

THE SUPPLY AND PRICE OF CORN IN RELATION TO THE SLAUGHTER  
AND PRICE OF FAT STEERS DURING THE FOLLOWING JULY-  
OCTOBER PERIOD

by

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## INTRODUCTION

The purpose of this study is to analyze some of the important economic factors that affect the profits of the producer of summer fed cattle.

The size of the corn crop, the price of corn and the profit or loss made in feeding cattle during the previous summer are some of the factors that influence the cattle feeder in deciding whether or not he should summer feed cattle. The writer hopes in this study to set up a few guide posts that will be helpful to the cattle feeder in arriving at this decision.

The producer of summer fed cattle usually follows the general practice of buying feeder steers in the fall months of the year when there are heavy runs of range cattle at the terminal markets. These feeder steers are turned in the feedlot and fed roughage and a small amount of grain during the winter months. They are full fed during the spring and summer and marketed as fat steers during the months of July to October. During this six to nine months period of ownership, the feeder may sell his cattle early in the year before they are fat or hold and full feed them until they have a high degree of finish. His decision as to when to sell will be based on his judgment of the future market for

fat steers.

Cattle feeding is regarded as one of the most alluring, yet most hazardous of farm enterprises. During the world war the beef cattle industry expanded to meet the demand for more food. The readjustment period following the war has been one of financial disaster to many beef producers and to rural banks lending funds on cattle. The year of 1932 finds many cattlemen on the verge of bankruptcy.

A study of prices of the four grades of steers for the months of July, August, September, and October, 1922-30 demonstrates the need for the efficient producer to have sufficient foresight and knowledge to enable him to suit his production to the market demand. This study shows that most any one might make money feeding cattle during 1927-28 but that the most efficient might fail during the years 1929-31.

If the production of beef could be stabilized, the cattle feeding industry would be comparatively safe and profitable for the efficient producer instead of a speculative enterprise in which anyone may win or lose heavily. Or if under the present system, the efficient producer could forecast, with the aid of livestock marketing specialists at the various state agricultural colleges, future

market conditions so as to adapt his production to take advantage of the needs of the market, he would find a profit or would avoid a loss that might fall to the cattle feeding industry as a whole.

In the pioneer days of this country, most cattle were marketed grass fat. As the prairies were broken and the ranges pushed back, an increasing number of stock men in the corn belt found it profitable to fatten out cattle on grain. This practice has furnished a profitable market for feed crops and a better quality of beef for the consumer trade.

The increase in number of producers of grain-fed cattle and the number of grain-fat cattle marketed has resulted in overproduction of beef at times so that the cattle feeding business is regarded by many as too risky for the producer to invest his capital.

#### ACKNOWLEDGMENT

The writer wishes to express his sincere appreciation to Homer J. Henney under whose direction this study was made, also to W. E. Grimes and other members of the department of agricultural economics faculty whose criticisms and suggestions were helpful in the preparation and presentation of this thesis.

## MATERIAL AND METHODS

### Sources of Material for the Study

Data on the cattle population in the world and the United States were secured from the United States Department of Agriculture Yearbook for 1931. Figures for the slaughter of cattle under Federal inspection in the United States were also taken from the same source. Figures for the slaughter of steers by grades at Chicago were compiled from monthly United States Department of Agriculture reports in Crops and Markets for the years 1922-30.

Data on the annual corn production for the years 1922 to 1930 in the five and eight main corn belt states and in the United States were taken from Table V, page 40, Kansas Agricultural Experiment Station Circular 158.

The prices of steers at Chicago by grades were compiled from the monthly reports of the United States Department of Agriculture Crops and Markets for the years 1922-30. In this study the classification "Steers All Grades" refers to all fat steers marketed. These "Steers All Grades" include the four main grades: "Choice", "Good", "Medium" and "Common" of all weights.

The prices of corn at Chicago were compiled from the



Chicago Board of Trade yearbooks for the years 1922-30.

### Method of Studying the Problem

The foundation of this study is introduced by a group of tables and time series graphs which picture the beef cattle industry as a whole under the following heads:

1. The Cattle Population in the World, United States and Kansas
2. The Cattle Production Cycle
3. The Slaughter of Cattle in United States and at Chicago for the 1922-30 Period

These tables and graphs are followed by a series of tables, graphs and scatter diagrams showing relationships of the economic factors that are considered in this study.

### REVIEW OF LITERATURE

Only limited information is available which can be used by the feeder of summer fed or long fed cattle in deciding whether or not he should feed cattle for the summer market in any year. The writer has attempted only a review of the available literature on the results of research work in analyzing some of the important economic factors that affect the profits from summer-fed cattle.

Volumes of entertaining and historical literature have been written on the production and development of the main



breeds of beef cattle. The fundamentals of cattle feeding or the costs of production and the costs of marketing beef cattle are well established and such information is available to the producer. In the April, 1929 issue of Armour's Monthly Letter to Animal Husbandment, "The Cost of Beef Production", a detailed account is given of the costs of producing beef on the range and in the feedlot and the expense to the producer in transporting and marketing his product at the terminal market.

Long time production trends of beef cattle and the seasonal trends in feeder, stocker, and fat steer prices have been determined by livestock economists. Armour's Monthly Letter to Animal Husbandmen of June, 1928, "How Livestock Prices Are Made", points out that price is determined and registered competitively based on the packers' ideas of the price of products at the time the livestock is bought. The supply and demand for livestock and livestock products are the fundamental factors guiding the packer in his competitive buying of livestock.

A study has been made of the "Judging Price Risks in Marketing Cattle", by Homer J. Henney, Circular 157, Kansas Agricultural Experiment Station. Henney shows whether or not it would probably pay the producer to hold his cattle for another 30 to 60 days from any given month in the year,

assuming that the probable increase in cattle prices would not be offset by the additional cost of feeding and holding the cattle. He also shows that usually the seasonal trend of fat cattle prices is upward during the spring and summer months.

Henney also shows in this circular that the trend of cattle prices is downward in years following a large corn crop in the eight corn belt states and that prices are upward in years following a small corn crop.

"A Statistical Study of the Prices and Production of Beef Cattle", by John A. Hopkins, Jr., Research Bulletin No. 101, Iowa Agricultural Experiment Station, states that the margin in price between fat and thin cattle and the price of corn are the two determining factors considered by the producer in deciding whether or not he should fatten cattle. Hopkins believes that the price of corn will determine the eagerness of feeders to buy thin cattle.

#### WORLD SUPPLY OF CATTLE

The world supply of beef cattle increased since the beginning of the twentieth century as shown by the fact that the 1909-13 average of the estimated world total of cattle including Russia was 561,600,000 head while the 1921-25 average was 646,700,000 head or an increase of 85,100,000

TABLE I. THE NUMBER OF CATTLE IN THE WORLD<sup>(1)</sup>  
(000 omitted)

Country	Average 1909-1913	Average 1921-1925
North America and West Indies	74,900	86,600
Canada	6,551	9,588
United States	56,750	65,421
South America	80,300	101,500
Brazil	30,705	34,271
Argentina	25,867	37,065
Europe	103,300	98,000
Belgium	1,925	1,550
France	15,338	13,582
Germany	18,474	16,786
Russia, European and Asiatic	60,280	58,159
Africa	33,800	50,000
Asia	195,200	235,000
Turkey, European and Asiatic	7,270	4,821
India-British	128,451	146,759
Philippine Islands	1,190	2,393
Oceania	13,800	17,400
Australia	11,535	13,789
New Zealand	2,020	3,393
Estimated world total, including Russia	561,600	646,700

(1) Data secured from United States Department of Agriculture Yearbook for 1931, Page 827, Table 355.



