AN ANALYSIS OF THE SEASONAL VARIATION OF HOG PRICES IN OKLAHOMA

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By

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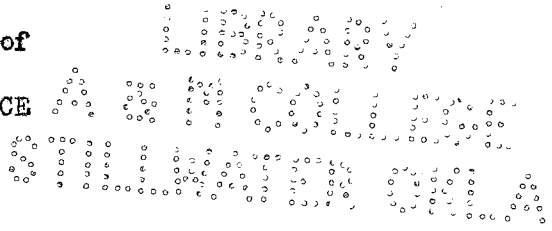

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INTRODUCTION

The purpose of this study is to give agricultural workers a more complete picture of the seasonal variation in the price of hogs. Average or so-called "normal" seasonal movements which are so often used may be readily calculated but their usefulness as indicators is extremely limited. The month to month movement of hog prices in any particular year is almost certain to differ significantly from the movement of the average. If fairly consistent relationships between changes in the factors influencing seasonal patterns can be isolated, guides may be provided to assist the farmer or marketing specialist in anticipating price changes during particular periods rather than those in general.

During any given year the deviation of the seasonal price movement from the average pattern is associated with a combination of conditions peculiar to that year. The difference may be due to changes in the distribution of marketings of hogs, to variations in the prospective supply, or to changes in the demand for hogs. All of the factors affecting the supply and demand for hogs must be considered before an estimation of the seasonal pattern can be accurately made. No one seasonal pattern fits all years, but if the separate influence of all the factors is understood their net effect, in varying combinations, upon the seasonal pattern may be estimated.

The complexity of the pricing system and the numerous factors influencing short time price changes makes such an analysis difficult. Price reactions to such superficial happenings as inaccurate reports of future supply and demand conditions may tend to obscure temporarily the adjustment to the true supply and demand conditions. Therefore, conclusions drawn from this study are general and relationships pointed out

may be modified by the special influences existing in any year. However, they should still be of value when properly used.

Usually forecasts of seasonal movements of price have been based upon seasonal patterns constructed from simple averages of five or ten years which may have been regarded as representative. The years selected have usually been those immediately preceding the time at which the analysis has been made or some other group which has been previously computed. Generally these groups included years of various conditions, some of which were far from average. This often resulted in a seasonal that was not analytical and did not apply to the year during which the forecast was made. Some of the main factors which influence the seasonal variation and change the seasonal pattern of prices have been isolated as nearly as possible. The relationships between each of these factors and the seasonal pattern have been shown so that future changes may be more accurately estimated. Any change in the general pattern of seasonal price movements which was due to developments in production methods or other reasons was also noted. The factors which have tended to change the general seasonal pattern were studied so that further changes in seasonal variation in prices might be anticipated.

Factors Affecting Prices and Seasonal Variations. Before the seasonal price variations of a commodity can be studied, it is necessary to know what factors affect the price of the commodity since it is the seasonal variation of these factors which causes the seasonal price variations. Particular emphasis on supply factors is necessary because the seasonal variation in supply determines to a large extent the usual seasonal price changes. Also the demand factors must be studied since the demand often varies seasonally. The trend in the general price level and the long time changes in demand have a decided influence on

prices. As a result, the seasonal variation in price is not as apparent or regular as it would be if the price level remained the same.

Correlation analyses were made between the price of hogs and various measures of the supply and the demand for hogs. The graphic method was used in order to give a more understandable presentation of the relationship which existed.

Although an average seasonal which consists of average monthly prices for several years is inadequate alone, it does serve as a starting point for an analysis of seasonal price movements. In this analysis an average seasonal pattern which had been adjusted for the trend in hog prices was computed and an attempt was made to explain the deviations from this seasonal pattern.

Procedure for Computing Statistical Measures

The Index of Average Seasonal Variation.[1/] The first step in computing the index of average seasonal variation of the prices and the factors affecting prices was to compute 12-month moving totals which centered between the two middle months. By adding two of the 12-month moving totals together, a 24-month moving total was computed which centered on the month between the two 12-month totals. The moving averages were then computed for each month by dividing the 24-month totals by 24. The original value for each month was then expressed as a percentage of the moving average for the corresponding month. The resulting percentages for each month during the years included were then added and averaged to calculate an index of average seasonal variation for each month. (See Appendix Table IV.)

1/ The method used for this measure is somewhat similar to that used by W. C. Waite and R. W. Cox in Seasonal Variation of Prices and Marketings of Minnesota Agricultural Products, 1921-1935, University of Minnesota Agricultural Experiment Station Technical Bulletin, 127, 1938, pp. 3 and 4.

The moving average was calculated to get a trend value for each month with which to compare the actual price for each of the months. The percentage of trend for each month was apparently the most logical means of making an adjustment in price or getting an index of price which would eliminate the variation in price due to cyclical changes and trends. These percentages of trend will not give an exact picture during those periods in which a peak or trough of a cyclical change occurs. Since the moving average is computed from the total of the six months preceding and the six months following the month the average may be low compared to the actual trend if the peak of a cyclical change happens to come at or close to the month in question; or it may be high if a trough of a cycle comes near that month. This will cause the percentage of trend to be high or low during those months affected by the peaks and troughs of the cycle. Even though the moving average does not represent the trend accurately during those periods, it fills the need best for this study. The error during such periods is too small to have any appreciable effects on the results obtained.

Index of Irregularity.[2/] The standard deviations of the percentages of the moving averages were computed for each of the months to give the index of irregularity. It shows how closely the prices or percentages were grouped around the average. It gives an indication of dispersion of the percentages of trend from the average. Approximately two-thirds of the items may be expected to fall between the two indexes of irregularity plotted on each side of the average. The larger the index of irregularity the more scattered the individual percentages were and the less indicative is the index of average seasonal variation. Since,

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2/ Ibid., p. 4.

in the case of hogs, the indexes are large, it is apparent that some refinement of the seasonal pattern is necessary in order to make it dependable as a forecasting device.

Month to Month Variation. The number of rises and falls from the preceding month were tabulated in order to estimate the likelihood of a rise or fall for each month on the basis of the past price changes.

Changes in Seasonal Variation. The years were divided in three groups for the purpose of studying changes in seasonal variation. The first was the earliest period for which data are available, the second, the intermediate period, and the third the most recent period. These groups do not represent years with any particular set of conditions, nor are they supposed to be composed of years having comparable conditions. They were so divided in an effort to determine whether or not there have been any decided changes in the seasonal price patterns arising from the improved methods of handling, raising, and marketing of hogs that have been adopted during the last 30 years.

The average seasonal variation for each period was computed and analyzed to note any changes. Also the causes were sought in order to have a basis for predicting further changes.

Average Seasonal Variation of Prices Under Particular Conditions. To show the causes of the price deviations from the usual seasonal variation, the years during which the number of hogs on farms increased were separated from those during which the number decreased and the average seasonal variation was computed for each group. The average price for each month was computed from the monthly prices which had not been adjusted for changes in price level. This gave a better estimate of the actual price changes due to this factor than would have been obtained from raw prices. Percentages of trend could not be used because they

would not show price changes due to cyclical changes in numbers. Cyclical variation and trends are largely eliminated when percentages of trend are computed. Adjusted prices were used in order to eliminate price level changes as much as possible. Each of these groups was then divided into years during which the supply of feed crops in the United States was above and below average. The combined effect of the two factors could then be observed.

Other groupings of the years were made using the hog-corn ratios as a basis for the groups. The relationship between the price of hogs and the price of feed is important since it does influence the time of marketing and the future production.

Another grouping of years was made according to the trend in the price level. Years during which the price level was rising, as shown by the price index of all farm commodities for Oklahoma, were compared with the years when the price level was falling. Raw prices were used for this analysis since adjusted prices would not reflect price level changes.

Comparison of Oklahoma Prices and Other Prices

Deviations of Oklahoma prices from United States and Chicago prices of hogs were studied to note differences between the seasonal variation as well as the differences in the level of the prices. Since Oklahoma produces a relatively small part of the hogs raised in the United States, the marketings from Oklahoma do not play a very great part in the determination of central market prices and Oklahoma prices will fluctuate about the same as those at the central markets. However, the differences which have existed should be analyzed since they are important to the Oklahoma farmer. The seasonal changes in the deviations were associated with the relationship between Oklahoma conditions and those of the nation.

Oklahoma feed supplies, Oklahoma hog numbers, and the seasonal distribution of receipts from Oklahoma at the important markets for Oklahoma hogs all appear to be important.

For convenience the prices received by farmers for hogs were sometimes referred to as farm prices although technically they are not farm prices. Actually these prices are those received by farmers at the particular local markets available to them. To refer to them as local market prices might have been confusing since they are not prices of any one market. To have called them prices received by farmers would have been cumbersome in many instances.

GENERAL SEASONAL MOVEMENTS OF HOG PRICES

The seasonal fluctuations in the price of hogs are influenced by several factors most important of which is the seasonal variation in the marketings of hogs. Hogs, like nearly all agricultural commodities, tend to flow to market in greater volume during certain months when more are ready for market than during other months. The time that pigs are farrowed more or less determines the time when they will be marketed because it takes from six to ten months to raise a hog to market weight. When hogs reach top weights or from 200 to 250 pounds, most farmers sell in order to get a higher price per pound. To hold them until they have exceeded top weights usually means that a lower price per hundredweight will be received, since heavier weights sell at lower prices per pound. Some farmers feed longer when prices are low and feed is plentiful, but unless the price level of hogs rises materially in the meantime they will get a lower price per pound. However, if the price of hogs is very favorable in relation to the price of feed, farmers can oftentimes profit even though the price does not increase. The additional cost incurred by feeding to the heavier weights may not be as great as the additional income from the heavier hogs.

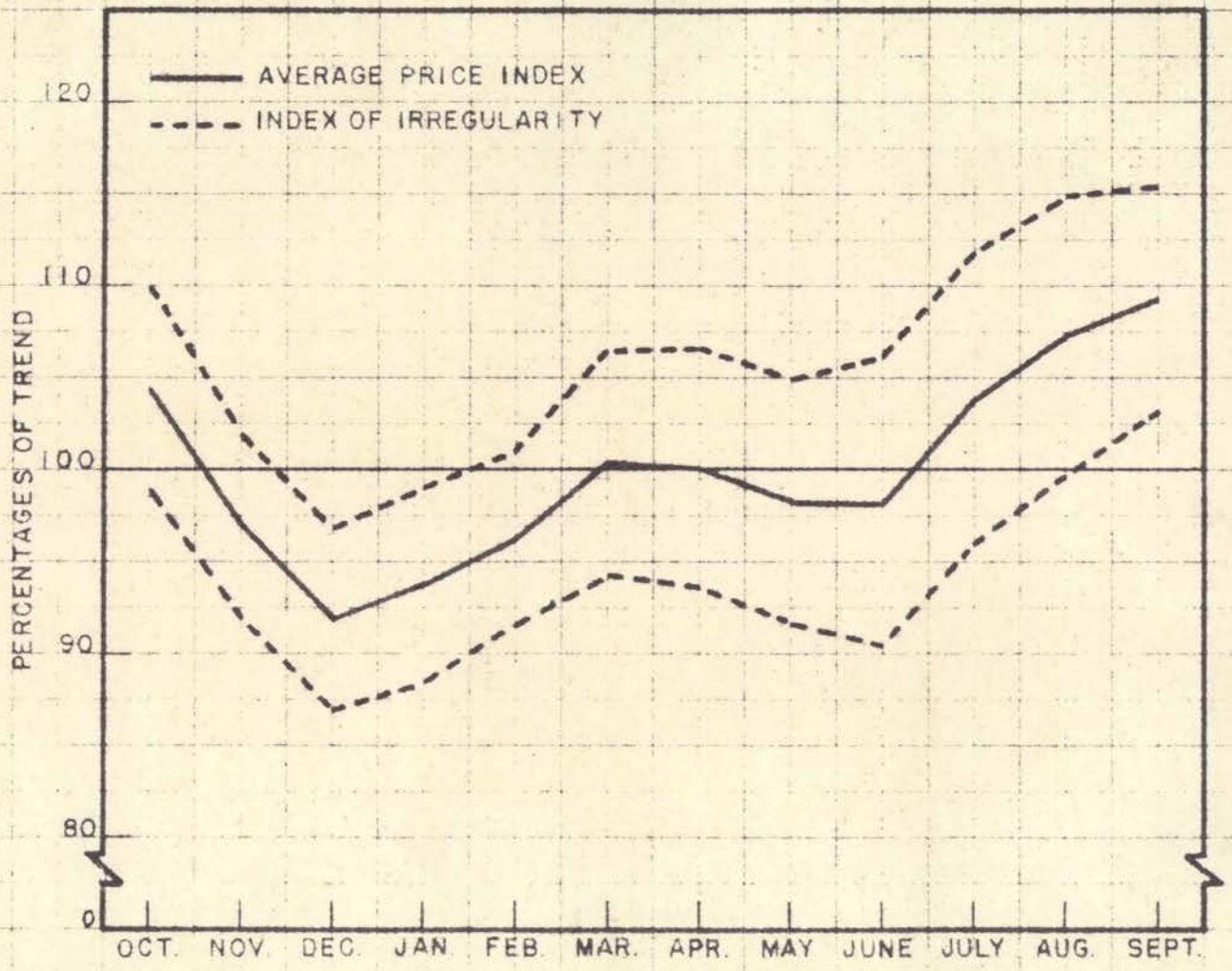
Index of Average Seasonal Variation. In order to get a general idea of the seasonal variation in hog prices, the index of average seasonal variation which is based on percentages of moving averages was computed by the method explained previously. This index which is based on the Oklahoma farm price of hogs during the years 1910-1940, shows that a peak in prices is ordinarily attained in September with a secondary peak in March and April. The periods of low prices or troughs are most likely to occur in December with a secondary trough in May and June. (See Figure 1.)

These peaks and troughs correspond closely with the seasonal marketings of hogs and particularly the supply of pork. Along with the increased marketings of hogs and increased supply of pork in December comes the decline in price. Again the same thing occurs in May and June. (See Figure 2.) When the marketings and supply begin to decline in July, August, and September, the price again rises. The same effect is noticed in February, March, and April.

Index of Irregularity. The limited use of the index of average seasonal variation must be pointed out to avoid its misuse. To get an idea of how much the actual indexes fluctuated from the average for each month, the index of irregularity was computed and plotted on each side of the index of average seasonal variation. (Figure 1.) The area between the indexes of irregularity includes approximately two-thirds of the indexes. It is apparent that there are large deviations from the averages for each month, and, therefore, the average seasonal movement must be used with caution. It gives an idea of only the general seasonal movement and does not allow for any particular conditions prevailing during each of the years in the sample. These conditions cause deviations from the usual seasonal movement and must be taken into account before the seasonal variation for other years can be estimated with any degree of accuracy. The main purpose of this study is to isolate these conditions and show how they may be used to estimate the seasonal movement during particular years for which forecasts are desired.

Month to Month Price Changes. The number of rises and falls in prices for each month from the preceding month during the last 31 years gives an indication of the probability of a directional change for any month. It is a good supplement to the index of average seasonal variation

FIGURE I AVERAGE SEASONAL VARIATION OF THE OKLAHOMA FARM PRICE OF HOGS (PRICE RECEIVED BY FARMERS), 1910 - 1940



SOURCE SEE TABLE VI

because it does show with what consistency prices rise or fall from one month to another, although the magnitude of the rise or fall is not revealed. November prices have fallen more often than those of any other month, having fallen 29 of the last 31 years. The Oklahoma farm price has risen in November only once since 1910. The most frequent increases in prices have occurred in July which had 22 rises and six falls during the last 31 years. (See Table 1.)

Table I. Number of Times the Oklahoma Price of Hogs Received by Farmers Has Risen and Fallen from the Price for the Preceding Month, 1910-1940

Month:	Oct.:	Nov.:	Dec.:	Jan.:	Feb.:	Mar.:	Apr.:	May:	June:	July:	Aug.:	Sept.
Rises	6	1	4	18	18	19	18	11	14	22	17	17
Falls	23	29	26	11	11	10	11	18	15	6	10	13

SOURCE: Oklahoma Farm Price Statistics, 1910-1938, T. R. Hedges and K. D. Blood, Oklahoma Agricultural Experiment Station Bulletin No. 238, and Mid-Month Local Price Reports, 1938-1940, Agricultural Marketing Service, United States Department of Agriculture.

The month during which the most frequent falls occur correspond with the troughs in the average seasonal movement and the months having the most rises correspond with the peaks.

Seasonal Variation in Supply. For the country as a whole the largest part of the year's pig crop is farrowed in the spring months, usually March, April, and May with another peak in the fall months of September and October. The spring pig crop is marketed during the months of November, December, and January. Federally inspected slaughter for these months far exceeds the other months. Even though federally inspected slaughter does not include the slaughter on farms and that in small establishments, it constitutes a large part of the total and is indicative

of changes in total slaughter. Another minor peak in slaughter comes in May and June, the months when most fall pigs are marketed. (See Figure 2.) However, the May and June peak is not as distinct since the fall pig crop usually amounts to only about two-thirds of the spring pig crop.

The variation in marketings is due mainly to practices of farmers in the Corn Belt where most hogs are raised. As will be explained later the seasonal movement of hogs in the Southern States is somewhat different from that in the Corn Belt.

The length of time between farrowing and marketing depends upon the weight to which the hogs are fed, the method of feeding and handling, and weather conditions.3/ If feeds are plentiful, particularly corn, and the price of the feed is cheap in relation to hog prices there will be a tendency to feed to heavier weights. The length of time that pigs are fed before being marketed influences the seasonal variation of marketings of hogs since it affects the time at which marketings will be made and also the total amount of pork and pork products.

During the winter and spring months when slaughter is highest, the cold storage holdings of pork are built up to supply the demand during months when fewer hogs go to market. (Figure 3.) These months of into-storage movement coincide with the period of heavy slaughter when the price of hogs is seasonally low. When larger numbers of hogs are being slaughtered, the production of pork exceeds consumption and the packer must store that portion of the slaughter which he cannot currently sell.

If it were not possible to store meat, the seasonal troughs and peaks would be much more distinct. If all of the pork produced during

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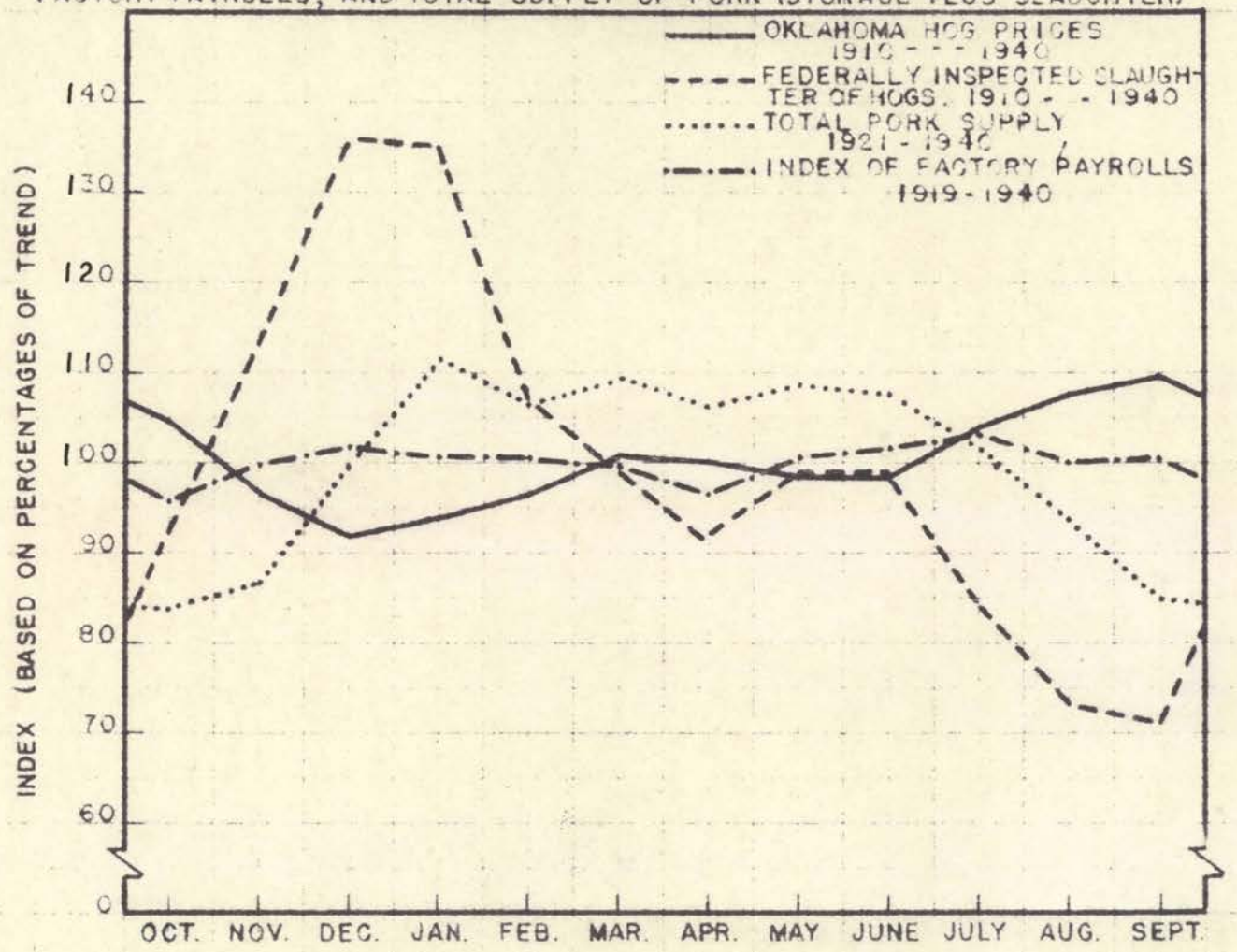
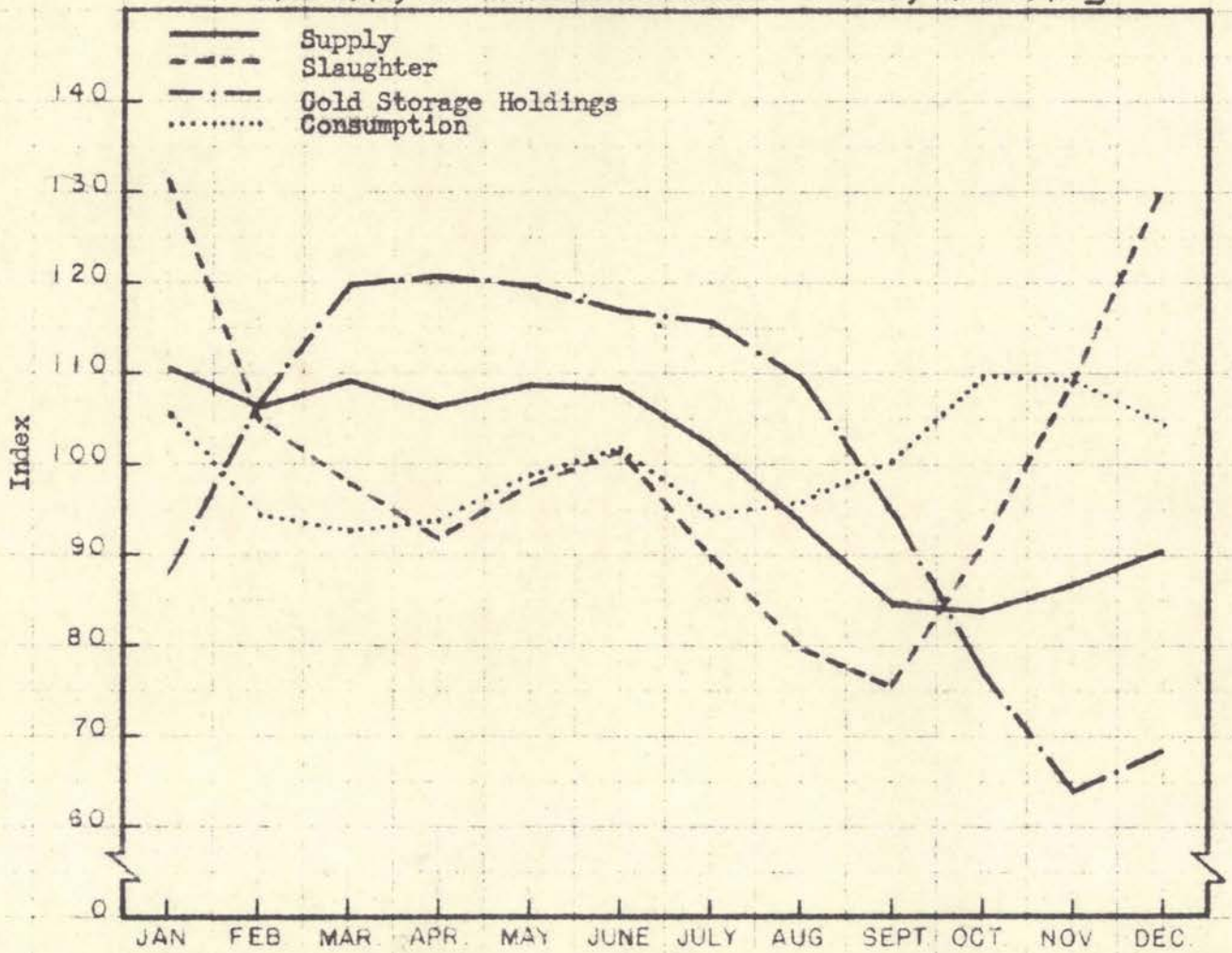
3/ F. L. Thomsen, Agricultural Prices, McGraw-Hill Book Company, 1936, p. 343.

FIGURE 2 AVERAGE SEASONAL VARIATION OF THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS; FEDERALLY INSPECTED SLAUGHTER, UNITED STATES; INDEX OF FACTORY PAYROLLS; AND TOTAL SUPPLY OF PORK (STORAGE PLUS SLAUGHTER)



SOURCE: SEE TABLES VI, X, L, AND LIV

FIGURE 3. AVERAGE SEASONAL VARIATION OF FEDERALLY INSPECTED SLAUGHTER, 1910-1940; COLD STORAGE HOLDINGS, 1916-1940; TOTAL SUPPLY OF PORK, 1921-1940; AND APPARENT CONSUMPTION OF PORK, 1921-1940 1/



SOURCE: See Tables L, LII, LIV, and LV.

1/ Based on percentages of trend except cold storage holdings and apparent consumption which are based on straight averages for the years.

the late fall months had to be sold soon after slaughter, the price would certainly drop much more than it now does. Storage allows the supply to be distributed more evenly throughout the year which tends to smooth out the seasonal price fluctuations. However, the packer must allow for the costs of storage, and, during the season of heavy marketings, lower prices are offered for live hogs. With heavy marketings, the packers do not have to offer as high prices to supply their current demand and they must allow for storage costs and the risk of price declines for that portion which is stored. Also by paying less for the hogs the packer can offer pork at a lower retail price and induce greater consumption.

Seasonal Variation in Demand. Apparently the seasonal variation in the demand for pork is due largely to the consumers' preference for pork during certain seasons of the year and to some extent the variation in consumer purchasing power. However, it is difficult to isolate these associations. During the fall and early winter months of October, November, December, and January the consumption is highest. (See Figure 3.) This is due partially to the consumer preference for pork during the colder seasons of the year and possibly to the slightly higher level of consumer income as indicated by the indexes of factory payrolls. Probably the most important reason why consumption is high during these months is that at the lower pork prices consumers are willing to buy more than usual. There is not only a change in the demand but also an increase in supply or a shift of the supply curve to the right. This necessarily causes the supply curve for pork to intersect the demand curve at a lower point unless there is a compensating increase in demand. That is, during the winter months when it is most convenient for farmers to put hogs on the market

they are willing to sell at lower prices. With the larger supplies and lower prices comes an increase in consumption. Consumers are willing to buy more.

The consumption of pork falls off a great deal during February, March, and April. This is associated with a decreasing supply of pork and increasing prices. At the higher prices, consumers are not willing to buy as much as before. The consumption rises again in April and May with the declining prices and the seasonal increase in marketings. It again falls off in July and August. This decline is not due as much to rising prices. It is more likely attributable to the hot weather during these months and the preference for lighter meats and the general decrease of meat in the diet during that season. During September and October the consumption increases again even though prices are at higher levels than in the summer. This indicates a preference for pork in the fall and early winter.

