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**Major Marketing Channels  
for SHELL EGGS in  
18 Metropolitan Areas**



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Washington, D. C.

February 1965

## PREFACE

This is the fourth of a series of reports on the movement of shell eggs through major marketing channels in 18 large metropolitan areas of the United States. Earlier reports presented details on Baltimore, Boston, Chicago, Los Angeles, New York City, Philadelphia, Pittsburgh, Portland-Vancouver, and Seattle. This report is a summary for these cities and also contains previously unpublished information for Atlanta, Birmingham, Detroit, Kansas City, Miami, Minneapolis-St. Paul, New Orleans, and St. Louis. The study is part of a broad program of research to obtain basic information on egg marketing.

Personnel of the Dairy and Poultry Market News Branch of the Agricultural Marketing Service provided valuable assistance in obtaining information for completion of this study.

On the basis of this study and other information, the Agricultural Marketing Service initiated a series of reports on the movement of eggs into retail channels. This study was based on information furnished by many firms; their cooperation is appreciated.

Previous publications in this series of studies were:

Pedersen, John R., Mitchell, William L., and Pritchard, Norris T., "Movement of Shell Eggs into Retail Channels in the Chicago Metropolitan Area." U. S. Dept. Agr., Agr. Mktg. Serv., AMS-338, 12 pp., Sept. 1959.

Pedersen, John R., and Mitchell, William L., "Reporting Shell Egg Movements into Retail Channels in Four West Coast Cities," U. S. Dept. Agr., Econ. Res. Serv., ERS-30, 28 pp., Sept. 1961.

Pedersen, John R., and Mitchell, William L., "Shell Egg Market Structure in Five Eastern Metropolitan Areas," U. S. Dept. Agr., Econ. Res. Serv., ERS-18, 51 pp., June 1963.

## DEFINITIONS OF TERMS

Some of the terms used in this report to describe the kinds of firms encountered are peculiar to the egg industry. The terms are defined below to avoid confusion. Some small differences can be found between the definitions for this 18-area summary and those in earlier reports in this series. Combinations of terms are used frequently in this report to indicate the performance of more than one function. There is considerable overlapping in functions performed, but the terms relate to the major ones.

Producing: Individuals and firms whose main function is producing eggs. However, they may also perform shipping or distributing functions.

a. Producers.--Individuals or firms who produce eggs.

b. Producer-shippers.--Individuals or firms who produce eggs and also ship them to distant markets. Typically, these eggs are shipped in 600 case or more truckload lots to warehouses of food chains or to wholesale distributors. Some of the eggs may be purchased from other producers, assemblers, or wholesalers. These firms may candle and grade the eggs, and ship loose or cartoned packs.

c. Producer-distributors.--Individuals or firms who produce eggs and also sell to retail outlets and consumers. Some of the eggs may be purchased from other producers, assemblers, or wholesalers. These individuals or firms typically candle and grade the eggs and deliver in loose or cartoned packs to retail outlets or consumers.

Assembling: Individuals and firms whose main function is assembling eggs. They may also perform producing, shipping, or distributing functions.

a. Assembler-shippers.--Persons or firms who assemble eggs from producers, grade the eggs, and ship loose or cartoned packs to food chains or wholesale distributors in distant markets. Firms who assemble and pack eggs and distribute to retail warehouses or individual stores, and who are located relatively close to the consuming areas they service, are often referred to as assembler-distributors.

Distributing: Individuals and firms whose main function is distributing eggs to retail outlets and others. They may also perform producing, assembling, wholesaling, jobbing, and brokerage functions.

a. Wholesale distributors.--Persons who receive eggs from their own production, producers, producer-shippers, and assembler-shippers. They receive eggs mainly in truck lots, but may receive some in less than truck lots. They may repack, grade, or candle and carton the eggs. They sell loose and cartoned packs. They serve retail outlets and a variety of other outlets. They may perform wholesaling, jobbing, or brokerage functions.



Retailing: All firms that sell or serve eggs to consumers, including independent retailers, food chains, milk distributors, commercial eating places, and institutional eating places.

a. Independent retailers.--Individually owned stores whose main incomes are from grocery items.

b. Food chains.--These consist of three kinds: corporate, cooperative, and voluntary.

1. Corporate food chain.--A food chain with three or more retail stores that have incorporated and own a warehouse distribution center.

2. Cooperative food chain.--A food chain of independently-owned retail stores whose owners are stockholder members of a cooperative wholesale purchasing and distribution center.

3. Voluntary food chain.--A food chain of independent retail stores that belong to a voluntary merchandising group sponsored by an independent wholesale grocer.

c. Milk distributors.--Firms that receive the major part of their income from the sale of milk products.

d. Commercial eating places.--All hotels, restaurants, cafes, and similar establishments, including restaurant chains with three or more outlets.

e. Institutional eating places.--All hospitals, nursing homes, factory cafeterias, prisons, schools, and similar establishments.

Supplying Special Markets: Firms selling eggs to the military, foreign buyers, breakers, and liquid egg users.

## SUMMARY

This is a summary report of the major movement of shell eggs in 18 large metropolitan areas of the United States. It also contains previously unpublished information for eight of the cities. It presents benchmark data on the number and sizes of firms handling shell eggs and the marketing channels through which eggs flow.

Information on volume of eggs handled and marketing functions performed was obtained through mail surveys of all firms thought to be handling 200 or more cases of eggs per month. The major types of firms surveyed were wholesale and producer-distributors, food chain stores, milk distributors, and restaurant chains. A total of 2,540 respondent firms handled 4.7 million cases of eggs during the survey month. Wholesale and producer-distributors were the largest group, accounting for 57 percent of the responding firms and 67 percent of the volume. Food chain stores were the second largest group, accounting for 15 percent of the firms and 28 percent of the volume.

When the wholesale and producer-distributors were arrayed by volume of eggs handled, two-thirds of the eggs were handled by the 101 firms in the largest size group--those handling 6,800 or more cases per month. A similar tendency was noted for food chains. The 51 food chains in the largest size group handled 72 percent of the eggs handled by food chains. This characteristic was not as apparent among the milk distributors or restaurant chains.