Figure 1. The Number of Cattle in the World, Including Russia. (Data Secured from U.S.D.A. Yearbook, 1931, Page 827. See Table I.)

cattle in 15 years. It is quite probable that the number of cattle in the world also increased during the latter half of the nineteenth century.

Table I shows that only the leading European countries had a decrease in the number of cattle on hand in 1921-25 as compared with the 1909-13 period. The World War was responsible for the depletion of these herds.

A comparison of the cattle population to the human population for the early twentieth century is given in the July, 1929 issue of Armour's Monthly Letter to Animal Husbandmen, and shows that there were 933 cattle per 1000 people in the 1909-13 pre-war period in the leading exporting nations.

In the post-war period of 1920-25, however, the cattle population in these countries almost equalled the human population, being 995 cattle to 1000 human beings.

During the past decade the world has seen a change in the production methods of beef cattle so that a decrease in cattle population does not necessarily mean a decrease in the supply of beef for human consumption. Steers formerly marketed at two to five years of age are now marketed as calves and baby beeves so that more pounds of beef can be marketed from a total number of cattle on hand each year than formerly.

TABLE II. NUMBER OF CATTLE PER THOUSAND  
HUMAN POPULATION<sup>(1)</sup>

	1909-13	1920-25
Great Britain.....	263	253
Germany.....	285	280
France.....	387	346
Russia.....	283	335
All Others.....	<u>152</u>	<u>113</u>
Total Europe.....	242	217
United States.....	638	619
Canada.....	909	1,093
Argentina.....	3,460	4,260
Australia.....	2,532	2,536
New Zealand.....	<u>1,886</u>	<u>2,643</u>
Total Western Countries.....	933	995

(1) Data from Armour's Monthly News Letter to Animal Husbandmen for July, 1929.

#### UNITED STATES SUPPLY OF CATTLE

The United States supply of beef cattle shows an increase from 14,972,000 in 1840 to 57,518,000 in 1900. Since 1900 the number has varied from 55 million to 64 million except during the period from 1910 to 1920 when due to war expansion the number of cattle increased to 68,871,000.



TABLE III. NUMBER OF CATTLE IN UNITED STATES, 1900-1930(1)

Year	(000 omitted)		
	All Cattle	Beef Cattle	Dairy Cattle
1900	57,518	34,170	23,348
1901	60,544	36,382	24,162
1902	62,215	37,252	24,963
1903	63,738	37,716	26,072
1904	64,137	37,024	27,113
1905	64,003	36,826	27,177
1906	62,872	35,202	27,670
1907	62,373	35,636	26,737
1908	60,794	33,997	26,797
1909	59,634	32,547	27,087
1910	57,940	30,874	27,066
1911	56,219	29,163	27,056
1912	55,022	27,622	27,400
1913	55,833	27,806	28,027
1914	58,737	29,039	29,698
1915	62,532	31,177	31,355
1916	66,394	33,953	32,441
1917	69,533	36,059	33,474
1918	71,229	38,070	33,159
1919	70,281	38,056	32,205
1920	68,871	36,995	31,876
1921	67,184	35,621	31,565
1922	67,264	35,385	31,879
1923	66,156	33,718	32,338
1924	64,507	31,779	32,728
1925	61,996	29,711	33,285
1926	59,122	26,608	32,514
1927	56,832	24,585	32,247
1928	55,676	23,749	31,927
1929	56,389	24,224	32,165
1930	57,973	24,926	33,052

(1) Data secured from United States Department of Agriculture Yearbook for 1931, Page 825, Table 353.





Figure 2. The Supply of Cattle in the United States. (Data from U.S.D.A. Yearbook for 1931, Page 825.) See Table III.

It is interesting to note the change in the kind of cattle in the United States since 1900 when there were 57,518,000 head of all cattle of which 34,170,000 were beef cattle and 23,348,000 were dairy cattle. In 1930 the total of all cattle was about the same as in 1900 or 57,978,000 head, but the proportion of beef and dairy cattle was reversed with 24,926,000 beef cattle and 33,052,000 dairy cattle.

On page 573 of the 1931 United States Department of Agriculture Yearbook we find that "The general trend of cattle slaughter has been upward in the last 40 years. The years of largest slaughter were during the war period when production was stimulated by the war demands for beef. During the last 30 years there have been two cycles of cattle production of 14 and 16 years in length. These production cycles were reflected in similar cycles of cattle slaughter which began about two years later. The slaughter cycle which began about 1914 was distorted somewhat by the war and the abnormal economic conditions which followed."

The cattle production cycle is influenced by the trend in the price of beef. When cattle begin selling at a higher price level production is stimulated. The producer responds to high prices by increasing his breeding herd. Since it takes about six years for a producer to put this

increase on the market the cattle production cycle is of necessity slower than the production cycle for sheep or hogs. By the time the producers have raised and fattened an increased number of beef cattle, prices have reached their peak, and as this increased quantity of beef is marketed prices tend downward.

At present, cattle production is increasing with decreasing prices. High points in production were in 1892-93; 1904-05; 1919-20. Low points in production were reached in 1897, 1912, and 1923.

#### KANSAS SUPPLY OF CATTLE

Kansas has approximately 600,000 milk cows and two million other cattle. As shown in Figure 3 the number of dairy cows in Kansas is fairly constant. The slump in the number of milk cows in 1917, as given in Figure 3, was due to changes in the classification of cattle in Kansas made by the State Board of Agriculture rather than to an actual drop in the number of cows used for milking purposes on the farms.

The drop in the number of other cattle in Kansas during 1926-27 is probably due to drouth and lack of feed in 1926, and the breaking up of sod land for wheat production in the western part of the state.

TABLE IV. CATTLE POPULATION IN KANSAS<sup>(1)</sup>

<u>Year</u>	<u>Milk Cows</u>	<u>Other Cattle</u>
1890	674,705	1,696,081
1900	712,582	2,443,043
1901	793,389	2,613,835
1902	791,844	2,555,800
1903	802,738	2,745,536
1904	799,712	2,757,542
1905	763,803	2,637,222
1906	711,152	2,377,330
1907	690,318	2,171,276
1908	687,432	1,953,435
1909	671,662	2,018,965
1910	641,570	1,878,641
1911	809,623	1,706,266
1912	836,068	1,520,263
1913	862,906	1,551,792
1914	856,883	1,430,150
1915	961,281	1,919,756
1916	1,007,067	2,200,848
1917	580,213	2,337,592
1918	683,211	2,239,717
1919	708,737	2,220,718
1920	609,829	2,132,733
1921	619,210	2,136,611
1922	624,128	2,121,183
1923	609,001	2,218,560
1924	568,327	2,289,432
1925	611,214	2,241,142
1926	625,312	1,967,301
1927	614,634	1,739,582
1928	614,979	1,858,527
1929	609,516	1,979,220
1930	622,222	2,129,434

(1) Data from the Twenty-Seventh Biennial Report of the Kansas State Board of Agriculture, Page 542.



Figure 3. The Supply of Cattle in Kansas. (Data from the 27th Biennial Report of the Kansas State Board of Agriculture, Page 542.)

Cattle production in Kansas in the future will probably be about the same as present production.

