

ANALYSIS OF THE DAYTON LIVESTOCK PRICE SITUATION

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## ANALYSIS OF THE DAYTON LIVESTOCK PRICE SITUATION

There has been considerable discussion regarding the general level of livestock prices at Dayton. This has been especially true since a movement to establish a producers cooperative commission association on the Dayton market began about five years ago (1930). After several years of organizational work a cooperative commission association was established and began operating March 11, 1935.

During the first year in which the cooperative association operated, a total of approximately 100,000 head of livestock was received on the market for sale. Of this number 47,011 head, or 47.2 per cent of total receipts, were sold by the cooperative association. The percentage of the total receipts on the market that was handled by the cooperative was by species, as follows: Cattle, 30.8 per cent; calves, 34.2 per cent; hogs, 51.9 per cent; sheep, 61.5 per cent.

Since the first year of cooperative activity was distinctive as far as volume of livestock consignments was concerned, there has been a growing demand for a comparison of prices paid at Dayton during the year with prices paid in previous years and also with prices at other markets during the year. The Department of Rural Economics has been asked to make such a comparison.

The method selected to study the situation was to use the prices paid at Dayton as a base and to set up the prices paid at Cincinnati on identical days and to calculate the difference in amount, or differential, between them.

Prices were taken once in every week from the daily papers at Dayton or Cincinnati from January 1, 1930 to April 1, 1936. Monday prices were used on hogs and calves except for those dates when holidays fell on Monday. In these cases the following days' (Tuesdays') quotations were compared. On lambs Monday prices were used until July 1, 1935. At this date the cooperative association established a "lamb day." Since this special sale day was set up on Tuesday and the bulk of the week's receipts came in at this time it was thought advisable to use Tuesday quotations from this time on. Owing to the lack of data, it was only possible to study comparative prices of top hogs for the year 1930.

No price comparison was made on cattle since grades are not identical at these markets and quotations vary accordingly. Likewise, only top quotations were used on lamb and calf prices, since on these species also, quotations by grades are not strictly comparable.

In obtaining prices on hogs three weight groups were used, 180 to 200 pounds, 200 to 225 pounds and 225 to 250 pounds. This range in weight will market most of the hogs from Ohio farms. If the price paid for hogs weighing 180 to 200 pounds on a particular day was \$8.80 to \$9.00 per hundred pounds, two kinds of prices were used. First the price of \$9.00 was used as the top quotation. Then the top and bottom prices for that grade were averaged. In the example just given the average of \$8.80 and \$9.00 would be \$8.90. Thus two quotations on each of the three weight groups of hogs were obtained. You will note these in hog price comparisons throughout.

Every effort has been made to maintain accuracy in the data. However, inaccuracy in quotations or slight errors may have crept in so that absolute price differences as given may be questioned for some periods, although it is believed that the information does show the general trend.

In Table 1 a yearly summary of the differences in prices paid at the two markets is presented. In 1930 the only available data showed the average price of top hogs at Cincinnati to be 47 cents per hundredweight over the Dayton average top for the year. Following these differences it can be seen that the Cincinnati average yearly price was 52 cents over Dayton in 1931 and fairly steady at 34 and 35 cents over Dayton in 1932, 1933 and 1934. The average for the year of 1935 however, showed a distinct narrowing of the margin between the prices paid for top hogs at the two markets.

Table 1

Amount the Cincinnati Price of Hogs, Lambs and Calves Averaged over the Price for the Same Species at Dayton, by Years, 1930 - 1935

In dollars per hundredweight

Year	Hogs: 180 - 250 pounds		Lambs: Average difference in top prices	Calves: Average difference in top prices
	Av. of top & bottom prices	Average difference in: Top prices		
1930	\$ -	\$.47	\$ -	\$ -
1931	.45	.52	1.41	.77
1932	.32	.34	1.24	.58
1933	.33	.34	1.12	.52
1934	.39	.35	1.34	.45
1935	.21	.25	.62	.36

The question that immediately arises in analyzing these, and other similar changes apparent in the data, and particularly in studying the narrowed difference in 1935, is whether it is the Dayton average price that has risen or whether the Cincinnati average price has fallen.