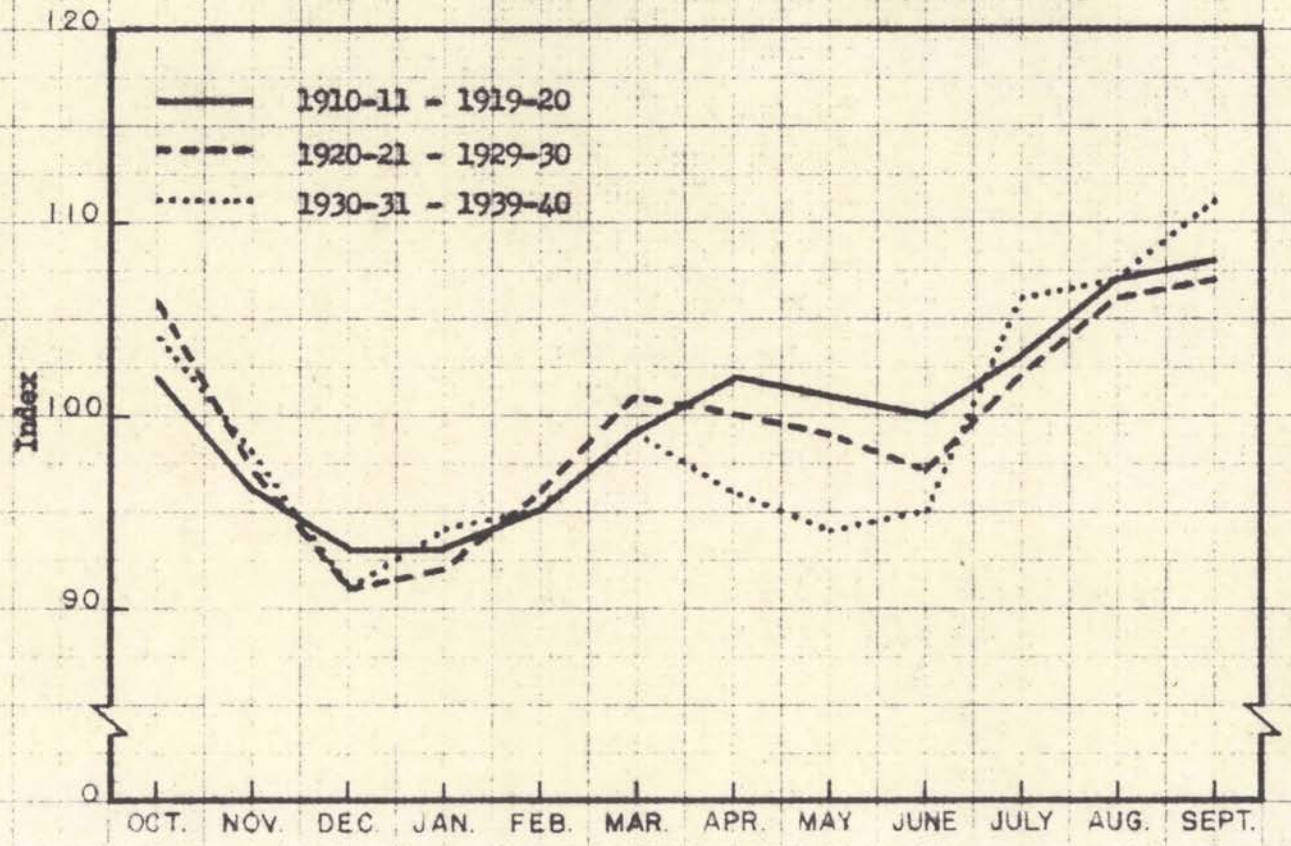
The seasonal variation of hog prices due to seasonal changes in consumer purchasing power are evidently very minor. The index of average seasonal variation of factory payrolls which is a good indicator of consumer purchasing power shows the peaks of purchasing power to be in August, September, and October, and again in March, April, and May. This variation is so little, however, that the influence seems rather insignificant. These peaks are not associated with either high or low consumption.

Consumer purchasing power is important in another respect. High consumer incomes are associated with high price levels and, when the price level is rising or falling hog prices can ordinarily be expected to do likewise. This, of course, influences the seasonal pattern for any particular year as will be explained later in the analysis.

Changes in Seasonal Variation of Hog Prices from 1910-1940. The most pronounced change in the seasonal variation occurring during the last 30 years (1910-1940) has been the lower prices or a more significant trough in prices during the spring and summer months of April, May, and June in the last ten years. The seasonal rise during July, August, and September has also been more pronounced in later years than before. (Figure 4.)

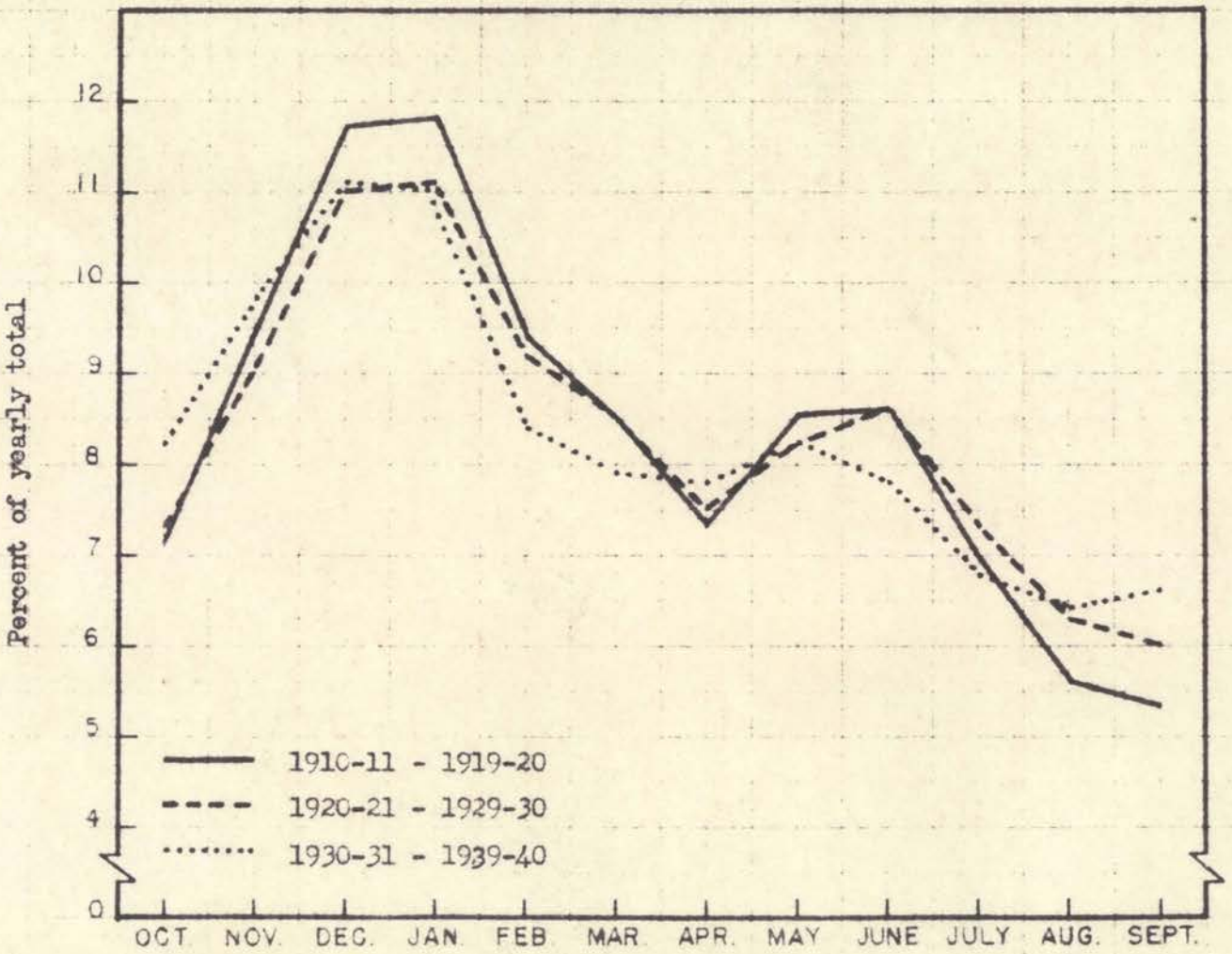
This change is apparently due to a shift in the seasonal demand for pork since an analysis of the federally inspected slaughter does not reveal a change in the marketings or supply which would cause such a price change. In fact, slaughter during July, August, and September of the 1930-31 to 1939-40 period did not decrease as much as it did during the same months of the two previous periods. This does indicate the ability of farmers to put more hogs on the market during months of higher prices but these earlier marketings have not yet been in large enough volume to depress prices appreciably. (See Figures 4 and 5.) If the seasonal marketings of hogs continue to level out during future years, the seasonal variation will probably do likewise even though this has not been the result during late years.

FIGURE 4. AVERAGE SEASONAL VARIATION OF THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, BY TEN YEAR PERIODS, 1910-1940



SOURCE: See Table VII.

FIGURE 5. AVERAGE SEASONAL VARIATION OF FEDERALLY INSPECTED SLAUGHTER OF HOGS BY TEN YEAR PERIODS, 1910-1940



SOURCE: Computed from data found in "Livestock, Meats, and Wool Market Statistics and Related Data," 1940, U.S.D.A., A.M.S., p34.

SEASONAL VARIATION OF HOG PRICES UNDER VARIED CONDITIONS

Some of the changes in various conditions which occur from year to year and which influence the seasonal pattern of prices during each year have been isolated to show the associations of particular conditions with particular seasonal patterns of prices. The factors studied consist of hog numbers, size of corn crops, the general price level, and the hog-corn price ratio. No attempt has been made to measure quantatively the effect of various changes but the charts should suggest the degree of influence and the extent of the association.

Seasonal Variation of Price as Indicated by Changes in Hog Numbers and Size of Corn Crops.[4/] One factor which provides a basis for estimating the seasonal variation in hog prices is the number of hogs on farms on January 1 as reported each year by the Agricultural Marketing Service. The number of hogs on farms on January 1 is a good indication of the number of hogs to be slaughtered during the rest of the marketing season or until October 1, since it includes a large part of the previous spring pig crop and the fall pig crop. (See Figure 6.) In all but four years between 1910 and 1940 the federally inspected slaughter for the season (October-September) moved in the same direction as the number of hogs on farms on January 1 of the corresponding years, and, during the years when the directional movement was different, there was relatively little change in either.

During the years when the numbers of hogs are increasing, the seasonal variation was found to be different from that during those years in which

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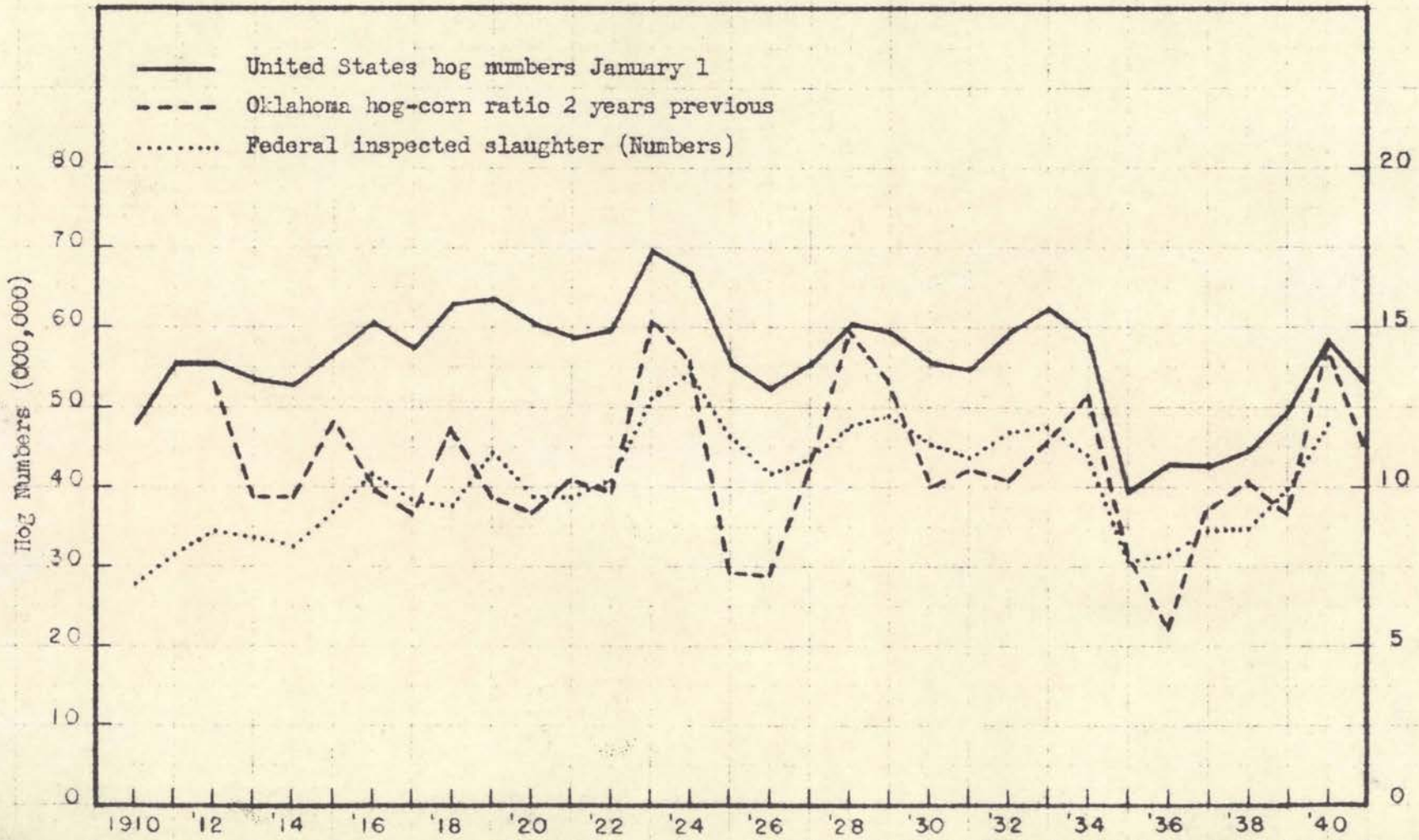
4/ A similar analysis of seasonal variation in Kansas hog prices as influenced by hog numbers and the size of the United States corn crops is presented by Green and Stockdyk in Judging Price Risks in Marketing Hogs, Kansas Agricultural Experiment Station Circular No. 137, pp. 11-26.

FIGURE 6. THE RELATIONSHIP BETWEEN THE UNITED STATES HOG NUMBERS, FEDERALLY INSPECTED SLAUGHTER, AND THE OKLAHOMA HOG CORN RATIO, 1910-1940



SOURCE: See Tables XI, and XXVIII; and "Livestock Meats and Wool, Market Statistics and Related Data," 1940, U.S.D.A., A.M.S., p. 34

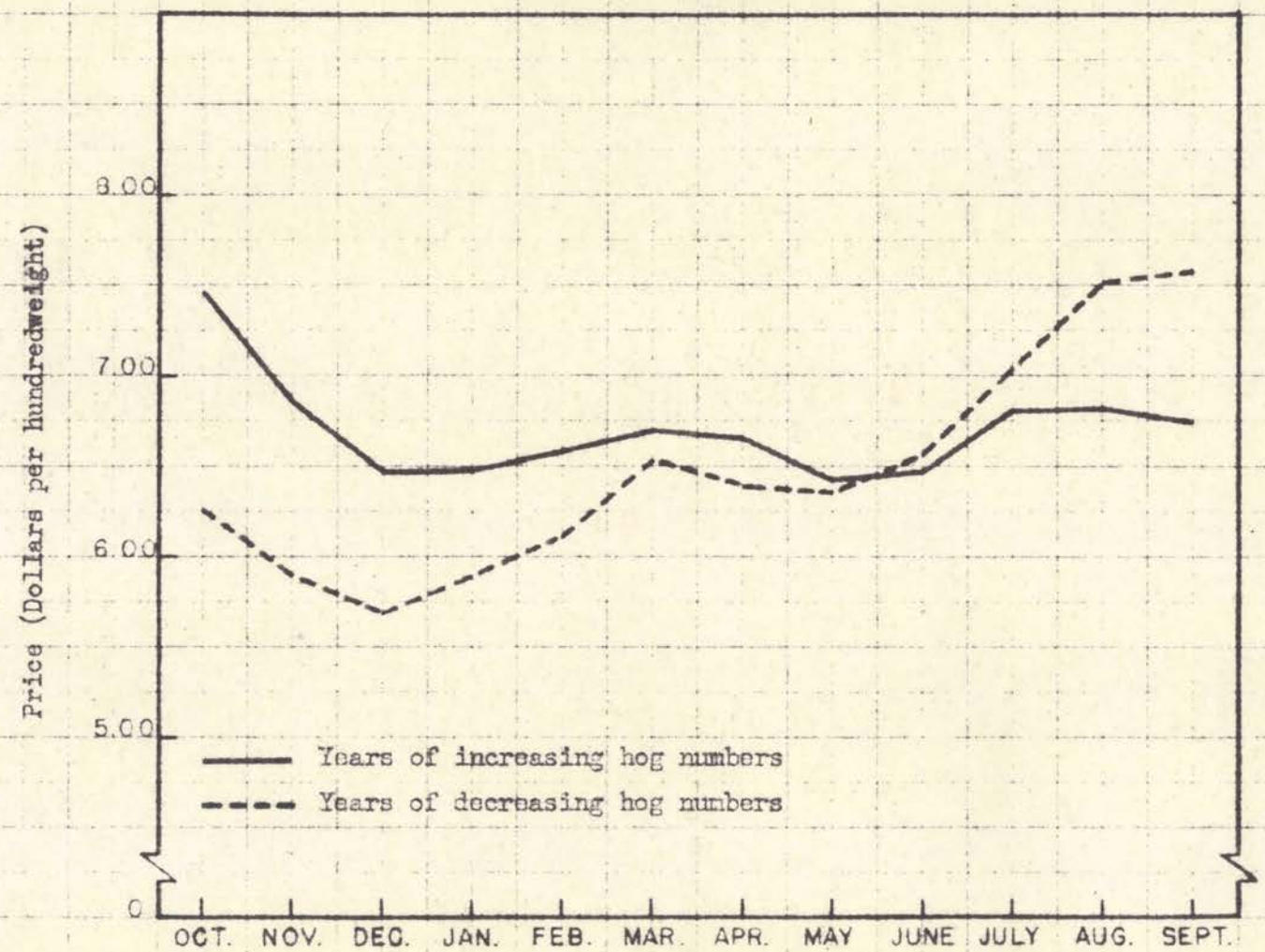
the numbers were decreasing. (See Figure 7.) During years when numbers were increasing or when marketings were on the upgrade, the price at the end of the marketing season was found to be lower than it was at the beginning of the season if the general price level and demand remained approximately the same. An increase in price usually accompanied decreasing numbers. The amount of variation depends upon the relative amount of change in numbers and demand.

For this part of the analysis it was necessary to use the adjusted price of hogs to get a better picture of the seasonal pattern of prices. When percentages of trend were used, the cyclical change in hog prices which was due to the change in numbers was eliminated. There was very little difference in the seasonal patterns when the cyclical variation of prices was not taken into account. Changes in numbers are associated with changes in the level of hog prices. As the new level is reached, the usual seasonal pattern of prices is altered. (See Figure 8.) If prices are on an upward trend, the seasonal pattern will be likewise.

When the prices of hogs which had been adjusted for changes in the price level were used, two distinct patterns of seasonal movement can be observed. (See Figure 7.) During the years in which hog numbers for the country are decreasing, a definite upward price trend prevails. Prices are low during the first part of the marketing season, but, after a small seasonal drop through December, they rise almost continuously throughout the year. Between October and September, the average price increased almost one-fourth. During the years when numbers were increasing, a downward trend in price took place and the seasonal upswings were very small.

When the years grouped according to the increasing or decreasing hog numbers are further broken down into years of large and small United

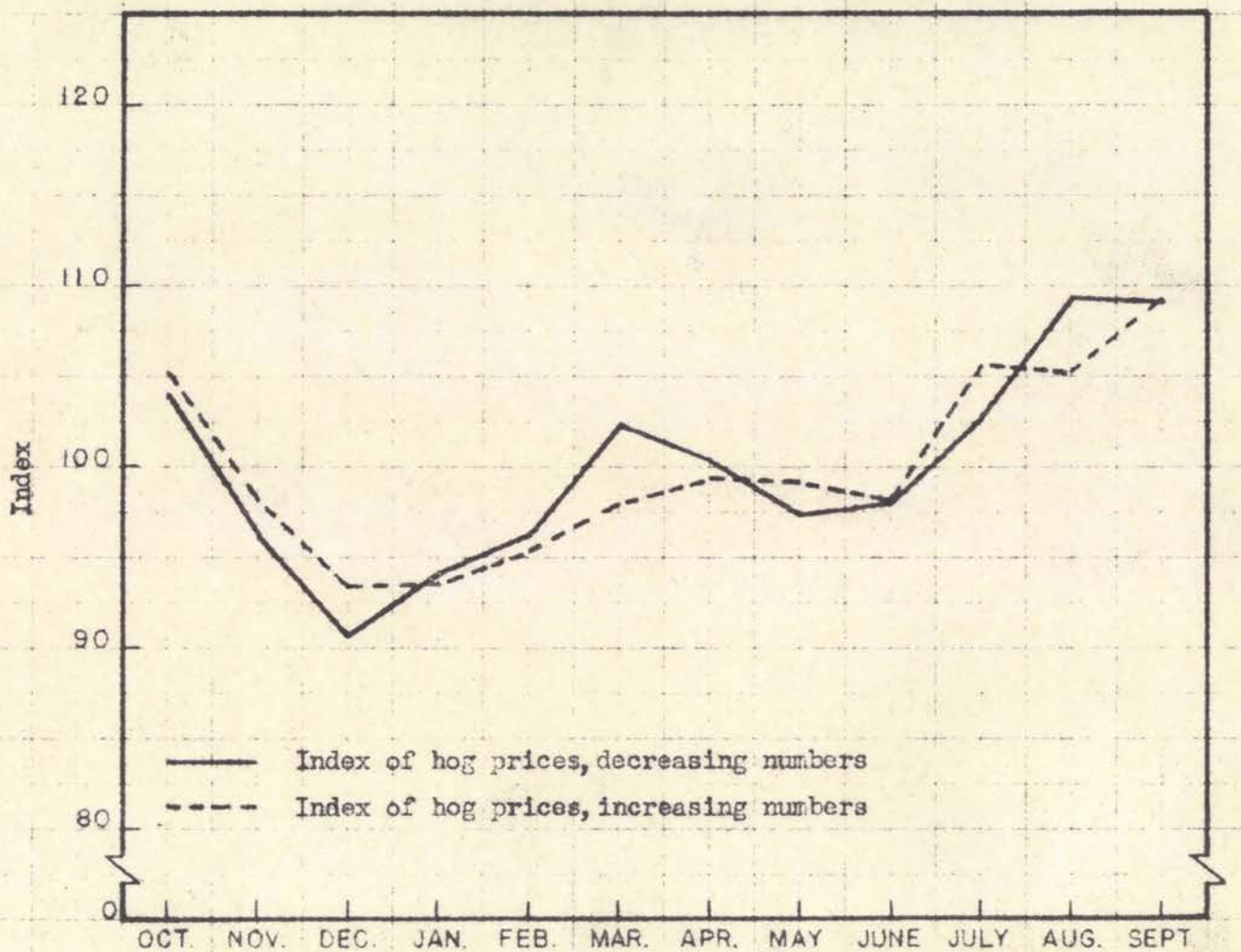
FIGURE 7. SEASONAL VARIATION OF THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, 1/ DURING YEARS OF INCREASING AND DECREASING HOG NUMBERS IN THE UNITED STATES, 1910-1940



SOURCE: See Tables XIII and XV.

1/ Adjusted for changes in the general price level.

FIGURE 8. SEASONAL VARIATION BASED ON PERCENTAGES OF TREND IN THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS FOR YEARS OF INCREASING AND DECREASING HOG NUMBERS IN THE UNITED STATES, 1910-1940



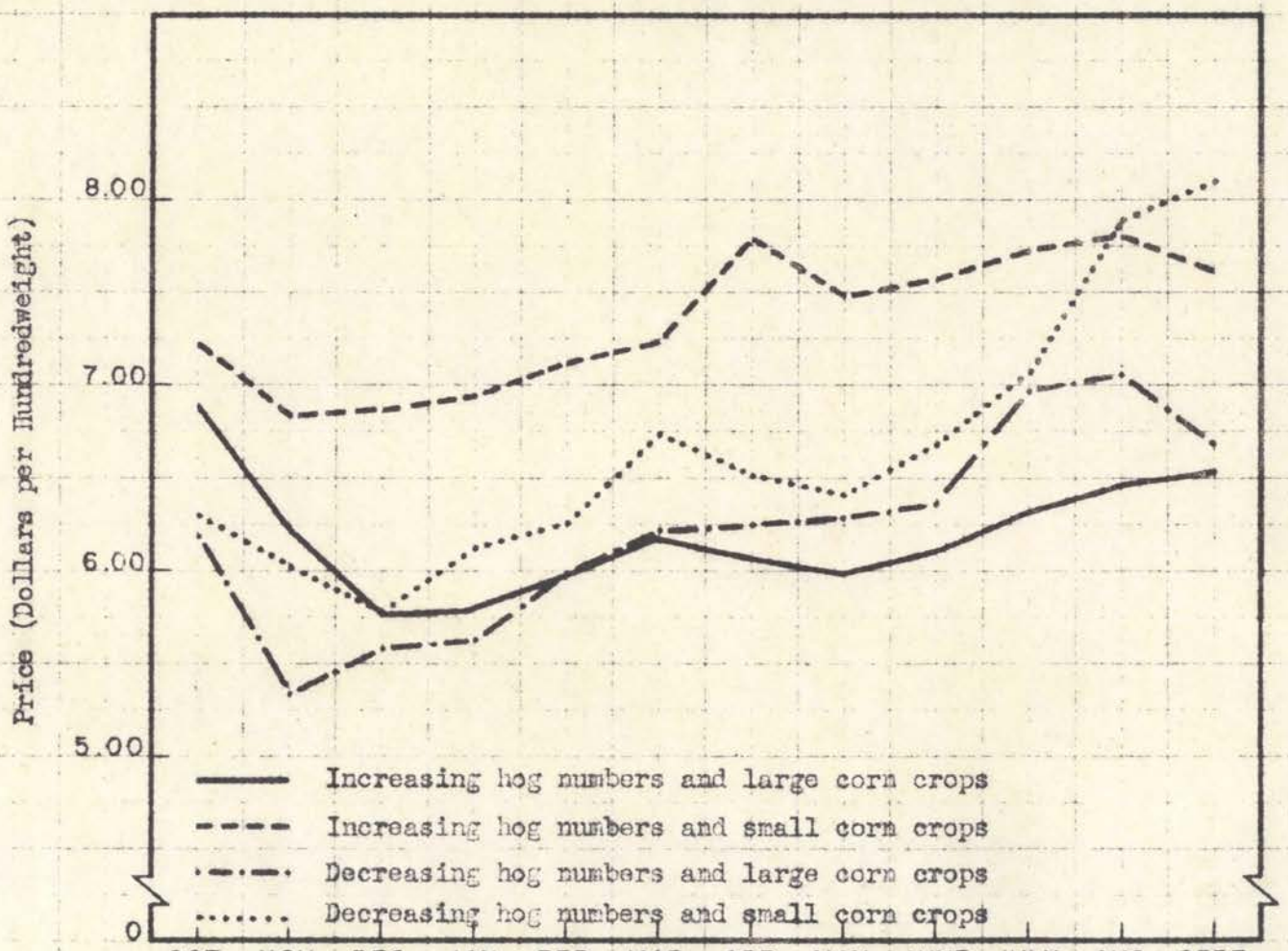
SOURCE: See Tables XII and XIV

States corn crops another relationship is revealed. Small corn crops, which are associated with high corn prices, have a tendency to bring about a rising trend in hog prices while large corn crops have the opposite effect. The sharpest rise in price was found during the years having small corn crops and decreasing hog numbers. The most abrupt fall in prices was found during years having large corn crops and increasing hog numbers. (See Figure 9.)

The lower corn prices accompanying large corn crops cause the price of hogs in the fall to be more favorable for hog raising. During the late summer and fall of these years, the demand for feeder pigs and brood sows is stronger than usual. There is also a tendency for feeding to heavier weights (See Table II) and later marketings than usual since large crops are associated with cheap corn and probably a more favorable hog-corn ratio. This, and the fact that a large feed supply is available, will encourage hog raisers to breed more sows for spring pigs. This has a tendency to lower the price the following fall and marketing season when the spring crop is marketed. In this case the marketings during the first part of the marketing season (November and December) will constitute a smaller proportion of the total annual marketings. Hogs are held to a later date in order to feed to heavier weights. As a result the prices during these months are higher than they would have been otherwise. However, later in the season marketings increase more than average causing the price to decline.

