

WHY PEAK HOG PRICES COME IN SEPTEMBER OR  
LATER MORE OFTEN IN ELECTION YEARS  
THAN IN NON-ELECTION YEARS

by

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## INTRODUCTION

There seems to be a strong feeling among certain groups of people that presidential elections are more or less disturbing to business, depending on the economic issues involved. In financial centers, for example, it is almost traditional that business will be suspended somewhat and prosperity arrested until the new president is proclaimed and certain political issues are decided.

On the other hand, in commercial and agricultural sections of the country many people are more inclined to believe business is stimulated, and prices of commodities will rise prior to presidential election periods. They reason that prices are higher because the existing administration is doing everything in its power to keep business booming. If politics have any effect on business it would normally be exerted at this crucial period to keep the voting public in line with the administration then in office. Certainly business depression before the election is not conducive to the welfare of the party in power.

Still others believe that business is too big to be affected by the election--that business, and not politics, is the paramount concern of the people. In short, business and economic needs of the country mold political issues

rather than politics molding the economic life or causing any severe change--a change the people would probably not be prepared for nor ready to receive.

It has been observed by those studying marketing that prices of certain commodities change from year to year depending on certain factors. For example, in the case of hogs, it has been noticed that prices in election years behaved differently than in other years. The fall peak price of hogs tended to come later or to extend toward the date of the presidential election more often than in other years. The study here reported is an attempt to bring together for consideration and analysis some of the underlying major causes of this tendency.

#### REVIEW OF LITERATURE

Only in the last eight or nine years have studies been made of the effect of presidential elections on business. During this time seven articles were written, most of them in business and financial magazines. One such article appeared in 1924, one in 1927, one in 1928, and four in 1932. All of the studies dealt with industries other than agriculture.



Theodore Knappen /1 stated that the American business world is obsessed with the idea that presidential election campaigns are surcharged with business disturbances--that political activity and business prosperity are naturally incompatible. Knappen questioned whether the ordinary activities of a presidential campaign are sufficient to distract energy and interest from business to politics to a degree that would tend to slow up business, unless the presidential candidate held radical economic views and had a good chance of being elected. Knappen further cites the work of the National Bureau of Economics in which it was found that during fifteen of the thirty-four election years business was prosperous; that ten were years of depression; that five began prosperously and ended with depression; and that only four can be classed as years of pronounced business depression.

Knappen cites Dudley F. Fowler's work on the subject when in an address in 1924 Fowler declared that there had been only four presidential election years since 1800 that were marked by depressions, meaning depressions that began during the year. These were 1808, 1860, 1884 and 1920. For

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/1 Knappen, Theodore. Do Presidential Years Bring Good Business? Magazine of Wall Street, Volume XLI, pages 833-835. March 10, 1928.

most of these years he gives reasons other than political for the causes of the depression. In 1808 international policy was the cause. Referring to the panic of 1860, Mr. Fowler said: "Here was a true instance of a panic caused by politics, but it must be remembered that the South was seceding from the Union and the very life of the nation was in peril." In 1884 and 1920 the depressions were due to causes other than politics.

Fowler evidently took the opposite view from the general public regarding the effect of presidential elections on business. He believed that business was good because of the election, not in spite of it. To prove his contention he points out the following: (1) The railways moved more ton miles of revenue freight in every presidential year as far back as 1904 than they did in the immediately preceding year with the exception of two years. (2) Pig iron production increased in every election year from 1904 to 1924 with the exception of 1924. (3) Coal production gained in every presidential year as far back as 1900, excepting 1924. (4) Domestic exports increased in every election year since 1880 with the exception of 1884, 1888 and 1908. Imports decreased in 1884, 1892, 1904 and 1908 but increased in the other presidential years of the period. (5) The volume of money in circulation grew in every presidential year

excepting 1896. With the exception of 1908, the total of individual deposits in banks moved upward. (6) Since 1880 the volume of life insurance written has been larger each presidential year than the year before, except in 1896.

(7) Capital issues have gained in election years since 1908.

(8) In the last five presidential years union wages per hour have been higher than in the last preceding year. Commodity prices have been higher in the last four presidential years.

The main criticisms of Fowler's work are that he compares only the pre-election years with election years and does not take into account post and mid-election years. Also, he was dealing with a period of increasing prices and expanding business.

A. T. Miller /1 states that in four of the presidential years, 1908 to 1924, politics had little to do with business or market conditions. The exception was the year 1924 when business was improving but had not yet reached a definitely sound basis. The action after the election showed the relief of the market. Miller states that "Under certain conditions, therefore, the election of a president may have little effect on business and securities; under other

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/1 Miller, A. T. How Do Presidential Campaigns Affect the Stock Market? Magazine of Wall Street, Volume XLI, page 316. December 17, 1927.

conditions, it may have a very great effect. ... If the two leading candidates were of opposite economic beliefs and one were a conservative and the other a genuine radical, with both having even chances of election, the probabilities are almost certain that business would show its fears of a radical election through a protracted decline in the market, in the first place, and a recession in trade and industrial activity in the second."

A somewhat different view as to the effect of presidential years on business appears as an editorial /1 in Bradstreet's Weekly. The editorial was based on a study of 15 election years and 14 post-election years, and held that during heated political campaigns business was suspended temporarily. The discussion points out that seven of the fifteen presidential years show decided recessions in business, 1884, 1896, 1900, 1904, 1920, 1924 and 1932. In 1880 a sharp dent appears in the boom period of the cycle and this year may therefore be added to the preceding seven years of uncertainty and business retreat. Since this country has had more of prosperity than depression the evidence must be regarded as tending to support the hypothesis

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/1 Bradstreet's Weekly Prosperity Prospects After Election. Volume 60, page 1477. November 12, 1932.

of business suspension during a presidential year. It need hardly be added that this view is widely entertained and that it can marshal an impressive array of direct evidence in its favor.

Prosperity and depression have visited the presidential administrations of both parties alike in the past. A brief description of the election years since 1876 is as follows:

- 1876: Normal, followed by a dip.
- 1880: Above normal with rise continued throughout greater part of following year.
- 1884: Sharp decline below normal, with bottom reached at end of year. Rapid recovery took place during next year and a half.
- 1888: Business improved with rise continued for another year and a half.
- 1892: High level maintained during year followed by a collapse in spring of 1893. Business at a low ebb throughout administration.
- 1896: Business declined sharply during year with healthy rally in the following spring.
- 1900: Irregular around normal, but below both previous and ensuing years.
- 1904: A repetition of 1900.
- 1908: A year of steady recovery continuing into 1909.
- 1912: Extraordinary stability around normal level.
- 1916: Business rising sharply to war boom levels.
- 1920: Post war deflation in progress. Decline continuous.
- 1924: Above normal, but below preceding and following years.



1928: Business riding high.

1932: The great Juggernaut at its worst.

An editorial /1 appearing in Commerce and Finance points out that the tradition is deeply embedded in the American mind that commodity and Wall Street markets will largely suspend activities while the results of the presidential campaigns are in doubt. The old time tariff campaigns had their influence in depressing business in 1884, 1880 and 1876. In 1896 when Bryan was conducting his free silver-coinage contest, his possible victory was believed to foreshadow a depreciated currency. People showed fear of his election by forming in lines outside the New York Sub-treasury's "Redemption Window" to exchange their legal tender money for gold coin. The next day's news of Bryan's defeat caused an outburst of relieved enthusiasm, reflected both in the stock market and in general trade. Since 1900, however, financial uneasiness based on the coming election cannot be said to have displayed itself.

A. T. Miller /2 points out in another study that the

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/1 Commerce and Finance. Presidential Elections and Business. Volume 21, page 1273. October 19, 1932.

/2 Miller, A. T. Magazine of Wall Street. The Market From Now Until Election. Volume 50, page 636-637. October 1, 1932.

national election is not of major economic significance, but that its uncertainties will necessarily cause at least a temporary damper upon speculative activity.

In another editorial /1 appearing in the Literary Digest for October 1, 1932, a discussion was made of the political sensation of Maine going democratic. This was followed by a sharp break in the stock market. As a matter of fact, the Maine election caused some selling, but probably is more important as an excuse for what would have happened anyway, sooner or later.

From the above review of literature it is observed that there is a wide diversity of opinion as to the effect of elections on business. Some writers maintain that in the majority of election years business was good because of the election. Other writers maintain that business is temporarily sustained or depressed in the majority of election years. Still others maintain that the destiny of business will emerge from its own internal situation, and will be governed by purely economic factors quite independent of political forces.

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/1 Literary Digest. Politics and the Stock Exchange. Volume 114, pages 42-43. October 1, 1932.

## PURPOSE OF THE STUDY

The purpose of this study is to determine why, in presidential election years, the top price for hogs in the last six months of the year has tended to come in September or later much more frequently than in non-election years. With such a purpose in view it is desirable to know what factors influence the tendency.

In dealing with the problem three methods of approach have been made. First, is it due to the psychology of presidential election campaigns that prices of hogs advance more sharply and for a longer period of time during the usual fall uptrend of prices in election years than is true of most non-election years? Also, does this same election psychology usually cause sharper price advances during January and February preceding the inauguration of the new president?

Second, do advancing prices occur in this period more frequently because of a favorable position in the hog production cycle--declining production and increasing prices or vice versa, and just happen to coincide with election years the greater share of the time?

Third, is the size of the corn crop, the corn hog ratio, or corn prices such in election years as to influence



the price of hogs at this particular season or possibly have an indirect effect in influencing receipts at the markets?

#### SOURCE OF DATA AND METHOD OF APPROACH

Monthly top hog prices for all weights and receipts of hogs at eleven markets were taken from the Chicago Daily Drovers Journal, Yearbook of Figures. Kansas City top prices were used in determining periods of advancing and declining prices. Chicago ten day top prices were taken from the Chicago Board of Trade Yearbook. Data on numbers of hogs on farms January 1 were taken from the United States Department of Agriculture Yearbook for 1932. The forty year period from 1892 to 1931, inclusive, was used for prices, production, and receipts except where specifically stated otherwise.

Data on the annual United States corn production were taken from the United States Department of Agriculture Yearbook for 1932. The prices of No. 2 mixed corn at Chicago were compiled from the Chicago Board of Trade Yearbooks. The corn-hog ratios were taken from crops and markets for 1910 to 1931, inclusive. Corn-hog ratios from 1892 to 1909, inclusive, were taken from bulletin 208 of the Nebraska Agricultural Experiment Station.

The method of procedure followed was to divide the

years studied into four groups, namely: the election group; the post-election group; the mid-election group; and the pre-election group. Monthly average prices and receipts in each period were then compared by means of scatter diagrams to determine if there were any differences occurring between certain months of election years and non-election years. Years of increasing and decreasing production and prices for both hogs and corn were classified as to election and non-election years and studied. Also the relation existing between hog production, receipts, prices, corn production, corn prices, and corn-hog ratios in election and non-election years were studied by means of tables, charts, and graphs.

#### DEFINITIONS

There are some terms and words in this study that are not in common usage. To clarify certain statements the following definitions are offered.

Election years - years in which presidential elections are held.

Non-election years - includes all years other than election years.

