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PRICE SPREADS for BEEF

Miscellaneous Publication No. 992

IBRAR RECEIVED MAR10 1965

rketing Economics Division Economic Research Service U.S. Department of Agriculture

PREFACE

The Congress has directed the Department of Agriculture to make special studies of spreads between prices paid by consumers and those received by farmers. This report analyzes the trend of prices and price spreads for U.S. Choice grade beef at various stages in the marketing process. U.S. Choice grade beef accounts for about half of our total supply of block beef. Also, cost data are more complete for the marketing of Choice beef and are representative of costs for the marketing of other grades.

Price spreads are erratic in the short run, because the live, wholesale, and retail prices respond individually to the complex of market conditions. Although these markets are interdependent, the effect of supply and demand changes moves slowly through the marketing channels. As a result, short-term changes individually have little significance. Conversely, a long-term trend in price spreads is evidence of changes in either the cost or profit structure of the marketing system. Costs change as the amount or quality of services change, and as the costs of labor and materials change. Gross and net profits change with pricing policies and practices, and as levels of competition and efficiency change.

Changes in the structure and organization of the livestock and meat economy are increasing the need for information. These changes, the cost trends that point them out, and their implications for producers and consumers make up the subject of this report.

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February 1965

SUMMARY

The difference between what the farmer receives for U.S. Choice grade cattle and what the consumer pays for U.S. Choice beef at retail increased 12.6 cents per pound between 1949 and 1964, an increase of 55 percent in 16 years.

In addition to the steady upward trend , price spreads for beef often changed sharply from month to month. Most of these short-term changes were explained by changes in the supply of cattle. Retail prices adjusted to supply changes much more slowly than did cattle prices. These lags caused price spreads to behave erratically in the short run. This was apparent during 1962 when prices of Choice grade cattle increased for 9 of the 12 months and the farm-retail spread dropped sharply during the year to its lowest annual average since 1959. In 1963, when cattle prices dropped during 10 of the 12 months, the spread increased sharply to near the level predicted by the long-term trend.

The farm-retail price spread increased 12.6 cents in the 1949-64 period. This resulted from a 9.1-cent increase in the wholesale-retail spread and a 3.5-cent increase in the farm-wholesale spread. The farm-retail price spread for beef has increased more rapidly since 1949 than have spreads for other red meats and for all foods, and much faster than the consumer price index.

Price spreads for beef tended to narrow in the 25 years between 1920 and 1945. Shortly after World War II, this trend was reversed and the widening trend observed above has been characteristic since. Most of the increase has been in the wholesaleretail spread, with the farm-wholesale spread increasing at about the rate of the consumer price index.

The examples in this bulletin of individual marketings of cattle from ranch and farm point out that differences between costs and selling prices can vary greatly, yielding different returns for similar services at different times. For the livestock producer and feeder, they indicate that the timing of purchases and sales is a major factor in profit and loss. For the consumer, they show how the marketing services of feeding, hauling, slaughtering, distribution, and retailing enter into the retail price of beef.

PRICE SPREADS FOR BEEF

By J. Bruce Bullock and Duane Hacklander Agricultural Economists Marketing Economics Division Economic Research Service

INTRODUCTION

Meat is the most important item in the consumer's food budget, accounting for about 25 percent of total food expenditures. Beef is the most important meat, accounting for more than half of the consumer's meat expenditures. Further, beef faces a rapidly increasing demand as the consumer's income continues to rise. Per capita beef consumption in 1964 was 99.7 pcunds, about 56 percent greater than that of 1949, 63.9 pounds. Demand increased sufficiently during the period to allow these increases to cccur while retail prices remained nearly stable.

Livestock raising and feeding account for about two-fifths of gross farm income, and provide the main income for a large proportion of U. S. farmers. Livestock marketing consists of a series of steps that convert livestock on the farm into meat in the consumer's shopping cart. It involves moving livestock from the farm to the retail shelf, the restaurant, or the institutional kitchen. It has become increasingly specialized in this country, as has livestock production. The distribution of the consumer's beef dollar between producer and marketing agencies for 1949-64 is shown in figure 1.

Most of the cattle that make up our beef supply are born on the ranges of the West or on the grass pastures of the South. They spend the first several months of their lives on grass and then are sold to feeders who ship them to the Corn Belt, California, Arizona, or Colorado for 3 to 12 months of drylot feeding. Slaughter cattle may be sold directly to packers or through auctions or terminal markets. The packer sells to retailers, wholesalers, restaurants, and institutions. The cost of all these services in 1962 was \$7.9 billion for meat products with a retail value of \$16.5 billion.

The charge for these marketing services per pound of beef is the difference between the retail price of beef and the value of an equivalent quantity of live animal, less the value of the byproducts (hide, tallow, heart, etc.). A 1,000-pound Choice grade steer yields about 600 pounds of carcass and 400 pounds of byproducts and waste. The packer who sells a 600-pound Choice grade carcass is selling about 440 pounds of retail cuts, and 160 pounds of bone, fat, and waste. As a result, it takes 1.67 pounds of Choice steer to make a pound of carcass, and 2.25 pounds of steer (or 1.35 pounds of carcass) to make a pound of retail cuts. Therefore, to make meaningful comparisons of prices at farm, wholesale, and retail, adjustments must be made to account for these differences in quantity.

The farm-retail spread, or the cost of marketing a pound of beef, is the difference between the retail price per pound and the value of 2.25 pounds of Choice grade cattle, less the value of the byproducts. The computation involves 3 steps: (1) Estimation of average U. S. prices for Choice grade cattle, wholesale beef, and retail beef, (2) estimation of the value of the byproducts, and (3) adjustments to convert prices at the live and wholesale levels to a retail weight basis.





Price spreads for beef have been computed since the early 1920's when the U.S. Department of Agriculture was asked to engage in special studies of the marketing margins for livestock. In 1934, at the request of livestock producers, the Department developed a statistical series which measures changes inmarketing costs for a number of agricultural commodities. In March 1935, the Department published a preliminary report which summarized price spreads for 10 of the most important farm products for the period 1910 to 1934. In 1936, the Department issued a report on price spreads for 58 food items. Since 1941, farm-retail price spreads for beef and pork have been published periodically.

