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UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE

Extension Division

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PRICE AND MARKET SUGGESTIONS FOR
KENTUCKY STOCKMEN

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Lexington, Kentucky

May, 1937

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Circular No. 303

Price and Market Suggestions for Kentucky Stockmen

By L. A. VENNES

Livestock production is largely for a future market and therefore stockmen are constantly faced with the problem of estimating price changes months in advance. Prices often change widely between the time a female is bred and the time the offspring is ready for market, so the profitableness of the enterprise depends, to some extent, on the producer's ability to forecast future price trends. His estimates of the future market level are the basis for decisions relative to the time of breeding, the quality to prepare for market, his purchases of feeder stock, and whether to increase or decrease his breeding herd. Many influences cause prices to change from day to day, month to month, and year to year, and while it is impossible to predict to the cent what prices will be a month or a year hence, we have learned that certain price changes occur more or less regularly. Other price changes due to unusual occurrences, such as drouth, strikes, etc., are not periodic in nature and can be forecast with less certainty. This bulletin is intended to provide information regarding usual price movements with the hope that it will assist stockmen in planning their production and marketing of livestock.

Demand. Every stockman is familiar with the fact that livestock prices constantly fluctuate, but many are not familiar with the causes of these changes. It is true that prices are set by the law of supply and demand, but this is an inadequate explanation of the reason why prices behave as they do, and is of little value to a farmer planning his future production and marketing.

The demand for livestock is very closely related to the demand for dressed meat which in turn depends largely upon the amount of money the housewife has for buying meat. This is well illustrated by the following chart (Figure 1) showing the relationship between consumer income and the income to farmers from the sale of meat animals. The demand for livestock products moves upward or downward as the incomes of industrial workers move up or down.

The price of any one kind of meat would not be likely to follow changes in consumer incomes so closely. If the supply of pork was small and pork prices high, and beef supplies were large and prices low, many housewives would increase their purchases of beef and

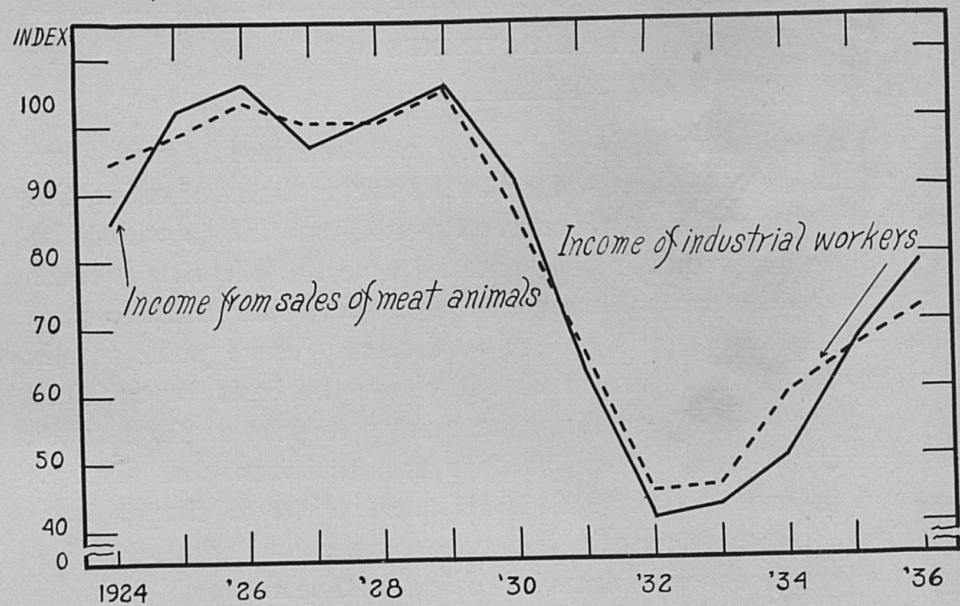


FIGURE 1. The index of the income from sales of meat animals and the index of the income of industrial workers. (U. S. D. A.) The income to farmers from the sale of meat animals closely followed changes in the income of industrial workers during the period from 1924 to 1936.

curtail their purchases of pork in order to get the most pounds of meat for their money, but there would probably still be enough housewives willing to purchase pork to keep pork prices high in relation to beef prices.

If we assume that changes in the amount of money that will be spent for meat follow closely changes in the national income we have a measure of demand for all meat. While there is some variation from month to month in the spread between the price of livestock and the retail price of meat products, these prices are largely determined by consumer buying power and market receipts of livestock (see Figure 2). Changes in the relationship between the prices of various kinds of livestock will depend largely on the available market supplies.

Cyclical changes in prices of livestock. Price changes are of three distinct types: cyclical, seasonal and day to day fluctuations. Cyclical changes occur both in prices and in production of livestock. Cycles in production arise from efforts of large numbers of pro-

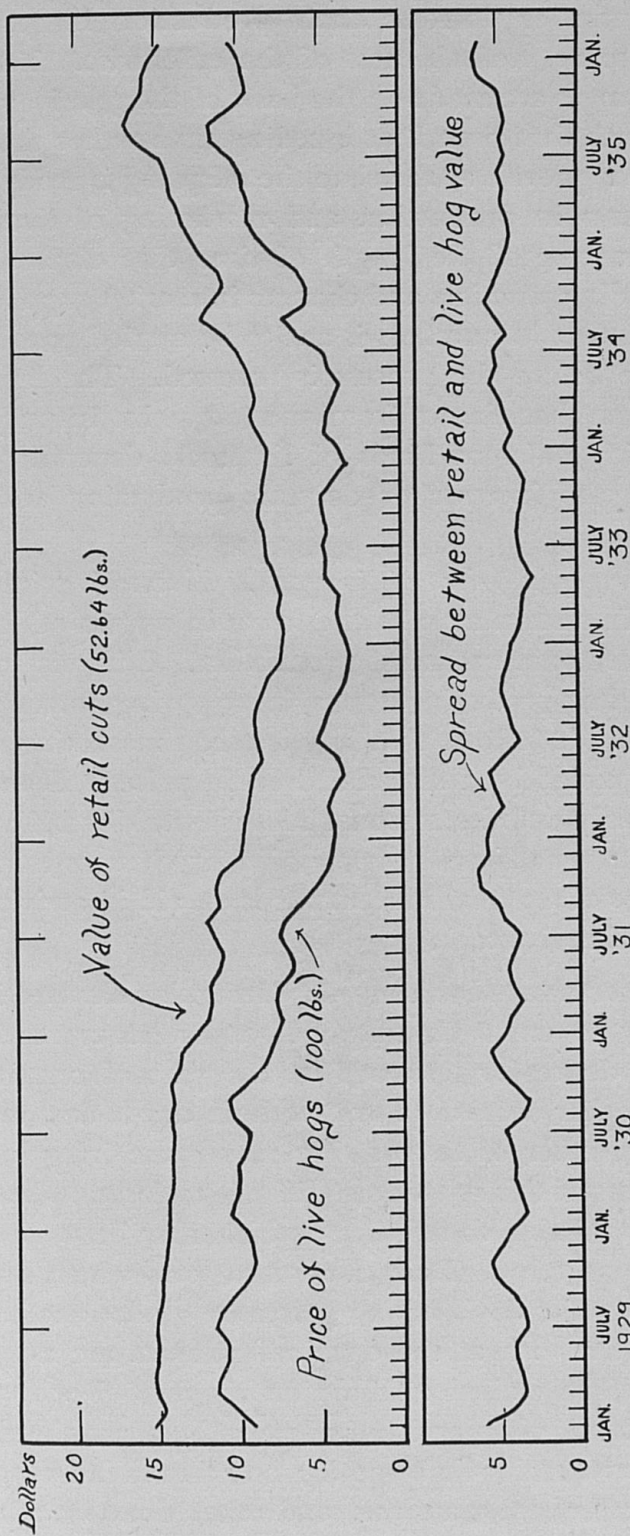


FIGURE 2. Price of live hogs, retail value of hog products, and spread between retail and live-hog values (B. A. E. - U. S. D. A.). The spread between the price per hundredweight of live hogs and the retail value of the principal hog products derived from 100 pounds of live weight was somewhat wider during the 3 years, 1929 to 1931, than in the succeeding years. This spread represents the costs of processing and distribution.

ducers to increase or decrease their production in response to changes in price or profitableness of the enterprise. Taken as a whole these changes are made on the basis of the relative prices for feed and livestock that prevail at breeding time rather than on the prices which may prevail at the time the offspring is ready for market. Adjustments in production and marketing of livestock are made slowly because of the length of time that elapses between changes in breeding practices and changes in market supplies; therefore, the adjustment in numbers is apt to be carried past the point of best balance before the process is reversed. The length of a cycle, or the time that elapses from one low point in prices to the next, varies with different kinds of livestock, depending on the period necessary to increase or decrease production and market supplies.

Seasonal changes in prices of livestock. Livestock prices tend to average higher in certain months and lower in certain other months because of the seasonal nature of production. Climatic conditions in the leading hog-producing states favor spring farrowing as a general practice. It follows that heaviest hog marketing comes in the fall, accompanied by a seasonal drop in prices. Each kind of livestock has fairly definite seasonal movements of marketing and these movements usually are accompanied by changes in price. A thoro knowledge of seasonal movements is an aid in arriving at the best time to market livestock.

Day to day, or short-time changes. Irregular changes in prices occur from day to day. Unusually light or heavy receipts and changes in the desire for livestock on the part of certain buyers combine with other factors to cause these day-to-day variations. Owing to the number of factors that may cause irregular prices, future movements of this nature are difficult to forecast, but certain information is available to stockmen which may be used to guide them in their marketing. Daily market reports which summarize the day's receipts, the day's selling prices by grades and the carry-over of unsold livestock at the terminal markets are available to farmers and will be mailed to them on request. Reports of this nature, while useful, often arrive too late to be of maximum value. Early radio reports giving information on carry-over from the previous day, volume of early arrivals, and other timely market information, can be used by nearby shippers to guide their marketing

and may enable them to avoid selling on days when the market is glutted and to sell on days when there is an active market.

Short-time price changes are of considerable importance to the livestock producer and an effort should be made to correlate the movement to market with the available demand at that market. Future developments in radio market reports will largely depend upon the demands made by livestock producers for news service of this kind.

CATTLE

Cattle production is of growing importance in Kentucky. In 1920, Kentucky ranked twenty-fifth among all states in the number of cattle on farms but by 1936, had moved up to twenty-first place. Increased acreage of lespedeza and other legumes has increased the amount of roughage and pasture available for livestock and has resulted in an increase in cattle production in the State. The accompanying chart (Figure 3) shows the number of cattle on farms in Kentucky on January 1 from 1867 to 1937. The chief advantage that this state enjoys in the production of cattle is in the length of pasture season and freedom from extreme winter temperatures. The fact that Kentucky cannot compete with cornbelt states in the production of cheap corn makes the maximum use of pastures imperative. This, in turn, influences the types of feeder cattle to be purchased and the degree of finish that can profitably be given. While there is a definite place for cattle that may be fed out to grade choice or prime on the market, the practice of making the maximum gain on pasture and producing and marketing cattle to grade good to medium most nearly fits conditions found generally in the State.