Sources of eggs for the four kinds of firms surveyed were: producers 40 percent, assembler-shippers 57 percent, and own production 3 percent.

When duplication was eliminated in handling eggs among the various kinds of firms surveyed, a net movement of 3.7 million cases of eggs went to retail and other outlets. Almost half of this volume went to food chain stores, with independent retailers the second largest outlet.

During the study period (1958-61), the predominant marketing channel for the 18 metropolitan areas was from producers to country assembler-shippers to wholesale and producer-distributors, and to food chain stores and independent retailers. This is a shorter marketing channel than existed in earlier years. Moreover, a further shortening of the marketing channels was in progress during the years of this study and afterwards. This occurred mainly because many chain-store organizations were closing down their candling, cartoning, and consumer-grading operations. Instead, they were relying more on direct shipments from assembler-shippers and producer-shippers, and were bypassing terminal market wholesale distributors.

Considerable geographic variation was apparent in the sources of eggs received in the 18 cities. Most cities received the bulk of their eggs from their own or adjacent States. But cities in deficit production areas had to reach further out.

For the 18 metropolitan areas as a whole, five out of six cases of eggs were received as loose packs and one out of six were received as consumer-cartoned packs. However, a considerable amount of consumer-grading and carton-ing was done in the cities. Of the net movement into retail outlets, 74 percent, or 2.2 million cases, was consumer-graded and cartoned.

The report concludes with brief summaries of the findings for each of the metropolitan areas studied.

MAJOR MARKETING CHANNELS FOR SHELL EGGS  
IN 18 METROPOLITAN AREAS

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INTRODUCTION

This report presents information on the movement of shell eggs through major marketing channels in 18 large metropolitan areas of the United States. It is a summary report but also contains information previously unpublished for eight of the cities. The kinds of firms handling shell eggs, their number, size, and location are presented. The flow of the eggs through the cities is traced.

As eggs move through marketing channels, various marketing functions may be performed by several different kinds of firms. Marketing channels varied in their complexity within and among the 18 cities studied. In the simplest channel the eggs move directly from producers to consumers. In the most complex, the eggs move from producers to country buying stations to country assembler-shippers to city wholesale distributors to retail stores and finally to consumers. The predominant marketing channel, at the time of this study, was the one where eggs were assembled from producers by assembler-shippers, who shipped in truckload lots (600 or more 30-dozen cases) to wholesale and producer-distributors. These firms in turn sold their eggs to a variety of outlets, but the most important were food chains and independent retailers. Recently, there has been a tendency for large-volume producer-distributors to replace the assembler-shippers. Another variation is where the large-volume producer-distributor or assembler-shipper is able to service individual retail stores directly. In this situation, both the wholesale distributor and the warehouse of the large-volume retailer are bypassed.

Shifts in the location of consumer-grading and cartoning are of prime importance in explaining changes in egg marketing channels. In the oldest marketing system, these operations were performed primarily by wholesalers. As the volume of eggs handled by food chains increased, they began performing these operations in their city warehouses. This resulted in their being able: (1) to bypass the wholesalers and jobbers, and (2) to maintain closer control over the kind and quality of the eggs being offered to their customers. Later, as a result of many improvements in production and marketing processes, assembler-shippers, large-volume producer-shippers and producer-distributors demonstrated that they could do consumer-grading and cartoning satisfactorily. Thus, they were able to offer the kinds and qualities of eggs needed by the food chains. Furthermore, they were able to do so at country points at lower costs than the city-operated candling rooms of food chains. <sup>1/</sup> Thus, in recent years

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<sup>1/</sup> Conlogue, R. M., Candling and Cartoning Eggs at Country Plants. U. S. Dept. Agr., Mktg. Res. Rpt. 366, Dec. 1959.

a tendency for decentralization of the consumer-grading and cartoning operations toward country points has occurred.

### Procedure

All firms or persons handling 200 cases or more of eggs per month in the 18 cities were surveyed to obtain information on volume handled and marketing functions performed. This was done by a mail survey, followed by telephone calls and personal visits to nonrespondents. From the information obtained, a statistical universe of firms was established for each standard metropolitan area. Then, volume-movement information was obtained weekly from a reporting sample of these firms. From this procedure, it was possible to prepare weekly estimates of total eggs moving into retail channels. After demonstrating that these estimates could be made reliably on a week-to-week basis, the function was transferred to the Dairy and Poultry Market News Branch of Agricultural Marketing Service. Thus, through research, a new source of marketing information was established. Such information can help firms in the industry to arrive at marketing decisions in response to short-run changes in demand. It can also help individual firms to evaluate their position in the market through time.

Weekly reports of egg movements into retail outlets were initiated in 16 of the 18 metropolitan areas. However, by August 1964, because of the difficulty of obtaining adequate continuing coverage, weekly reports were being released for only 12 metropolitan areas: Atlanta, Boston, Chicago, Detroit, Kansas City, Los Angeles, New Orleans, New York, Pittsburgh, Portland-Vancouver, San Francisco, and St. Louis.

Earlier reports in this series gave considerable detail on methodology. This summary report is concerned mainly with structure of the markets and marketing channels. Earlier reports described in detail the results found in Baltimore, Boston, Chicago, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, and Seattle. The appendix of this report contains detailed tables for the other cities--Atlanta, Birmingham, Detroit, Kansas City, Miami, Minneapolis-St. Paul, New Orleans, and St. Louis.

### Volume Covered By The Study

For all of the 18 metropolitan areas studied, the net movement of eggs into retail outlets was 76 percent of the estimated consumption. <sup>2/</sup> Based on the 1960 population, net movement of eggs into retail outlets in the 18 metropolitan areas represented 24 percent of estimated consumption of shell eggs for the entire United States.