Influence of Price Level Changes on the Seasonal Variation in Hog Prices. The trend in the general price level is an important factor to consider in the analysis of seasonal variation. As mentioned before, the general price level is associated with changes in consumer incomes and demand. If the price level is rising, the month-to-month changes in

FIGURE 9. SEASONAL VARIATION OF THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS 1/ AS INFLUENCED BY CHANGES IN THE UNITED STATES HOG NUMBERS AND SIZE OF CORN CROPS, 1910-1940



SOURCE: See Tables XVIII, XIX, XX, and XXI.

1/ Adjusted for changes in the price level.

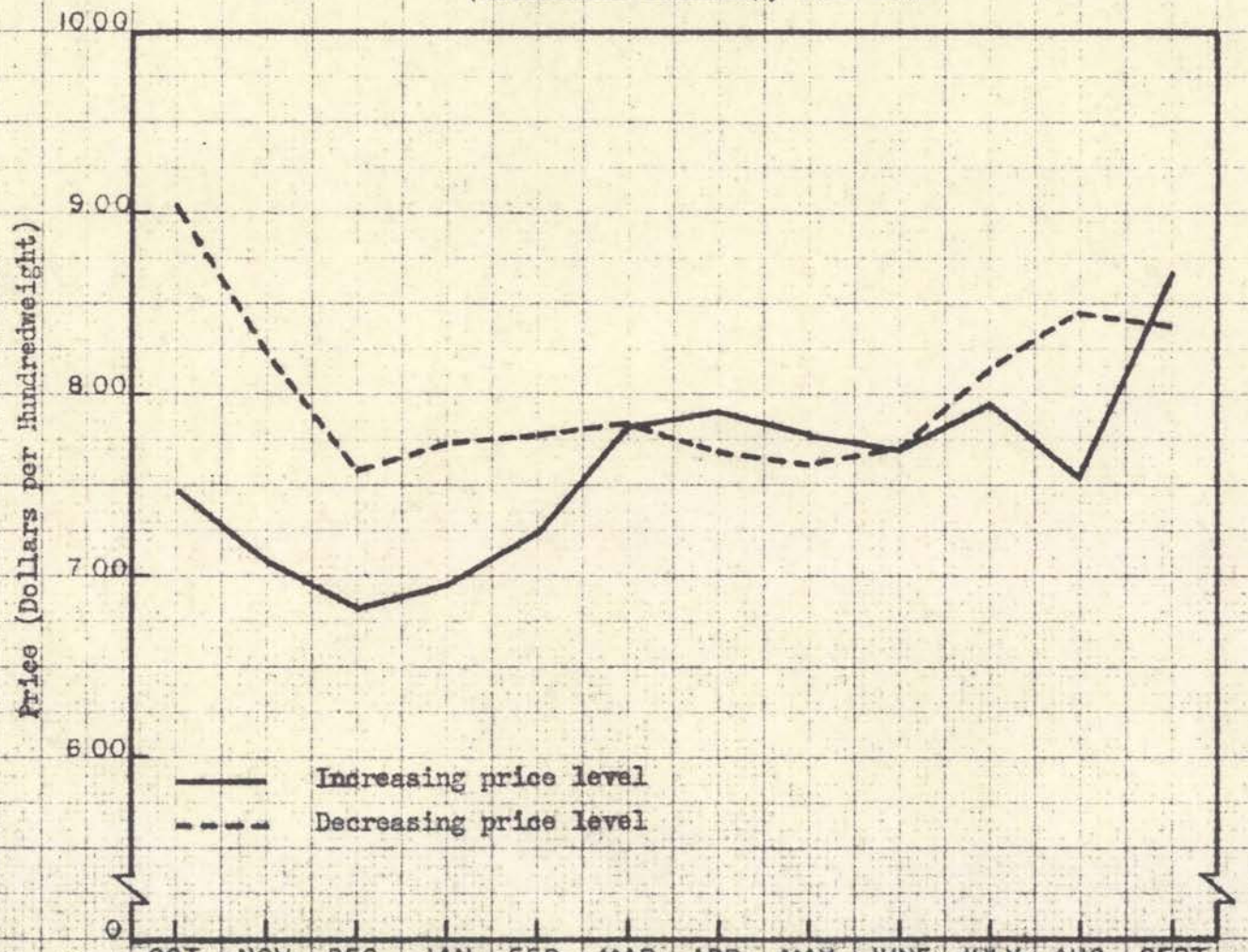
hog prices can be expected to be upward, particularly if numbers are decreasing. (See Figure 10.) If the price level is decreasing and hog numbers increasing, the month-to-month changes will probably be downward. It is exceedingly important to watch price level changes in forecasting prices because an abrupt change in the price level often causes hog prices to change contra-seasonally. Sometimes when a seasonal increase in price would normally be expected, a decline in purchasing power and the price level offsets the seasonal influence and no rise occurs.

Price level changes are not very sharp, as a rule, and the general trend can ordinarily be foreseen. The rapidity with which the price level is changing combined with the supply factors influences the amount of deviation of hog prices from their average seasonal changes. The sharper the rise or fall in the general price level, the more sharp the rise or fall in hog prices is likely to be.

If an increase in hog numbers occurs during a downward trend in price level, a sharp decline in the seasonal pattern is likely. However, if a decrease in numbers takes place with an increasing price level, a sharp rise ordinarily prevails. The influence of both factors taken together is shown in Figure 11.

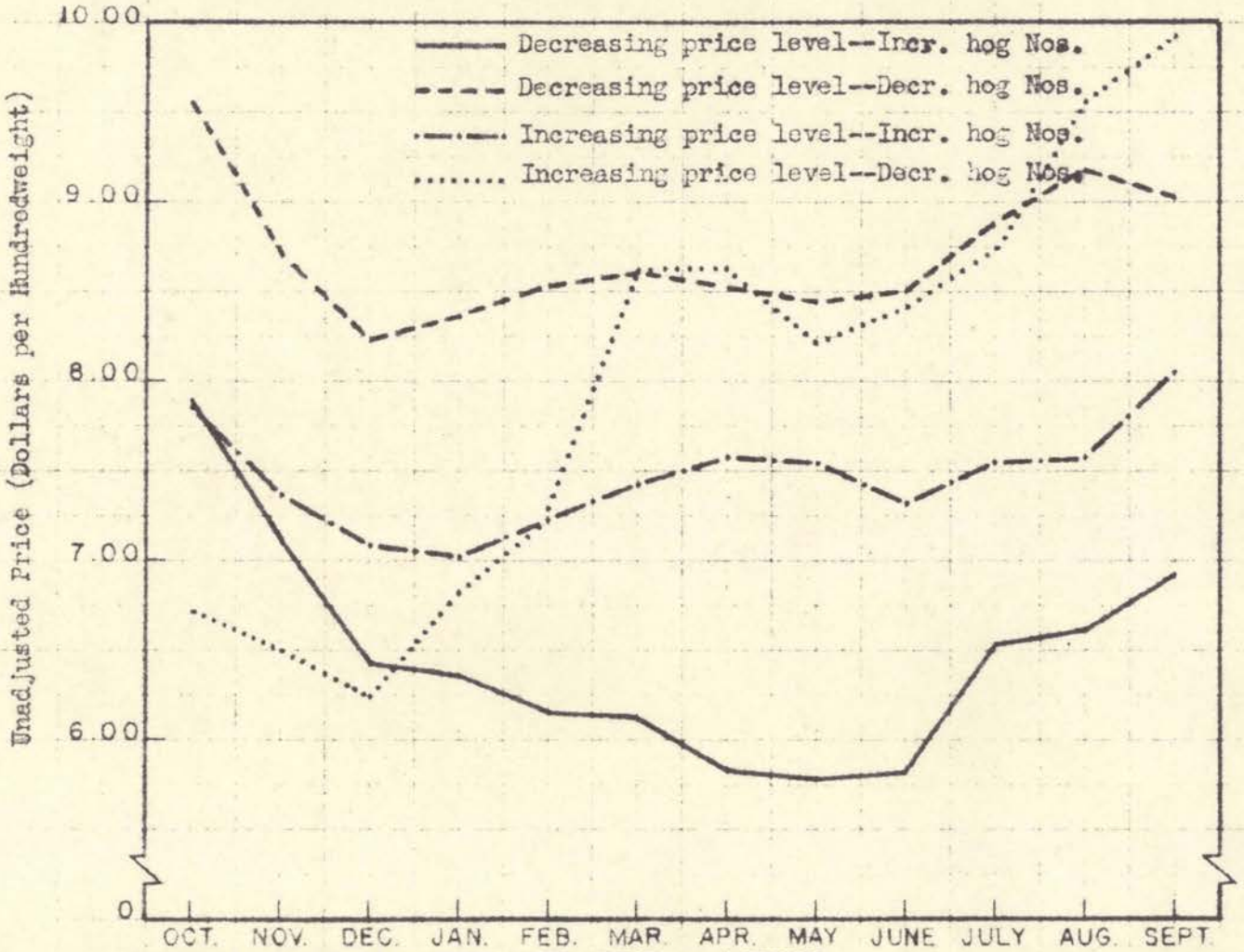
The Hog-Corn Price Ratio as an Indicator of Future Price Movements. The hog-corn ratio is useful in the analysis of hog prices as an indicator of the sows to farrow or the pigs to be raised in future months. Also the relationship between the price of hogs and corn which is often measured by the "hog-corn" ratio influences the length of time for which the hogs are fed and the weight at which they are marketed. These factors influence the seasonal price. (See Figure 12 and Table II.) During the years having a high hog-corn ratio, the weight of hogs marketed was considerably greater

FIGURE 10. SEASONAL VARIATION OF THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS DURING YEARS OF INCREASING AND DECREASING PRICE LEVEL (UNADJUSTED PRICES.), 1910-1940



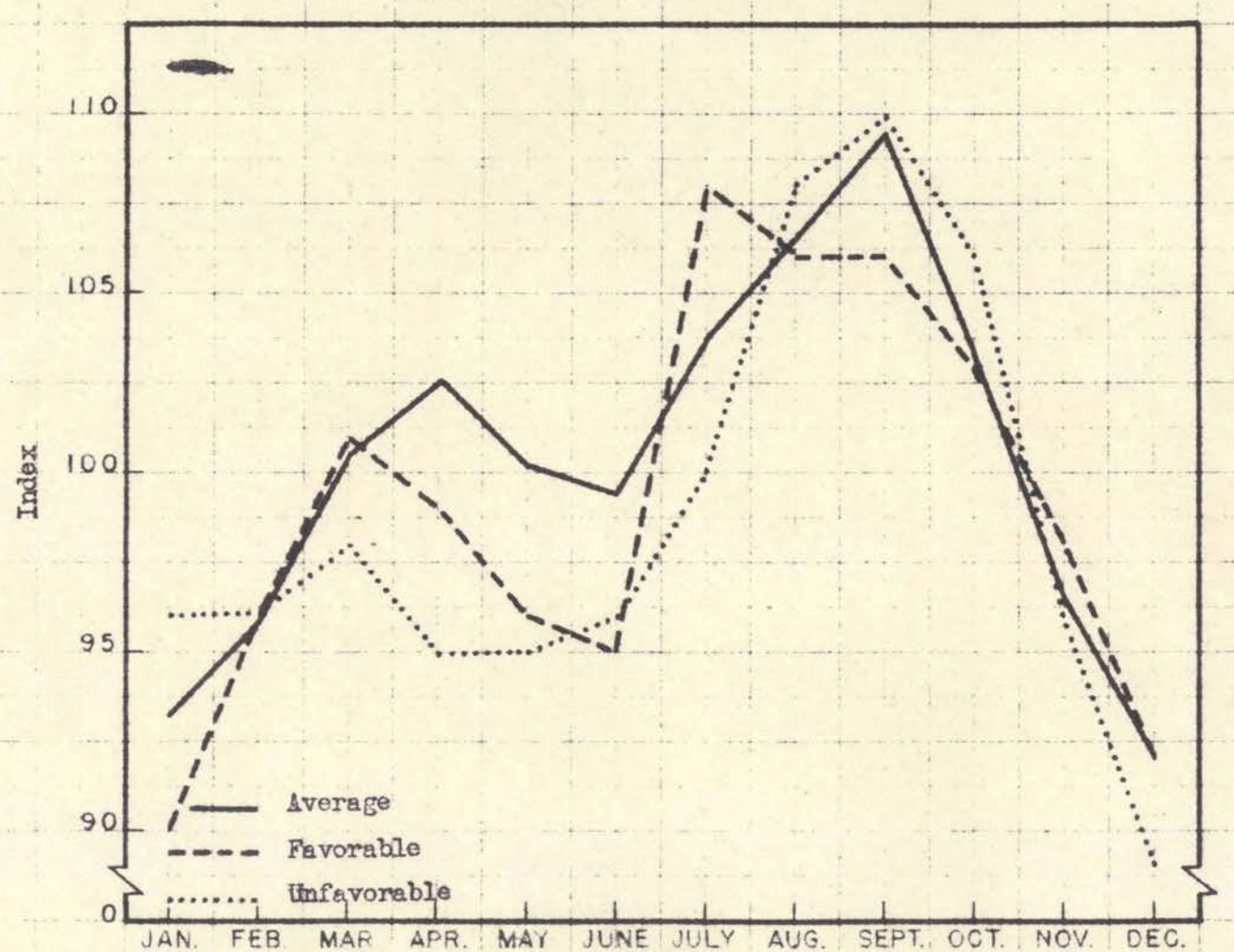
SOURCE: See Tables XXII and XXIII.

FIGURE 11. INFLUENCE OF PRICE LEVEL CHANGES AND CHANGES IN THE UNITED STATES HOG NUMBERS ON THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, 1910-1940



SOURCE: See Tables XXIV, XXV, XXVI, and XXVII.

FIGURE 12. SEASONAL VARIATION IN THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS 1/ DURING YEARS OF FAVORABLE, UNFAVORABLE, AND MEDIUM HOG-CORN RATIOS IN OKLAHOMA, 1910-1940



SOURCE: See Tables XXIX, XXX, and XXXI.

1/ Based on percentages of trend.

Table II. Influence of the Hog-Corn Ratio on the Weights of Hogs Slaughtered in the United States, 1924-1940.

Year	Weight	Hog-Corn Ratio
1924	222	8.2
1925	226	11.3
1926	235	16.9
1927	233	12.7
1928	229	9.9
1929	232	10.8
1930	231	11.4
1931	233	11.9
1932	230	12.6
1933	231	10.5
1934	221	7.0
1935	227	11.3
1936	226	12.8
1937	225	11.0
1938	233	15.8
1939	235	13.4
1940	232	9.2

SOURCE: Livestock, Meats and Wool Market Statistics and Related Data, 1940, Agricultural Marketing Service, United States Department of Agriculture, pp. 72 and 87.

than during the years when the ratio was lower.

In referring to Figure 12, it is noted that the index of price during October, November, and December for the years having a favorable hog-corn ratio was above the price for those years having unfavorable ratios. However, during January the price for those years having a favorable ratio was below the years having an unfavorable price ratio. Also there was a more prolonged seasonal decline during May and June during the years having the favorable hog-corn ratio. This shows the influence of favorable hog prices in prolonging marketings. Also during the years having a favorable hog-corn ratio there is a sharper rise in price after the two seasonal low points occurring in January and June. This suggests the tendency for producers to bunch their marketings to a greater extent during years having more favorable prices and then cut them off more sharply in February and March causing a sharper increase in price during these months. The same effect is apparent in June and July. The price rises more abruptly in July when the prices are favorable.

Most of the influence of the hog-corn ratio is apparent in its influence on hog numbers the year following. A favorable ratio in the fall will encourage heavier breeding resulting in a larger pig crop the following spring, and larger numbers the following fall. These increasing numbers tend to depress the prices of hogs marketed during the marketing season beginning about a year from the time when the favorable hog-corn ratio existed.

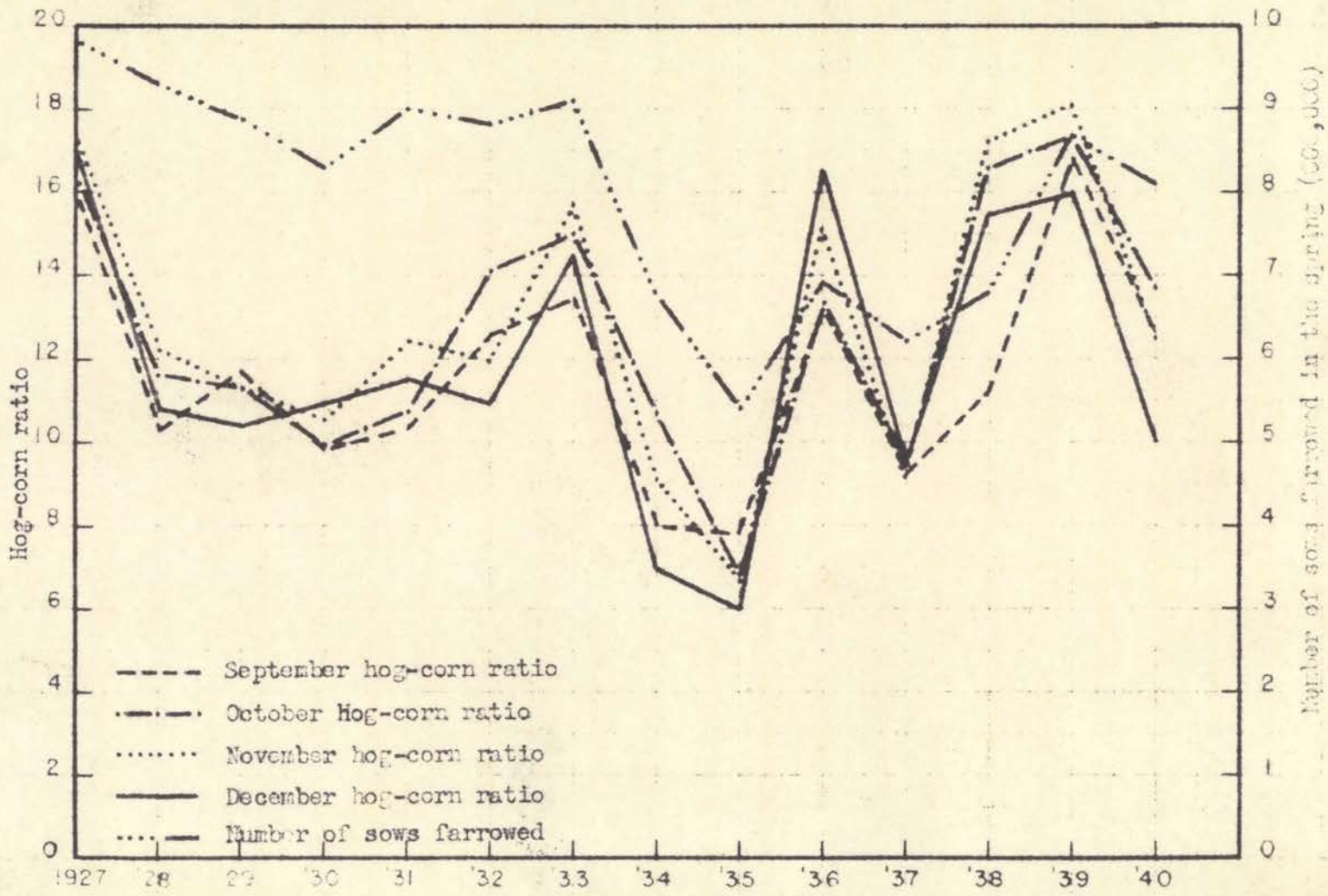
The effect of the hog-corn ratio during the breeding season upon hog numbers for the following year is also shown in Figure 6. During the period from 1910 to 1940, there was a definite correlation between the hog-corn ratio and the numbers the following year. However, during the

first world war period when prices were high, numbers remained large even though the hog-corn ratio was low. Also during 1937 numbers remained low because the corn crops during 1934, 1935, and 1936 were so small that farmers could not increase their hog numbers in response to the favorable prices.

An analysis was made in an attempt to determine in which month the hog-corn ratio was more closely correlated with the sows kept for farrow the following spring. The number of sows farrowed determines to a great extent the spring pig crop. (Figures 13 and 14.) The regression coefficient for a straight line trend was highest during the month of September indicating that a high ratio during September would likely induce a larger number of sows to farrow the following spring than a high ratio during the other months. However, by closer examination it will be seen that the items for September as plotted in Figure 14 are more scattered about the trend line (both the straight line and the free-hand curved trend line) than during November or December which had smaller regression coefficients. The standard error of estimate, which is a measure of this scatter was smaller for November than it was for September which indicates that the number of sows to farrow in the spring was more closely related to the ratio in November than it was for September. This is logically true since the activities of the farmer seem to be influenced more by conditions at the time he plans or begins an activity than by the conditions of the past. Both have an influence but more is due to the immediate conditions. The price relationships during the breeding season of November and December are most influential.

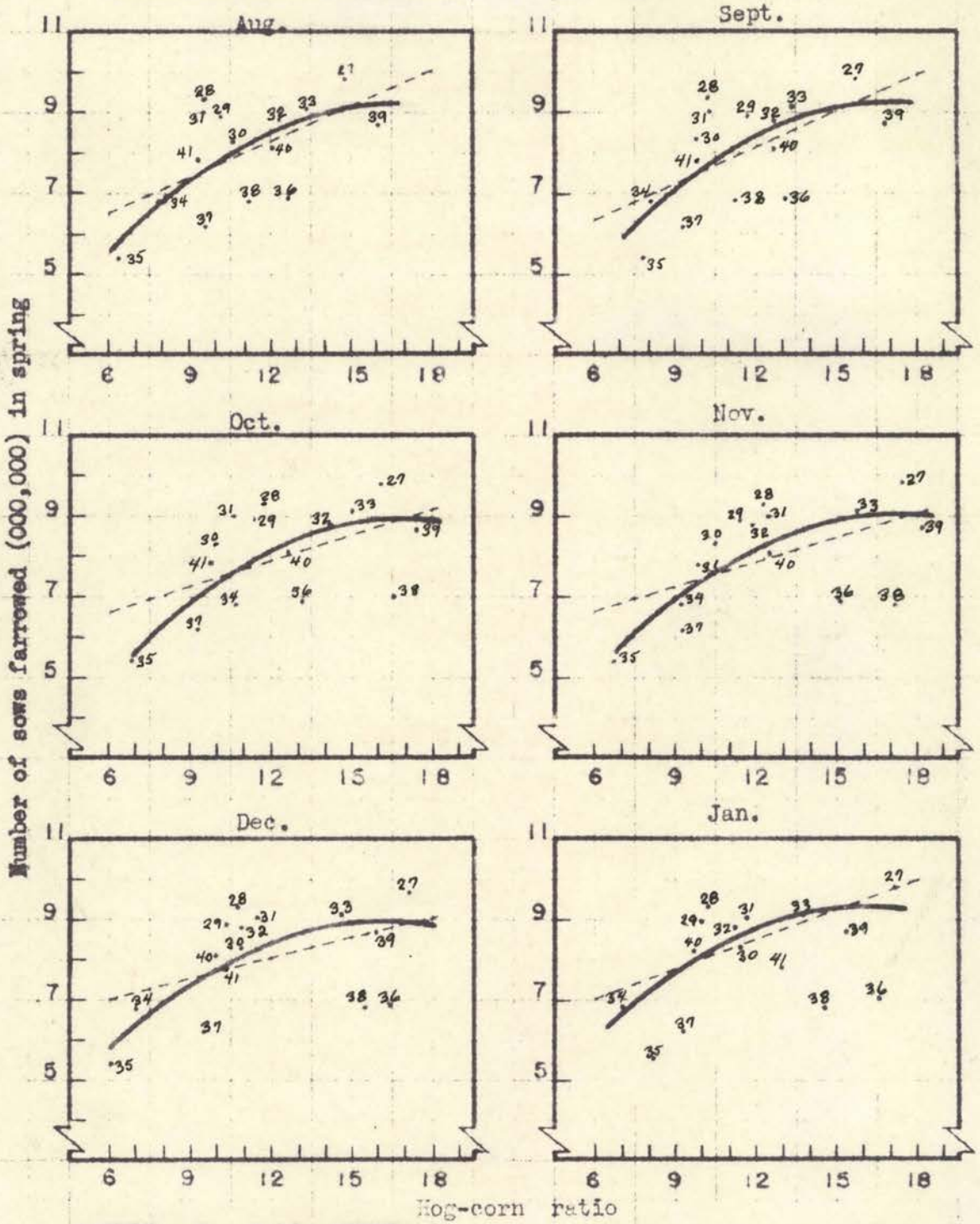
The reason for the lower regression coefficients for November and December apparently lies in the fact that the numbers of sows farrowed

FIGURE 13. THE UNITED STATES HOG CORN RATIO FOR SEPTEMBER THROUGH DECEMBER AND THE NUMBER OF SOWS FARROWING THE FOLLOWING SPRING, 1926-1940



SOURCE: See Table XXXII.

FIGURE 14. THE INFLUENCE OF THE HOG-CORN RATIO ON THE SOWS KEPT FOR FARROW THE FOLLOWING SPRING, AUGUST THROUGH JANUARY, 1927-1941



SOURCE: See Table XXXII.

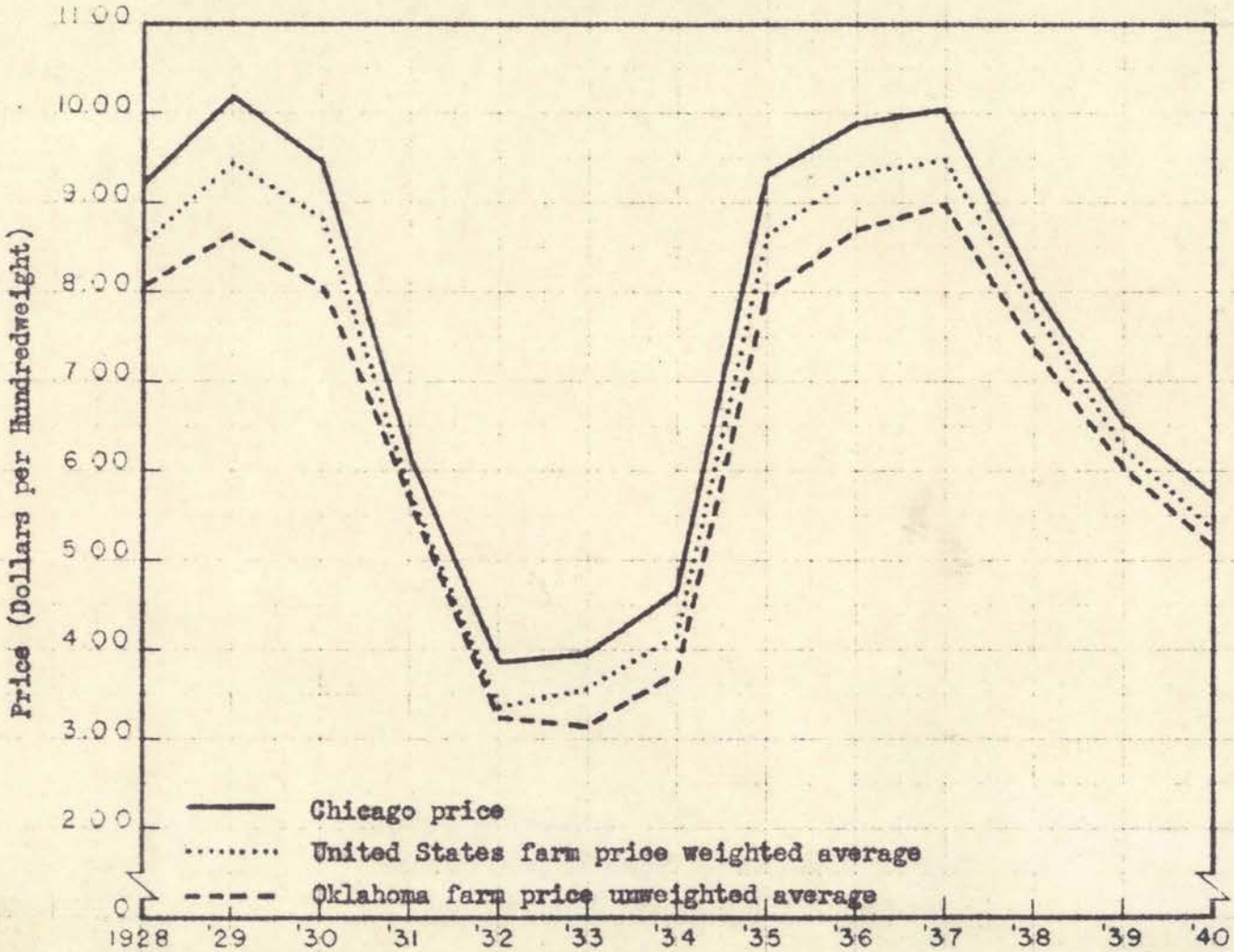
during the springs of 1936 and 1938 as indicated by the hog-corn ratios were far out of line when compared to the other years. (See Figure 14.) The numbers indicated by the hog-corn ratios for November and December of those years were very low, but the actual number far surpassed indications. Data and time available are not sufficient to reveal the cause of this situation but an examination of corn and hog prices during these years shows that the increase in the hog-corn ratios during the fall of 1935 and the fall of 1937 were due to a greatly reduced corn price rather than a large increase in hog prices. This would suggest that farmers respond more slowly to an increase in the hog-corn ratio which is due to a decrease in corn prices than they do to an increase in the ratio which is due to an increase in hog prices. Also the ratios during those years were increasing at a fast rate which might suggest an unstable condition to the hog producers.