Post-election years - years following election years.

Mid-election years - the second year following election years.

Pre-election years - the years preceding election years.

Pre-inaugural months - the months following presidential years up to inaugural day, March 4.

#### HOG PRICES IN ELECTION AND NON-ELECTION YEARS

A record of hog prices since 1892 shows a decided tendency for yearly average prices in election years to be lower than in non-election years.

Since 1892, prices of hogs have tended to keep in line with general commodity prices. From 1896 to 1920 the major price trend was upward. Average hog prices during this period ranged from \$3.88 in 1896 to \$9.72 in 1910 and to \$15.82 in 1920. Since 1920, the trend of general commodity prices and hog prices has been downward.

Hogs, as well as many other commodities, exhibit a minor price cycle movement of several years' duration.

Yearly average top prices for hogs in election years during this period, in the majority of years, have tended to come at the bottom or near the bottom of the minor price cycle. The average top price in 1892 was considerably lower than in the following year of 1893. In 1896, 1904, 1908 and 1928 the average yearly price was at the bottom of minor price cycles. In the years 1900, 1912, and 1924 average

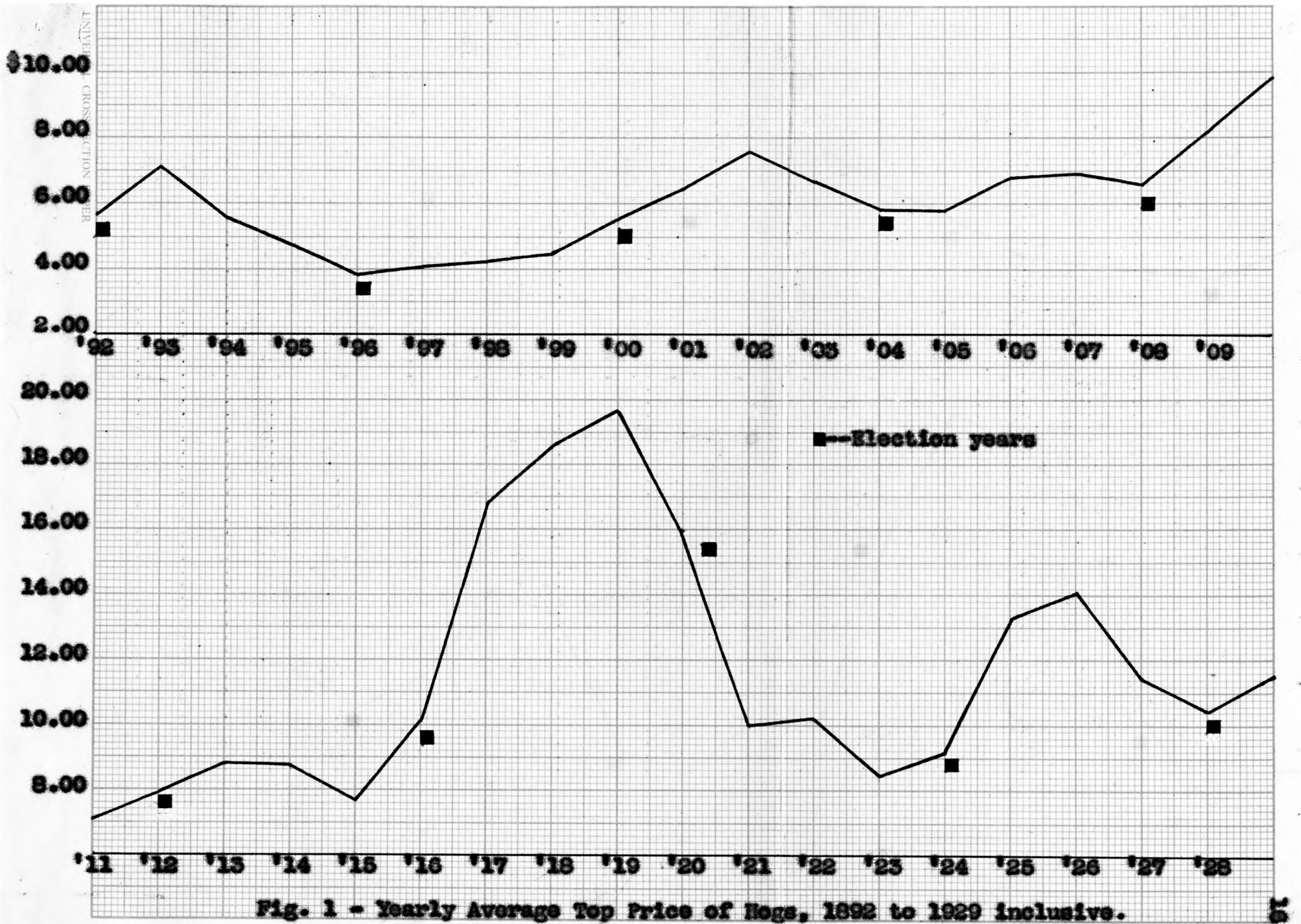
yearly prices were near the bottom. The years 1916 and 1920 were out of line with other election years, but abnormal demand brought about by the world war distorted prices beyond what would logically be expected. (See Figure 1.)

A comparison of hog prices in election and non-election years brings out the fact that in 10 election years the yearly average price was \$8.10, while in 30 non-election years the yearly average price was \$9.09 or nearly

Table I. - Relation between top hog prices in election and non-election years, 1892 to 1931.

Mo.	Ave. monthly prices in 10 elec. yrs.	Ave. monthly prices in 10 post-elec.yrs.	Ave. monthly prices in 10 mid-elec.yrs.	Ave. monthly prices in 10 pre-elec.yrs.
Jan.	7.14	8.07	9.06	8.66
Feb.	7.22	8.66	9.64	8.65
Mar.	7.80	9.53	9.82	8.83
Apr.	8.03	9.42	9.81	8.93
May	7.81	9.10	9.73	8.57
June	8.04	9.10	9.67	8.33
July	8.66	9.63	9.98	8.99
Aug.	8.88	10.00	10.28	9.16
Sept.	9.23	9.84	10.34	8.90
Oct.	8.80	9.42	9.87	8.24
Nov.	7.96	8.63	8.94	7.33
Dec.	7.63	8.67	8.33	6.77
Yearly Average	8.10	9.19	9.62	8.45

\$1.00 more than in election years. For further comparison the non-election years were divided into post-election,





mid-election, and pre-election years. In 10 post-election years the average yearly price was \$9.19; in 10 mid-election years, \$9.62; and in 10 pre-election years, \$8.45. (See Table I.)

Hog prices have been highest in mid-election years and lowest in election years with post and pre-election years coming in between.

With yearly average prices lower in election years than in non-election years, the natural thing to expect would be for average monthly prices in election years to be lower than in non-election years. Figure 2 clearly proves this to be the case. In no month of 30 non-election years was the average monthly price below the corresponding month in the preceding or following election year. However, it should be observed that the widest difference between monthly average prices in election and non-election years occurred during the first six months of the year. There was a tendency during the last six months, and especially from September on, for the monthly average top prices to approach each other. A further study of average monthly prices in election, post-election, mid-election, and pre-election years shows monthly average prices in post-election and mid-election years to be higher than corresponding months of election years in every case. In pre-election

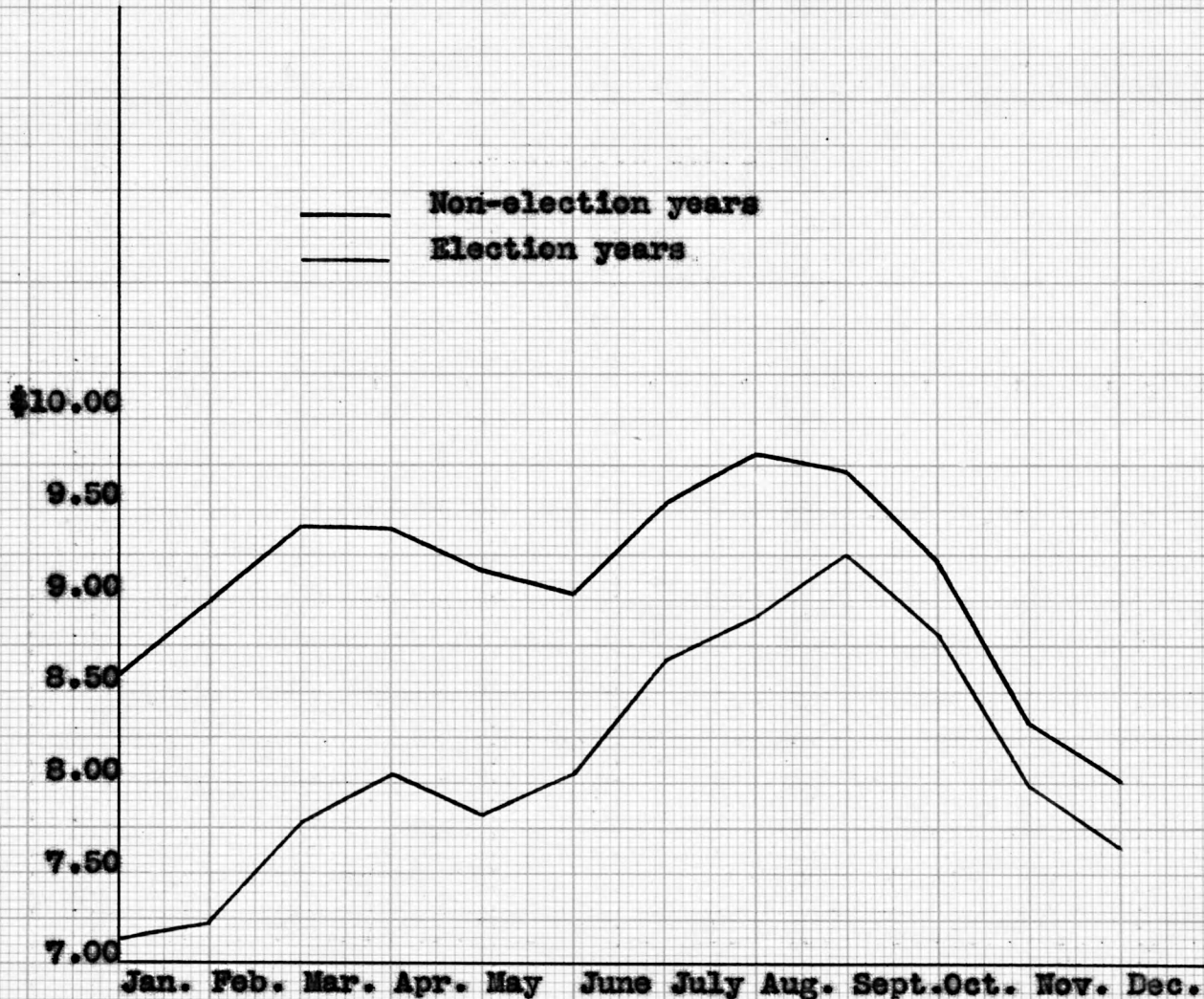


Fig. 2 - Monthly Average Top Price of Hogs at Chicago in Election and Non-election Years, 1892 to 1931, inclusive.

years average prices during the first eight months were higher than during the first eight months of election years, but the latter four months were lower than the corresponding months of election years. (See Table I.)