UNITED STATES FEDERALLY INSPECTED SLAUGHTER  
OF ALL CATTLE 1900-32

Although the total number of cattle in the United States did not increase materially excepting during the World War period, there has been a steady increase in the number of cattle slaughtered under Federal inspection during the 1900-29 period. In 1900 the slaughter was 5,031,000 and 1929 the total was 8,324,000. (See Table V). The peak of the period occurred in 1918 during the World War when 11,829,000 head were slaughtered under Federal inspection in the United States. Figure 4 shows the trend in the slaughter of cattle in the United States since 1900. The increase in the number of Federally inspected slaughter cattle was due to the development of the packing industry whereby a greater percentage of meat animals were slaughtered by the packer and a smaller per cent by the local butcher. The increase was also due to the fact that the age of fat slaughter cattle has decreased during the 1900-29 period so that more of the total cattle population in the United States are available for slaughter each year.

TABLE V. UNITED STATES FEDERALLY INSPECTED SLAUGHTER  
OF ALL CATTLE 1900-1930<sup>(1)</sup>

Year	Total For Year	Total for August, Septem- ber and October
	(000 omitted)	(000 omitted)
1900	5,031	
1901	5,390	
1902	5,847	
1903	6,242	
1904	6,223	
1905	6,727	
1906	6,926	
1907	7,633	2,165
1908	7,279	2,229
1909	7,714	2,326
1910	7,808	2,306
1911	7,619	2,240
1912	7,253	2,084
1913	6,978	1,939
1914	6,757	1,912
1915	7,153	1,967
1916	8,310	2,475
1917	10,350	3,019
1918	11,829	3,381
1919	10,091	2,787
1920	8,609	2,354
1921	7,608	2,129
1922	8,678	2,441
1923	9,163	2,584
1924	9,593	2,672
1925	9,853	2,744
1926	10,190	2,778
1927	9,520	2,555
1928	8,467	2,282
1929	8,324	2,318
1930	8,170	

(1) Data secured from United States Department of Agriculture Yearbook for 1931, Figure 18, Page 573, and Table 364, Page 836.





Figure 4. United States Federally Inspected Slaughter of All Cattle for 1900-1930. (Data from U.S.D.A. Yearbook for 1931, Page 836.)

FEDERALLY INSPECTED SLAUGHTER OF CATTLE  
AT CHICAGO 1922-30

The feeder of summer fed cattle is interested in the trend in the number of cattle slaughtered under Federal inspection during the months of July to October as a guide in determining the competition from the supply side of the market that he will encounter in marketing his fat cattle during the July to October period of the following summer.

The total slaughter of all cattle Federally inspected at Chicago shows (See Tables VI and VII) that there was an increase in the total for the years 1922 to 1926 and a similar increase in the July to October slaughter for the same years. In this period the cattle production cycle in the United States shows a steady increase from 1922 to 1928. This means that producers sold a large quantity of the stuff during 1922-1926. Beginning in 1926-27 the heifers were held back to increase breeding herds, resulting in a reduction in the number slaughtered and with this increase in the stuff the production cycle started the upward swing in 1926 and the decline in the July to October slaughter stopped. The year 1929 showed an increase in the production and also in the July to October slaughter of all cattle. This indicates that the production of beef cattle is

TABLE VI. SLAUGHTER OF STEERS AT CHICAGO 1922-1930<sup>(1)</sup>

Year	(000 omitted) Total for July, August, September and October			
	For Year	All Grades	Choice and Good	Medium and Common
1922	1,573	406,383	300,826	105,557
1923	1,654	479,180	265,068	214,112
1924	1,573	453,271	262,913	190,358
1925	1,580	382,057	229,441	152,616
1926	1,628	505,032	333,134	171,898
1927	1,247	404,336	295,974	108,412
1928	1,040	322,403	242,099	80,354
1929	1,080	398,079	315,364	82,715
1930	1,079	395,721	276,675	119,046

(1) Compiled from Monthly Reports of Crops and Markets,  
United States Department of Agriculture.

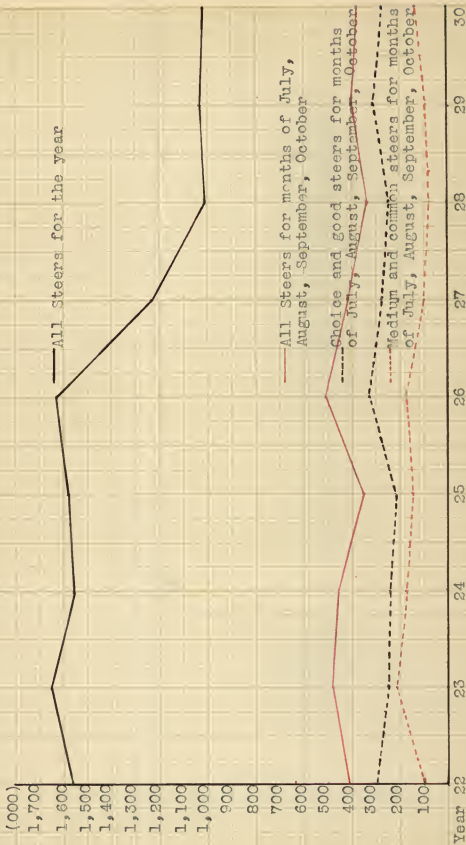


Figure 5. Number of Steers by Grades Slaughtered at Chicago 1922-30. (Data from Monthly Reports of Crops and Markets, U.S.D.A.)

TABLE VII. SLAUGHTER OF STEERS BY GRADES AT CHICAGO FOR THE MONTHS OF JULY TO OCTOBER, INCLUSIVE, 1922-1930(1)

Year	Grades			
	Choice	Good	Medium	Common
1922	111,538	189,238	75,856	29,701
1923	63,523	196,545	175,861	33,251
1924	89,123	173,790	169,551	20,807
1925	49,049	180,392	125,971	26,645
1926	122,373	210,261	146,715	25,183
1927	68,518	227,456	95,028	13,384
1928	101,020	141,079	60,405	19,949
1929	63,012	252,352	64,075	18,640
1930	105,905	170,770	84,461	34,585

(1) Data from Monthly Reports of Crops and Markets, United States Department of Agriculture.



Figure 6. Slaughter of Steers by Grades at Chicago for the Months of July to October, inclusive, 1922-1930. (Data from Crops and Markets, U.S.D.A.)

now increasing and that the excessive dumping of all cattle for slaughter will take place when the producer believes that it is not profitable to keep the stuff for breeding purposes. Judging from past experience, the next peak of cattle production in the United States should be reached in 1935.

Tables VI and VII and Figures 5 and 6 show the slaughter of steers by grades at Chicago during the July to October period of the years 1922-1930. These are the months when the feeder of summer-fed cattle markets his product.

Table VII shows that the number of choice steers sold on the Chicago market during July to October tends to increase and decrease in alternate years. The number increased or decreased from 40 to 50 per cent each year during the 1922-30 period. Table XV shows that the price of choice fat steers reacted to this change in supply. Top prices of choice steers were higher in the alternate years when the number of steers slaughtered decreased with the exception of 1928 when the total slaughter of all grades was less than the previous year. This indicates that it would have been profitable for the producer to market choice steers in those alternate years when the supplies were light and the price relatively high.



TABLE VIII. CORN PRODUCTION IN STATES INFLUENCING THE NUMBER OF SUMMER FED STEERS(1)

Year	Five Corn(2)	Eight Corn(3)	United States
	Belt States (000,000 omitted)	Belt States (000,000 omitted)	
1921	1,244	1,705	3,068
1922	1,282	1,695	2,906
1923	1,323	1,872	3,053
1924	955	1,397	2,309
1925	1,470	1,964	2,916
1926	1,250	1,607	2,691
1927	1,051	1,647	2,763
1928	1,308	1,858	2,813
1929	1,137	1,662	2,614
1930	961	1,377	2,081

(1) Compiled from Circular 158, Kansas Agricultural Experiment Station, 1931, Table V, Page 40.

