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PRICE SPREADS and PRICES for EGGS, FRYING CHICKENS, and TURKEYS

In Selected Cities, 1956-1961

UNITED STATES
DEPARTMENT OF AGRICULTURE
Economic Research Service
Marketing Economics Division

PREFACE

This report on prices and price spreads of eggs, frying chickens, and turkeys is a summary of data compiled monthly from January 1956 through December 1961.

It is in partial response to a directive from the U. S. Congress to the U. S. Department of Agriculture to make a number of special studies on price spreads between farmers and consumers. Since 1956, Congress has been earmarking funds for special studies on this subject. These studies are part of a broad program of research designed to provide public information on farm-to-retail price spreads on food.

The authors appreciate the cooperation and assistance of the Bureau of Labor Statistics, U. S. Department of Labor; The Dairy and Poultry Market News Service, U. S. Department of Agriculture; and other State agencies and private firms who have supplied price information for this study.

Price Spreads

Farm-to-retail spread-the difference between the price the consumer pays for a product in a retail store, and the farm value (the amount the farmer receives for an equivalent quantity of farm product.) In this report, this spread is further subdivided into:

Retail store price spread--the difference between the price the consumer pays for a product in a retail store, and the price the retailer paid for it.

Farm-to-retailer price spread--the difference between the price paid by the retailer and the farm value. This spread is the combined farm-to-receiver and receiver-to-retailer price spreads.

Receiver-to-retailer price spread--the difference between the price paid by the retailer and the city receiver price.

Farm-to-receiver price spread--the difference between the city receiver price and the farm value.

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April 1962

SUMMARY

Price spreads on eggs and poultry were relatively stable during the period 1956-61. But spreads for various categories of eggs and poultry differed considerably among 10 selected cities due to such factors as directness of marketing channels, retail store pricing policies, and sources of supply. These differences vary between categories of eggs and poultry as well as between cities.

Farm-to-retail price spreads in selected major U. S. cities averaged about 24 cents a dozen for grade A large eggs, 20 cents a pound for frying chickens, and 20 cents a pound for medium size turkeys from 1956 to 1961. The spreads ranged from 15.4 to 30.1 cents a dozen for grade A large eggs; 15.5 to 37.8 cents a pound for frying chickens; and 15.1 to 27.8 cents a pound for medium turkeys.

Generally, farm-to-retail price spreads were lower for eggs and higher for frying chickens in the two California cities, Los Angeles and San Francisco, than in the other eight studied (Boston, New York, Baltimore, Washington, D. C., Atlanta, Cleveland, Chicago, and St. Louis). Price spreads were more similar among the 10 cities for turkeys than for either eggs or frying chickens.

The farm-to-retail spread is separated into two major categories, the retail store spread and the farm-to-retailer spread. The farm-to-retailer spread is further sub-divided into the receiver-to-retailer, and farm-to-receiver spreads.

Retail store spreads are influenced largely by retail store pricing policies. Although retailers sometimes feature items at or below cost, they are interested primarily in achieving an overall markup goal for their entire operation. To accomplish this, they make appropriate adjustments in the price spreads of various commodities. Retail store spreads were reasonably stable from year to year for eggs and frying chickens, but for turkeys they fluctuated considerably. As a percentage of the total marketing price spread between farmers and consumers, retail store spreads among the 10 cities in 1959-61 averaged: 40 percent for large eggs, 53 percent for frying chickens, and 42 percent for medium turkeys.

Farm-to-retailer price spreads among the 10 cities from 1956 to 1961 generally narrowed for grade A large eggs and medium size turkeys, but showed no uniform trends for frying chickens. Effects of component elements on farm-to-retailer spreads varied both among commodities and among cities. Long-run changes in these spreads may indicate a trend toward lower marketing charges. Such lower charges may be the result of increased technological and operational efficiencies.

Information based upon supplementary case studies of marketing channels, price spreads, and costs and efficiencies gives further insight into the makeup of the price spread elements, and some possible reasons for changes in spreads. The concept of economies of scale in commercial poultry processing plants is used to indicate the possibilities for further reductions in processor costs and price spreads for frying chickens. Some major marketing factors generally affecting changes in price spreads for eggs, frying chickens, and turkeys have been: (1) Concentrations of processing and assembling in fewer but larger plants, (2) movements toward more complete integration or market coordination, (3) innovations in equipment and technology which led to reduced costs per unit, and (4) retail store pricing policies.

Retail prices used in this study are based on weighted averages of chain and independent retail store prices reported for a limited period each month. These retail prices are higher than those advertised in newspapers when specials are being held by leading supermarkets, but they are useful as indicators of trends in retail prices in the various cities.

Farm values for each commodity are weighted averages of prices at farms in the major commercial producing areas supplying the various city markets. Among the cities included in this study, those near the major commercial egg and poultry producing areas generally received most of their respective supplies from these areas. Many of the cities received sizable proportions of their eggs and poultry from the same major producing areas.

PRICES AND PRICE SPREADS FOR EGGS, FRYING CHICKENS, AND TURKEYS IN SELECTED CITIES, 1956-61.

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INTRODUCTION

In recent years, public agencies both in the United States and foreign countries have shown increased interest in price spreads on agricultural products (14, 18, and 19). 1/ Data on farm-to-retail price spreads and some component elements of these spreads for eggs and poultry in selected cities have been compiled by the U. S. Department of Agriculture since July 1955.

Prices used in computing these spreads were compiled monthly from both public and private sources. Retail price information was supplied by the Bureau of Labor Statistics. Price information at other market levels (price to retailers, city receiver price, and farm value) was generally supplied by the Federal State Market News Service. Occasionally, prices were based upon information obtained from individual State agencies and private firms.

Articles based on these data are published periodically in the Marketing and Transportation Situation, a U. S. Department of Agriculture publication (13, 16, and other references applicable). Monthly data on egg and poultry prices and price spreads in 10 selected cities are available upon request to Poultry Section, Marketing Economics Division, Economic Research Service, U. S. Department of Agriculture, Washington 25, D. C. The 10 are: Atlanta, Baltimore, Boston, Chicago, Cleveland, Los Angeles, New York, St. Louis, San Francisco, and Washington, D. C. Compiling of data for Washington, D. C. began in July 1958.

Explanations of Market Price Levels

Prices at various market levels are collected for selected periods during each month.

Retail prices are prices to consumers in retail stores. They are weighted 20 percent for Monday-Wednesday and 80 percent for Thursday-Saturday. Average prices in samples of chainstores and independent retailers in each city are combined according to predetermined weightings based on their aggregate gross sales. Chainstores have increased their share of aggregate gross sales for all retail grocery stores. These weightings vary among cities and have gradually changed, with more weight now being given chainstores in most cities.

Prices to retailers are those prices paid by or offered on a store door-delivery basis to either independent or chainstore retailers. They do not include prices paid by chainstores for delivery to their warehouses.

1/ Underscored figures in parenthesis refer to items in Selected References on page 16.