The advance in prices from the spring low in election years to the fall peak is particularly noticeable in comparing election years with non-election years. In 10 election years the spring low came in May with an average price of \$7.81. The fall peak came in September with an average price of \$9.24 or a price increase of \$1.43. In 30 non-election years the month of lowest average price was June, with an average price of \$9.03. The fall peak came in August with an average price of \$9.82 or an increase of \$0.79.

In the 10 election years the spring low came in April twice, in May four times, and in June four times. The fall peak came in August once, in September six times, in October twice, and in December once, with the price from the spring low to the fall peak ranging from \$3.30 in 1896 to \$18.25 in 1920.

In the 30 non-election years the spring low came in April six times, in May eleven times, and in June thirteen times. The fall peak came in July nine times, in August eight times, in September ten times, in October twice, and



in December once, with the price from the spring low to the fall peak ranging from \$3.65 in 1897 to \$23.60 in 1919.

Therefore, over a period of years in the past the chances have been superior for a longer and larger rise of prices from the spring low to the fall peak in election years as compared to non-election years. (See Figure 2.)

#### ADVANCING OR DECLINING PRICES IN ELECTION AND NON-ELECTION YEARS

For a number of years livestock men have observed that hog prices move in rather clear cut upward or downward cycles. Since 1878 this price cycle, in the case of Kansas City top hog prices, has been repeated eleven times. The average length of time that prices moved upward was about thirty-one and one-fourth months, and the average length of time that prices moved downward was about twenty-seven and one-half months. The time elapsing between one peak and the next has varied from twenty-seven months to one-hundred and thirteen months. Hog production, general business conditions, corn crops, corn prices, and other factors have had an influence on the time when peak hog prices occurred.

When price advancing and price declining years are divided into election and non-election years, it is observed that 7 out of 10 election years and 7 out of 10 post-

election years were years of advancing prices. The opposite tendency is noticed in mid- and pre-election years, or, in only 4 of 11 mid-election years and 3 of 11 pre-election years was the price advancing. (See Table II.)

Table II. - Price advancing years and price declining years classified as to election and non-election years, 1890 to 1931.

	Election years	Post- election years	Mid- election years	Pre- election years
No. of price advancing yrs.	7	7	4	3
No. of price declining yrs.	3	3	7	8
Total no. yrs.	10	10	11	11

It is observed from the above that election and post-election years have an equal number of price advancing years, or, taken together, prices have advanced in 14 of 20 years. In other words, these particular years have happened to fall most often in periods when the price cycle of hogs was on the upward grade. The election years in which prices declined were 1896, 1904, and 1920. However, it is possible that 1896 and 1920 might have been price advancing years had not the decline of all general commodities carried hog values down also. In 1904, due to a marked

increase in hog production, the price could be expected to decline, and it did.

On the other hand, in mid- and pre-election years hog prices were declining in the majority of years, or, taken together, prices were on the decline in 15 of 22 years. These particular years have happened to fall most often in periods when the price cycle of hogs was on the downward trend.

HOGS ON FARMS JANUARY 1 AND RECEIPTS OF HOGS  
AT ELEVEN MARKETS IN ELECTION AND  
NON-ELECTION YEARS

For many years prior to 1923 hog numbers on farms worked to higher levels. For example, the number of hogs on farms January 1 in 1895 totalled, roughly, forty-four million; in 1905, fifty-two million; in 1915, fifty-seven million; in 1920, sixty million; and in 1923 the peak was reached at upwards of sixty-nine million head. Consumptive demand by a rapidly increasing population and abnormal war demand in later years accounts in large part for this tendency. Since 1923, production has been downward due to reduced demand and relatively lower prices than those prevailing during the war period. Population growth since the

war has been less rapid which further tends to level off hog production.

Regardless of whether the long time general trend of hog production is pointed up or down, the production of hogs varies from year to year. Prior to 1923 hog production increased by a series of ups and downs. Since 1923 hog production has tended to decrease and level off by a series of ups and downs. These series of ups and downs are best explained as cyclical movements and are due largely to the producers reaction to existing prices.

These cyclical movements exhibit quite a regularity in their upward and downward swings. The time between a peak and a low point of production has been about two or three years. Likewise, the interval between lowest point and peak point in production varied from two to three years. This cycle of hog production repeated itself about every four or five years unless unusual conditions shortened or lengthened the period somewhat.

When years of increasing and decreasing hog production are classified as to election and non-election years, it is observed that in 8 of 10 election years and in 7 of 10 post-election years hog production declined. In only 5 of the 20 election and post-election years was hog production increasing.

Almost the exact opposite is true in mid- and pre-election years, or only in 3 of 10 mid-election and 3 of 10 pre-election years did hog production decline. In 14 of the 20 mid- and pre-election years hog production was increasing. (See Table III.)

Table III. - Years of increasing and decreasing hog production classified as to election and non-election years.

	Election years	Post- election years	Mid- election years	Pre- election years
No. of yrs. hog production was increasing	2	3	7	7
No. of yrs. hog production was decreasing	8	7	3	3
Total No. yrs.	10	10	10	10

From the above, it is observed that election and post-election years were predominately years in which hog production was declining. In other words, these particular years just happened to coincide with the downward slant of the hog production cycle. On the other hand, mid- and pre-election years were predominately years in which hog production was increasing, or these particular years just happened to coincide with the upward trend of the hog

production cycle in the majority of years.

Since 1892 hog numbers on farms on January 1 averaged around fifty-four million head, with a range from about forty and one-half million in 1897 to more than sixty-nine million in 1923.

Numbers of hogs on farms January 1 in 10 election years averaged fifty-six and one-fourth million head. In non-election years numbers averaged not quite fifty-three million head. Roughly speaking, election years have averaged above three and one-fourth million more hogs on farms on January 1 than have non-election years. Expressed in terms of percentage, non-election years have averaged about 6 per cent fewer hogs on farms January 1 than have election years.

A more detailed study of numbers of hogs on farms on January 1 in non-election years showed that in only 2 of 10 post-election years was there a larger number of hogs on farms at the beginning of the year than at the beginning of the election years immediately preceding. These 2 years were 1901, in which there was an increase of 1 per cent over 1900; and 1905, in which there was an increase of 5 per cent compared with 1904. Average numbers of hogs at the beginning of 10 post-election years were 5 per cent less



Table IV. - A comparison of number of hogs on farms January 1 in election and non-election years, 1891 to 1932.

Post-election yrs.	Numbers in Election thousands	Election yrs.	Numbers in Non-election thousands	Non-election yrs. in % of election yrs.
1893	46,095	1892	52,398	88%
1897	40,600	1896	42,843	95
1901	53,200	1900	52,600	101
1905	52,000	1904	49,500	105
1909	57,000	1908	61,300	93
1913	54,000	1912	55,700	96
1917	56,700	1916	59,700	95
1921	58,942	1920	60,159	98
1925	55,770	1924	66,576	83
1929	58,789	1928	61,772	95
Average	53,309		56,254	94.7
Mid-election yrs.				
1894	45,206	1892	52,398	86
1898	39,760	1896	42,843	93
1902	46,800	1900	52,600	89
1906	54,600	1904	49,500	110
1910	49,300	1908	61,300	80
1914	51,800	1912	55,700	93
1918	61,200	1916	59,700	102
1922	59,849	1920	60,159	99
1926	52,085	1924	66,576	78
1930	55,301	1928	61,772	90
Average	51,590		56,254	91.7

Table IV. - (Con't.)

Pre-election yrs.	Numbers in thousands	Election yrs.	Numbers in thousands	Non-election yrs. in % of election yrs.
1891	50,625	1892	52,398	96%
1895	44,166	1896	42,843	103
1899	38,652	1900	52,600	74
1903	47,200	1904	49,500	95
1907	57,300	1908	61,300	94
1911	55,700	1912	55,700	100
1915	57,000	1916	59,700	96
1919	63,800	1920	60,159	106
1923	69,304	1924	66,576	105
1927	55,468	1928	61,772	90
1931	54,374	1932	59,511	91
Average	53,962		56,550	95.4

than the corresponding period of the preceding election years. (See Table IV.)

In only 2 of the 10 mid-election years was the number of hogs on farms at the beginning of the year larger than at the beginning of the election year preceding. These 2 years were 1906, which showed a 10 per cent increase over the election year of 1904; and 1918, which showed a 2 per cent increase over 1916. Average numbers of hogs at the start of 10 mid-election years were 8.3 per cent below the corresponding period of the preceding election years. (See Table IV.)

In 3 of 10 pre-election years the number of hogs on



farms January 1 was larger than at the beginning of election years immediately following. These three years were 1895, with an increase of 3 per cent compared with 1896; 1919, with an increase of 6 per cent compared with 1920; and 1923, with an increase of 5 per cent compared with 1924. Average numbers of hogs at the beginning of pre-election years were 4.6 per cent fewer than the corresponding period of the following election years. (See Table IV.)

It naturally follows that if numbers of hogs on farms on January 1 vary from year to year, that receipts would show somewhat the same tendency. A study of receipts at 11 principal markets shows this to be true. (See Table V.)

Receipts at 11 principal markets in 8 election years have averaged more than twenty-eight and one-fourth million head as compared to approximately twenty-six and one-fourth million head in non-election years. Expressed in terms of percentage, receipts in non-election years have averaged about 7 per cent less than receipts in election years. This result compares favorably with the figures on numbers of hogs on farms January 1, in which numbers of hogs on farms in non-election years averaged about 6 per cent less than in election years.

Dividing the non-election years into post-, pre- and mid-election years further shows the relationship between

Table V. - A comparison of receipts of hogs at eleven markets in election and non-election years, 1900 to 1932.

Post-election yrs.	Numbers in thousands	Election yrs.	Numbers in thousands	Non-election yrs. in % of election yrs.
1901	25,334	1900	22,464	113%
1905	24,048	1904	22,081	109
1909	22,415	1908	27,638	81
1913	25,185	1912	25,005	101
1917	26,086	1916	31,706	91
1921	28,439	1920	28,552	99
1925	30,321	1924	38,644	78
1929	28,720	1928	30,226	95
Average	26,318		28,289	93.0
Mid-election yrs.				
1902	21,748	1900	22,464	97
1906	23,173	1904	22,081	105
1910	19,523	1908	27,638	71
1914	23,518	1912	25,005	94
1918	31,831	1916	31,706	100
1922	29,660	1920	28,552	104
1926	26,768	1924	38,644	69
1930	26,673	1928	30,226	88
Average	25,362		28,289	89.6
Pre-election yrs.				
1903	20,999	1904	22,081	95
1907	23,944	1908	27,638	87
1911	24,799	1912	25,005	99
1915	26,612	1916	31,706	84
1919	31,340	1920	28,552	110
1923	38,483	1924	38,644	99
1927	27,091	1928	30,226	90
1931	26,154	1932	26,154	114
Average	27,428		28,750	95.4

numbers on farms and receipts.