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<sup>2/</sup> For purposes of deriving the approximate proportion of volume covered by firms above a certain size, the "net movement of eggs into retail outlets" was compared with estimated consumption. "Net movement of eggs into retail outlets" was derived by deleting the movement of eggs to breakers and "all other" outlets from the net movement of eggs into retail and other outlets. Continued-----

Movement of eggs into retail outlets, as a percentage of estimated consumption, was lower for the Midwestern cities than for the Southern cities (table 5 in the Appendix). In three of the Midwestern cities, less than 50 percent of the estimated consumption was accounted for by the movements of eggs into retail channels. In contrast, three of the Southern cities showed more than 90 percent of the estimated consumption accounted for by the movements into retail outlets.

The range among the cities was from a low of 42 percent in St. Louis to a high of 148 percent in Miami. The median city was Baltimore, with 75 percent. The relative position of the low cities may be explained by a greater-than-usual amount of direct selling by farmers and peddlers to stores and housewives. The high percentage for Miami may be explained by its ever-present tourists.

#### NUMBER AND SIZES OF FIRMS

In the 18 metropolitan areas surveyed, 2,540 respondent firms handled 4.7 million cases of eggs during the survey month. Each metropolitan area was surveyed separately and information was requested for a recent month to minimize memory bias. Thus, the survey month varied for most of the metropolitan areas.

The major kinds of firms included in the surveys were wholesale and producer-distributors, food chains, milk distributors, and restaurant chains. Volume of eggs handled was obtained from these kinds of firms located within the metropolitan areas surveyed, plus the volume these firms reported receiving from firms outside of the metropolitan areas, mainly from producer-shippers and assembler-shippers.

Wholesale and producer-distributors accounted for 57 percent of the responding firms and 67 percent of the volume of eggs handled. The second largest group, the food chains, accounted for 15 percent of the firms and 28 percent of the volume (table 1). Table 4 in the Appendix gives the same information for the eight metropolitan areas for which data were not previously published.

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2/-Continued Estimated consumption of eggs was obtained by multiplying the number of people within each standard metropolitan area by the U. S. average per capita consumption. The standard metropolitan areas used were those defined by the Bureau of the Census, and population for them was obtained from the same source. Per capita consumption estimates were obtained from the Economic and Statistical Analysis Division of the Economic Research Service.

Possible sources of error between estimated and actual consumption might be: (1) Firms within the metropolitan areas may have sold eggs to outlets outside of the metropolitan areas, particularly during certain seasons of the year; (2) per capita consumption undoubtedly varied among metropolitan areas; (3) sales of eggs by farmers and small-volume egg handlers to retail and other outlets varied considerably from one metropolitan area to another; (4) although a diligent attempt was made to obtain information from all firms above a minimum size, the possibility still remains that a few were not included; and (5) time of year when survey was made.

Table 1.--Number of firms and volume of eggs handled by respondents to the surveys, 18 metropolitan areas, 1958-61

Kind of firm	Firms		Volume handled per month	
	Number	Percent	1,000 cases	Percent
Wholesale and producer distributors.....	1,459	57.4	3,168	66.9
Corporate, voluntary, and cooperative food chains.....	370	14.6	1,343	28.4
Milk distributors.....	571	22.5	195	4.1
Restaurant chains.....	140	5.5	30	.6
Total.....	2,540	100.0	4,736	100.0

The four kinds of firms were classified by the number of cases of eggs handled per month. The largest number of wholesale and producer-distributors fell within the group handling 400-1,199 cases per month. However, almost two-thirds of the volume was handled by the 101 distributors in the 6,800-cases-or-more-per-month size group--the largest size group (table 2). The food chains exhibited a similar tendency. The largest number of them fell in the 100-399 case-per-month size group. But the 51 chains handling 6,800 cases per month or more accounted for more than 70 percent of the eggs handled by all food chains. More than half of the milk distributors handled less than 100 cases of eggs per month. The five largest firms, those handling more than 6,800 cases per month, accounted for about one-third of the volume handled by all of the milk distributors. Thus, the largest milk distributors handled a smaller proportion of total volume for the group than did the largest food chains and the largest wholesale and producer-distributors. Among the restaurant chains, the largest number fell in the less-than-100-case-per-month size group. These firms were not as large in egg handling as the other kinds of firms. The seven largest restaurant chains fell in the 1,200-3,599-case-per-month group, but they accounted for almost half of the volume handled by all of the restaurant chains.

#### SOURCES AND OUTLETS

The main sources of eggs, for the four kinds of firms surveyed in the 18 metropolitan areas, were producers, country assembler-shippers, and their own production. Of their total receipts, 40 percent was from producers, 57 percent from country assembler-shippers, and 3 percent from their own production. There was also some back-movement, i.e., some eggs moved from chainstores back to wholesale distributors. Usually, such eggs are not put into consumer cartons and must be sold to other types of outlets, such as egg breakers.

Table 2.--Number of firms and volume of eggs handled by major kinds of firms, distributed by size groups, 18 metropolitan areas, for survey months, 1958-61

Size groups	Wholesale and producer distributors		Food chains		Milk distributors		Restaurant chains		Total
	Number	Cases per month	Number	Cases	Number	Cases	Number	Cases	
Less than 100 cases..	190		59		338		80		667
100 to 399 cases.....	415		80		138		42		675
400 to 1199 cases....	432		76		67		11		586
1200 to 3599 cases...	244		75		19		7		345
3600 to 6799 cases...	77		29		4		---		110
6800 cases and up....	101		51		5		---		157
Total.....	1,459		370		571		140		2,540
Total volume handled per month									
Less than 100 cases..	9,001		3,169		11,206		2,800		26,176
100 to 399 cases.....	91,024		19,084		27,838		7,904		145,850
400 to 1199 cases....	289,608		49,992		41,392		7,048		388,040
1200 to 3599 cases...	481,582		152,026		38,116		12,142		683,866
3600 to 6799 cases...	376,455		145,586		18,015		---		540,056
6800 cases and up....	1,920,656		973,176		58,423		---		2,952,255
Total.....	3,168,326		1,343,033		194,990		29,894		4,736,243



Among the 18 metropolitan areas studied, there was considerable geographic variation in the sources of the eggs received. Most of the metropolitan areas received the bulk of their eggs from their own and adjacent States. However, the metropolitan areas in deficit production areas had to reach out farther. Estimated surpluses and deficits of eggs by States are shown in figure 1. One can deduce from this map the major flows of eggs, i.e., from the Midwest to the East and South, and from the Southeast to the Northeast. The major geographical sources of egg receipts for the individual metropolitan areas are given later in this report.