There are several factors that do much to substantiate the theory that a rising price level at Dayton has been responsible for the change. First, the Cincinnati market is an important terminal market and hence a decided change in trend of prices is less likely than in smaller markets. Further, the Cincinnati market operated with fundamentally the same competitive agencies in 1935 as it did in any year included in the study. In another unpublished study Cincinnati prices remained on a similar basis with other markets such as Chicago, St. Louis and Indianapolis.

On the other hand, the Dayton market was sharply stimulated by the entrance of the cooperative as a selling agency. The cooperative's operations not only encouraged greater competitive activity among the selling firms, but provided a flexibility of market outlet that the area had not previously possessed. Another logical factor lending emphasis to the belief that the narrowed differential was caused by a rising price level at Dayton, was the fact that the cooperative exerted a great deal of activity directly toward maintaining prices on all species that would compare favorably with Cincinnati quotations.

Considering the remainder of the data in Table 1 it is interesting to note the decided lowering of the differences between the two markets in 1935 on the average of top and bottom quotations on hogs for the same grade and on top quotations of lambs and calves. The change in differentials is most noticeable on the average of top and bottom quotations on hogs and on the top lamb prices. In both of these cases the actual narrowing of differences was greater in 1935 than in any other year on which data was obtained. There has been a rather consistent narrowing of the differences in average calf prices during the last five years. However, the narrowing of the differential in 1935 was greater than in any other year since 1932.

Table 2

Amount the Cincinnati Price of Hogs Exceeded the Dayton Price,  
by Years, 1930 - 1935  
Classified into Weight Ranges

In dollars per hundredweight						
Year	180-200 pound hogs		200-225 pound hogs		225-250 pound hogs	
	Difference between average of top and bottom quotations	Difference between top prices	Difference between average of top and bottom quotations	Difference between top prices	Difference between average of top and bottom quotations	Difference between top prices
1930	\$ -	\$ .50	\$ -	\$ .46	\$ -	\$ .44
1931	.52	.54	.43	.46	.39	.55
1932	.35	.32	.34	.32	.27	.39
1933	.49	.46	.26	.27	.26	.29
1934	.50	.47	.35	.30	.34	.29
1935	.27	.33	.20	.20	.16	.21

Table 2 presents the differences between the market prices of hogs classified by weight groups. In all comparisons a decided narrowing is apparent in 1935. By subtracting the 1935 differentials from an average of the four preceding years, some indication is obtained of the actual amount per hundredweight the Dayton price of hogs approached the Cincinnati price during the year. On the 180 lb. to 200 lb. hogs the average of the top and bottom quotations at Dayton for 1935 was 20 cents nearer the Cincinnati price than it had averaged during the preceding four years. On top quotations of the 180 to 200 lb. grade the Dayton price was 12 cents nearer Cincinnati than it had averaged from 1931 through 1934.

A comparison of prices of 200 lb. to 225 lb. hogs shows the Dayton average price during 1935 to be 15 cents nearer Cincinnati on average of quotation prices, and 14 cents nearer Cincinnati on top prices than it averaged the preceding four years. The same situation was true regarding the 225 lb. to 250 lb. weights for the Dayton average of top and bottom quotation price was 16 cents nearer Cincinnati, and the Dayton top price was 17 cents nearer Cincinnati than it had averaged from 1931 through 1934.

Thus it can be said that during 1935 Dayton prices as compared to Cincinnati were narrowed 12 to 20¢ for the 180-200 pound weights; 14 to 15¢ for 200-225 pound weights; and 16 to 17¢ for 225 to 250 pound weights.

Figure 1 shows the same information presented in Table 2 except it is given by months. It shows that top hog prices at Dayton have fluctuated in much the same way as has the average of the top and bottom prices for the weight groups of 180 to 250 pounds.

Figures 2 and 3 present the same information as given in Tables 6 & 7. You will note there are wide differences at times in the price of Top Lambs at Cincinnati and Dayton. During some months of the year past the Dayton price has been much nearer the Cincinnati price than at other times although there has been a tendency for the price differentials to narrow.

Figure 3 shows some periods when the Dayton price of Top Veal Calves has been out of line with Cincinnati. Especially was this true for November 1933 and October 1935.

Figures 4, 5 & 6 present the seasonal variation of the price differentials of Dayton and Cincinnati for the three weight groups of Hogs, Top Lambs and Top Veal Calves.