Of 8 post-election years there were only 3 in which receipts were greater than for the election years immediately preceding. These 3 years were 1901, in which there was an increase of 13 per cent compared with 1900; 1905, with an increase of 9 per cent compared with 1904; and 1913, with an increase of one per cent compared with 1912. The eight post-election years averaged 7 per cent lighter receipts than did the 8 election years. (See Table V.)

In the 8 mid-election years there were also 3 years in which receipts were greater than for the election years preceding. These 3 years were 1906, in which receipts increased 5 per cent compared with 1904; 1918, with an increase of 0 per cent compared with 1916; and 1922, with an increase of 4 per cent compared with 1920. The eight mid-election years averaged 10.4 per cent lighter receipts than the 8 election years preceding them. (See Table V.)

In the 8 pre-election years there were just two years in which receipts were more than for the election year immediately following. These years were 1919, with an increase of 10 per cent compared with 1920; and 1931, with an increase of 14 per cent compared with 1932 receipts. The eight pre-election years averaged 4.6 per cent smaller

(In millions of head)

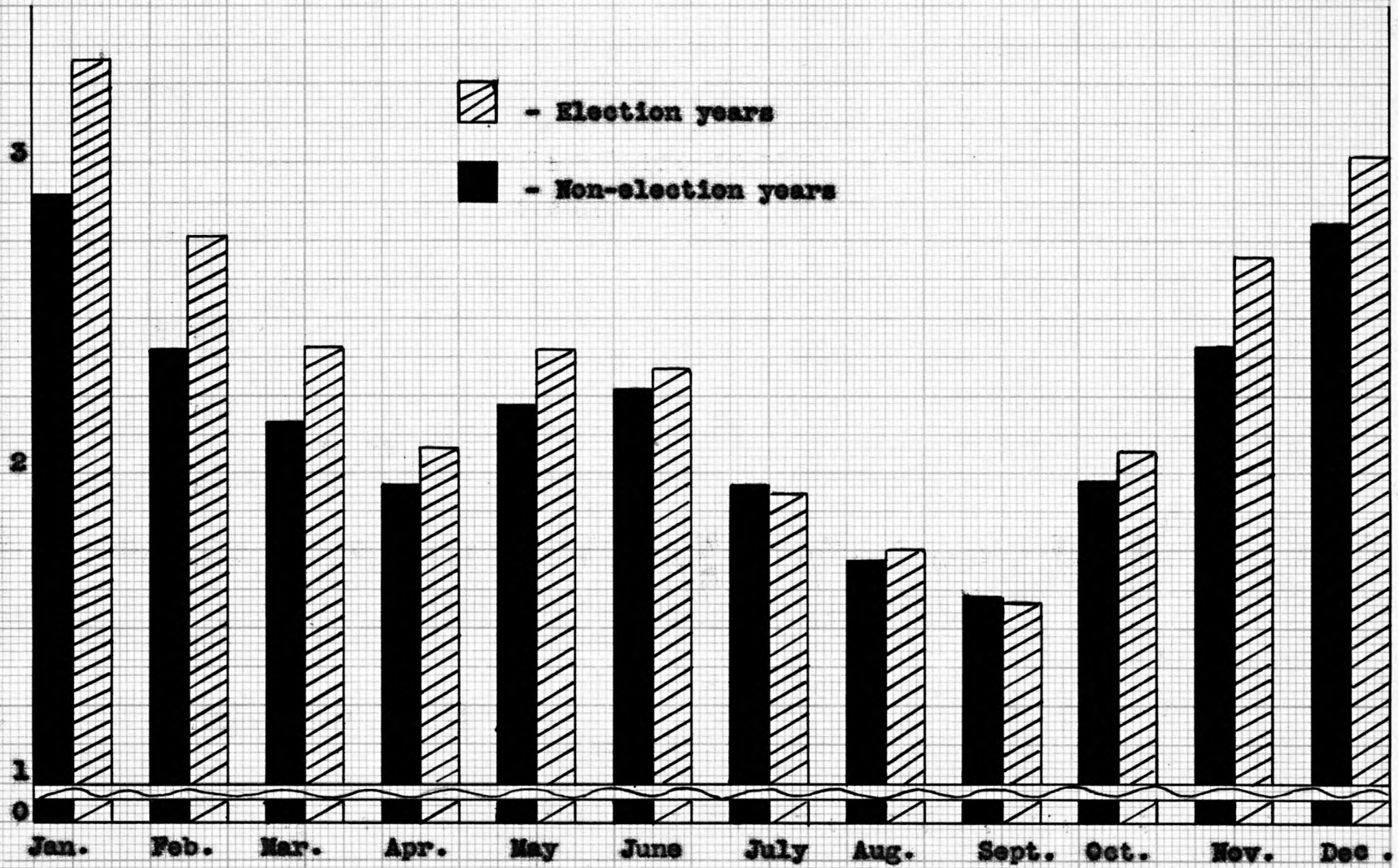


Fig. 3 - Average Monthly Receipts of Hogs at Eleven Markets in Election and Non-election years, 1900 to 1931, inclusive.

receipts than did the 8 election years following these years. (See Table V.)

Study of the monthly distribution of receipts in election and non-election years shows average receipts for the first 6 months to be considerably more than corresponding months in non-election years. July and September were the only two months of the year in which average receipts in election years were fewer than in non-election years. (See Figure 3.)

RELATION BETWEEN HOG PRODUCTION, HOG RECEIPTS,  
AND HOG PRICES IN ELECTION AND  
NON-ELECTION YEARS

An increase in the supply of any commodity is usually attended by a fall in price, unless increased demand offsets the tendency. Hog prices are no exception to the rule. Low yearly average top prices have coincided in the majority of cases with years of high receipts. High yearly average prices have coincided with years of low receipts in most cases. When prices and receipts were averaged for a number of years, prices tended to adjust to receipts. The larger the receipts, the lower the average prices; and the fewer the receipts, the higher the average prices.



Figures 4, 5, and 6 show the close relationship between numbers of hogs on farms January 1, receipts of hogs at 11 markets, and price in election and non-election years.

Numbers of hogs on farms at the beginning of election years averaged 6 per cent more than in non-election years. (See Table IV.) Receipts at 11 principal markets followed in line with numbers of hogs on farms, or 6.9 per cent more hogs were marketed in election years than in non-election years. (See Table V.) If receipts were heaviest in this period, it naturally follows that average yearly prices should be correspondingly lower, and such is the case. The average yearly price in election years was 10 per cent lower than in non-election years. (See Table I.)

Mid-election years hold the record for averaging the smallest numbers of hogs on farms at the beginning of the year, the lightest marketings, and the highest prices of any other period. Hog numbers on farms at the first of the year in this group of years averaged 8.3 per cent smaller; receipts at 11 markets averaged 10.4 per cent lighter, and prices averaged 16 per cent higher than in election years.

Post-election years averaged 5.3 per cent smaller numbers of hogs on farms at the beginning of the year, 7

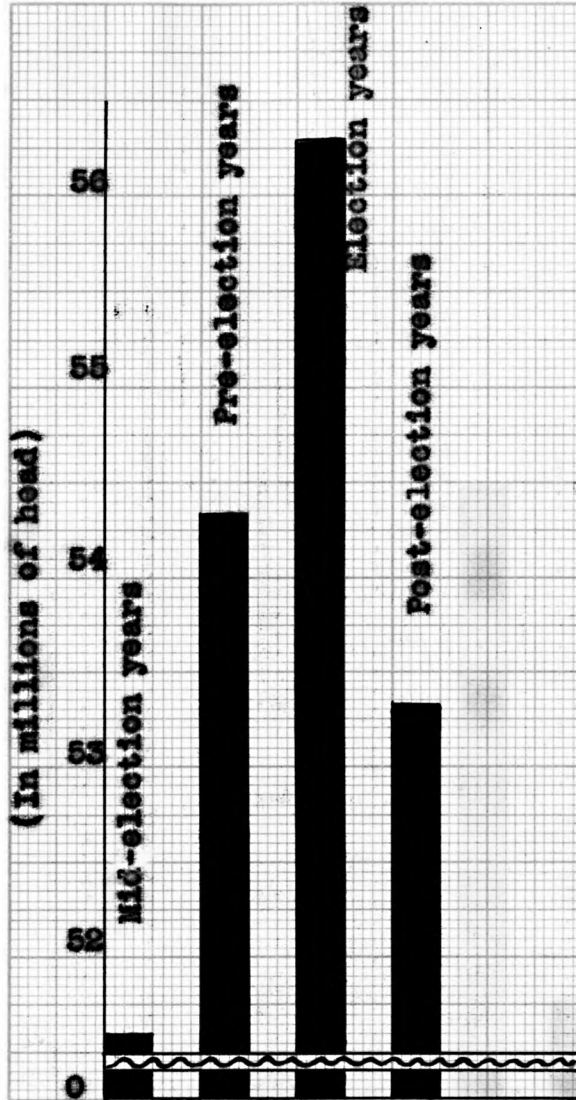


Fig. 4 - Hogs on farms Jan. 1 in election and non-election years, 1892 to 1931, inclusive.

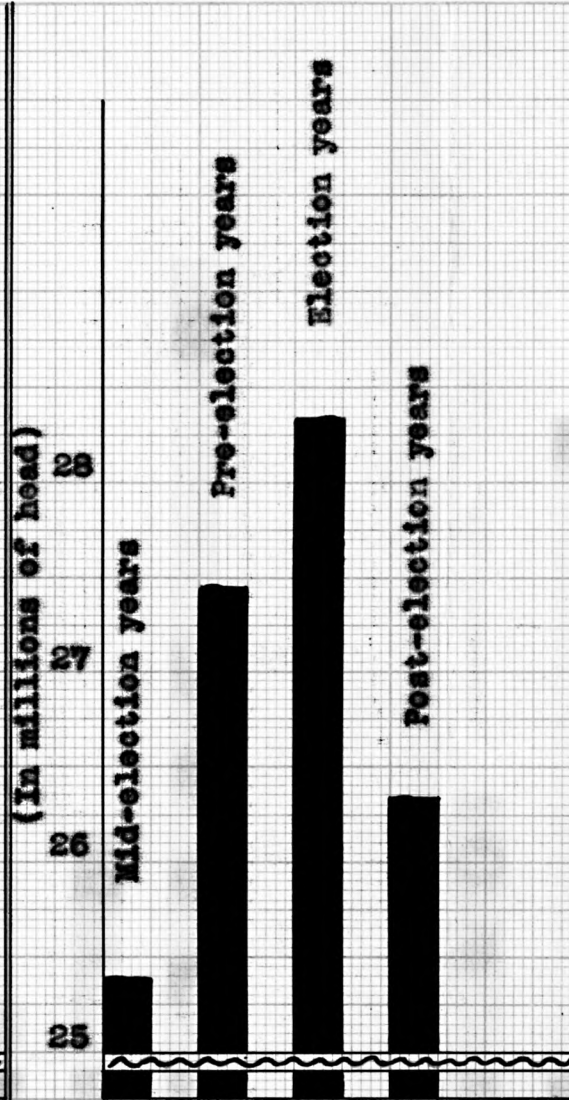


Fig. 5 - Receipts of hogs at 11 markets in election and non-election years, 1900 to 1931, inclusive.