The surveyed firms reported that they handled 4.7 million cases of eggs during the month of the surveys (table 1). There was considerable duplication in the handling of these eggs. This occurred for two main reasons: (1) When one of the four kinds of firms surveyed sold eggs to another of the four kinds of firms surveyed, e.g., wholesale distributors sold to a food chain, and (2) when one of the four kinds of firms surveyed sold to another firm of the same kind, e.g., one wholesale distributor sold to another wholesale distributor. When duplication was eliminated, a net movement of eggs into retail and other outlets was obtained. On this basis, the firms surveyed handled a net movement of 3.7 million cases of eggs during the month of the surveys (table 3).

Almost half of this volume moved to food chains. Independent retailers were the second largest outlet. However, the volume of eggs that moved to independent retailers was undoubtedly an understatement of the total volume of eggs handled by them. They were not among the kinds of firms intended to be surveyed in this study. Volumes were also probably understated for commercial eating places, institutional eating places, and egg breakers. Nevertheless, the data in table 3 are probably representative of egg movements to such outlets by the four major kinds of firms surveyed. The category of "all other outlets" included sales of eggs to military, to liquid egg users such as bakeries, to export outlets, and to firms outside the metropolitan areas surveyed.

The aggregate movements of shell eggs for 17 metropolitan areas are shown in figure 2. This figure emphasizes the importance of the four major kinds of egg-handling firms. The numbers in figure 2 are somewhat different from those in table 3, because the data for Chicago were gathered on a basis incompatible with those for the other 17 metropolitan areas. Hence, Chicago data were not included in figure 2.

#### IMPORTANCE AND LOCATION OF CARTONING

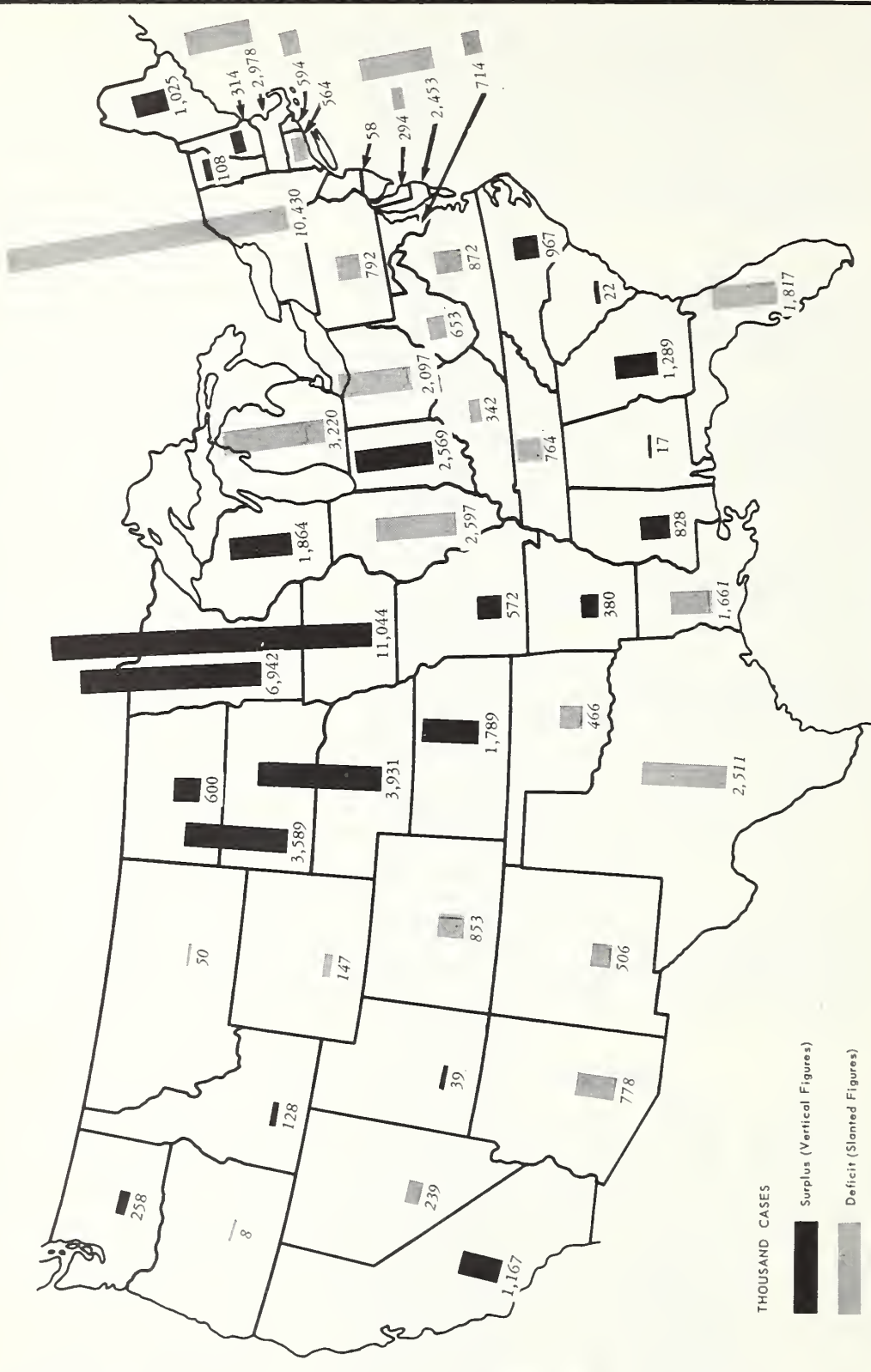
For many years, eggs have been assembled from farmers by various kinds of egg handlers. However, most eggs were eventually accumulated by country assembler-shippers. They typically removed the dirty and cracked eggs and sorted the remaining eggs into wholesale grades. The wholesale-graded eggs were then shipped in truckload lots to wholesale distributors or large-volume retailers. These firms would then grade the eggs into the consumer grades of AA, A, B, and C, and put the top grades into cartons. However, some consumer-graded eggs, the checks and dirties, were not put into cartons but sold on a loose