THE NATURE OF PRICE SPREAD DATA

U. S. slaughter cattle are typically sold alive, by the hundredweight. Meat is sold by the pound. Live and retail prices are not directly comparable. First, no such thing as a single retail price for Choice grade beef exists in trade usage. Instead, there are prices of more than 30 individual cuts of beef. The retail price of beef is a weighted average of the prices of the several cuts. Second, that part of the live price which arises from byproducts must be estimated and removed. Third, to make them comparable, the prices are adjusted to a retail weight basis by multiplying the live price by 2.25, and the wholesale price by 1.35.

Price spread data are estimates, rather than precise measurements. More reliance can be placed on trends than on specific levels of spreads and prices. Still, price spread data are the best available evidence of the relative size of the gross returns to various segments of the marketing system. Alone, they are not a measure of the efficiency of the marketing system or of the profits made by marketing and processing firms.

THE SPREAD BETWEEN CATTLE AND BEEF PRICES

Price spread data are comparisons of prices of cattle, carcass beef and byproducts, and retail beef. Although there are many steps in converting live cattle into retail beef, price comparisons can divide the marketing charges into but 2 segments; the farm-wholesale spread and the wholesale-retail spread. Each of these include several marketing steps. The farm-wholesale spread includes all the costs of moving cattle from the farm, through the packing plant, and into wholesalers' and retailers' coolers. The wholesale-retail spread includes all costs of moving carcasses into retail stores and selling retail cuts of beef.

Price spreads thus depend on the levels and changes of 3 separate, although interdependent, prices. Although the prices of cattle and beef are reacting to essentially the same changes in supply and demand, their reactions are not identical at any given point. Supply changes occur first at the farm level, later at the wholesale level. The result of the interval between responses at different levels is a fluctuation in the price spread. The prices at retail, wholesale, and farm follow about the same pattern of adjustment over time (figure 2). Although the movements in prices have been similar, the spread between cattle and beef prices has widened consistently.

The Farm-Wholesale Spread

The farm-wholesale spread includes roughly all the marketing operations that take place between the farm gate and the retail store. It is measured by the spread between cattle and carcass beef prices on a retail weight basis. 1/

The general trend of the farm-wholesale spread since 1949 has been upward (figure 3) although there have been exceptions in years of relatively small cattle marketings. In general, the farm-wholesale spread tends to widen when cattle supplies are heavy, and to narrow when they are light. The rate of increase has been erratic, but has tended to increase at about the same rate as the average of all consumer prices.

These increases in the farm-wholesale spread appear to be the result of a number of general trends. Costs for labor and materials have increased for all marketing firms. Increasing truck and railroad operating costs, reflected in higher rates, have increased the cost of transportation. In some cases, however, these costs have been offset by increases in efficiency, resulting from improved technology of meatpacking.

In spite of increases in efficiency, the charges for marketing cattle from farm to wholesaler increased 44 percent from 1949 to 1964. This indicates a need for still more improvements in efficiency. For example, cattle are sold today much the same way as in Biblical times. Buyers still inspect each lot of cattle and estimate the quantity and quality of meat it will yield. Thus, the packers pay a number of skilled buyers, and the sellers or their representatives must be present to negotiate with the buyers. Although these time-honored practices are widely used, more efficient techniques are available. Buyers and sellers need objective methods of determining carcass yield and quality, and various plans for selling livestock without personal inspection are being considered. The development and use of Federal grades for beef has facilitated the sale of beef by long-distance telephone.

1/ When a Choice grade steer is slaughtered the resulting carcass weighs, on the average, about 60 percent as much as the live steer. Individual animals vary considerably in carcass yield, depending on their size and weight, muscle and bone structure, and their care and feeding.



Figure 2



Figure 3

Wholesale - Retail Spread

Retailing principally involves the processing and merchandising of retail cuts of beef. Retailers typically buy either carcasses or wholesale cuts. 2/ Most cutting and packaging is done in the store where the meat is sold.

The greatest change in beef retailing in recent years has been the growth of the supermarket. Chains of supermarkets have increased their beef retailing, and independent supermarkets have formed voluntary buying organizations to compete with the chains. Most of the meat sold at retail moves through supermarkets.

Retailers now sell beef differently from the way they did in the late forties. Today, most fresh beef is sold in packages, and a larger proportion of it is boneless. More of the beef cattle have been fattened on grain. To appeal to bargin-hunting and calorieconscious housewives, retailers frequently insist that their beef be as lean as quality considerations allow.

When a retailer buys a beef carcass, he pays the same price for each pound. At retail, he sells thecuts of meat for varying prices: Some for more than twice the carcass price, some for less than half. About 26 percent of the carcass is fat and bone trim, cutting loss, and shrink. The more desirable and higher priced cuts represent a small proportion, while the medium-priced roasts, hamburger, and stew meat make up the largest part of the carcass (figure 4).

Because of the 40-percent weight loss in slaughtering cattle and the 26-percent loss in processing retail cuts of beef, the average price of retail cuts is more than twice the price of cattle before adding marketing costs (table 1).

Item	:	Percentage of carcass	:	Price per pound	:	Value
	:	Percent		Dollars		Dollars
Retail cuts	:					
Steak	:					
Porterhouse, T-bone, and club	.:	5.2		1.16		6.03
Sirloin	.:	8.4		.98		8.23
Round	• :	11.3		1.06		11.98
Roast	:					
Rib	• :	6.3		.82		5.17
Rump	• :	3.4		1.02		3.47
Chuck	.:	14.9		.61 <u>2</u> /		9.09
Hamburger, stew, and other cuts	• :	24.5		.59 <u>2</u> /		14.46
Total or average	• :	74		.79 <u>2</u> /		58.43
Bones, fat, waste, and shrink	: • :	26		.027 <u>2</u> /		.70
Grand total or average	• •	100		.59 <u>2</u> /		59.13

Table 1.--Retail price per pound and retail value of 100 pounds of U.S. Choice grade carcass beef, by specified cuts 1/

1/ This table illustrates the differences in prices for various retail cuts of beef in May 1964.

