103,001,916	428	98	440,399	42,345	44,510,054	431	98	40.88	196	98
1919	45,085,000	104,355,341	432	99	575,328	83,039	45,507,289	436	99	44.22	211	98
1920	44,750,000	105,708,771	420	96	329,974	145,693	44,934,301	425	97	43.22	207	83
1921	42,870,000									31.41	150	

[1] Yearbook of Department of Agriculture, 1920, p. 729. Exports and imports include milk cows. Number of cattle on farms includes oxen.

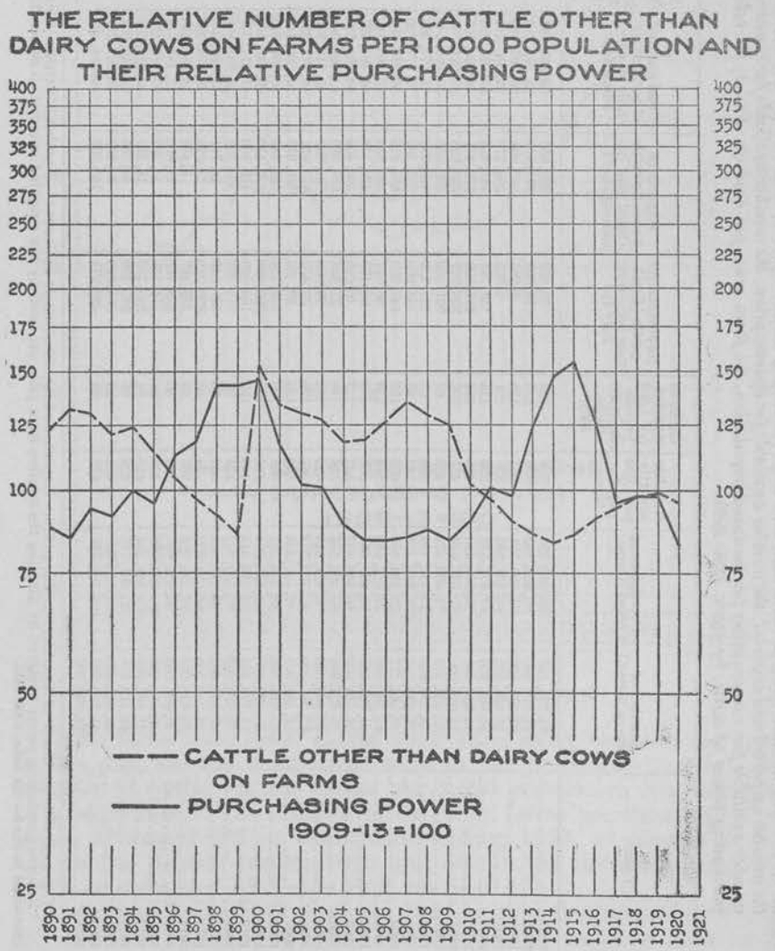
[2] Relative purchasing power obtained by dividing the relative farm price per head by the weighted index of all commodities of Bureau of Labor Statistics, on the 1913 base converted to the 5-year base, 1909–1913.

cattle per capita were accompanied by seven years of relatively low prices. Three years of low production, beginning with 1897, resulted in 3 years of relatively higher prices; 11 years of large production resulted in 11 years of low prices, while 10 years of low production brought 10 years of relatively high prices.

The purchasing power of beef cattle has fluctuated very widely and apparently without much direct relation to the relative farm price per head. On the whole, as measured in purchasing power, the production of beef cattle has not been profitable and the price to the farmer has not been sufficiently high to maintain production on a basis of increase equivalent to the increase in population.

The relative number of cattle other than dairy cows on farms and their relative purchasing power is graphically shown in the chart which follows.

CHART H–6.



HOGS.

Table H–10, on page 176, brings together the data showing the relation between total number of hogs per 1,000 population, exports, imports, and consumption.

The number of hogs on farms in recent years has exceeded the number in previous years. The number of hogs on farms per capita in the five years ending 1920 was greater than in any five preceding years, excepting the five years ending with 1894. Hog production in recent years has little more than kept pace with the population except in 1920, when a decrease in the price apparently resulted in a decrease in production. There appears to be no very clear or constant relation between the total or per capita production of hogs and the relative farm price.

It should be noted in connection with Table H–10, on page 176, that a very large increase in actual number of hogs and in the relative number of hogs per 1,000 population shown in 1900 is probably due to a census adjustment of figures rather than to an actual difference in the number of hogs on farms in 1900 as compared with 1899.

It should be noted in connection with Table H–10 that a very large increase in actual number of hogs and in the relative number of hogs per 1,000 population shown in 1900 is probably due to a census adjustment of figures rather than to an actual difference in the number of hogs on farms in 1900 as compared with 1899.

Table H–11, on page 177, shows the relation between the number of sheep on farms, the number of sheep per 1,000 population, exports, imports, and net production of sheep available for consumption, and the price per head and the purchasing power of sheep.

TABLE NO. H–10.—*The number of live hogs on farms, the number exported and imported, the number available for slaughter, the relative number produced, and the relative number available for slaughter per 1,000 population, the relative farm price per head, and the relative purchasing power, by years, 1890–1920.*

Year.	Number of hogs on farms Jan. 1.[1]	Population of United States.	Number of hogs per 1,000 population.	Relative number per 1,000 population (1909–1913=100).	Exports of live hogs (fiscal year beginning July 1.[2])	Imports of live hogs.[2]	Number available for slaughter.	Number available for slaughter per 1,000 population.	Relative number available per 1,000 population (1909–1913=100).	Farm price per head Jan. 1.[1]	Relative farm price Jan. 1 (1909–1913=100).	Relative purchasing power.[3]
1890	57,409,583	62,622,250	0.916	140	91,148	.....	57,318,435	915	141	$4.72	56	68
1891	50,625,000	63,959,482	.791	121	95,654	.....	50,529,346	790	121	4.15	49	58
1892	52,398,000	65,296,714	.802	123	31,963	.....	52,366,037	802	123	4.60	54	69
1893	46,095,000	66,633,946	.691	106	27,375	.....	46,067,625	691	106	6.41	76	96
1894	45,206,000	67,971,178	.660	101	1,553	.....	45,204,447	660	101	5.98	70	100
1895	44,166,000	69,308,410	.637	98	7,130	.....	44,158,870	637	97	4.97	59	83
1896	42,843,000	70,645,642	.606	93	21,049	.....	42,791,951	606	93	4.35	51	76
1897	40,600,000	71,982,874	.564	86	28,751	.....	40,571,249	564	87	4.10	48	71
1898	39,760,000	73,310,106	.541	83	14,031	.....	39,745,969	541	83	4.39	52	74
1899	38,652,000	74,647,338	.517	79	51,180	.....	38,600,819	517	79	4.40	52	68
1900	62,868,041	75,994,575	.827	127	22,318	.....	62,845,723	827	127	5.00	59	72
1901	56,982,000	77,612,569	.734	112	8,368	.....	56,973,632	734	113	6.20	73	90
1902	48,699,000	79,230,563	.614	94	4,031	.....	48,694,969	615	94	7.03	83	95
1903	46,923,000	80,848,557	.583	89	6,345	.....	46,916,654	580	89	7.78	92	106
1904	47,009,000	82,466,551	.570	87	44,496	.....	46,964,504	570	88	6.15	72	82
1905	47,321,000	84,084,545	.563	86	59,170	.....	47,261,829	562	86	5.99	71	82
1906	52,103,000	85,702,533	.607	93	24,262	.....	52,078,738	608	93	6.18	73	81
1907	54,794,000	87,320,533	.627	96	30,818	.....	54,763,182	627	96	7.62	90	94
1908	56,084,000	88,938,527	.636	97	18,655	.....	56,065,345	630	97	6.05	71	76
1909	54,147,000	90,556,521	.608	93	4,410	.....	54,142,519	598	92	6.55	77	78
1910, Apr. 15	58,185,000	92,174,515	.631	107	8,551	.....	58,176,449	631	97	9.17	108	107
1911	65,620,000	93,527,941	.701	106	19,038	.....	65,600,962	701	108	9.37	110	113
1912	65,410,000	94,881,366	.689	97	15,332	.....	65,394,667	689	106	8.00	94	91
1913	61,178,000	96,234,791	.636	92	10,122	.....	61,167,878	636	98	9.86	116	114
1914	58,933,000	97,588,216	.604	100	7,799	.....	58,925,201	604	93	10.40	122	120
1915	64,618,000	98,941,641	.653	104	20,048	.....	64,597,952	653	100	9.87	116	113
1916	67,766,000	100,295,066	.676	102	21,926	5,669	67,749,743	676	104	8.40	99	78
1917	67,503,000	101,648,491	.663	106	9,280	12,696	67,506,416	664	102	11.75	138	77
1918	70,978,000	103,001,916	.689	109	17,390	24,236	70,984,846	689	106	19.54	230	115
1919	74,584,000	104,355,341	.714	104	36,107	3,662	74,551,555	714	110	22.02	259	120
1920	71,727,000	105,708,771	.678	96	103,414	1,161	71,624,747	676	104	19.01	224	90
1921	66,649,000	.....	.....	.....	.....	.....	.....	.....	.....	12.99	153	.....

[1] Yearbook of Department of Agriculture, 1920, p. 753.
[2] Compiled from Commerce Reports.
[3] Relative purchasing power obtained by dividing the relative farm price per head by the weighted index of all commodities of Bureau of Labor Statistics, on the 1913 base converted to the 5-year base, 1909–1913.

SHEEP.

TABLE H–11.—*The number of sheep on farms, the imports and exports of live sheep, the total available for consumption, the number available per 1,000 population, the farm price Jan. 1, and the relative production, consumption, price, and purchasing power, by years, 1890–1920.*

Years.	Number on farms.[1]	Population of United States.	Number of sheep per 1,000 population.	Relative number (1909–1913 =100).	Imports of live sheep (fiscal year beginning July 1.)[2]	Domestic exports of live sheep (fiscal year beginning July 1.)[2]	Total number available for consumption.	Number available for consumption per 1,000 population.	Relative number for consumption (1909–1913 =100).	Farm price Jan. 1.[1]	Relative farm price (1909–1913 =100).	Relative purchasing power (1909–1913 =100).[3]
1890	44,336,000	62,622,250	708	124				708	125	$2.27	60	72
1891	43,431,136	63,959,482	679	119				679	120	2.50	66	79
1892	44,938,365	65,296,714	688	121				688	121	2.58	68	87
1893	47,273,553	66,633,946	709	125	459,484	37,260	47,695,777	709	125	2.68	71	90
1894	45,048,017	67,971,178	669	118	242,568	132,370	45,158,215	669	118	1.98	53	76
1895	42,294,064	69,308,410	610	107	291,461	405,748	42,179,777	689	121	1.58	42	59
1896	38,298,783	70,645,642	542	95	322,962	491,565	38,130,180	539	95	1.70	45	67
1897	36,818,643	71,982,874	511	90	405,633	244,120	36,980,156	513	90	1.82	48	71
1898	37,656,960	73,310,106	513	90	392,314	199,690	37,849,584	516	91	2.46	65	93
1899	39,114,453	74,647,338	523	92	345,911	143,286	39,317,078	528	93	2.75	73	96
1900	41,883,000	75,994,575	551	97	381,792	125,972	42,139,020	554	98	2.93	78	95
1901	59,756,718	77,612,569	769	135	331,488	297,925	59,790,281	770	136	2.98	79	97
1902	62,039,091	79,230,563	783	138	266,953	358,720	61,947,324	782	138	2.65	70	80
1903	63,964,876	80,848,557	791	139	301,623	176,961	64,089,538	793	140	2.63	70	80
1904	51,630,144	82,466,551	626	110	238,094	301,313	51,566,925	625	110	2.59	69	78
1905	45,170,423	84,084,545	537	94	186,942	268,365	45,089,000	536	94	2.82	75	86
1906	50,631,619	85,702,533	590	104	240,747	142,690	50,729,676	592	104	3.54	94	104
1907	53,240,282	87,320,533	609	107	224,798	135,344	53,329,736	611	108	3.84	102	106
1908	54,631,000	88,938,527	614	108	224,765	101,000	54,754,765	615	108	3.88	103	111
1909	56,084,000	90,556,521	619	109	102,663	67,656	56,119,007	619	109	3.43	91	92
1910	52,448,000	92,174,515	569	100	126,152	44,517	52,529,635	569	100	4.12	109	108
1911	53,633,000	93,527,941	573	101	53,455	121,491	53,564,964	573	101	3.91	104	107
1912	52,362,000	94,881,366	551	97	23,588	157,263	52,228,325	550	97	3.46	92	89
1913	51,482,000	96,234,791	534	94	15,428	187,132	51,310,296	533	94	3.94	105	103
1914	49,719,000	97,588,216	509	89	223,719	152,600	49,790,119	510	90	4.02	107	105
1915	49,956,000	98,941,641	504	89	153,317	47,213	50,062,104	506	89	4.50	119	116
1916	48,625,000	100,295,066	484	85	235,659	52,278	48,808,381	487	86	5.17	137	108
1917	47,616,000	101,648,491	468	82	160,422	58,811	47,717,611	469	83	7.13	189	105
1918	48,603,000	103,001,916	471	83	177,681	7,959	48,772,722	475	84	11.82	313	157
1919	48,866,000	104,355,341	468	82	199,549	16,117	49,049,432	470	83	11.63	308	143
1920	47,114,000	105,708,771	445	78	161,243	80,723	47,194,520	465	82	10.52	279	113
1921	45,067,000	106,000,000	425	75						6.41	170	

[1] Yearbook of Department of Agriculture, 1920, p. 743.
[2] Yearbook of Department of Agriculture, 1919, p. 670; 1920 and 1921, compiled from Commerce Reports.
[3] Relative purchasing power obtained by dividing the relative farm price per head by the weighted index of all commodities of Bureau of Labor Statistics, on the 1913 base converted to the 5-year base, 1909–1913.

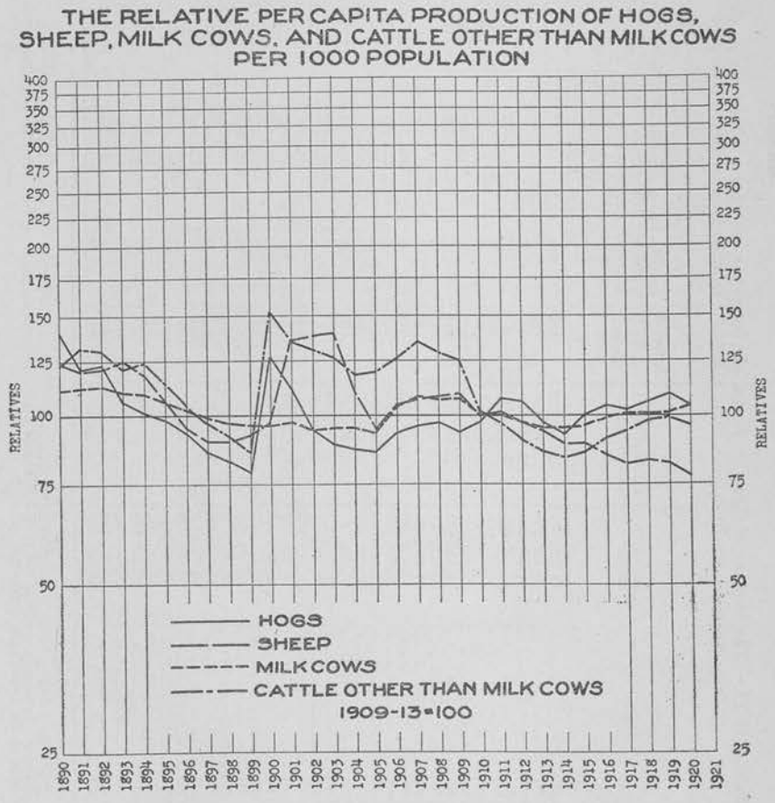
The actual number of sheep on farms in the United States in the decade ending 1920 was lower than in the decade ending in 1910 and higher in the decade ending in 1900. The number of sheep per 1,000 of population, however, in the last decade was less than in either of the two preceding 10-year periods. The number per thousand population averaged 501 in the 10 years ending 1920, as compared with 651 in the 10 years ending 1910 and 544 in the 10 years ending in 1900.

The price and purchasing power of sheep has risen rather steadily with the decrease in the number of sheep per 1,000 of population. The price of wool and mutton has not been sufficiently high to keep up relatively our supply of sheep. The decline in price in 1920 and the early months of 1921 seems likely to result in a further decline in the flocks of sheep, unless there should be very marked and sustained increase in price of wool and of sheep in the immediate future.

PER CAPITA PRODUCTION OF LIVE STOCK.

The relative production of hogs, sheep, and cattle, other than milk cows, is graphically shown in the following chart:

CHART H-7.



The sharp increase in per capita production of sheep and cattle other than milk cows in 1899 to 1900, as shown by the above chart, probably represents a readjustment of statistics rather than an actual increase of the number of sheep and cattle actually on farms, that is to say, the estimates for the years preceding 1900 were probably too low and were readjusted on the basis of the census figures, resulting in an apparent increase as shown by the statistics. Hogs and milk cows have apparently kept pace with the population. Cattle, other than milk cows, show a tendency to decline and at present they are on a basis slightly below the increase in population.

The production of sheep has fallen far behind the increase in population.

CONCLUSION.

Dairy cows and hogs on the farms in the United States are increasing in numbers and keeping pace with the population while sheep and cattle, other than dairy cows, are declining in number and not keeping pace with the relative increase in population. This trend reflects the efficiency of each of these groups of animals in producing edible solids out of organic matter. The dairy cow is the most economical producer of foods. The cow is only a near competitor of the pig and in the long run she slightly leads. In short periods the pig leads the cow only because of the longer period it takes the cow to mature. The amount of edible solids produced for each 100 pounds of digestible organic matter consumed by the different farm animals is as follows:

	Edible solids produced.		Edible solids produced.
Cow (milk)	18.0	Poultry (eggs)	5.1
Pig (dressed)	15.6	Poultry (dressed)	4.2
Cow (cheese)	9.4	Lamb (dressed)	3.2
Calf (dressed)	8.1	Steer (dressed)	2.8
Cow (butter)	5.4	Sheep (dressed)	2.6

It is obvious, however, that the prices paid for meat have not been such on the whole in recent years as to maintain production of animals. The price paid for corn has been sufficient to slightly increase corn production. The production of wheat has scarcely held its own on a per capita basis while the production of cotton has been declining. All of this occurred in the face of increased consumption of these products in the United States. Production of farm crops and farm animals seems certain to decline further unless sharply increased prices in the immediate future induce greater production. It seems likely, in any event, that a period of low production will result in a period of higher prices of farm products before production again overtakes consumption.

CHAPTER IX.

FACTORS INFLUENCING COSTS OF PRODUCTION.

In the preceding pages of this report the commission has compared wholesale prices of farm products with the wholesale prices of other groups of commodities. While such comparisons are of value as indicating the relative status of agriculture, compared with other industries, absolute prices can not be considered as a conclusive index either of profits or of well-being of farmers, because costs of production may increase more rapidly than the prices received and hence reduce the net gain. While there is more or less cost of production data in the record, this data is not sufficiently comprehensive, nor does it cover a sufficiently long period, to be an absolutely safe or accurate guide as to costs of production in their relation to prices.

The commission, therefore, has not undertaken to establish the profits or lack of profits to the farmer on the basis of a comparison of cost of production with prices. It is safe to say, however, that the prices received for the crop of 1920 were wholly inadequate to liquidate the costs of producing that crop.

THE QUALITY OF PRODUCTS.

Costs of production may change because of improvements in quality of production. The quality of fruits marketed in recent years has greatly improved. Milk now produced is a different commodity in quality from that produced in the last century. Improvement of quality usually means additional expenditures in cost of production. These additional expenditures, however, may be fully compensated by higher prices, or by increased quantity output or lower unit costs. In general, good quality costs more and brings better prices than poor quality, but on the whole no doubt it represents an economic saving.

INCREASING USE OF FERTILIZER.

The exhaustion of virgin soils, the exploitation of which caused the great expansion in the production of grain crops in the eighties, and early nineties, has necessitated the use of fertilizers, and these cost money, whether they are secured by keeping live stock on the farm, or by the direct purchase of commercial fertilizers, or by the use of green manures, or by better cultivation and rotation.

While the added cost of fertilizer may be fully compensated by increased quantity production or lower unit costs, the use of fertilizer may be expected to increase, and will add a new item of expense to cost of production in many sections of the country where fertilizer is not now used extensively.

There has been a huge increase in farm expenditures for commercial fertilizers, as shown in Table I–1, on page 181. Expenditures for fertilizers in various States have increased several fold in the past 20 years.

TABLE I–1.—*Total farm expenditures for fertilizer, 1899, 1909, and 1919, by divisions and by States.*[1]

Division or State.	1899	1909	1919	Per cent increase, 1909 over 1899.	Per cent increase, 1919 over 1899.
New England	4,297,705	9,407,759	18,322,697	+118.9	+ 326.3
Middle Atlantic	11,344,290	18,221,474	41,571,361	+ 60.6	+ 266.6
East North Central	5,866,520	8,058,881	30,779,341	+ 37.4	+ 424.6
West North Central	1,407,175	983,216	6,967,695	+ 30.1	+ 395.1
South Atlantic	22,732,670	59,625,130	185,987,241	+162.3	+ 718.1
East South Central	5,337,708	12,901,239	25,476,855	+141.7	+ 377.2
West South Central	1,374,116	3,225,927	9,997,382	+134.8	+ 627.4
Mountain	77,116	159,342	889,178	+106.6	+1053.0
Pacific	993,610	2,299,573	9,198,159	+131.4	+ 825.7
Maine	819,680	4,069,479	7,759,067	+396.3	+ 846.5
New Hampshire	367,980	512,580	526,180	+ 39.3	+ 43.2
Vermont	447,065	570,752	857,273	+ 27.7	+ 91.0
Massachusetts	1,320,600	1,965,682	3,906,723	+ 48.8	+ 195.0
Rhode Island	264,140	335,103	379,786	+ 26.9	+ 43.7
Connecticut	1,078,240	1,954,163	4,893,658	+ 81.2	+ 353.8
New York	4,493,050	7,142,265	15,067,371	+ 59.0	+ 235.2
New Jersey	2,165,320	4,277,604	10,742,682	+ 97.5	+ 396.1
Pennsylvania	4,685,920	6,801,605	15,761,308	+ 45.1	+ 236.3
Ohio	2,695,470	4,180,485	13,206,018	+ 55.1	+ 389.9
Indiana	1,553,710	2,189,695	8,734,698	+ 40.9	+ 462.1
Illinois	830,660	615,594	3,171,625	− 25.9	+ 281.8
Michigan	492,360	945,354	4,887,253	+ 92.0	+ 892.6
Wisconsin	294,320	127,753	779,750	− 56.6	+ 164.9
Minnesota	251,120	74,653	432,680	− 70.3	+ 72.3
Iowa	337,190	109,570	596,537	− 67.5	+ 76.9
Missouri	370,630	671,073	3,941,488	+ 81.1	+ 963.4
North Dakota	13,855	10,003	119,782	− 27.8	+ 764.7
South Dakota	12,940	11,294	198,186	− 12.7	+1431.6
Nebraska	153,080	31,021	699,985	− 79.7	+ 356.5
Kansas	268,360	75,602	979,037	− 71.8	+ 264.8
Delaware	539,040	864,577	1,222,329	+ 60.4	+ 126.6
Maryland	2,618,890	3,387,634	7,610,478	+ 29.4	+ 190.6
District of Columbia	22,600	16,975	23,267	− 24.9	+ 2.9
Virginia	3,681,790	6,932,455	17,564,769	+ 88.3	+ 377.0
West Virginia	405,270	528,937	1,709,546	+ 30.5	+ 321.8
North Carolina	4,479,030	12,262,533	48,796,694	+173.8	+ 989.4
South Carolina	4,494,410	15,162,017	52,546,795	+237.3	+1069.1
Georgia	5,738,520	16,860,149	46,196,434	+193.8	+ 705.0
Florida	753,120	3,609,853	10,316,929	+379.3	+1269.8
Kentucky	908,250	1,350,720	3,597,449	+ 48.7	+ 296.0
Tennessee	898,070	1,216,296	3,525,133	+ 35.4	+ 292.5
Alabama	2,599,290	7,630,952	14,066,108	+193.6	+ 441.0
Mississippi	932,098	2,703,271	4,288,165	+190.0	+ 360.0
Arkansas	172,510	596,553	2,572,678	+245.8	+1391.0
Louisiana	1,076,890	2,004,919	3,840,469	+ 86.2	+ 256.6
Oklahoma		29,092	891,288		
Texas	124,716	595,363	2,692,947	+377.4	+2059.0
Montana	3,940	12,323	126,232	+212.8	+3103.8
Idaho	17,150	20,737	106,121	+ 20.9	+ 518.7
Wyoming	12,700	5,302	89,149	− 58.3	+ 601.0
Colorado	23,225	61,113	294,448	+163.1	+1167.8
New Mexico	2,880	25,371	113,483	+780.9	+3840.0
Arizona	2,921	6,080	40,892	+108.1	+1299.7
Utah	14,300	20,037	108,956	+ 40.1	+ 661.0
Nevada		8,379	9,897		
Oregon	27,395	68,557	489,524	+150.3	+ 168.6
Washington	29,165	87,023	525,637	+198.4	+1702.0
California	937,050	2,143,993	8,182,998	+128.8	+ 773.2

[1] From the Bureau of the Census.

The total amount our farmers reported to the Census as spent for fertilizers increased from $53,430,910 in 1899 to $114,882,541 in 1909, an increase of 115 per cent. The expenditure reported for 1919 was $329,189,912, an increase of 186.5 per cent over 1909 and 513 per cent over 1899.