Table 3.--Net movement of eggs into retail and other outlets by kind of firm surveyed in 18 metropolitan areas, cases per month, 1958-61

Kind of firms	Distribution to retail and other outlets												
	Food chains	Independent : retailers	Milk distributors	Commercial: eating : places	Institutional: eating : places	Own : retail : routes	Egg breakers	All other outlets	Total	Cases	Cases	Cases	Cases
Wholesale and producer distributors.....	629,329	757,666	135,470	285,225	135,103	72,248	102,939	2,735,074	617,094	2,735,074			
Food chains.....	903,979	200	---	---	---	---	8,571	925,661	12,911	925,661			
Milk distributors.....	4,073	3,133	64,295	2,026	63	---	958	87,082	8,462	87,082			
Restaurant chains.....	---	---	---	3,351	---	---	---	3,351	---	3,351			
Total.....	3/1,537,381	760,999	3/199,765	290,602	135,166	72,248	112,468	3,747,096	640,094	3,747,096			

1/ Net movement of shell eggs into retail channels was defined differently for Chicago; thus none of the movement reported sold by wholesale distributors to food chains in Chicago is included in this figure.  
 2/ A part of this volume was moved to egg breakers and sales between wholesale distributors in Chicago.  
 3/ The volume shown in table 3 exceeds that shown in table 1 for several possible reasons: (a) In some instances the volume reported sold to food chains by wholesale distributors was larger than the volume reported by the food chains as purchased from the wholesale distributors. When this occurred, the larger volume was used in table 3. (b) Since both buyers and sellers reported estimated volumes, an error of estimate may be present. (c) It is possible that some of the wholesale distributors included brokerage sales in their total sales.

# SURPLUSES AND DEFICITS OF EGGS, BY STATES, 1960



THOUSAND CASES  
 Surplus (Vertical Figures)  
 Deficit (Slanted Figures)

NEG. ERS 3454-65(1)

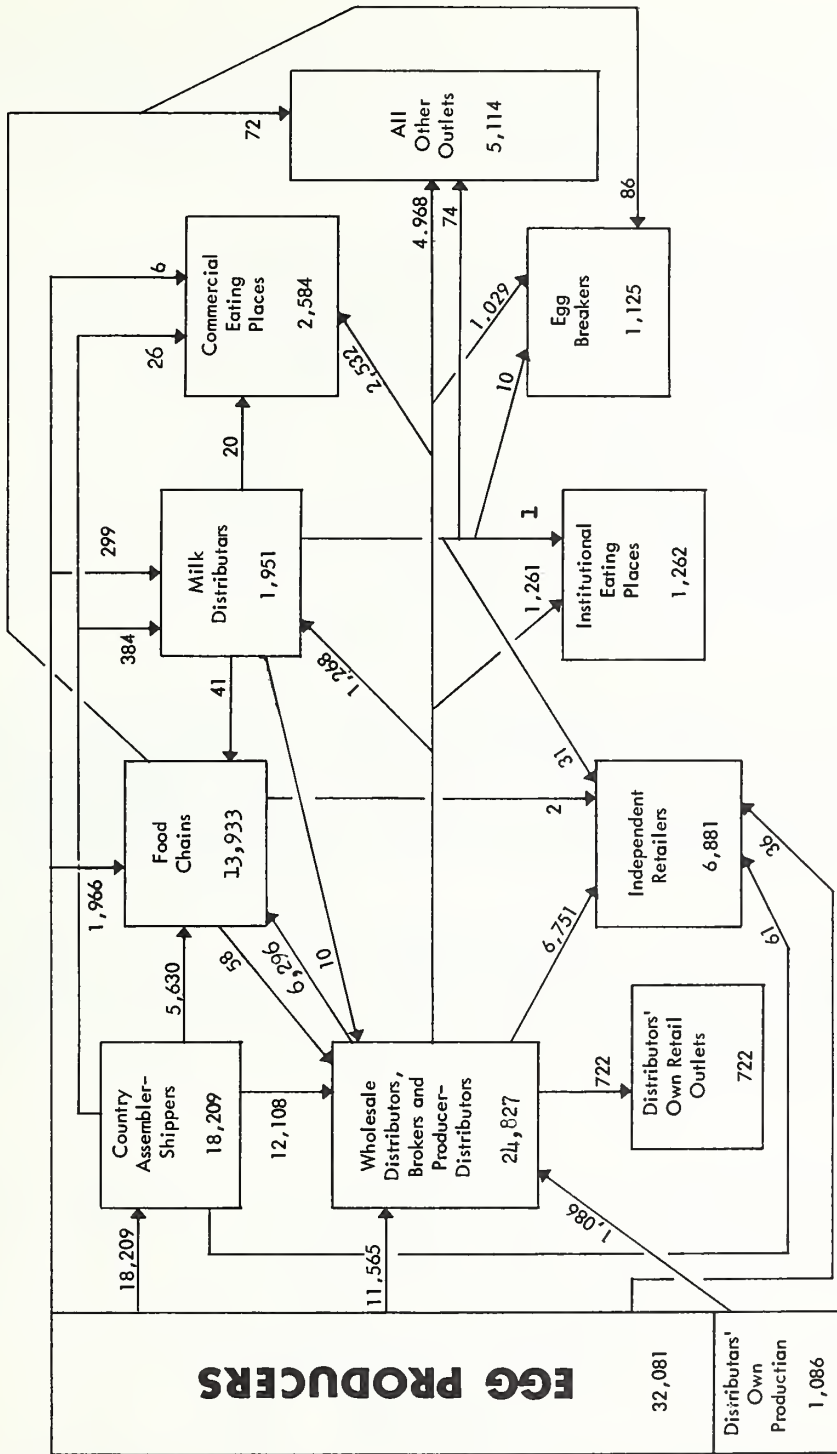
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Figure 1

In 17 Large Metropolitan Areas, Specific Months, 1959-61\* (Chicago not included)

# SHELL EGG MARKETING CHANNELS



\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3455-65(1) ECONOMIC RESEARCH SERVICE

Figure 2.

basis. Through the years, there has been a trend toward more consumer-grading and cartoning, with a decreasing proportion being sold to consumers as loose eggs.