Price and production cycles. The production of cattle within the United States is constantly shifting in response to the relative profitableness of the cattle enterprise. The number of cattle tends to increase for seven to eight years and then to decrease for a like period making a usual cycle of 14 to 16 years in duration. Figure 4 shows the number of cattle on farms in the United States from 1890 to 1937 and illustrates the definite tendency for the number to move in cycles. A close study of this chart also indicates that these cycles, while similar, are not identical. This is particularly noticeable following the drouth year of 1934 when shortage of feed caused a forced liquidation of cattle. The liquidation was carried to such

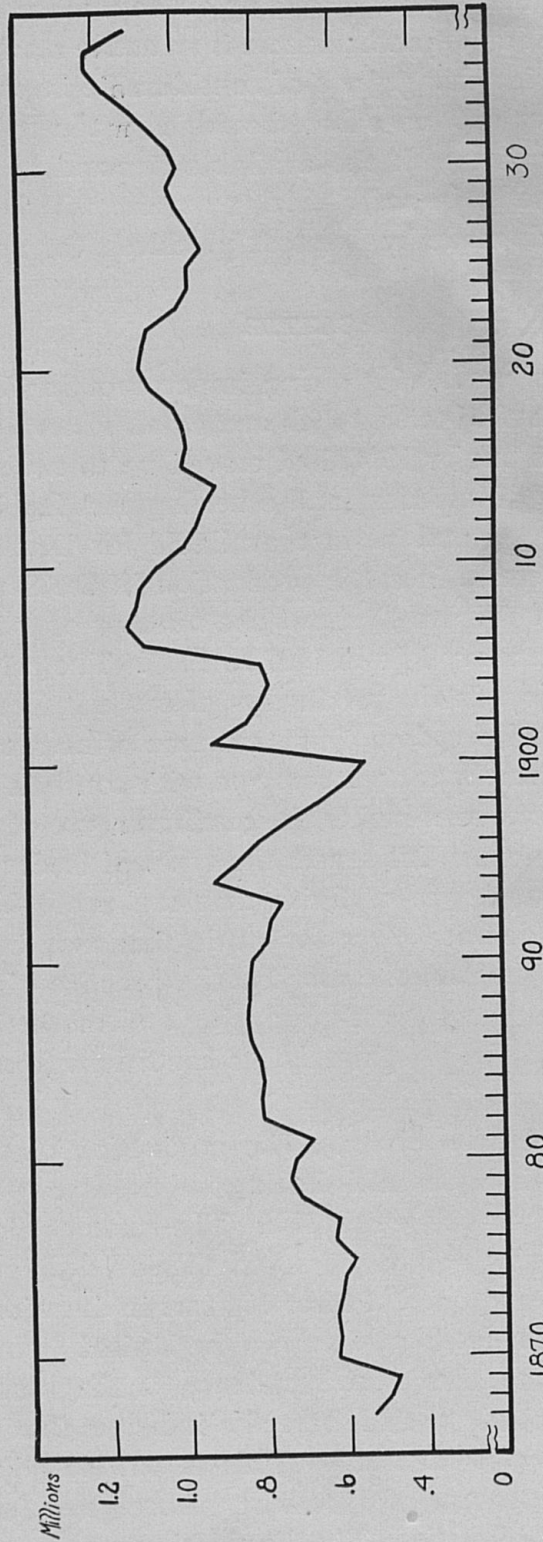


FIGURE 3. Cattle on farms in Kentucky January 1, from 1867 to 1937. The trend of the number in Kentucky has been upward during this period and reached a peak in 1900. The drought caused some decrease in cattle during 1936.

an extent that large numbers of breeding animals were marketed and the production cycle was headed downward more rapidly than would have been expected under normal conditions. Breeders who have a thoro knowledge of the causes as well as the direction of such periodic movements are in a better position to adjust their production to take advantage of shifts three or four years hence.

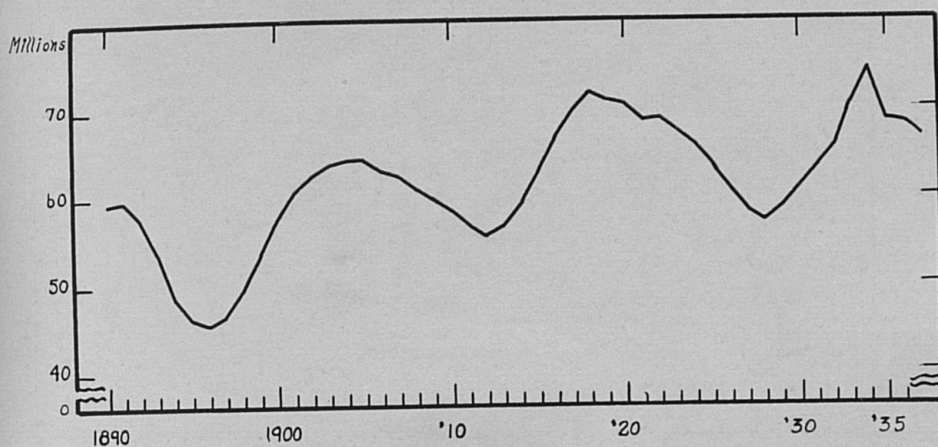


FIGURE 4. Cattle on farms in the United States on January 1, from 1890 to 1937. The number of cattle on farms tends to vary over a period of years in fairly regular cycles of 14 to 16 years. The severe drought in 1934 greatly reduced the number as shown by the figures for January 1, 1935.

The price of cattle passes thru cycles similar to those of the number but the high point in the price cycle occurs several months after the low point in the production cycle. This condition is brought about by stockmen attempting to increase their production in reaction to rising prices. As prices rise, breeding stock is held off the market and the volume of marketings continues to decrease for some time after the low point in number is reached. Just the reverse happens when the price cycle nears the bottom; the low point in the price cycle is usually reached several months after the high point in number of cattle, owing to the continued liquidation of breeding stock following the decline in price. Figure 5 shows the average January 1 farm value per head of cattle on farms, for the period, 1890 to 1936. This chart shows both the actual and the deflated January 1 price. The deflated value was arrived at by dividing the actual January 1 price by the index number of prices of all commodities for the corresponding month. By deflating the value, fluctuations due to changes in the general price level are largely eliminated and the resulting figure shows what the probable move-

ment of prices would have been if the general price level had remained constant.

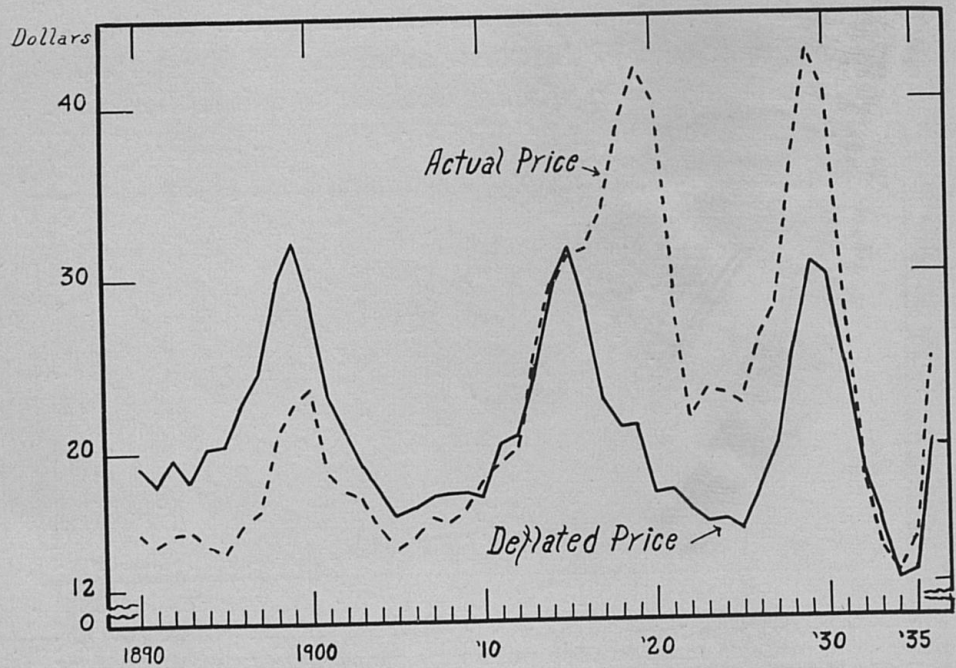


FIGURE 5. Average farm value per head of cattle on farms in the United States on January 1, from 1890 to 1936. Prices tend to fluctuate in fairly regular cycles of 14 to 16 years, approximately opposite to production cycles.

Production cycles are caused by the attempt of cattlemen as a whole to adjust their production in response to prices, and the price cycle is due to the periodic up and down movement of cattle marketings. While many factors affect the price that a farmer will receive for his livestock, the number marketed in any year is of major importance. Therefore, the relationship between the price cycle and production cycle is significant and should be familiar to all stockmen.

Seasonal Price Changes. A study of the month-to-month movement of cattle prices shows that the price of each grade tends to follow rather a definite seasonal trend. It is necessary to recognize that each grade of cattle is more or less a distinct commodity and has a distinct seasonal price movement which is quite different from that of other grades. This is illustrated by the fact that better grades are normally lowest during the spring and highest during the fall as contrasted with low-grade cattle where spring prices are highest and fall prices the lowest. Figure 6 illustrates the normal seasonal movement of the various grades of cattle.