Of the total expenditure in 1919, 91.8 per cent was reported by the States east of the Mississippi River, as compared with about 95 per cent in 1909. Even in the Western States rotation of crops and the use of manures no longer suffice alone to support the productivity of the soil.

The States reporting the largest expenditures for fertilizer in 1909 and in 1919 follows.

TABLE I–2.—*States spending most for fertilizer.*

State.	Amount.	State.	Amount.
1919.		1909.	
South Carolina	$52,546,795	Georgia	$16,860,000
North Carolina	48,796,694	South Carolina	15,162,000
Georgia	46,196,434	North Carolina	12,263,000
Virginia	17,564,769	Alabama	7,631,000
Pennsylvania	15,761,308	New York	7,142,000
New York	15,067,371	Pennsylvania	6,802,000
Alabama	14,066,108	Virginia	6,932,000

INCREASING WAGES OF AGRICULTURAL LABOR.

While wages of employees in agriculture were relatively lower than they were in other industries during the past 30 years, they have increased at a relatively faster rate than wages in other industries. This is due in part to the necessity of meeting industrial competition and in part to the fact that permanent agricultural labor now must be of a skilled character, consequently commands a higher wage than formerly. The problem of securing permanent labor of the required experience and skill in competition with urban industries at prices which the farmer can afford to pay is one of increasing importance and difficulty.

The following Table I–3, shows the relative increase in wages to farm labor, compared with the relative increase in wages to industrial workers. It does not compare wages nor purchasing power. It shows that farm wages have increased 60 per cent from the low prices prevailing in the period from 1890 to 1899 to the higher price range of 1912 and 1914. During the same period urban wages advanced approximately 45 per cent.

TABLE I–3.—*Index numbers of industrial and agricultural wages, 1890 to 1920.*[1]

[1890–1899=100.]

Year.	Industrial.[2]	Agricultural.[3]	Year.	Industrial.[2]	Agricultural.[3]
1890	100.3	99.4	1906	123.5	.....
1891	100.3	99.7	1907	129.4	.....
1892	100.3	100.0	1908	129.4	.....
1893	100.3	102.0	1909	130.8	149.3
1894	97.4	93.3	1910	135.2	150.3
1895	98.8	92.6	1911	138.1	156.0
1896	100.3	92.6	1912	141.0	161.1
1897	100.3	105.1	1913	145.3	164.9
1898	100.3	105.1	1914	148.3	161.7
1899	101.7	110.7	1915	149.7	161.1
1900	106.1	.....	1916	161.3	178.1
1901	107.6	.....	1917	186.0	221.1
1902	111.9	126.8	1918	235.5	275.7
1903	116.3	.....	1919	267.4	322.9
1904	116.3	.....	1920	340.1	375.1
1905	119.2	.....			

[1] Prepared by Dr. H. C. Marshall, United States Department of Agriculture.
[2] Compiled from data in United States Bureau of Labor Statistics, Monthly Labor Review, vol. 12, No. 2, p. 74, February, 1921.
[3] Compiled from data in United States Department of Agriculture, Monthly Crop Reporter, vol. 6, No. 12, p. 134, December, 1920.

The following Table I–4, on page 183, shows that total expenditures for farm labor have about doubled in the period 1909 to 1919. It also shows that the total expenditures for feed in 1919 were $1,101,228,543, as compared with $299,839,857 in 1909, an increase of 267.3 per cent. The greater part of this increase is due to the higher prices prevailing in 1919 for hay, corn, oats, and mill feeds; but allowing for such increases in price, the increase is still significant, and results in considerable measure from the expansion of milk production and the feeding of cattle on farms.

TABLE I–4.—*Farm expenditures for labor and feed in the United States, by geographic divisions and States: 1919 and 1909.*[1]

Division or State.	Farm expenditures for labor.						Farm expenditures for feed.	
	Total.		Amount in cash.		Value of rent and board furnished.		1919	1909
	1919	1909	1919	1909	1919	1909		
United States	$1,363,454,380	$651,611,287	$1,101,586,456	$521,729,941	$261,867,924	$129,881,346	$1,101,228,543	$299,839,857
Geographic divisions:								
New England	53,756,424	34,500,407	43,686,874	27,603,492	10,069,550	6,896,915	69,588,522	34,613,964
Middle Atlantic	124,510,574	78,021,570	95,298,313	59,913,169	29,212,261	18,108,410	149,864,469	54,693,044
East North Central	239,869,280	117,880,195	185,274,713	91,591,170	54,594,567	26,289,025	197,538,879	40,611,121
West North Central	344,527,913	135,924,234	294,741,053	105,023,453	49,786,860	30,900,781	309,405,441	76,207,557
South Atlantic	104,545,971	66,607,245	89,074,885	55,413,285	15,471,086	11,193,960	60,536,800	19,255,280
East South Central	44,136,117	35,308,883	37,855,340	28,662,434	6,280,777	6,646,449	43,303,604	15,607,673
West South Central	164,344,223	59,980,738	147,324,289	52,219,927	17,019,944	7,760,811	121,802,450	24,725,246
Mountain	106,395,274	46,939,012	84,891,225	37,384,652	21,504,049	9,554,360	68,625,501	13,204,509
Pacific	181,248,294	76,448,994	155,419,764	63,918,359	25,828,530	12,530,635	80,492,877	20,920,563
New England:								
Maine	9,641,064	5,633,106	7,506,437	4,485,911	2,134,627	1,147,195	14,858,557	7,267,854
New Hampshire	4,520,816	3,374,126	3,665,259	2,690,006	855,557	684,120	8,725,716	4,614,933
Vermont	7,712,305	4,748,063	6,788,588	3,579,799	1,923,717	1,168,264	11,070,656	4,758,703
Massachusetts	16,577,123	12,101,959	13,929,305	9,906,209	2,647,818	2,195,750	20,272,851	10,878,178
Rhode Island	2,102,397	1,761,594	1,730,402	1,429,388	371,995	332,206	2,889,450	1,678,183
Connecticut	13,202,719	6,883,619	11,066,883	5,512,179	2,135,836	1,369,440	11,721,292	5,416,108
Middle Atlantic:								
New York	64,324,931	41,312,014	49,345,689	32,000,566	14,979,242	9,311,448	82,966,321	29,545,703
New Jersey	18,074,198	11,007,727	14,388,519	8,633,475	3,715,679	2,464,252	14,719,159	5,947,181
Pennsylvania	42,111,745	25,611,838	31,594,105	19,279,128	10,517,640	6,332,710	52,178,989	19,203,160
East North Central:								
Ohio	46,427,807	25,631,185	36,339,046	20,426,904	10,088,761	5,204,281	40,378,027	8,445,761
Indiana	32,867,304	17,082,079	25,608,743	14,013,473	7,258,561	3,668,606	42,306,030	6,893,901
Illinois	80,389,710	38,308,576	61,802,861	27,989,488	18,526,849	8,318,888	64,830,483	13,915,628
Michigan	32,167,716	19,068,082	24,902,349	15,073,667	7,265,367	3,989,415	22,104,883	5,682,915
Wisconsin	48,136,743	19,195,473	34,581,714	14,087,638	13,555,029	5,107,585	27,919,456	5,672,916
West North Central:								
Minnesota	49,811,218	22,330,149	36,450,774	16,673,777	13,360,444	5,656,372	22,940,650	5,041,925
Iowa	70,698,060	24,781,592	52,942,172	18,586,300	17,755,888	6,195,292	79,068,535	18,532,251
Missouri	40,115,464	18,644,695	33,037,414	14,970,635	7,078,050	3,674,060	60,171,516	17,148,608
North Dakota	37,063,815	21,740,149	27,678,182	17,198,082	9,385,633	4,542,067	12,382,661	2,003,028
South Dakota	32,599,070	12,831,944	24,355,965	9,905,389	8,243,105	2,923,555	16,808,707	3,049,255
Nebraska	46,366,802	15,028,468	35,515,466	11,422,188	10,851,336	3,606,280	60,518,850	12,567,838
Kansas	67,873,484	20,567,237	54,761,080	16,264,082	13,112,404	4,303,155	57,514,522	17,815,252

[1] Bureau of the Census.

TABLE I–4.—*Farm expenditures for labor and feed in the United States, by geographic divisions and States: 1919 and 1909*—Continued.

Division or State.	Farm expenditures for labor.						Farm expenditures for feed.	
	Total.		Amount in cash.		Value of rent and board furnished.		1919	1909
	1919	1909	1919	1909	1919	1909		
South Atlantic:								
Delaware	$2,807,879	$1,612,471	$2,052,218	$1,257,198	$755,661	$355,273	$1,490,252	$337,841
Maryland	16,721,294	8,802,172	12,915,060	6,743,157	3,806,234	2,059,015	8,044,715	2,445,065
District of Columbia	173,066	238,833	139,895	212,893	33,171	25,940	170,758	130,077
Virginia	21,808,507	13,354,194	17,851,986	10,822,816	3,956,521	2,531,378	12,432,456	3,504,660
West Virginia	5,815,727	4,035,764	4,786,810	3,203,924	1,028,917	831,840	5,639,713	1,938,233
North Carolina	12,035,960	9,220,564	10,818,456	7,643,783	1,217,504	1,576,781	12,291,850	3,151,190
South Carolina	15,336,438	10,770,758	13,687,695	9,351,384	1,648,743	1,419,374	5,903,625	1,830,815
Georgia	19,016,703	13,218,113	16,705,234	11,185,852	2,311,469	2,032,261	9,538,763	4,097,043
Florida	10,830,397	5,354,376	10,117,531	4,992,278	712,866	362,098	5,024,668	1,820,356
East South Central:								
Kentucky	18,152,309	12,243,851	15,292,169	10,007,302	2,860,140	2,236,549	16,016,669	4,014,998
Tennessee	11,226,472	8,448,059	9,647,363	7,036,564	1,579,109	1,411,495	11,165,456	3,570,551
Alabama	7,724,138	7,454,748	6,588,966	6,033,123	1,135,172	1,421,625	5,920,837	4,041,486
Mississippi	7,033,198	7,162,225	6,326,842	5,585,445	706,356	1,576,780	10,260,642	3,980,638
West South Central:								
Arkansas	13,207,550	7,654,571	12,068,268	6,304,169	1,139,282	1,350,402	17,725,489	4,275,587
Louisiana	21,418,393	16,704,125	19,699,806	15,298,744	1,718,587	1,405,381	12,232,235	3,784,140
Oklahoma	41,625,422	9,837,541	35,733,159	7,963,617	5,892,263	1,873,924	30,816,899	5,863,373
Texas	88,092,868	25,784,501	79,823,056	22,653,397	8,269,812	3,131,104	61,087,827	10,800,046
Mountain:								
Montana	21,344,016	10,930,477	15,603,271	8,258,350	5,740,745	2,672,127	19,791,034	1,741,071
Idaho	18,303,152	6,701,604	14,733,521	5,573,209	3,569,631	1,128,395	10,709,475	2,122,709
Wyoming	9,276,468	6,174,164	6,716,387	4,555,847	2,560,081	1,618,317	6,899,279	1,508,828
Colorado	28,292,609	10,818,465	23,146,568	8,770,753	5,146,041	2,047,712	18,430,975	4,592,799
New Mexico	6,438,120	3,645,423	5,259,834	2,985,826	1,178,286	659,597	5,370,823	1,527,037
Arizona	8,442,276	2,504,984	7,663,620	2,061,462	778,656	443,522	2,059,855	541,371
Utah	8,490,146	3,169,917	7,472,300	2,863,709	1,017,846	306,208	3,941,388	727,409
Nevada	5,808,487	2,993,978	4,295,724	2,315,496	1,512,763	678,482	1,422,672	443,285
Pacific:								
Washington	34,121,457	15,370,931	28,330,116	12,602,203	5,791,341	2,768,728	20,721,880	5,045,297
Oregon	21,020,685	11,101,864	17,161,595	9,110,241	3,859,090	1,991,623	13,390,428	3,198,363
California	126,096,152	49,976,199	109,928,053	42,205,915	16,168,099	7,770,284	46,380,569	12,676,903

INCREASING FARM VALUES.

The investments in farm lands and buildings increased from $34,801,125,697 in 1910, to $67,795,965,384 in 1920, an increase of 94.8 per cent. This value was no doubt above present values, but it reflects the property interests of the farmers in this country. The average value of land and buildings per farm was $10,514 in 1920, as compared with $5,471 in 1910. (See Table I–5, page 186.)

The interest on increased property investment in farms and buildings must be paid either out of increased production or higher money prices, or through economies and savings, where possible, either through greater efficiency of farm production, more economic marketing, or reduced standards of living.

TABLE I–5.—*Number, acreage, and value of farms in the United States, by geographic divisions and States: 1920 and 1910.*[1]

Division or State.	Number of farms.		Land in farms (acres).		Value of farm land and buildings.		Average value of land and buildings—			
							Per farm.		Per acre.	
	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910
United States	6,448,366	6,361,502	955,676,545	878,798,325	$67,795,965,384	$34,801,125,697	$10,514	$5,471	$70.94	$39.60
Geographic divisions:										
New England	156,564	188,802	16,990,642	19,714,931	917,468,584	718,544,808	5,860	3,806	54.00	36.45
Middle Atlantic	425,149	468,379	40,554,158	43,191,056	3,005,640,486	2,442,949,103	7,070	5,216	74.11	56.56
East North Central	1,084,744	1,123,489	117,739,160	117,929,148	16,357,408,156	8,873,991,594	15,080	7,899	138.93	75.25
West North Central	1,096,973	1,109,948	256,973,874	232,648,121	24,480,727,074	11,614,665,870	22,317	10,464	95.27	49.92
South Atlantic	1,158,976	1,111,881	97,806,524	103,782,255	5,204,968,813	2,486,436,474	4,491	2,236	53.22	23.96
East South Central	1,051,600	1,042,480	78,954,063	81,520,629	3,665,189,438	1,738,397,839	3,485	1,668	46.42	21.32
West South Central	996,087	943,186	173,156,841	169,149,976	6,331,224,217	3,128,596,882	6,356	3,317	36.56	18.50
Mountain	244,109	183,446	117,348,578	59,533,420	3,163,921,882	1,319,396,873	12,961	7,192	26.96	22.16
Pacific	234,164	189,891	56,152,705	51,328,789	4,669,416,734	2,478,146,254	19,941	13,050	83.16	48.28
New England:										
Maine	48,227	60,016	5,425,968	6,296,859	204,108,971	159,619,626	4,232	2,660	37.62	25.35
New Hampshire	20,523	27,053	2,603,806	3,249,458	89,995,870	85,916,061	4,385	3,176	34.56	26.44
Vermont	29,075	32,709	4,235,811	4,663,577	159,117,159	112,588,275	5,473	3,442	37.56	24.14
Massachusetts	32,001	36,917	2,494,477	2,875,941	247,587,831	194,168,765	7,737	5,260	99.25	67.51
Rhode Island	4,083	5,292	331,600	443,308	26,387,926	27,932,860	6,463	5,278	79.58	63.01
Connecticut	22,655	26,815	1,898,980	2,185,788	190,270,827	138,319,221	8,399	5,158	100.20	63.28
Middle Atlantic:										
New York	193,195	215,597	20,632,803	22,030,367	1,425,061,740	1,184,745,829	7,376	5,495	69.07	53.78
New Jersey	29,702	33,487	2,282,585	2,573,857	250,323,986	217,134,519	8,428	6,484	109.67	84.36
Pennsylvania	202,252	219,295	17,638,770	18,586,832	1,330,254,760	1,041,068,755	6,577	4,747	75.42	56.01
East North Central:										
Ohio	256,695	272,045	23,515,888	24,105,708	2,661,435,949	1,654,152,406	10,368	6,080	113.18	68.62
Indiana	205,126	215,485	21,063,332	21,299,823	2,653,643,973	1,594,275,596	12,937	7,399	125.98	74.85
Illinois	237,181	251,872	31,977,513	32,522,937	7,416,583,951	3,522,792,570	31,270	13,986	231.93	108.32
Michigan	196,447	206,960	19,034,204	18,940,614	1,437,862,310	901,138,299	7,319	4,354	75.54	47.58
Wisconsin	189,295	177,127	22,148,223	21,060,066	2,187,881,973	1,201,632,723	11,558	6,784	98.78	57.06
West North Central:										
Minnesota	178,478	156,137	30,221,758	27,675,823	3,301,168,325	1,262,441,426	18,496	8,085	109.23	45.62
Iowa	213,439	217,044	33,474,896	33,930,688	7,601,772,290	3,257,379,400	35,616	15,008	227.09	96.00
Missouri	263,004	277,244	34,774,679	34,591,248	3,062,967,700	1,716,204,386	11,646	6,190	88.08	49.61
North Dakota	77,690	74,360	36,214,751	28,426,650	1,488,521,495	822,656,744	19,160	11,063	41.10	28.94
South Dakota	74,655	77,644	34,523,775	26,016,892	2,472,697,091	1,005,080,807	33,122	12,945	71.62	38.63
Nebraska	124,421	129,678	42,338,836	38,622,021	3,723,536,255	1,813,346,935	29,927	13,983	87.95	46.95
Kansas	165,286	177,841	45,425,179	43,384,799	2,830,063,918	1,737,556,172	17,122	9,770	62.30	40.05
South Atlantic:										
Delaware	10,140	10,836	944,511	1,038,866	64,755,631	53,155,983	6,386	4,905	68.56	51.17
Maryland	47,908	48,923	4,757,999	5,057,140	386,596,850	241,737,123	8,070	4,941	81.25	47.80
District of Columbia	204	217	5,668	6,063	5,577,369	8,231,343	27,340	37,932	984.01	1,357.64
Virginia	186,242	184,018	18,561,112	19,495,636	1,022,886,216	532,058,062	5,492	2,891	55.11	27.29
West Virginia	87,289	96,685	9,569,790	10,026,442	410,783,406	264,390,954	4,706	2,735	42.93	26.37
North Carolina	269,763	253,725	20,021,736	22,439,129	1,076,392,960	456,624,607	3,990	1,800	53.76	20.35
South Carolina	192,693	176,434	12,461,945	13,512,028	816,308,650	332,888,081	4,236	1,887	65.50	24.64
Georgia	310,732	291,027	25,437,072	26,953,413	1,140,218,327	479,204,332	3,669	1,647	44.83	17.78
Florida	54,005	50,016	6,046,691	5,253,538	281,449,404	118,145,989	5,212	2,362	46.55	22.49
East South Central:										
Kentucky	270,626	259,185	21,612,772	22,189,127	1,305,158,936	635,459,372	4,823	2,452	60.39	28.64
Tennessee	252,774	246,012	19,510,856	20,041,657	1,024,979,894	480,522,587	4,055	1,953	52.53	23.98
Alabama	256,099	262,901	19,576,856	20,732,312	543,657,755	288,253,591	2,123	1,096	27.77	13.90
Mississippi	272,101	274,382	18,253,579	18,557,533	791,392,853	334,162,289	2,908	1,218	43.36	18.01
West South Central:										
Arkansas	232,604	214,678	17,566,353	17,416,075	773,617,226	309,166,813	3,326	1,440	44.04	17.75
Louisiana	135,463	120,546	10,019,822	10,439,481	474,038,793	237,544,450	3,499	1,971	47.31	22.75
Oklahoma	191,987	190,192	31,989,950	28,859,353	1,365,768,654	738,677,224	7,114	3,884	42.69	25.60
Texas	436,033	417,770	113,580,716	112,435,067	3,717,799,544	1,843,208,395	8,526	4,412	32.73	16.39
Mountain:										
Montana	57,677	26,214	35,070,656	13,545,603	776,767,529	251,625,930	13,468	9,599	22.15	18.58
Idaho	42,106	30,807	8,375,873	5,283,604	581,511,964	245,065,825	13,811	7,955	69.43	46.38
Wyoming	15,748	10,987	11,820,703	8,543,010	235,482,224	97,915,277	14,953	8,912	19.92	11.46
Colorado	59,934	46,170	24,462,014	13,532,113	886,013,660	408,518,861	14,449	8,848	35.40	30.19
New Mexico	29,844	35,676	24,409,633	11,270,021	221,814,212	111,830,999	7,432	3,135	9.09	9.92
Arizona	9,975	9,227	5,802,126	1,246,613	172,325,321	47,285,310	17,276	5,125	29.70	37.93
Utah	25,662	21,676	5,050,410	3,397,699	243,751,758	117,545,332	9,499	5,423	48.26	34.60
Nevada	3,163	2,689	2,357,163	2,714,757	66,255,214	39,609,339	20,947	14,730	28.11	14.59
Pacific:										
Washington	66,288	56,192	13,244,720	11,712,235	920,392,341	571,968,457	13,885	10,179	69.49	48.84
Oregon	50,206	45,502	13,542,318	11,685,110	675,213,284	455,576,309	13,449	10,012	49.86	38.99
California	117,670	88,197	29,365,667	27,931,444	3,073,811,109	1,450,601,488	26,122	16,447	104.67	51.93

[1] From preliminary reports of Fourteenth Census.

INVESTMENT IN MACHINERY AND EQUIPMENT.

Another element of importance in the cost of production is the increase in outlay necessary for machinery and equipment. In agriculture, as in industry, machinery has more and more taken the place of hand labor.

The outlay for the necessary farm equipment and machinery should ultimately be paid for out of the products of the farm, either in increased output, lower unit costs, or in higher money prices. There is nothing in the history of the development of agriculture in the last 30 years which indicates that either the interest on higher farm values or the increase in cost of machinery and equipment is likely to be paid for out of the increased production. To the extent that they can not be paid for out of increased production they must be paid for out of higher money prices or in lower unit costs if the standard of living on the farm is to be maintained.

The following statement, furnished the commission by the International Harvester Co. of America, gives wholesale prices of various items of farm machinery to dealers as of April 15 for years 1913–1921, inclusive, and also the proposed prices for 1922 effective September, 1921:

TABLE I–6.—*International Harvester Co. of America—comparative statement of prices to dealers as of April 15 for years 1913–1921; also proposed prices for 1922 (effective September, 1921), f. o. b. Chicago.*

Article.	1913	1914	1915	1916	1917	1918	1919	1920	1921	Proposed 1922 prices, effective September, 1921.
Grain binder, 6-foot, with bundle carrier	$102.50	$102.50	$102.50	$107.50	$130.00	$175.00	$175.00	$165.00	$172.00	$146.00
Cash discount	7.07	7.07	7.07	7.41	9.75	8.75	8.75	8.25	8.60	7.30
Net price	95.43	95.43	95.43	100.09	120.25	166.25	166.25	156.75	163.40	138.70
Mower, 5-foot, regular plain lift	36.00	37.00	37.00	39.00	48.00	65.00	65.00	62.00	65.75	56.00
Cash discount	2.48	2.55	2.55	2.69	3.60	3.25	3.25	3.10	3.29	2.80
Net price	33.52	34.45	34.45	36.31	44.40	61.75	61.75	58.90	62.46	53.20
Self-dump hay rake, 10-foot, 26 teeth	18.00	19.00	19.00	20.00	26.50	38.00	38.00	36.00	35.50	28.50
Quantity discount (20 or more)				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cash discount	1.26	1.33	1.33	.95	1.28	1.85	1.85	1.75	1.73	1.38
Net Price	16.74	17.67	17.67	18.05	24.22	35.15	35.15	33.25	32.77	26.12
Side-delivery rake	45.00	46.00	46.00	47.00	62.00	75.00	75.00	72.50	71.75	.....
Quantity discount (20 or more)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	.....
Cash discount	3.15	3.22	3.08	2.25	3.00	3.65	3.65	3.53	3.49	.....
Net price	41.85	42.78	40.92	42.75	57.00	69.35	69.35	66.97	66.26	.....
Hay loader, 6-foot, steel, with fore carriage	50.00	55.00	55.00	57.50	67.50	90.00	90.00	85.00	84.25	71.50
Quantity discount (20 or more)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Cash discount	3.36	3.71	3.71	2.78	3.28	4.40	4.40	4.15	4.11	3.48
Net price	44.64	49.29	49.29	52.72	62.22	83.60	83.60	78.85	78.14	66.02
Corn planter, No. 1, I. H. C., 30-inch open wheel with 80 rods wire	34.00	34.00	34.50	36.50	46.00	60.00	60.00	60.00	59.75	54.00
Quantity discount, lots of 40 except (*) lots of 20		1.00	1.00	*1.00	*1.00	1.50	1.50	1.50	2.00	2.00
Cash discount	2.38	2.38	2.35	1.78	2.25	2.93	2.93	2.93	2.89	2.60
Net price	31.62	31.62	31.15	33.72	42.75	55.57	55.57	55.57	54.86	49.40
Cultivator, 2-horse, riding, No. 4, 8-shovel, pin break		23.50	24.50	26.00	34.50	50.00	50.00	50.00	50.00	40.00
Quantity discount, lots of 50 except (*) lots of 40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00	*1.00
Cash discount		1.65	1.65	1.25	1.68	2.45	2.45	2.45	2.45	1.95
Net price		21.85	21.85	23.75	31.82	46.55	46.55	46.55	46.55	37.05

TABLE I–6.—*International Harvester Co. of America—comparative statement of prices to dealers as of April 15 for years 1913–1921; also proposed prices for 1922 (effective September, 1921), f. o. b. Chicago*—Continued.