As noted earlier, these operations have been shifting from the wholesale distributors to the food chain store warehouses, and most recently to the assembler-shippers. The latter shift was occurring during the years this study was being conducted and present conditions are, therefore, not fully reflected in the survey data.

For the 18 metropolitan areas as a whole, 681,822 cases were received in consumer cartons and 3,065,274 were received as loose packs. The cartoned packs can be further subdivided into 596,960 cases received from country shippers and 84,862 cases received from producers. Of the eggs received as loose packs in the 18 areas, 1,547,037 cases were put into cartons. When the receipts of cartoned eggs are combined with eggs put into cartons from loose packs, it was found that this totaled 2,228,859 cases, or 74 percent of the net movement to retail outlets. Table 6 in the Appendix gives the same information for the eight metropolitan areas for which data were not previously published. Nearly all of the loose-packed eggs (30 dozen per case) were sold to outlets such as hotels, restaurants, institutions, egg breakers, military installations, and exporters.

#### METROPOLITAN AREA SUMMARIES

A brief summary is presented for each of the metropolitan areas studied. For each area, the predominant marketing channel or channels and the geographical sources of eggs are given. Estimates of principal areas supplying these markets were based on information from several sources, including the sample surveys. These estimates cover total receipts from all sources and hence differ somewhat from estimates in previous publications, which covered mainly country shippers.

The location and volume of consumer-grading and cartoning is also given. Variation is apparent in the location and performance of this essential marketing function. Detailed tables and flow charts of the marketing channels are presented in the Appendix for the eight cities for which such information has not been published previously.

#### Boston

The major flow of eggs in the Boston market in June 1960 was from producers to country assembler-shippers, and then to food chains. Wholesale distributors also handled an important volume. They received eggs from producers and country assembler-shippers and distributed them to a variety of outlets. About 90 percent of the eggs received in Boston came from the New England States, Maine being the most important. Virtually all of the remaining 10 percent came from the Midwest, principally Iowa and Minnesota. The food chains received loose and consumer-graded and cartoned 49,000 cases of eggs. Wholesale distributors similarly put into cartons 35,000 cases. An additional 31,000 cases of eggs consumer-graded and cartoned were received by all receivers from country shippers and producers.

## New York City

The main flow of eggs for the New York City market in October 1959 was from producers to country assembler-shippers to wholesale distributors. The latter then distributed the eggs to many outlets. A second important flow was the eggs going directly to food chainstores. Sources of eggs for them, in order of importance, were country shippers and then wholesale distributors. About half of the eggs received in New York came from the Midwest, principally Iowa and Minnesota. About two-fifths originated in New York, Pennsylvania, and New Jersey, and a substantial share of the remaining 10 percent from the South, mainly Georgia and North Carolina. The food chains received loose and consumer-graded and cartoned 229,000 cases, while the wholesale distributors did the same for 213,000 cases. An additional 169,000 cases of eggs consumer-graded and cartoned were received by all receivers from producers and country shippers. Thus, during the survey month, the food chains were still important in consumer-grading and cartoning.

## Philadelphia

The main flow of eggs for Philadelphia in May 1960 was from producers to country assembler-shippers to wholesale distributors. The latter also received a heavy flow of eggs directly from producers. Food chains also received important volumes from producers and country shippers. The wholesale distributors moved their eggs to many outlets, but the food chains were among the most important. About 70 percent of Philadelphia's eggs came from Pennsylvania and New Jersey. About 20 percent originated in Midwestern States, and most of the rest came from Southeastern States. The food chains received 23,000 cases of eggs loose and consumer-graded and cartoned them. Wholesale distributors received loose and consumer-graded and cartoned 77,000 cases of eggs. An additional 50,000 cases of eggs consumer-graded and cartoned were received by all receivers from producers and country shippers.

## Baltimore

Most eggs coming into the Baltimore metropolitan area in August 1960 went from producers to country assembler-shippers and then to wholesale receivers. The latter sold eggs to many outlets, with independent retailers apparently most important. Sources of eggs for food chains, in order of importance, were country shippers, wholesale distributors, and producers. Less than half of the eggs received in Baltimore came from the Midwest, more than 35 percent from Pennsylvania, Maryland, and Virginia, and more than 10 percent from States further south. The food chains received loose and consumer-graded and cartoned 20,000 cases of eggs. The wholesale distributors received loose, consumer-graded, and cartoned 21,000 cases. An additional 23,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and country shippers.

## Pittsburgh

The major movement of eggs in January 1960 in the Pittsburgh area was from producers to country assembler-shippers to wholesale distributors. An almost

equally important flow went from country assembler-shippers to food chains. Some farmer cooperatives near Pittsburgh market eggs through their own sales agency in Pittsburgh, contributing an important flow of eggs to wholesale channels. Independent retail stores were the most important outlet for wholesale distributors. Ohio supplied more than 40 percent of the eggs received in Pittsburgh. At least as much came from other Midwestern States, and only 10 percent from Pennsylvania and Maryland. The food chains did virtually no consumer-grading and cartoning. Wholesale distributors received loose eggs and consumer-graded and cartoned 16,000 cases of eggs. The bulk of the consumer-grading and cartoning of eggs was done by producers and country shippers, since they shipped 66,000 cases of such eggs to various receivers.