ANALYSIS OF THE DEVIATIONS OF THE OKLAHOMA PRICE OF HOGS FROM THE UNITED STATES PRICE AND THE AVERAGE MONTHLY PRICE PAID AT CHICAGO

In studying the deviations of Oklahoma farm prices of hogs from the United States farm prices and the Chicago average prices, a comparison is necessary in order to distinguish the general relationship found among them. All three fluctuate similarly, but the spread between them tends to narrow when hog prices are low. (See Figure 15.) There is a greater degree of similarity between the average seasonal variations of the Oklahoma and United States farm prices of hogs than between either of these and the Chicago average price. However, there are some significant differences between the Oklahoma and the United States prices. During the months of July, August, September, and October when the heavier weight hogs are being marketed (a large part of which are old sows), the Chicago price is not a great deal higher than the United States farm price, nor is it very much higher than the Oklahoma farm price. However, during the other months this relationship changes. During February, March, April, May, and June, the months when the largest proportion of top hogs are marketed, the Chicago price is a great deal higher than either the United States farm price or the Oklahoma farm price. (Figure 16.)

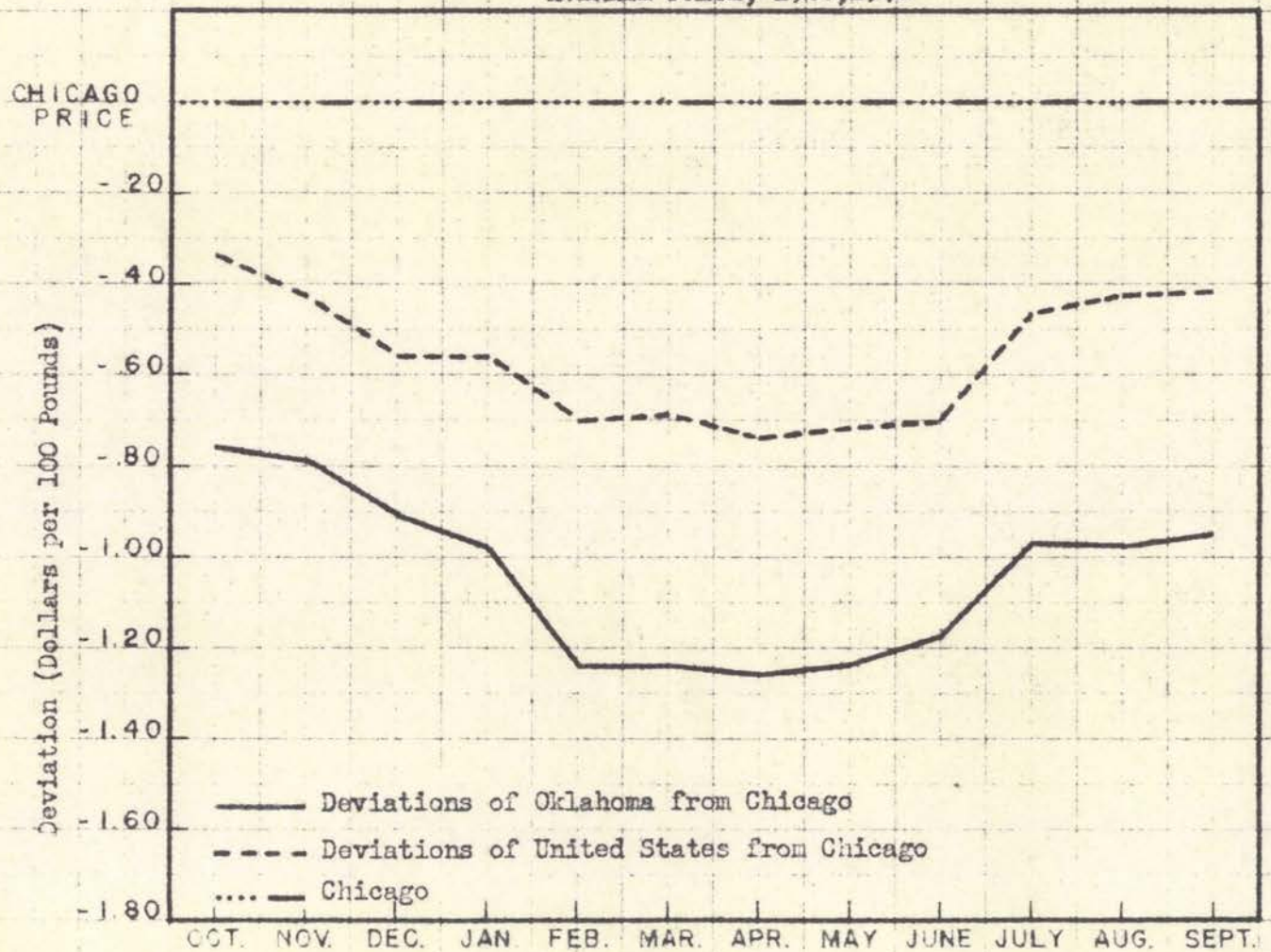
The Chicago prices are weighted average prices of packer and shipper purchases, and they reflect the grades of hogs that dominated the market during the month for which the quotation was made. There is considerable difference between the farm prices and the Chicago average price. Since the deviations are wider during the months when the most top hogs are going to market, it may be assumed that the farm prices do not fully reflect the grade of hogs being marketed. There is probably a tendency for reporters to report the prices for about the same grade from month to month. Even

FIGURE 15. A COMPARISON OF THE AVERAGE CHICAGO PRICE, THE UNITED STATES PRICE, AND THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, 1928-1940



SOURCE: See Tables V and XXXIV; "Livestock Meats and Wool Market Statistics and Related Data," Op. cit., p. 75.

FIGURE 16. SEASONAL VARIATION IN THE DEVIATIONS OF THE UNITED STATES PRICE AND OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, FROM THE CHICAGO AVERAGE PRICE, 1928-1940



SOURCE: See Tables XXXV and XXXVI.

though this is the case it does not mean that the farm prices are not indicative of actual price changes but rather they should be even more indicative. A price weighted by grades might fail to show actual price changes. If lower grade hogs are going to market, a weighted price could decline even though the price of each grade was steady.

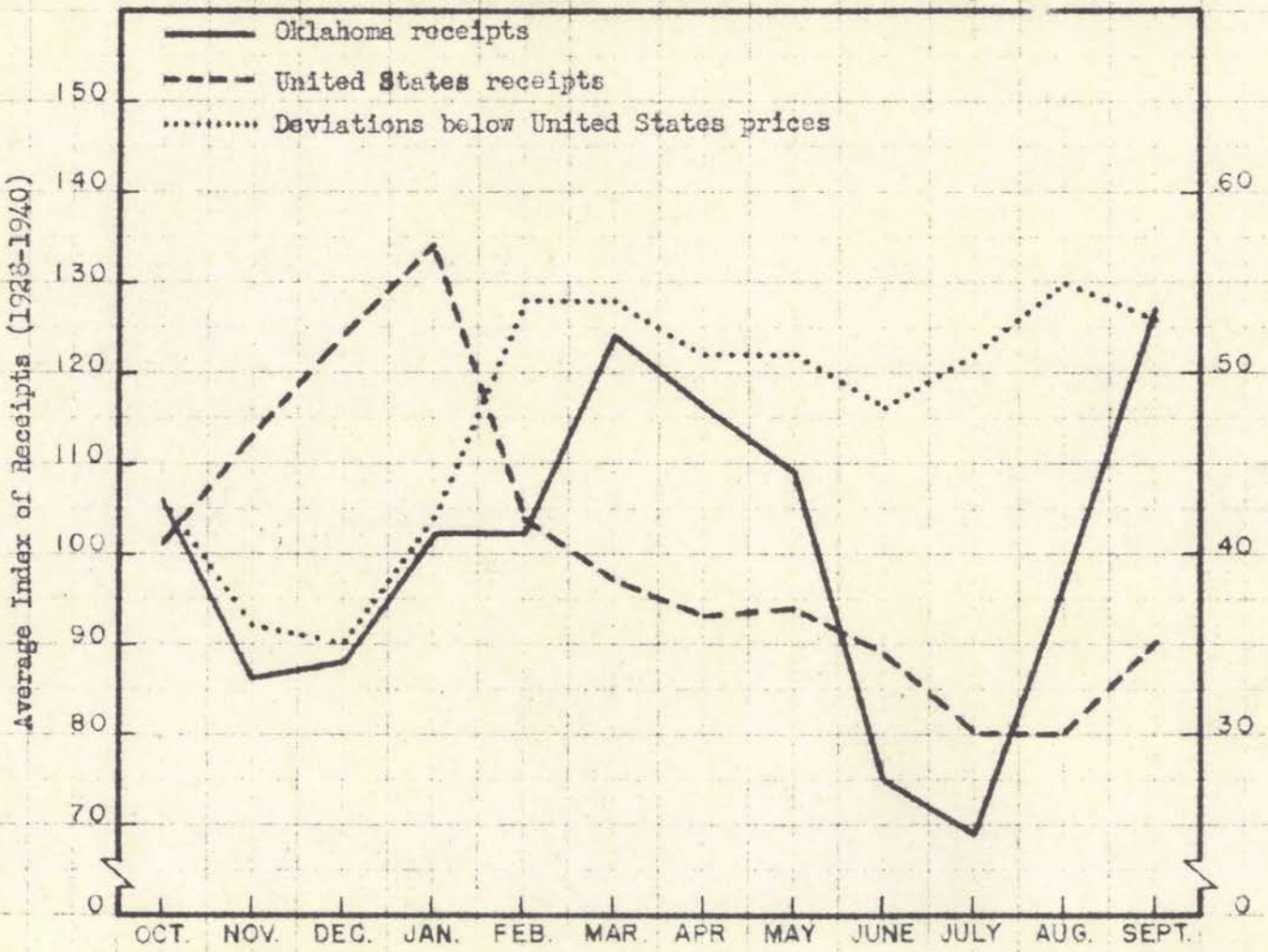
It is possible that the average Chicago price does not represent the grades marketed for the country as a whole but this is not likely.

Deviations of the Oklahoma Price from the United States Price Received by Farmers. In making the analysis of the deviations of Oklahoma prices from the United States and Chicago prices, only the years 1928-1940 were used in all but one part of the analysis because the receipts of hogs at the various markets from Oklahoma were available for those years only. The seasonal variation of the deviations of United States farm prices from the Oklahoma farm prices is definitely associated with the difference between the seasonal variation of receipts of hogs from Oklahoma and the receipts at the main markets in the United States. (See Figure 17.)

There is a considerable difference between the seasonal variation of receipts from Oklahoma and at the United States markets. For the country as a whole the bulk of receipts comes during the months of October, November, December, January, and February. However, this is not the case in Oklahoma. The bulk of receipts from Oklahoma comes during March, April, May, September, and October.

This accounts for the variation in the month-to-month deviations of the Oklahoma prices from those of the United States. During the months of November, December, and January, United States receipts were high and Oklahoma receipts were low. When this was the case, Oklahoma prices were high in relation to the United States prices. This is indicated by the small deviations for these months. During those months

FIGURE 17. THE SEASONAL VARIATION IN THE DEVIATION OF THE OKLAHOMA PRICE OF HOGS FROM THE UNITED STATES PRICE RECEIVED BY FARMERS RELATED TO RECEIPTS OF HOGS FROM OKLAHOMA AND THE UNITED STATES, 1928-1940



SOURCE: See Tables XXXIII, XLVI, and XLVII.

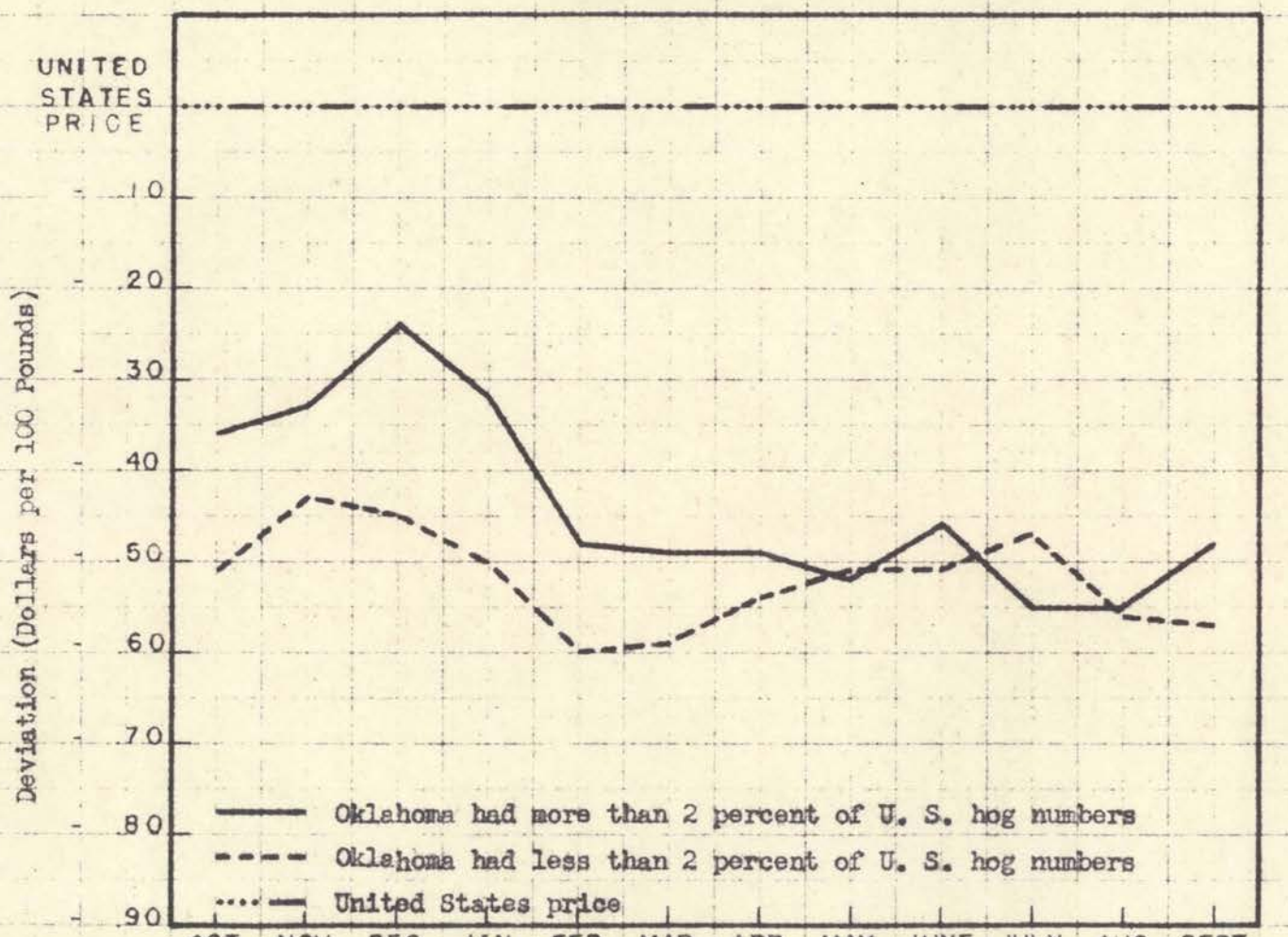
for which the receipts from Oklahoma were heavy in relation to United States receipts, the Oklahoma price fell in relation to the United States price and the deviations were greater. (See Figure 17.)

The number of hogs in Oklahoma in relation to those in the United States further explains the relationship between the production of hogs in Oklahoma with the deviations of Oklahoma prices from United States prices. During years in which Oklahoma numbers amounted to less than two percent of the United States numbers, the deviations did not increase the usual amount as the season progressed. In other words, the Oklahoma price was high in relation to the United States price. The opposite influence took place when numbers were high. The Oklahoma price declined. (See Figure 18.)

The seasonal variation in the deviations is influenced also by the amount of feed produced in Oklahoma in relation to that produced in the United States. When Oklahoma produced two percent or more of the corn equivalent units of feed grains produced in the United States, the Oklahome hog prices had a tendency to go down in relation to the United States prices and the deviations increased. (See Figure 19.) During those years there was a strong demand for hogs in the fall since feed supplies were large. As a result, the Oklahoma price was high. As the season progressed and the hogs were marketed, the Oklahoma price declined, and the deviations increased. Marketings were held off to a later date and more hogs were fed to heavier weights. The opposite effect took place when the feed grain production was low. The Oklahoma price remained high in relation to the United States price.

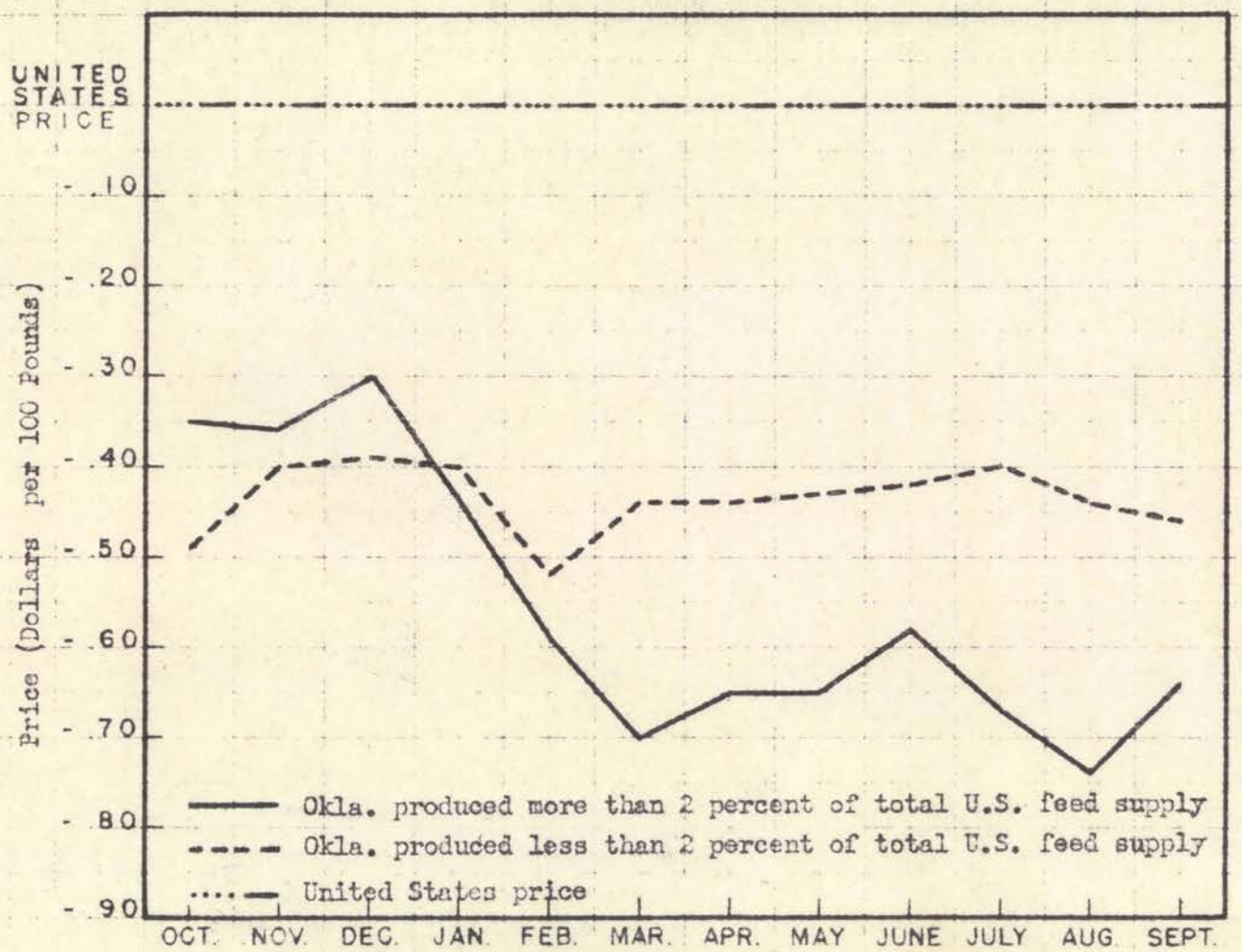
The influence of both factors (supply of feed grains and hog numbers) taken together is shown in Figure 20. When hog numbers were small

FIGURE 18. RELATIONSHIP BETWEEN OKLAHOMA HOG NUMBERS AND THE DEVIATIONS OF THE OKLAHOMA PRICE OF HOGS FROM THE UNITED STATES PRICE RECEIVED BY FARMERS, 1928-1940



SOURCE: See Tables XXXVIII and XXXIX.

FIGURE 19. RELATIONSHIP BETWEEN OKLAHOMA FEED SUPPLIES AND THE DEVIATION OF THE OKLAHOMA PRICE FROM THE UNITED STATES PRICE OF HOGS RECEIVED BY FARMERS, 1923-1940

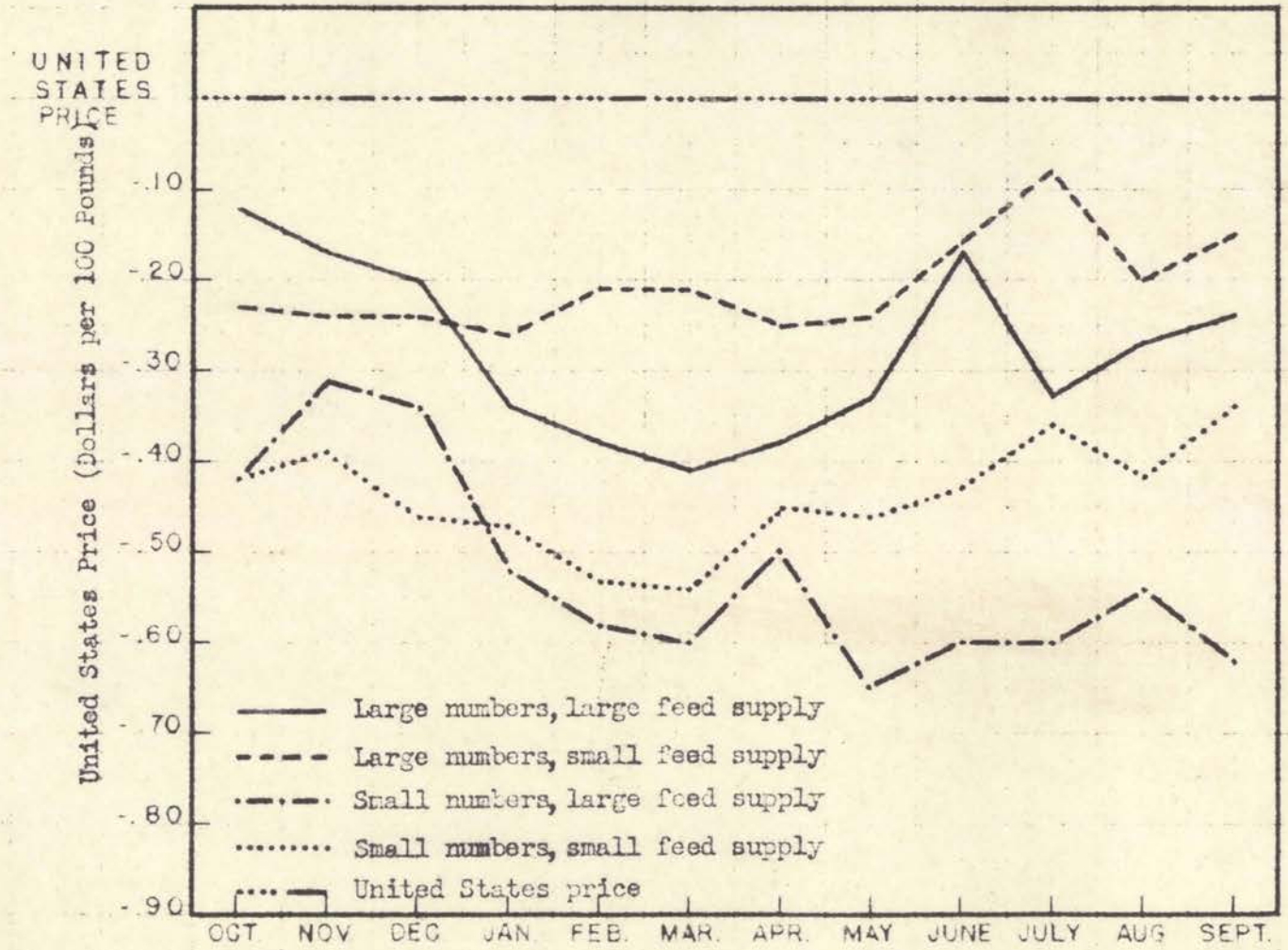


SOURCE: See Tables XL and XLI.

and feed supplies were large, the Oklahoma price went up in relation to the United States price during October and November. When numbers were large and feed supplies were small, the price declined.

If the past 30 years are divided into three groups, it will be found that hog numbers in Oklahoma during 1921-1930 were higher than for the previous ten years or the succeeding ten years. As would be expected the deviations of United States prices varied with the numbers. For the period from 1910-11 through 1919-20 and the period 1930-31 through 1939-40, the deviations averaged $.19 and $.40, respectively. During the period 1920-21 through 1929-30, they averaged $.62.

FIGURE 20. INFLUENCE OF BOTH HOG NUMBERS AND FEED SUPPLIES IN OKLAHOMA ON THE DEVIATION OF THE OKLAHOMA PRICE OF HOGS FROM THE UNITED STATES PRICE RECEIVED BY FARMERS, 1928-1940



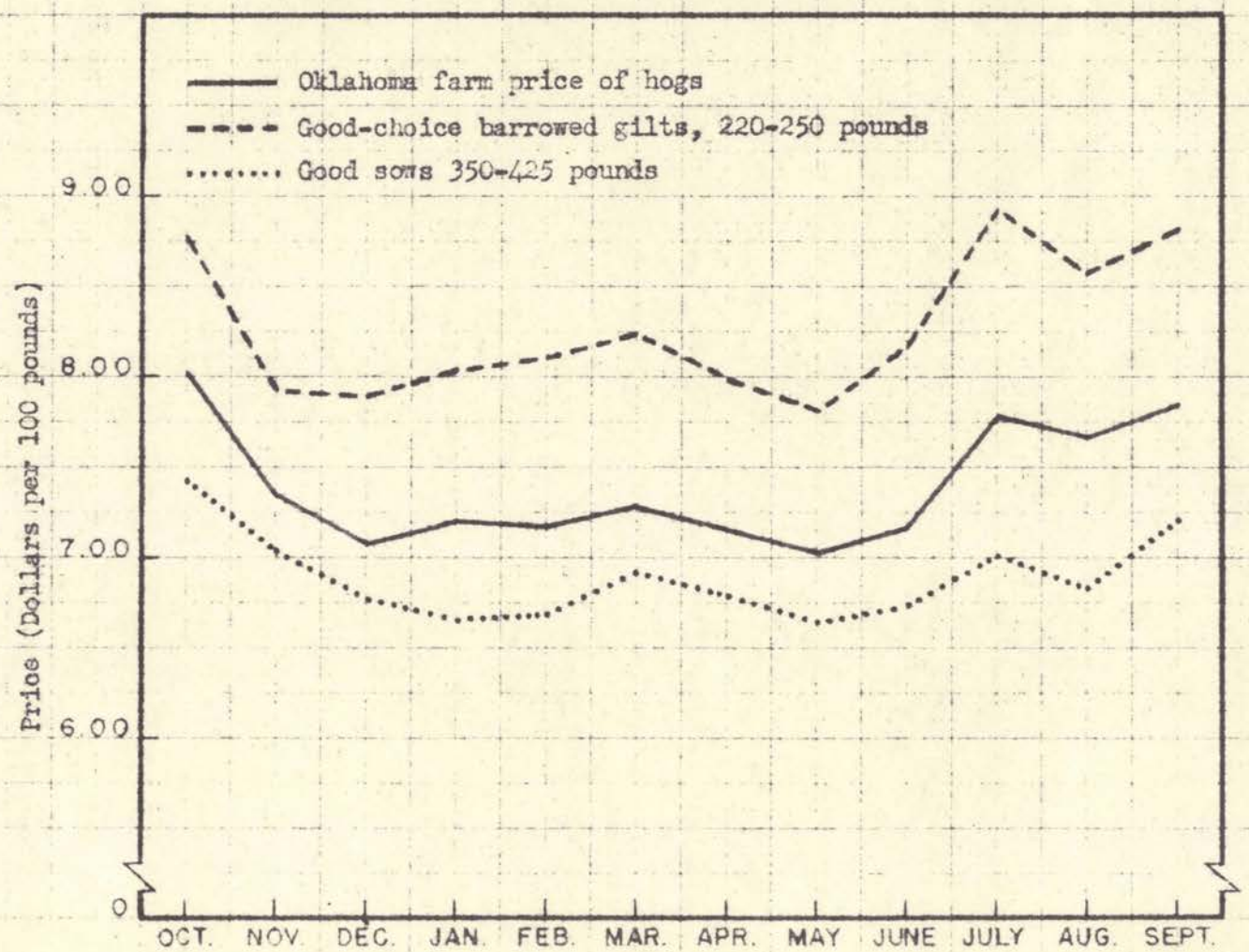
SOURCE: See Tables XLII, XLIII, XLIV, and XLV.