Article.	1913	1914	1915	1916	1917	1918	1919	1920	1921	Proposed 1922 prices, effective September, 1921.
Corn binder with bundle carrier	$102.50	$102.50	$102.50	$107.50	$130.00	$175.00	$175.00	$165.00	$172.00	$146.00
Cash discount	7.07	7.07	7.07	7.41	9.75	8.75	8.75	8.25	8.60	7.30
Net price	95.43	95.43	95.43	100.09	120.25	166.25	166.25	156.75	163.40	138.70
Ensilage cutter, type B, mounted	190.00	190.00	190.00	190.00	215.00	300.00	350.00	325.00	337.50	297.50
Cash discount	13.30	13.30	13.30	9.50	10.75	15.00	17.50	16.25	16.88	14.88
Net price	176.70	176.70	176.70	180.50	204.25	285.00	332.50	308.75	320.62	282.62
Grain drill, 12 by 7, single disk, plain	58.50	58.50	58.50	61.50	74.00	99.00	99.00	99.00	101.00	86.00
Quantity discount (20 or more)				2.00	2.00	2.00	2.00	2.00	2.00	2.00
Cash discount	4.10	4.10	4.10	4.17	3.60	4.85	4.85	4.85	4.95	4.20
Net price	54.40	54.40	54.40	55.33	68.40	92.15	92.15	92.15	94.05	79.80
Disk harrows, 12 by 16, with scrapers and weight boxes	21.50	22.50	22.50	24.50	32.80	42.00	42.00	40.00	42.00	33.75
Quantity discount: Lots of 30 except (*) lots of 20	*1.00	*1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Cash discount	1.43	1.50	1.47	1.15	1.57	2.03	2.03	1.93	2.03	1.61
Net price	19.07	20.00	19.53	21.85	29.73	38.47	38.47	36.57	38.47	30.64
Spring-tooth harrow, 17-tooth, regular	13.00	13.50	13.50	14.50	20.25	24.25	24.25	22.50	22.50	18.00
Quantity discount: Lots of 50 except (*) lots of 25; (**) lots of 100	*.50	*.50	1.00	1.00	1.00	**1.00	**1.00	**1.00	.80	.80
Cash discount	.88	.91	.88	.68	.96	1.16	1.16	1.08	1.09	.86
Net price	11.62	12.09	11.62	12.82	18.29	22.09	22.09	20.42	20.61	16.34
Peg-tooth harrow No. 2, 60-tooth, ⅝-inch teeth	9.50	10.00	10.00	11.00	14.50	20.00	20.00	19.00	19.35	15.50
Quantity discount: Lots of 50 except (*) lots of 25; (**) lots of 100	*.50	*.50	1.00	1.00	1.00	**1.00	**1.00	**1.00	**1.00	**1.00
Cash discount	.63	.67	.63	.50	.68	.95	.95	.90	.92	.73
Net price	8.37	8.83	8.37	9.50	12.82	18.05	18.05	17.10	17.43	13.77
Tractor 10/20 Titan				810.00	922.50	1,102.50	1,078.00	968.00	880.00	792.00
Quantity discount: Lots of 6 except (*) lots of 12; (**) carlots					51.25	61.25	*98.00	*88.00	**30.00	**27.00
Cash discount									25.00	25.00
Net price				810.00	871.25	1,041.25	980.00	880.00	825.00	740.00

Cream separator No. 2	48.50	48.50	48.50	51.00	53.00	57.50	65.00	75.00	67.50	67.50
Quantity discount: Lots of 25 except (*) lots of 10	*6.00	*6.00	*6.00	*6.00	8.00	8.00	8.00	8.00	8.00	8.00
Cash discount	2.98	2.98	2.98	3.60	2.25	2.48	2.85	3.35	2.98	2.98
Net price	39.52	39.52	39.52	41.40	42.75	47.02	54.15	63.65	56.52	56.52
Manure spreader No. 5, with wide spread attachment	100.00	95.00	95.00	100.90	122.50	160.00	160.00	.....	.....	.....
Quantity discount: Lots of 10 except (*) lots of 12	*2.50	*2.50	2.50	2.50	2.50	7.50	7.50	.....	.....	.....
Cash discount	6.83	6.48	6.48	7.80	6.00	7.62	7.62	.....	.....	.....
Net price	90.67	86.02	86.02	89.70	114.00	144.88	144.88	.....	.....	.....
Manure spreader No. 1 International (built in wide spread)								125.00	144.00	135.00
Quantity discount (14 or more)								.....	5.00	5.00
Cash discount								6.25	6.95	6.50
Net price								118.75	132.05	123.50
Thrasher, 24 by 40 New Racine, with hand feed and 18-foot folding stacker	430.00	355.00	355.00	371.50	410.00	548.00	675.00	675.00	653.00	.....
Cash discount	30.10	24.85	24.85	26.00	28.70	38.36	33.75	33.75	32.65	.....
Net price	399.90	330.15	330.15	345.50	381.30	509.64	641.25	641.25	620.35	.....
Wagon 3¼-inch, Standard	67.35	67.35	67.35	70.00	77.00	107.25	118.00	125.00	127.50	114.75
Quantity discount: Car lots	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Cash discount	3.19	3.19	3.19	3.35	3.70	5.21	5.75	6.10	6.23	5.59
Net price	60.66	60.66	60.66	63.65	70.30	99.04	109.25	115.90	118.27	106.16
Harvester thrasher, combined type, with auxiliary engine, net price					1,080.00	1,255.00	1,370.00	1,370.00	1,400.00	1,260.00
Corn lister, P. and O. No. 1, wide tread								89.00	92.75	74.50
Quantity discount, 15 or more								1.00	1.00	1.00
Cash discount								4.40	4.59	3.68
Net price								83.60	87.16	69.82
Tractor plow, No. 5, Little Genius, 3-furrow, 14-inch								183.75	173.00	138.50
Cash discount								9.19	8.65	6.93
Net price								174.56	164.35	131.57
Plow, horse-drawn, No. 2, Diamond sulky, 16-inch								67.50	70.50	56.50
Quantity discount, 15 or more								1.00	1.00	1.00
Cash discount								3.33	3.48	2.78
Net price								63.17	66.02	52.72
Disk harrow, tractor, 16 by 16 inch, with 16 by 16 inch tandem							112.00	112.00	121.00	97.00
Quantity discount, 15 or more							3.00	3.00	3.00	3.00
Cash discount							5.45	5.45	5.90	4.70
Net price							103.55	103.55	112.10	89.30

NOTE.—Prices are comparative as of April 15 for each year.

Table I–7, also furnished by the International Harvester Co. of America, shows the increases and decreases in prices of binding twine for years 1913–1921, inclusive.

TABLE I–7.—*International Harvester Co. of America—Comparative statement of standard and sisal twine prices to dealers as of date Apr. 15, years 1913–1921.*

	1913	1914	1915	1916	1917	1918	1919	1920	1921
Sisal or standard (500 feet)..	$0.0950	$0.0900	$0.0825	$0.09625	$0.15625	$0.2325	$0.2125	$0.1500	$0.1450
Quantity discount (20,000 pounds or more).....	.0025	.0025	.0025	.00250	.00250	.0025	.0025	.0025	.0025
Cash discount.....	.....	.....	.....	.....	.....	.....	.....	.0074	.0071
Net price.....	.0925	.0875	.0800	.09375	.15375	.2300	.2100	.1401	.1354

Table I–8, supplied by the Simmons Hardware Co., of St. Louis, gives the wholesale prices of typical farm tools, 1913–1921, and the prices effective as of September 15, 1921.

TABLE I–8.

	1913	1914	1915	1916	1917	1918	1919	1920	1921	Sept. 15, 1921.
Axes:										
KY100, 3½–4½ pounds, single bit.....dozen..	$7.25	$7.75	$5.25	$7.75	$12.25	$14.85	$14.75	$17.50	$15.50	$15.50
KM153, 3½–4½ pounds, double bit.....dozen..	9.25	11.00	7.50	10.75	16.75	19.35	19.25	23.15	20.50	20.50
1400, 3½–4½ pounds, single bit.....dozen..	7.00	7.95	5.20	7.85	12.35	15.35	14.75	17.25	15.50	15.50
1450, 3½–4½ pounds, double bit.....dozen..	9.25	11.45	7.70	11.25	17.35	20.60	19.75	23.75	21.00	21.00
Hatchets:										
KS/2, shingling....do....	5.50	5.75	5.75	5.85	8.75	14.75	14.00	19.25	15.75	15.75
KL/2, lathing.....do....	5.50	5.75	5.75	5.85	8.75	14.75	14.00	19.25	15.75	15.75
ES/2, shingling....do....	4.75	4.50	4.50	4.50	7.25	13.50	12.00	17.00	14.40	14.40
EL/2, lathing.....do....	4.75	4.50	4.50	5.00	7.25	12.00	12.00	17.00	14.40	14.40
Saws:										
D1046, crosscut....each..	2.08	2.08	2.22	2.57	3.42	4.32	4.32	5.05	4.50	4.50
D2046, crosscut....do....	1.49	1.49	1.49	1.70	2.28	3.00	3.00	3.55	3.15	3.15
D3014, crosscut (1-man), each.....	1.50	1.49	1.49	1.72	2.28	2.70	2.72	3.20	2.90	2.90
D3024, crosscut (1-man), each.....	1.65	1.61	1.61	1.72	2.48	3.00	2.88	3.50	3.15	3.15
12/26, hand.....dozen..	19.16	20.12	20.12	23.23	26.85	35.00	35.00	42.40	34.95	34.95
Forks:										
K305, hay.....do....	5.75	6.00	6.00	6.85	8.75	10.75	10.75	12.75	13.00	12.60
K504, manure.....do....	8.50	8.75	8.75	10.00	11.50	14.25	14.25	16.75	17.00	16.50
E305, hay.....do....	5.25	5.50	5.25	5.25	7.00	10.00	10.00	11.50	11.75	10.50
E504, manure.....do....	7.75	8.00	7.50	7.50	9.25	12.25	12.25	14.75	15.00	13.35
Hoes:										
KG207½, garden....do....	4.25	4.35	4.35	5.00	6.25	8.00	8.75	9.50	9.75	9.50
Do.....do....	3.75	3.85	3.75	4.25	5.25	7.00	7.25	8.75	9.00	7.70
KC/107, cotton.....do....	4.25	4.50	4.25	4.15	5.50	7.25	7.25	8.65	8.90	8.60
Do.....do....	4.00	4.15	3.85	4.00	5.25	6.75	6.75	8.15	8.40	8.15
Shovels:										
KDR2, D-handle, dirt, dozen.....	8.50	8.00	8.00	8.00	12.00	18.50	16.00	20.15	15.25	15.25
CDS2, D-handle, dirt, dozen.....	6.00	6.00	5.56	6.35	9.00	15.50	13.00	17.00	.....	10.00
Spades:										
KSD2.....dozen..	8.50	8.00	8.00	8.00	12.00	18.50	16.00	20.15	15.25	15.25
CSD2.....do....	6.00	6.00	5.56	6.35	9.00	15.50	13.00	17.00	.....	10.00
Grain scoops:										
KDW6.....do....	8.50	9.50	8.50	8.75	14.80	23.00	20.00	23.75	17.50	17.50
CDW6.....do....	6.00	6.25	6.00	6.50	10.75	17.75	16.00	19.50	14.40	14.00

To these prices must be added, in order to obtain an adequate picture of the cost to the farmer, the cost of transportation and the retailer's margin of cost and profit. These tables, however, indicate when compared with the prices of farm products, particularly in recent months, the difficulty which has confronted the farmer in attempting to pay cost of production out of greatly reduced prices of farm products.

The following table, I–9, furnished by the Western Pine Manufacturers' Association, gives wholesale prices of different dimensions of common pine lumber ordinarily used by the farmer, in 1913–1921, inclusive:

TABLE I–9.—*Western Pine Manufacturers Association—Statement of lumber prices for the years 1913 to 1921, inclusive, during the month of August, showing prices on five common items.*

	Aug. 23, 1913.	Aug. 22, 1914.	Aug. 21, 1915.	Aug. 26, 1916.	Aug. 18, 1917.	Aug. 17, 1918.	Aug. 23, 1919.	Aug. 21, 1920.	Aug. 20, 1921.
Western white pine:									
No. 2 common	$16.46	$15.94	$14.52	$17.48	$26.22	$30.11	$38.98	$50.73	$27.34
No. 3 common	13.09	11.82	10.20	13.99	22.13	26.89	30.65	39.32	15.53
Beveled siding (b. m.)	37.76	30.88	27.46	27.80	47.24	50.16	58.56	90.83	84.58
F. and L.:									
No. 1 dimension	12.49	10.53	8.22	13.23	19.60	22.56	29.03	29.55	12.60
Timbers and plank	13.57	10.94	9.56	15.20	20.90	23.03	33.23	33.47	19.32

The following table, I–10, gives the retail prices of the same qualities and classes of lumber given in table I–9, arrived at by applying to the prices in Table I–9 fixed average freight and retailer's margin, estimated for each year:

TABLE I–10.—*Statement of retail lumber prices for the years 1913–1921, inclusive, during the month of August, showing prices on 5 common items.*

	Aug. 23, 1913.	Aug. 22, 1914.	Aug. 21, 1915.	Aug. 26, 1916.	Aug. 18, 1917.	Aug. 17, 1918.	Aug. 23, 1919.	Aug. 21, 1920.	Aug. 20, 1921.
Western white pine:									
No. 2 common	$32.45	$31.80	$30.02	$33.72	$48.38	$53.44	$68.14	$87.38	$55.69
No. 3 common	28.23	26.65	24.62	29.36	43.06	49.25	56.90	71.98	40.33
Beveled siding (b. m.)	59.07	50.47	46.20	46.62	75.71	79.50	94.58	141.52	130.10
F. and L.:									
No. 1 dimensions	27.48	25.03	22.15	28.41	39.78	43.62	54.71	58.79	36.53
Timbers and plank	28.83	25.55	23.82	30.87	41.47	44.23	60.38	64.08	46.26

A few years ago tractors were unknown to American farms. Now 1 farm out of every 28 uses tractors. The States with the highest percentage of all farms using tractors on January 1, 1920, were: South Dakota, 16.3 per cent; North Dakota, 15.2 per cent; Montana, 12 per cent; California, 10.3 per cent; Kansas, 9.8 per cent; Illinois, 9.3 per cent; and Iowa, 9.1 per cent. The States with the largest number of tractors were: Illinois, 23,102; Iowa, 20,270; Kansas, 17,177; Minnesota, 15,503; California, 13,852; North Dakota, 13,006; South Dakota, 12,939; and Nebraska, 11,106. These eight States reported one-half of all the tractors, or almost one for every nine farms. Motor trucks are found on about 2 farms out of every 100.

About 31 farms (30.7) out of every 100 now report automobiles. Automobiles were reported for more than half the farms in Nebraska, Iowa, South Dakota, Kansas, Minnesota, North Dakota, California, and Illinois.

The extent to which investments in tractors, trucks, automobiles, and other farm machinery are justifiable in reducing the cost of production by increasing quantity output or increasing efficiency of production is a problem which must be solved with reference to the conditions existing upon each farm. No general conclusion upon this question can be arrived at without more data than it is possible for this commission to obtain in the limited time available to it.

Considering the entire question from the standpoint of agriculture as a whole, due consideration must be given to the necessity and desirability of increasing satisfactions and conveniences of farm life within the limits of the economic rewards which the industry should afford those engaged in it.

THE SIZE OF AMERICAN FARMS.

The expansion in the use of machinery has brought expansion in the size of farms. We have competed with the world in agricultural production by increasing output per unit of labor as distinct from output per acre. The number of farms increased but 1.4 per cent in the last decade. As shown in Table I–11, on page 195, the average acreage per farm increased from 138.1 in 1910 to 148.2 in 1920, or 2.9 per cent. All land in farms increased 8.7 per cent, and improved land increased 6 per cent, whereas "woodland" decreased 11.7 per cent. As shown in Table I–13, on page 198, farms have increased in size in Arizona, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kansas, Maine, Michigan, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, Vermont, and West Virginia.

TABLE I–11.—*Number of farms, and acreage of all land, improved land, woodland, and other unimproved land in farms, by geographic divisions and States, 1920 and 1910.*

Division or State.	Number of farms.		Land in farms (acres).								Average per farm.			
			Total.		Improved land.		Woodland.		Other unimproved land.		All land (acres).		Improved land (acres).	
	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910
United States	6,448,366	6,361,502	955,676,545	878,708,325	506,982,301	478,451,750	168,615,122	190,865,553	280,079,122	209,481,022	148.2	138.1	78.6	75.2
Geographic divisions:														
New England	156,564	188,802	16,999,642	19,714,931	6,114,601	7,254,904	7,020,311	7,852,913	3,855,730	4,607,114	108.5	104.4	39.1	38.4
Middle Atlantic	425,149	468,379	40,554,158	45,101,056	26,565,084	29,320,894	8,643,518	9,215,715	5,345,556	4,614,447	95.4	92.2	62.5	62.6
East North Central	1,084,744	1,123,489	117,739,160	117,924,148	87,895,559	88,947,228	18,061,560	18,109,180	11,782,061	10,872,740	108.5	105.0	81.0	79.2
West North Central	1,066,973	1,109,948	256,973,874	232,648,121	173,725,273	164,284,802	18,845,091	17,969,615	64,403,510	50,393,644	294.3	209.6	158.4	148.0
South Atlantic	1,158,976	1,111,881	97,806,524	103,782,255	48,531,172	48,479,733	41,814,909	48,904,830	7,460,443	6,397,692	84.4	93.3	41.9	43.6
East South Central	1,051,600	1,042,480	78,954,063	81,520,629	44,380,132	43,946,846	28,471,124	32,287,681	6,102,807	5,286,102	75.1	78.2	42.2	42.2
West South Central	993,187	943,186	173,156,841	169,149,976	65,731,153	58,264,273	30,496,684	44,055,394	76,929,004	66,830,309	173.8	179.3	66.0	61.8
Mountain	244,109	183,446	117,348,578	59,533,420	30,117,814	15,915,002	6,880,981	4,109,081	80,349,783	39,509,337	480.7	324.5	123.4	86.8
Pacific	234,164	189,891	56,152,705	51,328,789	23,921,533	22,038,008	8,374,944	8,321,144	23,856,228	20,969,637	239.8	270.3	102.2	116.1
New England:														
Maine	48,227	60,016	5,425,908	6,290,589	1,977,329	2,360,657	2,447,597	2,775,621	1,001,042	1,160,581	112.5	104.9	41.0	39.3
New Hampshire	20,523	27,053	2,603,806	3,249,458	702,902	929,185	1,209,388	1,502,389	691,066	817,884	126.9	120.1	34.2	34.3
Vermont	20,075	32,709	4,235,811	4,663,577	1,691,595	1,633,965	1,428,309	1,566,698	1,115,907	1,462,914	145.7	142.6	58.2	50.0
Massachusetts	32,001	36,917	2,494,477	2,875,941	908,834	1,164,501	1,030,386	1,064,553	555,257	646,887	77.9	77.9	28.4	31.5
Rhode Island	4,083	5,292	331,600	443,308	132,855	178,344	130,462	185,900	68,283	79,055	81.2	83.8	32.5	33.7
Connecticut	22,655	26,815	1,898,980	2,185,788	701,086	988,252	683,719	757,743	514,175	439,703	83.8	81.5	30.9	36.9
Middle Atlantic:														
New York	193,195	215,597	20,632,803	22,030,367	13,158,781	14,844,039	4,190,567	4,436,145	3,313,455	2,750,183	106.8	102.2	68.1	68.8
New Jersey	29,702	33,457	2,282,585	2,573,857	1,555,607	1,803,336	454,768	538,131	272,210	232,390	76.8	76.9	52.4	53.9
Pennsylvania	202,252	219,295	17,638,770	18,596,832	11,850,696	12,673,519	4,028,183	4,281,439	1,739,891	1,631,874	87.2	84.8	58.6	57.8
East North Central:														
Ohio	256,695	272,045	23,515,888	24,105,708	18,542,333	19,227,969	3,198,922	3,285,376	1,774,606	1,592,363	91.6	88.6	72.2	70.7
Indiana	205,126	215,485	21,063,332	21,299,823	16,680,212	16,931,252	3,111,042	3,370,791	1,242,078	997,780	102.7	98.8	81.3	78.6
Illinois	237,181	251,872	31,977,513	32,522,937	27,204,517	28,048,323	3,102,579	3,147,879	1,580,417	1,326,735	134.8	129.1	115.1	111.4
Michigan	196,447	206,960	19,034,204	18,940,614	12,926,211	12,832,078	3,217,100	2,927,554	2,890,893	3,180,982	96.9	91.5	65.8	62.0
Wisconsin	180,295	177,127	22,148,223	21,060,066	12,462,216	11,907,606	5,401,910	5,377,580	4,284,097	3,774,880	117.0	118.9	65.8	67.2
West North Central:														
Minnesota	178,478	156,137	30,221,753	27,675,823	21,481,710	19,643,533	4,482,656	3,922,391	4,257,392	4,109,899	169.3	177.3	120.4	125.8
Iowa	213,439	217,044	33,474,886	33,930,688	28,606,951	29,491,199	2,295,274	2,314,115	2,572,671	2,125,374	156.8	156.3	134.0	135.9
Missouri	263,004	277,244	34,774,679	34,691,248	24,822,996	24,581,186	8,558,857	8,915,972	1,392,826	1,194,090	132.2	125.1	94.4	88.7
North Dakota	77,090	74,300	34,523,775	28,420,630	24,865,178	20,455,092	679,586	421,877	7,979,011	7,543,661	466.1	382.3	336.2	275.1
South Dakota	74,655	77,644	26,016,892	26,016,892	19,051,922	15,827,208	552,652	383,144	6,412,318	9,806,540	462.4	335.1	255.2	203.8
Nebraska	124,421	129,678	42,338,896	38,622,021	24,587,788	24,382,577	967,723	803,206	16,783,327	13,436,238	340.3	297.8	197.6	188.0
Kansas	165,286	177,841	46,425,179	43,384,799	30,600,760	29,904,067	1,313,003	1,205,910	13,511,326	12,274,822	274.8	244.0	185.1	168.2

TABLE I–11.—*Number of farms, and acreage of all land, improved land, woodland, and other unimproved land in farms, by geographic divisions and States, 1920 and 1910*—Continued.

Division or State.	Number of farms.		Land in farms (acres).								Average per farm.			
			Total.		Improved land.		Woodland.		Other unimproved land.		All land (acres).		Improved land (acres).	
	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910
South Atlantic:														
Delaware	10,140	10,836	944,511	1,038,866	653,052	713,538	222,658	252,032	68,801	73,296	93.1	95.9	64.4	65.8
Maryland	47,908	48,923	4,757,999	5,057,140	3,136,728	3,354,767	1,327,221	1,467,333	294,050	235,040	99.3	103.4	65.5	68.6
District of Columbia	204	217	5,668	6,063	4,258	5,133	828	689	582	241	27.8	27.9	20.9	23.7
Virginia	186,242	184,018	18,561,112	19,495,636	9,460,492	9,870,058	7,907,352	8,414,680	1,193,268	1,210,898	99.7	105.9	50.8	53.6
West Virginia	87,289	96,685	9,569,790	10,026,442	5,520,308	5,521,757	3,469,444	3,968,836	580,038	535,849	109.6	103.7	63.2	57.1
North Carolina	269,763	253,725	20,021,736	22,439,129	8,198,409	8,813,056	10,299,547	12,451,739	1,523,780	1,174,334	74.2	88.4	30.4	34.7
South Carolina	192,693	176,434	12,461,945	13,512,028	6,206,644	6,097,999	5,318,641	6,339,142	936,660	1,074,887	64.7	76.6	32.2	34.6
Georgia	310,732	291,027	25,437,072	26,953,413	13,054,010	12,298,017	10,488,428	13,002,741	1,894,634	1,652,655	81.9	92.6	42.0	42.3
Florida	54,005	50,016	6,046,691	5,253,538	2,297,271	1,805,408	2,780,790	3,007,638	968,630	440,492	112.0	105.0	42.5	36.1
East South Central:														
Kentucky	270,626	259,185	21,612,772	22,189,127	13,975,746	14,354,471	6,018,280	6,951,626	1,618,746	883,030	79.9	85.6	51.6	55.4
Tennessee	252,774	246,012	19,510,856	20,041,657	11,185,302	10,890,484	7,080,169	8,007,733	1,245,385	1,143,440	77.2	81.5	44.3	44.3
Alabama	256,099	262,901	19,576,856	20,732,312	9,893,407	9,693,581	8,301,177	9,444,764	1,382,272	1,593,967	76.4	78.9	38.6	36.9
Mississippi	272,101	274,382	18,253,579	18,557,533	9,325,677	9,008,310	7,071,498	7,883,558	1,856,404	1,665,665	67.1	67.6	34.3	32.8
West South Central:														
Arkansas	232,604	214,678	17,566,353	17,416,075	9,238,893	8,076,254	7,393,523	8,511,510	933,937	828,311	75.5	81.1	39.7	37.6
Louisiana	135,463	120,546	10,019,822	10,439,481	5,626,226	5,276,016	3,614,040	4,316,561	779,556	846,904	74.0	86.6	41.5	43.8
Oklahoma	191,987	190,192	31,989,950	28,859,353	18,488,105	17,551,337	4,220,467	3,568,910	9,281,378	7,739,106	166.6	151.7	96.3	92.3
Texas	436,033	417,770	113,580,716	112,435,067	32,377,929	27,360,666	15,268,654	27,658,413	65,934,133	57,415,988	260.5	269.1	74.3	65.5
Mountain:														
Montana	57,677	26,214	35,070,656	13,545,603	11,007,278	3,640,309	1,646,462	595,870	22,416,916	9,309,424	608.1	516.7	190.8	138.9
Idaho	42,106	30,807	8,375,873	5,283,604	4,511,680	2,778,740	820,876	584,556	3,043,317	1,920,308	198.9	171.5	107.2	90.2
Wyoming	15,748	10,987	11,820,703	8,543,010	2,113,951	1,256,160	421,716	252,152	9,285,036	7,034,698	750.6	777.6	134.2	114.3
Colorado	59,934	46,170	24,462,014	13,532,113	7,744,757	4,302,101	1,415,420	891,698	15,301,837	8,338,314	408.1	293.1	129.2	93.2
New Mexico	29,844	35,676	24,409,633	11,270,021	1,717,224	1,467,191	1,817,460	1,491,025	20,874,949	8,311,805	817.9	315.9	57.5	41.1
Arizona	9,975	9,227	5,802,126	1,246,613	712,803	350,173	523,648	100,061	4,565,675	796,379	581.7	135.1	71.5	38.0
Utah	25,662	21,676	5,050,410	3,397,699	1,715,380	1,368,211	212,762	145,510	3,122,268	1,883,978	196.8	156.7	66.8	63.1
Nevada	3,163	2,689	2,357,163	2,714,757	594,741	752,117	28,637	48,209	1,733,785	1,914,431	745.2	1,009.6	188.0	279.7
Pacific:														
Washington	66,288	56,192	13,244,720	11,712,235	7,129,343	6,373,311	1,813,061	1,541,551	4,302,316	3,797,373	199.8	208.4	107.6	113.4
Oregon	50,206	45,502	13,542,318	11,685,110	4,913,851	4,274,803	2,309,596	2,237,826	6,318,871	5,172,481	269.7	256.8	97.9	93.9
California	117,670	88,197	29,365,667	27,931,444	11,878,339	11,389,894	4,252,287	4,541,767	13,235,041	11,999,783	249.6	316.7	100.9	129.1

TABLE I–12.—*Number of farms in the United States, by size, 1920 and 1910.*

Size group.	Number of farms.		Increase.[1]	
	Jan. 1, 1920.	Apr. 15, 1910.	Number.	Per cent.
Total	6,448,366	6,361,502	86,864	1.4
Under 20 acres	796,534	839,166	−42,632	−5.1
Under 3 acres	20,350	18,033	2,317	12.9
3 to 9 acres	298,422	317,010	−48,588	−15.3
10 to 19 acres	507,762	504,123	3,639	0.7
20 to 49 acres	1,503,734	1,414,376	89,358	6.3
50 to 99 acres	1,474,753	1,438,069	36,684	2.6
100 to 174 acres	1,449,639	1,516,266	−66,627	−4.4
175 to 499 acres	1,006,487	978,175	28,312	2.9
175 to 259 acres	530,795	534,191	−3,396	−0.6
260 to 499 acres	475,692	443,984	31,708	7.1
500 acres and over	217,199	175,430	41,769	23.8
500 to 999 acres	149,812	125,295	24,517	19.6
1,000 acres and over	67,387	50,135	17,252	34.4
Per cent of total:				
Under 20 acres	12.4	13.2		
20 to 49 acres	23.3	22.2		
50 to 99 acres	22.9	22.6		
100 to 174 acres	22.5	23.8		
175 to 499 acres	15.6	15.4		
500 acres and over	3.4	2.8		

[1] A minus sign (−) denotes decrease.