City receiver prices include f.o.b. delivered city prices, wholesale selling prices, or both. Prices reported for these levels often overlap, as trade practices and resulting pricing mechanisms make it difficult to differentiate these price levels satisfactorily. The average f.o.b. delivered city price includes prices paid to processors or other shippers by city wholesale distributors and by chainstores and other large volume retailers that bypass these distributors. The wholesale selling price includes prices: To jobbers, between wholesale dealers, and to others who may buy in wholesale lots.

Farm values (farm prices) are payments received by farmers for a dozen eggs or for a quantity of live poultry equivalent to one pound of ready-to-cook poultry. Computed farm values are weighted averages of prices at farms in the major producing areas supplying the bulk of a given commodity to the various city market areas. For example, farm prices of frying chickens in Washington, D. C. are weighted averages of prices paid to producers at farms in commercial broiler areas of Delmarva, North Carolina, Virginia, and Georgia, whereas those for Atlanta are prices paid producers at farms in Georgia. These prices have been adjusted so that the value of the commodity at the farm is on an equivalent weight basis with the value of the commodity being priced at other market levels.

Farm prices for each city are weighted according to major supply areas in the previous year. Weights used for averaging commodity farm prices from various producing areas are derived primarily from "Receipts at Terminal Markets," Dairy and Poultry Market Statistics (27). The previous year lag in weightings is used: (1) To give consideration to areas which may only be seasonal suppliers, but which may still ship in substantial proportions of the total annual supply, and (2) to allow more consistency in weightings throughout the year.

Two Separate Series

Before the Department began compiling this special series of data on price spreads in selected cities it compiled farm-to-retail price spreads for eggs and frying chickens for the United States as a whole. This U. S. series is also maintained on a current basis for purposes of measuring long-time trends and for use in determining market basket prices. The market basket contains the average quantities of farm-produced food products purchased per family in 1952 for consumption at home by urban wage earner and clerical-worker families. 2/ Eggs and frying chickens compose the only major group of food products in the market basket for which farm-to-retail spreads have not increased in recent years.

The special series of data on price spreads in selected cities differ somewhat from the market basket series for the United States. Three reasons for the differences are: (1) The market basket data are averages for retail prices in 46 U. S. cities, whereas only 10 of the 46 cities were selected for this special series; (2) the data for each of the 10 cities selected are presented separately, and (3) some components of the farm-to-retail spread are shown in the series for 10 cities, whereas no components are shown in the U. S. series. Trends in components of the farm-to-retail spread may show significant changes in price spreads at certain market levels. Yet there may be little or no change in the overall farm-to-retail spread. This may be the result of widening or narrowing retail store spreads which are largely offset by opposite changes in farm-to-retailer spreads. More insight into the trends of price spreads can thus be revealed.

2/ For more details on this series see (18, pp. 113 and 114).

Principal Supply Areas

There is some consistency among poultry and egg products as to principal supply areas for various major terminal markets in the United States. The major commercial production areas for eggs supplied to these markets during 1956-61 were the North Central States and California; for frying chickens, the South; and for turkeys, the West North Central States and California. Cities near these production areas generally received most of their supplies from these areas. For example, Atlanta received virtually all of its frying chickens from Georgia; Los Angeles received nearly all of its eggs and turkeys from California. In contrast, Atlanta received most of its turkeys from the Midwest and California, while Los Angeles received most of its frying chickens from Southern States.

Supplementary Studies

In addition to this series of price spread data, the Department has published reports of supplementary marketing studies pertaining to prices, price spreads, costs, trade channels, and practices (1, 2, 4, 9, 12, and 21).

These supplementary studies were conducted for short time periods in selected areas. They were designed to provide additional detailed information on price spreads, marketing costs, and channels of distribution. A study in San Francisco showed that retail store price spreads on frying chickens and turkeys varied considerably by the type of ownership of the retail poultry department. A study of seven Midwestern egg assembly plants pointed out a possible substantial cost savings when eggs are candled and cartoned at country plants, compared with costs when eggs are candled and packed loose into 30-dozen cases in the Midwest and then shipped to plants in distant destinations to be recandled and cartoned. Reports of these studies generally had some detailed breakdowns of major components of the spreads between the farm price and price to retailers. A study of economies of scale in chicken processing plants elaborated on possibilities of further cost reductions through more efficient operations (22). These potential savings in costs could result in narrower farm-to-city receiver price spreads.

EGGS

Price spreads on large eggs in selected large U. S. cities were generally widest in the autumn and winter months, narrowed during the spring, and widened a little in the summer (6). Seasonally, price spreads were considerably more stable than prices. Farm-to-retail and its component price spreads varied slightly from year to year (fig. 1).

Farm-to-retail price spreads on Grade A large eggs during 1956-61 were narrowest in Los Angeles and widest in New York among the 10 cities. These spreads averaged 17.1 cents a dozen in Los Angeles and 29.2 cents in New York for the 6-year period (table 1).

Retail store spreads on Grade A large eggs were narrowest in Chicago and widest in New York. During 1959-61, retail store spreads, as a percentage of the total farm-to-retail price spread for large eggs, averaged 40 percent among the 10 cities.

Farm-to-retailer spreads on Grade A large eggs averaged widest in Chicago and narrowest in Los Angeles.