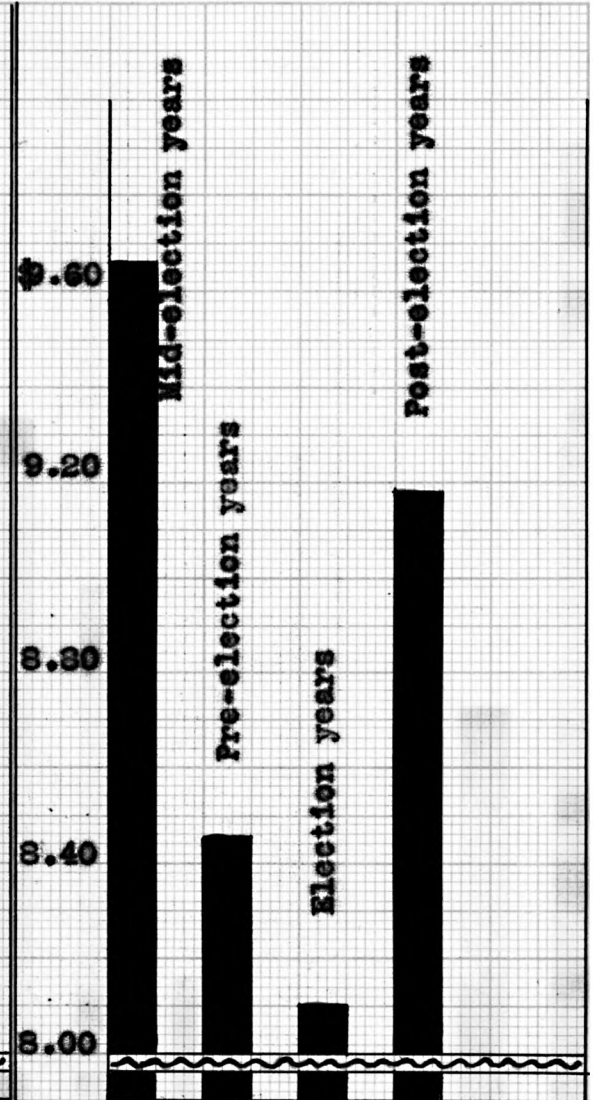


Fig. 6 - Yearly average top hog prices in election and non-election years, 1892 to 1931, inclusive.

per cent lighter marketings, and 11 per cent higher prices than election years.

Pre-election years averaged 4.6 per cent smaller numbers of hogs at the beginning of the year, 3.3 per cent lighter marketings, and 3 per cent higher prices than election years.

Although, for any certain number of years, yearly average prices tended to adjust more or less perfectly to receipts, individual years deviated from the average relationship. For example, in 1901 receipts were 13 per cent heavier than in 1900, but the price, instead of being lower as would be expected, increased 18 per cent over the 1900 yearly average price. 1906 was another year, in which receipts increased 5 per cent over 1904, and yet the price also increased 18 per cent over 1904 yearly average price. These and other exceptions to the rule can usually be explained by general business conditions, abnormal demand caused by war or some other national disturbance, prices of corn, corn production, the existing level of hog prices in comparison with other livestock, and other factors.



RELATION BETWEEN PRICES AND RECEIPTS OF HOGS IN CERTAIN  
MONTHS OF ELECTION YEARS COMPARED TO CERTAIN  
MONTHS IN NON-ELECTION YEARS

Relation between Prices and Receipts of Hogs the First  
Six Months of the Year Compared with the Last Six  
Months in Election and Non-Election Years

A comparative study of Chicago top hog prices for the first 6 months in election and non-election years reveals that the average monthly price the first 6 months of 10 election years was \$7.67 compared to \$8.52 in the last 6 months. Reduced to a percentage basis, prices averaged 11 per cent higher in the latter half of election years as compared to the first half. (See Table VI.)

In 10 post-election years the average monthly price the first 6 months of the year was \$8.98 compared to \$9.36 in the last 6 months. Reduced to a percentage basis, prices averaged 4 per cent higher in the latter half of post-election years as compared to the first half. (See Table VI.)

In 10 mid-election years the average monthly price for the first 6 months of the year was \$9.62 compared to \$9.65 in the last 6 months. Figuring the difference in

Table VI. - Relation between prices the first six months of the year and the last six months in 10 election and 30 non-election years.

	Ave. monthly top prices 1st 6 mo's. of yr.	Ave. monthly top prices 2d 6 mo's. of yr.	Difference and % change of 2d 6 mo's over 1st 6 mo's.	
Ten election years	Jan. \$7.14	July \$8.66		
	Feb. 7.22	Aug. 8.88		
	Mar. 7.80	Sept. 9.23		
	Apr. 8.03	Oct. 8.80		
	May 7.81	Nov. 7.98		
	June 8.04	Dec. 7.63		
	Ave. 7.67	Ave. 8.52	\$0.85	11%
Ten post-election years	Jan. 8.07	July 9.63		
	Feb. 8.66	Aug. 10.00		
	Mar. 9.53	Sept. 9.84		
	Apr. 9.42	Oct. 9.42		
	May 9.10	Nov. 8.63		
	June 9.10	Dec. 8.67		
	Ave. 8.98	Ave. 9.36	\$0.40	5%
Ten mid-election years	Jan. 9.06	July 9.98		
	Feb. 9.64	Aug. 10.28		
	Mar. 9.82	Sept. 10.34		
	Apr. 9.81	Oct. 9.87		
	May 9.73	Nov. 8.94		
	June 9.67	Dec. 8.33		
	Ave. 9.62	Ave. 9.65	\$0.03	0%
Ten pre-election years	Jan. 8.66	July 8.99		
	Feb. 8.65	Aug. 9.16		
	Mar. 8.83	Sept. 8.90		
	Apr. 8.93	Oct. 8.24		
	May 8.57	Nov. 7.33		
	June 8.33	Dec. 6.77		
	Ave. 8.66	Ave. 8.23	-\$0.43	-5%

percentage, there was less than one per cent advantage of the last 6 months compared with the first 6 months. (See Table VI.)

The average monthly price during the first 6 months of 10 pre-election years was \$8.66 compared to \$8.23 in the last 6 months. On a percentage basis, prices averaged 4 per cent lower in the latter half of pre-election years than in the first half.

In the past, during a 40 year period, the latter half of election years seems to have had a decided advantage compared with the first half when compared to corresponding periods in non-election years. Table VI shows that, in the past, average monthly prices were \$0.85 higher in the last 6 months of election years than in the first 6 months. On the other hand, in non-election years the average monthly prices of the first 6 months compared to the last 6 months have tended to exactly balance each other in a 30 year period. (See Table VI.)

Prices in 10 post-election years, however, tend to behave as prices in election years in that there is a \$0.40 monthly price advantage in the latter 6 months compared with the first 6 months. The opposite has been true in pre-election years as the average monthly prices the first 6 months have been \$0.43 more than average monthly

prices the last 6 months of the year. (See Table VI.)

Prices in mid-election years, comparing the first 6 months with the last 6 months, have almost balanced each other. (See Table VI.)

Even though there is a decided advantage in prices the latter half of election years, the average yearly price for election years was lower than the average in non-election years or of either post-, mid- or pre-election years. This fact may be of significance in explaining sharper and longer periods of advancing prices prior to presidential elections. (See Table I.)

In a period of years, receipts of hogs are heaviest the first 6 months of the year when compared to the latter 6 months. In 8 election years, average monthly receipts the last 6 months of the year were 14.9 per cent less than average monthly receipts the first 6 months of the year; in 8 post-election years, 12.1 per cent less; in 8 mid-election years, 7.7 per cent less; and in 8 pre-election years, 10 per cent less. (See Table VII.)

From the above, it is observed that the correlation between receipts and prices the first 6 months of election and non-election years to the last 6 months is surprisingly close. For example, in election years receipts the last

Table VII. - Relation between receipts of hogs the first six months of the year and the last six months in 8 election and 24 non-election years.

		(In thousands)			
		Ave. monthly receipts 1st 6 mos. of yr.	Ave. monthly receipts last 6 mos. of yr.	Difference and % change of 2d 6 mos. over 1st 6 mos.	
Eight election years	Jan.	3,311	July	1,925	
	Feb.	2,766	Aug.	1,754	
	Mar.	2,417	Sept.	1,572	
	Apr.	2,080	Oct.	2,070	
	May	2,396	Nov.	2,684	
	June	2,313	Dec.	3,014	
		Ave.	2,547	Ave.	2,170
Eight post- election years	Jan.	3,151	July	1,933	
	Feb.	2,439	Aug.	1,640	
	Mar.	2,080	Sept.	1,586	
	Apr.	1,964	Oct.	1,990	
	May	2,180	Nov.	2,428	
	June	2,119	Dec.	2,682	
		Ave.	2,322	Ave.	2,043
Eight mid- election years	Jan.	2,654	July	1,862	
	Feb.	2,277	Aug.	1,700	
	Mar.	2,118	Sept.	1,561	
	Apr.	1,869	Oct.	1,988	
	May	2,084	Nov.	2,311	
	June	2,180	Dec.	2,757	
		Ave.	2,197	Ave.	2,030
Eight pre- election years	Jan.	2,917	July	2,080	
	Feb.	2,413	Aug.	1,792	
	Mar.	2,305	Sept.	1,645	
	Apr.	2,051	Oct.	1,984	
	May	2,334	Nov.	2,482	
	June	2,407	Dec.	3,015	
		Ave.	2,404	Ave.	2,166



half of the year were 14.9 per cent lighter than the first half, but prices were 11 per cent higher.

In post-election years, receipts the latter half of the year were 12.1 per cent less than the first half, with prices 5 per cent higher.

In mid-election years, receipts the latter half of the year were 7.7 lighter than the first half, with prices almost balanced.

In the case of pre-election years, receipts and prices did not correlate so closely. Receipts the latter half of the year were 10 per cent less than the first half, but prices were 5 per cent lower. About the only explanation for this deviation from the normal is that in 8 of 11 pre-election years the price was declining, and under such conditions prices tend to decline faster than receipts increase.