2/ Weighted average.

2/ Cutting and trimming practices vary among retailers and have been changing as consumers' preferences have shifted toward leaner, better trimmed meats and boneless cuts. Carcass yield has been reduced gradually from 80 percent in 1951 be 74 percent in 1963 and later years.



Figure 4

In short-term movements, the composite average retail price of beef moves roughly parallel to the wholesale price and the price of Choice grade cattle. The longterm trend, however, has been significantly different. There has been a steadily widening wholesale-retail spread. However, the wholesale-retail spread decreased 0.9 cent in 1964. Except for 2 years (1953-54) at the end of the Koren war and 1962, the wholesale-retail spread increased each year inthe 1949-63 period. In 1964 this spread was 9.1 cents wider than in 1949--an increase of 61 percent in 16 years (figure 5).

SHORT-RUN PRICE ADJUSTMENTS

The spread between cattle and beef prices exhibits 2 types of movement: a persistent upward trend and short-term, month-to-month changes. The short-term changes in the spread are closely associated with month-to-month changes in cattle prices. There is about a 1-month lag between changes in cattle and beef prices, hence the price spread is a comparison between a cattle price that is adjusting to the supply change and a beef price that has not yet reacted to this change. Thus, in the very short run, spreads are greatly influenced by changes in cattle prices. Monthly price spreads tend to widen as cattle prices fall, and to narrow as cattle prices rise.

The lag between cattle and beef price changes and its consequent impact on the spread is observed both when prices are rising and when they are falling (table 2). This pattern is typical and has been observed as long as price spreads have been computed. Its cause appears to be mainly the length of time required for a change in supply to move from the live level to the retail level in the marketing channel. Other factors may be important also, including the perference of retailers for stable prices and their dependence on special sales to move increases in supply that may be of short duration.





			*		*				
	Beef	1/		Equ	ivalent live	product	± <u>2</u> /	: Lag in re : at beginn : of :Beginning	etail price ning and end period : End
Apr. Mar. Nov. Sept. Feb. Oct. July June June Ave	1954 - Jan. 1956 - Oct. 1957 - Sept. 1957 - June 1958 - May 1960 - Apr. 1960 - Jan. 1961 - Apr. 1962 - Dec. 1963 - Aug. 1964 - Sept. rage	1955 1956 1957 1958 1959 1960 1961 1962 1962 1963 1964	Cents 2.8 12.1 8.2 10.6 3.3 1.6 2.5 4.8 6.0 3.2 5.3 5.5	Peri Mar. Feb. Feb. Oct. Aug. Dec. Oct. June June May May	ods of increa 1954 - Jan. 1956 - Sept. 1957 - Aug. 1957 - Apr. 1958 - Apr. 1959 - Apr. 1960 - Jan. 1961 - Apr. 1962 - Nov. 1963 - July 1964 - Sept.	1955 1955 1956 1957 1958 1959 1960 1961 1962 1962 1962 1963 1964	Cents 5.7 14.0 9.9 12.3 8.2 4.2 4.8 8.7 7.6 4.6 9.2 8.0	Months 1 1 1 1 1 2 0 1 0 1 1 0.9	<u>Months</u> 0 1 2 1 0 0 0 1 1 1 0 0.6
				Peri	ods of decrea	sing pr	cices		
Jan. Oct. Sept. June May Apr. Jan. Apr. Dec. Aug. Ave	1955 - Mar. 1956 - Mar. 1957 - Nov. 1958 - Sept. 1959 - Feb. 1960 - Oct. 1961 - July 1962 - June 1963 - June 1963 - June rage	1956 1957 1957 1958 1960 1960 1961 1962 1963 1964	Cents -9.3 -7.2 -1.5 -2.6 -2.7 -3.0 -5.8 -1.3 -7.7 -5.9 -4.7	Jan. Sept. Aug. Apr. Apr. Jan. Jan. Nov. July	1955 - Feb. 1956 - Feb. 1957 - Oct. 1958 - Aug. 1959 - Dec. 1960 - Oct. 1961 - June 1962 - June 1962 - May 1963 - May	1956 1957 1957 1958 1959 1960 1961 1962 1963 1964	Cents -14.1 -11.3 - 2.7 - 7.1 - 8.2 - 6.4 - 8.7 - 3.0 -13.7 - 9.6 - 8.5	Months 0 1 2 1 0 0 0 1 1 1 0.7	Months 1 1 1 2 0 1 0 1 0 1 0 1 0 .9

Table 2.--Change in retail price per pound of Choice grade beef and in value of equivalent live product, 1954-63

1/ Changes in weighted average retail price calculated from monthly prices of individual cuts published by the Bureau of Labor Statistics.

2/ Changes in value of equivalent quantity of Choice steer, calculated from average prices of steers (900-1,100 lbs.) at 20 leading public stockyards.

The short-run lag in retail price responses to changes in cattle prices appears to explain a large proportion of the month-to-month changes in the price spread, but not the long-run upward trend. As the price spread widened and narrowed during 1949-64, it usually did not decline as much as it had increased. The result was an upward trend, which had a definite long-term pattern of nearly equal up-and-down movements.

TRENDS IN THE FARM-RETAIL SPREAD

The farm-to-retail spread for beef has risen steadily since 1949 (figure 5). The spread rose from 22.8 cents in 1949 to 26.9 cents in 1953, dropped to 25.8 cents in 1954, and has risen since at the rate of about 1 cent per pound per year. From 1954 to 1964, the only exception to the upward trend was the 1.2-cent per pound decline in 1962. This was the first decline since 1954 and the second since 1949. The 1962 decline resulted from rising live prices throughout much of the year with rather stable retail prices. In 1964, the spread increased 1.0 cent to an all time high of 35.4 cents per pound--very near that expected on the basis of the long-term trend.

Coupled with the increased farm-retail spread is a changing distribution of the total spread between the farm-wholesale and wholesale-retail segments. Both have trended upward since 1949. However, the wholesale-retail spread, accounting for 97 percent of the increase in the total spread, has increased at a much faster rate. Since 1949, the wholesale-retail spread has trended upward at 0.93 cent per pound per year. The farm-wholesale spread has risen about 0.03 cent per pound per year. This reflects the fact that most of the increased services performed by the marketing system have occurred at the retail level (table 3).