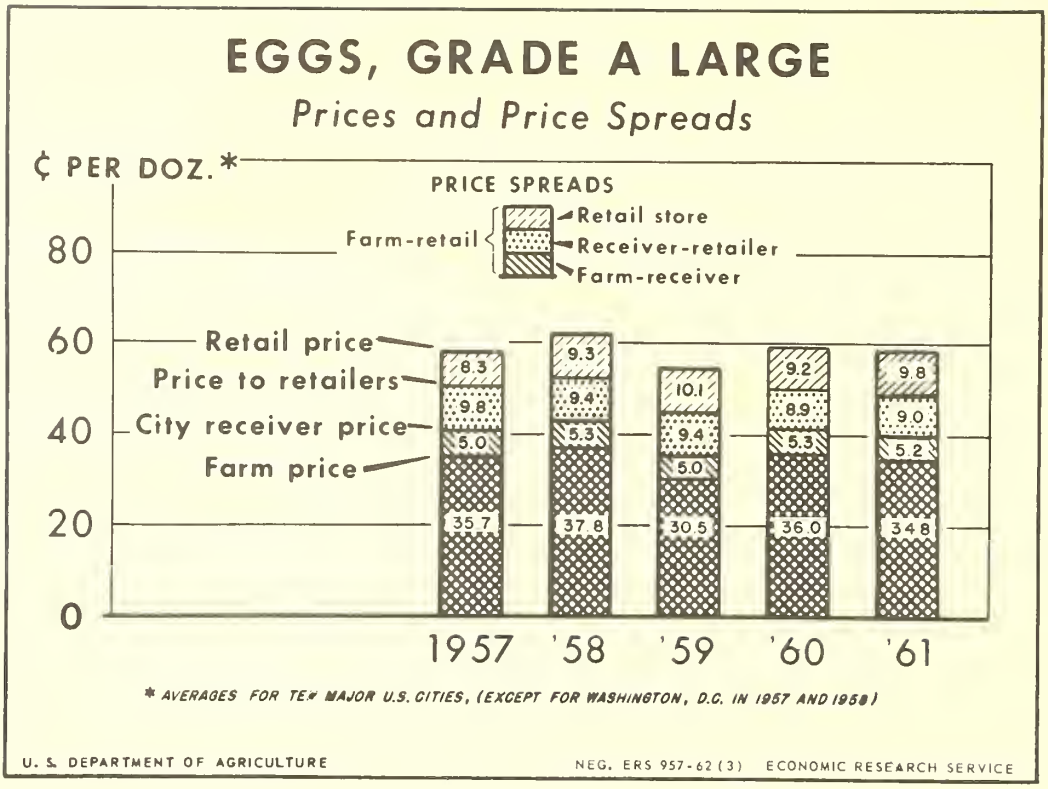

Figure 1

Los Angeles had the smallest farm-to-retail spread on eggs among the five cities shown in table 1, due largely to the low farm-to-retailer spread, and reflecting in part, efficiencies made possible by more direct marketing channels. Most of the eggs sold in Los Angeles were moved in cartons direct from nearby country assembler-distributors to retail stores. These assembler-distributors generally collected eggs from producers on regular scheduled routes, and they then graded, packed, and delivered them to retail stores and other outlets. In the other four cities shown in table 1, city distributors still received fairly large volumes of eggs from country assembler-distributors and producers in loose packs, which they then graded, sorted, and delivered to retail stores. Because of these differences in marketing practices and channels, comparisons of the farm-to-retailer price spread among cities seem to be more appropriate than comparisons of the components of this spread, i.e., the farm-to-receiver spread and the receiver-to-retailer spread.

Data from this study indicate that cities receiving most of their eggs from nearby producing areas, and which have generally more direct systems of marketing to retail stores, tend to have narrower farm-to-retailer spreads than cities receiving a large proportion of their eggs from distant producing areas, and which have more complex marketing systems. These more complex systems usually involve two or more wholesale firms in the assembly and distribution of eggs from farms to retail stores. For example, farm-to-retailer price spreads for eggs marketed in New York were narrower for eggs received from nearby than from midwestern producing areas (table 2). Farm-to-retailer price spreads for midwestern eggs sold in New York were wider than comparable spreads in any of the other cities studied. Similar spreads, however, were narrower for nearby eggs sold in New York than in any of the other cities except Los Angeles (tables 1 and 2). Spreads for large eggs in

Table 1.--Eggs, large, grade A or better quality: Price spreads and prices per dozen for various market levels, and farm share of retail price in selected cities, annual average, 1956-61

City and year	Price spreads					Prices				Farmer's share
	Farm-to-retail	Retail store	Farm-to-retailer			Retail	To retailers	To city receivers 1/	Farm value	
			Total	Receiver-to-retailer	Farm-to receiver					
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
New York:										
1956-61 average	2/29.2	12.4	2/16.8	2/10.4	2/ 6.4	64.4	52.0	2/41.6	2/35.2	54.7
1956	2/29.0	11.2	2/17.8	2/11.6	2/ 6.2	67.6	56.4	2/44.8	2/38.6	57.1
1957	2/29.2	11.2	2/18.0	2/11.4	2/ 6.6	64.4	53.2	2/41.8	2/35.2	54.7
1958	2/28.8	12.2	2/16.6	2/11.0	2/ 5.6	67.5	55.3	2/44.3	2/38.7	57.3
1959	2/29.6	12.9	2/16.7	2/11.0	2/ 5.7	60.3	47.4	2/36.4	2/30.7	50.9
1960	2/28.4	12.8	2/15.6	2/ 8.8	2/ 6.8	63.4	50.6	2/41.8	2/35.0	55.2
1961	2/30.1	13.9	2/16.2	2/ 8.7	2/ 7.5	63.3	49.4	2/40.7	2/33.2	52.4
Atlanta:										
1956-61 average	23.4	9.0	14.4	9.3	5.1	57.5	48.5	39.2	34.1	59.3
1956	22.9	6.9	16.0	10.2	5.8	60.8	53.9	43.7	37.9	62.3
1957	23.4	7.2	16.2	10.8	5.4	57.9	50.7	39.9	34.5	59.6
1958	26.1	10.3	15.8	9.2	6.6	61.5	51.2	42.0	35.4	57.6
1959	24.3	9.8	14.5	8.8	5.7	52.5	42.7	33.9	28.2	53.7
1960	22.7	9.7	13.0	8.5	4.5	56.7	47.0	38.5	34.0	60.0
1961	21.2	10.2	11.0	8.1	2.9	55.8	45.6	37.5	34.6	62.0
Chicago:										
1956-61 average	25.4	5.7	19.7	12.3	7.4	55.4	49.7	37.4	30.0	54.2
1956	25.7	6.0	19.7	11.5	8.2	58.2	52.2	40.7	32.5	55.8
1957	25.6	5.3	20.3	11.9	8.4	55.2	49.9	38.0	29.6	53.6
1958	25.6	5.8	19.8	12.4	7.4	57.9	52.1	39.7	32.3	55.8
1959	25.1	5.7	19.4	11.9	7.5	49.8	44.1	32.2	24.7	49.6
1960	23.7	4.5	19.2	13.0	6.2	55.1	50.6	37.6	31.4	57.0
1961	26.1	6.8	19.3	12.8	6.5	55.9	49.1	36.3	29.8	53.3
Los Angeles:										
1956-61 average	17.1	9.9	7.2	---	---	55.1	45.2	---	38.0	69.0
1956	15.4	8.2	7.2	---	---	56.4	48.2	---	41.0	72.7
1957	16.8	9.3	7.5	5.2	2.3	54.8	45.5	40.3	38.0	69.3
1958	18.0	10.7	7.3	4.7	2.6	57.2	46.5	41.8	39.2	68.5
1959	20.2	12.1	8.1	4.5	3.6	51.3	39.2	34.7	31.1	60.6
1960	16.0	9.6	6.4	3.5	2.9	55.8	46.2	42.7	39.8	71.3
1961	16.2	9.8	6.4	4.0	2.4	55.2	45.4	41.4	39.0	70.7
Washington, D. C.:										
1959	25.2	12.2	13.0	8.8	4.2	60.2	48.0	39.2	35.0	58.1
1960	26.7	12.0	14.7	9.1	5.6	65.2	53.2	44.1	38.5	59.0
1961	25.7	10.5	15.2	9.7	5.5	62.9	52.4	42.7	37.2	59.1

1/ Prices to city receivers are: Wholesale selling prices for New York and Los Angeles; and f.o.b. delivered city prices for Atlanta, Chicago, and Washington. 2/ Weighted average for nearby and midwestern eggs.