(2) Five states included are Iowa, Illinois, Indiana, Missouri and Ohio.

(3) Eight states included, in addition to five states named in (2), Kansas, Nebraska and Minnesota.



Figure 7. Corn Production in the United States, the Eight Corn Belt States and the Five Corn Belt States, 1921-1929. (Data from Kansas Circular No. 158, Page 40.)

THE SUPPLY OF CORN IN THE UNITED STATES AND IN  
THE PRINCIPAL CORN BELT AREAS IN 1921-30

The producer of summer-fed cattle depends upon the supply of corn for his cattle feeding operations. Table VIII and Figure 7 show the size of the corn crop in the five corn belt states, the eight corn belt states and the United States for the 1921-30 period. It will later be shown that the size of the corn crop the previous year influenced the number and the grade of steers marketed during this period.

THE EFFECT OF THE SUPPLY OF CORN IN THE FIVE CORN BELT  
STATES THE PREVIOUS YEAR AND THE SUPPLY OF  
STEERS OF ALL GRADES AT CHICAGO

The total July to October number of steers of all grades slaughtered at Chicago for the 1922-30 period compared with the production of corn in the five corn belt states, (Iowa, Illinois, Indiana, Ohio, and Missouri) (See Table IX) shows that there is some slight correlation in the size of corn crop factor. In 1926 there was the largest slaughter of cattle following the largest corn crop in 1925. While the smallest corn crop of 1927 was followed by the second smallest slaughter in 1928.

The production cycle of beef cattle shows its effect on the total number slaughtered during this period, reaching

its peak in 1926 with a total slaughter of 426,000 and dropping to 293,000 in 1927. Large corn crops caused an increase in the number of grain fed steers slaughtered the following summer.

TABLE IX. RELATION BETWEEN THE NUMBER OF STEERS OF ALL GRADES SLAUGHTERED AT CHICAGO, JULY TO OCTOBER, AND THE CORN PRODUCTION IN FIVE CORN BELT STATES ONE YEAR PREVIOUS(1)

Year	Cattle Slaughtered (000 omitted)	Corn Production in Five States Previous Year (000,000 omitted)
1922	474	1,240
1923	557	1,230
1924	513	1,320
1925	445	950
1926	564	1,470
1927	405	1,260
1928	323	1,050
1929	399	1,320
1930	395	

(1) Compiled from Monthly Reports of Crops and Markets, United States Department of Agriculture.

#### EFFECT OF THE SUPPLY OF CORN IN EIGHT CORN BELT STATES ON THE SUPPLY OF ALL GRADES OF STEERS

There is some relationship between the size of the corn crop of the previous year in the eight corn belt states

and the number of steers of all grades slaughtered at Chicago during July to October, as shown in Table IX. In years of large corn crops, the number of steers slaughtered during the following year increased. (See Figure 8). Large corn crops encouraged summer feeding of cattle. This study also shows a rather definite relationship between the number of steers slaughtered and the average price of all grades. The law of supply and demand was operating in that as the supply increased, the price decreased. In 1926 there were 564,000 steers of all grades slaughtered at Chicago during July to October. These steers averaged \$9.26 per cwt. In 1928, only 323,000 steers were sold during the same months. These steers brought an average price of \$14.09 per cwt. This illustrates the value to the producer of keeping the supply low enough to result in an active demand. It should be noted that the corn crop in 1925 was the largest corn crop in the eight corn belt states in the 1922-30 period. This illustrates that the cattle feeder should regard a bumper corn crop in the eight corn belt states, (i. e., a crop of around two billion bushels) as a DANGER SIGNAL WARNING him that there probably will be heavy runs of fat cattle on the Chicago markets during the summer months of the following year.

On the other hand, a corn crop of  $1\frac{1}{2}$  billion bushels,

TABLE X. RELATION BETWEEN THE NUMBER OF ALL GRADES OF STEERS  
SLAUGHTERED AT CHICAGO AND THE CORN PRODUCTION IN EIGHT  
CORN BELT STATES ONE YEAR PREVIOUS(1)

Year	All Grades Cattle Slaughtered July to October (000 omitted)	Corn Production Eight States Year Previous (000,000 omitted)
1922	474	1,705
1923	557	1,695
1924	513	1,872
1925	445	1,397
1926	564	1,964
1927	405	1,607
1928	323	1,647
1929	399	1,858
1930	395	1,662
		(30) 1,377

(1) Data compiled from monthly reports of Crops and Markets,  
United States Department of Agriculture.

Corn  
(000,000 Bushels)

Slaughter  
(000)

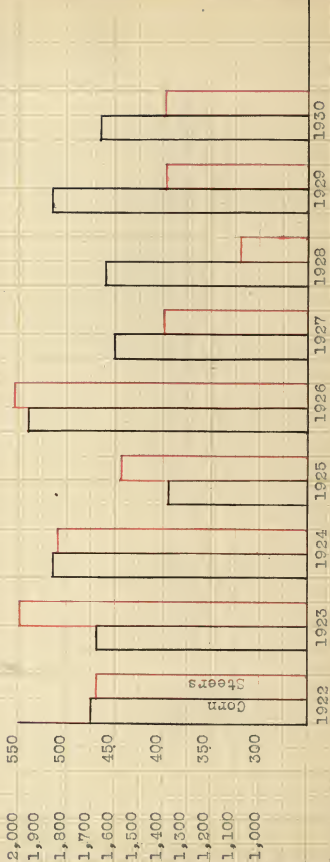


Figure 8. The Effect of the Supply of Corn in the Eight Corn Belt States on the Supply of All Grades of Steers at Chicago During July-October Following Year. (Data from Monthly Reports of Crops and Markets, U.S.D. Acs





Figure 9. The Effect of the Supply of Corn in the Eight Corn Belt States Previous Year and the Supply of Steers of All Grades at Chicago During Following July-October. (Data from Monthly Reports of Crops and Markets, U.S.D.A.)

or less in the eight corn belt states during the 1922-30 period, was followed by a decrease in the number of cattle full fed during the following summer. The slaughter of all grades of steers at Chicago during the 1922-30 period based on size of corn crop of the previous year in the various corn producing areas, shows that the size of crop was not the main determining factor. (See Figure 9). The fact that the slaughter of all grades was higher each year during the period of 1922-1926 inclusive than in the years of 1927, 1928, and 1929 indicates that the production cycle was the most important factor.

Other studies were made which indicate that the corn production of the previous year in the eight (and eleven) main corn belt states (i. e., Iowa, Ohio, Illinois, Indiana, Missouri, Nebraska, Kansas, and Minnesota) affect the total supply of all grades of steers slaughtered at Chicago during July to October more than the corn production in the five corn belt states and the total United States corn crop.

THE EFFECT OF THE SUPPLY OF CORN IN THE FIVE CORN BELT  
STATES THE PREVIOUS YEAR AND THE NUMBER OF CHOICE  
TO GOOD STEERS SLAUGHTERED AT CHICAGO DURING  
JULY TO OCTOBER

The relation between the number of good to choice cattle slaughtered at Chicago during July to October is shown in Table XI based on the total corn crop produced in the

TABLE XI. THE EFFECT OF THE SUPPLY OF CORN IN FIVE CORN BELT STATES ONE YEAR PREVIOUS ON THE SUPPLY OF CHOICE AND GOOD STEERS SLAUGHTERED AT CHICAGO<sup>(1)</sup>

Year	Choice and Good Cattle Slaughtered July-October	Corn Production in Five States Previous Year (000,000 omitted)
1922	300,826	1,244
1923	265,068	1,232
1924	262,913	1,323
1925	229,441	955
1926	333,134	1,470
1927	295,974	1,259
1928	242,099	1,051
1929	315,367	1,320
1930	276,675	1,137

(1) Data compiled from monthly reports of Crops and Markets, United States Department of Agriculture

five main corn belt states. In each year when the corn crop was more than 1,200,000,000 bushels the slaughter of choice to good steers was greater than 260,000. In 1925 and 1928 when the production was less than this level the slaughter was less than 245,000. The exception occurs in 1930 when a small corn crop was followed in 1931 with 276,000 good to choice steers being sold at Chicago. This increase was probably due to cheap grain prices and the substitution of wheat for corn as a livestock feed.