A person unfamiliar with cattle production would be surprised at the wide difference in price trends from month to month for the different grades. The variation between the better and the poorer grades can be explained by the fact that pasture can be used eco-

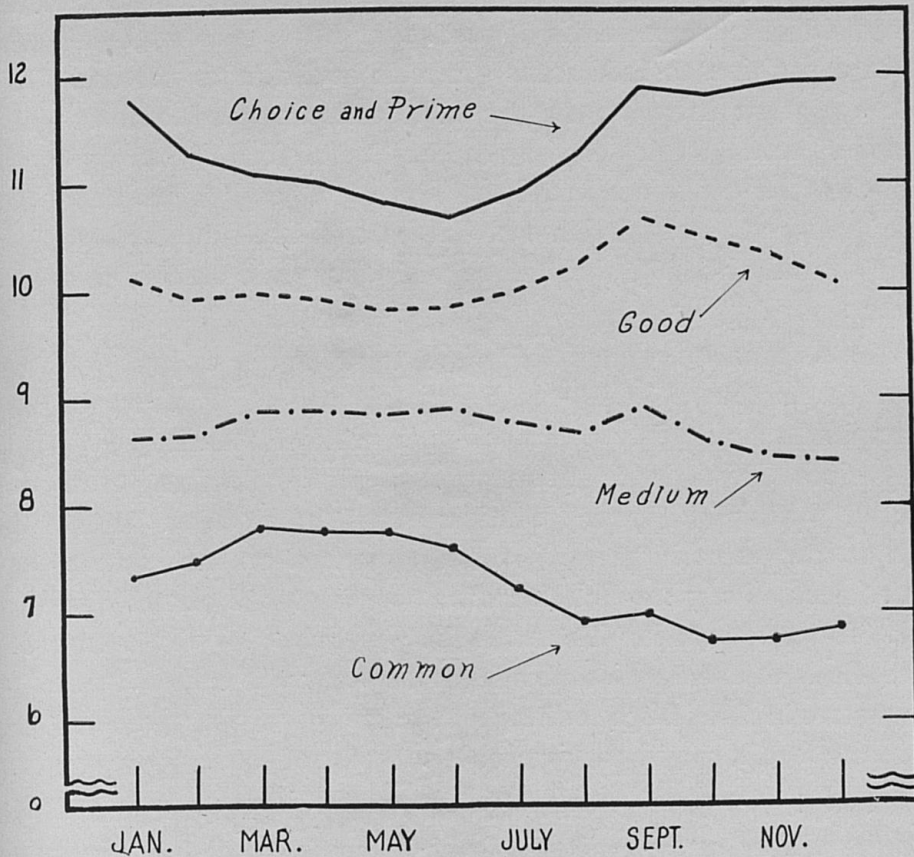


FIGURE 6. Average seasonal price movement of beef steers at Chicago (1926 to 1935 average). Prices of better grades of steers ordinarily reach their peak in late summer or early fall, when supply is limited and demand is strongest. The seasonal low is usually reached in late spring when the supply is plentiful. Prices for the lower grades do not show so great seasonal movement but tend to be higher in the spring and lowest in the late fall.

nomically to furnish a much higher percent of the feed requirements of common and medium grades than for better grades of cattle where long heavy feeding of grain is required to make them grade choice or prime when marketed. Inasmuch as common grades of cattle are in demand for the utilization of pasture during the summer, market receipts of this class are light during the pasture season and prices are relatively high during the late spring and early summer. During the late summer and early fall, when this class of cattle is marketed more freely as pastures become short,

prices tend to adjust themselves downward. In contrast, the bulk of cattle which are to be finished, go into the feed lot in the fall and are sold as prime and choice cattle in the spring months.

The same reasoning can be used to explain the seasonal movement of other market grades of cattle. A study of the seasonal movement of cattle prices is of particular interest to cattlemen who are in a position to feed some grain in addition to pasture. The wide variation in price, in the fall, between good and common grades of cattle, indicates the advisability of feeding enough grain to enable the cattle marketed to be graded good or better. Common grades are not in demand in the early fall and this type of cattle should either be finished to a higher grade or held to a later market.

The seasonal movement of prices paid for the various grades of livestock, as shown in Figure 6, was arrived at by averaging the corresponding monthly prices of each grade for each year during the period 1926 to 1935. If we were to plot the prices for any one year we would find some variation from the average. In fact the high or low point in prices is seldom reached on the identical day in two successive years but the same general trend occurs year after year. If a person is familiar with the general seasonal movement of prices he is then in a better position to judge the trend of prices in any season in light of the number of cattle on farms, number of cattle in the feed lots and the available supplies of feed.

The Effect of Large and Small Corn Crops on Cattle Prices. The amount of feed grain available for feeding livestock has a very definite effect on the seasonal movement of cattle prices. When a comparison of beef-steer prices for periods following large and small corn crops is made, a wide variation from the normal price movement is found (Figure 7). In preparing this chart, five years when corn crops were below average and five years when they were above average were selected and the respective averages charted. Instead of using the calendar year, as was done in preparing charts on the seasonal price movements for the various market classes, a period from August of the year with the abnormal crop to October of the following year was used. This period was selected so as to show the effect of the size of the corn crop on steer prices as soon as the abnormal crop was reflected in market receipts of corn. The prices used were the average for good grade steers.

In years following small corn crops the seasonal downward movement of prices during the spring tends to be delayed and the price level during the fall usually is higher than in the previous January, with the trend of prices upward during the entire period. In years following large corn crops, prices tend to recede more than normal during January and February and are usually lower during each month than in the same month of the previous year.

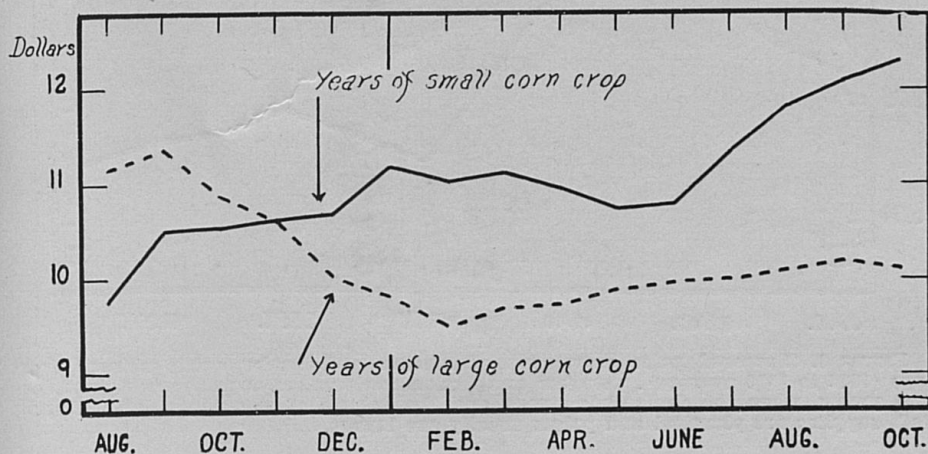


FIGURE 7. Prices of good-grade beef steers at Chicago following years of large and small corn crops. The size of the corn crop alters beef prices the following year. Large corn crops result in an increase in marketings of fed steers and small crops reduce the number of fed steers to be marketed the following year. Following small corn crops, fed-steer prices trend upward and usually reach a high point late the next fall. When the corn crop is larger than normal, prices fall more than usual during the succeeding spring and show but slight recovery the remainder of the year.

According to a study made by Homer J. Henney, and reported in Kansas Agricultural Experiment Station Bulletin 258, "The corn produced in the eight major corn-belt states affects the number of choice and good steers slaughtered at Chicago in September and October the following year. . . . An increase of 10 percent in a corn crop compared to the preceding crop has resulted in approximately a 15 to 20 percent increase in the number of fed steers slaughtered at Chicago the following fall. Or, in other words, an increase of 10 million bushels of corn results in an increase of approximately 1,500 fed steers slaughtered at Chicago in September and October of the following fall."

Seasonal Variations in Feeder Cattle Prices. The variation in price of feeder cattle of a given grade is due to seasonal changes in supply and in demand for that grade. During the spring, demand for cattle to go on pastures usually is strong, but farmers having feeder grades that have been carried thru the winter are not anx-

ious to sell at the beginning of the pasture season. The heavy market movement of grass cattle comes in the fall. The effect of this heavy movement on prices is partially offset by the concurrent strong demand for feeder cattle to be placed in the feed lots.

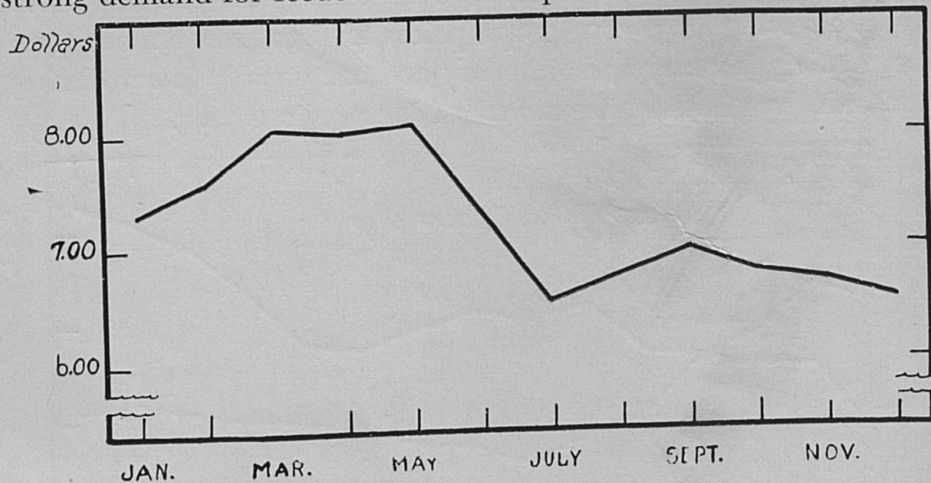


FIGURE 8. Seasonal price movement of stocker and feeder cattle shipped from Chicago (1926 to 1936 average). Stocker and feeder cattle prices usually are highest during the spring, when the demand is strong and the volume of shipments light. During the fall, supplies are plentiful and prices usually are lowest.

Over a period of years the seasonal trend of prices is quite definite, but one should keep in mind that in any one year there may be considerable deviation from the normal trend. The trend of

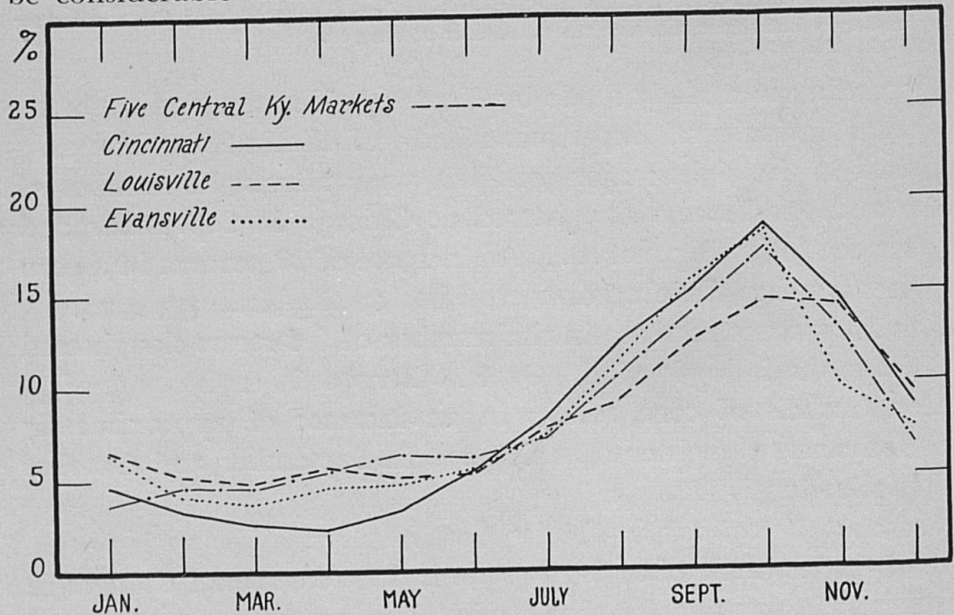


FIGURE 9. Monthly receipts of cattle by markets, for deliveries originating in Kentucky (1932-1935 average). The majority of Kentucky cattle are marketed as grass-fat, with the bulk of marketings during September, October and November when pasture becomes less plentiful.