Table 2a.--Price spreads for a dozen large eggs, grade A or better, purchased by retailers in New York City and originating at nearby or Midwest farms, 1956-61

Year	Farm-retailer spread		City receiver-retailer spread		Farm-city receiver spread	
	Nearby	Midwest	Nearby	Midwest	Nearby	Midwest
	Cents	Cents	Cents	Cents	Cents	Cents
1956-60 average	10.7	22.7	9.2	12.3	1.5	10.4
1956	11.6	23.9	10.0	13.2	1.6	10.7
1957	12.4	23.6	9.9	13.0	2.5	10.6
1958	10.3	23.0	9.7	12.3	.6	10.7
1959	9.4	22.7	9.1	12.5	.3	10.2
1960	9.9	20.3	7.2	10.2	2.7	10.1
1961	9.8	20.6	7.4	9.8	2.4	10.8

Table 2b.--Prices for a dozen large eggs, grade A or better, to retailers and city receivers in New York City, and at farms in nearby and Midwest areas, 1956-61

Year	Price to retailers	Price to city receiver 1/		Farm price	
		Nearby	Midwest	Nearby	Midwest
	Cents	Cents	Cents	Cents	Cents
1956-60 average	52.6	43.4	40.3	41.9	29.9
1956	56.4	46.4	43.2	44.8	32.5
1957	53.2	43.3	40.2	40.8	29.6
1958	55.3	45.6	43.0	45.0	32.3
1959	47.4	38.3	34.9	38.0	24.7
1960	50.6	43.4	40.4	40.7	30.3
1961	49.4	42.0	39.6	39.6	28.8

1/ Wholesale selling price.

New York, as shown in table 1, are weighted averages of prices reported for nearby and midwestern eggs.

A shipping point price for Grade A large white eggs reported for the North Central States area averaged three cents below the city receiver price for similar midwestern eggs in New York in 1959, and 3.4 cents below in 1960 (table 3). Transportation charges accounted for most of the North Central States shipping point-to New York City receiver price spread. The New York market "spot quotation" is widely used as a basing point price in the Midwest. The balance of the farm-shipping point price spread for loose eggs includes charges for procurement and plant operation. A special study made in June and November 1957 indicated that eggs packed

Table 3a.--Price spreads for a dozen large eggs, grade A or better, shipped from Midwest farms to New York City receivers, 1959-61

Year	Farm-to-shipping point	Shipping point to city receiver	Farm-to-city receiver
	Cents	Cents	Cents
1959	7.0	3.0	10.2
1960	6.7	3.4	10.1
1961	7.5	3.3	10.8

Table 3b.--Prices for a dozen large eggs, grade A or better, at Midwest farms, North Central State shipping point, and to New York City receiver, 1959-61

Year	Farm price	North Central State shipping point	New York City receiver 1/
	Cents	Cents	Cents
1959	24.7	31.9	34.9
1960	30.3	37.0	40.4
1961	28.8	36.3	39.6

1/ Wholesale selling price.

loose in the Midwest and then shipped to Eastern plants had the following expenses: (2).

Item	Cents a dozen
Pickup from farm	1.0
Plant labor	1.8
Cases, flats, and fillers	1.9
General and administrative	0.6
Commissions (buying)	0.7
Overhead	0.6
Freight charges	2.9
Total	9.5

This breakdown of expenses does not and should not be expected to coincide exactly with price spreads shown in tables 2, and 3 but it does indicate the major cost factors involved in the spread. Price spreads may not always equal marketing costs, because they include all costs incurred by marketing agencies, plus any profits or minus any losses.

Receipts of eggs in New York City originate in widely scattered areas. Until 1960, about half the eggs received at the New York terminal market were produced on nearby farms in New York, New Jersey, and Pennsylvania, and about half came from Midwestern States. In 1960, there was a noticeable increase in receipts of eggs at the New York Market from Southern States. To arrive at average farm prices for eggs sold in New York City in 1961, farm prices reported for each area were weighted 10 percent from the South, about half from the Midwest, and the balance from nearby areas.

The emerging commercial egg industry of the South has changed Georgia from a deficit to a surplus egg producing State. Increased egg production in Georgia

has come about through large-scale commercial flocks. Expansion of the commercial egg industry in Georgia has been accompanied by integration, reduced cost of production, and improved marketing technology.

The development of "egg sheds"--egg producing areas--near major consuming centers has increased. Atlanta is an example of a market for which an egg shed has developed. An increasing proportion of Atlanta's eggs now come from Georgia. Before 1960, about half the eggs received at Atlanta were shipped in from the Midwest. According to "Origin of Receipt" reports, roughly 90 percent of the eggs received in Atlanta in 1960 came from Georgia.

In Atlanta, price spreads on large Grade A eggs narrowed from 1958 to 1961 for all market levels (table 1).

Chicago, near the Midwest "egg basket," had reasonably stable price spreads during 1956-61 compared with Atlanta. Eggs received in Chicago were produced mainly in Illinois and nearby Midwestern States. While average size of flock has increased in the Midwest, much of the egg production is still from comparatively small flocks.

Farm-to-retail price spreads in Chicago changed little from 1956 to 1959, but dropped more than a cent a dozen in 1960. Most of this decline was due to a narrowing of retail store spreads which were 4.5 cents a dozen in 1960 as compared with 5.7 cents in 1959 and the 1956-60 average of 5.4 cents. In 1961, however, farm-to-retail price spreads widened 2.4 cents a dozen, mostly due to an increase of 2.3 cents a dozen in retail store spreads.

Prices each year for large eggs at all market levels in various cities were at their lowest levels in January and February, increased in the spring, declined in the summer, and increased again in the autumn.

In contrast, prices each year for medium eggs, especially in New York and Chicago, were at reasonably high levels in Janaury and February, declined in the spring, increased in summer, and declined in the autumn and early winter.

Farm shares of the retail prices for large eggs were higher in Los Angeles than in the "eastern" cities (table 1).

FRYING CHICKENS

Farm-to-retail price spreads for frying chickens in selected major U. S. cities generally narrowed from year-to-year from 21.1 cents a pound in 1957 to 18.9 cents in 1960 (figure 2). Declining retail store spreads accounted for most of the drop in farm-to-retail spreads during this period. However, farm-to-retailer spreads remained relatively stable in spite of improved technological innovations and shifts in marketing channels and practices that have permitted reduced costs, especially in assembling and processing.

Among the nine cities for which data were available from 1956 to 1961, farm-to-retail spreads were generally widest in San Francisco or Los Angeles and narrowest in Atlanta and Chicago. Of the 10 cities studied in 1959-61, spreads were narrowest in Washington, D. C. Seasonally, farm-to-retail price spreads were reasonably stable in major cities, although they tended to be a little wider in the autumn months.