37	*Detroil	ta Trhalagal	: Gross	:Byproduc	t:Net far	": Fa	rm-retai	1 spread :	Farmaric
Year and	Retail pr	1/ivalue 2/	: farm	:allowanc	e:	/ Total:	Wholesal	e: Farm :	charo
quarter	: per pound	1/ varue 2/	:value 3/	': <u>4</u> /	value <u>-</u>	: ::::::::::::::::::::::::::::::::::::	retail	:wholesale:	Share
· · · · · · · · · · · · · · · · · · ·	:								
	: Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
1949	:								
JanMar.	: 64.8	48.6	46.4	5.7	40.7	24.1	16.2	7.9	63
AprJune.	: 67.5	52.7	49.3	5.5	43.8	23.7	14.8	8.9	65
July-Sept.	: 70.6	55.8	53.1	5.6	47.5	23.1	14.8	8.3	67
OctDec.	: 70.8	57.0	56.0	5.5	50.5	20.3	13.8	6.5	71
Average.	: 68.4	53.5	51.2	5.6	45.6	22.8	14.9	7.9	67
	•								
1950	:								
JanMar.	: 68.2	53.9	52.1	5.2	46.9	21.3	14.3	7.0	69
AprJune.	: 73.7	58.5	56.6	5.8	50.8	22.9	15.2	7.7	69
July-Sept.	: 79.9	61.7	59.8	7.1	52.7	27.2	18.2	9.0	66
OctDec.	: 79.6	63.1	62.3	7.6	54.7	24.9	16.5	8.4	69
Average.	: 75.4	59.3	57.7	6.4	51.3	24.1	16.1	8.0	68
	•								
1951	:								
JanMar.	: 87.0	69.0	70.1	8.8	61.3	25.7	18.0	7.7	70
AprJune.	: 88.3	71.2	70.8	8.4	62.4	25.9	17.1	8.8	71
July-Sept.	: 88.6	71.6	70.9	8.2	62.7	25.9	17.0	8.9	71
OctDec.	: 88.8	72.6	70.2	7.4	62.8	26.0	16.2	9.8	71
Average.	: 88.2	71.1	70.5	8.2	62.3	25.9	17.1	8.8	71
	•								
1952	•								
JanMar.	: 88.1	70.8	67.9	6.0	61.9	26.2	17.3	8.9	70
AprJune.	: 87.3	69.4	66.0	5.6	60.4	26.9	17.9	9.0	69
July-Sept.	: 86.2	69.6	65.0	5.7	59.3	26.9	16.6	10.3	69
OctDec.	:84.7	65.8	63.2	5.2	58.0	26.7	18.9	7.8	68
Average.	: 86.6	68.9	65.5	5.6	59.9	26.7	17.7	9.0	69
1052	•								
Inn -Mar	. 71 1	E 0 E	17 0	1 0	10.0	0.0.1	17 (10 5	<i>c</i> 0
JanHar.		22.2	47.3	4.3	43.0	28.1	17.6	10.5	60
AprJune.	: 00.0	48.8	42.2	4.2	38.0	28.6	1/.8	10.8	57
July-Sept.	: 09.3	23.0	48.7	4.4	44.3	25.0	15.7	9.3	64
OctDec.	. 09.3	52.7	47.6	4.3	43.3	26.0	16.6	9.4	62 .
Average.	: 09.1	5Z.Z	46.4	4.2	42.2	26.9	16.9	10.0	61
1954	•								
JanMar	. 68 2	50 5	45 /	/ T	/1 2	26.0	17 7	0.2	61
Apr June	. 68 1	51 0	45.4	4 · 1	41.5	20.9	17 1	9.2	61
Tulv-Sont	. 68 1	52 5	40.1	4.4	41.7	20.4	1/.1	9.3	61
Oct -Dec	. 60.6	54.5 54.5	40.2	4.1	42.1	26.0	15.6	10.4	62
Averaus	. 60 c	52.1	49.7	3.9	45.8	23.8	15.1	8./	66
Average.	: 00.0	52.1	46.8	4.1	42.7	25.8	16.4	9.4	62

Table 3.--Beef, Choice grade: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, by quarters, 1949-64

Continued--

Table 3.--Beef, Choice grade: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, by quarters, 1949-64--Continued