OKLAHOMA CITY PRICE OF HOGS COMPARED WITH THE OKLAHOMA PRICE RECEIVED BY FARMERS

According to the data regularly supplied to the Agricultural Marketing Service of the United States Department of Agriculture, the Oklahoma City market receives a larger number of Oklahoma hogs than any other market. This being the case it should be a good indicator of the marketings from Oklahoma, and the prices received over the State. During the marketing seasons 1935-1936 through 1939-40 (those years during which price data on the Oklahoma City market were available), the prices on the Oklahoma City market for the 15th of each month followed quite closely the Oklahoma farm prices for the corresponding months. (See Figure 21.) The prices used for the Oklahoma City market quotations were the mid points of the price ranges for the grades used. The grades used were good to choice, 220 to 250 pound barrows and gilts and good 350 to 425 pound sows.

During the last five years the Oklahoma farm price has fluctuated more closely with the price of barrows and gilts than with sows. The seasonal pattern of good to choice 220-250 pound barrows and gilts at Oklahoma City has been about the same as that of the Oklahoma farm price, except, of course, it has held a higher level because of the fact that the farm price is not the price of the better grades alone and it consists of local prices. The prices changed in the same direction for all of the months except February, but during this month all three prices were practically the same as those for January. The high month for top hogs at Oklahoma City was July. This was the result of the unusually low receipts of hogs at Oklahoma City during July and also a larger part of this small number were sows or lower grade hogs. This low supply of barrows and gilts pushed the price up.

FIGURE 21. SEASONAL VARIATION IN THE OKLAHOMA PRICE OF HOGS RECEIVED BY FARMERS, AND THE OKLAHOMA CITY PRICE OF HOGS (BARROWS AND GILTS, 220-250 POUNDS; AND GOOD SOWS, 350-425 POUNDS), 1935-36 THROUGH 1939-40



SOURCE: See Tables XLVIII and XLIX.

The high month for the Oklahoma farm price during these years was October. The low months for both were December and May.

The Oklahoma City price of good 350-425 pound sows had a seasonal variation similar to that of the Oklahoma farm price, but there was a large spread between the two during the months of July, August, and September--the months when the bulk of sows which farrowed spring pigs were marketed. The high month, October, was the same for both. However, January and May were the lowest months for sows.

The spread between the price of barrows and gilts and sows at Oklahoma City was greatest during the months of June, July, August, and September as would be expected since a larger proportion of sows are are marketed then. Also the high month for sows was in October as compared to July for barrows and gilts. The spread was narrow in October, November, and December but widened again in January and February with the rise in the price of barrows and gilts.

ANALYSIS OF FACTORS ASSOCIATED WITH LONG TIME FLUCTUATIONS IN HOG PRICES

In order to give the reader a better understanding of short time changes in hog prices, it is necessary to analyze briefly those factors which influence the level of hog prices or the long time changes as well.

The factors affecting the level of hog prices are numerous but among the most important of these are (1) the production of hogs and pork, (2) consumer purchasing power, (3) exports and foreign demand, and (4) supplies and prices of competing products, particularly beef.[5/] Conditions causing an increase in the numbers of hogs raised and slaughtered will usually result in lower hog prices. On the other hand, conditions causing an increase in the demand, either domestic or foreign will in turn cause more favorable prices if supply conditions do not counteract the improvement in demand.

Probably the greatest difference between the factors influencing the seasonal and the year to year changes in hog prices is that the supply factors are more significant in determining the usual seasonal movement. Demand does not have as pronounced a seasonal movement as supply.

The seasonal movement in prices is dependent to a large extent upon the phase of the hog price cycle, which in turn is due to the cycles in hog production, and the trend in price level. It is the seasonal variation of the factors determining the level of hog prices which accounts for the deviation from the average seasonal variation of hog prices.

5/ A brief analysis of the factors affecting hog prices was made by G. P. Collins, in "Guide Posts for Farmers' Analysis of Hog Prices", Current Farm Economics, Oklahoma Agricultural Experiment Station, Vol. 13, No. 4, August, 1940, p. 90.

In this analysis the annual average Oklahoma farm price of hogs was correlated with (1) the adjusted production of pork from hogs slaughtered under federal inspection plus cold storage holdings for each of the years in the analysis,[6] (2) the annual index of factory payrolls, and (3) the exports of pork and lard. The index of factory payrolls is an indication of the domestic consumer purchasing power and exports indicate foreign demand.

Correlation of the Oklahoma Price of Hogs with Various Factors. The graphic correlation of the supply of pork as indicated by federally inspected slaughter plus cold storage holdings, the index of factory payrolls, and exports of pork and lard shows that a large part of the variation in Oklahoma hog prices is due to these three factors.[7] (See Figure 22.) The correlation is not as high as that which probably would have been found between United States prices and the same factors, but it does bring out the relationship which exists between Oklahoma prices and the factors determining prices for the country as a whole. Even though Oklahoma prices do not fluctuate the same as the United States prices as can be seen by the changes in the deviations between the two prices, they do not vary greatly. If the Oklahoma price gets out of line, shipments into or out of the State would bring the price back to near the usual relationship.

During years prior to 1926, foreign demand and the exports of pork were large enough to influence the price of hogs a great deal, but in recent years exports have been too low to be of major importance. Since

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6/ Adjusted by the ratio of (1) total production of pork from the total United States slaughter to (2) the production of pork from federally inspected slaughter.

7/ A similar correlation with United States farm prices was made by F. L. Thomsen, Agricultural Prices, pp. 221-222.

FIGURE 22. CORRELATION OF THE OKLAHOMA ANNUAL PRICE OF HOGS RECEIVED BY FARMERS WITH THE SUPPLY OF PORK IN THE UNITED STATES, THE INDEX OF FACTORY PAY-ROLLS, AND THE EXPORTS OF PORK AND LARD, 1921-1940

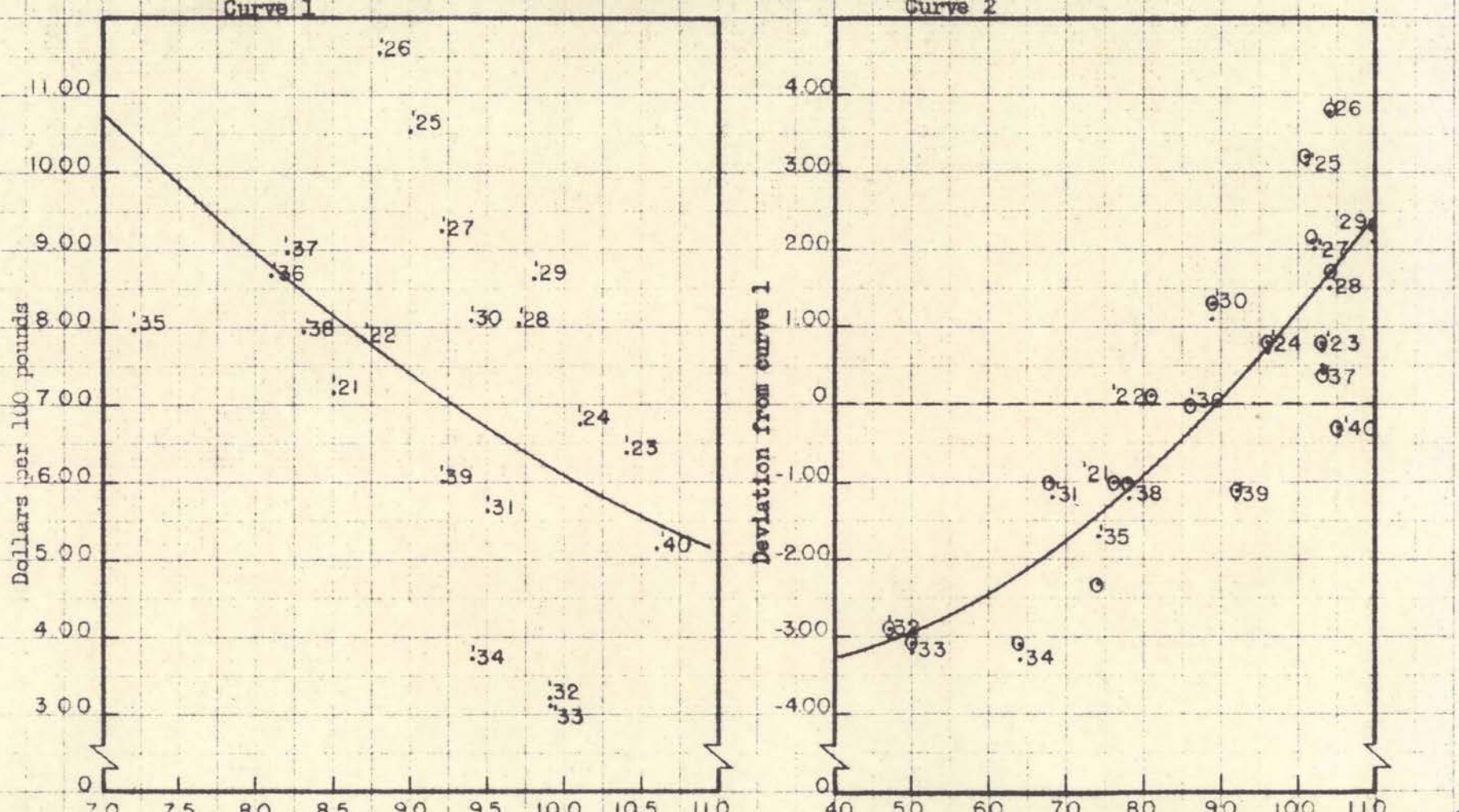

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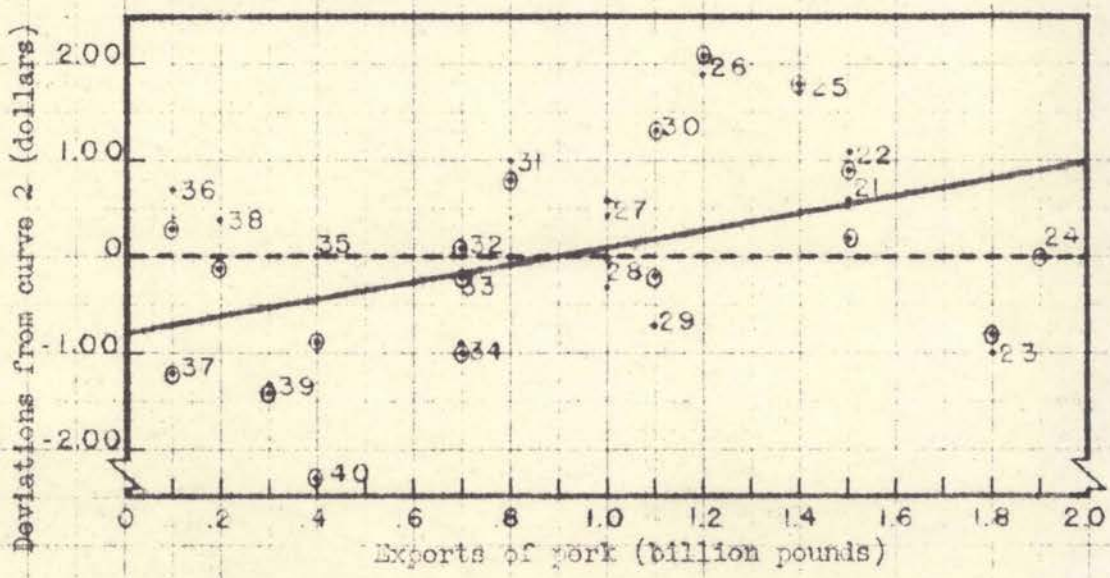
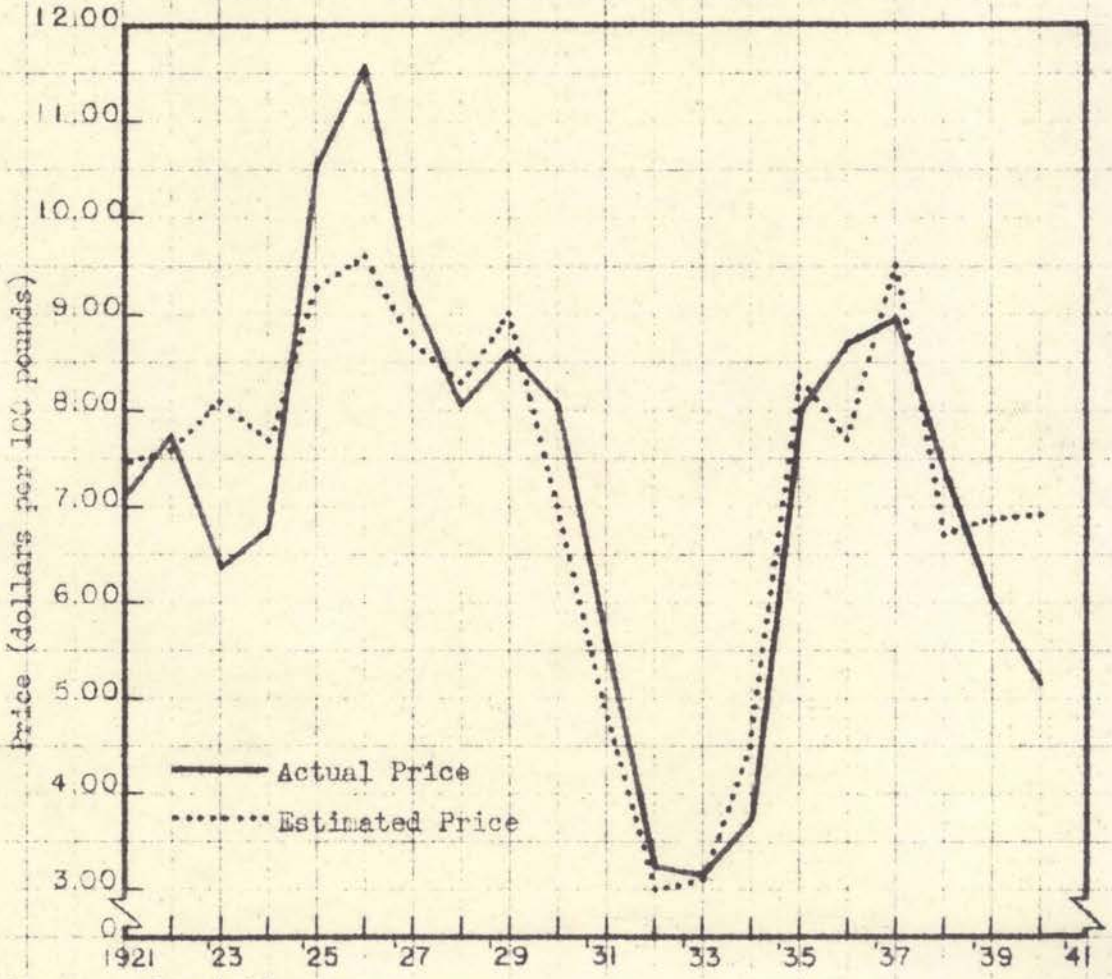
FIGURE 22. (CONTINUED)



Estimated 1/ and Actual Price of Hogs for Oklahoma



Source: See table LVI.

1/ Estimated from the curves shown in the correlation and the values of the factors for each year.

1930 less than three percent of the pork produced in the United States has been exported. Before 1926, particularly during the last world war, exports constituted a much larger part of our production, reaching a peak of 23 percent in 1919. (See Table III.) During the war years, high exports were partially responsible for the high prices. If exports should increase during the present war period, prices could be expected to react similarly again. Exports during this war will probably not reach the amounts during the first war because of more hazardous shipping. However, government purchases have apparently caused some increase in prices although the increase in the general price level has undoubtedly been the major factor.

Table III. Percentages of Total Pork Production Exported, 1910-1940

Year	Percent	Year	Percent
1910	5.7	1926	5.7
1911	5.2	1927	3.8
1912	7.0	1928	3.4
1913	6.0	1929	3.5
1914	6.0	1930	3.9
1915	7.9	1931	2.2
1916	12.2	1932	1.4
1917	14.7	1933	1.3
1918	15.5	1934	1.8
1919	23.1	1935	2.1
1920	15.0	1936	.9
1921	9.8	1937	.9
1922	8.4	1938	1.0
1923	8.6	1939	1.3
1924	9.8	1940	1.4
1925	7.2		

SOURCE: Computed from data in Livestock Meats and Wool Market Statistics and Related Data, 1940, U. S. D. A., A. M. S., pp. 57 and 100.

Lard exports have likewise fallen below earlier levels and recently have not constituted a large enough proportion of total pork and lard production to be a great price determining factor.

SUMMARY

Briefly, the following seasonal patterns may be expected from the following particular conditions:

1. A seasonal pattern characterized by rising prices throughout most of the year, may be expected when hog numbers are decreasing.
2. A seasonal pattern having declining prices during most of the months is associated with increasing hog numbers.
3. Large corn crops have a tendency to prolong the seasonal trough in the price of hogs and are associated with a downward movement of prices.
4. Small corn crops bring about a trough in the seasonal pattern earlier in the marketing season and are generally followed by rising hog prices.
5. The seasonal movement of prices is influenced by changes in the price level. A rising price level causes rising hog prices. A falling price level results in decreasing hog prices.
6. A high or favorable hog-corn ratio in the fall months is associated with increasing numbers the following year and a downward movement in prices the next fall and marketing season.
7. A low hog-corn ratio in the fall usually precedes decreasing hog numbers the following year and generally a rising seasonal movement during the next fall.
8. When Oklahoma has a smaller proportion of the United States hog numbers than usual, the Oklahoma price will be nearer to the United States price than when Oklahoma has a larger proportion of hog numbers.

9. If Oklahoma's feed grain supply is high in relation to that in the United States, the price of hogs may be expected to be low in relation to that for the United States as a whole. If the Oklahoma feed supply is low, the price of hogs will be high in relation to the United States price.

APPENDIX

Computation of Index of Average Seasonal Variation. Part of the table which was made in calculating the percentages of trend for hog prices is shown in Table IV. Percentages of trend for the other years were computed in the same manner and the results are found in Table VI.

Table IV. Moving Averages and Percentages of Trend of the Oklahoma Price Received by Farmers for Hogs, by Months, 1911.

Year	Month	(1) Farm Price (Dollars)	(2) 12 Mo. Moving Total	(3) 24 Mo. Moving Total	(4) 24 Mo. Moving Average	(5) Percentage of Trend
1910	July	8.00				
	Aug.	7.50				
	Sept.	8.30				
	Oct.	8.10				
	Nov.	7.60				
	Dec.	7.00				
1911	Jan.	7.20	83.10	163.60	6.82	106
	Feb.	6.90	80.50	159.80	6.66	104
	Mar.	6.30	79.30	156.60	6.53	96
	Apr.	5.60	77.30	152.20	6.34	88
	May	5.30	74.90	147.70	6.15	86
	June	5.30	72.80	143.90	6.00	88
	July	5.40	71.10	140.40	5.85	92
	Aug.	6.30	69.30	137.20	5.72	110
	Sept.	6.30	67.90	135.10	5.63	112
	Oct.	5.70	67.20	135.50	5.65	101
	Nov.	5.50	68.30	137.90	5.75	96
	Dec.	5.30	69.60	140.40	5.85	91
1912	Jan.	5.40	70.80			
	Feb.	5.50				
	Mar.	5.60				
	Apr.	6.70				
	May	6.60				
	June	6.50				

SOURCE: Oklahoma prices from Oklahoma Farm Price Statistics, 1910-38, Trimble R. Hedges and K. D. Blood, Oklahoma Agricultural Experiment Station Bulletin No. 238, p. 34.

The 12 month moving totals shown in Column (2) center between the months. In order to get totals which centered on the months, the two 12 month totals which preceded and followed each month were added in order to get a 24 month total centering on the month. Moving averages

were then computed by dividing the 24 month moving totals by 24. The percentages of trend are the monthly prices divided by the 24 month moving averages for the corresponding months. After the percentages of trend were computed and tabulated as are found in Table III, averages for each month of the period were computed. These averages were then adjusted so that the total for the 12 months would equal 1200.0. This was done by:

(1) Adding the straight averages (found at the bottom of Table VI) which equaled 1195.2 and

(2) Multiplying each of the straight averages by the fraction $\frac{1200.0}{1195.2}$.

The indexes of average seasonal variation of the other factors found in the following tables were computed by the same method.

Index of Irregularity. The standard deviation of the percentages of trend for each month were computed and are found at the bottom of Table VI. These are used for the index of irregularity.

Table V. Oklahoma Price Received by Farmers[1/], for Hogs 1910-1940
(Dollars per 100 Pounds)

	January	February	March	April	May	June	July	August	September	October	November	December	Average
1910	7.30	7.50	8.90	9.10	8.20	8.20	8.00	7.50	8.30	8.10	7.60	7.00	7.97
1911	7.20	6.90	6.30	5.60	5.30	5.30	5.40	6.30	6.30	5.70	5.50	5.30	5.92
1912	5.40	5.50	5.60	6.70	6.60	6.50	6.60	7.20	7.80	7.80	7.20	7.00	6.66
1913	6.70	7.00	7.50	8.00	7.40	7.70	7.70	7.70	7.60	7.40	7.10	6.90	7.39
1914	7.10	7.50	7.50	7.60	7.30	7.10	7.30	7.90	7.80	6.90	6.60	6.40	7.25
1915	6.30	6.00	5.90	6.00	6.40	6.50	7.00	6.60	6.50	6.90	6.10	5.90	6.34
1916	6.00	6.80	8.00	8.30	8.50	8.40	8.50	8.60	9.40	8.70	8.90	8.70	8.23
1917	9.20	10.50	12.80	13.60	13.80	13.60	13.40	14.00	15.90	16.30	15.10	15.60	13.65
1918	14.90	14.80	15.10	15.30	15.50	15.20	15.50	16.40	16.90	16.60	15.50	15.50	15.60
1919	15.30	15.10	15.70	17.50	18.00	17.80	19.10	18.90	16.00	14.10	13.10	12.40	16.08
1920	12.80	12.90	12.70	12.70	12.70	12.80	13.30	13.40	13.80	12.70	9.80	8.40	12.33
1921	8.10	7.80	8.00	7.10	6.90	6.30	7.70	8.20	6.90	6.80	6.20	5.90	7.16
1922	6.20	7.60	8.40	8.50	8.80	8.90	8.50	8.00	7.50	7.50	7.20	7.10	7.85
1923	7.00	6.90	6.80	6.80	6.30	5.60	6.10	6.10	7.00	6.40	6.00	5.60	6.38
1924	5.70	5.70	5.60	5.80	5.70	5.80	5.80	8.00	7.80	8.80	8.50	8.00	6.77
1925	9.00	9.10	11.50	11.30	9.80	10.00	11.40	12.30	10.90	11.00	10.50	9.80	10.55
1926	10.50	11.40	11.20	10.90	11.30	12.40	12.80	11.70	12.40	12.20	11.60	11.70	11.59
1927	10.30	10.70	10.30	10.10	9.10	8.10	8.00	8.80	9.50	9.70	8.60	7.80	9.25
1928	7.30	7.00	6.80	6.90	8.10	8.00	8.90	9.00	10.30	9.20	7.90	7.40	8.07
1929	7.50	8.00	8.90	9.30	9.10	9.00	9.30	9.30	8.80	8.50	7.90	7.90	8.62
1930	8.00	8.50	8.60	8.30	8.20	8.40	7.70	7.70	8.60	8.10	7.80	7.10	8.08
1931	6.80	6.50	6.40	6.50	5.90	5.30	5.80	6.00	5.20	4.60	4.40	3.90	5.61
1932	3.70	3.40	3.60	3.30	2.70	2.50	3.80	3.70	3.45	3.00	2.85	2.60	3.22
1933	2.50	2.60	2.75	2.85	3.25	3.60	3.50	3.25	3.30	3.75	3.45	2.80	3.13
1934	2.80	3.30	3.40	2.90	2.75	2.95	3.40	3.85	5.50	4.60	4.45	4.70	3.72
1935	6.40	6.50	7.80	7.30	7.30	7.80	7.80	9.90	9.70	9.00	8.10	8.20	7.98
1936	8.50	8.80	8.70	9.00	8.20	8.60	8.90	9.10	9.20	8.60	8.20	8.50	8.69
1937	8.70	8.40	8.50	8.40	8.90	9.40	10.20	11.20	9.90	9.20	7.90	7.00	8.97
1938	7.20	7.30	7.80	7.50	7.00	7.50	8.00	7.40	7.60	7.20	7.00	6.70	7.35
1939	6.70	6.70	6.80	6.20	6.00	5.60	6.10	5.10	6.60	6.10	5.50	4.90	6.01
1940	4.90	4.60	4.60	4.65	5.00	4.70	5.60	5.50	5.90	5.50	5.50	5.30	5.15

SOURCE: Oklahoma Farm Price Statistics, 1910-1938, Trimble R. Hedges and K. D. Blood, Oklahoma Agricultural Experiment Station Bulletin No. 238, p. 34. Subsequent years from Mid-Month Local Price Reports, U. S. D. A., Agricultural Marketing Service, various issues.

1/ Based on reports to Agricultural Marketing Service by Price Reporters on the fifteenth of each month.

Table VI. Monthly Percentages of trend of the Oklahoma Price Received by Farmers for Hogs 1910-1940.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1910							100	94	106	107	104	99
1911	106	104	96	88	86	88	92	110	112	101	96	91
1912	91	91	91	107	102	99	98	105	112	110	100	96
1913	91	94	101	108	100	100	104	103	102	99	96	93
1914	96	102	102	103	100	98	101	111	112	101	98	96
1915	95	91	91	93	100	102	111	104	100	104	89	84
1916	84	93	107	108	108	103	102	99	104	92	90	84
1917	86	94	110	111	108	102	96	98	109	111	101	104
1918	98	96	97	98	99	97	99	105	108	105	97	96
1919	93	90	94	105	109	110	120	120	103	93	88	86
1920	92	96	97	98	99	102	110	114	122	117	94	85
1921	86	87	95	90	92	87	109	117	99	96	86	80
1922	82	100	111	111	114	114	108	101	96	98	96	98
1923	100	101	101	102	96	87	96	98	114	106	101	94
1924	96	95	92	93	88	87	84	111	103	109	101	91
1925	98	95	116	111	95	95	107	114	100	102	97	89
1926	94	102	99	96	99	107	111	101	108	107	103	97
1927	97	104	102	103	95	86	88	99	111	117	106	97
1928	90	86	83	84	100	99	110	111	125	109	92	85
1929	86	91	102	108	106	105	108	107	101	98	92	93
1930	95	103	105	101	101	103	96	97	111	107	106	99
1931	98	96	97	103	98	92	106	115	104	97	99	93
1932	92	89	98	94	80	76	120	120	115	101	96	86
1933	81	86	91	94	105	115	111	102	102	115	106	87
1934	88	103	103	84	78	81	88	93	123	95	85	84
1935	107	101	114	101	97	99	97	120	116	106	94	94
1936	97	100	100	104	95	99	102	105	106	100	95	98
1937	99	94	94	92	98	104	114	127	113	106	92	83
1938	88	92	101	100	94	102	109	102	105	101	100	97
1939	99	102	106	98	96	92	103	88	118	112	103	90
1940	94	89	89	91	98	92	107					
Standard Deviation	5.5	5.0	5.0	5.3	4.7	6.1	6.5	6.6	7.9	7.9	7.7	6.1
Ave.	93.3	95.8	99.0	99.6	97.9	97.8	103.4	106.8	108.8	104.0	96.5	91.4
Adj. Ave.	93.7	96.2	100.3	100.0	98.3	98.2	103.8	107.2	109.2	104.4	96.9	91.8

SOURCE: Computed from Table V.