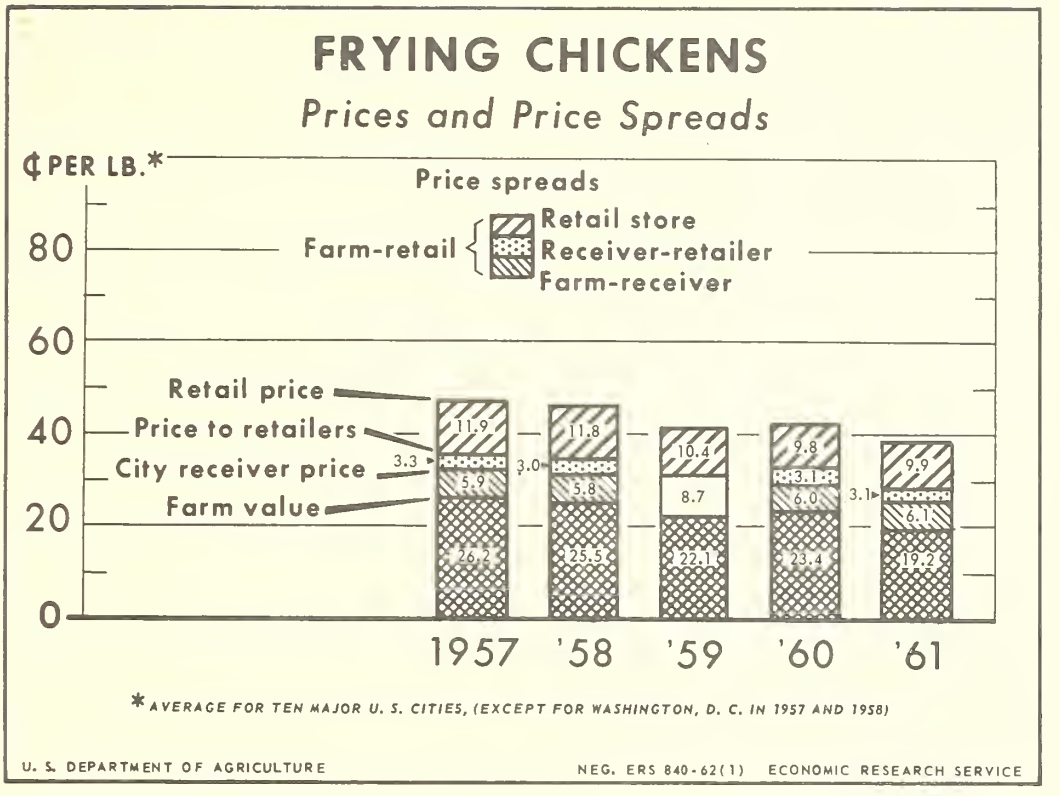

Figure 2

Retail store spreads during 1956-61 were generally widest in San Francisco or Los Angeles among the 10 cities. The city with the narrowest retail store spread each year was New York, Chicago, or St. Louis. Retail store spreads accounted for Atlanta having wider farm-to-retail spreads than Chicago or Washington in 1959-61. During 1959-61, retail store spreads averaged 53 percent of the total farm-to-retail price spread for frying chickens among the 10 cities.

Farm-to-retailer spreads during 1956-61 were generally widest in San Francisco or Los Angeles among the 10 cities. Atlanta had the narrowest farm-to-retailer spread from 1956-58, but for 1959-61 Boston had the narrowest. Retail store spreads in Boston, however, were among the widest of the 10 cities.

Farm-to-receiver spreads were more similar among the 10 cities than spreads at either of the other component market levels. Los Angeles and San Francisco had the widest farm-to-receiver spreads among the 10 cities perhaps because of high freight costs. Nearly half the frying chickens received in San Francisco were produced in California, and the remainder were produced in Southern States. Nearly all the frying chickens received in Los Angeles, however, were produced in Southern States. The other eight cities received sizable proportions of their frying chickens from Southern States, and they are considerably closer to their major supply areas than are the two West Coast cities. Geographically, the principal broiler production area in the United States lies in the Southern States.

Southern processors shipping frying chickens to Los Angeles and San Francisco were able to obtain prices, f.o.b. delivered to the city, that were competitive with

prices for locally produced fryers. These favorable prices, delivered to the city, were due largely to comparatively low unit costs of operations, including reduced freight rate advantages since 1956 (9, 26).

Processor charges account for most of the farm-to-receiver spread on frying chickens. Typical operating costs for processors of frying chickens in plants on the Delmarva Peninsula and in southeastern Pennsylvania totaled about 5.9 cents a pound in June 1958 (12). Major components of these total costs were:

Cost Items	Cents a Pound
Hauling and receiving	0.6
Processing	1.7
Packaging labor and materials	1.4
Transportation to market	0.9
Selling	0.2
Miscellaneous	1.1
Total operating costs	5.9

Since most of the frying chickens received in New York City were processed in the Delmarva and Pennsylvania areas, it would seem that processors were losing money - based upon these total operating costs and price spreads shown in table 4. Some firms, however, were tied in with a vertically integrated marketing firm, and it is possible that their apparent losses may have been offset, at least in part, in other areas of the overall integrated firm setup.

Theoretically, a commercial poultry processing plant operating at 100 percent of capacity could realize total costs considerably less than 5.9 cents a pound. A study of economies of scale in commercial broiler processing plants with line speeds of 1,800 to 7,500 head per hour indicates that it is possible to achieve total costs of 4.50 to 3.75 cents per pound of eviscerated weight when operating at 100 percent of capacity (22). 5/ Normally, however, processors operate their plants at considerably less than full capacity. This suggests that further reductions in these costs and spreads could occur if processors were able to increase their plant size and to operate these plants at or near full capacity.

Typical major components of broiler processing costs at full capacity with a line speed of about 3,600 birds per hour are: 6/

Cost Item	Percent of Total Costs
Variable operating costs	54
Constant-unit operating costs	27
Fixed operating costs	13
Fixed overhead costs	6
Total costs	100

Prices for frying chickens at all market levels in all cities took a downward trend between 1956 and 1961. In Atlanta prices are generally a little less than in most other large cities because of its nearness to major commercial producing areas (table 4).

5/ These costs are based upon weight yields of 73 percent from live to ready-to-cook weights.

6/ See Selected References (22), Appendix table III, pp. 54-55.

Table 4.--Frying Chickens, grade A, ready-to-cook basis: Price spreads and prices per pound for various market levels and farm share of retail price in selected cities, annual averages 1956-61