feeder prices during the year may be affected by the trend of fat-cattle prices, changes in production and marketing, as well as by changes in the general price level. Drouth in either the range country or the corn belt may also cause variations from the normal

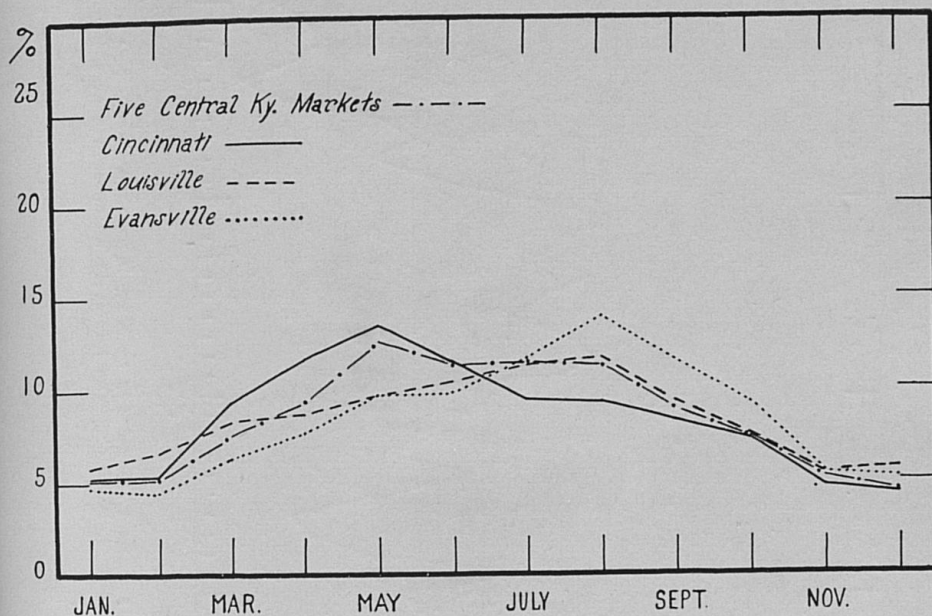


FIGURE 10. Monthly receipts of calves by markets, for deliveries originating in Kentucky (1932-1935 average). The peak of marketings for central Kentucky and Cincinnati comes in May, while at Louisville and Evansville it comes in August. (Data from which Figures 9, 10, 16, and 24 were drawn were gathered by C. D. Phillips of the Experiment Station, Lexington, Kentucky.) The five central Kentucky markets are: Bourbon County Cooperative Livestock Association, Paris; Boyle County Stockyards Company, Danville; Gentry-Thompson Stockyards Company, Lexington; Lexington Livestock Commission Association, Lexington; Winchester Stockyards Company, Winchester.

seasonal price movement. It becomes apparent, then, that a knowledge of the normal trend of prices for feeder cattle may be of great help in determining the time to buy, but it should not be followed blindly. This knowledge must be supplemented with up-to-date information on conditions thruout the cattle industry.

HOGS

Early in the 19th century Kentucky was one of the leading states in the production of hogs and as late as 1850, Kentucky ranked second in number of hogs. This high level continued until about 1893 when a rapid decline occurred. During the period from 1892 to 1904, the number of hogs in the state dropped from over 2,300,000 to less than 1,000,000 head. This tremendous reduction was largely due to increased competition that came with the settlement

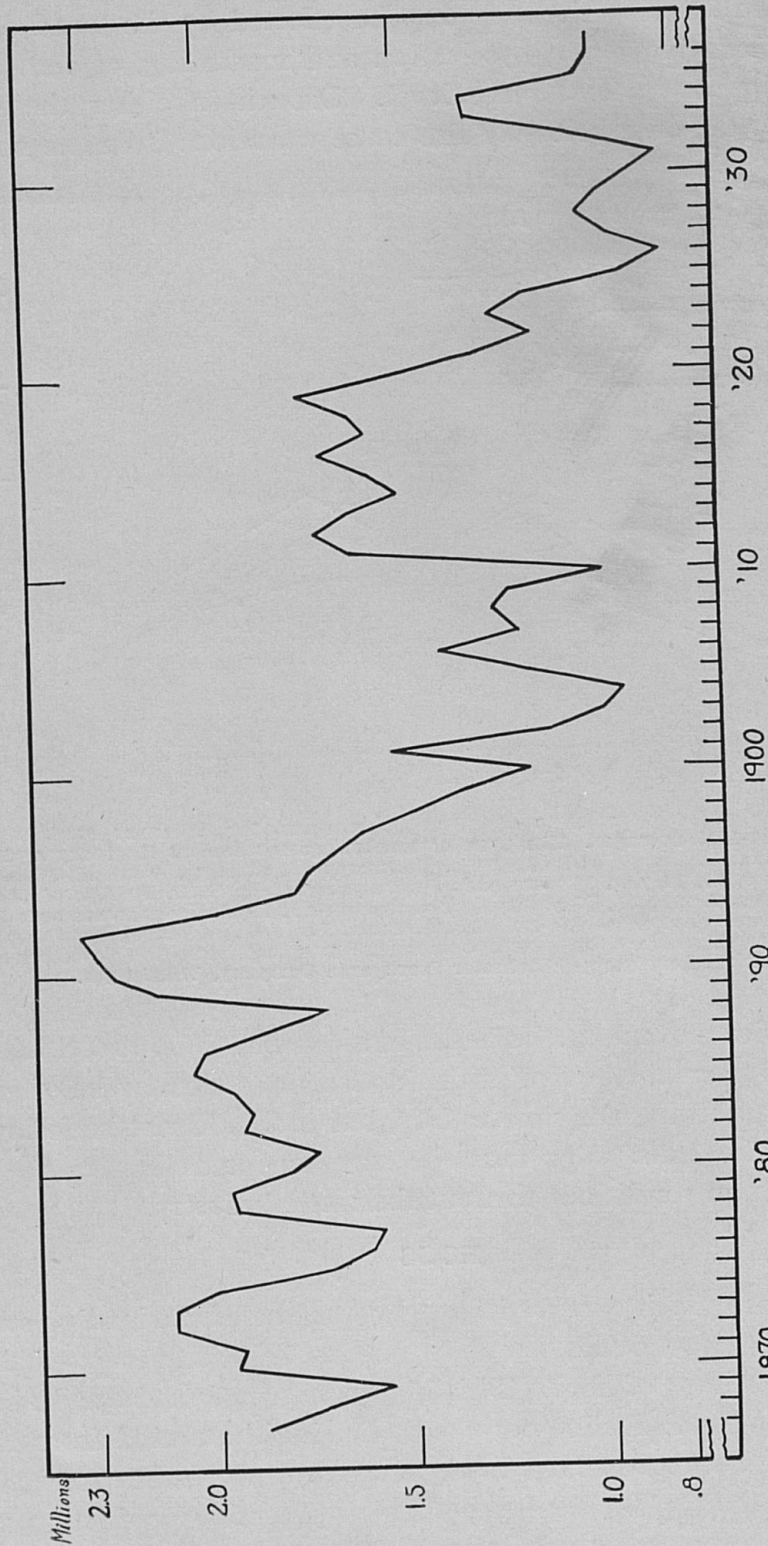


FIGURE 11. Number of hogs on farms in Kentucky on January 1, from 1867 to 1937. The number reached a peak in 1892 and then fell rapidly until 1904. After 1904, except the war period, Kentucky was relatively unimportant as a hog-raising state.

of the fertile lands now known as the corn belt. Kentucky found it difficult to compete in hog production with this newly settled area where corn could be produced more cheaply. While the area within the state which is planted to corn remained rather constant since 1880, an increasing proportion of the corn was utilized in feeding cattle, sheep and poultry. The principal hog producing counties are in the western part of the state where wide river bottoms furnish a soil well adapted to the production of corn. Henderson county leads in the production of both corn and hogs.

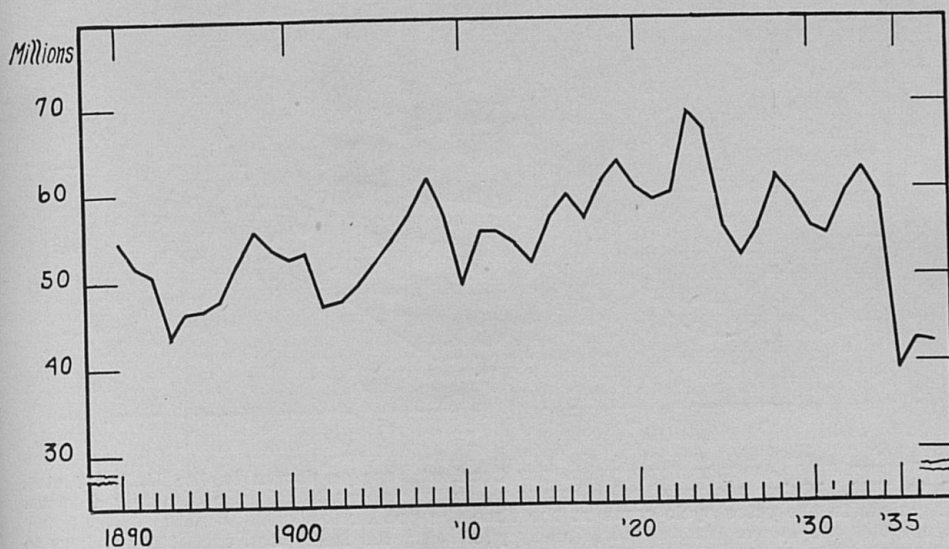


FIGURE 12. Number of hogs on farms in the United States on January 1, from 1890 to 1937. The major peaks occur at intervals of approximately 6 years.

Production Cycles. Figure 12 shows the number of hogs on farms in the United States, for the period from 1890 to 1937. The number of hogs tends to increase for two to three years and to decrease for a like period, causing cycles of five to six years in duration. These cycles of production are brought about by mass changes in production in response to prices. When prices are relatively high the number of sows kept for breeding is increased and as the offspring reach the market in increasing numbers, prices decline, breeding is curtailed and the cycle is completed.

Price Cycles. Figure 13 shows the price cycles and the average value per head on January 1, for the period, 1890 to 1936. This chart shows both the actual value per head and the deflated value per head. The deflated value, represented by the heavy line, shows the value of hogs after a correction has been made for changes in

the general price level. The deflated value was arrived at by dividing the January 1 actual price by the index number of prices of all commodities for the corresponding date. By deflating the value, fluctuations due to changes in the price level are largely eliminated and the resulting line shows what the probable movement of prices would have been if the general price level had remained at the level that obtained during the period, 1910 to 1914.