Therefore, it may be said that higher monthly average prices predominated the latter half of election years compared with corresponding periods of non-election years, because the latter half of election years have the lighter receipts when compared to the first 6 months of the year than do corresponding periods in non-election years. Also, in 7 of 10 election years price was advancing and prices under such conditions advanced faster than receipts

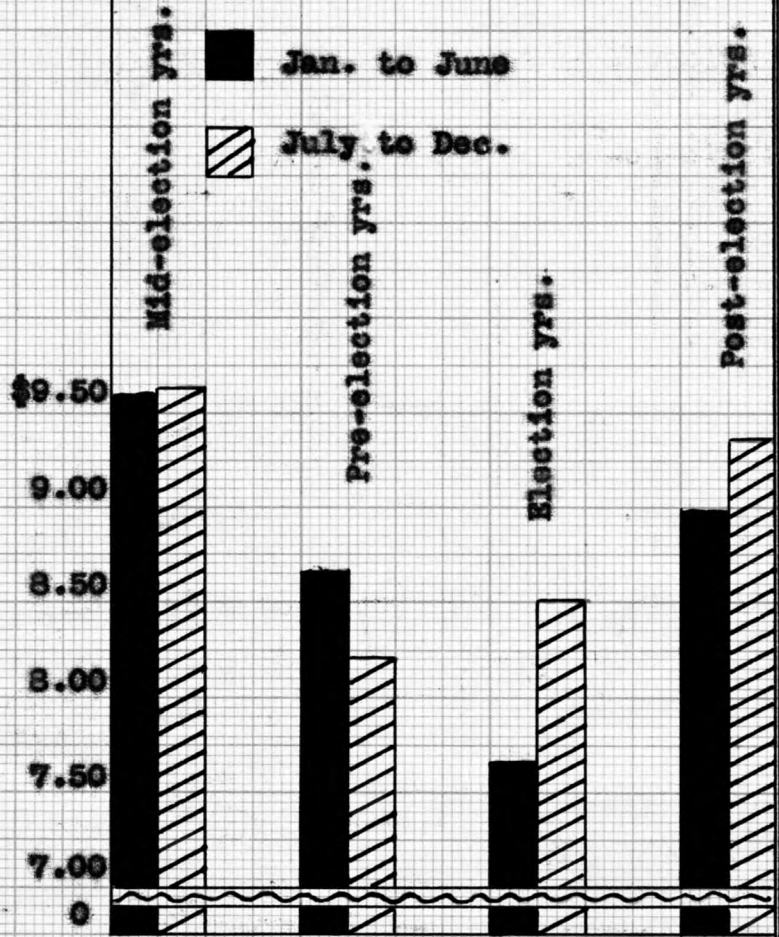


Fig. 7 - Average Chicago Top Hog Prices by six months Periods in Election and Non-election Years, 1892 to 1931, inclusive.

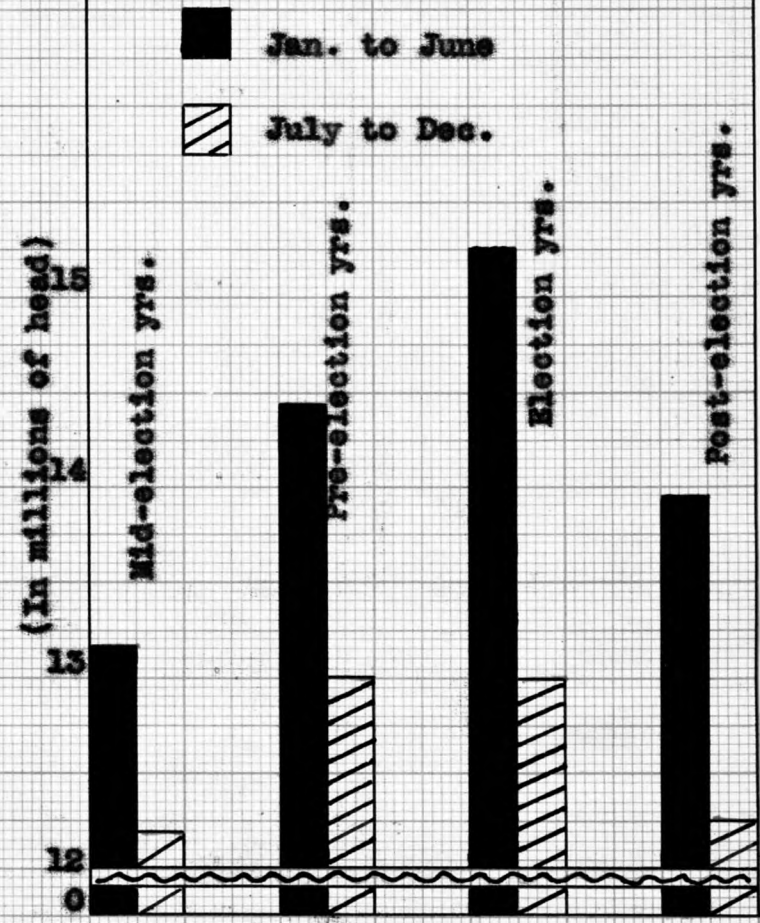


Fig. 8 - Average Receipts of Hogs at 11 Markets by 6 months periods in Election and Non-election years, 1900 to 1931, inclusive.

declined. (See Figures 7 and 8.)

It is quite possible that heavy receipts during the first 6 months of election years and comparatively light receipts the latter half of the year, with hog production decreasing and price on the advance in the majority of years, are the dominating factors which caused peak prices in the last six months of election years to come in September or later so much more frequently than in non-election years.

A Comparison of Peak Hog Prices in the Last Six  
Months of the Year in Election and  
Non-Election Years

Peak hog prices during the last 6 months of the year have tended to come in September or later much more frequently in election than in non-election years. Since 1880, the top price in election years was in August twice, 8 times in September, twice in October, and once in December. (See Table VIII.) In about 85 per cent of the time the peak has been in September or later in election years. In non-election years the peak has been in September or later only 43 per cent of the time.

Since 1880, the only times that the peak price of hogs

came prior to September in election years were 1884 and 1896. In 1884 production was increasing and price was declining, which caused the peak to come early. In 1896, production was declining and theoretically prices should have advanced, but a decided slump in all commodity prices carried hogs down.

Table VIII. - A comparison of September-October with July-August peak hog prices in election and non-election years, 1880 to 1931.

	Election years		Post-election years		Mid-election years		Pre-election years	
	No.	%	No.	%	No.	%	No.	%
No. and per cent of times of Sept-Oct. high	10	83.3	5	41.7	5	38.5	5	41.7
No. and per cent of times of July-Aug. high	2	16.7	7	58.3	8	61.5	7	58.3
Total No. yrs.	12		12		13		12	

In pre-election years the peak price the last 6 months of the year came 5 times in September or later, and 7 times before September. In post-election years the same was true as in pre-election years. In mid-election years the peak price came 5 times in September or later, and 8 times before September. (See Table VIII.)

Because of this tendency for the peak price to be late

in election years and the sharp rise in prices from the spring low, some people have attributed it to the psychology of presidential elections. A study of the number of hogs on farms January 1 has shown that election years have, in the majority of cases, just happened to coincide with the peak point of the four-year hog production cycle. It naturally follows that if election years have comparatively more hogs on farms on January 1, then more hogs would be marketed in the following 6 months than in any other period. A few months after peak production is reached the number of hogs to be marketed declines, and declining hog production is closely associated with price advances. In 8 of 10 election years hog production declined and in 7 of the 10 years prices advanced. Because of the exceptionally heavy marketing of hogs during the first half of election years, which were accompanied by low prices, with production declining and price advancing in the latter half of the year in about 80 per cent of election years, it becomes clearly evident why the peak prices in election years have tended to come later than in non-election years.



September and November Hog Prices and Receipts  
Compared to the Average of May and June  
Prices and Receipts in Election  
and Non-Election Years

September top hog prices during a period of forty years have been higher than May-June top prices more frequently than lower. November prices have, however, been lower more frequently than higher. In 10 election years, September prices were higher than May-June prices eight times, with an average price advantage of \$1.68. In the 10 post-election years, September prices were higher eight times with an average price advantage of \$1.68. In 10 mid-election years, September prices were higher seven times with an average price advantage of \$1.06. In 10 pre-election years, September prices were higher six times with an average price advantage of \$1.10.

Therefore, in the past, the ratio of frequency of occurrence for September prices being higher than May-June has been four to one in election and post-election years, but only two to one in mid- and pre-election years.

November prices in 10 election years were higher than May-June top prices six times, with an average price Advantage of \$0.57. In 10 post-election years, November was

higher four times, with an average price advantage of \$1.45. In 10 mid-election years, November was higher only once, and in 10 pre-election years, only three times.

Therefore, the chances for November being higher than the average of May and June have been about fifty-fifty in election and post-election years, but only one in four in mid- and pre-election years.

Receipts of hogs in September have averaged approximately 70 per cent of the average receipts in May-June. Receipts of hogs in November are about 110 per cent of May-June receipts. This fact is due to hog production and marketing being highly seasonal. There are two distinct periods of heavy market movements, reflecting, respectively, spring and fall farrowing practices. Ordinarily, the first period of heavy receipts comes in May and June, and the second comes in November and December. September is usually between these two peaks of marketings and, therefore, is ordinarily the month of lightest receipts in the year.

In 10 election years, September receipts have averaged about 34 per cent less than May-June average receipts. In 10 post-election years, September receipts have averaged about 27 per cent less. In 10 mid-election years, September has also averaged 27 per cent less. And in 10

pre-election years, September has averaged about 31 per cent less than May-June average receipts.

Higher average prices in September of election years compared with May-June average prices when compared to corresponding periods of non-election years may be explained on the basis of lighter marketings for the period. Hog production was on the decrease and prices were advancing in the majority of these years. This had a strong tendency to strengthen the September price compared with May-June prices in election years. These latter factors are probably the major reasons for September average prices in post-election years being stronger than May-June average prices, in spite of the fact that receipts for the period are not much more favorable than those in mid-election years, and are practically the same as those in pre-election years. However, it must be remembered that hog production was increasing and prices declining in the majority of cases in mid- and pre-election years, which tended to lessen the spread between September and May-June prices.

November average receipts in election years and also post-election years when compared to May-June receipts were heavier than corresponding periods of mid- and pre-election years. In spite of this fact, however, November average