City and year	Price spreads					Prices				Farmer's share
	Farm-to-retail	Retail store	Farm-to-retailer			Retail	To retailers	To city receivers 1/	Farm value	
			Total	Receiver-to-retailer	Farm-to-receiver					
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
New York:										
1956-61 average	---	---	8.1	2.8	5.3	---	32.8	30.0	24.7	---
1956	17.7	8.1	9.6	2.9	6.7	45.2	37.1	34.2	27.5	60.8
1957	17.2	8.5	8.7	2.8	5.9	44.0	35.5	32.7	26.8	60.9
1958	---	---	8.0	2.9	5.1	---	34.2	31.3	26.2	---
1959	18.1	10.8	7.3	2.4	4.9	41.9	30.4	28.0	23.1	56.1
1960	18.7	10.6	8.1	3.2	4.9	42.9	32.3	29.1	24.2	56.4
1961	18.2	11.0	7.2	2.7	4.5	38.6	27.6	24.9	20.4	52.8
Atlanta:										
1956-61 average	16.6	9.3	7.3	2.0	5.3	39.5	30.2	28.2	22.9	58.0
1956	15.6	9.2	6.4	2.5	3.9	41.6	32.4	29.9	26.0	62.5
1957	16.0	9.5	6.5	1.5	5.0	41.2	31.7	30.2	25.2	61.2
1958	16.7	10.0	6.7	1.1	5.6	41.3	31.3	30.2	24.6	59.6
1959	17.4	9.3	8.1	2.3	5.8	38.2	28.9	26.6	20.8	54.5
1960	17.2	9.4	7.8	2.1	5.7	39.8	30.4	28.3	22.6	56.8
1961	16.5	8.3	8.2	2.5	5.7	34.9	26.6	24.1	18.4	52.7
Chicago:										
1956-61 average	17.1	8.4	8.7	2.9	5.8	40.3	31.9	29.0	23.2	57.6
1956	17.7	9.0	8.7	2.8	5.9	44.1	35.1	32.3	26.4	59.9
1957	16.9	8.8	8.1	2.9	5.2	42.4	33.6	30.7	25.5	60.1
1958	17.5	9.4	8.1	2.4	5.7	42.4	33.0	30.6	24.9	58.7
1959	17.1	8.0	9.1	3.3	5.8	38.4	30.4	27.1	21.3	55.5
1960	16.2	6.8	9.4	3.7	5.7	39.1	32.3	28.6	22.9	58.6
1961	16.8	8.3	8.5	2.5	6.0	35.2	26.9	24.4	18.4	52.3
San Francisco:										
1956-60 average	29.1	16.5	12.6	6.9	---	53.9	37.4	30.5	24.8	46.0
1956	37.8	23.4	14.4	9.6	4.8	65.9	42.5	32.9	28.1	42.6
1957	31.3	17.9	13.4	8.6	4.8	58.6	40.7	32.1	27.3	46.6
1958	26.9	14.7	12.2	8.4	3.8	53.8	39.1	30.7	26.9	50.0
1959	4/25.2	14.2	4/11.0	5.0	4/8.6	48.7	34.5	2/29.5	3/23.5	48.3
1960	4/25.6	13.5	4/12.1	5.1	4/8.5	49.6	36.1	2/31.0	3/24.0	48.4
1961	4/27.3	14.8	4/12.5	5.1	4/8.5	46.6	31.8	2/26.7	3/19.3	41.4
Washington, D. C.:										
1959	16.1	8.0	8.1	2.5	5.6	38.3	30.3	27.8	22.2	58.0
1960	15.9	7.8	8.1	2.2	5.9	39.1	31.3	29.1	23.2	59.3
1961	15.7	7.2	8.5	2.7	5.8	35.0	27.8	25.1	19.3	55.1

1/ Prices to city receivers are all f.o.b. delivered city prices. 2/ Prices are for mostly out-of-state frying chickens. 3/ Weighted average price for California and out-of-state birds. 4/ Farm-to-retail and farm-to-retailer spreads computed with farm values shown, but farm-to-receiver spread computed with farm values for birds processed only in the South.

Retail prices for frying chickens declined during this 6 year period (table 4). Retail prices for fryers in San Francisco averaged 46.6 cents a pound in 1961. This was about 19.3 cents a pound lower than the comparable price for 1956. Farm prices on the other hand did not drop nearly as much as consumer prices. Farm prices for fryers sold in San Francisco averaged 19.3 cents a pound in 1961, 8.8 cents lower than in 1956. The result of these converging prices has been a decline in price spreads not only between farm and retail prices, but also between component price levels. Farm-to-retail price spreads of 27.3 cents a pound in 1961 were 10.5 cents a pound less than in 1956. These gross farm-to-retail spreads in San Francisco were almost 2.5 times wider than comparable spreads in Atlanta in 1956, but in 1961, they were only 1.6 times wider than in Atlanta.

San Francisco retail store spreads of 14.8 cents a pound on frying chickens in 1961 averaged 8.6 cents lower than in 1956, and accounted for most of the decline in farm-to-retail spread in that city between 1956 and 1961.

Farm shares of the retail prices for frying chickens were lower in San Francisco than in the "eastern" cities due in part to the distance from Southern plants (table 4).

TURKEYS

Farm-to-retail price spreads on medium size turkeys in major U. S. cities generally fluctuated from year to year during October-December of 1956-61 (fig. 3). These fluctuations were due mostly to changes in retail store spreads. Farm-to-retailer spreads during these months generally declined from 1956-60. Declines in farm-to-retailer spreads were due largely to narrowing farm-to-receiver spreads. However, farm-to-retailer spreads increased from 1960-61 because of widening farm-to-receiver spreads.

Price spreads for medium size turkeys were averaged for the months of October-December, the big marketing season, as data for 12 months during 1956-61 were incomplete. However, the limited data available suggest that seasonally, price spreads on medium turkeys were generally narrowest during the last three months of the year.

Farm-to-retail price spreads among the five cities shown in table 5 were generally widest in Washington, D. C. and narrowest in Chicago. These spreads averaged 21.7 cents a pound in Chicago and 27.8 cents in Washington, D. C. in 1961; these averages are higher than in any of the previous years.

Usually, retail store price spreads were also widest in Washington and narrowest in Chicago. These price spreads among 5 major U. S. cities shown in table 5 averaged 36 percent of the farm-to-retail price spread during October-December 1959, but 47 percent during the same period of 1960.

Variations in retail store spreads for turkeys reflect the influence of pricing policies of retailers regarding their selling prices to consumers. Retailers are interested primarily in achieving certain overall markup goals for their entire operation. They usually place low markups on commodities featured as special sales items, but they make appropriate adjustments in the price spreads of other individual commodity lines to help arrive at their overall markup goal. Sometimes turkeys are featured as special sales items by retailers, especially when competing for sales for the Thanksgiving and Christmas holidays.

Farm-to-retailer price spreads on medium turkeys were more similar among major U. S. cities than were retail store spreads.