In studying Figure 4 more closely one observes that for the weights of hogs from 200-250 the price differential during the season averaged about the same. This was obtained by using both top prices and the average of top and bottom prices for these weight groups. However in case of the light weight hogs the spread between the two markets was wider during the fall months of the year. Apparently there is a much poorer outlet at Dayton for light weight hogs.

There is a rather pronounced seasonal variation in the Lamb Price Differential. The Dayton prices are lowest in comparison to Cincinnati during June, July and August. Dayton's best lamb market in comparison to Cincinnati is during the late fall and winter months.

In the case of calves the seasonal situation is just the opposite from lambs. The summer months are the better for the price difference between Dayton and Cincinnati has been less during June and July and widest during the winter months.

Cents per  
Cwt.

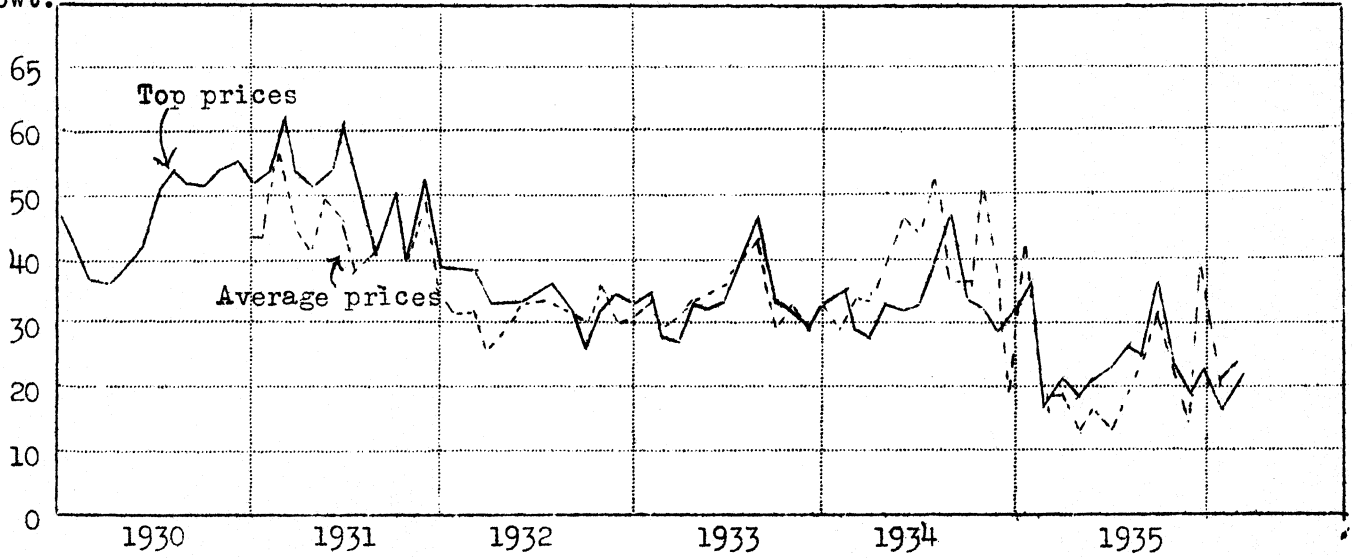


Fig. 1.--The amount the Cincinnati price of 180-to 250-pound hogs exceeded the price paid for the same weight hogs at Dayton 1930-March 1936, both for top prices and the average of top and bottom prices.

Cents per  
Cwt.