Year and	Retail pri	ice [.] Wholesale	: Gross	:Byprodu	t:Net farm	Fa	rm-retai	1 spread :	Farmer's
quarter	per pound	1/ [:] value 2/	: farm	:allowand	e value 5/	Total	Wholesal	e: Farm :	share
	:	_:	:value <u>5</u> /	:/		: :	retail	:wnolesale:	
	: Cente	Conta	Conte	Conte	Cents	Cents	Cents	Cents	Percent
1955	: Cents	Gents	Cents	Genes	Geneb	001100			
JanMar.	69.6	54.4	49.9	3.8	46.1	23.5	15 2	83	66
AprJune.	: 67.7	50.7	44.9	3.7	41.2	26.5	17.0	9.5	61
July-Sept.	: 67.0	50.7	43.8	3.9	39.9	27.1	16.3	10.8	60
OctDec.	: 65.8	47.5	41.0	3.7	37.3	28.5	18.3	10.2	57
Average.	: 67.5	50.8	44.9	3.8	41.1	26.4	16.7	9.7	61
1056	:								
Ian -Mar	: 62 1	44 0	27 2	2 (22.0	00 0	10.1	10.1	
Apr June	. 62.6	44.0	30.7	3.4	33.9	28.2	18.1	10.1	55
July-Sept.	: 68.5	54.6	48 6	5.0	55.9	20.7	12 0	9.6	57
OctDec.	70.8	51.9	46.1	3.9	42.2	24.1	18.9	9.7	60 60
Average.	: 66.0	49.0	42.9	3.8	39.1	26.9	17.0	9.9	59
<u>1957</u>	:	1.7 2	41 0	2.6	37 /	20 0	10 1	0 0	56
Apr - Jupo	. 69.7	47.5	41.0	4 1	41.6	28.1	18.2	9.9	60
July-Sent.	. 73.2	55.4	49.5	4.3	45.2	28.0	17.8	10.2	62
OctDec.	: 73.1	54.4	49.7	4.0	45.7	27.4	18.7	8.7	63
Average.	: 70.6	52.2	46.5	4.0	42.5	28.1	18.4	9.7	60
10.70	:								
1958	: 70.0	(0 - Z	E E - 7	1 5	51 0	27 (10 1	0.5	65
JanMar.	. /8.8	60.7	55./	4.5	52.5	27.0	20.7	9.5	63
AprJune.	: 02.0 81.3	59.2	5/.5	4.8	J2.J 49 3	32 0	20.7	9.0	61
Oct -Dec	81.0	59 2	55 4	5.0	50.4	30.6	21.8	8.8	62
Average.	81.0	60.3	55.7	4.8	50.9	30.1	20.7	9.4	63
1959	• • • • •	() 0	50 0	5 0	52 0	20.0	20. 2	0.6	61.
JanMar.	: 02 /	62.3	50.2	5.0	53.2	29.0	20.2	9.0	65
AprJune. July-Sept	• 82 6	61 1	57 0	5.9	51 1	31 5	20.1	10.0	62
OctDec.	· 82.1	58.9	52.6	4.7	47.9	34.2	23.2	11.0	58
Average.	82.8	61.5	56.9	5.4	51.5	31.3	21.3	10.0	62
10(0	:								
1960	• 01 0	60 /	51.7	1. 5	50.2	21 0	20.9	10.2	60
JanMar.	• 01.2 • 82.1	60.4	55 2	4.5	50.2	31.7	20.0	10.2	61
July-Sent.	80.6	57.3	50.4	4.5	45.9	34.7	23.3	11.4	57
OctDec.	: 79.9	56.5	50.5	4.3	46.2	33.7	23.4	10.3	58
Average.	: 81.0	58.7	52.7	4.5	48.2	32.8	22.3	10.5	60
1961	:								
JanMar	81 7	59 2	53.8	4 5	493	32 4	22 5	9 9	60
AprJune.	79.1	54.2	49.9	5.0	44.9	34.2	24.9	9.3	57
July-Sept.	76.9	53.5	49.4	5.2	44.2	32.7	23.4	9.3	57
OctDec.	78.9	56.1	51.7	4.8	46.9	32.0	22.8	9.2	59
Average.	: 79.2	55.8	51.2	4.9	46.3	32.9	23.4	9.5	58
1962	:								
JanMar.	: 80.6	59.4	54.9	4.9	50.0	30.6	21.2	9.4	62
AprJune.	80.5	59.0	54.3	5.0	49.3	31.2	21.5	9.7	61
July-Sept.	83.0	61.6	55.6	5.0	50.6	32.4	21.4	11.0	61
OctDec.	85.6	63.2	57.7	4.9	52.8	32.8	22.4	10.4	62
Average.	82.4	60.8	55.6	4.9	50.7	31.7	21.6	10.1	62
1963				•					
JanMar.	: 84.5	58.2	53.6	4.6	49.0	35.5	26.3	9.2	58
AprJune.	: 79.1	54.6	50.1	4.5	45.6	33.5	24.5	9.0	58
July-Sept.	: 80.4	57.4	52.3	4.5	47.8	32.6	23.0	9.6	59
OctDec.	:80.0	54.2	48.3	4.3	44.0	36.0	25.8	10.2	55
Average.	: 81.0	56.1	51.1	4.5	46.6	34.4	24.9	9.5	58

Continued--

Year and quarter	Reta per	il pr pound	ice Wholesal	e: Gross : farm :value <u>3</u> /	:Byprodu :allowar /: <u>4</u> /	ct Net farm ce value <u>5</u> /	Farı Total	n-retail : Wholesald: retail	spread : e: Farm : :wholesale:	Farmer's share
1964	•									
JanMar.	:	77.5	52.6	47.1	4.1	43.0	34.5	24.9	9.6	55
AprJune.	÷	76.0	51.1	44.5	4.3	40.2	35.8	24.9	10.9	53
July-Sept.	:	78.5	56.4	48.1	4.3	43.8	34.7	22.1	12.6	56
OctDec.	:	79.3	54.9	46.9	4.2	42.7	36.6	24.4	12.2	54
Average.	:	77.8	53.8	46.6	4.2	42.4	35.4	24.0	11.4	54
	:									

Table 3.--Beef, Choice grade: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, by quarters, 1949-64--Continued

1/ Estimated weighted average price of retail cuts from Choice grade carcass. 2/ Wholesale value of quantity of carcass beef equivalent to 1 lb. of retail cuts, calculated from weighted average wholesale price of Choice grade carcass beef in New York, Chicago, Los Angeles, San Francisco, and Portland-Seattle-Takoma. A wholesale carcass equivalent of 1.25 lb. was used for 1951; it was increased gradually to 1.35 lb. for 1963 and later years. 3/ Payment to farmer for quantity of Choice grade beef cattle equivalent to 1 lb. of retail cuts. The farm-product equivalent for 1951 was 2.08 lb.; it was increased gradually to 2.25 lb. for 1963 and later years. 4/ Portion of gross farm value attributed to edible and inedible byproducts. 5/ Gross farm value minus byproduct allowance.

EXAMPLES OF PRICE SPREADS FOR BEEF

The foregoing is a general description of price spreads for U.S. Choice grade beef. To illustrate the components of price spreads and the variability and distribution of the spreads among ranchers, feeders, packer-wholesalers, and retailers, 6 examples of cattle marketings have been worked out. They describe the marketing of:

- (1) a steer from ranch in Texas to retail in New York City
- (2) a steer from ranch in Wyoming to retail in New York City
- (3) a steer from farm in Illinois to retail in Chicago
- (4) a steer from farm in Louisiana to retail in Los Angeles
- (5) a steer from ranch in Arizona to retail in Los Angeles
- (6) a steer from ranch in Montana to retail in San Francisco

These marketing movements are designed to represent different marketing and feeding programs for steers fed to U.S. Choice grade. U.S. Choice grade beef represents about half of the total supply sold as fresh cuts at retail. However, there are many other feeding and marketing programs for U.S. Choice grade cattle, as well as for other grades. Each case illustrates the steps in marketing from a selected farm or ranch to a particular market at a particular time during 1963-64. These marketings show the variations in net returns received by farmers, ranchers, and marketing agencies, which result from differences in feeding, marketing, location, and other factors. These important differences would, of course, be hidden in averages and aggregate data and are not intended to suggest average returns. Nor are they intended to indicate that any particular feeding program or marketing system is superior.