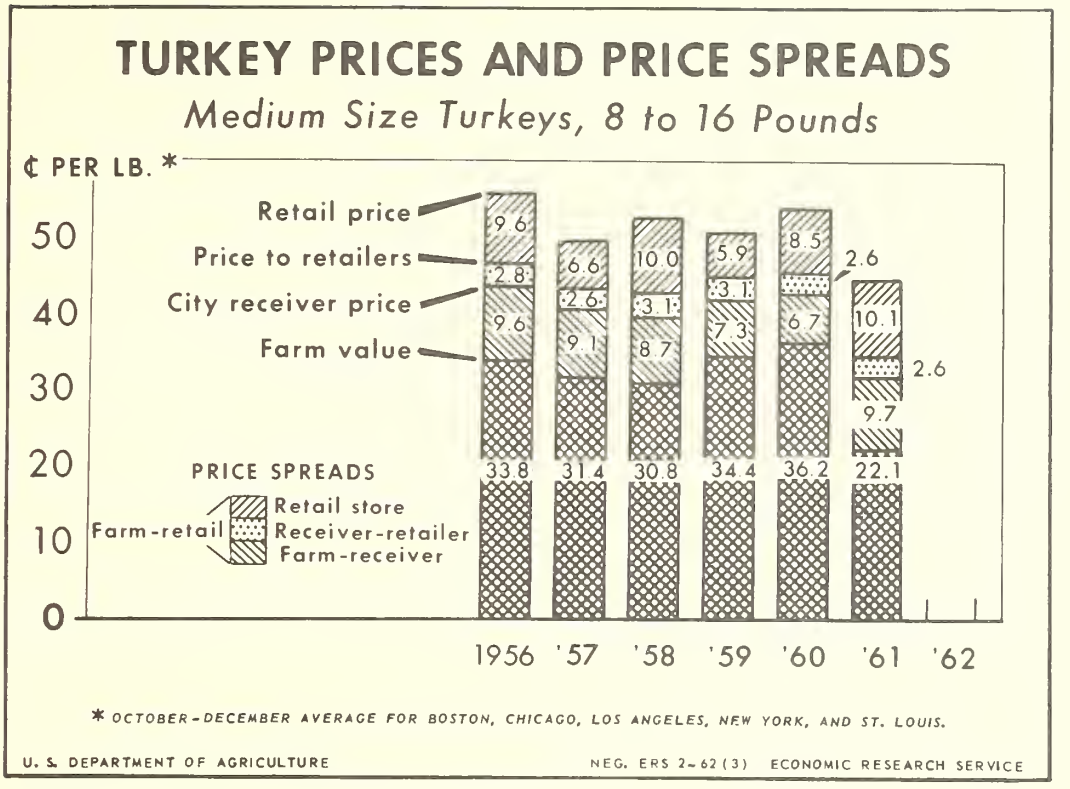

Figure 3

Receiver-to-retailer spreads for medium turkeys generally remained reasonably stable from year to year. This spread covers mostly returns to wholesale distributors for their transactions. Some of the wholesalers perform multiple functions as brokers, jobbers, and general wholesalers. Price spreads of wholesaler functions varied: About 0.5 cents a pound for brokers; about 1 cent for jobbers; and up to about 6 cents for other wholesalers (9). There were times, however, when wholesale distributors had to sell turkeys below cost in order to move the birds out of storage.

Farm-to-receiver spreads for medium turkeys marketed in Chicago narrowed more than a penny a pound from 1958-60. This decline was due mostly to narrowing farm-to-shipping point price spreads which include the marketing functions of assembling and processing (13).

Total costs for processing heavy young hens and toms in 25 turkey processing plants averaged 5.84 cents a pound in 1960 (23). Major components of this total were:

Item	Cost (cents a pound)
Wages and salaries	2.27
Packaging, supplies, and miscellaneous	1.92
Utilities, ice, freezing, and storage	.80
Fixed overhead	.85
Total	5.84

If charges for transportation are added to the above processing costs, they will approximate farm-to-receiver price spreads for the various cities in 1960. Possible

Table 5.--Turkeys, medium size, grade A, ready-to-cook basis: Price spreads and prices per pound for various market levels and farm share of retail price in selected cities, October-December averages, 1956-61 1/

City and year	Price spreads					Prices				Farmer's share
	Farm-to-retail	Retail store	Farm-to-retailer			Retail	To retailers	To city receivers 2/	Farm value	
			Total	Receiver-to-retailer	Farm-to-receiver					
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
New York:										
1956-61 average	---	---	12.3	2.6	9.7	---	43.8	41.2	31.5	---
1956	24.6	10.7	13.9	2.9	11.0	58.1	47.4	44.5	33.5	57.7
1957	19.5	6.6	12.9	2.7	10.2	50.9	44.3	41.6	31.4	61.7
1958	22.5	9.9	12.6	3.1	9.5	53.5	43.6	50.5	31.0	57.9
1959	18.6	8.1	10.5	2.2	8.3	53.4	45.3	43.1	34.8	65.2
1960	---	---	9.4	2.1	7.3	---	45.6	43.5	36.2	---
1961	22.6	8.1	14.5	3.1	11.4	44.9	36.8	33.7	22.3	49.7
Chicago:										
1956-61 average	17.7	6.0	11.7	3.2	8.5	49.2	43.2	40.0	31.5	64.0
1956	20.0	8.4	11.6	3.7	7.9	54.7	46.3	42.6	34.7	63.4
1957	15.5	5.2	10.2	2.5	7.7	47.8	42.5	40.0	32.3	67.6
1958	18.2	6.5	11.7	3.3	8.4	49.5	43.0	39.7	31.3	63.2
1959	15.3	2.7	12.6	4.4	8.2	48.8	46.1	41.7	33.5	68.6
1960	15.7	5.2	10.5	3.2	7.3	51.9	46.7	43.5	36.2	69.7
1961	21.7	8.3	13.4	2.0	11.4	42.6	34.3	32.3	20.9	49.1
St. Louis:										
1956-61 average	20.4	8.7	11.7	3.7	8.0	51.7	43.0	39.3	31.3	60.5
1956	20.1	7.9	12.2	3.9	8.3	54.1	46.2	42.3	34.0	62.8
1957	19.1	6.4	12.7	3.1	9.6	50.7	44.3	41.2	31.6	62.3
1958	24.5	12.4	12.1	3.9	8.2	55.1	42.7	38.8	30.6	55.5
1959	16.6	6.1	10.5	3.7	6.8	50.6	44.5	40.8	34.0	67.2
1960	18.3	8.5	9.8	3.5	6.3	54.5	46.0	42.5	36.2	66.4
1961	23.9	11.3	12.6	3.7	8.9	45.3	34.0	30.3	21.4	47.2
Los Angeles:										
1956-60 average	19.9	9.8	10.1	2.7	7.4	51.4	41.6	38.9	31.5	61.3
1956	24.2	12.5	11.7	1.8	9.9	56.8	44.3	42.5	32.6	57.4
1957	19.4	8.2	11.2	3.5	7.7	49.4	41.2	37.7	30.0	60.7
1958	21.8	10.4	11.4	3.0	8.4	51.7	41.3	38.3	29.9	57.8
1959	15.1	7.0	8.1	2.6	5.5	50.8	43.8	41.2	35.7	70.3
1960	18.2	9.2	9.0	2.5	6.5	54.5	45.3	42.8	36.3	66.6
1961	20.6	11.2	9.4	3.0	6.4	45.1	33.9	30.9	24.5	54.3
Washington, D. C.:										
1958	24.9	13.8	11.1	3.0	8.1	56.6	42.8	39.8	31.7	56.0
1959	17.9	6.7	11.2	3.0	8.2	52.6	45.9	42.9	34.7	66.0
1960	22.9	12.3	10.6	2.8	7.8	59.1	46.8	44.0	36.2	61.3
1961	27.8	12.1	15.7	3.8	11.9	48.6	36.5	32.7	20.8	42.8

1/ Weight range for medium size turkeys is 8-16 pounds. 2/ Prices to city receivers are: Wholesale selling prices for New York and Chicago; and f.o.b. delivered city prices for St. Louis, Los Angeles and Washington.

explanations for the decreasing farm-to-receiver spreads from 1956-60 may be: (1) Concentrations of turkey processing in fewer but larger plants; (2) movements toward more complete vertical integration or market coordination in the turkey industry; and (3) innovations in equipment and technology which reduced costs.