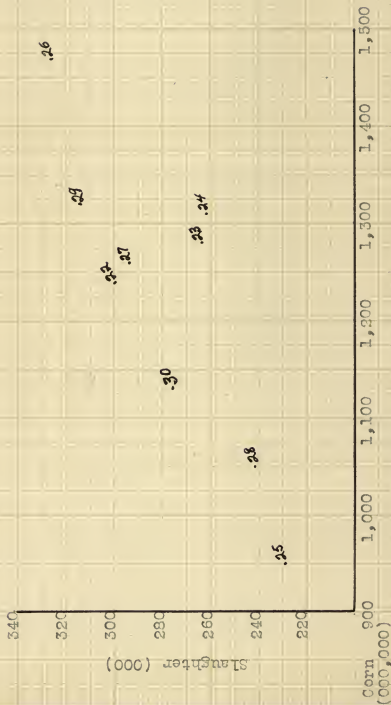


Figure 10. The Effect of the Supply of Corn in the Five Corn Belt States the Previous Year on the Supply of Choice and Good Steers Slaughtered at Chicago During July-October. (Data from Monthly Reports of Crops and Markets, U.S.D.A.)

THE EFFECT OF THE SUPPLY OF CORN IN THE UNITED STATES  
ON THE SUPPLY OF CHOICE AND GOOD STEERS

There seems to be a close relationship between the number of choice to good steers slaughtered at Chicago and the size of the United States corn crop in the previous year. There was also an increased number of cattle full-fed for the summer-fall market at Chicago since 1926 than were full fed for the summer and fall market in 1922-25 as shown in Table XII. As the corn crop increased, the supply

TABLE XII. THE EFFECT OF THE SUPPLY OF CORN YEAR PREVIOUS ON  
THE SUPPLY OF CHOICE AND GOOD STEERS AT CHICAGO THE FOLLOWING JULY-OCTOBER<sup>(1)</sup>

<u>Year</u>	<u>Choice and Good Cattle Slaughtered July-October</u>	<u>Corn Production Eight States Year Previous (000,000 omitted)</u>	<u>Corn Production in the United States Year Previous (000,000 omitted)</u>
1922	300,826	1,705	3,068
1923	265,068	1,695	2,906
1924	262,913	1,872	3,053
1925	229,441	1,597	2,309
1926	333,134	1,964	2,916
1927	295,974	1,607	2,691
1928	242,099	1,647	2,763
1929	315,367	1,858	2,818
1930	276,675	1,662	2,614
		1,377	2,081

(1) Data compiled from monthly reports of Crops and Markets, United States Department of Agriculture.

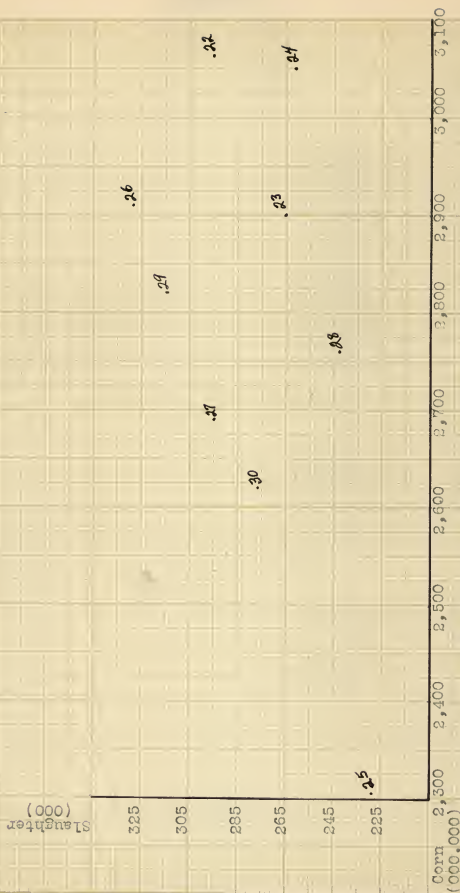


Figure 11. The Effect of the Supply of Corn in the United States the Year Previous on the Supply of Choice and Good Steers at Chicago the Following July to October. (Data Compiled from Monthly Reports of Crops and Markets, U.S.D.A.)



of fat steers marketed the next fall increased.

During the 1922-30 period more fat cattle were slaughtered at Chicago during July and August than during September and October, with two exceptions, 1924 and 1930. The years of 1924 and 1930 were both years of relatively low cattle prices. Feeders with long fed steers probably held on to their steers until late summer, hoping for an upturn in cattle prices.

It may be assumed that the number of good and choice steers slaughtered at Chicago will increase in years following a large corn crop in the United States. A large corn crop means comparatively cheap corn and the feeder is tempted to full feed for the summer market. What is a large corn crop? The size of the corn crop is influenced by the carry over of corn from the previous year, the number of livestock on feed and the amount of substitute grains such as barley or wheat that can be fed instead of corn. In general a large corn crop year is one in which growing conditions are favorable to the crop in the eleven corn belt states. Such a season will produce a crop of 2,800,000,000 bushels or more.

Figure 11 shows that the July to October total of choice and good steers slaughtered based on the total corn produced in the United States the year previous affected



the number of steers slaughtered. This was especially true in the years 1925 and 1931 following a small corn crop the year previous. In years of large crops following a large crop total, slaughter of good to choice steers tended to alternate year after year. The feeding of quality steers apparently is an in and out proposition with a large group of cattle feeders.

THE EFFECT OF THE SIZE OF CORN CROP IN THE EIGHT CORN BELT STATES IN THE PREVIOUS YEAR ON THE PRICE OF CHOICE FAT STEERS THE FOLLOWING JULY TO OCTOBER AT CHICAGO

In studying the effects of the size of the corn crop of the previous year on the price of choice fat steers at Chicago the following July to October, it was found (See Table XIII) that 1921 to 1925 were years of average corn crops in the eight corn belt states and that during the July to October periods of 1922 to 1926 the price of fat cattle at Chicago showed an upward trend. The corn crop of 1923 was the largest in this period and this large corn crop was followed by a lower trend in fat cattle prices during the following summer.

The corn crop of 1924 for the eight corn belt states was the smallest during the 1921 to 1925 period when one-half billion bushels less corn was produced in this area than in the previous year. This small corn crop was fol-

TABLE XIII. THE EFFECT OF THE SIZE OF CORN CROP IN EIGHT CORN BELT STATES IN THE PREVIOUS YEAR ON THE PRICE OF FAT STEERS THE FOLLOWING JULY TO OCTOBER AT CHICAGO<sup>(1)</sup>

July to October Average Price of All Grades of Fat Steers at Chicago					Corn Production of the Year Previous in Eight States (000,000 omitted)
Year	Choice	Good	Medium	Common	
1922	10.90	9.80	8.57	7.18	1,705
1923	11.72	10.55	9.27	7.25	1,695
1924	10.75	9.82	8.55	6.50	1,872
1925	14.46	11.93	9.15	7.00	1,397
1926	10.55	9.90	8.88	7.75	1,964
1927	14.55	12.94	10.46	8.35	1,607
1928	16.72	15.46	13.00	11.20	1,647
1929	15.74	14.28	12.52	10.45	1,858
1930	11.35	10.29	8.97	7.35	1,662
					1,377

(1) Data compiled from monthly reports of Crops and Markets, United States Department of Agriculture.

lowed by an increase of \$2.30 per hundred weight for choice steers on the Chicago market the following year compared with the market of the previous July to October period.