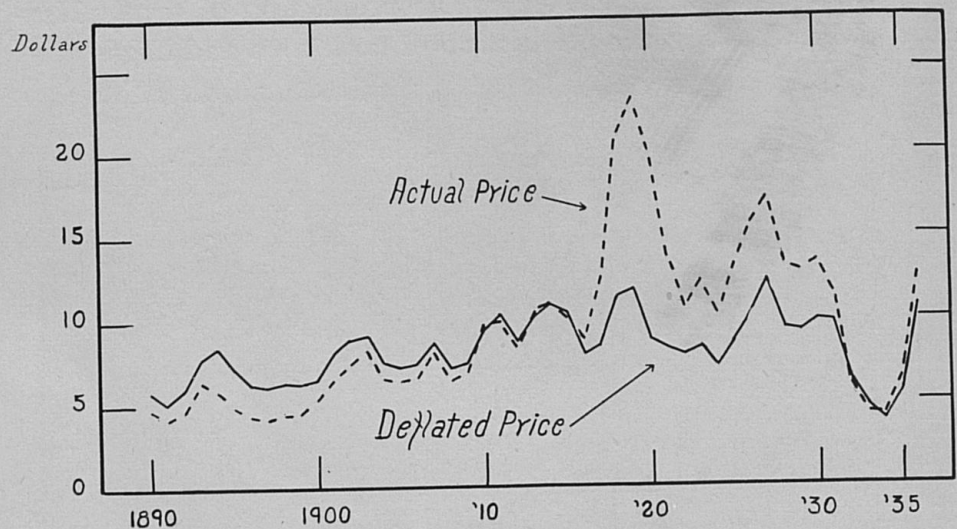


FIGURE 13. Average farm value per head of hogs on farms in the United States, 1890 to 1936. Major peaks in price cycles occur at intervals of approximately 6 years. High points in the price cycle come at the time the production cycle is near its low point. These cycles are due to farmers alternately producing too many and then too few hogs to meet market demand at a uniform price.

A comparison of Figures 12 and 13 shows that the price and production cycles are of about equal duration. The high point in the price cycle comes at about the same time as the low point in the production cycle and vice versa. As in the case of cattle cycles, hog cycles are not always of equal length or depth, but knowledge of the reaction of prices to changes in the number of hogs and the length of time necessary for the mass of hog raisers to adjust their production can be used to advantage by the average farmer in planning breeding and marketing operations.

Seasonal Distribution of Farrowings and Marketings in the United States. The seasonal distribution of farrowings largely determines the seasonal movement of hogs to market. Almost twenty-five percent of the year's litters are farrowed in April. The peak of marketings comes eight or nine months later. The peak of fall farrowings usually occurs in September with the secondary peak of

marketings eight months later. Figure 14 illustrates the seasonal nature of farrowings.

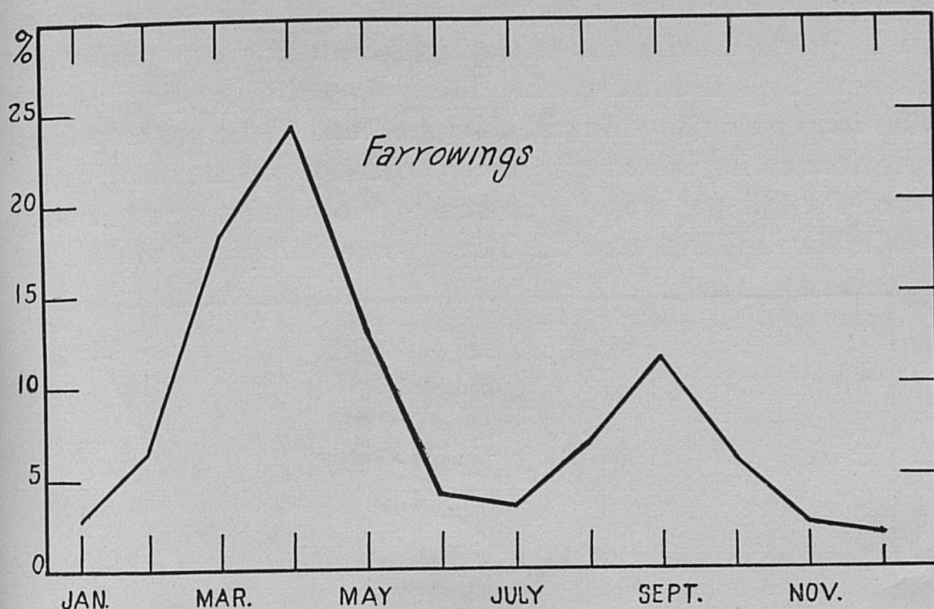


FIGURE 14. The percentage of farrowings of hogs by months, for the United States (1931-1935 average. B. A. E. - U. S. D. A.) Approximately 25 percent of the year's litters are farrowed in April. This results in a peak in marketing in the following December or January.

In Kentucky, where winters ordinarily are not severe, many farmers can manage their herds so as to avoid the peaks of farrowings and have a much better chance of disposing of their hogs at a time when marketings are light and thus avoid the seasonal low price periods.

Seasonal Price Changes. The price of hogs tends to follow fairly definite seasonal changes. This seasonal movement of prices is largely in response to volume of marketings and is illustrated by Figure 15, showing the average price of average weight hogs by months and the percentage distribution of marketings. This chart clearly shows the market advantage that may be gained by marketing hogs in months when receipts ordinarily are light. It has been pointed out already in this circular that seasonal movements of marketings and price do not always follow the same course each year but that knowledge of the normal movement plus information of current conditions should greatly aid farmers in planning their production and marketing.

It will be noted that the price of hogs tends to reach a seasonal

peak in the early fall, usually in early September, before the heavy shipments of the spring pig crop move to market. August and September are the months of smallest receipts. The seasonal low point in prices usually occurs during December when market receipts near their seasonal peak. The spring rise in prices usually reaches its peak during March, after the bulk of the pig crop from the previous spring has been marketed and prior to the heavy movement of the fall pig crop. The summer low point prices usually comes in May or June, when the heavy run of fall pigs is under way.

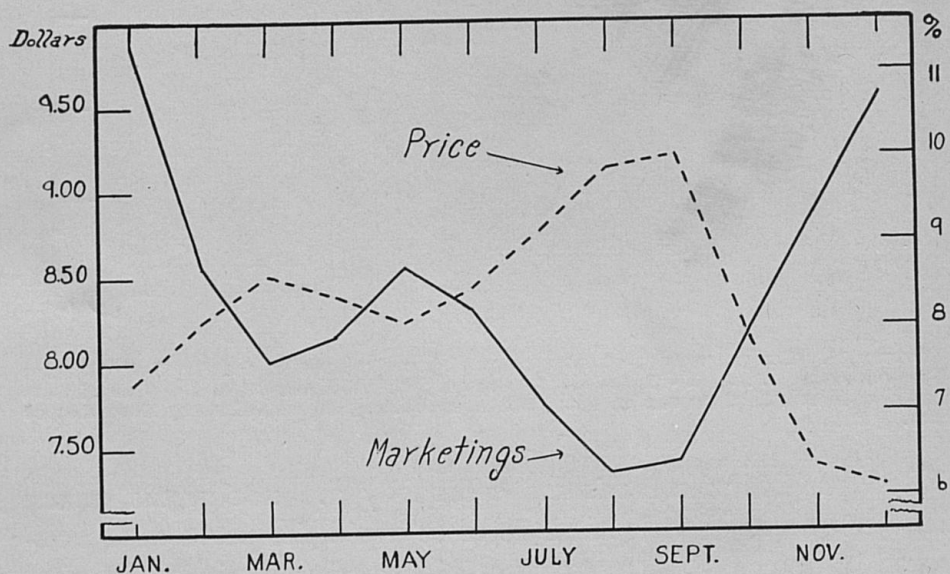


FIGURE 15. The normal seasonal price movement of average-weight hogs at Chicago (1926-1935 average) and the normal seasonal distribution of marketings for the United States (1930-1934 average). The volume of marketings is a large factor in determining the price of hogs. The seasonal low point in marketings usually comes in August or September and the high point in prices during the same period.

It is interesting to compare the monthly marketing of hogs for the United States, as shown by Figure 15, with the monthly marketing of hogs from Kentucky as shown by market receipts of Kentucky hogs at Evansville, Cincinnati, Louisville and five Central Kentucky markets, in Figure 16. While there is considerable variation between markets within the state, it is apparent that the seasonal marketings from Kentucky vary widely from the average of the United States as a whole. Farmers from this state market a much higher percentage of the year's total during April and May and a much smaller percentage during December and January than for the nation. By avoiding the December, January and February market, Kentucky farmers miss most of the seasonal low point in

prices and therefore benefit by a higher average price for their hogs. On the other hand, it does appear that a higher percentage of hogs are marketed during April and May than can be justified by the normal trend of prices during those months.

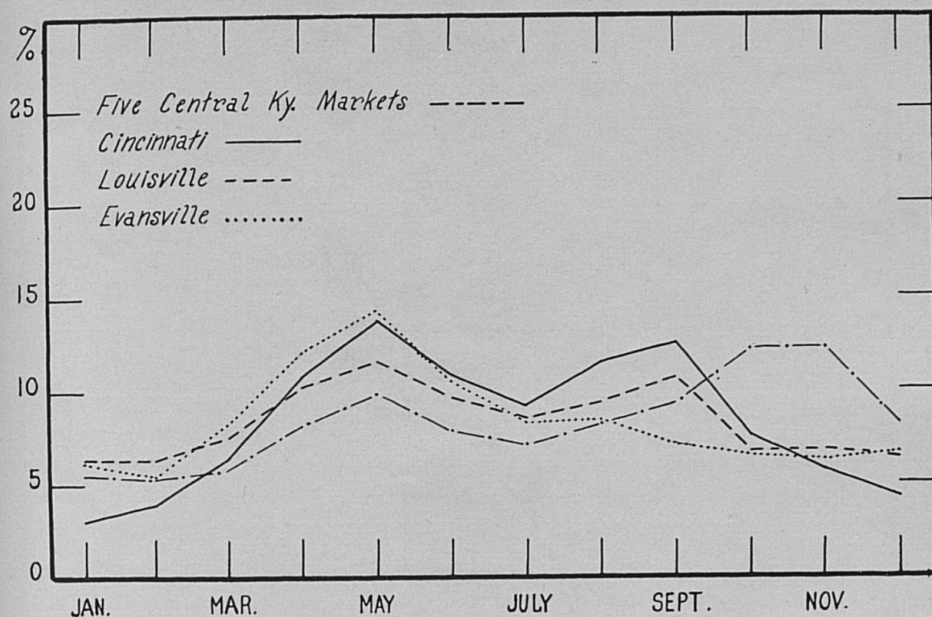


FIGURE 16. Monthly receipts of hogs by markets, for deliveries originating in Kentucky (1932-1935 average). Monthly marketings of hogs in Kentucky do not follow the same pattern as for the United States as a whole. In this state the peak of marketings comes in May and the low months are December, January and February.

The effect of large and small corn crops on the seasonal movement of prices. The production and market receipts of hogs in the United States are very dependent upon the production and price of corn. In years of large corn crops and relatively low prices there is a tendency for hog market receipts to slow up during the fall. Cheap corn encourages the production of hogs and farmers tend to retain more gilts for breeding, which reduces market receipts in the latter half of the year. Delayed marketings also result from the tendency to feed pigs over a longer period and to heavier weights in order to utilize the large supplies of cheap corn. These changes in marketings influence the seasonal movement of prices.