Farm-to-receiver spreads widened 3 cents a pound on medium turkeys from 1960 to 1961. This may be the result of some peculiar circumstances. Usually, there is an excess of processing capacity in the turkey industry on an annual basis, but this capacity is used rather fully during the few months preceding the Thanksgiving and Christmas holidays. More turkeys were produced in 1961 than in any year on record, and production was about 26 percent higher than in 1960. During the fourth quarter of 1961, turkey processing plants were jammed to capacity, and processing of some flocks had to be delayed. Some firms are known to have widened their processing charges. This may have been due to higher aggregate costs because of more overtime pay and an increase in birds custom-processed for growers for storage in their own account. These circumstances may explain most of the widening of the farm-to-receiver spread from 1960-61.

Turkey prices advertised in newspapers by leading supermarkets in major U. S. cities generally were higher for the Christmas than for the Thanksgiving holidays. These advertised prices for the holidays were often several cents a pound lower than prices shown in table 5.

Farm shares of retail prices for turkeys were reasonably similar among cities (table 5).

SELECTED REFERENCES

(1) Conologue, R. M.
1957. Marketing Costs and Margins for Chicken Fryers, and Fowl Sold in Chicago and Minneapolis - St. Paul. U. S. Dept. Agr. Mktg. Res. Rpt. 195, 31 pp., illus. November.

(2) _____
1959. Candling and Cartoning Eggs at Country Plants. U. S. Dept. Agr. Mktg. Res. Rpt. 366, 16 pp. December.

(3) _____, and Gray L. R.
1956. Who Gets the Money for Eggs? Agr. Mktg., U. S. Dept. Agr., pp. 10-11. November.

(4) _____, and Kaiser, W. K.
1958. Price Spreads for Eggs in Washington, D. C. Mktg. and Transportation Situation, U. S. Dept. Agr., Agr. Mktg. Serv., MTS-128, pp. 28-32, reprinted as AMS-224. January.

(5) _____, and Manson, R.
1956. Marketing Margins for Poultry and Eggs. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-120, pp. 21-30, reprinted as AMS-112. January.

(6) Gale, H. F.
1961. Seasonal Variation in Farm Food Prices and Price Spreads. U. S. Dept. Agr. Misc. Pub. 840, 47 pp., illus. January.

(7) Gray, L. R.
1957. Marketing Margins for Poultry and Eggs in the United States and Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-124, pp. 16-29, illus., reprinted as AMS-170. January.

(8) _____
1959. Marketing Spreads for Turkeys in Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-133, pp. 26-31, reprinted as AMS-308. April.

(9) _____
1959. Marketing Costs and Price Spreads for Eggs, Frying Chickens, and Turkeys Sold in San Francisco. U. S. Dept. Agr. Mktg. Res. Rpt. 314, 44 pp., illus. April.

(10) _____
1960. Marketing Spreads for Eggs and Frying Chickens in the United States and Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-136, pp. 19-27, illus., reprinted as AMS-296 (1960). January.

(11) _____
1960. Marketing Spreads for Turkeys in selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-138, pp. 19-24, reprinted as AMS-308 (1960). July.

(12) _____
1960. Price Spreads, Costs and Marketing Channels for Eggs and Poultry Sold in Trenton, N. J. U. S. Dept. Agr., Mktg. Res. Rpt. 434, 24 pp., illus. October.

(13) _____
1961. Marketing Spreads for Turkeys in Selected Cities. U. S. Dept. Agr., Econ. Res. Serv., MTS-141, pp. 37-42, illus., reprinted as ERS-5 (1961) (Pub. in 1960 as AMS-308). April.

(14) _____, MacPherson, D. D., and Phillips, V. B.
1961. Prices and Price Spreads for Beef, Eggs, and Fluid Milk in Selected Markets of the United States and Europe. U. S. Dept. Agr., Econ. Res. Serv., ERS-37, 20 pp., illus. December.

(15) _____, and Mitchell, W. L.
1959. Marketing Spreads for Eggs and Frying Chickens in the United States and Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-132, pp. 20-27, reprinted as AMS-296. January.

(16) _____, and Mitchell, W. L.
1961. Marketing Spreads for Eggs and Frying Chickens in the United States and Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-140, pp. 15-22, illus., reprinted as AMS-296 (1961). January.

(17) _____, and Pritchard, N. T.
1958. Farm-Retail Spreads for Poultry and Eggs in the United States and Selected Cities. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-128, pp. 19-27, reprinted as AMS-227. January.

(18) Ogren, K. E.
1957. Farm-Retail Spreads for Food Products. U. S. Dept. Agr. Misc. Pub. 741, 165 pp., illus. November.

(19) Organization for European Economic Cooperation.
1959. Marketing and Distribution Margins for Eggs in O.E.E.C. Countries. O.E.E.C. European Productivity Agency, Documentation in Food and Agr., 1959 Ser. No. 16, 57 pp., illus.

(20) Rinear, E. H.
1956. Marketing Margins for Turkeys. U. S. Dept. Agr., Agr. Mktg. Serv., MTS-121, pp. 36-39. April.

(21) _____
1957. Marketing Margins and Practices for Turkeys Sold in Three Eastern Markets. U. S. Dept. Agr. Mktg. Res. Rpt. 191, 36 pp., illus. August.

(22) Rogers, G. B., and Bardwell, E. T.
1959. Marketing New England Poultry. 2. Economies of Scale in Chicken Processing. Univ. New Hampshire, Agr. Expt. Sta. Bul. 459, 62 pp., illus. April.

(23) _____, and Rinear, E. H.
1961. Costs and Efficiency in Turkey Processing Plants. U. S. Dept. Agr., Econ Res. Serv., ERS-26, 11 pp. August.

(24) Royal Commission, Ottawa, Canada
1959. Report of the Royal Commission on Price Spreads of Food Products, Ottawa, Canada, Vol. II. 266 pp., illus. September. (Also Vol. III, Mar. 1960, 565 pp.)

(25) Saunders, R., and Stoddard, E., II.
1960. Effects of Fryer Specials on Supermarket Sales and Profits. Univ. Maine, Agr. Expt. Sta. Misc. Pub. 643, 14 pp. September.

(26) Snitzler, J. R., and Byrne, R. J.
1958. Interstate Trucking of Fresh and Frozen Poultry Under Agricultural Exemption. U. S. Dept. Agr. Mktg. Res. Rpt. 224, 88 pp. March.

(27) U. S. Agricultural Marketing Service
1961. Dairy and Poultry Marketing Statistics, April 1960. U. S. Dept. Agr. Statis. Bul. 280, 78 pp., illus. (Similar compilations of market statistics were released for prior years.)