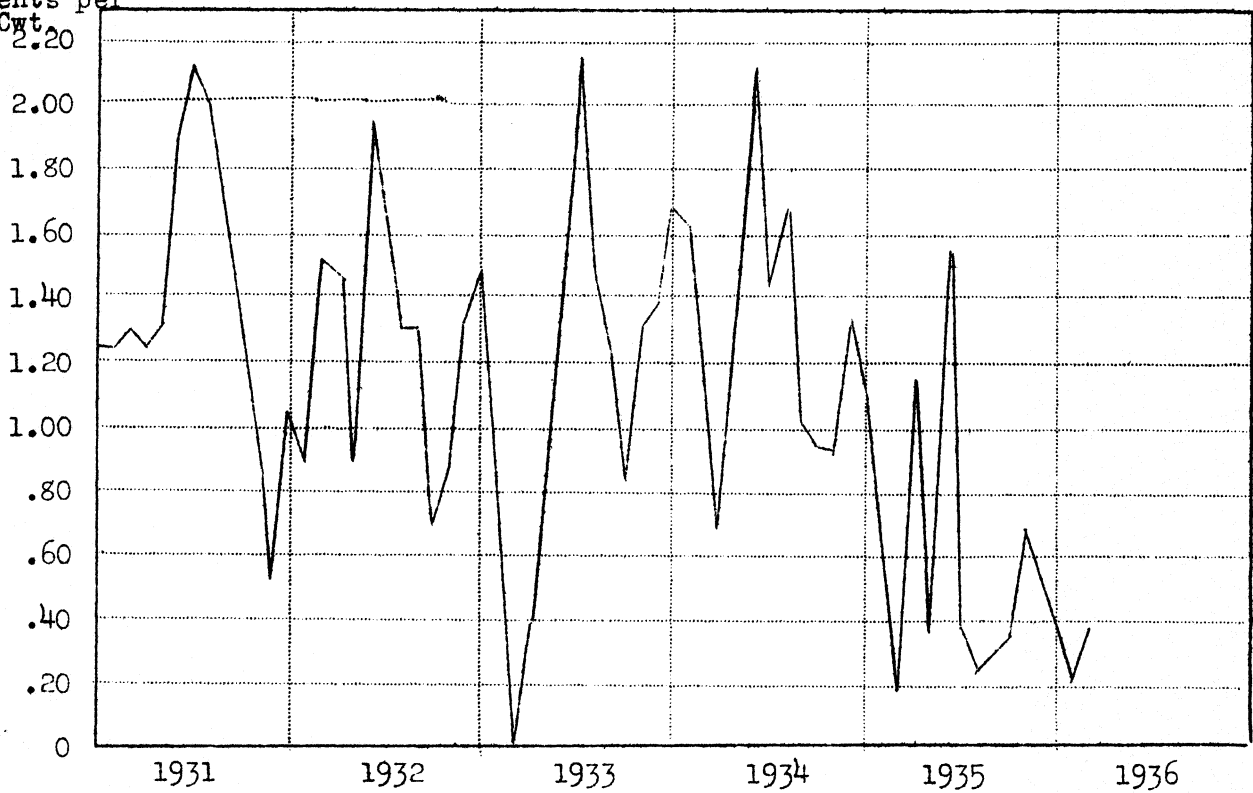


Fig. 2.--Amount the Cincinnati price of top lambs exceeded the Dayton price for the same grade lambs, 1931-March, 1936.

Cents per  
Cwt.