In 1925 a large corn crop was produced in the eight corn belt states which resulted in choice fat steers selling on the Chicago market the following July to October at about \$4.00 per hundred less than in the previous year of the 1922-30 period.

TABLE XIV. AVERAGE PRICE OF STEERS  
BY GRADES AT CHICAGO(1)

<u>Year</u>	<u>Choice</u>	<u>Good</u>	<u>Medium</u>	<u>Common</u>
<u>JULY</u>				
1922	\$10.15	\$ 9.46	\$ 8.69	\$ 7.80
1923	10.91	9.97	9.02	7.34
1924	10.68	9.83	8.86	7.04
1925	13.50	12.04	9.58	7.37
1926	10.03	9.63	9.00	7.44
1927	13.17	11.77	10.08	8.63
1928	15.82	15.11	13.56	11.33
1929	15.73	14.49	13.13	11.14
1930	10.74	9.81	8.72	7.28

<u>AUGUST</u>				
1922	10.44	9.63	8.62	7.33
1923	12.02	10.72	9.40	7.39
1924	10.55	9.80	8.66	6.33
1925	14.88	12.00	8.85	6.72
1926	9.98	9.50	8.63	6.95
1927	13.72	12.21	10.04	8.18
1928	16.31	15.29	13.50	11.06
1929	16.21	14.40	12.41	10.31
1930	10.58	9.76	8.71	7.27

(1) Data from monthly reports of Crops and Markets, United States Department of Agriculture.

Table XIV, continued:

SEPTEMBER

1922	\$11.02	\$ 9.93	\$ 8.60	\$ 7.03
1923	12.27	10.72	9.21	7.08
1924	10.73	9.81	8.41	6.28
1925	14.94	11.88	9.11	6.88
1926	11.11	10.33	9.18	7.43
1927	15.01	13.31	10.54	8.18
1928	17.53	16.09	13.84	11.52
1929	15.90	14.13	12.32	10.21
1930	11.97	10.89	9.39	7.53

OCTOBER

1922	12.01	10.18	8.37	6.59
1923	11.70	10.79	9.46	7.22
1924	11.07	9.85	8.29	6.31
1925	14.54	11.80	9.07	7.02
1926	11.10	10.12	8.71	7.12
1927	16.32	14.49	11.21	8.38
1928	17.20	15.42	11.13	10.86
1929	15.70	14.22	12.25	10.17
1930	12.12	10.70	9.09	7.39

In 1926 and 1927 small to medium corn crops were produced in the eight corn belt states and prices rose about \$4.00 per hundred in 1927 and continued upward \$2.00 per hundred on choice fat steers at Chicago in July to October, 1928.

In 1928 a large corn crop was produced in the eight corn belt states which resulted in choice steers selling at \$1.00 per hundred less in the summer and fall of 1929 than the previous summer and fall.

The years of 1929 and 1930 were years of medium and small corn crops respectively yet prices of choice steers declined at Chicago the following years. This indicates that other factors besides the corn crop and the supply of beef affect the price of fat cattle at Chicago. The business situation or the general price level of all commodities has certainly affected the price of beef during the 1922-1930 period and especially during 1929 and 1930 the business situation seemed to be the dominant factor in pushing the cattle market down.

#### THE EFFECT OF THE SUPPLY OF CORN ON THE PRICE OF STEERS

In considering the relation of the price of fat cattle in the late summer and the fall months to the supply of corn in the United States, one might assume that in years follow-

TABLE XV. JULY-OCTOBER AVERAGE PRICE OF ALL GRADES OF FAT STEERS AT CHICAGO AND THE CORN PRODUCTION IN THE UNITED STATES AND THE EIGHT CORN BELT STATES, PREVIOUS YEAR(1)

Year	Average of Four				Corn Production Year Previous	
	Choice	Good	Medium	Common	United States (Bushels) (000,000 omitted)	United States (Bushels) (000,000 omitted)
1922	\$10.90	\$ 9.80	\$ 8.57	\$ 7.18	\$ 9.11	1,705
1923	11.72	10.55	9.27	7.25	9.65	1,695
1924	10.75	9.82	8.55	6.50	9.40	1,872
1925	14.46	11.93	9.15	7.00	10.63	1,597
1926	10.55	9.90	8.88	7.75	9.26	1,964
1927	14.55	12.94	10.46	8.35	11.57	1,607
1928	16.72	15.47	13.00	11.20	14.09	1,647
1929	15.74	14.29	12.52	10.45	13.25	1,858
1930	11.35	10.29	8.97	7.35	9.49	1,662
					(1930)	1,377
						2,081

(1) Data from monthly reports of Crops and Markets, United States Department of Agriculture.

ing large corn crops in the United States the supply of fat cattle marketed would be large and low prices would result. This assumption is partially correct. The years 1921, 1922 and 1923 were approximately three billion bushel corn production years for the United States. The average price of choice fat steers during the summer months for the years 1922, 1923, and 1924 was approximately \$11.00 a hundred.

These three large corn production years were followed by a small corn crop of 2,300,000,000 bushels in 1924 and this small corn year was followed by high fat steer prices in the summer of 1925 when top prices averaged \$14.50 for choice steers. The year 1925 was a good corn crop year of 2,900,000,000 bushels and the following summer choice fat steers sold for \$10.55 per hundred. In 1926 the United States corn crop was 2,763,093,000 bushels and the July to October average price in 1927 of choice fat steers was \$14.66 per hundred. This unusual rise in the price of fat steers is probably due to the fact that approximately 100,000 fewer steers of all grades and approximately one-half of the number of choice grade steers were marketed in Chicago during the July to October period of 1927 as compared with the same months in 1926.

The United States corn crops in 1927, 1928 and 1929 were 2,763,000,000, 2,818,000,000 and 2,614,000,000 respec-



tively and the price of fat steers remained at the same high level of prices as established during the summer months of 1927 until the 1930 period when choice steers sold at \$4.00 per hundred less than in 1929. This severe drop in cattle prices in 1930 was due to low grain prices, increased receipts of fat cattle at Chicago during the July to October period and the decline in world prices of all commodities.

#### THE EFFECT OF THE PRICE OF CORN ON THE SUPPLY OF CHOICE AND GOOD STEERS THE FOLLOWING SUMMER

The cattle feeder certainly considers the price of corn during the months of November, December, January and February as a factor in determining the number of choice and good steers he will market during the following July to October. Table XVI shows that in 1925 following the year of highest corn prices the lowest number of choice and good steers were marketed. The most steers of the 1922-30 period were marketed during 1926. This was following the largest corn crop of the eight-year period, the price of corn was down to 78 cents and many feeders undoubtedly filled their lots hoping to increase the profits of the previous year.