In years of large corn crops hog prices tend to be higher from August thru to December and lower during the following months of January thru July than in years of normal or small corn crops. This is illustrated by Figure 17.

Another factor influencing the seasonal price movement of hogs

is the phase of the hog price cycle. When we compare the seasonal movement of prices for years when the price cycle is on the downward trend with the seasonal movement when the price cycle is moving upward, we find quite a difference. When the cycle is on

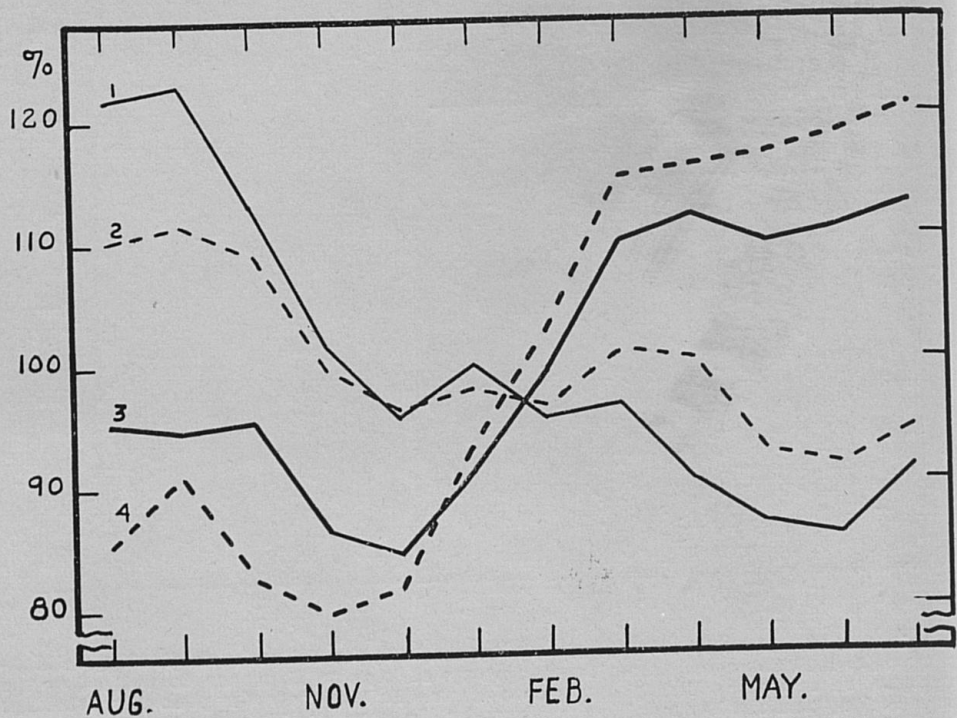


FIGURE 17. Seasonal movement of hog prices at Chicago under the following conditions: 1. Large corn crop and falling hog prices. 2. Small corn crop and falling hog prices. 3. Large corn crop and rising hog prices. 4. Small corn crop and rising hog prices.

Two factors which cause variations from the normal seasonal price movement, as shown in Figure 15, are the size of the corn crop and the direction of the cyclical price movement. The latter has the greater influence on seasonal price changes but the size of the corn crop influences the direction of the movement until the new crop is available.

the upward swing, prices tend to be much higher from February thru July than during the preceding period from August thru December. In contrast, on the down swing of the price cycle, prices for the fall months are considerably higher than during the succeeding eight months. Figure 17 shows how the seasonal price movement is affected by the current position in the hog cycle and by the size of the corn crop. From this chart it may be observed that the position in the hog cycle seems to have a greater influence on the seasonal trend of prices than does the size of the corn crop.

Figure 17 might be summarized as follows:

1. Large corn crops delay marketings and strengthen the early fall price but depress the normal rise the following spring.

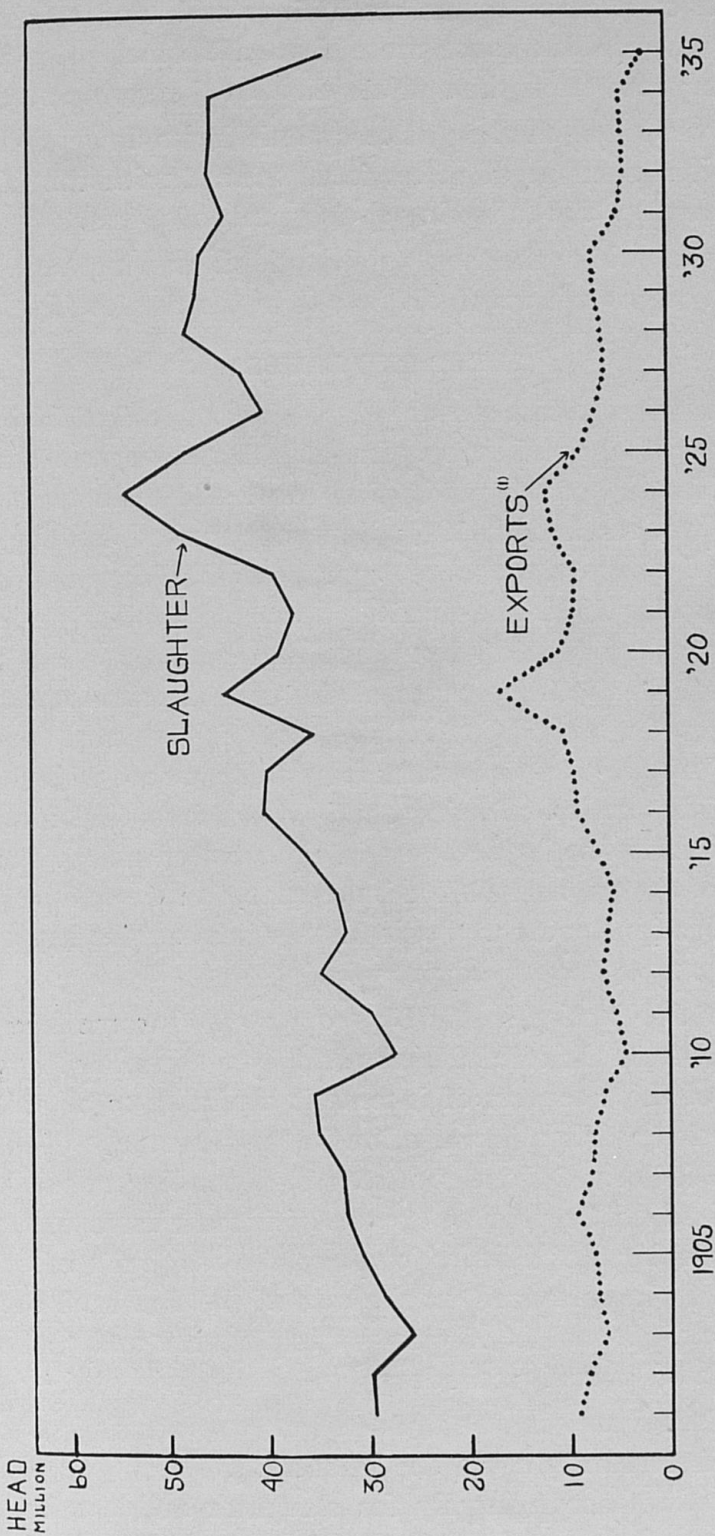


FIGURE 18. Commercial hog slaughter in the United States and exports of hog products from the United States (1900 to 1935). (1) Exports expressed in hog equivalent (160 pounds equals 1 hog) B. A. E. - U. S. D. A. The peak of exports was reached in 1919 but the high point in commercial slaughter was not reached until 1924. In 1935, commercial slaughter reached the lowest point in twenty years and exports were the lowest in the present century.

2. Small corn crops hasten marketings and tend to check the fall price advance but cause more than a normal price advance after January and strengthen prices thruout the spring months.

3. In years when the hog price cycle is in its downward phase, the seasonal movement of prices is downward with the fall peak much higher than the following spring peak of prices.

4. In years when the hog price cycle is moving upward the spring peak of prices is usually higher than the previous fall peak.

SHEEP AND LAMBS

Since early in the last century Kentucky has ranked high in the production of lambs and sheep. In 1850, this State ranked sixth in number of sheep, but tho production continued to increase until a high point was reached in 1911, Kentucky ranked but fourteenth in that year, because of the more rapid increase in the western range areas. Following 1911, the number decreased rapidly until a low point was reached in 1922 but since that date there has been a steady growth in the importance of the industry within the State. The bluegrass region of Central Kentucky is the most important sheep-producing section and lambs from this area are widely known for their high quality. During recent years increased interest in sheep production has been shown in the western part of the state where lespedeza has become an important pasture and hay crop. Present indications point to a still further increase in sheep in this area accompanying improved pastures.

Trend of Production in the United States. Income from sheep comes chiefly from the sale of lambs and from the sale of wool, and while each of these sources of income is available to all raisers of sheep, there is considerable variation in the percentage of the total income that is derived from each source, depending upon the type of sheep raised. The primary source of income from the mutton breeds is from the sale of lambs for slaughter, while the sale of wool is of secondary importance. In the case of the fine wool breeds of sheep the sale of wool is of primary importance and the income from the sale of lambs is secondary.

The United States can be divided into two areas of sheep production. The states lying in the Mississippi River Valley and to the East produce sheep largely for slaughter and are known as native-sheep or fleece-wool states. In the range states, in the west-