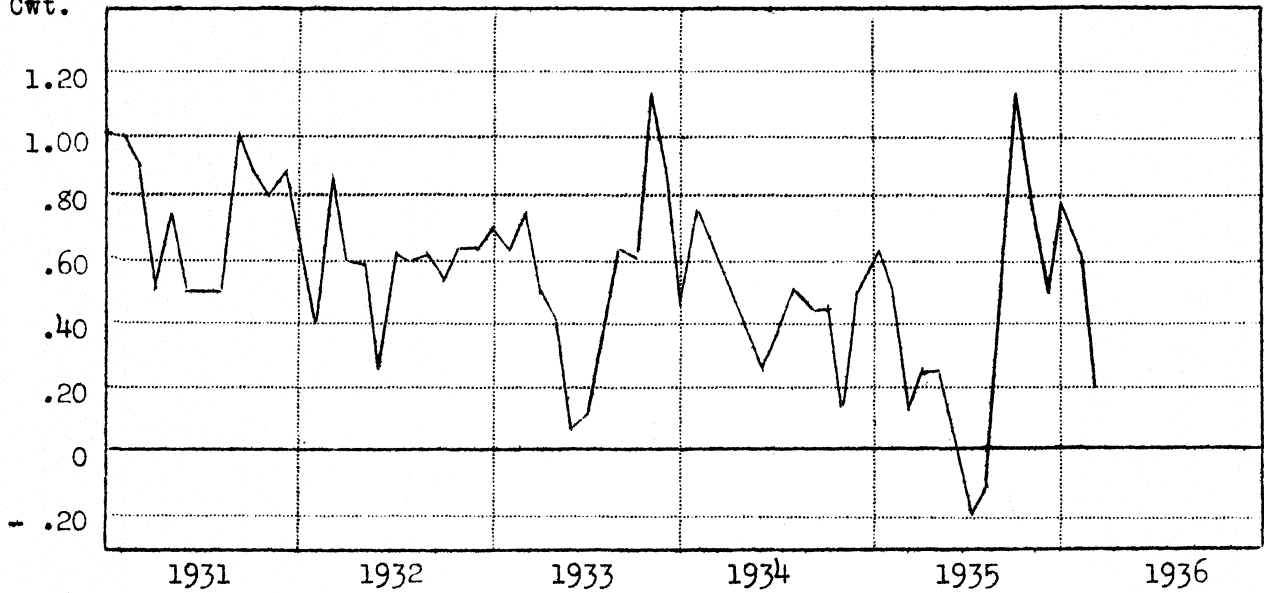


Fig. 3.--Amount the price of top veal calves exceeded the Dayton price of the same grade calves, 1931-March, 1936

Cents per  
Cwt.

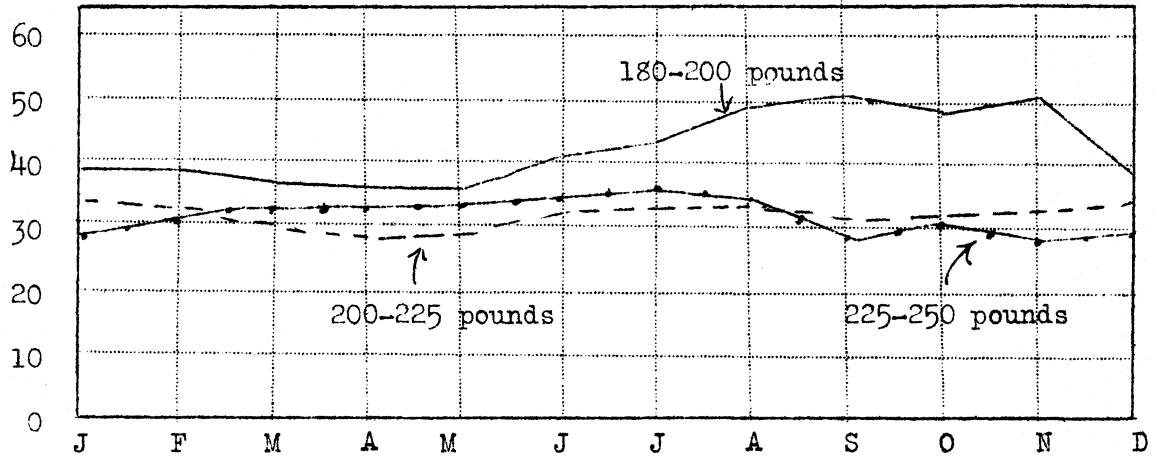


Fig. 4.--Seasonal variation of the price of hogs for three-weight groups at Cincinnati over the same price at Dayton.