TABLE I–13.—*Number of farms in the United States, by size, for geographic divisions and States: 1920 and 1910.*

Division and State.	Total number of farms.		Under 20 acres.		20 to 49 acres.		50 to 59 acres.		100 to 174 acres.		175 to 499 acres.		500 acres and over.	
	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910
United States	6,448,366	6,361,502	796,534	839,166	1,503,734	1,414,376	1,474,753	1,438,069	1,449,659	1,516,286	1,006,487	978,175	217,199	175,430
Geographic divisions:														
New England	156,564	188,802	25,886	34,304	27,117	33,822	38,036	45,932	37,993	44,019	25,173	28,008	2,359	2,717
Middle Atlantic	425,149	468,379	65,725	80,919	70,492	78,375	120,324	130,702	116,010	123,756	50,437	52,310	2,161	2,317
East North Central	1,084,744	1,123,489	90,703	108,283	172,052	197,164	335,439	340,940	325,390	315,607	155,489	155,585	5,671	5,910
West North Central	1,096,973	1,109,948	46,093	52,536	81,821	91,971	170,903	181,843	351,032	368,669	366,449	346,875	80,675	68,054
South Atlantic	1,158,976	1,111,881	187,326	186,956	401,259	354,207	280,114	251,901	175,311	181,336	99,833	117,899	15,133	19,582
East South Central	1,051,600	1,042,480	203,187	211,614	373,138	350,256	235,444	225,976	152,992	157,414	77,078	86,297	9,761	10,923
West South Central	996,087	943,186	97,877	102,044	296,730	251,444	235,213	216,860	212,166	222,794	120,428	118,416	33,673	31,628
Mountain	244,109	183,446	22,071	23,426	25,392	19,383	26,896	19,330	45,855	64,783	77,982	41,676	45,913	14,848
Pacific	234,164	189,891	57,666	39,084	55,733	37,754	32,384	24,585	32,910	37,908	33,618	31,109	21,853	19,451
New England:														
Maine	48,227	60,016	4,525	7,713	6,768	9,492	14,277	17,895	14,425	16,633	7,683	8,293	549	590
New Hampshire	20,523	27,053	2,897	4,595	3,375	4,509	4,888	6,248	4,986	6,247	3,809	4,774	568	680
Vermont	29,075	32,709	3,350	4,578	2,924	3,481	5,199	5,910	8,777	9,492	8,196	8,516	629	732
Massachusetts	32,001	36,917	9,505	10,606	7,532	8,890	6,834	7,981	4,888	5,703	2,895	3,325	347	412
Rhode Island	4,083	5,292	936	1,377	983	1,144	1,031	1,264	718	945	357	487	58	75
Connecticut	22,655	26,815	4,673	6,035	5,535	6,306	5,807	6,634	4,199	4,999	2,233	2,613	208	228
Middle Atlantic:														
New York	193,195	215,597	26,540	34,188	27,267	31,047	50,784	56,821	56,929	61,031	30,461	31,163	1,214	1,347
New Jersey	29,702	33,487	7,222	8,073	6,763	7,607	7,367	8,194	6,251	7,207	1,950	2,235	149	171
Pennsylvania	202,252	219,295	31,963	38,658	36,462	39,721	62,173	65,687	52,830	55,518	18,026	18,912	798	799
East North Central:														
Ohio	256,695	272,045	31,479	38,913	44,535	50,331	86,337	88,047	69,738	68,746	23,773	25,113	833	895
Indiana	205,126	215,485	19,916	23,644	34,949	40,161	65,066	67,221	57,895	57,261	26,265	26,107	1,035	1,091
Illinois	237,181	251,872	16,710	20,294	26,989	33,322	51,920	57,917	81,459	80,539	58,186	57,755	1,917	2,045
Michigan	196,447	206,960	12,744	14,785	40,765	49,890	71,391	73,748	52,645	50,622	18,075	17,143	827	772
Wisconsin	189,295	177,127	9,854	10,647	24,814	23,460	60,725	54,007	63,653	58,439	29,190	29,467	1,059	1,107
West North Central:														
Minnesota	178,478	156,137	6,160	5,619	14,111	12,028	32,743	26,571	65,793	55,424	56,353	52,836	3,318	3,659
Iowa	213,439	217,044	11,521	13,724	13,117	15,678	35,959	38,712	85,549	80,121	65,279	66,165	2,014	2,644
Missouri	263,004	277,244	16,641	19,756	41,116	47,398	67,446	74,178	79,507	80,020	53,961	51,921	4,333	3,971
North Dakota	77,690	74,360	314	229	505	450	917	1,207	11,490	23,003	42,078	34,393	22,386	15,078
South Dakota	74,655	77,644	766	808	993	1,121	2,385	2,406	16,490	28,396	37,354	33,041	16,667	11,872
Nebraska	124,421	129,678	3,361	4,358	3,702	4,558	11,166	12,618	43,159	43,916	47,377	47,233	15,656	16,995
Kansas	165,286	177,841	7,330	8,042	8,277	10,738	20,287	26,151	49,044	57,789	64,047	61,286	16,301	13,835

South Atlantic:														
Delaware	10,140	10,836	1,226	1,535	2,182	1,988	2,952	2,977	2,510	2,849	1,218	1,429	52	58
Maryland	47,908	48,923	9,473	10,232	9,003	8,629	10,452	9,946	11,178	11,457	7,344	8,070	458	589
District of Columbia	201	217	127	122	50	65	18	17	5	10	4	3	.....	.....
Virginia	186,242	184,018	36,402	39,746	45,884	42,390	42,714	38,342	34,011	32,997	23,601	26,101	3,630	4,442
West Virginia	87,289	96,685	10,410	15,399	18,155	20,323	25,587	26,806	19,539	20,156	11,990	12,248	1,608	1,753
North Carolina	269,763	253,725	51,336	43,224	87,239	75,629	68,903	62,157	41,082	43,987	19,094	25,254	2,109	3,474
South Carolina	192,693	176,434	40,825	37,985	84,893	70,582	37,530	33,147	18,166	19,427	9,352	12,539	1,927	2,754
Georgia	310,732	291,027	26,969	29,629	134,471	117,432	81,112	68,510	41,183	42,275	22,753	27,710	4,244	5,471
Florida	54,005	50,016	10,558	9,084	19,382	17,169	10,846	9,999	7,637	8,178	4,477	4,545	1,105	1,041
East South Central:														
Kentucky	270,626	259,185	58,965	55,472	63,571	58,537	71,200	65,778	50,991	50,134	23,843	26,639	2,056	2,625
Tennessee	252,774	246,012	44,528	47,341	79,924	72,212	64,940	60,105	41,283	41,545	20,172	22,450	1,927	2,359
Alabama	256,099	262,901	33,741	41,358	112,848	106,841	57,404	55,448	32,500	35,563	16,733	20,093	2,873	3,098
Mississippi	272,101	274,382	65,953	66,943	116,795	112,666	41,900	44,645	28,218	30,172	16,330	17,115	2,905	2,841
West South Central:														
Arkansas	232,604	214,678	35,943	36,259	92,438	74,983	50,619	45,373	36,275	39,353	15,732	17,149	1,597	1,561
Louisiana	135,463	120,546	30,033	29,256	61,346	46,389	21,715	20,248	12,855	13,681	7,472	8,406	2,042	2,566
Oklahoma	191,987	190,192	6,024	7,158	32,558	31,489	43,452	39,002	66,244	75,186	37,652	33,812	6,057	3,545
Texas	436,033	417,770	25,877	29,371	110,388	98,583	119,427	112,237	96,792	94,574	59,572	59,049	23,977	23,956
Mountain:														
Montana	57,677	26,214	930	755	1,279	956	2,141	1,260	8,735	10,552	26,988	8,339	17,604	4,352
Idaho	42,106	30,807	2,917	2,005	6,819	4,048	8,502	5,820	10,565	11,891	10,488	5,856	2,815	1,177
Wyoming	15,748	10,987	196	420	399	338	994	645	2,551	3,816	6,011	3,629	5,597	2,139
Colorado	59,934	46,170	4,932	5,070	4,449	3,882	5,913	4,384	12,139	16,355	21,611	12,476	10,890	4,003
New Mexico	29,844	35,676	6,789	6,885	3,095	2,812	2,008	1,820	4,929	15,363	7,015	7,388	6,008	1,408
Arizona	9,975	9,227	1,436	3,346	2,367	1,477	1,703	820	2,239	2,591	1,351	757	879	236
Utah	25,662	21,676	4,610	4,674	6,549	5,550	5,080	4,170	4,086	3,660	3,867	2,681	1,470	941
Nevada	3,163	2,689	261	271	435	320	555	411	611	555	651	540	650	592
Pacific:														
Washington	66,288	56,192	16,073	10,529	15,255	10,252	9,048	7,105	9,958	13,884	9,637	9,215	6,317	5,207
Oregon	50,206	45,502	7,526	6,030	8,755	6,888	8,302	6,800	9,735	12,009	10,310	9,343	5,578	4,432
California	117,670	88,197	34,067	22,525	31,723	20,614	15,034	10,680	13,217	12,015	13,671	12,551	9,958	9,812

AN IMPROVING COUNTRY LIFE.

In 1890, 64.6 per cent of the total population in the United States lived in the country, exclusive of those living in towns and villages with a population of 2,500 or less. In 1900 this per cent was 60.0, in 1910 it was 54.2, and in 1920, 48.6. In the light of such a trend it is obvious that satisfactions in rural life must be increased if we are long to be nationally self-sufficient in agricultural products. Improvement has been made in the facilities in rural districts, but these have not been sufficient to hold the population. Well-being in the country must be enhanced, not by tearing down well-being in the cities, but by increasing the comforts and satisfactions in rural life. This can not be done without increasing purchasing power on our farms, as well as in our towns and cities.

Greater satisfaction and convenience in rural communities means better country roads, better rural schools, rural mail and parcel-post deliveries, telephones and water in country homes, playground facilities, and increasing opportunities for recreation. The automobile with good roads will help make larger rural community centers possible, and hence as choice recreational and social opportunities as smaller cities and most larger cities will offer. A better standard of living in the country should be a cost factor to be reckoned with in future farm prices.

As shown in the following table I–14, forty farms (38.9 per cent) out of 100 now report telephones (1920), and about 1 out of 10 farm homes have water piped into the houses. California, Pennsylvania, New York, Ohio, and Texas lead in the number of farm homes with water piped into farmhouses. The per cent is highest in the New England States and in California. But 7 farm homes out of 100 are now supplied with gas or electricity in the United States as a whole. (See Table I–15, p. 201.)

TABLE I–14.—*Motor vehicles, telephones, water, and light on farms in the United States, 1920.*

Automobiles:	
Farms reporting	1,979,564
Per cent of all farms	30.7
Number of automobiles	2,146,512
Number per 1,000 farms	332.9
Motor trucks:	
Farms reporting	131,551
Per cent of all farms	2.0
Number of motor trucks	139,169
Number per 1,000 farms	21.6
Tractors:	
Farms reporting	229,334
Per cent of all farms	3.6
Number of tractors	246,139
Number per 1,000 farms	38.2
Telephones:	
Farms reporting	2,508,002
Per cent of all farms	38.9
Water piped into house:	
Farms reporting	644,088
Per cent of all farms	10.0
Gas or electric light:	
Farms reporting	452,809
Per cent of all farms	7.0

TABLE I–15.—*Motor vehicles, telephones, water, and light on farms in the United States, by geographic divisions and States, 1920.*

Division and State.	Total number of farms.	Automobiles.			Motor trucks.			Tractors.			Farms reporting telephones.		Farms reporting—		
		Farms reporting.		Number of automobiles.	Farms reporting.		Number of motor trucks.	Farms reporting.		Number of tractors.	Number.	Per cent of all farms.	Water piped into house.	Gas or electric light.
		Number.	Per cent of all farms.		Number.	Per cent of all farms.		Number.	Per cent of all farms.					
United States	6,448,366	1,979,564	30.7	2,146,512	131,551	2.0	139,169	229,334	3.6	246,139	2,508,002	38.9	644,088	452,809
Geographic divisions:														
New England	156,584	40,269	25.7	44,754	7,284	4.7	8,119	2,245	1.4	2,397	80,510	51.4	74,954	24,000
Middle Atlantic	426,149	149,599	35.2	164,839	20,472	4.8	22,011	13,240	3.1	14,140	198,344	46.5	98,936	60,102
East North Central	1,084,744	513,652	47.3	550,858	24,942	2.3	26,074	55,413	5.1	58,092	678,937	62.6	134,877	113,439
West North Central	1,096,973	631,631	57.6	693,182	32,331	3.0	33,375	92,123	8.4	97,890	762,432	69.5	107,015	97,847
South Atlantic	1,158,976	187,236	16.2	200,103	14,716	1.3	15,787	10,460	.9	11,254	165,772	14.3	38,964	45,596
East South Central	1,051,600	81,830	7.8	86,141	4,869	.5	5,153	5,046	.5	5,404	202,904	19.3	15,999	21,720
West South Central	996,087	173,609	17.4	184,275	8,960	.9	9,455	17,435	1.8	19,382	273,315	27.4	49,191	19,352
Mountain	244,109	91,698	37.6	98,727	7,168	2.9	7,589	15,885	6.5	17,513	64,166	26.3	26,343	25,161
Pacific	234,164	110,640	47.3	123,633	10,809	4.6	11,606	17,507	7.5	19,557	90,612	38.7	97,809	45,160
New England:														
Maine	48,227	11,686	24.2	12,569	1,061	2.2	1,120	605	1.3	635	23,632	49.0	18,020	4,625
New Hampshire	20,523	4,797	23.4	5,263	663	3.2	717	196	1.0	207	10,166	49.5	10,765	2,322
Vermont	29,075	7,611	26.2	8,172	576	2.0	616	424	1.5	444	16,752	57.6	18,301	3,328
Massachusetts	32,001	8,181	25.6	9,309	3,136	9.8	3,535	540	1.7	592	16,557	51.7	16,893	9,062
Rhode Island	4,083	1,198	29.3	1,395	471	11.5	536	69	1.7	79	1,685	41.3	1,461	700
Connecticut	22,655	6,796	30.0	8,046	1,377	6.1	1,595	411	1.8	440	11,738	51.8	9,524	3,963
Middle Atlantic:														
New York	193,195	68,003	35.2	74,753	8,636	4.5	9,259	7,021	3.6	7,497	91,973	47.6	45,487	24,882
New Jersey	29,702	11,731	39.5	13,695	3,075	10.4	3,380	845	2.8	946	9,484	31.9	7,047	4,551
Pennsylvania	202,252	69,865	34.5	76,491	8,761	4.3	9,372	5,374	2.7	5,697	87,887	43.5	46,402	30,669
East North Central:														
Ohio	236,695	119,511	46.6	128,384	6,960	2.7	7,310	9,934	3.9	10,469	159,478	62.1	41,531	37,745
Indiana	205,125	95,238	46.4	102,122	3,501	1.7	3,671	8,571	4.3	9,230	136,140	66.4	23,476	20,584
Illinois	227,151	123,596	54.0	139,090	5,907	2.5	6,154	21,932	9.3	23,102	173,647	73.2	26,676	23,273
Michigan	196,447	78,919	40.2	82,437	4,681	2.4	4,885	5,584	2.8	5,884	97,874	49.8	29,729	15,695
Wisconsin	189,295	93,798	49.6	98,825	3,893	2.1	4,044	9,092	4.8	9,407	111,798	59.1	13,465	16,574
West North Central:														
Minnesota	178,478	101,847	57.1	107,824	3,677	2.1	3,803	14,794	8.3	15,503	110,568	62.0	11,392	13,539
Iowa	213,439	156,081	73.1	177,558	8,669	4.1	8,910	19,427	9.1	20,270	183,852	86.1	33,851	22,552
Missouri	263,004	81,392	31.0	86,229	4,878	1.9	5,050	7,438	2.8	7,889	163,543	62.2	11,901	14,341
North Dakota	77,600	44,010	56.7	47,711	743	1.0	774	11,824	15.2	13,006	36,349	46.8	4,684	4,518
South Dakota	74,655	51,780	69.4	58,352	4,249	5.7	4,353	12,160	16.3	12,939	44,327	59.4	9,157	6,445
Nebraska	124,421	94,004	75.6	101,453	6,333	5.1	6,548	10,342	8.3	11,106	95,050	76.4	20,691	12,062
Kansas	165,286	102,517	62.0	111,055	3,782	2.3	3,928	16,128	9.8	17,177	128,753	77.9	15,339	14,390

TABLE I–15.—*Motor vehicles, telephones, water, and light on farms in the United States, by geographic divisions and States, 1920*—Continued.

Division and State.	Total number of farms.	Automobiles.			Motor trucks.			Tractors.			Farms reporting telephones.		Farms reporting—	
		Farms reporting.		Number of automobiles.	Farms reporting.		Number of motor trucks.	Farms reporting.		Number of tractors.	Number.	Per cent of all farms.	Water piped into house.	Gas or electric light.
		Number.	Per cent of all farms.		Number.	Per cent of all farms.		Number.	Per cent of all farms.					
South Atlantic:														
Delaware	10,140	3,693	36.4	4,014	283	2.8	304	220	2.2	239	2,763	27.3	732	397
Maryland	47,908	16,949	35.5	17,702	2,556	5.3	2,805	1,410	2.9	1,525	11,755	24.5	6,702	3,330
District of Columbia	201	50	24.5	58	29	14.2	29	1	0.5	1	67	32.8	51	52
Virginia	186,242	28,557	15.3	30,939	2,389	1.3	2,544	2,206	1.2	2,379	33,482	18.0	9,474	7,874
West Virginia	87,289	10,465	11.9	11,127	886	1.0	936	541	0.6	572	37,739	43.3	4,974	12,900
North Carolina	269,763	41,839	15.5	44,207	2,551	1.0	2,671	2,184	0.8	2,277	38,218	12.3	4,612	8,005
South Carolina	192,693	30,709	15.9	32,812	1,609	0.8	1,736	1,213	0.6	1,304	10,943	5.7	3,443	5,170
Georgia	310,752	47,173	15.2	49,841	2,913	0.9	3,145	2,083	0.7	2,252	31,231	10.1	5,615	5,826
Florida	54,005	8,761	16.2	9,383	1,500	2.8	1,617	602	1.1	705	4,624	8.4	3,341	2,042
East South Central:														
Kentucky	270,626	28,532	10.5	30,146	1,455	0.5	1,538	1,913	0.7	2,029	73,145	27.0	5,139	5,925
Tennessee	252,774	22,446	8.9	23,550	1,362	0.5	1,430	1,796	0.7	1,872	56,830	22.5	4,890	4,534
Alabama	256,099	15,806	6.2	16,592	1,114	0.4	1,180	739	0.3	886	44,619	17.4	2,987	3,345
Mississippi	272,101	14,946	5.5	15,853	908	0.3	1,005	598	0.2	667	28,260	10.4	2,933	2,896
West South Central:														
Arkansas	232,604	15,401	6.6	16,468	973	0.4	1,027	1,423	0.6	1,822	52,869	22.7	1,730	2,643
Louisiana	135,463	9,494	7.0	10,512	793	0.6	874	2,142	1.6	2,812	8,599	6.4	2,185	1,471
Oklahoma	191,987	49,017	25.5	52,063	2,070	1.1	2,155	5,796	3.0	6,210	71,613	37.3	6,646	7,010
Texas	436,063	99,097	22.9	105,292	5,124	1.2	5,399	8,084	1.9	9,048	140,294	32.2	38,589	8,228
Mountain:														
Montana	57,677	20,739	36.0	22,072	1,167	2.0	1,225	6,890	12.0	7,647	9,781	17.0	3,055	2,013
Idaho	42,106	16,851	39.6	17,646	779	1.9	837	2,468	6.2	2,687	13,857	32.9	5,240	5,982
Wyoming	15,748	6,180	39.2	6,705	554	3.5	591	969	6.2	1,075	4,449	28.3	1,035	717
Colorado	59,384	28,356	47.3	30,330	2,884	4.8	3,016	4,526	7.6	4,990	23,685	39.5	6,806	3,925
New Mexico	29,844	5,546	18.6	6,018	552	1.9	593	457	1.5	491	3,359	11.3	1,460	422
Arizona	9,975	4,531	45.5	5,082	527	5.3	581	820	8.2	900	1,638	16.4	1,088	592
Utah	25,662	8,246	32.1	8,657	544	2.1	572	533	2.2	583	6,295	24.5	6,179	11,125
Nevada	3,163	1,436	45.4	1,717	161	5.1	174	182	5.8	210	1,122	35.5	580	385
Pacific:														
Washington	66,288	27,626	41.7	29,792	3,172	4.8	3,371	2,474	3.7	2,635	27,952	42.2	18,967	9,178
Oregon	50,206	20,601	41.0	22,223	1,726	3.4	1,819	2,902	5.8	3,070	25,351	50.5	12,914	5,463
California	117,570	62,453	53.1	71,518	5,900	5.0	6,416	12,131	10.3	13,852	37,309	31.7	65,928	30,519

INCREASING SCIENCE IN FARMING.

Agriculture is subject to numerous hazards which can be only partially controlled. These hazards are mainly responsible for wide variations in yield, which make figures of cost of production of farm crops of very doubtful reliability, and makes farming a gamble of enormous proportions. Wide variations in yield in relation to acreage are illustrated in the table which follows.

TABLE I–16.—*Production and acreage of specified farm crops, 1919 and 1909.*

PRODUCTION.

	1919	1909	Increase.	Per cent increase.
Corn	2,355,593,173	2,552,189,630	−196,596,457	− 7.7
Wheat	951,331,017	683,379,259	267,951,758	39.1
Oats	1,055,095,513	1,007,142,980	47,952,533	4.8
Barley	122,060,377	173,344,212	− 51,283,835	−29.6
Rye	75,774,308	29,520,457	46,253,851	156.7
Buckwheat	12,735,537	14,849,332	− 2,113,795	−14.2
Potatoes (Irish)	290,754,580	389,194,965	− 98,440,385	−25.3
Peanuts	27,449,930	19,415,816	8,034,114	41.4
Hay	90,469,213	87,216,351	3,252,862	3.7
Peaches	51,551,251	35,470,276	16,080,975	45.3
Apples	136,746,154	145,412,318	− 8,666,164	− 6.0

ACREAGE.

Corn	87,666,910	98,382,665	−10,715,755	−10.9
Wheat	73,156,967	44,262,592	28,894,375	65.3
Oats	37,842,925	35,159,441	2,683,484	7.6
Barley	6,474,462	7,698,706	− 1,224,244	−15.9
Rye	7,682,708	2,195,561	5,487,147	249.9
Buckwheat	746,306	878,048	− 131,742	−15.0
Potatoes (Irish)	3,258,192	3,668,855	− 410,663	−11.2
Peanuts	1,125,100	869,887	255,213	29.3
Hay	72,824,890	68,227,310	4,597,580	6.7
Peaches	[1] 65,654,921	94,506,657	−28,851,736	−30.5
Apples	[1] 115,265,029	151,322,840	−36,057,811	−23.8

[1] Number of trees of bearing age.