Table VII. Average Seasonal Variation of Hog Prices by Ten-Year Periods, 1910-11 through 1919-20; 1920-21 through 1929-30; and 1930-31 through 1939-40.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
					1910-11 through 1919-20							
Ave.	102	96	93	93	95	99	102	101	100	103	107	108
					1920-21 through 1929-30							
Ave.	106	97	91	92	96	101	100	99	97	102	106	107
					1930-31 through 1939-40							
Ave.	104	98	91	94	95	99	96	94	95	106	107	111

SOURCE: Computed from Table VI using Percentages of Trend.

Table VIII. Oklahoma Price Received by Farmers for Hogs, Adjusted for Changes in the Price Level[1/]
(Dollars per 100 Pounds)

	January	February	March	April	May	June	July	August	September	October	November	December	Average
1910	6.46	6.82	7.95	8.05	7.45	7.66	7.69	7.14	7.90	7.71	7.10	6.48	7.38
1911	6.67	6.57	6.12	5.54	5.25	5.30	5.40	6.36	6.70	6.26	6.18	6.02	6.04
1912	6.00	5.91	5.96	6.84	6.60	6.63	6.95	7.58	8.12	8.21	7.50	7.14	6.94
1913	6.84	7.07	7.50	8.00	7.55	7.86	7.94	7.86	7.24	6.79	6.64	6.57	7.32
1914	6.96	7.35	7.28	7.38	7.16	7.10	7.37	8.06	8.48	7.93	7.67	7.11	7.47
1915	6.63	6.06	5.90	5.83	6.21	6.77	7.37	7.17	6.77	6.63	5.75	5.46	6.34
1916	5.50	6.18	7.41	7.55	7.59	7.50	7.59	7.11	6.96	5.92	5.49	5.37	6.58
1917	5.71	6.52	7.90	7.35	7.04	6.90	6.63	6.73	7.76	7.87	7.06	7.06	7.07
1918	6.65	6.61	6.83	6.83	6.92	6.85	7.08	7.22	7.01	7.00	6.83	6.83	6.90
1919	6.80	7.12	7.27	7.78	7.59	7.48	8.03	7.91	6.81	5.73	5.10	4.75	6.81
1920	4.89	5.18	5.20	5.03	5.04	5.02	5.32	5.80	6.63	6.94	6.67	6.67	5.58
1921	6.69	6.90	7.55	7.10	7.19	6.49	8.02	8.54	6.00	5.27	5.00	5.04	6.57
1922	5.49	6.44	7.06	6.97	6.88	6.79	6.49	6.20	5.68	5.47	4.86	4.58	6.04
1923	4.46	4.29	4.12	4.10	3.99	3.61	4.15	4.30	4.43	3.86	3.47	3.11	3.96
1924	3.13	3.18	3.22	3.39	3.43	3.60	3.65	4.85	5.23	5.68	5.41	5.00	4.10
1925	5.36	5.38	6.61	6.69	6.05	6.17	6.95	7.19	6.49	6.75	6.73	6.71	6.43
1926	6.95	7.50	7.83	7.73	8.25	8.92	10.41	9.00	9.05	10.25	9.67	9.22	8.65
1927	9.12	9.30	8.80	8.78	7.28	6.38	6.15	6.47	5.90	6.18	5.51	5.06	6.90
1928	4.77	4.76	4.56	4.51	4.94	5.10	5.60	6.12	7.10	6.26	5.49	5.10	5.94
1929	5.21	5.48	5.93	6.20	6.23	6.21	6.41	6.33	5.95	5.82	5.64	5.72	5.74
1930	5.88	6.49	6.94	6.48	6.51	7.00	7.40	7.55	8.69	8.62	8.48	8.07	7.21
1931	8.10	7.83	7.44	7.56	7.28	7.46	8.17	9.52	9.12	8.52	7.10	6.72	7.90
1932	6.73	6.42	6.67	6.35	5.51	5.81	7.92	6.98	6.16	5.66	5.70	5.31	6.31
1933	5.21	5.65	5.85	5.28	4.78	5.29	4.17	4.33	4.52	5.14	4.54	3.84	4.82
1934	3.73	3.93	4.05	3.54	3.44	3.55	3.91	3.93	5.29	4.55	4.36	4.52	4.13
1935	5.93	5.80	7.22	6.52	6.58	7.50	7.65	9.43	9.42	8.41	7.50	7.74	7.46
1936	8.02	8.30	8.45	8.74	8.20	8.60	8.17	7.91	7.86	7.41	7.15	7.14	7.97
1937	7.13	6.94	6.59	6.51	7.24	8.10	8.72	10.37	10.10	10.00	8.88	7.95	8.08
1938	8.28	8.49	8.86	9.04	8.33	9.04	9.76	10.14	9.50	9.00	8.75	8.17	8.96
1939	8.17	8.27	8.29	7.56	7.23	6.83	7.62	6.62	7.50	7.26	6.11	4.95	7.15
1940	5.05	4.79	4.84	4.74	5.26	5.40	6.51	6.47	6.86	6.11	5.98	5.64	

SOURCE: Table V.

1/ Monthly prices were divided by the index of Oklahoma farm prices of all commodities for the corresponding month. Oklahoma Farm Price Statistics, 1910-1938, Trimble R. Hedges and K. D. Blood, Oklahoma Agricultural Experiment Station Bulletin No. 238, p. 78.

Table IX. Index of Factory Payrolls, Unadjusted, 1919-1940
(23-25=100)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
1919	93.8	89.3	90.0	89.2	90.1	92.7	95.6	101.7	106.3	103.6	107.8	115.4	98.0
1920	119.1	117.4	125.4	122.3	123.0	124.4	120.0	120.6	118.9	114.4	105.0	95.5	117.2
1921	80.6	80.1	81.0	78.8	77.4	75.6	71.6	73.6	73.3	71.9	70.9	72.7	75.6
1922	69.6	72.5	74.4	73.6	77.0	80.0	80.2	84.1	87.0	88.7	92.2	94.5	81.2
1923	93.9	97.8	102.6	103.8	107.3	107.2	102.9	103.1	103.8	105.9	103.9	102.7	102.9
1924	98.9	104.5	104.5	102.0	97.6	91.9	85.3	89.1	92.4	94.6	93.1	97.6	96.0
1925	96.0	101.0	102.8	100.4	101.4	99.2	97.5	100.1	99.4	105.3	105.1	105.5	101.1
1926	101.6	105.7	107.2	104.9	103.5	103.7	99.4	103.8	105.1	108.0	104.3	103.6	104.2
1927	98.6	104.8	106.6	105.0	104.8	103.2	99.1	102.5	102.1	102.7	98.9	100.0	102.4
1928	96.6	102.0	103.5	101.3	102.3	102.7	100.2	104.6	106.2	109.5	106.2	106.9	103.5
1929	103.8	110.8	113.0	114.1	114.3	112.7	108.6	113.5	114.4	113.7	104.9	101.2	110.4
1930	96.5	99.6	99.7	98.5	96.1	92.9	85.0	83.8	84.8	82.9	77.3	75.4	89.4
1931	70.3	74.4	75.9	74.7	73.6	69.9	66.6	66.4	63.8	61.8	58.3	57.8	67.8
1932	54.0	55.4	53.6	49.6	46.8	43.7	40.4	41.4	44.0	45.8	43.6	42.4	46.7
1933	40.3	41.4	38.3	40.4	44.4	49.1	52.7	58.6	61.3	61.1	57.3	56.5	50.1
1934	56.1	62.9	67.2	69.6	69.7	67.4	62.8	65.1	60.8	64.0	62.5	66.2	64.5
1935	67.5	72.6	74.3	74.4	71.7	69.9	69.1	74.0	76.7	79.4	78.6	80.4	74.1
1936 1/	76.7	76.6	80.3	82.3	83.9	84.1	83.4	87.1	86.9	92.5	94.0	98.8	85.6
1937	94.4	99.7	105.5	109.3	109.7	107.0	104.6	108.2	104.4	104.5	92.9	84.2	102.5
1938	75.4	77.7	77.8	75.2	73.6	71.6	71.7	77.9	82.3	85.0	85.3	88.1	78.5
1939	84.7	87.1	88.8	86.8	86.3	87.9	85.8	91.2	95.4	103.2	103.2	105.4	92.2
1940	99.8	99.3	99.8	97.9	97.8	99.5	98.2	105.5	111.6	116.2	116.5	122.8	105.4

SOURCE: Federal Reserve Bulletins, Board of Governors, Federal Reserve System, Washington, D. C., various issues. See February 1941, p. 153.

1/ 1936 and 1937 have since been revised, but the change was slight. The annual averages did not change.

Table X. Percentages of Trend for Factory Payrolls, July, 1919-June, 1940.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1919							97	100	102	97	98	103
1920	104	101	107	103	103	105	104	107	109	109	103	98
1921	86	89	94	96	98	99	95	99	99	98	97	99
1922	94	97	98	96	98	100	98	100	101	100	101	101
1923	98	100	104	103	106	104	100	100	100	102	100	100
1924	98	105	106	104	101	96	89	93	97	99	98	102
1925	99	103	105	101	101	98	96	98	97	103	102	102
1926	98	102	103	101	99	99	95	100	101	104	100	100
1927	95	101	103	102	102	101	97	100	100	101	98	99
1928	95	101	102	99	100	100	97	100	101	103	99	99
1929	95	101	102	103	103	102	99	104	106	106	99	97
1930	94	100	102	104	104	103	96	97	101	101	96	96
1931	92	99	103	104	105	102	99	101	100	100	97	100
1932	97	104	104	99	96	92	87	92	100	107	103	100
1933	94	93	84	86	92	99	104	112	113	107	97	93
1934	90	100	106	110	110	105	97	99	91	95	93	98
1935	99	106	107	105	99	95	93	99	102	104	102	103
1936	97	96	99	100	101	99	97	99	97	100	100	102
1937	96	100	104	106	106	104	103	109	107	110	101	95
1938	88	93	96	94	94	91	91	98	102	104	104	105
1939	100	101	102	98	96	96	92	97	101	108	107	108
1940	101	99	99	96	95	95						
Ave.	95.7	99.6	101.4	100.5	100.4	99.3	96.5	100.2	101.3	102.8	99.8	100.0
Adj. Ave.	95.9	99.8	101.6	100.7	100.6	99.5	96.7	100.4	101.5	103.0	100.0	100.2

SOURCE: Table IX.

Table XI. Number of Hogs on Farms on January 1, Oklahoma and United States, 1910-1941

Year	Oklahoma (000)	Oklahoma Percent of U. S.	United States (000)
1910	1,550	3.2	48,072
1911	1,600	2.9	55,366
1912	1,230	2.2	55,394
1913	1,200	2.2	53,747
1914	1,300	2.5	52,853
1915	1,450	2.6	56,600
1916	1,480	2.4	60,596
1917	1,300	2.3	57,578
1918	1,390	2.2	62,931
1919	1,275	2.0	64,326
1920	1,304	2.2	60,159
1921	1,213	2.1	58,942
1922	1,334	2.2	59,849
1923	1,401	2.0	69,304
1924	1,175	1.8	66,576
1925	969	1.7	55,770
1926	936	1.8	52,105
1927	883	1.6	55,496
1928	1,104	1.8	61,373
1929	1,215	2.1	59,042
1930	1,053	1.9	55,705
1931	927	1.7	54,835
1932	1,205	2.0	59,301
1933	1,506	2.4	62,127
1934	1,180	2.0	58,621
1935	800	2.1	39,004
1936	824	1.9	42,837
1937	700	1.6	42,770
1938	763	1.7	44,218
1939	954	1.9	49,293
1940	1,269	2.2	58,207
1941	990	1.9	52,983

SOURCE: Livestock, Meats, and Wool Market Statistics and Related Data, 1940; U.S.D.A., Agricultural Marketing Service, p. 3; and Livestock on Farms, January 1, 1867-1935, U.S.D.A., B. A. E., p. 26.

Table XII. Seasonal Variation of Hog Prices[1] During Years of Increasing Hog Numbers in the United States, 1910-1940

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1910-11	107	104	99	106	104	96	88	86	88	92	110	112
1911-12	101	96	91	91	91	91	107	102	99	98	105	112
1914-15	101	98	96	95	91	91	93	100	102	111	104	100
1915-16	104	89	84	84	93	107	108	108	103	102	99	104
1917-18	111	101	104	98	96	97	98	99	97	99	105	108
1918-19	105	97	96	93	90	94	105	109	110	120	120	103
1921-22	96	86	80	82	100	111	111	114	114	108	101	96
1922-23	98	96	98	100	101	101	102	96	87	96	98	114
1926-27	107	103	97	97	104	102	103	95	86	88	99	111
1927-28	117	106	97	90	86	83	84	100	99	110	111	125
1931-32	97	99	93	92	89	98	94	80	76	120	120	115
1932-33	101	96	86	81	86	91	94	105	115	111	102	102
1935-36	106	94	94	97	100	100	104	95	99	102	105	106
1937-38	106	92	83	88	92	101	100	94	102	109	102	105
1938-39	101	100	97	99	102	106	98	96	92	103	88	118
1939-40	112	103	90	94	89	89	91	98	92	107	102	106
Average	104.4	97.5	92.8	92.9	94.6	97.4	98.8	98.6	97.6	104.8	104.4	108.6
Adjusted Average	105.1	98.1	93.4	93.5	95.2	98.0	99.4	99.2	98.2	105.5	105.1	109.3

SOURCE: Computed from Table VI and Table XI.

1/ Percentage of trend used.

Table XIII. Oklahoma Price Received by Farmers for Hogs, Adjusted for Changes in the General Price Level During Years of Increasing Hog Numbers in the United States, 1910-40.

(Dollars per Cwt.)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1910-11	7.71	6.10	6.48	6.67	6.57	6.12	5.54	5.25	5.30	5.40	6.36	6.70
1911-12	6.26	6.18	6.02	6.00	5.91	5.96	6.84	6.60	6.63	6.95	7.58	8.12
1914-15	7.93	7.67	7.11	6.63	6.06	5.90	5.83	6.21	6.77	7.37	7.17	6.77
1915-16	6.63	5.75	5.46	5.50	6.18	7.41	7.55	7.59	7.50	7.59	7.11	6.96
1917-18	7.87	7.06	7.06	6.65	6.61	6.83	6.83	6.92	6.85	7.08	7.22	7.01
1918-19	7.00	6.83	6.83	6.80	7.12	7.27	7.78	7.59	7.48	8.03	7.91	6.81
1921-22	5.27	5.00	5.04	5.49	6.44	7.06	6.97	6.88	6.79	6.49	6.20	5.68
1922-23	5.47	4.86	4.58	4.46	4.29	4.12	4.10	3.99	3.61	4.15	4.30	4.43
1926-27	10.25	9.67	9.22	9.12	9.30	8.80	8.78	7.28	6.38	6.15	6.47	5.90
1927-28	6.18	5.51	5.06	4.77	4.76	4.56	4.51	4.94	5.10	5.60	6.12	7.10
1931-32	8.52	7.10	6.72	6.73	6.42	6.67	6.35	5.51	5.81	7.92	6.98	6.16
1932-33	5.66	5.70	5.31	5.21	5.65	5.85	5.28	4.78	5.29	4.17	4.33	4.52
1935-36	8.41	7.50	7.74	8.02	8.30	8.45	8.74	8.20	8.60	8.17	7.91	7.86
1937-38	10.00	8.88	7.95	8.28	8.49	8.86	9.04	8.83	9.04	9.76	10.14	9.50
1938-39	9.00	8.75	8.17	8.17	8.27	8.29	7.56	7.23	6.83	7.62	6.62	7.50
1939-40	7.26	6.11	4.95	5.05	4.79	4.84	4.74	5.26	5.40	6.51	6.47	6.86
Ave.	7.46	6.85	6.48	6.47	6.57	6.69	6.65	6.41	6.46	6.81	6.81	6.74

SOURCE: Table VIII.

Table XIV. Seasonal Variation of Hog Prices[1] During Years of Decreasing Hog Numbers in the U. S. 1910-1940.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1912-13	110	100	96	91	94	101	108	100	104	104	103	102
1913-14	99	96	93	96	102	102	103	100	98	101	111	112
1916-17	92	90	84	86	94	110	111	108	102	96	98	109
1919-20	93	88	86	92	96	97	98	99	102	110	114	122
1920-21	117	94	85	86	87	95	90	92	87	109	117	99
1923-24	106	101	94	96	95	92	93	88	87	84	111	103
1924-25	109	101	91	98	95	116	111	95	95	107	114	100
1925-26	102	97	89	94	102	99	96	99	107	111	101	108
1928-29	109	92	85	86	91	102	108	106	105	108	107	101
1929-30	98	92	93	95	103	105	101	101	103	96	97	111
1930-31	107	106	99	98	96	97	103	98	92	106	115	104
1933-34	115	106	87	88	103	103	84	78	81	88	93	123
1934-35	95	85	84	107	101	114	101	97	99	97	120	116
1936-37	100	95	98	99	94	94	92	98	104	114	127	113
Average	103.7	95.9	90.3	93.7	96.6	101.9	99.9	97.1	97.6	102.2	109.1	108.8
Adj. Ave.	104.0	96.2	90.6	94.0	96.3	102.2	100.2	97.4	97.9	102.5	109.4	109.1

SOURCE: Computed from Table VI and XI.

1/ Percentages of trend were used.

Table XV. Oklahoma Price Received by Farmers for Hogs, Adjusted for Changes in the General Price Level during Years of Decreasing Hog Numbers in the United States, 1910-1940.
(Dollars per Cwt.)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1912-13	8.21	7.50	7.14	6.84	7.07	7.50	8.00	7.55	7.86	7.94	7.86	7.24
1913-14	6.79	6.64	6.57	6.96	7.35	7.28	7.38	7.16	7.10	7.37	8.06	8.48
1916-17	5.92	5.49	5.37	5.71	6.52	7.90	7.35	7.04	6.90	6.63	6.73	7.76
1919-20	5.73	5.10	4.75	4.89	5.18	5.20	5.08	5.04	5.02	5.32	5.30	6.63
1920-21	6.94	6.67	6.67	6.69	6.90	7.55	7.10	7.19	6.49	8.02	8.54	6.00
1923-24	3.86	3.47	3.11	3.13	3.18	3.22	3.39	3.43	3.60	3.65	4.85	5.23
1924-25	5.68	5.41	5.00	5.36	5.38	6.61	6.69	6.05	6.17	6.95	7.19	6.49
1925-26	6.75	6.73	6.71	6.95	7.50	7.83	7.73	8.25	8.92	10.41	9.00	9.05
1928-29	6.26	5.49	5.10	5.21	5.48	5.93	6.20	6.23	6.21	6.41	6.33	5.95
1929-30	5.82	5.64	5.72	5.88	6.49	6.94	6.48	6.51	7.00	7.40	7.55	8.69
1930-31	8.62	8.48	8.07	8.10	7.83	7.44	7.56	7.28	7.46	8.17	9.52	9.12
1933-34	5.14	4.54	3.84	3.73	3.93	4.05	3.54	3.44	3.55	3.91	3.93	5.29
1934-35	4.55	4.36	4.52	5.93	5.80	7.22	6.52	6.58	7.50	7.65	9.43	9.42
1936-37	7.41	7.13	7.14	7.13	6.94	6.59	6.51	7.24	8.10	8.72	10.37	10.10
Average	6.26	5.90	5.69	5.89	6.11	6.52	6.39	6.36	6.56	7.04	7.51	7.53

SOURCE: Table VIII.

Table XVI. Production of Feed Crops in United States in Corn Equivalent Units* 1910-1940 (In Millions)

	Wheat	Corn	Oats	Barley	Rye	Grain Sorghums[1]	Grains Including Wheat	Grains Excluding Wheat
1910	695	2,853	561	119	29		4,257	3,562
1911	687	2,475	449	121	31		3,763	3,076
1912	811	2,948	686	165	38		4,648	3,837
1913	834	2,273	527	133	40		3,807	2,973
1914	997	2,524	541	149	42		4,253	3,256
1915	1,121	2,829	728	173	46		4,897	3,776
1916	705	2,425	577	133	43		3,883	3,178
1917	689	2,908	731	153	60		4,541	3,852
1918	1,004	2,441	724	188	83		4,440	3,436
1919	1,058	2,679	561	110	78	113	4,486[2]	3,428[2]
1920	937	3,071	732	143	62	126	4,945[2]	4,008[2]
1921	910	2,928	550	111	61	104	4,644	3,734
1922	941	2,707	582	128	100	70	4,528	3,587
1923	844	2,875	622	133	56	82	4,612	3,768
1924	935	2,223	718	138	58	90	4,162	3,227
1925	743	2,798	712	161	42	83	4,539	3,796
1926	925	2,547	585	139	35	100	4,331	3,406
1927	972	2,616	554	200	51	118	4,511	3,539
1928	1,016	2,666	666	275	38	111	4,772	3,756
1929	915	2,521	564	234	35	76	4,345	3,430
1930	985	2,080	646	251	45	58	4,065	3,080
1931	1,046	2,576	570	167	33	105	4,497	3,451
1932	841	2,931	634	250	39	101	4,796	3,955
1933	613	2,400	372	129	21	76	3,611	2,998
1934	585	1,461	275	98	17	37	2,473	1,888
1935	696	2,304	606	239	58	91	3,994	3,298
1936	696	1,507	398	123	25	51	2,800	2,104
1937	973	2,651	589	184	50	90	4,537	3,564
1938	1,035	2,562	541	212	55	91	4,496	3,461
1939	835	2,602	475	229	39	77	4,257	3,422
1940	907	2,449	627	259	41	112	4,395	3,488

SOURCE: Computed from data in Acreage, Yield and Production of Principal Crops, annual summaries, United States Department of Agriculture, Agricultural Marketing Service.

1/ No data from 1910-18.

2/ Grain sorghums omitted to make totals comparable with Oklahoma figures.

* Factors used to compute Corn Equivalent Units were: corn, 1.0; wheat, 1,111; oats, .507; barley, .837; grain sorghums, .992; and rye, .994 corn equivalent units per bushel.

Table XVII. Production of Feed Crops in Oklahoma in Corn Equivalent Units, 1910-1940.
(In Thousands)

	Wheat	Corn	Oats	Barley	Rye	Grain Sorghums 1/	Grains Including Wheat	Grains Excluding Wheat	Percent of Grains (Excluding Wheat) Produced in Okla.
1910	24,497	89,760	1,207	205	38		116,707	91,210	2.6
1911	10,488	38,080	4,233	113	28		52,942	42,454	1.4
1912	23,886	90,650	11.179	345	42		126,102	102,216	2.7
1913	18,320	45,540	8,761	100	104		72,825	54,505	1.8
1914	50,939	43,375	14,640	242	348		109,544	58,605	1.8
1915	42,773	104,135	16,351	310	350		163,919	121,146	3.2
1916	30,291	47,520	7,732	125	402		86,070	55,779	1.8
1917	37,885	28,645	13,096	272	413		80,311	42,426	1.1
1918	40,885	21,450	16,034	396	421		79,186	38,301	1.1
1919	73,384	56,188	23,201	1,482	716		154,971	81,587	2.4
1920	62,110	74,672	23,210	1,602	434		162,028	99,918	2.5
1921	59,216	80,592	14,263	1,481	257	25,845	181,654	122,438	3.3
1922	35,621	58,378	11,549	1,349	213	19,428	126,538	90,917	2.5
1923	47,014	35,134	9,449	1,674	246	18,139	111,656	64,642	1.7
1924	63,440	51,516	13,689	3,076	229	19,354	151,304	87,864	2.7
1925	33,289	25,580	11,213	1,040	159	14,109	85,390	52,101	1.4
1926	81,818	53,119	15,334	1,992	197	34,264	187,724	105,906	3.1
1927	38,963	73,071	9,360	819	76	34,618	157,407	118,444	3.3
1928	71,751	62,525	10,639	356	72	30,531	176,374	104,623	2.8
1929	56,940	47,585	9,667	951	70	20,329	135,542	78,602	2.3
1930	41,531	33,526	12,012	643	119	12,961	100,792	59,261	1.9
1931	82,486	49,815	19,984	1,863	183	14,322	168,653	86,167	2.5
1932	52,399	65,760	12,174	1,502	123	15,105	147,063	94,664	2.4
1933	34,735	20,027	10,514	550	72	11,811	77,709	42,974	1.4
1934	41,259	11,281	10,607	1,339	106	7,337	71,929	30,670	1.6
1935	36,752	25,872	18,163	1,312	209	12,245	94,553	57,801	1.8
1936	30,575	11,772	10,302	653	143	5,965	59,410	28,835	1.4
1937	72,728	30,960	13,865	1,714	304	13,706	133,277	60,549	1.7
1938	64,796	35,080	13,916	2,862	338	12,621	129,613	64,817	1.9
1939	67,147	27,216	10,705	5,062	497	8,851	119,478	52,331	1.5
1940	62,574	40,356	16,360	4,838	398	15,822	140,348	77,774	2.2

SOURCE: Table XVI.

1/ No data available from 1910-1920.

Table XVIII. Oklahoma Price Received by Farmers for Hogs, Adjusted[1/] in Years of Increasing Hog Numbers and Large Corn Crops in the United States
(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1910-11	7.71	7.10	6.48	6.67	6.57	6.12	5.54	5.25	5.30	5.40	6.36	6.70
1915-16	6.63	5.75	5.46	5.50	6.18	7.41	7.55	7.59	7.50	7.59	7.11	6.96
1917-18	7.78	7.06	7.06	6.65	6.61	6.83	6.83	6.92	6.85	7.08	7.22	7.01
1921-22	5.27	5.00	5.04	5.49	6.44	7.06	6.97	6.88	6.79	6.49	6.20	5.68
1922-23	5.47	4.86	4.58	4.46	4.29	4.12	4.10	3.99	3.61	4.15	4.30	4.43
1927-28	6.18	5.51	5.06	4.77	4.76	4.56	4.51	4.94	5.10	5.60	6.12	7.10
1932-33	5.66	5.70	5.31	5.21	5.65	5.85	5.28	4.78	5.29	4.17	4.33	4.52
1937-38	10.00	8.88	7.95	8.28	8.49	8.86	9.04	8.33	9.04	9.76	10.14	9.50
1939-40	7.26	6.11	4.95	5.05	4.74	4.84	4.74	5.26	5.40	6.51	6.47	6.86
Average	6.89	6.22	5.77	5.79	5.98	6.18	6.06	5.99	6.10	6.31	6.47	6.53

SOURCE: Computed from Tables XVI and VIII.

1/ Adjusted for changes in price level.

Table XIX. Oklahoma Price Received by Farmers for Hogs (Adjusted)[1/] in Years of Increasing Hog Numbers and Small Corn Crops in the United States.
(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1911-12	6.26	6.18	6.02	6.00	5.91	5.96	6.84	6.60	6.63	6.95	7.58	8.12
1918-19	7.00	6.83	6.83	6.80	7.12	7.27	7.78	7.59	7.48	8.03	7.91	6.81
1935-36	8.41	7.50	7.74	8.02	8.30	8.45	8.74	8.20	8.60	8.17	7.91	7.86
Average	7.22	6.84	6.86	6.94	7.11	7.23	7.79	7.46	7.57	7.72	7.80	7.60

SOURCE: Computed from Tables XVI and VIII.

1/ Adjusted for changes in price level.

Table XX. Oklahoma Price Received by Farmers for Hogs (Adjusted)[1/]
for Years of Decreasing Hog Numbers and Large Corn Crops in the United States
(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1912-13	8.21	7.50	7.14	6.84	7.07	7.50	8.00	7.55	7.86	7.94	7.86	7.24
1919-20	5.73	5.10	4.75	4.89	5.18	5.20	5.08	5.04	5.02	5.32	5.80	6.63
1920-21	6.94	6.67	6.67	6.69	6.90	7.55	7.10	7.19	6.49	8.02	8.54	6.00
1923-24	3.86	3.47	3.11	3.13	3.18	3.22	3.39	3.43	3.60	3.65	4.85	5.23
1925-26	6.75	6.73	6.71	6.95	7.50	7.83	7.73	8.25	8.92	10.41	9.00	9.05
1928-29	6.26	5.49	5.10	5.21	5.48	5.93	6.20	6.23	6.21	6.41	6.53	5.95
Average	6.29	5.33	5.58	5.62	5.89	6.21	6.25	6.28	6.35	6.96	7.06	6.68

SOURCE: Table XVI and VIII.

1/ Adjusted for changes in price level.

Table XXI. Oklahoma Price Received by Farmers for Hogs, (Adjusted)[1/] for Years of Decreasing Hog Numbers and Small Corn Crops in the United States

(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1913-14	6.79	6.64	6.57	6.96	7.35	7.28	7.38	7.16	7.10	7.37	8.06	8.48
1916-17	5.92	5.49	5.37	5.71	6.52	7.90	7.35	7.04	6.90	6.63	6.73	7.76
1924-25	5.68	5.41	5.00	5.36	5.38	6.61	6.69	6.05	6.17	6.95	7.19	6.49
1930-31	8.62	8.48	8.07	8.10	7.83	7.44	7.56	7.28	7.46	8.17	9.52	9.12
1933-34	5.14	4.54	3.84	3.73	3.93	4.05	3.54	3.44	3.55	3.91	3.93	5.29
1934-35	4.55	4.36	4.52	5.93	5.80	7.22	6.52	6.58	7.50	7.65	9.43	9.42
1936-37	7.41	7.13	7.14	7.13	6.94	6.59	6.51	7.24	8.10	8.72	10.37	10.10
Average	6.30	6.01	5.79	6.13	6.25	6.73	6.51	6.40	6.68	7.06	7.89	8.09

SOURCE: Table XVI and VIII.