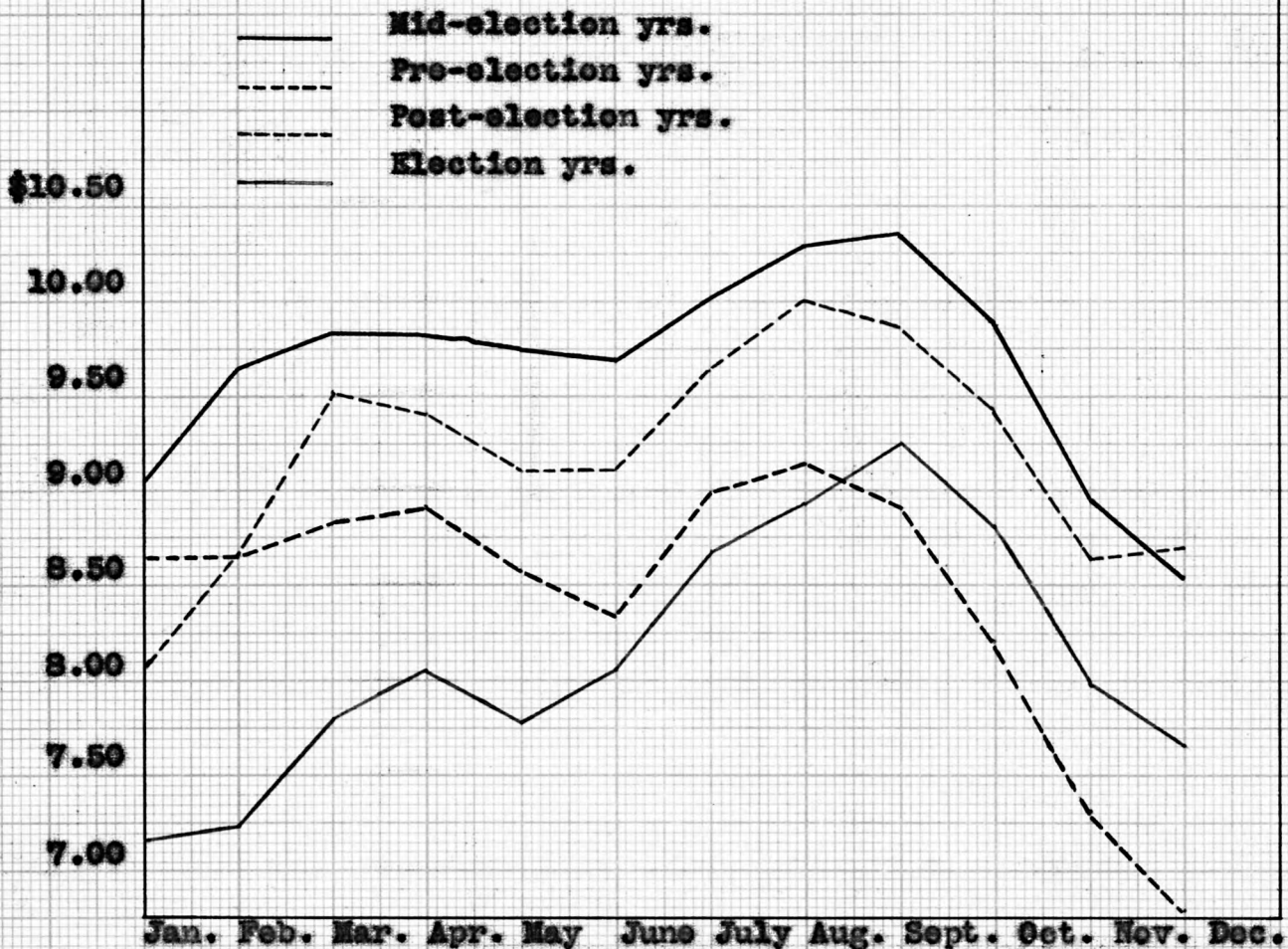
prices in the former period have had a fifty-fifty chance of being higher than May-June average prices. This evident departure from the price-receipts relationship may be explained by the factors mentioned in the previous paragraph, namely: production decreasing and price increasing in most cases of election and post-election years caused an upward price trend in these years, and November prices would naturally be expected to have a higher level in comparison with May-June than would corresponding periods of mid- and pre-election years, when, in most of these latter years, hog production was increasing and prices declining. Therefore, November average prices would logically be lower than May-June average prices. This conclusion is strengthened by the observation that when prices are decreasing, they tend to decline faster than the price-receipts relationship would indicate. When prices are advancing in the cycle, they tend to advance faster than the price-receipts relationship would indicate. In other words, price leads the way in periods of declining or increasing marketings.

Relation between Price and Receipts in Pre-Inaugural  
Months Compared to Corresponding Months  
in Other Years

Prices in January, February, and especially March of inaugural years have averaged stronger advances than have corresponding periods in election, pre-election, and mid-election years. By inaugural years is meant the years following election years, or, the year in which the incoming presidents are inaugurated. Here again it would appear that the incoming administration on March 4 was having a stimulating effect on the market.

The average price of hogs in March of 10 inaugural years was \$9.54 compared to \$8.66 for February, and \$8.07 for January of the same year. Or, March price was \$1.47 higher than January. The average March price of 10 mid-election years was \$0.76 higher than the preceding January, and \$0.18 higher than February. In 10 pre-election years the average March price was only \$0.16 higher than the preceding January, and \$0.17 higher than February. In 10 election years the average March price was \$0.66 higher than the preceding January, and \$0.58 higher than February. (See Figure 9.)





**Fig. 9 - Monthly Average Top Price of Hogs at Chicago in Election and Non-election years, 1992 to 1991, inclusive.**

As pointed out in other phases of this study, there is a close correlation between hog prices and receipts, especially when the period studied covers a long period of time. The fact that pre-inaugural months show strength in prices is no exception to the price-receipts relationship. In other words, prices are relatively stronger from January to March of inaugural years because receipts are relatively lighter from January to March of this period than is the case in corresponding months in other years. (See Figure 10.)

March receipts in inaugural years averaged 34 per cent less than the preceding January, and 15 per cent less than February. March receipts in mid-election years averaged only 21 per cent less than the preceding January, and 7 per cent less than February. March receipts in pre-election years also averaged 21 per cent less than the preceding January, and 5 per cent less than February, or, these years averaged almost identical with mid-election years. In election years March prices averaged 27 per cent less than prices in the preceding January, and 13 per cent less than in February.

From the above summary, it is seen that there is the sharpest decline of receipts from January to March inclusive in inaugural or post-election years, with the corres-

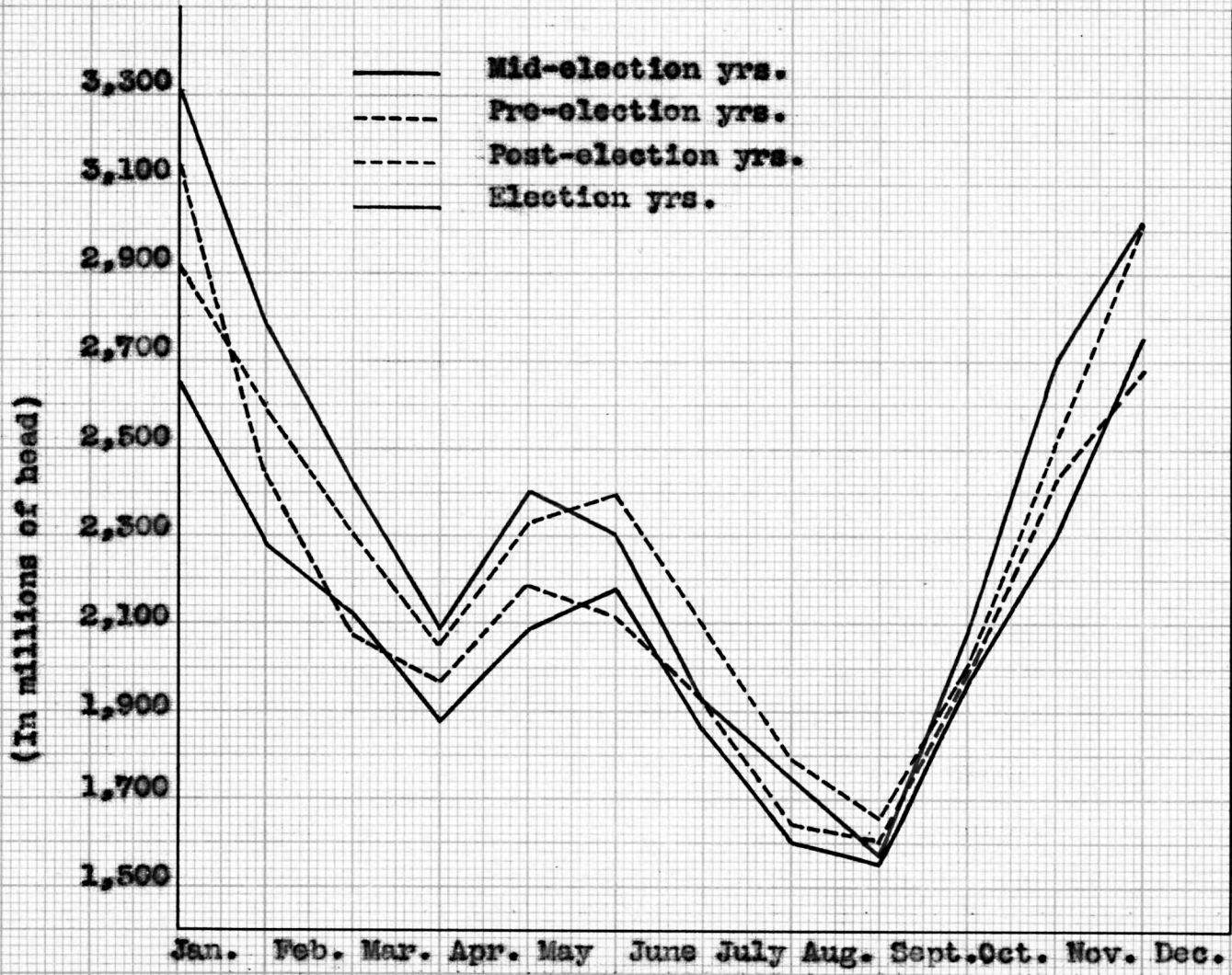


Fig. 10 - Average Monthly Receipts of Hogs at Eleven Markets in Election and Non-election Years, 1900 to 1931, inclusive.

ponding months of election years exhibiting somewhat the same tendency. In this connection, it should be remembered that election and post-election years were predominately years in which hog production was on the decline and price was on the advance. This indicates why receipts declined more sharply in these periods and prices showed more strength than in pre- and mid-election years in which, in most cases, hog production was advancing and prices declining.

OCTOBER AND NOVEMBER PRICES OF HOGS BY TEN DAY  
PERIODS IN ELECTION AND  
NON-ELECTION YEARS

If the election has any effect on hog prices one way or the other, it should show up either in the last 10 days of October or the first 20 days of November, in election years. This is true because the election psychology, if it manifested itself at all, would be most likely to have an effect on prices at this particular time. Because of the pronounced seasonal downtrend starting usually in October, the top for each 10 day period is normally lower than the previous 10 day period.

A comparison of top hog prices the last 10 day of



October with the previous 10 day period in election and non-election years shows that prices were higher twice, lower 7 times, and even once in election years; 9 times lower and once even in post-election years; higher once, lower 8 times, and even once in mid-election years; and lower 9 times and even once in pre-election years. (See Table IX.)

Table IX.- A comparison of October and November hog prices by ten-day periods in election and non-election years, 1892 to 1931.

Election Years			
	Last 10 days of Oct. com- pared to pre- vious 10 days	First 10 days of Nov. com- pared to last 10 days of Oct.	Second 10 days of Nov. com- pared to pre- vious 10 days
Higher	2	4	1
Lower	7	5	8
Even	1	1	1
Post-Election Years			
Higher	0	3	2
Lower	9	7	7
Even	1	0	1
Mid-Election Years			
Higher	1	1	1
Lower	8	9	8
Even	1	0	2
Pre-Election Years			
Higher	0	1	1
Lower	9	9	7
Even	1	0	2



The first 10 days of November were higher than the last 10 days of October 4 times, lower 5 times, and even once; higher three times, and lower 7 times in post-election years; higher once and lower 9 times in mid- and pre-election years. (See Table IX.)

The second 10 days of November were higher than the first 10 days once, lower 8 times, and even once in election years; higher 3 times, lower 7 times, and even once in post-election years; higher once, lower 8 times, and even twice in mid-election years; higher once, lower 7 times, and even twice in pre-election years. (See Table IX.)