These wide variations can, of course, not be accounted for on the basis of variation in farming methods. They must be accounted for on the basis of hazards which the farmer can not control. These hazards include weather, insect pests, plant and animal diseases. Some of these hazards can be covered by insurance, others can be partially controlled by methods of cultivation and other means of control.

Great progress has been made by agricultural colleges, and by the National and State departments of agriculture, in working out means of controlling the hazards to which agriculture is subject. Losses from these sources have been greatly diminished. Effective application of methods of controlling insect pests and plant and animal diseases depend in large measure, however, upon appropriate farm organizations. Campaigns for the control or eradication of insect pests and plant and animal diseases depend for success largely upon effective organization of the farmers in the afflicted communities. Where these farmers are already organized in effective farm units, the work of control or eradication is rendered much easier, particularly where the campaign involves modifications of cultural methods or general

changes in the kind or strains of crops to be planted or animals to be produced.

On the whole, it seems probable that increased production of farm products in this country must be at the expense of increased costs. There is nothing in the study of the development of agriculture for the past 30 years which justifies a conclusion that greatly increased fixed charges resulting from higher land values, greater indebtedness, larger outlay for equipment and machinery, fertilizer, labor, and greater satisfactions and conveniences in country life, can be paid for out of either increased production per man or per acre. Payment of these increased costs must come out of larger money returns, and these are dependent for the most part upon better organization and more efficient marketing of farm crops.

CHAPTER X.

FARM MORTGAGES.

The total amount of mortgages on farm lands and buildings owned by their operators and farmed without renting additional lands increased from $1,726,172,851 in 1910 to $4,012,711,215 in 1920, an increase of 132.5 per cent, according to United States Census Bureau figures. The ratio of the total mortgage debt to the value of these lands and buildings increased from 27.3 per cent in 1910 to 29.1 per cent in 1920. The amount of mortgage debt on such farms in 1890 was $1,085,995,960, or just about one-fourth what it was in 1920.

These are the totals for the farms operated in their entirety by their owners. Assuming that all other farms are mortgaged at the same rate, the total mortgage debt in 1910 would have been $3,598,825,000 and in 1920 about $8,663,000,000.

THE INCREASE IN OWNED FARMS MORTGAGED.

The per cent of owned farms mortgaged increased from 33.6 per cent of all farms in 1910 to 41.3 per cent in 1920, and all the States but two show increases. The two States showing decreases are Mississippi and Delaware. The number of all farms in Mississippi decreased from 1910 to 1920, the number of colored farmers markedly decreased, and the average value of land and buildings per acre went up from $18.01 to $43.36 per acre in the decade, as compared with an increase of $39.60 to $70.94 in the United States as a whole. The number of farms in Delaware declined during the decade, as did the average acreage per farm. Delaware is situated in a particularly profitable truck and fruit growing region.

The per cent of owned farms mortgaged has increased from 28.2 per cent in 1890 and 31 per cent in 1900 to 33.6 per cent and 41.3 per cent in 1910 and 1920, respectively.

Half the States show an increase of 24 per cent or more in the number of owned farms mortgaged in the last 10 years, as shown by the Table J–1.

TABLE J–1.—*The per cent of increase or decrease in the number of owned farms mortgaged 1910–1920, by States.*

State.	Per cent.	State.	Per cent.
Decreased:		Increased—Continued.	
Mississippi	5.4	Minnesota	21.6
Delaware	1.8	Louisiana	24.0
Increased:		Virginia	24.0
New Jersey	1.2	West Virginia	30.0
Maryland	1.3	Kentucky	31.5
North Carolina	4.0	California	35.8
South Carolina	4.0	Oklahoma	38.8
Indiana	6.4	Georgia	39.0
New York	7.0	Tennessee	39.0
Vermont	7.0	Nebraska	43.6
Michigan	7.6	Washington	43.7
Illinois	8.7	Oregon	47.3
Ohio	9.6	North Dakota	49.0
Rhode Island	9.8	Arkansas	60.7
Pennsylvania	9.9	Florida	65.0
Missouri	10.1	South Dakota	65.9
Connecticut	11.5	Idaho	88.0
Maine	12.0	Colorado	90.1
Alabama	12.2	District of Columbia	92.0
Iowa	14.0	Utah	109.6
Massachusetts	15.6	Nevada	113.0
Kansas	15.6	Wyoming	126.9
Texas	19.2	Montana	206.1
Wisconsin	20.8	Arizona	270.0
New Hampshire	21.0	New Mexico	405.0

Table J–2 gives the per cent of owned farms mortgaged in each State and geographic division from 1890 to 1920. The States are arranged in order of the per cent of mortgages in 1920. It will be noted—

1. In one-third of the States from 16 to 32 per cent of the owned farms are mortgaged, in one-third of the States from 34 to 49 per cent of the owned farms are mortgaged, and in one-third of the States one-half or more of the owned farms are mortgaged.

2. Of the States in which half or more of the owned farms are mortgaged all but three are west of the Mississippi River.

3. The per cent of all owned farms mortgaged has increased from 28.2 per cent in 1890 to 41.3 per cent in 1920.

4. All the geographical divisions show increases in owned farms mortgaged. For the United States as a whole there was an increase of 46 per cent in owned farms mortgaged from 1890 to 1920, as contrasted with 11 per cent in the Middle Atlantic States, with 19 per cent in the west North Central States, 22 per cent in the east North Central States, 41 per cent in New England, 81 per cent in the Pacific States, 203 per cent in the South Atlantic States, and 498 per cent in the east South Central States (Arkansas, Louisiana, Oklahoma, and Texas). In other words, where few farms were mortgaged 30 years ago many are mortgaged now.

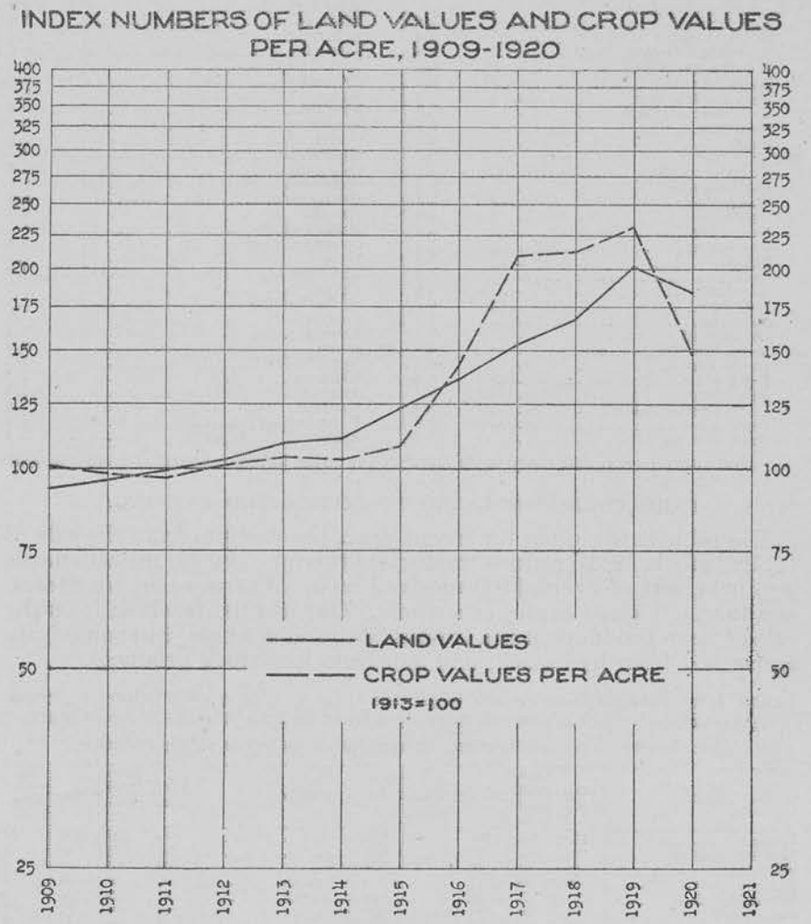
TABLE J–2.—*Per cent of owned farms mortgaged, by States and divisions, 1890–1920.*

States and divisions.	1920	1910	1900	1890
United States	41.3	33.6	31.1	28.2
Geographical divisions:				
New England	39.8	34.9	34.1	28.2
Middle Atlantic	41.1	38.3	40.3	37.0
East North Central	46.0	40.9	39.4	37.6
West North Central	56.9	45.1	44.3	48.0
South Atlantic	22.4	18.8	16.8	7.4
East South Central	26.9	22.7	17.0	4.5
West South Central	40.6	30.6	18.2	4.8
Mountain	52.2	20.8	14.4	14.1
Pacific	52.1	36.8	27.6	28.7
States:				
West Virginia	16.3	12.6	14.1	13.0
North Carolina	19.2	18.5	15.8	4.9
Virginia	19.8	16.0	14.7	3.2
Tennessee	23.5	16.9	11.5	3.2
Florida	24.5	14.8	10.3	2.9
Louisiana	24.7	19.0	17.7	4.0
South Carolina	25.0	24.0	20.6	8.0
Kentucky	25.8	19.6	15.2	4.1
Georgia	26.5	19.0	14.7	3.4
New Mexico	27.3	5.4	2.3	3.0
Maine	29.8	28.6	26.7	22.1
Alabama	30.2	26.9	19.2	4.4
New Hampshire	31.0	25.6	25.5	21.8
Mississippi	31.1	32.9	27.1	7.7
Ohio	31.6	28.9	29.8	28.9
Rhode Island	32.5	29.6	27.1	19.1
Pennsylvania	34.1	31.1	32.3	27.4
Arkansas	34.4	21.4	14.3	4.2
District of Columbia	35.4	18.4	18.9	4.1
States—Continued.				
Nevada	35.6	16.7	19.3	17.2
Delaware	36.5	37.2	36.5	29.4
Maryland	37.0	36.5	36.8	30.0
Texas	39.7	33.3	23.4	5.7
Indiana	41.3	38.8	36.5	33.1
Illinois	42.6	39.2	39.3	36.7
Wyoming	44.7	19.7	12.2	13.1
New York	46.9	43.7	46.3	44.2
Massachusetts	47.3	40.9	38.6	30.5
Arizona	47.7	12.9	6.0	6.8
Utah	48.0	22.9	11.1	5.5
Connecticut	48.3	43.2	40.7	31.1
Washington	49.0	34.1	21.7	26.8
Oregon	49.7	33.7	25.2	23.4
Colorado	50.2	26.4	27.0	25.5
New Jersey	50.2	49.6	51.9	48.9
Vermont	50.2	46.9	46.9	44.3
Missouri	51.0	46.3	42.4	36.4
Kansas	51.8	44.8	41.8	35.5
Michigan	51.9	48.2	48.3	49.4
California	55.0	40.5	32.2	32.5
Minnesota	56.3	46.3	44.8	46.4
Nebraska	56.5	39.4	45.4	52.0
Iowa	59.1	51.8	53.0	53.3
Oklahoma	60.4	43.5	9.2	.....
Wisconsin	62.0	51.4	45.8	42.9
Idaho	62.8	33.4	16.4	16.3
South Dakota	63.1	38.2	36.7	52.4
Montana	64.6	21.1	14.0	15.6
North Dakota	75.9	50.9	31.4	48.7

LAND AND CROP VALUES.

For the United States as a whole land values increased slightly more rapidly than did the value of crop yields per acre from 1909 to 1915, but land values lagged well behind crop values from 1916 to 1919 and were above crop values in 1920. Moreover, land values for the United States as a whole, in 1920, were about 50 per cent above the average land values per acre in 1913, yet crop values per acre in 1921 are about back to a 1913 level. This represents a serious element in the farm-mortgage situation at the present time, as is indicated by chart J–1.

CHART J–1.



INTEREST RATE ON MORTGAGES.

The average rate of interest paid on mortgages on land in early 1920, as given in the census returns, was 6.1 per cent. This rate was lowest in the Middle Atlantic (5.4 per cent) and New England (5.7 per cent) States, and highest in the west South Central (7.2 per cent) and Mountain (7.3 per cent) States. (See Table J–3, p. 208.)

Half the States paid an interest rate equal to or above the average per cent paid in the United States, and of these States 16 in number are west of the Mississippi River, 7 in the South, and 1 only (Maine) in the East.

TABLE J–3.—*Average interest rate paid on farm mortgages, in 1920, by States and by divisions and by the United States.*[1]

[From preliminary report of fourteenth census.]

States and divisions.	Rate of per cent.	States and divisions.	Rate of per cent.
United States	6.1	States—Continued.	
Geographical divisions:		West Virginia	5.9
New England	5.7	Michigan	6.0
Middle Atlantic	5.4	Kansas	6.0
East North Central	5.6	Virginia	6.0
West North Central	5.8	North Carolina	6.0
South Atlantic	6.4	Kentucky	6.0
East South Central	6.4	Maine	6.1
West South Central	7.2	Missouri	6.1
Mountain	7.3	Tennessee	6.2
Pacific	6.6	Oregon	6.5
States:		Mississippi	6.5
New Hampshire	5.1	California	6.6
Pennsylvania	5.3	Oklahoma	6.6
Wisconsin	5.3	Washington	6.6
Vermont	5.4	Nevada	6.7
New York	5.4	North Dakota	6.7
New Jersey	5.4	Colorado	6.8
Illinois	5.5	Utah	7.1
Iowa	5.5	Louisiana	7.2
Maryland	5.6	Texas	7.2
Delaware	5.7	South Carolina	7.3
Nebraska	5.7	Georgia	7.3
Connecticut	5.7	Florida	7.3
Massachusetts	5.7	Idaho	7.3
Rhode Island	5.8	New Mexico	7.3
Indiana	5.8	Alabama	7.5
Minnesota	5.8	Arizona	7.5
District of Columbia	5.8	Montana	7.6
Ohio	5.9	Wyoming	7.6
South Dakota	5.9	Arkansas	7.8

[1] Interest rates represent rates stated in the mortgage and do not include commission or other charges.

FARM CREDITS RELATED TO DIVERSIFIED FARMING.

The table below gives for recent years the receipts from the sale of (1) live stock, (2) live-stock products, (3) crops, and (4) miscellaneous products, out of every $100 received from all farm sales, by States, and for the United States as a whole. Out of $100 received from the sale of farm products in the United States as a whole, $40 came from crops, $36 from live stock, and $20 from live-stock products.

TABLE J–4.—*Receipts from the sale of (1) live stock, (2) live-stock products, (3) crops, (4) miscellaneous, out of every $100 received from all sales, average of recent years.*

[From tabulation of reports from crop correspondents of the Bureau of Crop Estimates.]

State.	Live stock.	Live-stock products.	Crops.	Miscellaneous.	State.	Live stock.	Live-stock products.	Crops.	Miscellaneous.
Maine	$15	$42	$35	$8	Minnesota	$33	$20	$43	$4
New Hampshire	20	51	25	4	Iowa	63	12	22	3
Vermont	18	64	10	8	Missouri	62	13	21	4
Massachusetts	19	50	27	5	North Dakota	25	6	66	3
Rhode Island	13	62	22	1	South Dakota	41	18	36	5
Connecticut	12	62	24	2	Nebraska	56	9	32	3
New York	14	53	27	6	Kansas	39	16	42	3
New Jersey	6	26	62	6	Kentucky	45	19	31	5
Pennsylvania	21	42	32	5	Tennessee	42	12	40	6
Maryland and Delaware	23	32	42	3	Alabama	17	14	66	3
Virginia	46	15	35	4	Mississippi	12	8	76	4
West Virginia	58	23	13	6	Louisiana	13	9	72	6
North Carolina	18	15	60	7	Texas	16	9	72	3
South Carolina	8	12	72	8	Oklahoma	32	11	53	4
Georgia	14	8	75	3	Arkansas	34	11	48	7
Florida	16	16	64	4	Mountain States[1]	49	13	34	4
Ohio	41	22	31	6	Washington	16	46	36	2
Indiana	50	16	30	4	Oregon	33	32	30	5
Illinois	42	20	35	3	California	15	12	72	14
Michigan	34	30	31	5					
Wisconsin	31	47	17	5	United States	36	20	40	4

[1] Including Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, and Idaho.

Source: United States Department of Agriculture, Yearbook, 1920, page 815. Correspondents were requested to give their 1914 sales if that year was representative; if 1914 sales were not normal, they were to give figures which were typical of sales in recent years. Unfortunately eight Mountain States are lumped together as one State.

The average receipts from the sale of crops per farm for the United States as a whole in recent years is about $40 per year out of each $100 of total sales. The table below gives the per cent of tenancy, the per cent of owned farms mortgaged, and the interest rate on mortgages for each State in which farmers receive $60 or more per acre for crops. It will be noticed that the per cent of tenancy, the per cent of owned farms mortgaged, and the interest rate on mortgages all are high in these States. This method brings out the cotton States, North Dakota as a wheat State, California as a fruit State, and New Jersey as a trucking State. Of these, New Jersey, with a low mortgage rate, has a low per cent of tenancy.

TABLE J–5.—*The per cent of farms operated by tenants, the per cent of owned farms mortgaged, and the interest rate on mortgages in States in which farmers receive $60 or more out of each $100 from the sale of farm crops.*

States.	Tenancy.	Mortgages.	Interest on mortgages.	Amount received from crops out of $100 sales.
	Per cent.			
New Jersey	23	50.2	5.4	$62
North Carolina	43.5	19.2	6	60
South Carolina	64.9	25	7.3	72
Georgia	66.6	26.5	7.3	75
Florida	25.3	24.5	7.3	64
North Dakota	25.6	75.9	6.7	66
Alabama	57.9	30.2	7.5	66
Mississippi	66.1	31.1	6.5	76
Louisiana	57	24.7	7.2	72
Texas	53.3	39.7	7.2	72
California	57.1	55	6.6	72
Average for these States	49.1	36.5	6.8	.....
Average for United States	38.1	41.3	6.1	.....

In the next table we compare the same items in those States in which farmers received from the sale of live stock $54 or more out of each $100 in sales. These are not the States producing most live stock in quantity, but the most in proportion to the agricultural output of the State. The per cent of tenancy runs not quite as high in these States as in the leading crop States, but the per cent of owned farms mortgaged is higher and the interest on mortgages is below, or not in excess of, the average for the United States.

TABLE J–6.—*The per cent of farms operated by tenants, the per cent of owned farms mortgaged, and the interest rate on mortgages in States in which farmers receive from live stock $54 or more out of each $100 of farm sales.*

States.	Per cent of all farms operated by tenants.	Per cent of owned farms mortgaged.	Interest rate on mortgages (1920).	Amount received for live stock out of each $100 sales.
West Virginia	16.2	16.3	5.9	$58
Iowa	41.7	59.1	5.5	63
Missouri	28.8	51.0	6.1	62
Nebraska	42.9	56.5	5.7	56

Of these States, however, West Virginia ranks thirty-fifth among the States in the value of live stock. If we take the 10 States leading in the value of all live stock, we find that the percentage of tenancy is below, the per cent of owned farms mortgaged above, and the rate of interest a little below the average for the United States as a whole. If, however, we exclude from these 10 States both New York and Wisconsin as dairy States, discussed in the next table, we have a degree of tenancy and of mortgages above that prevailing in the country as a whole, with the interest rate on mortgages about the same. These live-stock States, however, are above the "crop States" in owned farms mortgaged, with a decidedly lower interest rate on mortgages, and hence a much lower per cent of tenancy.

TABLE J–7.—*The per cent of farms operated by tenants, the per cent of owned farms mortgaged, and the interest rate on mortgages in the 10 leading live-stock States, 1920.*

[Yearbook of United States Department of Agriculture, 1920, p. 757.]

States.	Per cent of farms operated by tenants.	Per cent of owned farms mortgaged.	Interest rate on mortgages.	Amount received from live stock out of $100 sales.
Iowa	41.7	59.1	5.5	$63.00
Texas	55.3	39.7	7.2	16.00
Illinois	42.7	42.6	5.5	42.00
Missouri	28.8	51.0	6.1	62.00
Wisconsin	14.4	62.0	5.3	31.00
Ohio	29.3	31.6	5.9	41.00
Nebraska	42.9	56.5	5.7	56.00
Kansas	40.4	51.8	6.0	39.00
Minnesota	24.7	56.3	5.8	33.00
New York	19.2	46.9	5.4	14.00
Average for these States	33.7	49.75	5.84	39.70
Average for United States	38.1	41.3	6.1	36.00
Average for 8 States, excluding New York and Wisconsin	40.0	48.6	6.0	44.00

Table 28 page 211 gives the same data for States in which farmers receive 50 per cent or more ($30 or more out of each $100) than the average farmer in the country receives from the sale of live-stock products, such as milk and butter and eggs. These, as a rule, are the States with diversified farming, in which the roughage of the farms and much of the crops are fed to dairy cows. In these States the per cent of tenancy is less than half what it is throughout the United States; the per cent of owned farms mortgaged is slightly above and the interest rate on mortgages is considerably lower than in the above States, and much lower than the average for the country as a whole. In these 13 States, 17.6 per cent of all farms were operated by tenants, as compared with 38.1 per cent in the country as a whole; 44.3 per cent of owned farms were mortgaged, as compared with 41.3 per cent in the country as a whole; and the interest rate on mortgages in 1920 was 5.7 per cent, as compared with 6.1 per cent in the country as a whole. Dairy products particularly bring the farmer a steady cash income throughout the year, hence the need for borrowing is not so great and the security is better, and farmers have better credit opportunities for owning their own farms, and hence tenancy is lower.

TABLE J–8.—*The per cent of farms operated by tenants, the per cent of owned farms mortgaged, and the interest rate on mortgages in States in which farmers receive $30 or more out of each $100 on farm sales from the sale of live-stock products.*

States.	Per cent of tenancy.	Per cent of owned farms mortgaged.	Interest on mortgages.	Amount received from live-stock products per $100 sales.
New Hampshire	6.7	31.0	5.1	$51.00
Vermont	11.6	50.2	5.4	64.00
Massachusetts	7.1	47.3	5.7	50.00
Rhode Island	15.5	32.5	5.8	62.00
Connecticut	8.5	48.3	5.7	62.00
New York	19.2	46.9	5.4	53.00
Pennsylvania	21.9	34.1	5.3	42.00
Michigan	17.7	51.9	6.0	30.00
Wisconsin	14.4	62.0	5.3	47.00
Washington	18.7	49.0	6.6	46.00
Oregon	18.8	49.7	6.5	32.00
Maryland	28.9	37.0	5.6	32.00
Delaware	39.3	36.5	5.7	32.00
Average for these States	17.6	44.3	5.7	46.40
Average for United States	38.1	41.3	6.1	20.00

Those with money to loan consider many factors in estimating the element of risk, and hence the interest rate on loans. The careful investor will inquire whether land values are too far above crop values per acre. He will inquire whether there is a single crop on which price and yield risk may be high, or whether there are diversified crops to lower risks in price and in yields. The risk is higher in semiarid regions, and a loan near at home where all the factors can be weighed will be preferred to a loan in a region unknown to the investor. Soil and contour and community and family habits of thrift are all considered. And not least in importance are marketing opportunities and facilities. Cooperative marketing gives a strong base for a properly organized local credit system.

BUYING FARMS WITH LAND BANK LOANS.[1]

A special study has been made by the Federal Department of Agriculture as to the extent to which land bank loans have been used for the purchase of farms. About 13 per cent only of the loans made by Federal land banks from the time of their organization up to November 30, 1919, were used for the purpose of purchasing farm lands. It appears that in the year 1918 (ending Nov. 30) but 8 per cent of the loans were used in buying lands. In October of 1919, 16 per cent of the loans made by the Federal land banks were for the purchase of lands. It is evident, therefore, that these loans are more and more being used as an aid to farm ownership. Out of a total of $251,426,600 of loans made by these banks up to November of 1919, 59 per cent was used to liquidate existing mortgages.

About two-thirds of those who borrowed from Federal land banks to purchase land were already owners of farm lands. Of the total number of borrowers 23 per cent were landless tenants, and of the landless borrowers about two-thirds were operating as tenants at

[1] Bulletin 968, U. S. Department of Agriculture.

the time of borrowing. The relative size of Federal loans obtained for different tenure groups was as follows:

TABLE J-9.—*Relative size of Federal farm loan obtained for different tenure groups.*

Tenure group.	Number of farms.	Average per cent Federal farm loan is of the cost of the farm purchased.	Average cost of farm purchased.	Average size of the Federal land bank mortgages.
Nonowning buyers	558	44.2	$8,072	$3,556
Owner buyers, including tenant owners	610	41.5	9,652	4,007
Total	1,168			
Nonowning tenants	406	44.1	8,224	3,632
Owning tenants	133	42.4	9,620	4,077

The costs incurred in obtaining Federal farm loans was about 1.43 per cent of the average loan.

TABLE J-10.—*Costs incurred in obtaining Federal farm loans (analysis and averages of 1,765 reports).*

Size of average loan	$3,541.00
Average cost of securing the Federal farm loan	$50.84
Per cent which the average cost of securing the loan is to the loan	1.43

The Federal land banks have aided in extending farm ownership, and they no doubt afford more favorable conditions for the purchase of farms by those having but a small proportion of the purchase price than prevailed before the development of the Federal land bank system, particularly because the system makes it more practicable to lend on second mortgages than did the usual private arrangements.

America wants more farm owners and fewer tenants. This will be brought about by two means—price and credit. Constructive suggestions for better price policies and for better credit facilities are made elsewhere in this report.

CHAPTER XI.

FARM TENANCY.

Americans have taken great pride in the large number of our farms operated by their owners, as compared with the number in other countries. Is the number of farms run by their owners increasing or decreasing? What has been the trend toward tenancy in this country?