Marketing is a dynamic affair. Had the rancher, farmer, or feeder decided to market his animals 1 month earlier, or 1 month later, the results might have been different for all concerned. A different marketing decision, therefore, might have changed substantially the estimated distribution of the consumer's dollar spent for beef as shown in figure 6.



Figure 6

Example 1.-- Feeder Steer from Ranch in Texas to Retail in New York City

This illustration describes the marketing of a 610-pound U.S. Good grade feeder steer which was raised on a ranch near Childress, Tex., and was sold at the Amarillo livestock auction market in November 1963 to a cattle feeder from near Des Moines, Iowa. The steer was placed on a typical Corn Belt feeding program for 180 days. The 1,040-pound U.S. Choice grade slaughter steer was shipped to the Chicago livestock terminal market in May 1964. A Chicago packer purchased and slaughtered the steer and shipped the 624 pounds of carcass to a retailer in New York City. The retailer sold 462 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns

Return to Rancher

Sale value of 610-pound U.S. Good grade feeder steer at Amarillo, November 1963, at \$21.30 per 100 pounds		\$129.93
Less marketing expense		
Trucking expense from ranch to Amarillo Marketing expense at Amarillo, including commission, yardage,	\$1.53	
etc., per head	2.21	
Total marketing expense		3.74
Gross return to rancher		\$126.19

Return to Feeder

Sale value of 1,040-pound U.S. Choice grade slaughter steer at Chicago, May 1964, at \$20.67 per 100 pounds		\$214.97
Less marketing expense Trucking expense from Iowa feedlot to Chicago Marketing expense at Chicago including commission, yardage, feed, etc., per head Total marketing expense.	\$6.14 <u>3.70</u>	9.84
Receipt from sale of fed steer		205.13
Less cost Cost of 610-pound U.S. Good grade feeder steer at Amarillo, November 1963, at \$21.30 per 100 pounds Expense of shipping feeder steer from Amarillo to Iowa feedlot Total cost	129.93 7.69	_137.62
Gross return to feeder		\$ 67.51

Return to Packer-Wholesaler

Sale value of 624-pound U.S. Choice grade carcass, New York City, May 1964, at \$37.16 per 100 pounds Value of byproducts Total	\$231.19 20.80 251.99
Less expense of shipping beef carcass from Chicago to New York City	10.11
Receipt from sale of beef carcass and byproducts	241.88
Less cost of 1,040-pound U.S. Choice grade slaughter steer at Chicago, May 1964, at \$20.67 per 100 pounds	214.97
Gross return to packer-wholesaler	\$ 26.91
Return to Retailer	
Sale value of 462 pounds of U.S. Choice grade beef, New York City, May 1964, at an average price of 81 cents per pound	\$351.12
Value of bones, fat, and waste	3.24
Receipt from sale of beef	354.36
Less cost of 624-pound U.S. Choice grade carcass delivered to New York City, May 1964, at \$37.05 per 100 pounds	231.19
Gross return to retailer	\$123.17
Estimated Distribution of Consumer's Beef Dollar	Percent
Retailing Wholesaling and meatpacking	34.8

Transportation Other Total	2.8 7.6	10.4
Marketing livestock Expense at markets Transportation Total	1.7 <u>4.3</u>	6.0
Return to cattle feeder Return to rancher		$ \begin{array}{r} 19.1 \\ \underline{29.7} \\ 100.0 \end{array} $

Example 2 .-- Feeder Steer from Ranch in Wyoming to Retail in New York City

This example assumes that a 710-pound U.S. Choice grade feeder steer was marketed from a ranch near Casper, Wyo. This steer was bought in the Omaha livestock market in October 1963 by a cattle feeder near Lincoln, Neb. The steer was immediately placed on the typical Corn Belt feeding program for 120 days. The 1,000-pound U.S. Choice grade steer was shipped to the Omaha livestock market in February 1964. An Omaha packer purchased and slaughtered the steer. The packer then shipped the 600-pound carcass to a retailer in New York City who sold the 444 pounds of retail cuts to consumers.

Estimated Marketing Costs and Gross Returns

Return to Rancher

Sale value of 710-pound U.S. Good grade feeder steer at Omaha, October 1963, at \$23.31 per 100 pounds		\$165.50
Less marketing expense Trucking expense from ranch in Wyoming to Omaha Marketing cost at Omaha, including commission,	\$6.96	
yardage, feed, etc., per head Total marketing expense	3.17	10.13
Gross return to rancher		\$ <u>155.37</u>
Return to Feeder		
Sale value of 1,000-pound U.S. Choice grade slaughter steer at Omaha, February 1964, at \$20.91 per 100 pounds		\$209 <i>.</i> 10
Less marketing expense Trucking expense from feedlot to Omaha Marketing charges at Omaha, including commission.	\$2.50	
yardage, feed, etc., per head Total marketing expense	3.57	6.07
Receipt from sale of fed steer		\$203.03
Less cost Cost of 710-pound U.S. Good grade feeder steer at Omaha, October 1963, at \$23.31 per 100 pounds	165.50	