#### Detroit

The major flow of eggs in Detroit was from producers to country assembler-shippers to wholesale distributors and to food chains. Independent retail stores also received an important flow of eggs from wholesale distributors. About two-thirds of the eggs received in Detroit came from Michigan, Ohio, and Indiana. Almost all of the remaining one-third came from other Midwestern States. The food chains did no consumer-grading and cartoning of eggs. Wholesale and producer-distributors received loose and consumer-graded and cartoned 50,000 cases of eggs. An additional 83,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and country shippers. Clearly, in Detroit, the function of consumer-grading and cartoning had decentralized to the wholesale distributor, producer, and country shipper.

#### Chicago

The main flow of eggs from Chicago in June 1958 was from producers to assembler-shippers to wholesale distributors and/or food chains and finally to consumers. The food chains received over half of their eggs from assembler-shippers and the remainder from wholesale distributors. The wholesale distributors also moved substantial quantities to egg breakers, other area wholesalers, and to firms outside the metropolitan area. Within Chicago, the food chains were the most important outlet. More than 90 percent of the eggs received in Chicago came from Wisconsin, Iowa, Minnesota, and Illinois. The food chains did virtually no consumer-grading and cartoning. Of the eggs received by wholesale distributors, about 10 percent were purchased in consumer-graded and cartoned form. The wholesale distributors in the Chicago market did a substantial amount of consumer-grading and cartoning.

#### Kansas City

In March 1961 in Kansas City, the largest flow of eggs was from producers to country assembler-shippers to egg breakers. The second largest flow was from producers to egg breakers. Food chains were the next largest users of eggs, receiving most of their supplies from producers and wholesale and producer-distributors. Three large breakers of eggs are located in Kansas City. Virtually all of the eggs received were from Kansas, Missouri, and Iowa. The food chains received loose and consumer-graded and cartoned 7,000 cases of eggs. Similarly, the wholesale and producer-distributors consumer-graded and cartoned 18,000

cases. An additional 5,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and country shippers.

#### Minneapolis-St. Paul

In April 1961 in Minneapolis-St. Paul, the major flow of eggs was from producers to country assembler-shippers to food chains. None of the other flows were nearly as important. Almost all of the eggs came from Minnesota, but a small percentage came from Wisconsin. The food chains consumer-graded and cartoned less than 1,000 cases of eggs. Wholesale and producer-distributors received loose and consumer-graded and cartoned 6,000 cases of eggs. An additional 30,000 cases of consumer-graded and cartoned eggs were sent to all receivers by producers and country shippers.

#### St. Louis

In March 1961 in St. Louis, the major flow of eggs was from producers to wholesale and producer-distributors. From that level, the flows, in order of importance, were to independent retail stores, egg breakers, and food chains. Main States, in addition to Missouri, supplying eggs to the St. Louis market were Minnesota, Iowa, and Illinois. The food chains consumer-graded and cartoned less than 2,000 cases of eggs. Wholesale and producer-distributors received loose and consumer-graded and cartoned 35,000 cases of eggs. An additional 15,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and country shippers.

#### Atlanta

In October 1960 in Atlanta, the largest flow of eggs was from producers to wholesale and producer-distributors to firms outside the metropolitan area. The second largest flow was from producers to wholesale and producer-distributors to food chains. The bulk of the eggs reaching the Atlanta market originated in Georgia and adjacent States. About 10 percent came from Midwestern States. This market is unusual, because there are some large producers who do the consumer-grading and cartoning function and directly service individual stores of food chains, and others. Only 3,000 cases of eggs were received loose and consumer-graded and cartoned by food chains. Wholesale and producer-distributors consumer-graded and cartoned 45,000 cases of loose eggs. An additional 5,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and country shippers.

#### New Orleans

In October 1961 in New Orleans, the largest flow of eggs was from producers to country assembler-shippers to wholesale distributors to independent retail stores. The food chains were the second largest end-users of eggs. They received part of their eggs from country shippers and part from wholesale distributors. About three-fifths of the eggs received in the New Orleans market came from Louisiana, Mississippi, Alabama, and Texas. The rest came from Midwestern States. The consumer-grading and cartoning function was performed mainly by the wholesale



distributors, since the food chains did none. The wholesale distributors received loose and consumer-graded and cartoned 26,000 cases of eggs. An additional 14,000 cases of consumer-graded and cartoned eggs were received from producers and country shippers.

#### Birmingham

In October 1960 in Birmingham, the largest flow of eggs was from producers to food chains. The next largest flow was from producers to country shippers to wholesale and producer-distributors to firms outside the metropolitan area. About 55 percent of the eggs received in Birmingham came from Alabama, Mississippi, and Georgia. The rest was from the Midwest. The food chains brought in 4,000 cases of loose eggs and consumer-graded and cartoned them. Similarly, the wholesale distributors brought in 3,000 cases of eggs that they consumer-graded and cartoned. However, the largest volume of consumer-graded and cartoned eggs, 18,000 cases, were received from producers and country shippers.

#### Miami

In October 1961 in Miami, the largest flow of eggs was from producers to country assembler-shippers to wholesale and producer-distributors to food chains. The second largest flow followed the same route but ended at commercial eating places. Undoubtedly, this reflects the large tourist trade in Miami. About two-thirds of the eggs received in Miami came from Florida and adjacent States. More than 25 percent of the total came from the Midwest and over 5 percent from New York. The food chains received 16,000 cases of eggs loose in cases and consumer-graded and cartoned them. Similarly, the wholesale and producer-distributors received 23,000 cases that they consumer-graded and cartoned. An additional 19,000 cases of consumer-graded and cartoned eggs were received from producers, producer-distributors, and country shippers.

#### Seattle

In February 1959 in Seattle, the flow of eggs from producers was about the same to country assemblers and shippers, and to wholesale and producer-distributors. Most of the eggs handled by the country assemblers and shippers were sent to wholesale and producer-distributors. From that level, the largest distribution was to food chains, with independent retail stores the second largest outlet. About four-fifths of the eggs received in Seattle came from the State of Washington. Most of the rest came from Oregon and California. The food chains did no consumer-grading and cartoning. The wholesale and producer-distributors consumer-graded and cartoned 50,000 cases of loose eggs. Less than 1,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers, and country assemblers and shippers.