As shown in the following table, K-1, the total number of farms in the United States increased 1.4 per cent from 1910 (6,361,502) to 1920 (6,448,366), as contrasted with an increase of 14.6 per cent in the total population during this period. The number of farms operated by owners declined six-tenths of 1 per cent during the past decade, while the number operated by managers increased 17.9 per cent, and by tenants 4.2 per cent. But 60.9 per cent of our farms were run by their owners in 1920, as compared with 62.1 per cent in 1910 and 74.4 per cent in 1880. During this period the number of farms operated by tenants increased from 37 per cent to 38.1 per cent of the total, and by managers from 0.9 per cent to 1.1 per cent of all farms. In 1920 we had 86,864 more farms in the United States than in 1910, but 100,000 more farms were operated by tenants in 1920 than in 1910.

The number of farms operated by tenants in 1910 was 2,354,676; in 1920 the number was 2,454,746, an increase of 4.2 per cent. The number of farms operated by tenants in 1900 was 2,024,964, as compared with 2,354,676 in 1910, an increase of 16.3 per cent in that decade.

TABLE K-1.—*Farms in the United States, classified by tenure, 1920 and 1910.*[1]

	Number of farms.		Increase.[2]	
	1920	1910	Number.	Per cent.
Total	6,448,366	6,361,502	86,864	1.4
Owners	3,925,090	3,948,722	− 23,632	− 0.6
Managers	68,530	58,104	10,426	17.9
Tenants	2,454,746	2,354,676	100,070	4.2
Share tenants	1,117,730	1,399,923	278,812	19.9
Croppers[3]	561,005			
Share-cash tenants	127,834	128,466	− 632	− 0.5
Cash tenants	480,027	712,294	−127,280	−17.9
Standing renters[3]	104,987			
Unspecified	63,163	113,993	− 50,830	−44.6
Per cent of total:				
Owners	60.9	62.1		
Managers	1.1	0.9		
Tenants	38.1	37.0		

[1] From the Census Bureau. [2] A minus sign (−) denotes decrease. [3] In Southern States only.

The proportion of tenancy has steadily increased from 25.6 per cent of all farms in the United States in 1880 to 38 per cent in 1920. The relative increase was least in the last decade, though this past year has no doubt seen a distinct increase in tenancy over the pre-war years. Our greatest increase in tenantry came during the hard years of the nineties, as follows:

TABLE K–2.—*Proportion of farms in the United States operated by tenants, 1880–1920.*

	1880	1890	1900	1910	1920
Operated by tenants	25.6	28.4	35.3	37	38
Operated by owners and managers	74.4	71.6	64.7	63	62

As indicated by the following table K–3 the total farm acreage in the United States increased from 878,798,325 acres in 1910, to 955,676,545 acres in 1920, an increase of 8.7 per cent, as contrasted with an increase of 14.5 per cent in population. The number of acres farmed by tenants increased 17.1 per cent from 1910 to 1920, more rapidly than total acreage or the number of farms occupied by tenants, and more rapidly than the general increase in size of farms in the United States in that period.

TABLE K–3.—*Farm acreage in the United States, by tenure, 1920 and 1910.*[1]

	Jan. 1, 1920.	Apr. 15, 1910.
Total farm acreage	955,676,545	878,798,325
Acreage operated by—		
Owners	636,508,324	598,554,617
Full owners[1]	461,112,031	464,923,315
Part owners	175,396,293	133,631,302
Managers	53,974,806	53,730,865
Tenants	265,193,415	226,512,843
Average acreage per farm:		
All farms	148.2	138.1
Farms operated by—		
Owners	162.2	151.6
Full owners[1]	137.0	138.6
Part owners	314.0	225.0
Managers	787.7	924.7
Tenants	108.0	96.2

[1] From the Census Bureau.

As shown in the table, K–4, p. 215, the average acreage of land per farm for all farmers in 1920 was 148.2, as contrasted with 138.1 in 1910. The average acreage of land per farm, operated by owners, in 1920 was 162.2; in 1910, 151.6. The average acreage per farm operated by tenants was 108 in 1920, in 1910, 96.2 acres. The per cent increase in acreage per farm for this decade for each class was, for all farmers, 7.3 per cent; for owners, 6.9 per cent; for tenants, 12.2 per cent.

From 1900 to 1910 the average acreage per farm decreased 5.5 per cent, whereas the acreage per farm operated by tenants decreased but one-tenth of 1 per cent. In this decade the per cent of improved acreage per farm increased 4.2 per cent, while that occupied by tenants increased 7.3 per cent.

TABLE K–4.—*Average acreage per farm and percentage of farm land improved, by tenure of operator: 1910 and 1900.*[1]

Class of operator.	Average acreage per farm.				Average improved acreage per farm.				Per cent of farm land improved.	
	1910	1900	Increase.[2]		1910	1900	Increase.		1910	1900
			Amount.	Per cent.			Amount	Per cent.		
All classes	138.1	146.2	− 8.1	− 5.5	75.2	72.2	3.0	4.2	54.4	49.4
Farms operated by—										
Owners	151.6	152.2	− .6	− .4	78.5	76.2	2.3	3.0	51.8	50.0
Owning entire farm	138.6	134.7	3.9	2.9	69.7	69.2	.5	.7	50.3	51.4
Renting additional land	225.0	276.4	− 51.4	−18.6	128.1	125.7	2.4	1.9	56.9	45.5
Managers	924.7	1,481.2	−556.5	−37.6	211.9	184.6	27.3	14.8	22.9	12.5
Tenants	96.2	96.3	− .1	− .1	66.4	61.9	4.5	7.3	69.0	64.3
Share and share—cash	93.2	92.4	.8	.9	69.1	65.0	4.1	6.3	74.2	70.3
Share	87.9	.....	.....	.....	64.1	.....	.....	.....	72.9	.....
Share—cash	150.9	.....	.....	.....	124.0	.....	.....	.....	82.1	.....
Cash and unspecified	101.7	102.9	− 1.2	− 1.2	61.3	56.7	4.6	8.1	60.2	55.1
Cash	95.3	.....	.....	.....	58.4	.....	.....	.....	61.3	.....
Unspecified	142.3	.....	.....	.....	79.5	.....	.....	.....	55.8	.....

[1] From the Census Bureau. [2] A minus sign (−) denotes decrease.

The value of land and buildings on all farms in the United States increased from $34,801,125,697 in 1910 to $66,334,309,556 in 1920, an increase of 90 per cent; the value of land and buildings on farms occupied by tenants increased from $10,977,232,427 in 1910 to $23,793,984,605 in 1920, or 117 per cent. (See table below.)

TABLE K–5.—*Value of farms in the United States, by tenure, 1920 and 1910.*

	Jan. 1, 1920.	Apr. 15, 1910.
VALUE OF LAND AND BUILDINGS.		
All farms	$66,334,309,556	$34,801,125,697
Farms operated by—		
Owners	39,874,303,566	22,366,934,278
Full owners[1]	30,717,493,565	17,310,639,016
Part owners[2]	9,156,810,001	5,056,295,262
Managers	2,666,021,385	1,456,958,992
Tenants	23,793,984,605	10,977,232,427
Average per farm:		
All farms	10,287	5,471
Farms operated by—	10,159	5,664
Owners	9,124	5,160
Full owners[1]	16,394	8,515
Part owners[2]	38,906	25,075
Managers	9,693	4,662
Tenants		
Average per acre:	69.41	39.60
All farms		
VALUE OF LAND AND BUILDINGS—contd.		
Average per acre—Continued.		
Farms operated by—		
Owners	$62.65	$37.37
Full owners[1]	66.62	37.23
Part owners[2]	52.21	37.84
Managers	49.39	27.12
Tenants	89.72	48.46
VALUE OF LAND ALONE.		
All farms	54,903,453,925	28,475,674,169
Average per farm	8,514	4,476
Average per acre	57.45	32.40
VALUE OF BUILDINGS.		
All farms	11,430,855,631	6,325,451,528
Average per farm	1,773	994

[1] Owning entire farm. [2] Hiring additional land.

The same trend was shown for 1910 over 1900, as given in Table K–6.

TABLE K–6.—*Value of all farm property in the United States, 1910 and 1900, by tenure.*[1]

Class of operator.	1910	1900	Increase.	
			Amount.	Per cent.
All classes	$40,991,449,090	$20,439,901,164	$20,551,547,926	100.5
Farms operated by owners	26,669,634,373	13,753,055,102	12,916,579,271	93.9
Owning entire farm	20,730,867,111	11,276,548,792	9,454,318,319	83.8
Renting additional land	5,938,767,262	2,476,506,310	3,462,260,952	139.8
Managers	1,700,624,936	1,057,945,708	642,679,228	60.7
Tenants	12,621,189,781	5,628,900,354	6,992,289,427	124.2
Share and share, cash	7,981,203,217	3,371,703,720	4,609,499,497	136.7
Cash and unspecified	4,639,986,564	2,257,196,634	2,382,789,930	105.6

[1] From the Census Bureau.

TENANCY IN THE DIFFERENT STATES.

Such is the general situation as to tenancy in the United States. What is the relative situation in the different States?

Table K–7 gives the per cent of farms in each State operated by tenants in 1920 and in 1910, with the per cent of increase or decrease from 1910 to 1920. The States are arranged in rank from the smallest to largest per cent of tenancy in 1920. Attention is called to the following pertinent facts gleaned from this table and from Table K–8, on page 217, classifying the States in order of their decrease or increase in tenancy from 1910 to 1920.

TABLE K–7.—*Per cent of farms operated by tenants, 1910–1920, by States.*

States.	1920	1910	Per cent increased or decreased.	States.	1920	1910	Per cent increased or decreased.
Maine	4.2	4.3	− 2.3	North Dakota	25.6	14.3	+79
New Hampshire	6.7	6.9	− 2.9	Virginia	25.6	26.5	− 3.4
Massachusetts	7.1	8.1	− 12.3	Missouri	28.8	29.9	− 3.7
Connecticut	8.5	9.8	− 13.2	Maryland	28.9	29.5	− 2
Nevada	9.4	12.4	− 24.2	Ohio	29.3	28.4	+ 3.1
Utah	10.9	7.9	+ 25.3	Indiana	32.0	30.0	+ 6.6
Montana	11.3	8.9	+ 27	Kentucky	33.4	33.9	− 1.47
Vermont	11.6	12.3	− 5.7	South Dakota	34.9	24.8	+40.7
New Mexico	12.2	5.5	+122	Delaware	39.3	41.9	− 6.2
Wyoming	12.5	8.2	+ 5.24	Kansas	40.4	36.8	+ 9.7
Wisconsin	14.4	13.9	+ 3.6	Tennessee	41.1	41.1	.....
Rhode Island	15.5	18.0	− 13.9	Iowa	41.7	37.8	+10.3
Idaho	15.9	10.3	+ 54	District of Columbia	41.7	38.7	+ 7.8
West Virginia	16.2	20.5	− 21	Illinois	42.7	41.4	+ 3.1
Michigan	17.7	15.8	+ 12	Nebraska	42.9	38.1	+12.6
Arizona	18.1	9.3	+ 94.6	North Carolina	43.5	42.3	+ 2.8
Washington	18.7	13.7	+ 36.4	Oklahoma	51.0	54.8	− 7
Oregon	18.8	15.1	+ 24.5	Arkansas	51.3	50.0	+ 2.6
New York	19.2	20.8	− 7.7	Texas	53.3	52.6	+ 1.3
California	21.4	20.6	+ 3.8	Louisiana	57.1	55.3	+ 3.2
Pennsylvania	21.9	23.3	− 6	Alabama	57.9	60.2	− 3.8
Colorado	23.0	18.2	+ 26	South Carolina	64.9	63.0	+ 2.4
New Jersey	23.0	24.8	− 7.2	Mississippi	66.1	66.1	.....
Minnesota	24.7	21.0	+ 17.6	Georgia	66.6	65.6	+ 1.5
Florida	25.3	26.7	− 5.2				

NOTE.—All the States in which the percentage of farms operated by tenants was above 25 per cent are located west of the Mississippi and south of the Mason-Dixon line.

TABLE K–8.—*Decrease or increase in tenancy in each State, 1910–1920.*

DECREASE.

	Per cent.
Nevada	24.2
West Virginia	21
Rhode Island	13.9
Connecticut	13.2
Massachusetts	12.3
New York	7.7
New Jersey	7.2
Oklahoma	7
Delaware	6.2
Pennsylvania	6
Vermont	5.7
Florida	5.2
Alabama	3.8
Missouri	3.7
Virginia	3.4
New Hampshire	2.9
Maine	2.3
Maryland	2
Kentucky	1.47

INCREASE.

Texas	1.3
Georgia	1.5
South Carolina	2.4
Arkansas	2.6
North Carolina	2.8
Illinois	3.1
Ohio	3.1
Louisiana	3.2
Wisconsin	3.6
California	3.8
Wyoming	5.24
Indiana	6.6
District of Columbia	7.8
Kansas	9.7
Iowa	10.3
Michigan	12
Nebraska	12.6
Minnesota	17.6
Oregon	24.5
Utah	25.3
Colorado	26
Montana	27
Washington	36.4
South Dakota	40.7
Idaho	54
North Dakota	79
Arizona	94.6
New Mexico	122

With the exception of Nevada, all the States with declining tenancy are east of the Mississippi.

All the States in which tenancy increased 10 per cent or more are west of the Mississippi.

There was no change in Mississippi or Tennessee.

TABLE K–9.—*Number of farms in the United States, by tenure, for geographic divisions and States: 1920 and 1910.*[1]

Division and State.	Total number of farms.		Number of farms operated by—									
			All owners.		Full owners (owning entire farm).		Part owners (hiring additional land).		Managers.		Tenants.	
	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910	1920	1910
United States	6,448,366	6,361,502	3,925,095	3,948,722	3,366,546	3,354,897	558,549	593,825	68,525	58,104	2,454,746	2,354,676
Geographic divisions:												
New England	156,564	188,802	140,160	168,408	133,841	162,539	6,319	5,869	4,802	5,379	11,602	15,015
Middle Atlantic	425,149	468,379	327,106	355,036	304,605	329,423	22,501	25,613	9,853	9,072	88,190	104,271
East North Central	1,084,744	1,123,489	766,787	809,044	659,948	677,239	106,839	131,805	13,550	10,848	304,407	303,597
West North Central	1,096,973	1,109,948	711,172	758,946	543,264	580,066	167,908	178,880	10,778	8,384	375,023	342,618
South Atlantic	1,158,976	1,111,881	607,089	593,154	546,563	521,558	60,526	71,596	9,878	8,298	542,009	510,429
East South Central	1,051,600	1,042,480	525,808	510,452	468,054	438,977	57,754	71,475	3,506	3,290	522,286	528,738
West South Central	996,087	943,186	464,314	440,905	391,163	368,855	73,151	72,050	5,009	4,696	526,764	497,585
Mountain	244,109	183,446	202,515	160,844	165,094	145,029	37,421	15,815	4,116	2,912	37,478	19,600
Pacific	234,164	189,891	180,144	151,933	154,014	131,211	26,130	20,722	7,033	5,225	46,987	32,733
New England:												
Maine	48,227	60,016	45,437	56,454	44,224	55,349	1,213	1,105	786	999	2,004	2,563
New Hampshire	20,523	27,053	18,604	24,493	17,836	23,714	768	779	546	681	1,373	1,879
Vermont	29,075	32,709	25,121	28,065	23,926	26,793	1,195	1,272	568	636	3,386	4,008
Massachusetts	32,001	36,917	28,087	32,075	26,515	30,705	1,572	1,370	1,627	1,863	2,287	2,979
Rhode Island	4,083	5,292	3,245	4,087	2,971	3,831	274	256	205	251	633	954
Connecticut	22,655	26,815	19,666	23,234	18,369	22,147	1,297	1,087	1,070	949	1,919	2,632
Middle Atlantic:												
New York	193,195	215,597	151,717	166,674	139,153	152,343	12,564	14,331	4,376	4,051	37,102	44,872
New Jersey	29,702	33,487	21,889	24,133	20,752	22,992	1,137	1,141	987	1,060	6,826	8,294
Pennsylvania	202,252	219,295	153,500	164,229	144,700	154,088	8,800	10,141	4,490	3,961	44,262	51,105
East North Central:												
Ohio	256,695	272,045	177,986	192,104	157,116	162,982	20,870	29,122	3,065	2,753	75,644	77,188
Indiana	205,126	215,485	137,210	148,501	112,664	115,424	24,546	33,077	2,329	2,297	65,587	64,687
Illinois	237,181	251,872	132,575	145,107	100,904	107,300	31,671	37,807	3,410	2,386	101,196	104,379
Michigan	196,447	206,960	159,406	172,310	139,874	151,005	19,532	21,305	2,319	1,961	34,722	32,689
Wisconsin	189,295	177,127	159,610	151,022	149,390	140,528	10,220	10,494	2,427	1,451	27,258	24,654
West North Central:												
Minnesota	178,478	156,137	132,744	122,104	112,880	99,493	19,864	22,611	1,596	1,222	44,138	32,811
Iowa	213,439	217,044	121,888	133,003	99,008	106,464	22,880	26,539	2,487	1,926	89,064	82,115
Missouri	263,004	277,244	185,030	192,285	153,852	152,807	31,178	39,478	2,247	2,001	75,727	82,958
North Dakota	77,690	74,360	56,917	63,212	34,051	44,667	22,866	18,545	855	484	19,918	10,664
South Dakota	74,655	77,644	47,831	57,984	27,268	40,405	20,563	17,579	782	429	26,042	19,231
Nebraska	124,421	129,678	69,672	79,250	50,565	58,222	19,107	21,028	1,316	987	53,433	49,441
Kansas	165,286	177,841	97,090	111,108	65,640	78,008	31,450	33,100	1,495	1,335	66,701	65,398
South Atlantic:												
Delaware	10,140	10,836	6,010	6,178	5,688	5,865	322	313	144	123	3,986	4,535
Maryland	47,908	48,923	32,805	33,519	30,842	31,120	1,963	2,399	1,262	988	13,841	14,416
District of Columbia	204	217	100	118	91	111	9	7	19	15	85	84
Virginia	186,242	184,018	136,363	133,664	121,454	117,964	14,909	15,700	2,134	1,625	47,745	48,729
West Virginia	87,289	96,685	72,101	75,978	66,220	68,318	5,881	7,660	1,090	872	14,098	19,835
North Carolina	269,763	253,725	151,376	145,320	131,847	121,382	19,529	23,938	928	1,118	117,459	107,287
South Carolina	192,693	176,434	67,724	64,350	60,089	55,523	7,635	8,827	738	863	124,231	111,221
Georgia	310,732	291,027	102,123	98,628	94,575	88,768	7,548	9,860	1,734	1,419	206,875	190,980
Florida	54,005	50,016	38,487	35,399	35,757	32,507	2,730	2,892	1,829	1,275	13,689	13,342
East South Central:												
Kentucky	270,626	259,185	179,327	170,332	159,206	148,832	20,121	21,500	969	993	90,330	87,860
Tennessee	252,774	246,012	148,082	144,125	129,532	120,081	18,550	24,044	807	826	103,885	101,061
Alabama	256,099	262,901	107,089	103,929	95,548	87,589	11,541	16,340	741	646	148,269	158,326
Mississippi	272,101	274,382	91,310	92,066	83,768	82,475	7,542	9,591	989	825	179,802	181,491
West South Central:												
Arkansas	232,604	214,678	112,653	106,649	98,043	87,866	14,610	18,783	738	763	119,213	107,266
Louisiana	135,463	120,546	57,254	52,989	51,895	48,590	5,359	4,399	828	950	77,381	66,607
Oklahoma	191,987	190,192	93,217	85,404	69,786	64,884	23,431	20,520	935	651	97,835	104,137
Texas	436,033	417,770	201,190	195,863	171,439	167,515	29,751	28,348	2,508	2,332	232,335	219,575
Mountain:												
Montana	57,677	26,214	50,271	23,365	38,431	21,525	11,840	1,840	899	505	6,507	2,344
Idaho	42,106	30,807	34,647	27,169	30,299	24,940	4,348	2,229	758	450	6,701	3,188
Wyoming	15,748	10,987	13,403	9,779	10,681	8,677	2,722	1,102	377	311	1,968	897
Colorado	59,934	46,170	45,291	36,963	35,553	32,474	9,738	4,519	880	787	13,763	8,390
New Mexico	29,844	35,676	25,756	33,398	21,533	30,417	4,223	2,981	433	321	3,655	1,957
Arizona	9,975	9,227	7,869	8,203	6,970	7,759	899	444	305	163	1,801	861
Utah	25,662	21,676	22,579	19,762	19,134	17,176	3,445	2,586	296	194	2,787	1,720
Nevada	3,163	2,689	2,699	2,175	2,493	2,061	206	114	168	181	296	333
Pacific:												
Washington	66,288	56,192	52,701	47,505	44,832	41,729	7,869	5,776	1,168	961	12,419	7,726
Oregon	50,206	45,502	39,863	37,796	33,300	32,982	6,563	4,814	916	847	9,427	6,859
California	117,670	88,197	87,580	66,632	75,882	56,500	11,698	10,132	4,949	3,417	25,141	18,148

[1] From the Bureau of the Census.

The per cent of farms operated by tenants increased in all but two Southern States—Florida and Alabama. The number of tenants actually increased in Florida from 13,342 in 1910 to 13,689 in 1920. The number of farms, however, increased from 50,000 to 54,000, hence the per cent of farms operated by tenants is lower, though the actual number increased. In Alabama the number of farms in the State decreased from 1910 to 1920, and the number of tenants did not decrease as rapidly as did the number of farms.

Tenancy increased in all States west of the Mississippi except Nevada, Oklahoma, and Missouri. The number of farms in Nevada is very small, and that number increased 18 per cent from 1910 to 1920. There were but 37 fewer tenants in the State in 1920 than there were in 1910. Oklahoma is a new State, and yet over half its farms are operated by tenants. The total number of farms in Missouri was less in 1920 than in 1910, and tenancy declined a little more than did the number of farms.

As a rule, tenancy is highest in the Southern and Western States, and in the last 10 years increased most rapidly in the Western States.

Tenants now operate over one-fourth of the farms in half our States, over 40 per cent of the farms in 15 States, and over half the farms in eight States.

In general, tenancy has been declining in the eastern, and increasing in the western and southern parts of the country, where it is especially high.

TABLE K–10.—*Per cent of all farms operated by tenants, by States, 1880–1920.*

[From Census Reports.]

States.	1920	1910	1900	1890	1880
Maine	4.2	4.3	4.7	5.4	4.3
New Hampshire	6.7	6.9	7.5	8.0	8.1
Massachusetts	7.1	8.1	9.6	9.3	8.2
Connecticut	8.5	9.8	12.9	11.5	10.2
Nevada	9.4	12.4	11.4	7.5	9.7
Utah	10.9	7.9	8.8	5.2	4.6
Montana	11.3	8.9	9.2	4.8	5.3
Vermont	11.6	12.3	14.6	14.6	13.4
New Mexico	12.2	5.5	9.4	4.5	8.1
Wyoming	12.5	8.2	7.6	4.2	2.8
Wisconsin	14.4	13.9	13.5	11.4	9.1
Rhode Island	15.5	18.0	20.2	18.7	19.9
Idaho	15.9	10.3	8.8	4.6	4.7
West Virginia	16.2	20.5	21.8	17.7	19.1
Michigan	17.7	15.8	15.8	14.0	10.0
Arizona	18.1	9.3	8.4	7.9	13.2
Washington	18.7	13.7	14.4	8.5	7.2
Oregon	18.8	15.1	17.8	12.6	14.1
New York	19.2	20.8	23.9	20.2	16.5
California	21.4	20.6	23.1	17.8	19.8
Pennsylvania	21.9	23.3	26.0	23.3	21.2
Colorado	23.0	18.2	22.6	11.2	13.0
New Jersey	23.0	24.8	29.9	27.2	24.6
Minnesota	24.7	21.0	17.3	12.9	9.1
Florida	25.3	26.7	26.5	23.6	30.9
North Dakota	25.6	14.3	8.5	6.9	3.9
Virginia	25.6	26.5	30.7	26.9	29.5
Missouri	28.8	29.9	30.5	26.8	27.3
Maryland	28.9	28.5	33.6	31.0	30.9
Ohio	29.3	28.4	27.4	22.9	19.3
Indiana	32.0	30.0	28.6	25.4	23.7
Kentucky	33.4	33.9	32.8	25.0	26.5
South Dakota	34.9	24.8	21.8	13.2	(1)
Delaware	39.3	41.9	50.3	46.9	42.4
Kansas	40.4	36.8	35.2	28.2	16.3
Tennessee	41.1	41.1	40.6	30.8	34.5
Iowa	41.7	37.8	34.9	28.1	23.8
District of Columbia	41.7	38.7	43.1	36.6	38.2
Illinois	42.7	41.4	39.3	34.0	31.4

[1] No report.

TABLE K–10.—*Per cent of all farms operated by tenants, by States, 1880–1920*—Contd.

States.	1920	1910	1900	1890	1880
Nebraska	42.9	38.1	36.9	24.7	18.0
North Carolina	43.5	42.3	41.4	34.1	33.5
Oklahoma	51.0	54.8	43.8	.7	(1)
Arkansas	51.3	50.0	45.4	32.1	30.9
Texas	53.3	52.6	49.7	41.9	37.6
Louisiana	57.1	55.3	58.0	44.4	35.2
Alabama	57.9	60.2	57.7	48.6	46.8
South Carolina	64.9	63.0	61.1	55.3	50.3
Mississippi	66.1	66.1	62.4	52.8	43.8
Georgia	66.6	65.6	59.9	53.5	44.9

[1] No report.

In reaching a conclusion as to the relative status of tenancy in each of the States, the trend toward an increase or decrease in the number of farms must be considered also. Thus in the 19 States with declining tenancy, the number of farms in the State decreased in all save 3, though not usually at as rapid a rate as did tenancy (see Table K–8, page 217); whereas tenancy increased in 10 States in which the number of farms decreased. The largest increase in tenancy when compared with the increase or decrease in farms was in South Dakota, Idaho, North Dakota, Arizona, and New Mexico.