TABLE XVI. THE NUMBER OF CHOICE AND GOOD STEERS SLAUGHTERED AT CHICAGO IN JULY TO OCTOBER AND THE NOVEMBER TO FEBRUARY AVERAGE PRICE OF NO. 3 YELLOW CORN AT CHICAGO THE PREVIOUS WINTER

Year	Cattle Slaughtered <sup>(1)</sup>	Price of Corn <sup>(2)</sup>
1922	300,826	\$0.49
1923	265,068	0.71
1924	269,913	0.76
1925	229,441	1.20
1926	333,134	0.78
1927	295,974	0.73
1928	242,099	0.88
1929	315,367	0.90
1930	276,675	0.82

(1) Data compiled from monthly reports of Crops and Markets, United States Department of Agriculture

(2) Data compiled from Chicago Board of Trade Yearbooks.

THE EFFECT OF THE PRICE OF CORN ON THE SUPPLY OF ALL GRADES OF STEERS THE FOLLOWING SUMMER AT CHICAGO

Table XVII shows that the price of corn in November to February of the previous year does not affect the number of all cattle slaughtered at Chicago during the following August to September except during periods of extreme variations in the price of corn. In 1924 with 76 cent corn being fed 240,000 cattle were sold for slaughter at Chicago.

Slaughter  
(000)

360

340

320

300

280

260

240

220

Price .40

.50

.60

.70

.80

.90

1.00

1.10

1.20

.26

.29

.27

.22

.30

.24

.23

.28

.25

Figure 12. The Number of Choice and Good Steers Slaughtered at Chicago in July-October and the November to February Average Price of No. 3 Yellow Corn at Chicago the Previous Winter.

In 1925 the feeder was forced to feed corn worth \$1.20 at Chicago and as a result 213,000 cattle were marketed during August and September. The following year with corn back to 78 cents at Chicago 297,000 head were marketed. The size of the corn crop and the price of corn seem to affect the number that are grain fed for market rather than the number of all cattle sold for slaughter. (See Figure 13). The cattle production cycle is the dominant factor affecting the total number of all cattle slaughtered.

TABLE XVII. THE RELATION BETWEEN THE NUMBER OF ALL STEEPS SLAUGHTERED AT CHICAGO IN SEPTEMBER AND OCTOBER AND THE AVERAGE PRICE OF CORN AT CHICAGO IN THE NOVEMBER TO FEBRUARY PERIOD THE WINTER BEFORE

Year	Steers Slaughtered at Chi- cago September to October	Average Price of Corn at Chicago November to February
	(1)	(2)
1922	474,000	\$0.49
1923	557,000	0.71
1924	513,000	0.76
1925	445,000	1.20
1926	564,000	0.78
1927	405,000	0.73
1928	323,000	0.88
1929	399,000	0.90
1930	395,000	0.82

(1) Data compiled from report of Crops and Markets, United States Department of Agriculture.

(2) Data compiled from Chicago Board of Trade Yearbooks.

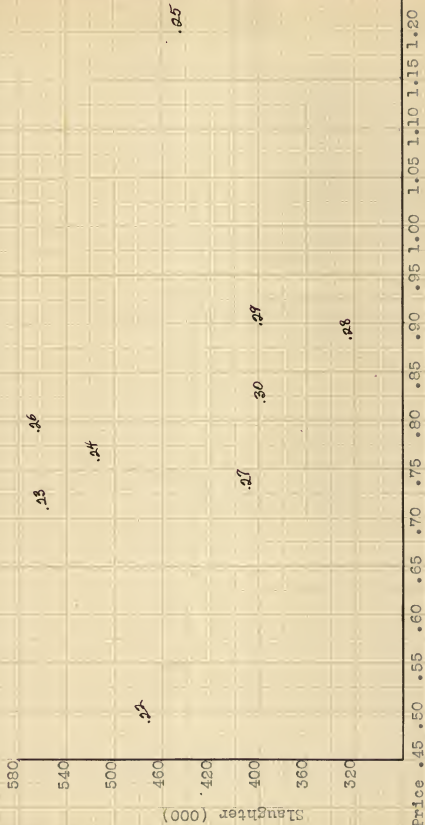


Figure 13. The Relation Between the Number of All Steers Slaughtered at Chicago in September and October and the Average Price of Corn at Chicago in the November to February Period the Previous Winter. See Table XVII

THE EFFECT OF THE PRICE OF CORN ON THE PER CENT CHANGE IN  
THE PRICE OF SUMMER FED STEERS

The present change of the average of monthly top prices of fat steers at Chicago from February-April to June-July based on the November-February corn price the previous year shows in Table XVIII that the price of corn early in the feeding season is not an important factor determining the length of the cattle feeding period or the upward or downward seasonal trend of fat cattle prices during the spring and summer months of February to April to June and July.

It is interesting to note, however, that with the exceptions of 1922 and 1923 when a seasonal advance was gained during the spring and summer, that from 1923 to 1928 the price trends alternated from higher to lower levels. That is, in 1923 the price of fat cattle at Chicago had increased by June-July to 110 per cent of the February-April price. The same increase was gained during the same period in 1922. During the same period in 1924 the price was 94 per cent in June and July of the February-April price. In June-July, 1925, the price was 113 per cent of the February-April price. In 1926 the price dropped as the season advanced, the June-July price being 94 per cent of the February-April price. In 1927 higher prices prevailed, June-July being 106 per cent of the February-April price. Lower



prices were the tendency in the 1928 period with June-July prices 97 per cent of February-April. The price trend was higher in 1929 with fat cattle scoring an advance in price, and the June-July period was 106 per cent of February-April prices.

TABLE XVIII. THE AVERAGE OF MONTHLY TOP PRICES OF FAT STEERS AT CHICAGO, BASED ON PER CENT JUNE-JULY PRICE IS OF APRIL-MAY PRICE DUE TO CORN PRICE OF THE PREVIOUS YEAR, NOVEMBER-FEBRUARY AVERAGE NO.3 YELLOW CORN AT CHICAGO

Year	Per Cent June-July Price of Fat Steers is of February- April Price(1)	Corn Price November- February(2)	Estimate	Amount Actual Variance from
			A	Estimate
1922	110	\$0.49	91	+ 19
1923	110	0.71	97	+ 13
1924	95	0.76	95	0
1925	113	1.20	108	+ 5
1926	94	0.78	93	- 4
1927	106	0.73	96	+ 10
1928	97	0.88	102	- 5
1929	106	0.90	106	0
1930		0.82		

(1) Chicago Drovers Yearbook of Figures.

(2) Chicago Board of Trade Yearbooks.



Percent June-July is of April-May Price.

115  
110  
105  
100  
95  
90

.02

.03

.05

.07

.09

.24

.26

.28

.45 .50 .55 .60 .65 .70 .75 .80 .85 .90 .95 1.00 1.05 1.10 1.15 1.20

Figure 14. Average of the Monthly Top Price of Fat Steers at Chicago Based on the Percent the June-July Price is of the April-May Price of Fat Steers Due to the November-February Average Price of No. 3 Yellow Corn at Chicago Previous Year. See Table XVII

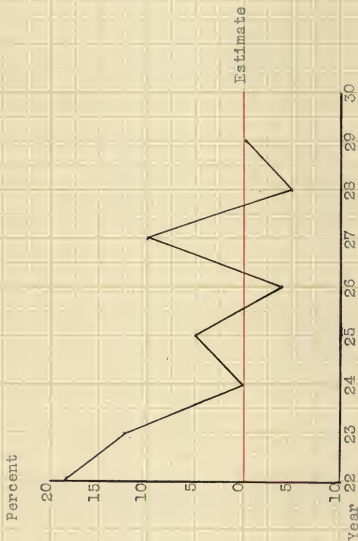


Figure 15. Amount Actual Price in Percentage Varied From Estimate. See Figure 14.

Table XIX shows that with one exception, 1924, when steer prices held the same, in each year of the 1922-30 period the price of fat steers at Chicago was higher during September and October than during the previous April and May.