1/ Adjusted for changes in price level.

Table XXII. Oklahoma Price Received by Farmers for Hogs, during Years of Increasing Price Level[1]

(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1911-12	5.70	5.50	5.30	5.40	5.50	5.60	6.70	6.60	6.50	6.60	7.20	7.80
1912-13	7.80	7.20	7.00	6.70	7.00	7.50	8.00	7.40	7.70	7.70	7.70	7.60
1914-15	6.90	6.60	6.40	6.30	6.00	5.90	6.00	6.40	6.50	7.00	6.60	6.50
1915-16	6.90	6.10	5.90	6.00	6.80	8.00	8.30	8.50	8.40	8.50	8.60	9.40
1916-17	8.70	8.90	8.70	9.20	10.50	12.80	13.60	13.80	13.60	13.40	14.00	15.90
1917-18	16.30	15.10	15.60	14.90	14.80	15.10	15.30	15.50	15.20	15.50	16.40	16.90
1921-22	6.80	6.20	5.90	6.20	7.60	8.40	8.50	8.80	8.90	8.50	8.00	7.50
1922-23	7.50	7.20	7.10	7.00	6.90	6.80	6.80	6.30	5.60	6.10	6.10	7.00
1924-25	8.80	8.50	8.00	9.00	9.10	11.50	11.30	9.80	10.00	11.40	12.30	10.90
1926-27	12.20	11.60	10.70	10.30	10.70	10.30	10.10	9.10	8.10	8.00	8.80	9.50
1932-33	3.00	2.85	2.60	2.50	2.60	2.75	2.85	3.25	3.60	3.50	3.25	3.30
1933-34	3.75	3.45	2.80	2.80	3.30	3.40	2.90	2.75	2.95	3.40	3.85	5.50
1934-35	4.60	4.45	4.70	6.40	6.50	7.80	7.30	7.30	7.80	7.80	9.90	9.70
1938-39	7.20	7.00	6.70	6.70	6.70	6.80	6.20	6.00	5.60	6.10	5.10	6.60
1939-40	6.10	5.50	4.70	4.90	4.60	4.60	4.65	5.00	4.70	5.60	5.50	5.90
Average	7.48	7.08	6.81	6.95	7.24	7.82	7.90	7.77	7.68	7.94	7.55	8.67

SOURCE: Table V.

1/ Years when the index of prices for the major Oklahoma farm products rose.

Table XXIII. Oklahoma Price Received by Farmers for Hogs during Years of Decreasing Price Level[1/]
(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1910-11	8.10	7.60	7.00	7.20	6.90	6.30	5.60	5.30	5.30	5.40	6.30	6.30
1913-14	7.40	7.10	6.90	7.10	7.50	7.50	7.60	7.30	7.10	7.30	7.90	7.80
1919-20	14.10	13.10	12.40	12.80	12.90	12.70	12.70	12.70	12.80	13.30	13.40	13.80
1920-21	12.70	9.80	8.40	8.10	7.80	8.00	7.10	6.90	6.30	7.70	8.20	6.90
1923-24	6.40	6.00	5.60	5.70	5.70	5.60	5.80	5.70	5.80	5.80	8.00	7.80
1925-26	11.00	10.50	9.80	10.50	11.40	11.20	10.90	11.30	12.40	12.80	11.70	12.40
1927-28	9.70	8.60	7.80	7.30	7.00	6.80	6.90	8.10	8.00	8.90	9.00	10.30
1928-29	9.20	7.90	7.40	7.50	8.00	8.90	9.30	9.10	9.00	9.30	9.30	8.80
1929-30	8.50	7.90	7.90	8.00	8.50	8.60	8.30	8.20	8.40	7.70	7.70	8.60
1930-31	8.10	7.80	7.10	6.80	6.50	6.40	6.50	5.90	5.30	5.80	6.00	5.20
1931-32	4.60	4.40	3.90	3.70	3.40	3.60	3.30	2.70	2.50	3.80	3.70	3.45
1936-37	8.60	8.20	8.50	8.70	8.40	8.50	8.40	8.90	9.40	10.20	11.20	9.90
1937-38	9.20	7.90	7.00	7.20	7.30	7.80	7.50	7.00	7.50	8.00	7.40	7.60
Average	9.05	8.22	7.58	7.74	7.79	7.84	7.68	7.62	7.68	8.15	8.45	8.37

SOURCE: Table V.

1/ Years when the index of price for the major farm commodities declined.

Table XXIV. Oklahoma Price Received by Farmers for Hogs
During Years of Decreasing Price Level and Increasing Hog Numbers

(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1910-11	8.10	7.60	7.00	7.20	6.90	6.30	5.60	5.30	5.30	5.40	6.30	6.30
1927-28	9.70	8.60	7.80	7.30	7.00	6.80	6.90	8.10	8.00	8.90	9.00	10.30
1931-32	4.60	4.40	3.90	3.70	3.40	3.60	3.30	2.70	2.50	3.80	3.70	3.45
1937-38	9.20	7.90	7.00	7.20	7.30	7.80	7.50	7.00	7.50	8.00	7.40	7.60
Average	7.90	7.12	6.42	6.35	6.15	6.12	5.82	5.78	5.82	6.52	6.60	6.91

SOURCE: Table XXIII.

Table XXV. Oklahoma Price Received by Farmers for Hogs
During Years of Decreasing Price Level and Decreasing Hog Numbers

(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1913-14	7.40	7.10	6.90	7.10	7.50	7.50	7.60	7.30	7.10	7.30	7.90	7.80
1919-20	14.10	13.10	12.40	12.80	12.90	12.70	12.70	12.70	12.80	13.30	13.40	13.80
1920-21	12.70	9.80	8.40	8.10	7.80	8.00	7.10	6.90	6.30	7.70	8.20	6.90
1923-24	6.40	6.00	5.60	5.70	5.70	5.60	5.80	5.70	5.80	5.80	8.00	7.80
1925-26	11.00	10.50	9.80	10.50	11.40	11.20	10.90	11.30	12.40	12.80	11.70	12.40
1928-29	9.20	7.90	7.40	7.50	8.00	8.90	9.30	9.10	9.00	9.30	9.30	8.80
1929-30	8.50	7.90	7.90	8.00	8.50	8.60	8.30	8.20	8.40	7.70	7.70	8.60
1930-31	8.10	7.80	7.10	6.80	6.50	6.40	6.50	5.90	5.30	5.80	6.00	5.20
1936-37	8.60	8.20	8.50	8.70	8.40	8.50	8.40	8.90	9.40	10.20	11.20	9.90
Average	9.56	8.70	8.22	8.36	8.52	8.60	8.51	8.44	8.50	8.88	9.27	9.02

SOURCE: Table XXIII.

Table XXVI. Oklahoma Price Received by Farmers for Hogs
During Years of Increasing Price Level and Increasing Hog Numbers.

(Dollars per Cwt)

	October	November	December	January	February	March	April	May	June	July	August	September
1911-12	5.70	5.50	5.30	5.40	5.50	5.60	6.70	6.60	6.50	6.60	7.20	7.80
1914-15	6.90	6.60	6.40	6.30	6.00	5.90	6.00	6.40	6.50	7.00	6.60	6.50
1915-16	6.90	6.10	5.90	6.00	6.80	8.00	8.30	8.50	8.40	8.50	8.60	9.40
1917-18	16.30	15.10	15.60	14.90	14.80	15.10	15.30	15.50	15.20	15.50	16.40	16.90
1921-22	6.80	6.20	5.90	6.20	7.60	8.40	8.50	8.80	8.90	8.50	8.00	7.50
1922-23	7.50	7.20	7.10	7.00	6.90	6.80	6.80	6.30	5.60	6.10	6.10	7.00
1926-27	12.20	11.60	10.70	10.30	10.70	10.30	10.10	9.10	8.10	8.00	8.80	9.50
1932-33	3.00	2.85	2.60	2.50	2.60	2.75	2.85	3.25	3.60	3.50	3.25	3.30
1938-39	7.20	7.00	6.70	6.70	6.70	6.80	6.20	6.00	5.60	6.10	5.10	6.60
1939-40	6.10	5.50	4.70	4.90	4.60	4.60	4.65	5.00	4.70	5.60	5.50	5.90
Ave.	7.86	7.37	7.09	7.02	7.22	7.42	7.58	7.54	7.31	7.54	7.56	8.04

SOURCE: Table XXII.

Table XXVII. Oklahoma Price Received by Farmers for Hogs During Years of Increasing Price Level and Decreasing Hog Numbers.

(Dollars per Cwt.)

	October	November	December	January	February	March	April	May	June	July	August	September
1912-13	7.80	7.20	7.00	6.70	7.00	7.50	8.00	7.40	7.70	7.70	7.70	7.60
1916-17	8.70	8.90	8.70	9.20	10.50	12.80	13.60	13.80	13.60	13.40	14.00	15.90
1924-25	8.80	8.50	8.00	9.00	9.10	11.50	11.30	9.80	10.00	11.40	12.30	10.90
1933-34	3.75	3.45	2.80	2.80	3.30	3.40	2.90	2.75	2.95	3.40	3.85	5.50
1934-35	4.60	4.45	4.70	6.40	6.50	7.80	7.30	7.30	7.80	7.80	9.90	9.70
Ave.	6.73	6.50	6.24	6.82	7.28	8.60	8.62	8.21	8.41	8.74	9.55	9.92

SOURCE: Table XXII.

Table XXVIII. Oklahoma Hog-Corn Ratio[1], 1910-1940.

	January	February	March	April	May	June	July	August	September	October	November	December	Average
1910	12.2	12.1	13.9	13.8	12.6	12.8	12.5	11.7	14.1	15.3	15.2	13.7	13.3
1911	14.4	13.8	12.1	10.8	9.6	8.7	7.9	9.0	9.3	8.3	7.9	7.4	9.7
1912	7.3	7.4	7.6	8.5	7.9	7.7	8.1	9.6	12.2	15.0	15.7	15.9	9.7
1913	14.6	14.6	15.0	15.7	13.7	13.3	12.4	11.0	10.0	10.0	9.7	9.3	12.1
1914	9.6	10.1	10.1	10.0	9.4	9.1	9.6	10.4	10.7	10.3	10.3	9.8	9.9
1915	9.0	7.7	7.2	7.5	7.8	7.9	8.8	8.9	10.8	14.4	13.3	12.0	9.2
1916	11.1	11.7	13.3	13.4	13.7	13.1	12.9	11.9	12.5	10.7	9.9	9.5	11.8
1917	9.8	10.7	12.0	10.4	9.1	8.8	8.0	7.8	9.6	10.9	10.5	10.3	9.7
1918	9.4	8.8	8.8	8.9	8.9	8.7	9.1	9.8	9.7	9.5	9.2	9.3	9.2
1919	9.3	9.4	9.7	10.4	10.3	9.9	10.5	10.6	10.7	11.3	10.6	9.4	10.2
1920	9.4	9.4	9.1	8.7	7.9	7.6	8.3	9.6	11.8	14.8	16.3	15.0	9.8
1921	15.0	15.3	14.0	11.8	12.5	11.1	14.8	19.5	18.6	21.2	20.7	17.4	15.2
1922	15.9	17.3	16.8	15.7	15.4	15.3	13.7	12.7	13.4	13.4	11.3	9.9	14.0
1923	9.5	8.8	8.2	7.9	7.1	6.7	6.1	6.4	7.8	7.4	6.8	6.4	7.3
1924	6.5	6.3	6.0	6.4	6.1	6.1	6.0	7.4	7.8	10.1	9.8	8.5	7.2
1925	8.5	8.8	11.1	11.0	9.4	9.4	11.3	12.1	11.1	11.7	11.8	11.3	10.6
1926	11.8	13.3	12.7	12.4	12.8	15.5	16.0	14.3	16.5	19.7	20.0	18.1	14.9
1927	17.8	18.1	17.5	17.1	14.2	9.9	9.6	10.6	12.2	14.5	14.6	12.2	13.6
1928	11.2	9.9	8.5	8.0	8.3	8.1	9.1	9.6	13.6	14.6	11.6	10.3	10.0
1929	10.1	9.8	10.3	11.1	11.2	11.1	11.3	10.4	10.4	10.2	9.9	10.0	10.5
1930	10.3	10.4	10.5	10.0	9.8	9.8	9.7	9.0	10.5	10.9	11.6	10.9	10.2
1931	11.1	10.7	10.5	10.3	9.5	9.3	10.5	12.2	15.3	20.9	15.2	13.0	11.4
1932	12.8	12.1	12.9	11.8	9.6	8.9	14.1	14.2	15.0	15.8	15.8	14.4	12.9
1933	13.2	13.0	12.0	9.2	7.7	8.0	5.9	5.9	6.5	8.2	7.5	6.1	7.8
1934	6.0	6.5	6.5	5.3	4.9	4.9	5.4	4.8	6.6	5.5	5.1	4.7	5.5
1935	6.3	6.6	7.9	7.2	7.3	8.2	8.5	11.4	14.3	14.8	13.3	13.0	9.3
1936	12.9	13.3	12.8	12.9	11.4	11.9	10.2	8.4	8.9	8.5	7.9	7.8	10.2
1937	7.8	7.3	7.3	6.7	7.2	7.8	8.6	11.4	14.3	16.4	14.9	13.0	9.2
1938	12.9	12.4	13.4	13.4	12.5	13.6	14.5	14.8	17.7	17.6	17.1	14.9	14.4
1939	13.7	13.1	13.3	11.7	10.9	10.0	11.7	10.6	12.0	11.5	10.0	8.1	11.3
1940	8.0	7.1	6.9	6.8	7.0	6.7	8.5	8.7	11.3	11.5	10.8	10.0	8.6
Ave.	10.9	10.8	10.9	10.5	9.9	9.6	10.1	10.5	11.8	12.7	12.1	11.0	10.6

SOURCE: Computed from hog and corn prices in Oklahoma, Oklahoma Farm Price Statistics, 1910-1938, and mid-month Local Price Reports, U. S. D. A., Agricultural Marketing Service, various issues.

1/ Number of bushels of corn equivalent in price to 100 lbs. of hog.

Table XXIX. Seasonal Variation of Hog Prices During Years Having Hog-Corn Ratios Above 12.5.

	January	February	March	April	May	June	July	August	September	October	November	December
1921	86	87	95	90	92	87	109	117	99	96	86	80
1922	82	100	111	111	114	114	108	101	96	98	96	98
1926	94	102	99	96	99	107	111	101	108	107	103	97
1927	97	104	102	103	95	86	88	99	111	117	106	97
1932	92	89	98	94	80	76	120	120	115	101	96	86
1938	88	92	101	100	94	102	109	102	105	101	100	97
Average	90	96	101	99	96	95	108	106	106	103	98	92

SOURCE: Computed from Table VI and Table XXVIII.

Table XXX. Seasonal Variation of Hog Prices During Years Having Hog-Corn Ratios Less than 9.5

	January	February	March	April	May	June	July	August	September	October	November	December
1915	95	91	91	93	100	102	111	104	100	104	89	84
1918	98	96	97	98	99	97	99	105	108	105	97	96
1923	100	101	101	102	96	87	96	98	114	106	101	94
1924	96	95	92	93	88	87	84	111	103	109	101	91
1933	81	86	91	94	105	115	111	102	102	115	106	87
1934	88	103	103	84	78	81	88	93	123	95	85	84
1935	107	101	114	101	97	99	97	120	116	106	94	94
1937	99	94	94	92	98	104	114	127	113	106	92	83
Average	96	96	98	95	95	96	100	108	110	106	96	89

SOURCE: Table VI and Table XXVIII.

Table XXXI. Seasonal Variation of Oklahoma Price Received by Farmers for Hogs during Years Having a Hog-Corn Ratio Between 9.5 and 12.5

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911	106	104	96	88	86	88	92	110	112	101	96	91
1912	91	91	91	107	102	99	98	105	112	110	100	96
1913	91	94	101	108	100	104	104	103	102	99	96	93
1914	96	102	102	103	100	98	101	111	112	101	98	96
1916	84	93	107	108	108	103	102	99	104	92	90	84
1917	86	94	110	111	108	102	96	98	109	111	101	104
1919	93	90	94	105	109	110	120	120	103	93	88	86
1920	92	96	97	98	99	102	110	114	122	117	94	85
1925	98	95	116	111	95	95	107	114	100	102	97	89
1928	90	86	83	84	100	99	110	111	125	109	92	85
1929	86	91	102	108	106	105	108	107	101	98	92	93
1930	95	103	105	101	101	103	96	97	111	107	106	99
1931	98	96	97	103	98	92	106	115	104	97	99	93
1936	97	100	100	104	95	99	102	105	106	100	95	98
1939	99	102	106	98	96	92	103	88	118	112	103	90

SOURCE: Table XXIX.

Table XXXII. Hog-Corn Price Ratio for January and August through December, 1926-1940, and Number of Sows Farrowed the Following Spring.
(Based on Prices Received by Farmers, U. S.)

	:August	:September	:October	:November	:December	:January:	Number of Sows Farrowed in Spring
							(Millions)
1926	14.7	15.8	16.2	17.3	17.0		
1927	9.5	10.3	11.6	12.2	10.8	17.1	9.8
1928	10.2	11.7	11.3	11.3	10.4	10.4	9.3
1929	10.7	9.8	9.9	10.5	10.9	10.2	8.9
1930	9.5	10.3	10.7	12.4	11.5	11.4	8.3
1931	12.3	12.6	14.1	11.9	10.9	11.8	9.0
1932	13.4	13.5	15.0	15.7	14.5	11.2	8.8
1933	7.8	8.0	10.7	9.1	7.0	14.0	9.1
1934	6.3	7.8	6.8	6.7	6.0	7.0	6.8
1935	12.6	13.2	13.3	15.1	16.5	8.1	5.5
1936	9.5	9.2	9.4	9.2	9.5	16.7	7.0
1937	11.2	11.2	16.6	17.2	15.5	9.3	6.2
1938	16.1	16.8	17.4	18.1	16.0	14.5	6.8
1939	12.0	12.6	13.7	12.5	10.0	15.4	8.7
1940	9.2	9.9	9.8	9.9	10.3	9.7	8.2
1941						13.0	7.8

SOURCE: Livestock Meats and Wool Market Statistics and Related Data, 1940, United States Department of Agriculture, Agricultural Marketing Service, pp. 8 and 72.

Table XXXIII. Deviations of United States Price from the Oklahoma Price Received by Farmers for Hogs, 1910-1940, and Averages for Marketing Seasons (Oct.-Sept.).

(Dollars)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave. Oct. Previous Yr.--Sept.
1910	.46	.37	.03	.16	.39	.26	.15	.28	-.03	-.02	.01	.16	
1911	.24	.14	.44	.57	.42	.36	.52	.24	.23	.39	.36	.42	.28
1912	.34	.29	.34	.08	.19	.15	.04	-.09	-.33	-.10	-.15	-.11	.18
1913	.07	.17	.12	.06	.05	-.09	.11	.09	.08	.20	.23	.26	.02
1914	.35	.25	.30	.20	.30	.33	.42	.21	.31	.53	.40	.27	.28
1915	.27	.34	.43	.48	.37	.30	-.16	.01	.29	.28	.25	.12	.29
1916	.32	.27	-.14	-.09	-.13	-.19	-.10	.01	-.18*	-.03	-.16	.06	.04
1917	-.04	-.17	-.48	.01	-.08	-.10	-.05	.24	-.21	-.15	.21	.13	-.08
1918	.36	.23	.48	.46	.34	.17	.08	.49	.60	-.10	.42	.32	.28
1919	.39	.43	.43	-.11	0	0	.12	.40	-.19	-.22	.26	.26	.18
1920	.56	.72	.89	1.03	.74	.38	.35	.19	.18	.87	1.84	.50	.44
1921	.62	.78	1.13	.86	.72	.92	.39	.53	.61	.51	.46	.62	.81
1922	.69	.64	.68	.33	.25	.21	.62	.54	.73	.83	.58	.53	.52
1923	.77	.75	.72	.65	.83	.77	.58	.75	.81	.83	.66	.79	.71
1924	.89	.84	1.03	.90	.98	.75	.80	.54	.70	.65	.12	.39	.81
1925	.31	.52	.33	.34	.98	.82	.62	-.11	.60	.16	.16	.71	.46
1926	.49	.36	.45	.59	.67	.40	-.11	-.04	-.33	-.14	-.15	.27	.29
1927	.67	.49	.59	.31	.31	.30	.58	.44	.28	.46	.39	.34	.33
1928	.50	.61	.68	.85	.72	.70	.74	1.01	.87	.35	.61	.55	.66
1929	.68	.88	1.10	.90	.86	.80	1.03	.98	.73	.60	.64	.63	.79
1930	.80	.98	.97	.87	.79	.70	.68	.81	.84	.69	.40	.34	.78
1931	.45	.31	.52	.42	.45	.40	.40	.25	.24	.10	-.04	-.14	.41
1932	.06	.13	.30	.28	.26	.32	.43	.36	.33	.25	.20	.13	.20
1933	.18	.34	.47	.36	.63	.36	.48	.54	.43	.42	.25	.12	.35
1934	.26	.57	.48	.59	.42	.57	.57	.76	.54	.60	.59	.45	.46
1935	.47	.60	.30	.58	.62	.56	.60	.32	.59	.56	.44	.52	.52
1936	.41	.54	.47	.38	.39	.31	.24	.79	.48	.57	.54	.59	.46
1937	.70	.79	.67	.64	.49	.57	.50	.26	.65	.58	.35	.54	.57
1938	.39	.44	.55	.27	.35	.50	.56	.41	.47	.08	.25	.20	.45
1939	.26	.51	.30	.37	.39	.36	.16	.37	.46	.42	.37	.33	.31
1940	.28	.37	.27	.25	.35	.12	.18	.33	.24	.33	.12	.29	.29
Ave. 1928-1940	.42	.54	.54	.52	.52	.48	.51	.55	.53	.43	.36	.35	
Ave. 1910-1940	.43	.47	.48	.44	.45	.39	.37	.38	.36	.34	.34	.34	

SOURCE: Computed from Table V and United States Price Received by Farmers for Hogs from Livestock, Meats, and Wool Market and Related Data, 1940, United States Department of Agriculture, Agricultural Marketing Service, p. 75.

Table XXXIV. Average Price[1/] of Hogs per 100 Pounds at Chicago 1928-1940.
(Dollars per Cwt.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave. for Year
1928	8.25	8.08	8.08	9.28	9.67	9.91	10.65	11.53	11.89	9.57	8.83	8.61	9.22
1929	9.22	10.19	11.44	11.41	10.81	10.72	11.20	10.52	9.85	9.38	9.06	9.34	10.16
1930	9.78	10.67	10.17	10.00	10.02	9.52	8.73	9.58	9.76	9.34	8.55	7.92	9.47
1931	7.65	7.06	7.46	7.26	6.53	6.36	6.33	5.98	5.41	5.09	4.61	4.20	6.16
1932	4.00	3.89	4.33	3.85	3.34	3.62	4.58	4.21	4.00	3.50	3.34	3.04	3.83
1933	3.12	3.46	3.88	3.77	4.51	4.49	4.41	3.97	4.24	4.43	4.04	3.25	3.94
1934	3.41	4.39	4.31	3.85	3.51	4.09	4.49	5.89	6.82	5.60	5.66	5.39	4.65
1935	7.70	8.35	9.09	8.94	9.31	9.27	9.49	10.78	10.95	9.83	9.31	9.57	9.27
1936	9.85	10.37	10.24	10.47	9.58	9.88	9.76	10.06	9.89	9.55	9.48	9.96	9.89
1937	10.24	10.08	10.11	9.97	10.73	11.04	11.57	11.77	11.37	10.03	8.64	7.90	10.02
1938	7.91	8.33	9.12	8.28	8.20	8.52	8.60	7.76	8.35	7.84	7.67	7.24	8.09
1939	7.30	7.77	7.43	6.92	6.67	6.34	5.92	5.52	7.44	6.85	.97	5.38	6.57
1940	5.32	5.12	5.07	5.43	5.59	4.98	5.92	6.21	6.45	6.25	6.11	6.27	5.71

SOURCE: Livestock Meats and Wool Market Statistics and Related Data, 1940, United States Department of Agriculture, Agricultural Marketing Service, p. 68.

1/ Weighted average packer and shipper purchases.

Table XXXV. Deviations of Chicago Average Price of Hogs from the Oklahoma Price Received by Farmers, 1928-1940.
(Dollars per Cwt.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	.95	1.08	1.28	2.38	1.57	1.91	1.75	2.53	1.59	.37	.93	1.21
1929	1.72	2.72	2.54	2.11	1.71	1.72	1.90	1.22	1.05	.88	1.16	1.44
1930	1.78	2.17	1.57	1.70	1.82	1.12	1.03	1.88	1.16	1.24	.75	.82
1931	.85	.56	1.06	.76	.63	1.06	.53	-.02	.21	.49	.21	.30
1932	.30	.49	.73	.55	.64	1.12	.78	.51	.55	.50	.49	.44
1933	.62	.86	1.13	.92	1.26	.89	.91	.72	.94	.68	.59	.45
1934	.61	1.09	.91	.95	.76	1.14	1.09	2.04	1.32	1.00	1.21	1.19
1935	1.30	1.85	1.29	1.64	2.01	1.47	1.69	.88	1.25	.83	1.21	1.37
1936	1.35	1.57	1.54	1.47	1.38	1.28	.86	.96	.69	.95	1.28	1.46
1937	1.54	1.68	1.61	1.57	1.83	1.64	1.37	.57	1.47	.83	.74	.90
1938	.71	1.03	1.32	.78	1.20	1.02	.60	.36	.75	.64	.67	.54
1939	.60	1.07	.63	.72	.67	.74	-.18	.42	.84	.75	.47	.68
1940	.42	.52	.47	.78	.59	.28	.32	.71	.55	.75	.61	.97
Ave.	.98	1.24	1.24	1.26	1.24	1.18	.97	.98	.95	.76	.79	.91

SOURCE: Computed from Table V and Average Price of Hogs at Chicago from Livestock Meats and Wool Market Statistics, 1940, United States Department of Agriculture, Agricultural Marketing Service, p. 68.

Table XXXVI. Deviations of Chicago Price of Hogs from the United States Price Received by Farmers, 1928-1940.

(Cents)

	January	February	March	April	May	June	July	August	September	October	November	December
1928	.45	.47	.60	1.53	.85	1.21	1.01	1.52	.72	.02	.32	.66
1929	1.04	1.31	1.44	1.21	.85	.92	.87	.24	.32	.28	.52	.81
1930	.98	1.19	.60	.83	1.03	.42	.35	1.07	.32	.55	.35	.48
1931	.40	.25	.54	.34	.18	.66	.13	-.27	-.03	.39	.25	.44
1932	.24	.36	.43	.27	.38	.80	.35	.15	.22	.25	.29	.31
1933	.44	.52	.66	.56	.63	.53	.43	.18	.51	.26	.34	.33
1934	.35	.52	.43	.36	.34	.57	.52	1.28	.78	.40	.62	.74
1935	.83	1.25	.99	1.06	1.39	.91	1.09	.56	.66	.27	.77	.85
1936	.94	1.03	1.07	1.09	.99	.97	.62	.17	.21	.38	.74	.87
1937	.84	.89	.94	.93	1.34	1.07	.87	.31	.82	.25	.39	.36
1938	.32	.59	.77	.51	.85	.52	.04	-.05	.28	.56	.42	.34
1939	.34	.56	.33	.35	.28	.38	-.34	.05	.38	.33	.10	.35
1940	.14	.15	.20	.53	.24	.16	.14	.38	.31	.42	.49	.68
Average	.56	.70	.69	.74	.72	.70	.47	.43	.42	.34	.43	.56

SOURCE: Computed from prices found in Livestock Meats and Wool Market Statistics and Related Data, 1940, Agricultural Marketing Service, U. S. D. A., pp. 68 and 75.

Table XXXVII. Deviations of the Annual United States Prices and Oklahoma Prices Received by Farmers for Hogs from the Chicago Average Price.