Expense of shipping steer from Omaha to feedlot		
near Lincoln, Neb Total cost	1.78	167 28
Gross return to feeder		\$ 35.75
Return to Packer-Wholesaler		
Sale value of 600-pound U.S. Choice grade carcass, New York City, February 1964 at \$38.74 per 100 pounds		\$232.44
Value of byproducts Total		$\frac{20.00}{252.44}$
Less expense of shipping carcass from Omaha to New York City		13.14
Receipt from sale of beef carcass and byproducts		239.30
Less cost of 1,000-pound U.S. Choice grade slaughter steer at Omaha, February 1964 at \$20.91 per 100 pounds		209.10
Gross return to packer-wholesaler		\$_30.20
Return to Retailer		
Sale value of 444 pounds of U.S. Choice grade beef, New York City, February 1964, at an average price of 78.2 cents per pound		\$347.21
Value of bones, fat, and waste		3.11
Receipt from sale of beef		350.32
Less cost of 600-pound U.S. Choice grade carcass delivered to New York City, February 1964, at \$38.74 per 100 pounds		232.44
Gross return to retailer		\$117.88
Estimated Distribution of Consumer's Beef Do	llar	
Retailing		Percent 33.6
Wholesaling and meatpacking Transportation	Percent 3.8 8.6	
Total		12.4
Marketing livestock	2.0	
Transportation Total	3.2	5.2
Return to cattle feeder Return to rancher		10.2 38.6 100.0

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Example 3.--Steer from Farm in Illinois to Retail in Chicago

This illustration describes the marketing of a 1,030-pound U.S. Choice grade slaughter steer, which, it is assumed, was raised and fed on a farm in northern Illinois. The calf, born in March 1962, was weaned in October. The farmer continued the steer on pasture with supplemental feeding until September 1963, when the steer was put on drylot feeding for 120 days. The 1,030-pound U.S. Choice grade slaughter steer was shipped to the Chicago livestock market in February 1964, where it was purchased by a local packer for slaughter. The packer sold the 618-pound U.S. Choice grade carcass to a local retailer who sold 458 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns

Return to Farmer

Sale value of 1,030-pound U.S. Choice grade slaughter steer at Chicago, February 1964, at \$21.75 per 100 pounds		\$224.03
Less marketing expense Trucking expense from farm to Chicago Marketing cost at Chicago including commission, yardage, feed, etc., per head Total marketing expense	\$2.58 <u>2.70</u>	\$ _6.28
Gross return to farmer		217.75
Return to Packer-Wholesaler		
Sale value of 618-pound U.S. Choice grade beef carcass at Chicago, February 1964, at \$38.74 per 100 pounds		\$239.41
value of byproducts		20.60
Receipt from sale of beef carcass and byproducts		260.01
Less cost Cost of 1,030-pound U.S. Choice grade slaughter steer at Chicago, February 1964, at \$21.75 per 100 pounds		224.03
Gross return to packer-wholesaler		\$ 35.98
Return to Retailer		
Sale value of 458 pounds of U.S. Choice grade beef at Chicago, February 1964 at an average price of 78.2 cents per pound		\$358.16
Value of bones, fat, waste		3.20
Receipt from sale of beef		361.36
Less cost of 618-pound U.S. Choice grade beef carcass at Chicago, February 1964, at \$38.74 per 100 pounds		239.41
Gross return to retailer		\$121.95

Estimated Distribution of Consumer's Beef Dollar Retailing	Percent 33.7
Wholesaling and meatpacking	10.0
Marketing livestockPercentTransportation7Expense at markets1.0Total1.0	1.7
Return to producer for raising and feeding steer	$\frac{54.6}{100.0}$

Example 4.--Feeder Steer from Farm in Louisiana to Retail in Los Angeles

This example assumes that a 625-pound U.S. Good grade feeder steer, raised near Alexandra, La., was sold at the Fort Worth livestock market in November 1963, to a cattle feeder from near Denver, Colo. The steer was placed in the feedlot for about 180 days. The 1,060-pound U.S. Choice grade slaughter steer was sold at the Denver stockyards to a local packer in May 1964. The packer slaughtered the steer and shipped the 636-pound U.S. Choice grade beef carcass to a retailer in Los Angeles who sold 471 pounds of retail cuts to local consumers.

Estimated Marketing Costs and Gross Returns

Return to Farmer

Sale value of 625-pound U.S. Good grade feeder steer at Fort Worth, November 1963, at \$20.70 per 100 pounds		\$129 . 38
Less marketing expense Trucking expense from farm to Fort Worth Marketing expense at Fort Worth including, commission, yardage, feed, etc., per head Total marketing expense	\$3.63 <u>3.28</u>	6.91
Gross return to farmer		\$ <u>122.47</u>
Return to Feeder		
Sale value of 1,060-pound U.S. Choice grade slaughter steer at Denver, May 1964, at \$19.90 per 100 pounds		\$210.94
Less marketing expense Trucking expense from feedlot to stockyards Marketing expense at Denver including commission, yardage, feed, etc., per head Total marketing expense	\$2.65 _2.45	\$5.10_
Receipt from sale of steer		205.84
Less costs Cost of 625-pound U.S. Good grade feeder steer at Fort Worth, November 1963, at \$20.70 per 100 pounds Expense of shipping feeder steer from Fort Worth to Denver feedlot Total cost.	129.38 7.50	<u>136.88</u>

Gross return to feeder	\$ 68.96
Return to Packer-Wholesaler	
Sale value of 636-pound U.S. Choice grade beef carcass at Los Angeles, May 1964, at \$37.05 per 100 pounds Value of byproducts Total	\$235.64 <u>21.20</u> 256.84
Less expense of shipping carcass from Denver to Los Angeles	14.76
Receipt from sale of carcass and byproducts	242.08
Less cost of 1,060-pound U.S. Choice grade slaughter steer at Denver, May 1964, at \$19.90 per 100 pounds	210.94
Gross return to packer-wholesaler	\$_31.14
Return to Retailer	
Sale value of 471 pounds of U.S. Choice grade beef at an average price of 76.0 cents per pound, May 1964 Value of bone, fat, and waste	\$357.96 <u>3.30</u>
Receipt from sale of beef	361.26
Less cost of 636-pound U.S. Choice grade beef carcass delivered to Los Angeles, May 1964, at \$37.05 per 100 pounds	235.64
Gross return to retailer	\$ <u>125.62</u>