TABLE XIX. THE RELATION BETWEEN CHANGE IN THE PRICE OF STEERS FROM SPRING TO FALL AND THE AVERAGE PRICE OF NO. 3 YELLOW CORN AT CHICAGO THE PREVIOUS NOVEMBER TO FEBRUARY PERIOD

Year	Per Cent Change in Price of Steers from April to May Average of Monthly Top to September to October Average of Monthly Top at Chicago(1)	November to February Average Price No. 3 Yellow Corn at Chicago Previous Winter(2)
1923	+ 22	\$0.71
1924	0	0.76
1925	+ 34	1.20
1926	+ 11	0.78
1927	+ 23	0.73
1928	+ 11	0.88
1929	+ 13	0.90

(1) Compiled from Chicago Drivers Yearbooks of Figures.

(2) Compiled from Chicago Board of Trade Yearbooks.

A comparison of Tables XVIII and XIX indicates that prices do not tend to alternate from higher to lower levels if the summer fed steers are held for the September-October market instead of being sold earlier in the summer.

Percent September-October 1s of April-May  
Top Price of Steers.

40

30

20

10

Corn .70

.74

.80

.90

1.00

1.10

1.20

.27

.23

.29

.26

.28

.25

Figure 16. The Relation Between the Change in the Price of Steers from Spring to Fall and the Average Price of No. 3 Yellow Corn at Chicago the Previous November-February Period. See Table XIX.

Table VIII shows that there has been a worthwhile increase in the price of steers from the April-May average of monthly top prices of fat steers to the September-October average of monthly top prices at Chicago during each year of the 1922-30 period. This indicates that during this period higher prices were much more certain for the feeder who marketed his summer steers during September-October than for the feeder who marketed his steers during June and July.

THIS TENDENCY OF FAT CATTLE PRICES TO INCREASE DURING ONE SPRING AND SUMMER AND TO DECLINE THE FOLLOWING SPRING AND SUMMER IS AN INDICATION THAT THE CATTLE FEEDER HAS BEEN A VICTIM OF HIS MOST RECENT EXPERIENCE DURING THE YEARS OF 1922 to 1930. It seems that cattlemen who feed for the summer market are influenced greatly by their experience in the preceding year. IF THE PRECEDING YEAR WAS ONE OF ADVANCING CATTLE PRICES DURING THE SPRING AND SUMMER MONTHS, THERE WAS A TENDENCY TO HOLD BACK FAT CATTLE UNTIL THE LATER OR HIGHER PRICE PERIOD OF THE PRECEDING YEAR. This tendency tended to glut the market and lower prices resulted. This conclusion may, to some extent, be an injustice to the cattle feeder since the buyer may also be influenced by the experience of the previous year which will cause him to underbid or over-bid for the fat cattle in the early months of the summer season.

# THE EFFECT OF THE SUPPLY OF SUMMER FED STEERS ON THE PRICE OF STEERS

There is a relationship between the number of steers of all grades slaughtered at Chicago and the price of fat cattle during the months of September and October.

TABLE XI. RELATION BETWEEN THE SUPPLY AND PRICE OF STEERS OF ALL GRADES SLAUGHTERED AT CHICAGO DURING SEPTEMBER-OCTOBER, 1922-30(1)

Year	September-October Average Cost of All Grades of Steers at Chicago	Number of Steers of All Grades for September-October Slaughtered at Chicago
1922	\$10.42	220,000
1923	10.17	249,000
1924	10.00	240,000
1925	11.45	222,000
1926	10.35	268,000
1927	12.10	157,000
1928	15.22	152,000
1929	13.50	202,000

(1) Data compiled from monthly reports of Crops and Markets, United States Department of Agriculture.

In the years 1922 to 1926 the number of Federally inspected cattle slaughtered at Chicago increased the September-October total from 220,000 in 1922 to 268,000 head in 1926. In 1927 the trend turned sharply downward to



Figure 17. Relation Between the Supply and Price of Steers, All Grades Slaughtered at Chicago During September-October 1922-23. (See Table XX.



157,000. This trend continued toward lower levels in the succeeding years. (See Figure 17.)

Table XX shows that in each year of the 1922-30 period when more cattle were slaughtered during September and October of each year as compared with the same period the previous year, the price for all grades of fat steers was less, with a slight exception in 1924, while the total slaughter and the average price per pound for all steers both decreased slightly. In other words, with the exception of 1924, more cattle meant a lower price and fewer cattle meant a higher price. The average price figures and the slaughter figures for the year 1924 as shown in Table XV were practically the same as for 1923 so that the slight exception in 1924 is negligible.

The top price of fat cattle is influenced by the number of choice and good cattle slaughtered but it is not determined by this factor alone. Total slaughter and business conditions affecting the demand side of the market are certainly weighty factors in establishing the price of good cattle.

A. E. Anderson, Federal and State Agricultural Statistician, Lincoln, Nebraska, finds that the supply of beef largely determines the price. Mr. Anderson points out that "in 1928 when the supply had fallen to nearly 8,000,000,000

pounds that the price exceeded \$9.00 per hundred pounds. The low point in price during this period was reached in 1926 when the supply was nearly 10,000,000,000 pounds, resulting in a price below \$7.00 per hundred pounds. Apparently the supply is the leading factor affecting price. The demand is affected by competition from pork, mutton, poultry, employment and business conditions."

It is evident that while the top price of fat cattle is not wholly determined by the number of choice and good cattle slaughtered, the average price of all cattle slaughtered is largely determined by the number of pounds slaughtered. It is also certain that great increases in the supply of good to choice beef will decrease the top price of fat cattle and vice versa. However, during 1929 and 1930 world price levels and general economic conditions have depressed the cattle market, indicating that while supply is the leading factor in establishing the price of beef over a period of years other factors may dominate the market during periods of economic readjustment.

THE JULY-OCTOBER PRICE OF STEERS, ALL GRADES, AT  
CHICAGO, 1923-30

Figure 18 shows the July-October average price of the four main grades of steers on the Chicago market for the 1922-30 period. (See Table XV). The extreme fluctuation of



Figure 18. The July-October Average Prices of All Grades of Fat Steers at Chicago for the 1922-30 Period. See Table XIV.

beef cattle prices from year to year indicates the financial hazards that have confronted cattle feeders during the past decade. The need for forecasting the probable market trend of summer fed beef cattle is apparent.

#### CONCLUSIONS

1. A large corn crop in the eight Corn Belt States means large runs of choice fat steers the following summer. These steers will sell at relatively lower prices.
2. If corn sells at relatively low prices in the fall and winter more choice to good cattle will be marketed the following summer and fall. The size of the corn crop and the price of corn affect the number of cattle that are full fed but not the total number of all cattle slaughtered.
3. Fat cattle prices tend to swing upward during one spring and summer period and downward the following year. From 1923 to 1928 prices alternated during each succeeding February-April to June-July period. This alternate upward and downward trend of prices should serve as a guide to the careful producer enabling him to go in the opposite direction from the majority of the producers.

4. Fat steers usually sell at a higher price on the Chicago market in September and October than in July and August of the same year except during years of comparatively low cattle prices such as 1924 and 1930.
5. The size of the corn crop of the previous year affects the number of grain-fed cattle slaughtered during the following year.
6. The number of choice fat steers slaughtered affects the general price level of cattle more than the total supply of all cattle slaughtered.
7. The production cycle of beef cattle affects total slaughter of all cattle more than the steer slaughter.
8. Generally in years after small corn crops in the eight Corn Belt States, prices of fat cattle will be comparatively higher during the September-October period than for the same months of the previous year.

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