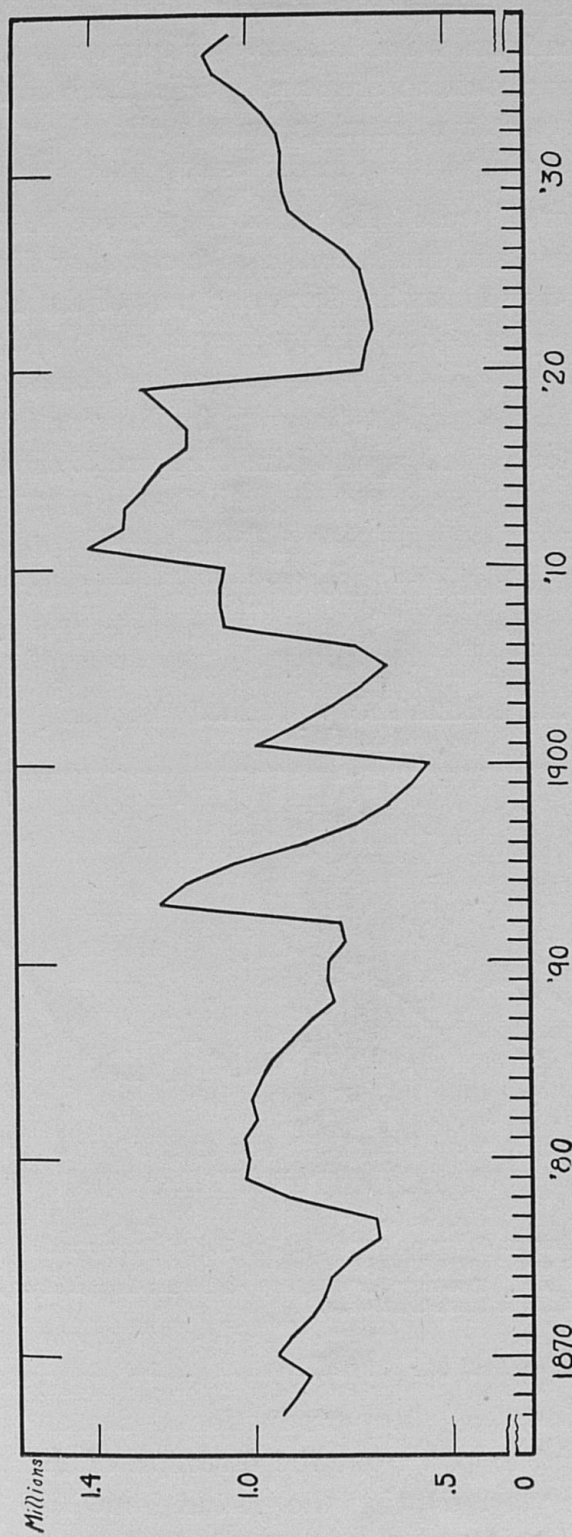


FIGURE 19. Number of sheep on farms in Kentucky on January 1, 1867 to 1937. The number of sheep in Kentucky reached a high point in 1911. This was followed by a rapid decline until 1920. Since that time there has been a definite trend toward increased number in the state.

ern part of the United States, sheep are raised primarily for their wool and the area is known as fine-wool or range states. Kentucky lies within the native-sheep area and, while the blood lines from some fine-wool breeds are found in many flocks, the production of lambs is of primary importance in the area.

Because prices of wool and lambs may move relatively independently of each other, the incentive to increase or decrease sheep production may vary somewhat from one part of the United States to another. The production of sheep tends to be cyclical but the cycles are not so well defined as in most other classes of livestock. The number of sheep tends to increase for four or five years and then to decrease for a like length of time. Figure 20 shows the number of sheep for the United States from 1890 to 1937. For thirty years following 1893 the trend of the number was downward but after reaching a low point in 1923, an increase was shown each year for the next nine years. This increase occurred over a period about twice the normal cyclical period and illustrates the variation that may occur from the normal sheep production cycle.

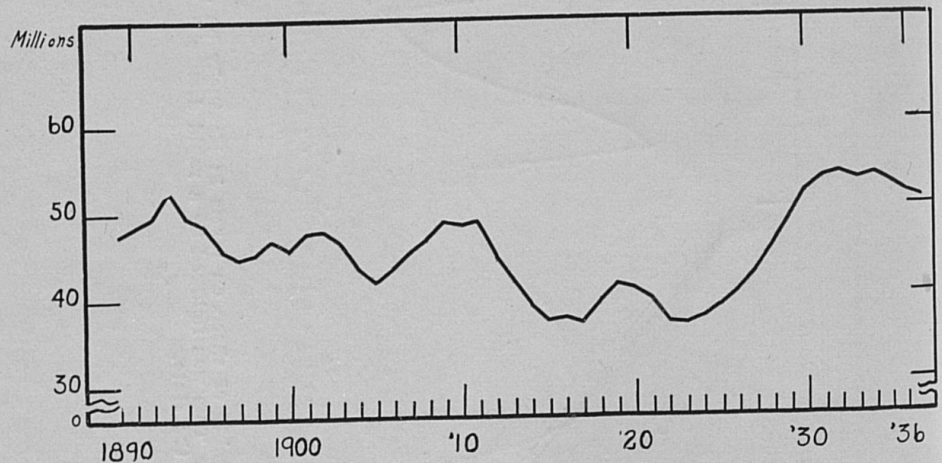


FIGURE 20. Number of sheep on farms in the United States on January 1, 1890 to 1937. The number of sheep in the United States did not follow as uniform cycles as the numbers of cattle and hogs. The number of sheep on farms increased rapidly from 1923 to 1932 and tended to decline since that time.

Price Cycles. Sheep prices tend to move thru cycles of about ten years' duration, but sheep-production cycles are not regular enough to be used to point out the direction of the price movement in any one year. During the period from 1890 to 1935, as shown on Figure 21, sheep prices moved thru five cycles, the last

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one apparently being completed in 1933. This chart shows the cyclical movement and the upward trend during the period.

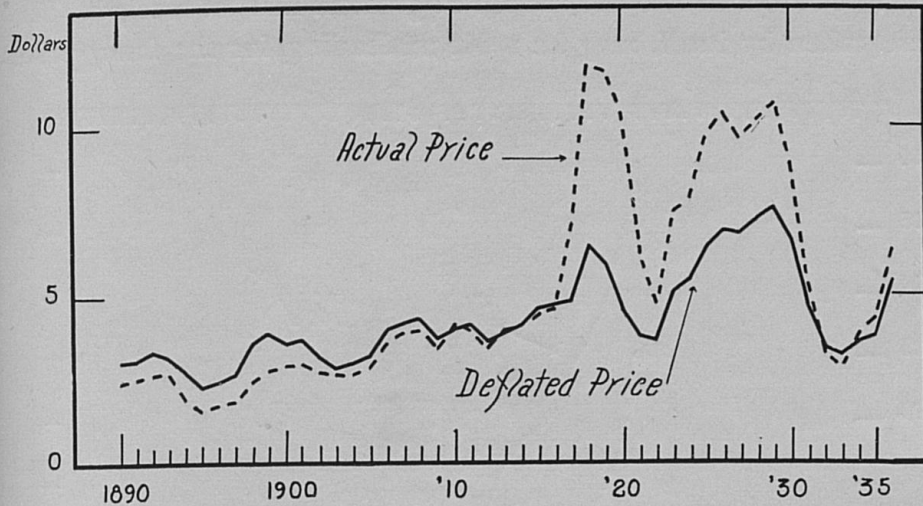


FIGURE 21. Average farm value per head of sheep on farms on January 1, 1890 to 1936. The general trend was upward from 1890 to 1929. Prices fell during the depression years and now have renewed their upward trend.

Seasonal Price Changes. Figure 23 shows the average price of choice and common grades of lambs by months, for the Cincinnati market. Beginning in April, with the first quotation for spring

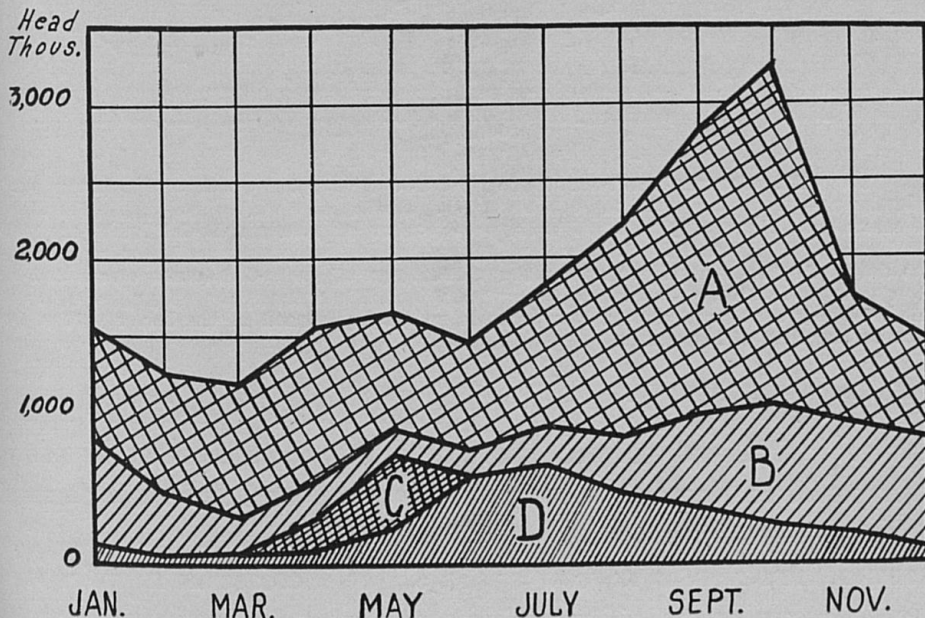


FIGURE 22. Origin of market receipts of sheep and lambs by months for a typical year (1929). A represents western range states, B mid-western states, C California, and D the marketings from Kentucky, Virginia, Tennessee, West Virginia, Arkansas and Missouri. Lambs from Kentucky marketed after the first of July meet increasing competition from western lamb-producing areas.

lamb, prices break sharply until the first of July and then take a more gradual downward trend until a low point is reached in October. October is also the month of greatest market receipts. This chart, taken by itself, may be a bit misleading for the fancy prices

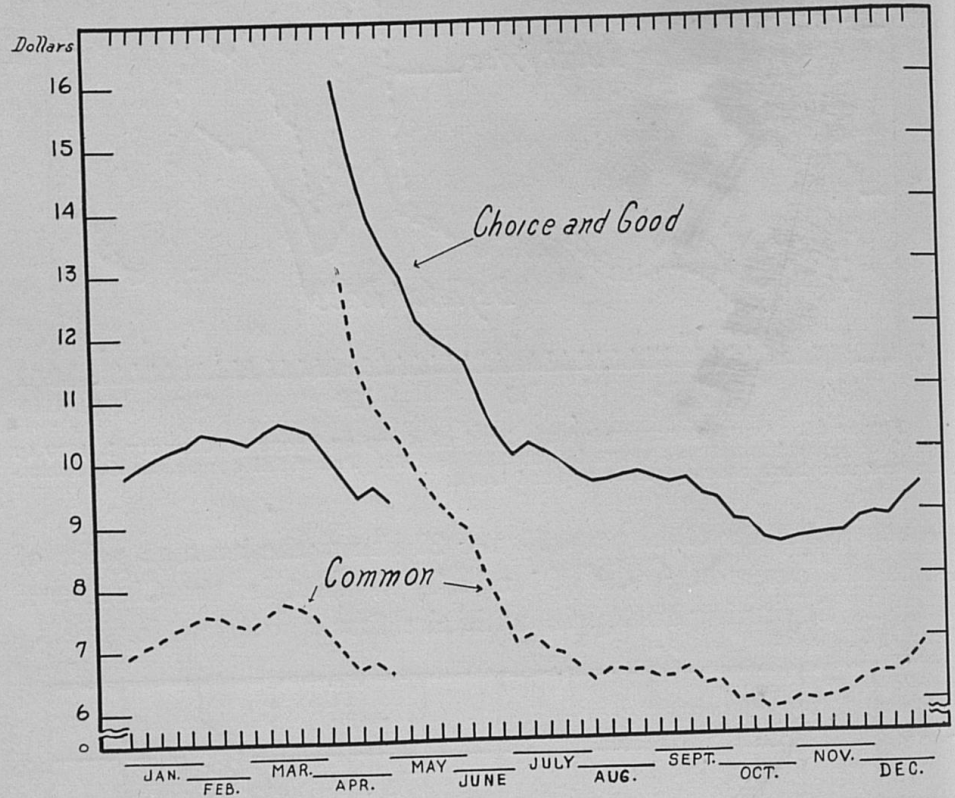


FIGURE 23. Seasonal movement of prices for choice and good, and common grade of lambs at Cincinnati (1927 to 1935 average). During the winter only grain-fed lambs are marketed. Beginning in April a limited number of spring milk-fat lambs are marketed at prices substantially higher than for grain-fed lambs that are being marketed at that date. As the season progresses the marketings of grain-fed lambs ceases and receipts of milk-fat lambs increase, accompanied by falling prices for all grades of lambs. This tendency continues until a low point in prices is reached in the latter part of October or the first of November.

paid in April for spring lambs are more than five dollars higher than grain-fed lambs of the same grade being marketed at that date. Spring milk-fed lambs are scarce at that time and there is a demand at fancy prices for a limited number of that kind of product. The demand, however, is narrow and a slight increase in supplies rapidly depresses prices. This being a specialty market it is not available to all Kentucky sheepmen. The chart does, however, clearly show that during the period of years covered, lamb prices have

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averaged higher, for both choice and common lambs, preceding July first than for the succeeding months.