TABLE K–11.—*The per cent of increase or decrease in the number of farms and in tenancy, 1910–1920.*

State.	Per cent that tenancy increased or decreased.	Per cent that number of farms increased or decreased.	State.	Per cent that tenancy increased or decreased.	Per cent that number of farms increased or decreased.
Nevada	−24.2	+18	North Carolina	+ 2.8	+ 6
West Virginia	−21	−10	Illinois	+ 3.1	− 6
Rhode Island	−13.9	−23	Ohio	+ 3.1	− 6
Connecticut	−13.2	−16	Louisiana	+ 3.2	+12
Massachusetts	−12.3	−13	Wisconsin	+ 3.6	+ 7
New York	− 7.7	−10	California	+ 3.8	+33
New Jersey	− 7.2	−11	Wyoming	+ 5.24	+43
Oklahoma	− 7	+ 1	Indiana	+ 6.6	− 5
Delaware	− 6.2	− 6	District of Columbia	+ 7.8	− 6
Pennsylvania	− 6	− 8	Kansas	+ 9.7	− 7
Vermont	− 5.7	−11	Iowa	+ 10.3	− 2
Florida	− 5.2	+ 8	Michigan	+ 12	− 50
Alabama	− 3.8	− 3	Nebraska	+ 12.6	− 4
Missouri	− 3.7	− 5	Minnesota	+ 17.6	+14
Virginia	− 3.4	+ 1	Oregon	+ 24.5	+10
New Hampshire	− 2.9	−24	Utah	+ 25.3	+18
Maine	− 2.3	−20	Colorado	+ 26	+30
Maryland	− 2	− 2	Montana	+ 27	+12
Mississippi		− 1	Washington	+ 36.4	+18
Tennessee		+ 3	South Dakota	+ 40.7	− 4
Texas	+ 1.3	+ 4	Idaho	+ 54	+37
Kentucky	+ 1.47	+ 4	North Dakota	+ 79	+ 4
Georgia	+ 1.5	+ 7	Arizona	+ 94.6	+ 8
South Carolina	+ 2.4	+ 9	New Mexico	+122	−16
Arkansas	+ 2.6	+ 8			

The States in which tenantry increased at a rate more rapid than the rate of decrease or increase in the number of farms in the last decade were: West Virginia, Rhode Island, Connecticut, Massachusetts, New York, New Jersey, Pennsylvania, Vermont, Missouri, New Hampshire, Maine, Mississippi, Illinois, Ohio, Indiana, Kansas, Iowa, Michigan, Nebraska, Minnesota, Oregon, Utah, Colorado,

Washington, South Dakota, Idaho, North Dakota, Arizona, New Mexico.

The States in which tenantry decreased at a rate more rapid than the rate of increase or decrease in farms were: Nevada, Oklahoma, Delaware, Florida, Alabama, Virginia, Tennessee, Texas, Kentucky, Georgia, South Carolina, Arkansas, North Carolina, Louisiana, Wisconsin, California, Wyoming, Montana.

Tenants operate 48.7 per cent of all the farms in the 13 leading cotton States, 40.2 per cent in the 11 leading hog States, 37.8 per cent of all the farms in the 11 leading corn States, 32.8 per cent in the 11 leading wheat States, 31.6 per cent in the 10 States leading in the number of dairy cows, 31.2 per cent in the 10 leading tobacco States, and 30.7 per cent in the 11 leading cattle States, as compared with an average of 38.1 per cent for the United States as a whole.

TABLE K–12.—*Per cent of tenancy in 1920 in the States leading in specified farm products.*

THE LEADING STATES IN TOBACCO PRODUCTION.

States.	Production.	Per cent of tenants, 1920.	Per cent of increase or decrease tenancy.	States.	Production.	Per cent of tenants, 1920.	Per cent of increase or decrease tenancy.
Kentucky	467,500,000	33.4	−1.47	Wisconsin	62,400,000	14.4	3.6
North Carolina	384,120,000	43.5	2.8	Ohio	60,480,000	29.3	3.1
Virginia	177,390,000	25.6	3.4	Pennsylvania	60,400,000	21.9	− 6.0
Tennessee	85,410,000	41.1	.....	Connecticut	36,112,000	8.5	−13.2
South Carolina	66,950,000	64.9	2.4	Maryland	30,625,000	28.9	− 2.0

THE LEADING STATES IN WHEAT PRODUCTION.

Kansas	137,056,000	40.4	9.7	Missouri	32,721,000	28.8	3.7
North Dakota	68,400,000	25.6	79.0	Minnesota	29,116,000	24.7	17.6
Nebraska	60,480,000	42.9	12.6	Ohio	28,698,000	29.3	3.1
Oklahoma	46,240,000	51.0	−7.0	South Dakota	26,282,000	34.9	40.7
Illinois	40,670,000	42.7	12.6	Pennsylvania	25,284,000	21.9	−6.0
Washington	37,982,000	18.7	36.4				

THE LEADING STATES IN NUMBER OF DAIRY COWS.

Wisconsin	1,846,000	14.4	3.6	Ohio	1,061,000	29.3	3.1
New York	1,493,000	19.2	−7.7	Illinois	1,060,000	42.7	12.6
Minnesota	1,395,000	24.7	17.6	Pennsylvania	970,000	21.9	−6.0
Iowa	1,353,000	41.7	10.3	Kansas	935,000	40.4	9.7
Texas	1,138,000	53.3	1.3	Missouri	919,000	28.8	−3.7

THE LEADING STATES IN NUMBER OF HOGS.

Iowa	10,389,000	41.7	10.3	Georgia	3,165,000	66.6	1.5
Illinois	5,323,000	42.7	12.6	Minnesota	2,951,000	24.7	17.6
Indiana	4,760,000	32.0	6.6	Mississippi	2,396,000	66.1	.....
Ohio	4,351,000	29.3	3.1	Texas	2,236,000	53.3	1.3
Missouri	4,305,000	28.8	3.7	Wisconsin	3,336,000	14.4	3.6
Nebraska	3,336,000	42.9	12.6				

THE LEADING STATES IN NUMBER OF CATTLE OTHER THAN DAIRY CATTLE.

Texas	4,458,000	53.3	1.3	California	1,634,000	21.4	3.8
Nebraska	2,911,000	42.9	12.6	South Dakota	1,526,000	34.9	40.7
Iowa	2,775,000	41.7	10.3	Wisconsin	1,493,000	14.4	3.6
Kansas	2,161,000	40.4	9.7	New Mexico	1,378,000	12.2	122
Missouri	1,746,000	28.8	−3.7	Colorado	1,355,000	23.0	26.0
Minnesota	1,730,000	24.7	17.6				

FARMS RUN BY MANAGERS.

There has also been an increase in absentee ownership as shown by the increase in the number of farms run by managers. The acreage of those run by managers increased but one-half of 1 per cent from 1910 to 1920. The average acreage per manager decreased from 924.7 acres in 1910 to 787.7 acres in 1920, while the number of farms operated by managers increased from 0.9 per cent to 1.1 per cent of the total number of farms in this country. The number actually operated by managers, however, increased 17.9 per cent in this decade. Managers operated 68,530 (1.1 per cent) out of the 6,448,366 farms in this country in 1920. The value of farms operated by managers did not increase as rapidly as did the value of farms operated either by their owners or by tenants.

CONCLUSION.

Tenancy is slightly increasing in this country. Our farms were once operated largely by their owners, but now 4 out of every 10 of them are operated by tenants or managers. The tenant problem is an increasingly important one throughout the West and South particularly. When acreage and value of land and buildings are considered, as well as the per cent of farms operated by tenants, tenantry in this country has increased in the last decade at about the same rate as from 1900 to 1910, though not as rapidly as from 1880 to 1890, and particularly from 1890 to 1900.

CHAPTER XII.

TRANSPORTATION.

Freight rates bear an important relation to the prices obtainable for commodities transported. This is especially true of agricultural products because, for the most part, the price which the farmer receives is that paid at the terminal or other place where his product comes into competition with the products of other farmers of other localities or countries, less the freight from the local market to the terminal.

Pyramided advances in freight rates have been made since 1913 until the existing level of rates represents the highest basis of transportation charges ever assessed in the history of this country. This high level of rates contributes materially to the restrictions placed upon industry and commerce by the existing agricultural and industrial depression.

Numerous instances have been brought to the attention of the commission from which it appears that the total returns in the sale of certain products were absorbed by the freight charges, leaving the producer nothing for his time, labor, and investment in producing them. This is especially true in many cases of shipments of perishables. Other cases have been brought to the attention of the commission in which the movement of farm products has been wholly prohibited because the price at the terminal would be absorbed by the freight charges.

We are convinced that a reduction in freight rates, from the farmer's standpoint both as a producer and a consumer, is absolutely essential to anything approximating a normal return of prices for farming operations. The commission believes that an immediate reduction of freight rates on farm products is absolutely necessary to a renewal of normal agricultural operations and prosperity and recommends prompt action by the railroads and the constituted public authority controlling transportation rates, looking to a scientific readjustment downward of existing tariffs on agricultural products.[1] The commission will deal further with the question of transportation and transportation requirements in a report to be made in the early future.

[1] Since this recommendation was agreed to, certain reductions in freight rates upon agricultural products have been made.

CHAPTER XIII.

RETAIL PRICES.

One of the factors which contributed to the difficulties of the farmers in the last half of 1920 and the first half of 1921 was the failure of retailers to reduce the proportion of the consumer's prices taken by them in the same proportion that wholesale prices fell. In the general decline of prices which occurred during the last 18 months, prices of commodities at retail lagged behind wholesale prices and still farther behind prices of farm products. This had the effect of still further diminishing the purchasing power of the farmer's dollar during this period of declining prices.

An attempt has been made to bring together the wholesale and retail prices of commodities and to work out indexes which would show the relative trend of wholesale and retail prices of different commodities and the trend of the margin taken by the retailer during the period January, 1913, to April, 1921.

It should be remembered in connection with the tables in this chapter that they are brought together for the purpose of showing trends of wholesale and retail prices and the margins between them and that hard and fast conclusions can not be drawn from specific comparisons of wholesale and retail prices at given dates, without making allowance for the fact that the prices given are averages which only in a very general way reflect actual prices and margins.

It should also be remembered that the wholesale prices given in the tables in this chapter represent in some cases the prices paid by the wholesaler and in others the wholesale price at point of shipment and not the prices of the goods delivered to the retailer. The margin, therefore, while indicated as the margin to the retailer, represents in fact, in some cases, all of the distributing costs, including profits of wholesaler and retailer, between the price paid by the wholesaler for the goods and the price paid by the ultimate consumer, including transportation, cartage, warehousing, insurance, and all of the other numerous factors of cost and service intervening between the price paid or received by the wholesaler and the price paid by the ultimate consumer for the article.

Table L–1, on page 226, gives the actual retail and the actual and relative wholesale price of corn meal, the price differential taken by the retailer, the per cent of the wholesale price taken by the retailer, the relative increase or decrease in the percentage of the wholesale price taken by the retailer, and the relative price differential by months from January, 1913, to March, 1920.

TABLE L–1.—*Wholesale and retail price changes of white corn meal and relative increase in margins, 1913 to 1921.*

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1913.							
January	$0.030	$0.0142	100	$0.0158	111	100	101
February	.029	.0132	93	.0158	120	108	101
March	.029	.0132	93	.0158	120	108	101
April	.029	.0132	93	.0158	120	108	101
May	.029	.0132	93	.0158	120	108	101
June	.029	.0137	96	.0153	112	101	97
July	.030	.0137	96	.0163	119	107	104
August	.030	.0137	96	.0163	119	107	104
September	.031	.0147	104	.0163	111	100	104
October	.031	.0162	114	.0148	91	82	94
November	.031	.0157	111	.0153	97	87	97
December	.031	.0157	111	.0153	97	87	97
1914.							
January	.031	.0152	107	.0158	104	94	101
February	.031	.0147	104	.0163	111	100	104
March	.031	.0147	104	.0163	111	100	104
April	.031	.0147	104	.0163	111	100	104
May	.031	.0147	104	.0163	111	100	104
June	.031	.0142	100	.0168	118	106	107
July	.031	.0142	100	.0168	118	106	107
August	.031	.0142	100	.0168	118	106	107
September	.033	.0190	134	.0139	73	66	89
October	.033	.0190	134	.0139	73	66	89
November	.033	.0177	125	.0153	86	77	97
December	.032	.0155	109	.0165	106	95	105
1915.							
January	.033	.0155	109	.0175	113	102	111
February	.033	.0167	118	.0163	98	88	104
March	.033	.0187	132	.0143	76	68	91
April	.033	.0177	125	.0153	86	77	97
May	.033	.0177	125	.0153	86	77	97
June	.033	.0172	121	.0158	92	83	101
July	.033	.0172	121	.0158	92	83	101
August	.032	.0170	120	.0149	88	79	95
September	.032	.0175	123	.0145	83	75	92
October	.032	.0172	121	.0148	86	77	94
November	.032	.0172	121	.0148	86	77	94
December	.032	.0172	121	.0148	86	77	94
1916.							
January	.032	.0172	121	.0148	86	77	94
February	.032	.0190	134	.0129	68	61	82
March	.032	.0190	134	.0129	68	61	82
April	.032	.0200	141	.0119	54	49	76
May	.032	.0210	148	.0109	52	47	69
June	.032	.0185	130	.0135	73	66	86
July	.032	.0195	137	.0125	64	58	80
August	.033	.0200	141	.0129	64	58	82
September	.034	.0210	148	.0129	61	55	82
October	.035	.0210	148	.0139	66	59	89
November	.038	.0260	183	.0119	46	41	76
December	.039	.0275	194	.0115	42	38	73
1917.							
January	.040	.0249	175	.0151	61	55	96
February	.041	.0253	178	.0157	62	56	100
March	.041	.0279	196	.0131	47	42	83
April	.046	.0375	264	.0085	22	20	54
May	.053	.0413	291	.0117	28	25	95
June	.055	.0413	291	.0137	33	30	87
July	.059	.0488	344	.0102	21	19	65
August	.066	.0556	392	.0104	19	17	66
September	.081	.0531	374	.0279	53	48	178
October	.070	.0512	361	.0188	37	33	120
November	.071	.0507	357	.0203	40	36	129
December	.071	.0486	342	.0224	46	41	143

TABLE L–1.—*Wholesale and retail price changes of white corn meal and relative increase in margins, 1913 to 1921*—Continued.

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1918.							
January	$0.070	$0.0483	340	$0.0217	45	41	138
February	.070	.0543	382	.0157	29	26	100
March	.072	.0515	363	.0205	40	36	131
April	.071	.0535	377	.0175	33	30	111
May	.070	.0458	323	.0242	53	48	154
June	.067	.0445	313	.0225	51	46	143
July	.067	.0482	339	.0188	39	35	120
August	.068	.0445	313	.0235	53	48	150
September	.069	.0398	280	.0292	73	66	186
October	.068	.0340	239	.0339	100	90	216
November	.065	.0302	213	.0348	115	104	222
December	.064	.0323	227	.0317	98	88	202
1919.							
January	.062	.0315	222	.0305	97	87	194
February	.060	.0283	299	.0317	112	101	202
March	.059	.0315	222	.0275	87	78	175
April	.060	.0352	248	.0248	70	63	158
May	.062	.0381	268	.0239	62	56	152
June	.063	.0393	277	.0237	60	54	151
July	.065	.0448	315	.0202	45	41	129
August	.066	.0428	301	.0232	54	49	148
September	.067	.0325	229	.0345	106	95	220
October	.066	.0295	208	.0365	124	112	233
November	.066	.0306	215	.0354	116	105	225
December	.066	.0308	217	.0352	114	103	224
1920.							
January	.066	.0308	217	.0352	114	103	224
February	.065	.0301	212	.0349	116	105	222
March	.065	.0345	243	.0305	88	79	194
April	.065	.0377	265	.0273	72	65	174
May	.067	.0422	297	.0248	59	53	158
June	.069	.0437	308	.0253	58	52	161
July	.070	.0359	253	.0341	95	86	217
August	.069	.0340	239	.0349	103	93	222
September	.068	.0286	201	.0394	138	124	251
October	.065	.0215	151	.0435	202	182	277
November	.059	.0138	97	.0452	328	295	288
December	.055	.0153	108	.0397	259	233	253
1921.							
January	.052	.0135	95	.0385	285	257	245
February	.050	.0142	100	.0358	252	227	228
March	.048	.0137	96	.0343	250	225	218

It will be noted that as the wholesale price of corn meal rose during 1913, 1914, 1915, 1916, and 1917 the price differential or margin taken by the retailer tended to decrease and that in 1918, 1919, and 1920, as the wholesale price of corn meal tended to decline, the differential or margin of the retailer tended to increase, so that in February, 1920, when the wholesale price of corn meal was exactly the same as it was in January, 1913, the differential of retailer was more than double what it was in January, 1913.

RICE.

Table L–2 gives the retail and actual and relative wholesale price of rice, the differentials between the wholesale price and the retail price, the percentage of the wholesale price taken by the retailer, the relative increase or decrease in the percentage taken by the retailer, and the relative price differential by months from January, 1913, to March, 1921.

TABLE L–2.—*Wholesale and retail price changes of Honduras head rice and relative per cent increase in margins, 1913 to 1921.*

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1913.							
January	$0.086	$0.054	98	$0.032	59	105	103
February	.086	.054	98	.032	59	105	103
March	.086	.054	98	.032	59	105	103
April	.086	.054	98	.032	59	105	103
May	.086	.054	98	.032	59	105	103
June	.086	.054	98	.032	59	105	103
July	.087	.054	98	.033	61	109	106
August	.087	.057	104	.030	52	93	97
September	.087	.057	104	.030	52	93	97
October	.087	.057	104	.030	52	93	97
November	.087	.057	104	.030	52	93	97
December	.087	.057	104	.030	52	93	97
1914.							
January	.087	.058	105	.029	50	89	94
February	.087	.058	105	.029	50	89	94
March	.087	.058	105	.029	50	89	94
April	.087	.058	105	.029	50	89	94
May	.087	.058	105	.029	50	89	94
June	.087	.058	105	.029	50	89	94
July	.088	.058	105	.030	52	93	97
August	.088	.058	105	.030	52	93	97
September	.088	.061	111	.027	44	79	87
October	.088	.061	111	.027	44	79	87
November	.088	.063	115	.025	40	71	81
December	.088	.063	115	.025	40	71	81
1915.							
January	.091	.050	91	.041	82	146	132
February	.091	.049	89	.042	86	154	135
March	.091	.049	89	.042	86	154	135
April	.091	.049	89	.042	86	154	135
May	.091	.049	89	.042	86	154	135
June	.091	.049	89	.042	86	154	135
July	.091	.049	89	.042	86	154	135
August	.091	.050	91	.041	82	146	132
September	.091	.042	76	.049	117	209	158
October	.091	.042	76	.049	117	209	158
November	.090	.047	85	.043	91	162	139
December	.090	.047	85	.043	91	162	139
1916.							
January	.091	.045	82	.046	102	182	148
February	.091	.045	82	.046	102	182	148
March	.091	.047	85	.044	94	168	142
April	.091	.046	84	.045	98	175	145
May	.091	.046	84	.045	98	175	145
June	.091	.046	84	.045	98	175	145
July	.091	.046	84	.045	98	175	145
August	.091	.045	82	.045	100	179	145
September	.091	.044	80	.047	107	191	152
October	.091	.043	78	.048	111	198	155
November	.091	.045	82	.046	102	182	148
December	.091	.047	85	.044	94	168	142
1917.							
January	.091	.048	87	.043	90	161	139
February	.091	.048	87	.043	90	161	139
March	.091	048	87	.043	90	161	139

TABLE L–2.—*Wholesale and retail price changes of Honduras head rice and relative per cent increase in margins, 1913 to 1921*—Continued.

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1917.							
April	$0.094	$0.049	89	$0.045	92	164	145
May	.105	.070	127	.035	50	89	113
June	.109	.071	129	.038	54	96	123
July	.107	.071	129	.026	37	66	84
August	.106	.072	131	.034	47	74	110
September	.108	.070	127	.038	54	96	123
October	.111	.077	140	.034	44	79	110
November	.114	.078	142	.036	46	82	116
December	.116	.079	144	.037	47	84	119
1918.							
January	.117	.079	144	.038	48	86	123
February	.118	.081	147	.027	33	59	87
March	.120	.085	155	.035	41	73	113
April	.121	.090	064	.031	34	61	100
May	.123	.091	165	.032	35	62	103
June	.125	.091	165	.034	37	66	110
July	.129	.094	171	.035	37	66	113
August	.134	.091	165	.043	47	84	139
September	.137	.091	165	.046	51	91	148
October	.140	.091	165	.049	54	96	158
November	.140	.091	165	.049	54	96	158
December	.139	.091	165	.048	53	95	155
1919.							
January	.138	.091	165	.047	52	93	152
February	.143	.091	165	.052	57	102	168
March	.134	.091	165	.043	47	84	139
April	.134	.089	162	.045	51	91	145
May	.134	.088	160	.046	52	93	148
June	.138	.091	165	.047	52	93	152
July	.146	.117	213	.029	25	45	94
August	.155	.143	260	.012	8	14	39
September	.165	.127	231	.038	30	54	123
October	.173	.121	220	.052	43	77	168
November	.176	.127	231	.049	39	70	158
December	.177	.124	225	.053	43	77	171
1920.							
January	.181	.127	231	.054	43	77	174
February	.183	.128	233	.055	43	77	177
March	.184	.125	227	.059	47	84	190
April	.186	.123	224	.063	51	91	203
May	.187	.122	222	.065	53	95	210
June	.187	.123	224	.064	52	93	206
July	.186	.125	227	.061	49	87	197
August	.183	.102	185	.081	79	141	261
September	.176	.095	173	.081	85	152	261
October	.161	.079	144	.082	104	186	264
November	.142	.068	124	.074	108	193	239
December	.132	.066	120	.076	115	205	245
1921.							
January	.119	.046	84	.073	159	284	235
February	.105	.048	87	.057	119	212	184
March	.098	.045	82	.053	118	211	171
April	.092						

This table shows, as did the preceding table, that the margin or differential of the retailer tends to decrease as wholesale prices rise and to increase as prices fall. The wholesale price of rice in January, 1913, was 5.4 cents and the retail price 8.6 cents per pound. The retailer's margin was 3.2 cents or 59 per cent of the wholesaler's price. In January, 1921, the wholesale price of rice was 4.6 cents, the retail price 11.9 cents, and the retailer's margin 7.3 cents, or 159 per cent of the wholesale price. Retailer's margin had increased over 100 per cent.

SUGAR.

The following table gives the retail and actual and relative wholesale price of sugar, the difference between wholesale and retail price, the per cent of the wholesale price taken by the retailer, the relative increase or decrease in the percentage of the wholesale price taken by the retailer, and the relative price differential by months from January, 1913, to March, 1921:

TABLE L–3.—*Wholesale and retail price changes of granulated sugar and relative per cent increase in margins, 1913 to 1921.*

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1913.							
January	$0.058	$0.045	105	$0.013	29	104	108
February	.055	.042	98	.013	31	111	108
March	.054	.042	98	.012	29	104	100
April	.054	.041	95	.013	32	114	108
May	.054	.041	95	.013	32	114	108
June	.053	.041	95	.012	29	104	100
July	.055	.045	105	.010	22	79	83
August	.056	.046	107	.010	21	75	83
September	.057	.045	105	.012	27	96	100
October	.055	.042	98	.013	32	114	108
November	.054	.042	98	.012	29	104	100
December	.054	.041	95	.013	32	114	108
1914.							
January	.052	.039	91	.013	33	118	108
February	.052	.039	91	.013	33	118	108
March	.051	.038	88	.013	34	121	108
April	.050	.037	86	.013	35	125	108
May	.050	.039	91	.011	28	100	92
June	.051	.042	98	.009	21	75	75
July	.052	.042	98	.010	23	82	83
August	.079	.065	151	.014	21	75	117
September	.080	.068	158	.012	17	61	100
October	.072	.059	137	.013	22	79	108
November	.062	.049	114	.013	26	93	108
December	.061	.048	112	.013	27	96	108
1915.							
January	.060	.048	112	.012	25	89	100
February	.065	.055	128	.010	18	64	83
March	.066	.057	133	.009	16	57	75
April	.067	.058	135	.009	16	57	75
May	.068	.058	135	.010	17	61	83
June	.069	.058	135	.011	19	68	92
July	.070	.058	135	.012	21	75	100
August	.067	.055	128	.012	22	79	100
September	.065	.050	116	.015	30	107	125
October	.061	.049	114	.012	24	86	100
November	.066	.056	130	.010	18	64	83
December	.068	.059	137	.009	15	54	75
1916.							
January	.067	.057	133	.010	18	64	83
February	.069	.059	137	.010	17	61	83
March	.075	.066	154	.009	14	50	75
April	.080	.071	165	.009	13	46	75
May	.086	.075	174	.011	15	54	92
June	.087	.074	172	.013	18	64	108
July	.088	.075	174	.013	17	61	108
August	.085	.070	163	.015	21	75	125
September	.077	.064	149	.013	20	71	108
October	.082	.071	165	.011	15	54	92
November	.086	.074	172	.012	16	57	100
December	.083	.069	160	.014	20	71	117

TABLE L–3.—*Wholesale and retail price changes of granulated sugar and relative per cent increase in margins, 1913 to 1921*—Continued.