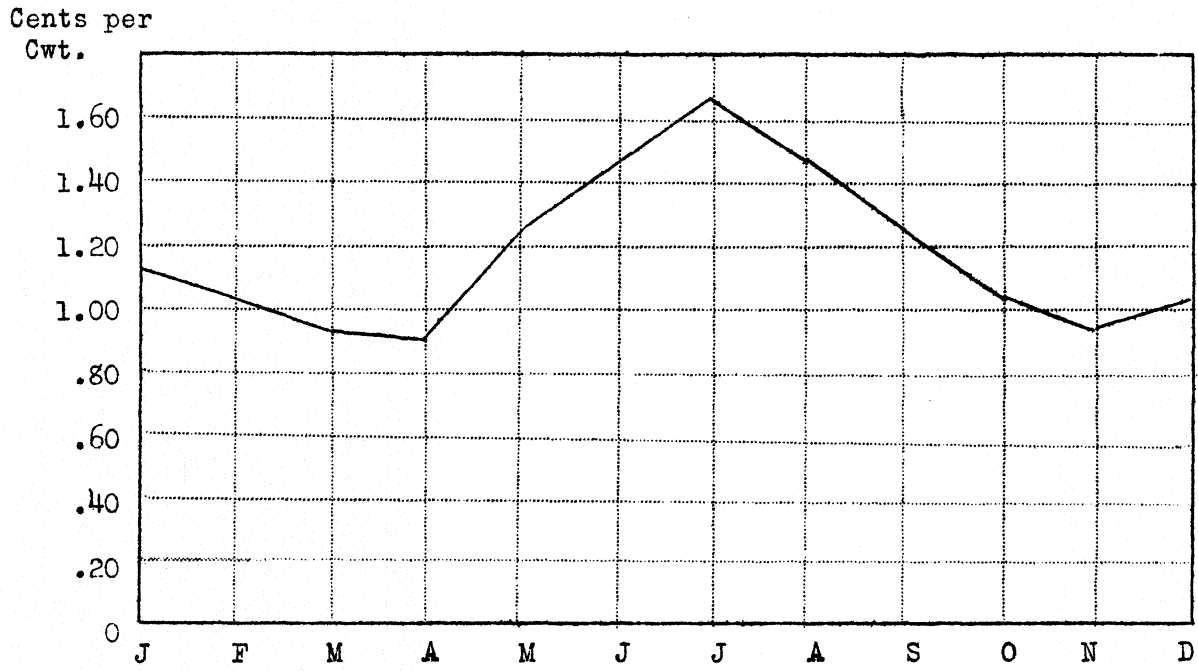


Fig. 5.--Seasonal variation of the average price of top lambs at Cincinnati over the top price at Dayton.

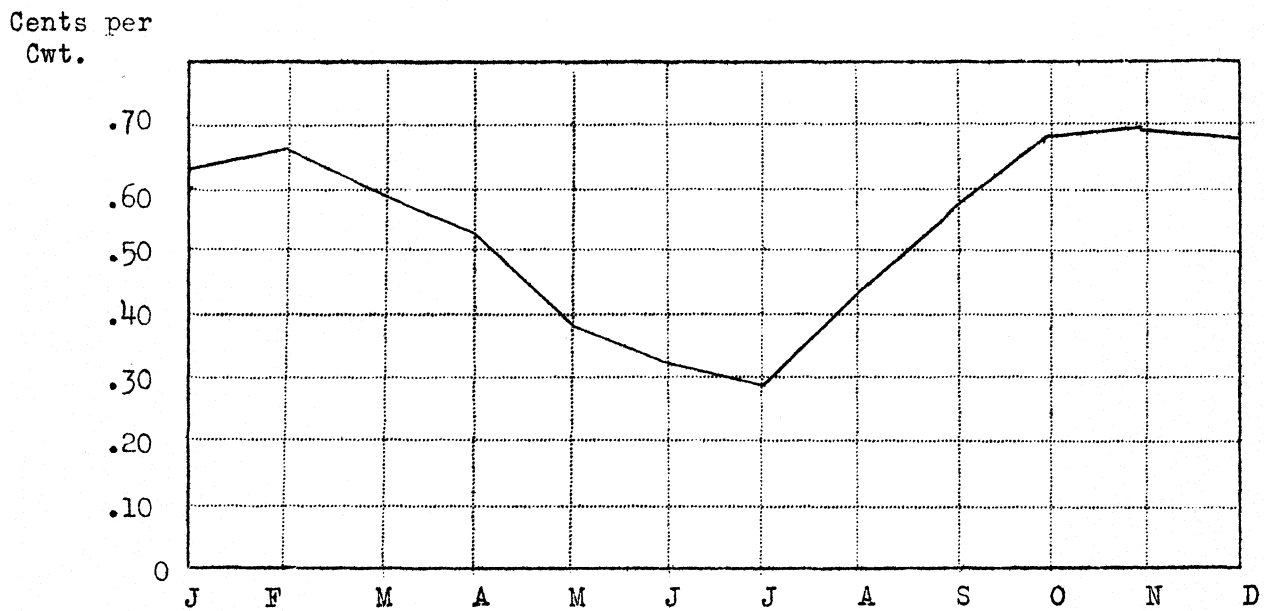


Fig. 6.--Seasonal variation of the Cincinnati price of top calves over the Dayton top price.