While prices generally are higher from April to July 1, than for the months following, there are occasional exceptions. The marketing season of 1935 serves to illustrate the point. In that year choice lamb prices averaged 79 cents higher per hundred pounds after July 1 than for the preceding months of the year. General improvement in business conditions accompanied by scarcity of other meats, particularly pork, probably was responsible for this situation.

When considered strictly from the standpoint of prices alone, it appears advisable to market spring lambs as early as their weight and condition will permit. Weights of 70 to 80 pounds usually are desirable.* Lambs marketed later than July 1 meet added competition from later lambing areas and this usually results in lower prices. Another factor influencing the gross returns is the difficulty of finishing out lambs during hot weather which usually occurs during July and August. Hot weather reduces the feed available from pastures as well as tends to dry out the wool on the lambs' back causing a higher percentage of the lambs to fall into the lower grades as the season progresses.

Market Movement. While a study of prices indicates that higher prices may be received if lambs are marketed before July 1, a large percentage of Kentucky lambs are actually marketed later. During the period, 1927 to 1935, of the total lambs marketed at Louisville, Cincinnati, Evansville and five Central Kentucky markets, 42.7 percent were marketed before July 1 and 57.3 percent during the remainder of the year. Figure 24 shows the distribution of marketings thruout the year for the markets mentioned above.

While the price at which lambs are sold is of major importance, other factors such as death losses, feed costs and labor costs must be considered in an attempt to determine the profitableness of the enterprise. No doubt the costs in care and feed are greater in getting lambs ready for an early market and these factors must be balanced against the higher early prices in arriving at the proper time to market the lamb crop.

A recent study of farm records on 34 sheep flocks in Central Kentucky, in 1935, made by George B. Byers and D. E. Bayless, of the Department of Farm Economics, College of Agriculture, Uni-

* Ky. Exp. Station Bul. 302. Quality as a factor in the price of Kentucky lambs.

iversity of Kentucky, shows that farmers who marketed their lambs before August 1 received on an average \$1.02 more per ewe for pasture and management than those who marketed the majority of their lambs at a later date. This was true in spite of the fact that

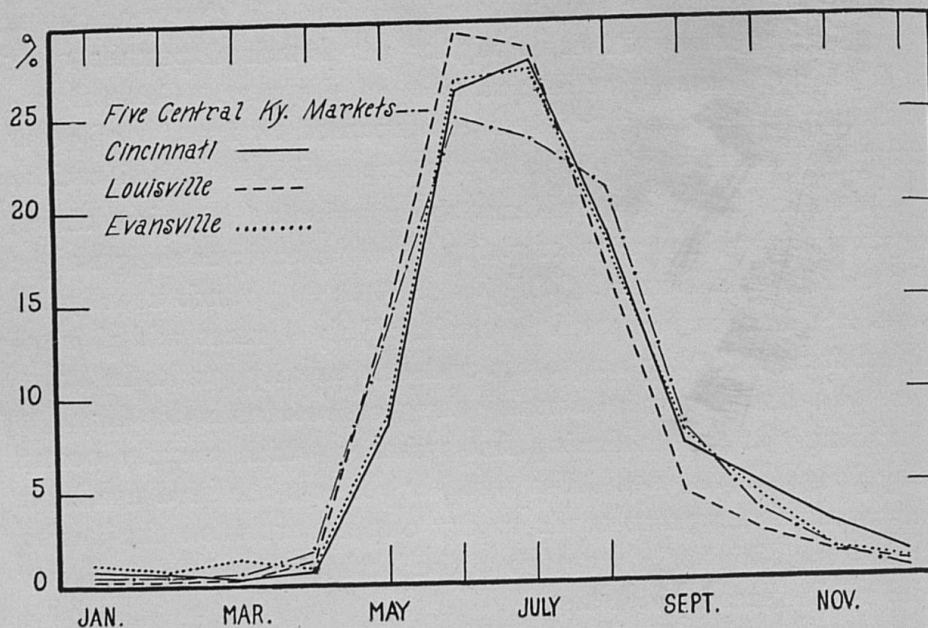


FIGURE 24. Monthly receipts of lambs by markets, for deliveries originating in Kentucky (1932 to 1935 average). The bulk of Kentucky lambs are marketed during June, July and August. Of the years' total, 42.7 percent were marketed before June 1 and 57.3 percent during the remainder of the year.

during that year prices moved contrary to the usual seasonal movement and averaged higher during the latter half of the year than during the preceding months.

The two chief advantages that Kentucky enjoys in the production and marketing of lambs arise from the fact that relatively mild winters permit early lambing and provide an abundance of early pasture so that the lambs are ready for market at a time when market receipts from other areas are light. In studying the subject of lamb marketing one must keep in mind that lambs may be marketed as milk-fed, grass lambs or grain-fed lambs. The milk-fed lambs, which have been fattened largely on their mother's milk, are marketed at four to five months of age. Grass lambs are largely marketed from August to November. A portion of these lambs are in condition for slaughter and the remainder are sent to feed lots for fattening. Lambs in this last group find their way to market from November thru the early spring months. Early milk-fat lambs

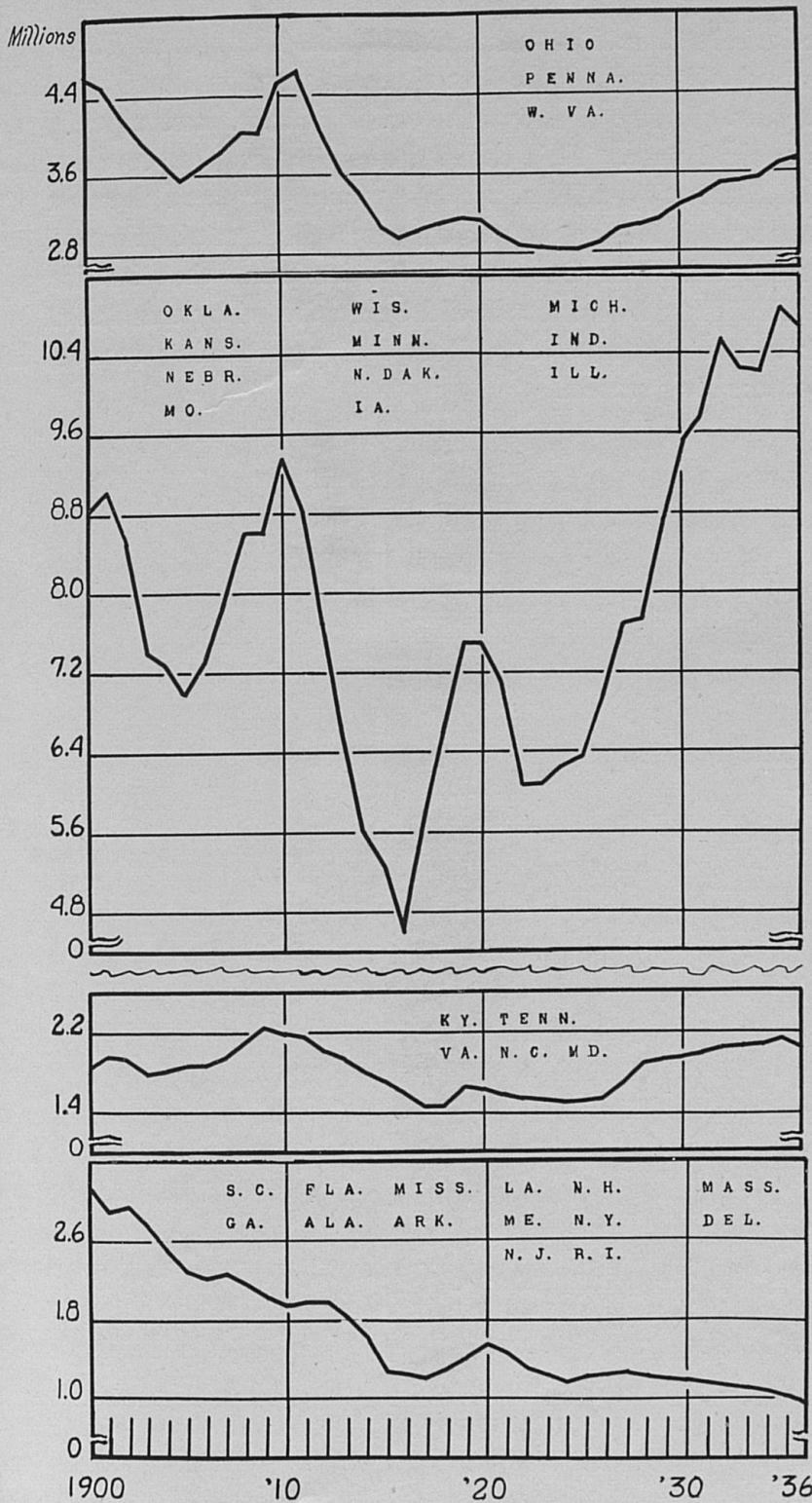


FIGURE 25. Number of sheep on farms in selected groups of native-sheep states. Since 1916, the number of sheep has increased rapidly in the states to the north and west of Kentucky. As the volume of lambs marketed from the northern area increases, lower prices for late-marketed Kentucky lambs may be expected, owing to the increased marketing of slaughter lambs during that period. Data from U. S. D. A. Extension Handbook.

come largely from Kentucky, California, Tennessee, Virginia, Arkansas and Missouri. The first three states mentioned are the most important. Figure 22 shows the origin of market receipts by months for a typical year. This chart shows that market receipts, for the United States as a whole, are below average until the first of July and that receipts increase rapidly from the first of July until a high point is reached in October. This indicates that insofar as it is possible, Kentucky lambs should be marketed by the first of July in order to avoid competition from heavy-producing sections having a later lambing season.