	Estimated Distribution of Consumer's Beef Doll	lar	
			Percent
Re	etailing		34.8
Wł	nolesaling and meatpacking	Percent	
	Transportation	4.1	
	Other	8.6	
	Total	ter gagtirine	12.7
Má	arketing livestock		
	Expense at markets	1.6	
	Transportation	3.8	
	Total		5.4
Re	eturn to cattle feeder		19.1
Re	eturn to farmer		28.0
			100.0

Example 5.-- Feeder Steer from Ranch in Arizona to Retail in Los Angeles

This example describes the marketing of a 410-pound U.S. Good grade feeder steer directly from a ranch near Phoenix, Ariz. The steer was sold to a cattle feeder near El Centro, Calif., in November 1962. The steer was placed on range and pasture with supplemental feeding for 290 days, where it gained 360 pounds. The steer was then placed on drylot feeding for 120 days. The 1,060-pound U.S. Choice grade slaughter steer was sold directly from the feedlot to a Los Angeles packer in January 1964. The packer delivered the 636-pound U.S. Choice grade carcass to a local retailer who sold 471 pounds of retail cuts to consumers.

Estimated Marketing Costs and Gross Returns

<u>Return to Rancher</u>

Sale value of 410-pound U.S. Good grade feeder steer from ranch in November 1962, at \$25.62 per 100 pounds		\$105.04
Gross return to rancher		\$ <u>105.04</u>
Return to Feeder		
Sale value of 1,060-pound U.S. Choice grade slaughter steer from feedlot, January 1964, at \$23.00 per 100 pounds		\$243.80
Less costs Cost of 410-pound U.S. Good grade feeder steer at Phoenix, November 1962, at \$25.62 per 100 pounds Expense of shipping steer from Arizona to feedlot in California Total cost	\$105.04 2.62	<u>107.66</u>
Gross return to feeder		\$ <u>136.14</u>
Return to Packer-Wholesaler		
Sale value of 636-pound U.S. Choice grade beef carcass at Los Angeles, January 1964, at \$39.58 per 100 pounds Value of byproducts		\$251.73 21.20
Receipt from sale of carcass and byproducts		272.93
Less costs Cost of 1,060-pound U.S. Choice grade slaughter steer at El Centro, Calif., January 1964, at \$23.00 per 100 pounds Expense of shipping steer from feedlot to packing plant in Los Angeles Total cost	\$243.80 5.62	<u>249.42</u>
Gross return to packer-wholesaler		\$ 23.51
Return to Retailer		
Sale value of 471 pounds of U.S. Choice grade beef at an average price of 77.8 cents per pound at Los Angeles January 1964		\$366.44
Value of bones, fat, and waste		3.30
Receipt from sale of carcass		\$369.74

Less cost of 636-pound U.S. Choice grade beef carcass at Los Angeles, January 1964, at \$39.58 per 100 pounds	<u>251.73</u>
Gross return to retailer	\$118.01
Estimated Distribution of Consumer's Beef Dollar	Percent
Retailing Wholesaling and meatpacking Transportation	31.9 6.4 2.2
Return to cattle feeder	36.8

Example 6.--Feeder Steer from Ranch in Montana to Retail in San Francisco

This illustration assumes that a 455-pound U.S. Good grade feeder steer was marketed from a ranch near Billings, Mont. The steer was sold at the Billings livestock auction market in October 1962, to a cattle feeder from near Sacramento, Calif. The steer was put on native foothill pasture for 115 days, where it gained 105 pounds. The rancher then put the steer on lowlands pasture with supplemental feeding for 90 days. The steer was then placed on drylot feeding for 150 days. The U.S. Choice grade slaughter steer was sold at the feedlot to a packer-buyer and was shipped to San Francisco for slaughter in November 1963. The steer weighed 1,040 pounds at the packing plant. The 624-pound U.S. Choice grade carcass was delivered to a local retailer who sold 462 pounds of retail cuts.

Estimated Marketing Costs and Gross Returns

Return to Rancher

Sale value of 455-pound U.S. Good grade feeder steer at		
Billings, Mont., October 1962, at \$31.30 per 100 pounds		\$142.42
Less marketing expense		
Trucking expense from ranch to Billings Marketing expense at Billings including commission,	\$1.14	
yardage, feed, etc., per head	2.85	
Total marketing expense		3.99
Gross return to rancher		\$138.43
R <u>eturn to feeder</u>		
Sale value of 1,040-pound U.S. Choice grade slaughter steer at San Francisco, October 1963, at \$23.00 per 100 pounds		\$239.20
Less cost		
Cost of 455-pound U.S. Good grade feeder steer at \$31.30		
per 100 pound	\$142.42	
Expense of shipping feeder steer from Montana to feedlot		
in California	6.78	
local cost		<u>149.20</u>
Gross return to feeder		\$ 90.00
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Percent

Return to	Packer
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Sale value of 624-pound U.S. Choice grade beef carcass at San Francisco, October 1963, at \$41.53 per 100 pounds Value of byproducts Receipt from sale of carcass and byproducts	\$259.15 <u>22.15</u> 281.30
Less cost Cost of 1,040-pound U.S. Choice grade slaughter steer at San Francisce, October 1963, at \$23.00 per 100 pounds \$239.20 Expense of shipping steer from feedlot to San Francisco 2.60 Total cost	<u>241.80</u>
Gross return to packer-wholesaler	\$ 39.50

Return to Retailer

Sale value of 462 pounds of U.S. Choice grade beef at an average price of 80.7 cents per pound, Oct. 1963 Value of bones, fat, and waste	\$372.83 <u>3.24</u>
Receipt from sale of carcass	376.07
Less cost of 624-pound U.S. Choice grade beef carcass at San Francisco, October 1963, at \$41.53 per 100 pounds	<u>259.15</u>
Gross return to retailer	\$116.92

Estimated Distribution of Consumer's Beef Dollar

Retailing	31.1
Wholesaling and Meatpacking	rcent
Transportation	.7
Other <u>1</u>	0.5
Total	11.2
Marketing livestock	
Transportation	2.1
Expense at market	.8
Total	2.9
Return to cattle feeder	23.9
Return to rancher	<u>30.9</u>