From the above analysis, it is observed that in election and post-election years there was a tendency for each 10 day period of October and November to be higher than the previous 10 day period more often than was true of pre- and mid-election years. At first glance it would appear that the election might have some influence, but when it is remembered that hog production was decreasing and prices advancing in most election and post-election years, while the opposite was true of mid- and pre-election years, it is logical to assume that such would be true. Therefore, it is doubtful if the election has little or any effect on hog

prices just prior to or immediately after the election.

SIZE OF CORN CROP AND CORN PRICES IN ELECTION  
AND NON-ELECTION YEARS

In the preceding phases of the problem studied it was learned that the peculiar price situation in the latter half of election years was due largely to price-receipts relationships rather than the psychology of presidential elections. It was further pointed out that hog production was decreasing and price advancing in the majority of election years.

Because corn production and corn prices have a marked influence on hog production, a study was made of these factors to determine if corn production and prices in election years were in any way dissimilar from what they were in non-election years.

During a period of years large corn crops are followed about two-thirds of the time by increased hog production. Small corn crops are followed about two thirds of the time by decreasing hog production. The above is obvious because, if there is plenty of corn, farmers keep their hogs to feed or to produce more hogs. If the corn crop is small, farmers tend to sell their hogs as quickly as possible

because of lack of corn for feeding.

Corn prices change from year to year with the size of the crop, and with changes in other factors affecting the demand for corn. This variation in corn prices has made hog production profitable at certain times and unprofitable at other times.

The size of the corn crop varies from year to year. Roughly speaking, a corn crop of around three billion bushels is considered a large crop, and one of less than three billion bushels is considered a small crop. When large and small corn crops are segregated into election and non-election years, it is observed that 6 of 10 election years were years of large corn crops. Of 10 post-election years, 5 were large corn crop years. In 10 mid-election years only 3 were large corn crop years. And, in 10 pre-election years 5 were large corn crop years. (See Table X.)

Table X. - A comparison of large and small corn crops in election and non-election years, 1892 to 1931.

	Election years	Post- election years	Mid- election years	Pre- election years
Large	6	5	3	5
Small	4	5	7	5
Total no. yrs.	10	10	10	10

In spite of the fact that 5 years of large and 5 years of small corn crops came in pre-election years, hog production the following election years was declining in 8 of 10 years. Of 10 mid-election years, 3 were years of large corn crops, but 7 of the 10 following pre-election years were years of increasing hog production. For these particular years other factors such as hog prices, corn prices, or other factors must have had more influence on hog production than the size of the preceding corn crop. The three years of large corn crops in mid-election years, however, were followed by years of increasing hog production.

A study of United States corn production in election and non-election years shows that the average yearly production in 10 election years was 2,581,000,000 bushels; in 10 post-election years, 2,481,000,000 bushels; in 10 mid-election years, 2,483,000,000 bushels; and in 10 pre-election years, 2,582,000,000 bushels.

Election and pre-election years have averaged somewhat the same in corn production, and post- and mid-election years have averaged somewhat the same; or, the latter group have averaged about 100,000,000 bushels less than the former group of years. (See Table XI.)

Due to larger corn supplies in election and pre-election years during a long period of years, it would appear

Table XI. - United States corn production in election and non-election years, 1891 to 1930.

(In millions of bushels)

Election		Post-election		Mid-election		Pre-election	
Yrs.	Bus.	Yrs.	Bus.	Yrs.	Bus.	Yrs.	Bus.
1892	1,713	1893	1,707	1894	1,339	1891	2,055
1896	2,503	1897	2,144	1898	2,261	1895	2,310
1900	2,505	1901	1,613	1902	2,619	1899	2,454
1904	2,528	1905	2,748	1906	2,897	1903	2,346
1908	2,544	1909	2,572	1910	2,886	1907	2,512
1912	3,124	1913	2,446	1914	2,672	1911	2,531
1916	2,566	1917	3,065	1918	2,502	1915	2,994
1920	3,208	1921	3,068	1922	2,906	1919	2,811
1924	2,309	1925	2,916	1926	2,691	1923	3,053
1928	2,818	1929	2,535	1930	2,060	1927	2,763
Ave.	2,581		2,481		2,483		2,582

that prices during the same period should exhibit a lower average price than mid- and post-election years. Corn price in 10 election years was \$0.77 a bushel; in 10 post-election years, \$0.77; in 10 mid-election years, \$0.73; and in 10 pre-election years, \$0.74. (See Table XII.) It would appear that during a long period of time influences other than supply have influenced prices, or else the change in supply has been too small to show much relationship.

Since hogs are a market for about forty per cent of the corn crop and hog numbers are large in pre-election and election years, hogs themselves tend to boost the price of corn through increased demand in spite of larger production. It is the advance in corn price with declining hog price



Table XIII. - Relation between Chicago monthly top corn prices in election and non-election years, 1892 to 1931.

Mo.	Ave. monthly prices in 10 election years	Ave. monthly prices in 10 post-election years	Ave. monthly prices in 10 mid-election years	Ave. monthly prices in 10 pre-election years
Jan.	\$0.69	\$0.67	\$0.72	\$0.69
Feb.	.70	.67	.71	.65
Mar.	.74	.70	.71	.67
Apr.	.77	.72	.72	.71
May	.87	.78	.72	.76
June	.82	.77	.72	.77
July	.82	.84	.78	.81
Aug.	.83	.85	.79	.82
Sept.	.80	.82	.76	.77
Oct.	.76	.77	.72	.72
Nov.	.72	.79	.70	.72
Dec.	.68	.75	.70	.69
Ave.	.77	.77	.73	.74

that causes the farmer to market hogs freely and cut hog production in election and post-election years.

From the above analysis of large and small corn crops, corn production, and corn prices, it is evident that there is no striking difference between election and non-election years. In other words, the corn production cycle with its accompanying years of increasing and decreasing production and price does not fit in the four year election cycle as is the case with hogs.

CORN-HOG PRICE RELATIONSHIP IN ELECTION  
AND NON-ELECTION YEARS

The previous discussion has shown that changes in hog prices from year to year have been among the most important causes of increasing or decreasing hog production. A second reason for the changes in hog production is that hogs are more dependent upon a single feed crop than any other class of livestock. Therefore, when corn prices are low relative to hog prices, farmers realize more profit on their feeding operations and consequently hog production is stimulated.

A relation between corn prices and hog prices is termed the corn-hog ratio. Over a period of years it was found that about 11 bushels of corn will sell for the same money as 100 pounds of live pork. Therefore, the average ratio has been about 11 to 1. Starting with a period of corn and hog prices favorable to hog production, farmers tend to increase their breeding herd and feeding operations as long as there is a favorable ratio. Eventually, however, hog production will have increased market receipts to such an extent that hog prices will be lower and the corn-hog ratio will become unfavorable. Farmers will then sell their hogs and market their corn. The trouble with

this policy is that when farmers are adjusting their hog production to favorable corn prices, it takes about a year to a year and a half for receipts to be changed at the markets. By this time, due to heavy marketings, the ratio may have changed and losses are incurred which will start the production cycle in the other direction or headed down, only to again be carried to extremes in a year or so when there is again decided profit in hogs.

A study of corn hog ratios in election and non-election years helps to make clear why hog production was decreasing in most election years. In 10 election years the average corn-hog ratio was only 10.3 to 1; in 10 post-election years, 12.2 to 1; in 10 mid-election years, 12.8 to 1; and in 10 pre-election years, 10.7 to 1. (See Table XIII.)

In only two election years since 1892 was the ratio favorable or higher than 11. In only 4 pre-election years was the ratio favorable for hog production. On the other hand, 7 post-election and 8 mid-election years were favorable for increasing hog production.

Therefore, an unfavorable corn-hog ratio starting in the latter half of pre-election years in the majority of these years has caused production to decline in the following election years. The four pre-election years in which

the ratio was favorable for hog production were 1899, 1903, 1907, and 1927.

Table XIII. - A comparison of corn-hog ratios in election and non-election years.

Election		Post-election		Mid-election		Pre-election	
Yrs.	Ratio	Yrs.	Ratio	Yrs.	Ratio	Yrs.	Ratio
1892	11.8	1893	16.5	1894	11.6	1891	7.4
1896	10.7	1897	14.2	1898	14.6	1895	10.8
1900	13.2	1901	11.8	1902	11.6	1899	12.0
1904	10.2	1905	10.4	1906	13.4	1903	13.0
1908	8.4	1909	11.3	1910	13.3	1907	11.4
1912	9.9	1913	12.2	1914	10.5	1911	11.1
1916	10.7	1917	9.7	1918	10.6	1915	9.2
1920	9.8	1921	14.0	1922	14.4	1919	10.3
1924	8.2	1925	11.3	1926	16.9	1923	9.0
1928	9.9	1929	10.8	1930	11.4	1927	12.7
Ave.	10.3		12.2		12.8		10.7

Apparently favorable and unfavorable corn-hog ratio years run in pairs. The latter part of pre-election and election years were predominately years of low corn-hog ratios, and as a result hog production was materially decreased during election and the following post-election years. The ratio, however, became favorable in most post- and mid-election years, and as a consequence production for two years was increased, or until hog raisers again over-supplied the market and hog prices were once more lower relative to corn.

## SUMMARY

Monthly and yearly average prices of hogs have tended to be lowest in election years and highest in mid-election years.

Price advancing periods fell most frequently in election and post-election years. Price declining periods fell most frequently in mid- and pre-election years.

Years of decreasing hog production occurred most frequently in election and post-election years. Years of increasing hog production occurred most frequently in mid- and pre-election years.

Numbers of hogs on farms on January 1 averaged largest in election years and smallest in mid-election years.

Receipts of hogs at eleven markets averaged heaviest in election years and lightest in mid-election years.

The adjustment of prices to receipts is fairly complete in election and non-election years. For certain years, however, prices were not completely adjusted to receipts. When prices were advancing, they tended to out-run receipts. When prices were declining, they declined faster than receipts warranted.

September prices when compared to May-June prices were



stronger in election years than in non-election years because of lighter marketings for the period and because in price advancing years prices advance faster than the price-supply relationship would suggest.

Peak prices in election years were later than in non-election years because price was advancing and production decreasing in most of those years. Also, receipts the first six months of election years were heavier and prices lower than in corresponding periods of other years. This resulted in a stronger recovery in price in the last six months of election years.

The first ten days of November showed more strength compared with the previous ten days in election years than in non-election years, but this again may be attributed to the causes enumerated above.

Price advances were stronger just prior to inauguration because of fewer hogs marketed in this period than was true of corresponding periods in other years.

Size of corn crop and corn prices showed little difference when classified into election and non-election years. These factors apparently have no immediate effect on the problem under study.

The corn-hog ratios have been unfavorable in pre- and election years more often than in post- and mid-election

years. This accounts in part for production decreasing in election and post-election years, since it takes about a year to eighteen months for the effect of the corn-hog ratio to be manifested in the markets.

Election years have just happened in a majority of cases to coincide with the peak of the four-year production cycle of hogs. This is because elections come every four years and there is a strong tendency for hog production to run in four-year cycles. The election cycle is arbitrarily fixed at four years. Circumstances surrounding hog production and marketing establish a hog price cycle averaging close to four years. The close correlation between advancing hog prices and election years is one with little or no evidence of causal relationship.

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