Months.	Retail.	Wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, 1913=100.	Relative price differential, 1913=100.
1917.							
January	$0.080	$0.066	153	$0.014	21	75	117
February	.081	.069	160	.012	17	61	100
March	.088	.071	172	.017	23	82	142
April	.096	.082	191	.014	17	61	117
May	.101	.079	184	.022	28	100	183
June	.094	.075	174	.019	25	89	158
July	.092	.075	174	.017	23	82	142
August	.100	.082	191	.018	22	79	150
September	.099	.082	191	.017	21	75	142
October	.098	.082	191	.016	20	71	133
November	.096	.082	191	.014	17	61	117
December	.095	.080	186	.015	19	68	125
1918.							
January	.095	.074	172	.021	28	100	175
February	.106	.073	170	.023	31	111	192
March	.092	.073	170	.019	26	93	158
April	.091	.073	170	.018	25	89	150
May	.091	.073	170	.018	25	89	150
June	.091	.073	170	.018	25	89	150
July	.092	.074	172	.018	24	86	150
August	.093	.074	172	.019	26	93	158
September	.096	.085	198	.011	13	46	92
October	.106	.088	205	.018	20	71	150
November	.108	.088	205	.020	23	82	167
December	.108	.088	205	.020	23	82	167
1919.							
January	.108	.088	205	.020	23	82	167
February	.107	.088	205	.019	22	79	158
March	.106	.088	205	.018	20	71	150
April	.106	.088	205	.018	20	71	150
May	.106	.088	205	.018	20	71	150
June	.106	.088	205	.018	20	71	150
July	.109	.088	205	.021	24	86	175
August	.111	.088	205	.023	26	93	192
September	.110	.088	205	.022	25	89	183
October	.114	.088	205	.026	30	107	217
November	.125	.088	205	.037	42	150	308
December	.145	.109	253	.036	33	118	300
1920.							
January	.178	.154	358	.024	15	54	200
February	.188	.150	349	.038	25	89	317
March	.187	.137	319	.050	36	129	417
April	.202	.192	447	.010	5	18	83
May	.254	.225	523	.029	13	46	242
June	.267	.212	493	.055	26	93	458
July	.265	.191	444	.074	39	139	617
August	.229	.167	388	.062	37	132	517
September	.183	.143	333	.040	28	100	333
October	.139	.108	251	.031	29	104	258
November	.128	.096	223	.032	33	118	267
December	.105	.081	188	.024	30	107	200
1921.							
January	.097	.076	177	.021	28	100	175
February	.089	.071	165	.018	25	89	150
March	.097	.078	181	.019	24	86	158
April	.097						

Up to December, 1916, the retailer's margin or differential on sugar has remained approximately the same, but owing to the increase in the wholesale price, the percentage of the wholesale price taken by the retailer tended to decline, but with the rising prices from 1917, 1918, 1919, and 1920, the retailer's margin also tended to rise somewhat, although continuing to be a relatively small percentage of the wholesale price. With the rapid decline of wholesale prices beginning in June, 1920, the retailer's margin began to rise. In other words, the retail price did not drop at the same rate as the wholesale price, although it dropped in nearer ratio with the wholesale price than in the case of either corn meal or rice.

SIRLOIN STEAK (NEW YORK).

Table L–4 gives the retail price of sirloin steak, the actual and relative wholesale price per pound, at New York, of beef loins No. 2, the price differential taken by the retailer, the per cent of the wholesale price taken by the retailer, the relative increase or decrease in the percentage of the wholesale price taken by the retailer, and the relative retail differential by months from January, 1919, to April, 1921.

TABLE L–4.—*Wholesale and retail price of sirloin steak at New York, 1919–1921.*

[Monthly Labor Review, Bureau of Labor Statistics.]

	Sirloin steak, retail, per pound.	Beef, No. 2 loins, wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in percentage of wholesale price taken by retailer, 1913=100.	Relative retail differential, 1913=100.
	Cents.	*Cents.*		*Cents.*			
1913 average	25.9	15.8	100	10.1	63	63	.....
1919.							
January	44.8	37.0	234	7.8	21	33	77
February	44.9	35.0	222	9.9	28	44	98
March	44.9	39.0	247	5.9	15	24	58
April	45.3	40.0	253	5.3	13	21	52
May	45.6	37.0	234	8.6	23	37	85
June	42.2	31.0	196	11.2	36	57	111
July	44.4	28.5	180	15.9	55	87	158
August	44.0	36.0	228	8.0	22	35	79
September	42.5	35.0	222	7.5	21	33	74
October	42.6	37.0	234	5.6	15	24	55
November	42.5	42.0	266	.5	1	1.6	4
December	42.7	42.0	266	.7	2	3.1	6
1920.							
January	43.3	37.0	234	6.3	17	2.7	62
February	43.4	37.0	234	6.4	17	2.7	63
March	42.4	34.0	215	8.4	24	38	83
April	45.8	34.0	215	11.8	34	54	117
May	44.3	33.0	209	11.3	34	54	112
June	47.6	33.0	209	14.6	44	70	145
July	52.9	43.0	272	9.9	23	37	98
August	51.4	43.0	272	8.4	19	30	83
September	51.0	40.5	256	10.5	25	40	104
October	50.1	41.0	260	9.1	22	35	90
November	.....	.....	.....	.....	.....	.....	.....
December	42.9	30.0	190	12.9	43	68	128
1921.							
January	43.9	30.0	190	13.9	46	73	138
February	40.3	28.0	177	12.3	44	70	122
March	41.7	27.5	174	14.2	51	81	141
April	42.0	30.0	190	12.9	43	68	128

SIRLOIN STEAK AND STEER LOIN ENDS (CHICAGO).

Table L–5 gives the retail price of sirloin steak and the actual and relative wholesale price of steak loin ends per pound at Chicago, the price differential, the per cent of the wholesale price taken by the retailer, the relative increase in percentage of the wholesale price taken by the retailer, and the relative retail differential by months from January, 1919, to April, 1921.

TABLE L–5.—*Wholesale and retail price of sirloin steak at Chicago, 1919–1921.*

[Monthly Labor Review, Bureau of Labor Statistics.]

	Sirloin steak, retail, per pound.	Steer, loin ends, wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in percentage of wholesale price taken by retailer, 1913=100.	Relative retail differential, 1913=100.
	Cents.	*Cents.*		*Cents.*			
1913 average	23.2	16.8	100	6.4	38	100	.....
1919.							
January	37.5	32.0	190	5.5	17	45	86
February	37.9	32.0	190	5.9	18	47	92
March	38.0	34.0	202	4.0	11	29	63
April	39.7	32.0	190	7.7	24	63	120
May	39.5	32.0	202	7.5	23	61	117
June	38.5	26.0	155	12.5	48	126	195
July	39.3	37.0	161	12.3	45	118	192
August	41.1	32.0	190	9.1	28	74	142
September	38.4	33.0	196	5.4	16	42	84
October	36.6	33.0	196	3.6	11	29	56
November	37.0	32.0	190	5.0	15	40	78
December	35.9	32.0	190	3.9	12	32	61
1920.							
January	37.2	32.0	190	5.2	16	42	81
February	37.2	30.0	179	7.2	24	63	112
March	39.4	32.0	190	7.4	23	61	116
April	40.9	32.0	190	8.9	27	71	140
May	41.0	32.0	190	9.0	28	74	141
June	44.4	32.0	190	12.4	38	100	194
July	47.8	36.0	214	11.0	33	84	184
August	47.4	36.0	214	11.4	31	82	178
September	48.4	38.3	226	10.4	27	71	163
October	47.3	40.0	238	7.3	18	47	114
November	.....	.....	.....	.....	.....	.....	.....
December	40.9	38.0	226	2.0	7.6	2	45
1921.							
January	40.2	34.0	202	6.2	18	31	97
February	36.2	27.0	161	9.2	34	89	144
March	38.6	28.0	167	10.6	37	97	166
April	38.4	28.0	167	10.4	37	97	163

The percentage of the wholesale price of steer loins taken by the retailer in sirloin steak has varied widely but tended to remain fairly constant in about the same level as in 1913 with the exception of the last four months of 1919, when retail prices declined faster than wholesale prices. The actual differential, however, has increased markedly, though not in proportion to the increase in the wholesale price.

Tables L–6 and L–7 show the wholesale and retail price per pound of round steak and beef loins No. 2, by months, from January, 1919, to April, 1921, the difference between wholesale price and the retail price, the percentage of the wholesale price taken by the retailer, and the relative price differential in New York and Chicago.

TABLE L–6.—*Wholesale and retail price of round steak at New York, 1919–1921.*

[Monthly Labor Review, Bureau of Lobor Statistics.]

	Round steak No. 7 retail, per pound.	Beef, No. 2 loins, wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in percentage of wholesale price taken by retailer, 1913=100.	Relative retail differential, 1913=100.
	Cents.	*Cents.*		*Cents.*			
1913 average	24.9	12.1	100	12.8	105	105	.....
1919.							
January	47.3	25.0	207	22.3	89	85	174
February	46.9	24.0	198	22.9	95	90	179
March	46.8	24.0	198	22.8	95	90	178
April	47.0	24.0	198	23.0	96	91	180
May	46.9	24.0	198	22.9	95	90	179
June	44.4	22.0	182	22.4	102	97	175
July	46.2	22.0	182	24.2	110	105	189
August	45.6	24.0	198	21.6	90	86	169
September	44.4	22.0	182	22.4	102	97	175
October	44.5	22.0	182	22.5	102	97	176
November	44.4	22.0	182	22.4	102	97	175
December	44.5	21.0	174	23.5	112	107	184
1920.							
January	44.6	21.0	174	23.6	112	107	184
February	44.4	20.0	165	24.4	122	116	191
March	43.1	19.0	157	24.1	127	121	188
April	46.4	20.5	169	25.9	126	120	202
May	45.0	22.0	182	23.0	105	100	180
June	47.6	21.0	174	26.6	127	121	208
July	52.9	30.0	248	22.9	76	72	179
August	51.7	25.0	207	26.7	107	102	209
September	51.2	25.0	207	26.2	105	100	205
October	50.3	23.0	190	27.3	119	113	213
November	.....	.....	.....	.....	.....	.....	.....
December	42.5	16.0	132	26.5	166	158	207
1921.							
January	43.6	16.0	132	27.6	173	165	216
February	39.9	15.0	124	24.9	166	158	195
March	40.7	15.5	128	25.2	163	155	197
April	41.9	15.5	128	26.4	170	162	206

TABLE L–7.—*Wholesale and retail price of round steak at Chicago, 1919–1921.*

[Monthly Labor Review, Bureau of Labor Statistics.]

	Round steak, retail, per pound.	Steer, rounds No. 2, wholesale.	Relative wholesale, 1913=100.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in percentage of wholesale price taken by retailer, 1913=100.	Relative retail differential, 1913=100.
	Cents.	*Cents.*		*Cents.*			
1913 average	20.2	13.1	100	7.1	54	100	.....
1919.							
January	34.0	22.0	168	12.0	54	100	169
February	34.4	22.0	168	12.4	56	104	175
March	34.4	23.0	176	11.4	49	91	161
April	35.7	24.0	183	11.7	48	89	165
May	36.0	25.0	191	11.0	44	82	155
June	34.6	22.0	168	12.6	57	105	177
July	35.5	22.0	168	13.5	61	113	190
August	36.1	25.0	191	11.1	44	82	156
September	34.1	23.0	176	11.1	48	89	156
October	32.5	21.0	160	11.5	54	100	162
November	32.5	18.5	141	14.0	75	139	197
December	31.7	20.0	153	11.7	58	107	165
1920.							
January	32.0	20.0	153	12.0	60	111	169
February	31.8	20.0	153	11.8	59	109	166
March	33.7	19.0	145	14.7	77	143	207
April	34.6	19.0	145	15.6	82	152	220
May	34.7	19.0	145	15.7	82	152	221
June	37.8	21.0	160	16.8	80	148	237
July	40.9	29.0	221	11.9	41	76	168
August	39.8	26.0	198	13.8	53	98	194
September	40.0	24.0	183	16.0	66	122	225
October	39.0	20.0	153	19.0	95	176	268
November	.....	.....	.....	.....	.....	.....	.....
December	34.0	17.0	130	17.0	100	185	239
1921.							
January	32.7	16.0	122	16.7	104	193	235
February	29.3	14.0	107	15.3	109	202	215
March	30.7	14.0	107	16.7	119	220	235
April	31.2	16.0	122	15.2	95	176	214

The margin of the retailer, as shown by these tables, has not only increased but has increased in percentage of the wholesale price, particularly during the period beginning with August, 1920, when wholesale prices began to decline rapidly. On the average, in 1913 the price of steer rounds No. 2 was 13.1 cents per pound and the retail price of round steak 20.2 cents and the price differential 7.1 cents, or 54 per cent of the wholesale price. In March, 1921, the wholesale price was 14 cents, the retail price 30.7, the retail margin 16.7, or 119 per cent of the wholesale price, or more than double what it was in 1913

LARD.

Table L–8 is the retail and actual and relative wholesale price of lard at New York, the difference between the wholesale and retail price, the per cent of the wholesale price taken by the retailer, the relative per cent of the wholesale price taken by the retailer, and the relative price differential by months from January, 1919, to April, 1921.

TABLE L–8.—*Wholesale and retail prices of lard at New York, with price differential and relative price differential, 1919–1921. (Average differential of 1913=100.)*

[Monthly Labor Review, Bureau of Labor Statistics.]

Years and months.	Lard, pure tub, retail.	Lard, prime contract, wholesale.	Relative wholesale.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in percentage of wholesale price taken by retailer.	Relative price differential, 1913=100.
	Cents.	*Cents.*		*Cents.*			
1913 average	16.0	11.1	100	4.9	45	100	
1919.							
January	33.1	24.2	218	8.9	36	80	178
February	31.8	25.3	228	6.5	25	56	130
March	33.7	28.1	253	5.6	19	42	112
April	36.0	31.2	281	4.8	15	33	96
May	38.7	34.1	307	4.6	13	29	92
June	41.3	34.7	313	6.6	39	87	132
July	42.5	35.8	322	6.7	18	40	134
August	41.6	32.0	355	9.6	30	67	192
September	38.3	26.6	240	11.7	44	98	234
October	35.7	29.0	261	6.7	23	51	134
November	36.3	26.8	241	9.5	35	78	190
December	34.3	23.6	213	10.7	45	100	214
1920.							
January	33.8	24.5	221	9.1	37	82	186
February	32.9	20.8	252	12.1	58	129	242
March	31.2	21.1	190	10.1	47	104	202
April	30.4	19.3	174	11.1	57	127	222
May	29.7	21.5	194	8.2	38	84	164
June	29.4	20.6	186	8.8	42	93	176
July	29.2	19.6	177	9.6	48	107	192
August	28.1	19.1	172	9.0	47	104	180
September	28.1	20.5	185	7.6	37	82	152
October	30.1	20.6	186	9.5	46	102	190
November							
December	25.8	14.4	130	11.4	79	176	228
1921.							
January	22.7	13.6	123	9.1	67	149	182
February	20.9	12.5	113	8.4	67	149	168
March	19.9	12.3	111	7.6	62	138	152
April	19.1	10.5	95	8.6	81	180	172

It appears from this table that the margin of the retailer tended to decline as the price of lard rose and to rise as the price of lard came down. On the average of 1913, the wholesale price of lard was 11.1 cents, the retailer's margin 4.9 cents or 45 per cent of the wholesale price. In April, 1921, the retail price was 19.1 cents per pound, the wholesale price 10.5 cents, and the retailer's margin 8.6 cents or 81 per cent of the wholesale price. In other words, the wholesale price in April, 1921, was lower than the average wholesale price in 1913, but the retailer's margin was 3.7 cents greater or about 80 per cent.

BUTTER.

The following tables, L–9 and L–10, give the wholesale and retail price per pound of butter at New York and Chicago by months from January, 1919, to April, 1921; the difference between the wholesale price and the retail price; the percentage of the wholesale price taken by the retailer; the relative increase of the percentage taken by the retailer, and the relative price differential:

TABLE L–9.—*Wholesale and retail prices of butter at New York, with the price differential and the relative price differential, 1919–1921. (Average differential 1913=100.)*

[Monthly Labor Review, Bureau of Labor Statistics.]

	Butter, creamery, extra, retail.	Butter, creamery, extra, wholesale.	Relative wholesale (1913=100).	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer (1913=100).	Relative retail differential (1913=100).
1919.	*Cents.*	*Cents.*		*Cents.*			
January	75.5	67.0	207	8.5	12.6	69	144
February	58.1	49.8	154	8.3	16.6	91	141
March	67.3	59.5	184	7.8	13.1	72	132
April	72.9	62.5	194	10.4	16.6	91	176
May	67.2	58.0	180	9.2	15.8	87	156
June	61.4	52.3	162	9.1	17.3	95	154
July	61.3	51.0	158	10.3	20.1	110	175
August	63.0	54.0	167	9.0	16.6	91	153
September	65.3	58.3	180	7.0	12.0	66	119
October	72.4	66.8	207	5.6	8.3	46	95
November	77.9	69.5	215	8.4	12.0	66	142
December	80.6	73.5	228	7.1	9.6	53	120
1920.							
January	75.2	63.8	198	11.4	17.8	98	193
February	75.6	67.0	207	8.6	12.8	70	146
March	75.1	65.8	204	9.3	14.1	78	158
April	80.0	75.0	232	5.0	6.6	36	84
May	70.6	59.3	184	11.3	19.0	104	192
June	65.5	57.0	176	8.5	14.8	81	144
July	66.9	57.4	178	9.5	16.5	91	161
August	64.8	55.5	172	9.3	16.7	92	158
September	67.6	58.0	180	9.6	16.5	91	163
October	69.9	61.0	189	8.9	14.5	80	251
November							
December	63.0	54.3	168	8.7	16.0	188	147
1921.							
January	63.4	53.8	167	9.6	17.8	98	163
February	54.7	43.3	134	11.4	26.3	144	193
March	56.8	46.4	144	10.4	22.4	123	176
April	57.2	49.4	153	7.8	15.7	86	132

TABLE L–10.—*Wholesale and retail prices of butter at Chicago with the price differential and the relative price differential, 1919–1921. (Average differential, 1913=100.)*

[Monthly Labor Review, Bureau of Labor Statistics.]

	Butter, creamery, extra, retail.	Butter, creamery, extra, wholesale.	Relative wholesale (1913=100).	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer (1913=100).	Relative retail differential (1913=100).
1919.	*Cents.*	*Cents.*		*Cents.*			
January	71.3	66.0	213	5.3	8.0	48	102
February	53.5	45.5	147	8.0	17.5	105	154
March	63.9	59.8	193	4.1	6.8	41	79
April	67.1	61.0	197	6.1	8.9	53	117
May	62.4	55.5	179	6.9	12.4	74	133
June	57.5	51.5	166	6.0	11.6	69	115
July	57.1	52.0	168	5.1	9.8	59	98
August	58.4	53.0	171	5.4	10.1	61	104
September	60.3	55.3	178	5.0	9.0	54	96
October	67.8	65.3	211	4.3	6.5	39	83
November	73.6	67.8	219	5.8	8.5	51	111
December	74.4	71.8	232	2.6	3.6	22	50
1920.							
January	69.0	62.0	200	7.0	11.2	67	135
February	66.4	59.0	190	7.4	12.5	75	142
March	73.9	65.5	211	8.4	12.8	77	162
April	71.0	60.0	194	11.0	18.3	110	212
May	66.1	57.5	185	8.6	14.9	68	165
June	61.1	53.8	174	7.3	13.5	81	140
July	62.9	55.5	179	7.4	13.3	80	142
August	61.4	54.0	174	7.4	13.7	82	142
September	63.4	56.0	181	7.4	13.2	79	142
October	63.3	58.0	187	5.3	9.1	55	102
November							
December	56.5	49.0	158	7.5	15.3	92	144
1921.							
January	56.2	48.5	156	7.8	16.0	98	150
February	52.3	45.0	145	7.3	16.2	144	140
March	53.8	45.5	147	8.3	18.2	123	160
April	53.5	46.0	148	7.5	16.3	86	144

The retail margins, in Chicago, on butter have been comparatively smaller than in New York. There has, however, been the same tendency for these margins to increase as prices of butter have fallen.

BACON.

Table L–11 gives the retail price of sliced bacon and the actual and relative wholesale price of bacon at Chicago, the differential between the wholesale and retail price, the percentage of the wholesale price taken by the retailer, the relative increase or decrease in the percentage of the wholesale price taken by the retailer, and the relative price differential by months from January, 1919, to April, 1921.

TABLE L–11.—*Wholesale and retail prices of bacon, at Chicago, with price differential and relative price differential, 1919–1921. (Average differential 1913=100.)*

[Monthly Labor Review, Bureau of Labor Statistics.]

Year and month.	Bacon, sliced, retail.	Bacon, short, clear sides, wholesale.	Relative wholesale.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the per centage of wholesale prices taken by retailer (1913=100).	Relative price differential (1913=100).
	Cents.	*Cents.*		*Cents.*			
1913 average	29.4	12.7	100	16.7	131	.....	.....
1919.							
January	61.6	29.4	232	32.2	109.5	84	193
February	57.1	27.3	215	29.8	109.0	84	178
March	57.1	29.3	231	27.8	94.8	73	166
April	58.2	32.6	257	25.6	78.5	60	153
May	59.7	33.4	263	26.3	78.7	60	157
June	59.7	32.9	259	26.8	81.4	62	172
July	61.5	33.9	267	28.4	83.7	64	158
August	61.7	33.4	263	28.3	84.7	65	169
September	58.6	28.6	225	30.0	104.8	80	180
October	54.6	23.3	183	31.3	134.2	102	187
November	54.2	23.1	182	31.1	134.5	103	186
December	52.7	24.1	190	28.6	118.6	91	171
1920.							
January	53.1	21.6	170	31.5	145.8	111	189
February	53.9	22.6	178	31.3	138.4	105	187
March	54.6	20.9	165	33.7	161.2	123	202
April	56.4	21.6	170	34.8	161.1	123	208
May	57.1	21.6	170	35.5	164.3	125	213
June	59.1	21.4	169	27.7	176.1	134	226
July	60.1	20.6	162	39.5	191.7	146	237
August	60.3	20.3	160	40.0	197.0	150	240
September	60.1	19.6	154	40.5	206.0	157	243
October	59.4	21.1	166	38.3	181.5	139	229
November							
December	51.1	17.1	135	34.0	198.8	152	204
1921.							
January	50.7	12.8	101	37.9	296.0	226	227
February	50.4	14.6	115	35.8	245.2	187	214
March	51.6	15.4	121	36.2	235.0	179	217
April	52.2	15.2	120	37.0	243.4	185	222

The margins taken by the retailer on bacon have markedly increased as the wholesale price declined during this period. The retailer's margin has increased both in percentage of the wholesale price and in actual figures as the wholesale price of bacon has fallen.

The consumer has received but a relatively small proportion of the decline in the wholesale price. With the wholesale price in January, 1921, only one-tenth of a cent higher than the average wholesale price in 1913, the retailer's margin was more than double of what it was in 1913 and is apparently 296 per cent of the wholesale price.

Table L–12 gives the actual retail and the actual and relative wholesale price of ham in Chicago, the price differential or margin of the retailer, the per cent of the wholesale price taken by the retailer, the relative percentage of the wholesale price taken by the retailer, and the relative price differential from January, 1919, to April, 1921.

TABLE L–12.—*Wholesale and retail prices of ham at Chicago, with price differential and relative price differential 1919–1921. (Average differential 1913=100.)*

[Source: Monthly Labor Review, Bureau of Labor Statistics.]

Years and months.	Ham, sliced, retail.	Ham, smoked, wholesale.	Relative wholesale.	Price differential.	Per cent of wholesale price taken by retailer.	Relative increase in the percentage of wholesale price taken by retailer, (1913 =100).	Relative price differential, (1913 =100).
1913 average	26.6	16.6	100	10.0	60	100	.....
1919							
January	55.3	35.3	212	20.0	56	93	200
February	52.1	33.8	203	18.3	54	90	183
March	50.8	33.3	200	17.3	52	87	175
April	54.6	35.3	212	19.3	54	90	193
May	56.6	37.5	226	19.1	51	85	191
June	57.3	38.0	229	19.3	51	85	193
July	58.8	38.3	230	20.5	53	88	205
August	59.8	38.3	230	21.5	56	93	215
September	57.9	35.0	211	22.9	65	108	229
October	54.0	29.3	176	26.7	91	152	267
November	52.3	28.9	174	23.4	81	135	234
December	51.4	28.9	174	22.5	77	128	225
1920							
January	51.8	28.9	174	22.9	79	132	229
February	51.9	30.3	182	21.6	71	118	216
March	53.1	30.5	184	22.6	74	123	226
April	55.6	32.5	196	23.1	71	118	231
May	56.0	36.0	217	20.0	55	92	200
June	58.5	36.5	220	22.0	60	100	220
July	61.3	37.5	226	23.8	63	105	238
August	61.9	37.5	226	24.4	65	108	244
September	62.3	36.1	217	26.2	72	120	262
October	61.9	35.8	215	26.1	72	120	261
December	52.3	26.5	159	25.8	97	162	258
1921							
January	51.2	24.5	147	26.7	109	182	267
February	51.0	26.3	158	24.7	93	155	247
March	51.8	27.8	167	24.0	86	143	240
April	51.7	27.8	167	23.9	86	143	239

Retail margins on ham have tended to increase and were very much greater in April, 1921, than in 1913, and also greater than they were in the early part of 1919. Retail margins have come up as wholesale prices have come down.

In the consideration of these figures it should be remembered that they do not purport to indicate the profit made by the retailer on sale of the various commodities indicated. They are intended to indicate the margins taken by the retailer in recent years compared with margins taken in 1913. The larger margins indicated in the recent period may be fully covered by additional and legitimate costs. The accuracy of the retail margins shown in the preceding tables are disputed by the trade. The commission at this time does not have sufficient comprehensive data to warrant it in expressing an opinion upon this question. It is making an investigation which it hopes will develop facts upon which an accurate conclusion can be based. These facts will be made public at a later date.

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