	Average Price of Hogs per 100 # at Chicago	U.S. Farm Price $ per 100 #	Okla. Farm Price $ per 100 #	Deviation of U.S. from Chicago $ per 100 #	Deviation of Oklahoma from Chicago $ per 100 #
1928	9.22	8.54	8.07	-.68	-1.15
1929	10.16	9.42	8.62	-.74	-1.54
1930	9.47	8.84	8.08	-.63	-1.39
1931	6.16	5.73	5.61	-.43	- .55
1932	3.83	3.34	3.22	-.49	- .61
1933	3.94	3.53	3.13	-.41	- .81
1934	4.65	4.14	3.72	-.51	- .93
1935	9.27	8.63	7.98	-.64	-1.29
1936	9.89	9.30	8.69	-.59	-1.20
1937	10.02	9.47	8.97	-.55	-1.05
1938	8.09	7.72	7.35	-.37	- .74
1939	6.57	6.23	6.01	-.34	- .56
1940	5.71	5.37	5.15	-.34	- .56

SOURCE: Tables V and XXXIV; United States price from the Mid-Month Local Price Reports, United States Department of Agriculture, Agricultural Marketing Service, various issues.

Table XXXVIII. Deviations of the United States Price of Hogs from the Oklahoma Price during Years in Which Oklahoma Had Two Percent or More of the United States Hog Numbers
(Cents)

	October	November	December	January	February	March	April	May	June	July	August	September
1928-29	35	61	55	68	88	110	90	86	80	103	98	73
1931-32	10	-04	-14	06	13	30	28	26	32	43	36	33
1932-33	25	20	13	18	34	47	36	63	36	48	54	43
1933-34	42	25	12	26	57	48	59	42	57	57	76	54
1934-35	60	59	45	47	60	30	58	62	56	60	32	59
1939-40	42	37	33	28	37	27	25	35	12	18	33	24
Average	36	33	24	32	48	49	49	52	46	55	55	48

SOURCE: Table XXXIII and Table XI.

Table XXXIX. Deviations of the United States Price of Hogs from the Oklahoma Price during Years when Oklahoma Had Less than Two Percent of the United States Hog Numbers

(Cents)

	October	November	December	January	February	March	April	May	June	July	August	September
1927-28	46	39	34	50	61	68	85	72	70	74	101	87
1929-30	60	64	63	80	98	97	87	79	70	68	81	84
1930-31	69	40	34	45	31	52	42	45	40	40	25	24
1935-36	56	44	52	41	54	47	38	39	31	24	79	48
1936-37	57	54	59	70	79	67	64	49	57	50	26	65
1937-38	58	35	54	39	44	55	27	35	50	56	41	47
1938-39	08	25	20	26	51	30	37	39	36	15	37	46
Average	51	43	45	50	60	59	54	51	51	47	56	57

SOURCE: Table XXXII and Table XI.

Table XL. Deviations of the United States Price of Hogs from the Oklahoma Price during Years When Oklahoma Produced More than Two Percent of the Corn Equivalent Units of Feed Grains in the United States

	October	November	December	January	February	March	April	May	June	July	August	September
						(Cents)						
1927-28	46	39	34	50	61	68	85	72	70	74	101	87
1928-29	35	61	55	68	88	110	90	86	80	103	98	73
1929-30	60	64	63	80	98	97	87	79	70	68	81	84
1931-32	10	- 4	-14	6	13	30	28	26	32	43	36	33
1932-33	25	20	13	18	34	47	36	63	36	48	54	43
Average	35	36	30	44	59	70	65	65	58	67	74	64

SOURCE: Tables XXXII and XVII.

Table XLI. Deviations of the United States Price of Hogs from the Oklahoma Price during Years when Oklahoma Produced Less than Two Percent of the Corn Equivalent Units of Feed Grains in the United States

	October	November	December	January	February	March	April	May	June	July	August	September
						(Cents)						
1930-31	69	40	34	45	31	52	42	45	40	40	25	24
1933-34	42	25	12	26	57	48	59	42	57	57	76	54
1934-35	60	59	45	47	60	30	58	62	56	60	32	59
1935-36	56	44	52	41	54	47	38	39	31	24	79	48
1936-37	57	54	59	70	79	67	64	49	57	50	26	65
1937-38	58	35	54	39	44	55	27	35	50	50	41	47
1938-39	08	25	20	26	51	30	37	39	36	16	37	46
1939-40	42	37	33	28	37	27	25	35	12	18	33	24
Average	49	40	39	40	52	44	44	43	42	40	44	46

SOURCE: Tables XXXII and XVII.

Table XLII. Deviations of the United States Price of Hogs from the Oklahoma Price during Years in Which Oklahoma Had Two Percent or More of the United States Hog Numbers and Less than Two Percent of Feed Supplies

(Cents)

	October	November	December	January	February	March	April	May	June	July	August	September
1911-12	39	36	42	34	29	34	08	19	15	04	-09	33
1913-14	20	23	26	35	25	30	20	30	33	42	21	31
1914-15	53	40	27	27	34	43	48	37	30	-16	01	29
1916-17	-03	-16	06	-04	-17	-48	.01	-.08	-10	05	24	-21
1917-18	-15	21	13	36	23	48	46	34	17	08	49	60
1939-40	42	37	33	28	37	27	25	35	12	18	33	24
Average	23	24	24	26	22	22	25	24	16	8	20	15

SOURCE: Tables X, XVII, and XXXIII.

Table XLIII. Deviations of the United States Price of Hogs from the Oklahoma Price during Years in Which Oklahoma Had Less than Two Percent of the United States Hog Numbers and More than Two Percent of Feed Supplies

(Cents)

	October	November	December	January	February	March	April	May	June	July	August	September
1922-23	83	58	53	77	75	72	65	83	77	58	75	81
1924-25	65	12	39	31	52	33	34	98	82	62	-11	60
1926-27	-14	-15	27	67	49	59	31	31	30	58	44	28
1927-28	46	39	34	50	61	68	85	72	70	74	101	87
1929-30	60	64	63	80	98	97	87	79	70	68	81	84
1931-32	10	-04	-14	06	13	30	28	26	32	43	36	33
Average	42	31	34	52	58	60	50	65	60	60	54	62

SOURCE: Tables X, XVII, and XXXIII.

Table XLIV. Deviations of the United States Price of Hogs from the Oklahoma Price During Years in Which Oklahoma Had Two Percent or More of the United States Hog Numbers and More than Two Percent of Feed Supplies. (Cents)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1910-11	-02	01	16	24	14	44	57	42	36	52	24	23
1912-13	-10	-15	-11	07	17	12	06	06	-09	11	0	8
1915-16	28	25	12	32	27	-14	-09	-13	-19	-10	01	-18
1919-20	-22	26	26	56	72	89	103	74	38	35	19	18
1921-22	51	46	62	69	64	68	33	25	21	62	54	73
1932-33	25	20	13	18	34	47	36	63	36	48	54	43
Average	12	17	20	34	38	41	38	33	17	33	27	24

SOURCE: Tables XI, XVII, and XXXIII.

Table XLV. Deviations of the United States Price of Hogs from the Oklahoma Price during Years in Which Oklahoma Had Less Than Two Percent of the United States Hog Numbers and Less than Two Percent of Feed Supplies.
(Cents)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1918-19	-10	42	32	39	43	43	-11	0	0	12	40	-19
1923-24	83	66	79	89	84	103	90	98	75	80	54	70
1925-26	16	16	71	49	36	45	59	67	40	-11	-04	-33
1930-31	69	40	34	45	51	52	42	45	40	40	25	24
1933-34	42	25	12	26	57	48	59	42	57	57	76	54
1935-36	56	44	52	41	54	47	38	39	31	24	79	49
1936-37	57	54	59	70	79	67	64	49	57	50	26	65
1937-38	58	35	54	39	44	55	27	35	50	56	41	47
1938-39	08	25	20	26	51	30	37	39	36	16	37	46
Average	42	39	46	47	53	54	45	46	43	36	42	34

SOURCE: Tables XI, XVII, and XXXIII.

Table XLVI. Index of Receipts of Hogs from Oklahoma[1/]

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	87	115	136	109	127	91	54	49	136	123	92	81
1929	105	105	144	146	118	93	66	79	98	103	69	73
1930	113	143	146	144	119	73	49	64	104	92	80	74
1931	130	132	131	123	120	72	52	93	95	103	72	76
1932	53	71	110	120	132	73	80	100	132	127	101	101
1933	75	75	101	117	122	88	80	136	288	42	45	30
1934	94	84	122	116	111	73	100	120	124	100	77	79
1935	131	114	125	112	104	60	55	93	96	102	94	114
1936	127	94	128	121	96	79	78	97	100	92	86	102
1937	117	104	128	105	90	63	66	140	124	105	79	81
1938	85	89	124	106	94	84	85	105	113	114	97	104
1939	94	97	123	97	105	73	71	86	117	125	110	103
1940	114	97	99	92	79	49	65	99	122	150	110	123
Ave.	102	102	124	116	109	75	69	97	127	106	86	88

SOURCE: Computed from Data obtained from K. D. Blood, U. S. Department of Agriculture, Agricultural Marketing Service, Oklahoma City, Oklahoma.

1/ Percent the receipts for each month were of the average monthly receipts for the corresponding year.

Table XLVII. Index of Receipts at Public Stockyards, [1]
United States, 1928-1940.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	137	136	120	90	96	92	75	65	67	95	105	123
1929	140	109	94	97	93	89	90	81	84	101	107	116
1930	139	111	97	96	97	95	86	77	82	101	101	118
1931	141	112	97	93	89	87	76	74	83	105	114	128
1932	144	125	101	101	104	87	74	82	86	92	95	107
1933	101	80	78	83	93	100	85	117	193	75	95	99
1934	151	97	88	95	109	96	90	74	74	100	115	112
1935	149	112	99	101	95	80	82	78	75	101	103	125
1936	115	83	93	85	80	85	87	79	88	119	143	143
1937	132	110	118	108	81	80	61	68	81	101	123	137
1938	140	95	92	83	91	85	76	87	91	109	126	124
1939	116	85	95	86	103	90	84	86	86	105	122	143
1940	131	101	94	90	93	92	78	76	80	108	125	132
Ave.	134	104	97	93	94	89	80	80	80	101	113	124

SOURCE: Computed from Livestock Meats and Wool Market Statistics and Related Data, 1940, U. S. Department of Agriculture, Agricultural Marketing Service, p. 11.

1/ Percent the receipts for each month were of the average monthly receipts for the corresponding year.

Table XLVIII. Oklahoma City Price of Hogs by Months,[1] 1936-1940
(Dollars per 100 Pounds)

	October	November	December	January	February	March	April	May	June	July	August	September
Good and Choice, Barrows and Gilts, 220-250 Pounds												
1935-36	9.95	8.95	9.12	9.60	10.30	10.00	10.22	8.88	9.78	9.85	10.72	10.02
1936-37	9.55	9.08	9.45	9.92	9.72	9.92	9.72	10.55	10.92	11.72	12.32	11.45
1937-38	10.12	8.25	7.98	7.88	7.80	8.78	7.90	7.60	8.62	9.55	8.18	8.70
1938-39	7.42	7.62	7.15	7.32	7.60	7.12	6.62	6.60	6.38	6.92	5.28	7.45
1939-40	6.92	5.72	5.29	5.50	5.10	5.35	5.42	5.42	5.10	6.60	6.45	6.45
Average Price	8.79	7.92	7.79	8.04	8.10	8.23	7.98	7.81	8.16	8.93	8.58	8.81
Index	106	96	94	97	98	100	97	95	99	108	104	107
Good Sows, 350-425 Pounds												
1935-36	8.37	7.87	8.37	8.12	8.62	8.48	8.62	7.38	8.12	7.75	8.80	8.30
1936-37	8.00	8.38	8.75	9.00	8.62	8.87	8.88	9.38	9.62	9.88	10.75	9.50
1937-38	8.62	7.25	6.50	6.12	6.18	7.42	6.88	6.55	7.38	7.62	6.12	6.88
1938-39	6.66	6.88	6.12	6.12	6.18	5.92	5.62	5.38	4.62	4.75	3.62	6.12
1939-40	5.48	4.80	4.12	3.88	3.78	3.88	3.98	4.52	3.88	5.02	4.88	5.22
Average Price	7.43	7.04	6.77	6.65	6.68	6.91	6.80	6.64	6.72	7.00	6.83	7.20
Index	108	102	98	96	97	100	99	96	98	102	99	105
Deviations of Oklahoma Farm Price of Hogs from the Oklahoma City Price of Barrows and Gilts, 220-225 Pounds												
1935-36	.95	.85	.92	1.10	1.50	1.30	1.22	.68	1.18	.95	1.62	.82
1936-37	.95	.88	.95	1.22	1.32	1.42	1.32	1.65	1.52	1.52	1.12	1.55
1937-38	.92	.35	.98	.68	.50	.98	.40	.60	1.12	1.55	.78	1.10
1938-39	.22	.62	.45	.62	.90	.32	.42	.60	.78	.82	.18	.85
1939-40	.82	.22	.55	.60	.50	.75	.77	.42	.40	1.00	.92	.55
Average	.77	.58	.77	.84	.94	.95	.83	.79	1.00	1.17	.92	.97

SOURCE: Livestock Market Reports, Oklahoma City, Oklahoma, A.M.S., U.S.D.A., 1936-1940.

1/ Price is mid point of the range on the 15th of the month or the closest market date to the 15th.

Table XLIX. Oklahoma Price Received by Farmers for Hogs, by Marketing Seasons, 1935-36 -- 1939-40.
(Dollars per 100 Pounds)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1935-36	9.00	8.10	8.20	8.50	8.80	8.70	9.00	8.20	8.60	8.90	9.10	9.20
1936-37	8.60	8.20	8.50	8.70	8.40	8.50	8.40	8.90	9.40	10.20	11.20	9.90
1937-38	9.20	7.90	7.00	7.20	7.30	7.80	7.50	7.00	7.50	8.00	7.40	7.60
1938-39	7.20	7.00	6.70	6.70	6.70	6.80	6.20	6.00	5.60	6.10	5.10	6.60
1939-40	6.10	5.50	4.90	4.90	4.60	4.60	4.65	5.00	4.70	5.60	5.50	5.90
Total	40.10	36.70	35.30	36.00	35.80	36.40	35.75	35.10	35.80	38.80	38.30	39.20
Average	8.02	7.34	7.06	7.20	7.16	7.28	7.15	7.02	7.16	7.76	7.66	7.84

SOURCE: Table V.

Table L. Percentages of Trend for Federally Inspected Slaughter of Hogs, U. S., 1910-1940.

(Based on Numbers)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1910										83	104	112
1911	108	100	115	100	111	125	90	67	73	90	120	124
1912	141	114	93	86	100	100	89	70	63	96	111	126
1913	137	104	82	89	107	111	93	82	75	96	114	139
1914	125	100	93	85	96	107	85	64	66	90	100	143
1915	143	130	110	87	94	103	78	61	58	76	109	159
1916	159	126	100	83	92	89	69	71	68	97	141	156
1917	139	106	94	84	103	93	86	61	46	76	103	128
1918	133	133	126	106	97	82	83	64	56	83	119	154
1919	157	116	92	89	103	106	85	56	61	82	100	145
1920	159	97	106	81	113	113	84	71	65	81	106	129
1921	139	119	94	94	103	113	88	78	75	91	106	115
1922	121	106	103	85	109	114	86	78	71	85	108	130
1923	124	102	114	100	100	98	89	80	70	96	118	131
1924	131	111	100	93	98	98	93	70	67	83	112	161
1925	150	113	85	79	84	100	80	74	76	97	106	132
1926	132	100	106	91	91	100	91	82	76	88	106	126
1927	125	94	106	92	106	119	92	79	62	75	92	122
1928	138	145	128	85	98	100	71	61	62	92	112	149
1929	142	112	88	93	93	93	90	78	79	100	115	131
1930	128	105	89	92	103	100	86	73	76	95	108	124
1931	150	114	97	97	92	89	76	68	79	100	111	142
1932	132	121	95	95	100	87	74	81	89	97	103	121
1933	121	92	92	97	110	118	98	88	77	79	115	118
1934	142	89	81	92	114	103	94	76	79	109	139	145
1935	107	89	85	88	92	82	77	77	68	95	104	145
1936	142	92	104	100	93	93	90	77	77	113	139	157
1937	117	97	107	100	78	78	59	59	74	104	127	148
1938	156	100	90	86	87	83	77	83	90	106	126	134
1939	125	88	97	88	103	94	80	78	78	92	116	133
1940	138	110	100	90	95	93	76	73	78			
Ave.	135	107	99	91	99	99	84	73	71	92	113	136

SOURCE: Computed from Livestock, Meats, and Wool Market Statistics and Related Data, 1940, United States Department of Agriculture, Agricultural Marketing Service, p. 34.

Table LI. Total Dressed Weight of Hogs Slaughtered Under Federal Inspection, 1921-1940.
(000,000 lbs.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1921	742	668	525	520	559	617	528	450	420	478	565	640	6711
1922	690	592	567	507	642	718	566	523	486	550	699	878	7419
1923	904	749	853	735	736	749	703	641	552	711	873	976	9182
1924	977	844	766	691	721	737	732	549	493	560	723	1027	8820
1925	951	723	548	519	556	650	512	457	461	564	607	774	7323
1926	803	605	650	572	569	647	616	564	476	480	569	723	7273
1927	784	608	695	603	682	778	653	581	459	497	597	794	7731
1928	935	1018	890	585	673	705	538	467	434	624	741	969	8579
1929	974	770	636	655	666	673	676	586	552	652	738	851	8430
1930	874	705	590	603	665	664	603	500	472	576	666	798	7718
1931	963	732	631	624	604	597	533	457	503	611	678	899	7831
1932	860	787	629	644	676	575	509	536	571	608	644	789	7831
1933	819	629	624	677	751	823	708	631	540	518	753	752	8226
1934	915	574	509	572	700	633	574	453	427	562	670	642	7231
1935	485	386	351	364	374	322	316	290	251	363	410	495	4406
1936	595	390	454	449	449	499	498	403	396	547	669	751	6101
1937	570	464	499	459	346	369	297	275	341	452	549	681	5301
1938	742	485	447	426	459	477	437	448	444	532	652	757	6305
1939	715	501	564	513	605	586	534	511	506	601	754	907	7296
1940	939	742	690	623	676	695	596	541	540	747	899	1021	8709
Ave.	812	649	606	567	605	626	556	493	466	562	673	806	7421

SOURCE: Livestock, Meats, and Wool Market Statistics and Related Data, 1940, United States Department of Agriculture, Agricultural Marketing Service, p. 93.

Table LII. Cold Storage Holdings of Pork 1916-1940 (000,000 lbs.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1916	421	556	666	646	618	615	644	642	550	431	352	426
1917	559	643	701	662	676	695	729	732	597	435	329	379
1918	564	725	876	967	996	1010	893	844	720	580	517	561
1919	723	969	1000	1004	999	988	959	882	771	692	569	514
1920	598	777	903	969	961	959	982	933	807	616	473	427
1921	534	670	837	843	802	801	799	728	624	472	360	356
1922	415	485	547	591	594	636	707	683	620	483	395	419
1923	571	689	784	865	940	909	909	866	754	613	506	577
1924	709	801	878	932	908	891	873	811	711	565	408	428
1925	647	779	865	830	814	748	739	670	584	467	393	383
1926	472	556	610	627	604	574	602	643	623	514	406	388
1927	473	589	672	738	770	788	844	841	766	609	467	420
1928	523	656	886	998	961	919	915	819	682	515	433	462
1929	670	838	945	922	924	871	842	814	719	600	491	490
1930	621	687	786	753	712	675	679	651	551	447	357	412
1931	521	726	853	844	868	828	775	712	595	475	381	397
1932	563	674	812	792	799	796	724	643	579	498	434	404
1933	491	575	609	610	630	671	761	808	757	630	493	529
1934	630	730	734	657	656	642	628	644	542	524	505	572
1935	688	688	667	627	565	503	445	370	325	278	241	253
1936	327	436	451	450	457	441	435	442	421	362	355	463
1937	667	739	776	756	756	664	578	467	368	283	266	307
1938	399	554	583	544	501	451	418	379	335	277	252	299
1939	430	526	542	523	527	520	497	455	361	300	273	332
1940	469	589	651	563	612	593	599	549	418	329	304	409
Ave.	547	665	745	752	746	728	719	681	591	480	398	424
Index	87.8	106.8	119.6	120.7	119.7	116.7	115.4	109.3	94.9	77.0	63.9	68.1

SOURCE: Livestock Meats and Wool, Market Statistics and Related Data, 1940, U. S. D. A., Agricultural Marketing Service, p. 53.

Table LIII. Total Supply of Pork (Dressed Weight of Hogs Slaughtered Under Federal Inspection Plus Cold Storage Holdings of Pork), (1921-1940). (000,000 lbs.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1921	1,276	1,338	1,362	1,363	1,361	1,418	1,327	1,178	1,044	950	925	996	14,538
1922	1,105	1,077	1,114	1,098	1,236	1,354	1,273	1,206	1,106	1,033	1,094	1,297	13,993
1923	1,475	1,438	1,637	1,600	1,676	1,658	1,612	1,507	1,306	1,324	1,379	1,553	18,165
1924	1,686	1,645	1,644	1,623	1,629	1,628	1,605	1,360	1,204	1,125	1,131	1,455	17,735
1925	1,598	1,502	1,413	1,349	1,370	1,398	1,251	1,127	1,045	1,031	1,000	1,159	15,243
1926	1,275	1,161	1,260	1,199	1,173	1,221	1,218	1,207	1,099	994	975	1,111	13,893
1927	1,257	1,197	1,367	1,341	1,452	1,566	1,497	1,422	1,225	1,106	1,064	1,214	15,708
1928	1,458	1,674	1,776	1,583	1,634	1,624	1,453	1,286	1,116	1,139	1,174	1,431	17,348
1929	1,644	1,608	1,581	1,577	1,590	1,544	1,518	1,400	1,271	1,252	1,229	1,341	17,555
1930	1,495	1,392	1,376	1,356	1,377	1,339	1,383	1,151	1,023	1,023	1,023	1,210	15,047
1931	1,484	1,458	1,484	1,468	1,472	1,425	1,308	1,169	1,098	1,086	1,059	1,296	15,807
1932	1,423	1,461	1,441	1,436	1,475	1,371	1,233	1,179	1,150	1,106	1,078	1,193	15,546
1933	1,310	1,204	1,233	1,287	1,381	1,494	1,469	1,439	1,297	1,139	1,246	1,281	15,789
1934	1,545	1,304	1,243	1,229	1,356	1,275	1,202	1,097	969	1,086	1,175	1,214	14,695
1935	1,173	1,054	1,018	991	939	825	761	660	576	641	651	748	10,037
1936	922	826	905	899	906	940	933	845	817	909	1,024	1,214	11,140
1937	1,237	1,203	1,275	1,215	1,102	1,033	875	742	709	735	815	988	11,929
1938	1,141	1,039	1,030	970	960	928	855	827	779	809	904	1,056	11,298
1939	1,145	1,027	1,106	1,036	1,132	1,106	1,031	966	867	901	1,027	1,239	12,583
1940	1,408	1,331	1,341	1,276	1,288	1,288	1,195	1,090	958	1,076	1,203	1,430	14,884
Ave.	1,353	1,297	1,330	1,295	1,325	1,322	1,245	1,143	1,033	1,024	1,059	1,221	14,647

SOURCE: Computed from Livestock, Meats, and Wool Market Statistics and Related Data, 1940, pp. 53 and 93.

Table LIV. Percentages of Trend for Total Supply of Pork (Cold Storage Plus Slaughter) 1921-1940.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1921							110	99	90	83	82	89
1922	99	97	100	98	109	117	108	100	89	80	82	95
1923	106	102	114	110	113	110	106	98	84	85	89	100
1924	109	107	108	107	109	110	109	93	83	79	80	105
1925	117	112	107	103	105	109	100	92	86	86	85	99
1926	110	100	108	103	101	105	105	104	94	85	82	91
1927	101	95	107	104	112	120	114	106	89	78	75	84
1928	101	117	125	112	115	113	100	88	77	79	82	100
1929	115	112	109	108	108	105	104	97	89	89	89	98
1930	111	105	105	105	108	106	102	92	81	80	80	94
1931	115	113	114	113	112	108	99	89	84	83	81	99
1932	110	113	111	110	113	105	96	92	92	89	88	97
1933	105	95	96	100	106	114	111	107	97	86	93	96
1934	118	102	99	99	110	104	99	93	83	95	105	112
1935	112	105	105	106	105	96	92	82	73	82	84	96
1936	116	102	110	106	104	103	99	87	82	88	97	114
1937	116	114	122	117	108	103	88	76	74	78	88	108
1938	125	114	112	105	103	99	91	88	83	85	94	108
1939	116	102	109	102	110	106	97	89	78	80	90	107
1940	120	113	113	106	106	105						
Ave.	111.7	106.3	109.2	106.0	108.3	107.3	101.6	93.3	84.6	83.7	86.6	99.6
Adj. Ave.	111.9	106.5	109.4	106.2	108.5	107.5	101.8	93.4	84.7	83.8	86.7	99.7

SOURCE: Table LIII.

Table LV. Apparent Consumption of Pork (Federally Inspected Slaughter Carcass Weight) 1921-1940, (000,000 lbs.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1921	420	315	366	419	419	468	438	423	463	528	486	468	5212
1922	480	391	375	404	473	496	468	483	547	551	555	555	5777
1923	582	488	579	477	603	578	584	618	566	698	643	642	7057
1924	656	562	519	561	598	622	650	539	565	660	608	662	7201
1925	624	483	463	451	526	549	492	492	519	592	542	563	6297
1926	567	430	512	489	496	521	471	498	537	547	540	545	6154
1927	564	446	540	473	561	589	548	595	576	615	604	594	6706
1928	676	642	619	529	617	598	560	550	588	675	641	634	7330
1929	628	537	552	559	623	586	604	617	614	718	657	602	7299
1930	693	490	532	568	598	574	558	558	552	636	553	608	6919
1931	660	509	564	524	581	585	540	552	601	679	620	640	7055
1932	654	559	586	587	609	587	551	579	629	647	631	632	7250
1933	635	524	561	597	616	606	576	629	638	652	671	568	7272
1934	716	512	536	519	631	577	494	551	443	568	571	487	6604
1935	483	366	377	415	427	371	395	341	301	398	387	395	4657
1936	450	363	443	424	435	483	467	422	456	549	534	502	5529
1937	455	404	499	457	440	456	431	408	465	484	493	545	5536
1938	518	419	464	451	482	486	461	486	506	554	574	570	5972
1939	561	463	550	488	571	567	548	606	567	613	642	661	6836
1940	724	573	651	643	659	650	618	690	652	771	767	703	8101
Ave.	587	474	514	502	548	547	523	532	539	607	586	579	6539
Index	105.8	94.6	92.5	93.5	98.7	101.8	94.2	95.9	100.4	109.3	109.1	104.3	100.0

SOURCE: Livestock, Meats, and Wool Market Statistics and Related Data, 1940, U. S. D. A., Agricultural Marketing Service, p. 97.

Table LVI. Correlation of Oklahoma Price Received by Farmers for Hogs, Supply of Pork in the United States, Index of Factory Payrolls and Exports of Pork and Lard, 1921-1940

Year	Annual Average Oklahoma Farm Price of Hogs (Dollars per cwt.)	Adjusted Supply of Pork from Federally Inspected Slaughter 1/ (Billion Pounds)	Annual Average Index of Factory Payrolls (1923-25 = 100)	Exports of Pork and Lard (Billion Pounds)	Price Estimated from Charts in Figure 22 and Values of Factors
1921	7.16	8.5	76	1.5	7.45
1922	7.85	8.7	81	1.5	7.60
1923	6.38	10.4	103	1.8	8.10
1924	6.77	10.1	96	1.9	7.70
1925	10.55	9.0	101	1.4	9.25
1926	11.59	8.8	104	1.2	9.60
1927	9.25	9.2	102	1.0	8.70
1928	8.07	9.7	104	1.0	8.30
1929	8.62	9.8	110	1.1	9.00
1930	8.08	9.4	89	1.1	7.00
1931	5.61	9.5	68	.8	4.80
1932	3.22	9.9	47	.7	3.00
1933	3.13	9.9	50	.7	3.10
1934	3.72	9.4	64	.7	4.50
1935	7.98	7.2	74	.4	8.40
1936	8.69	8.1	86	.1	7.70
1937	8.97	8.2	103	.1	9.50
1938	7.35	8.3	78	.2	6.70
1939	6.01	9.2	92	.3	6.85
1940	5.15	10.6	105	.4	6.90

SOURCES: See Tables V and IX. Livestock Meats and Wool Market Statistics and Related Data, 1940, U. S. D. A., A.M.S., pp. 57, 94, and 100.

1/ Production of pork from federally inspected slaughter plus cold storage holdings, January 1, adjusted by the ratio of (1) the total production of pork from total United States slaughter to (2) pork from federally inspected slaughter.

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