#### Portland-Vancouver

In June 1959 in Portland-Vancouver, the predominant flow of eggs was from producers to wholesale and producer-distributors to outlets outside the metro-

politan area. Within the metropolitan area, food chains and independent retail stores were the largest end-users of eggs, and they received about the same volume. The food chains received most of their eggs from producers. The independent retail stores were supplied mainly by wholesale and producer-distributors. Virtually all of the eggs received in the Portland-Vancouver market came from Oregon. The food chains received loose and consumer-graded and cartoned 9,000 cases of eggs. Similarly, the wholesale and producer-distributors consumer-graded and cartoned 15,000 cases of eggs. Less than 1,000 cases of consumer-graded and cartoned eggs were received from producers and local area country assemblers and shippers.

#### San Francisco

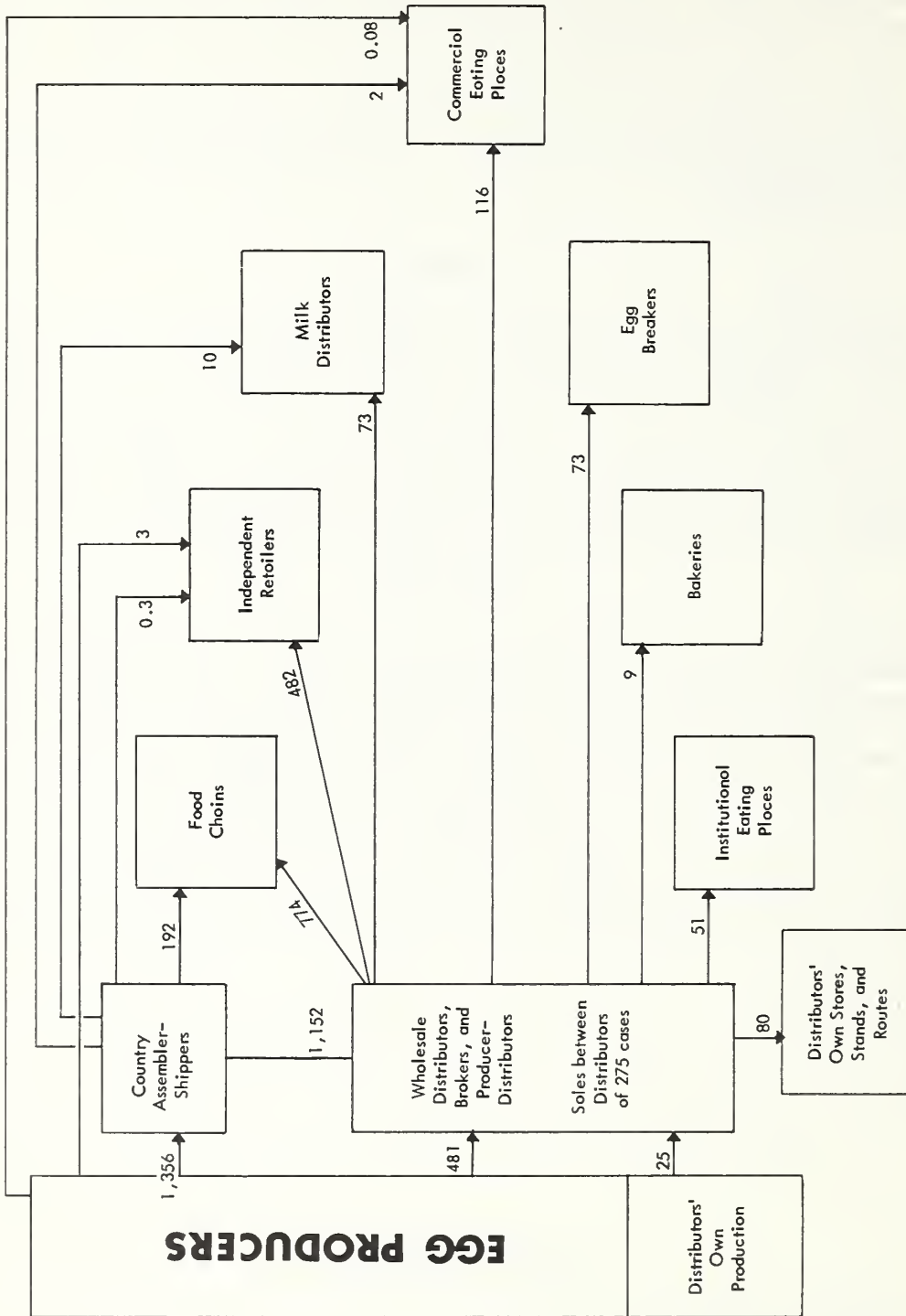
In March 1959 in San Francisco, the largest flow of eggs was from producers to wholesale and producer-distributors to chain food stores. Almost all of the eggs received in San Francisco came from within California. Only a minor percentage came from the Midwest. The food chainstores received loose and consumer-graded and cartoned 26,000 cases of eggs. Similarly, the wholesale and producer-distributors consumer-graded and cartoned 139,000 cases of eggs. An additional 30,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers and California country assemblers and shippers.

#### Los Angeles

In April 1961 in Los Angeles, the largest flow of eggs was from producers to wholesale and producer-distributors to independent retail stores. Food chainstores also received a large share of the flow. Most of their eggs came from wholesale and producer-distributors, but they also received a significant share from producers. Almost all of the eggs received in Los Angeles came from within California. Only a minor percentage came from the Midwest. The food chainstores received 33,000 cases of loose eggs, consumer-graded and cartoned them. Similarly, the wholesale and producer-distributors consumer-graded and cartoned 266,000 cases of eggs. An additional 21,000 cases of consumer-graded and cartoned eggs were received by all receivers from producers, and country assemblers and shippers.

In Detroit, November 1960\*

# SHELL EGG MARKETING CHANNELS



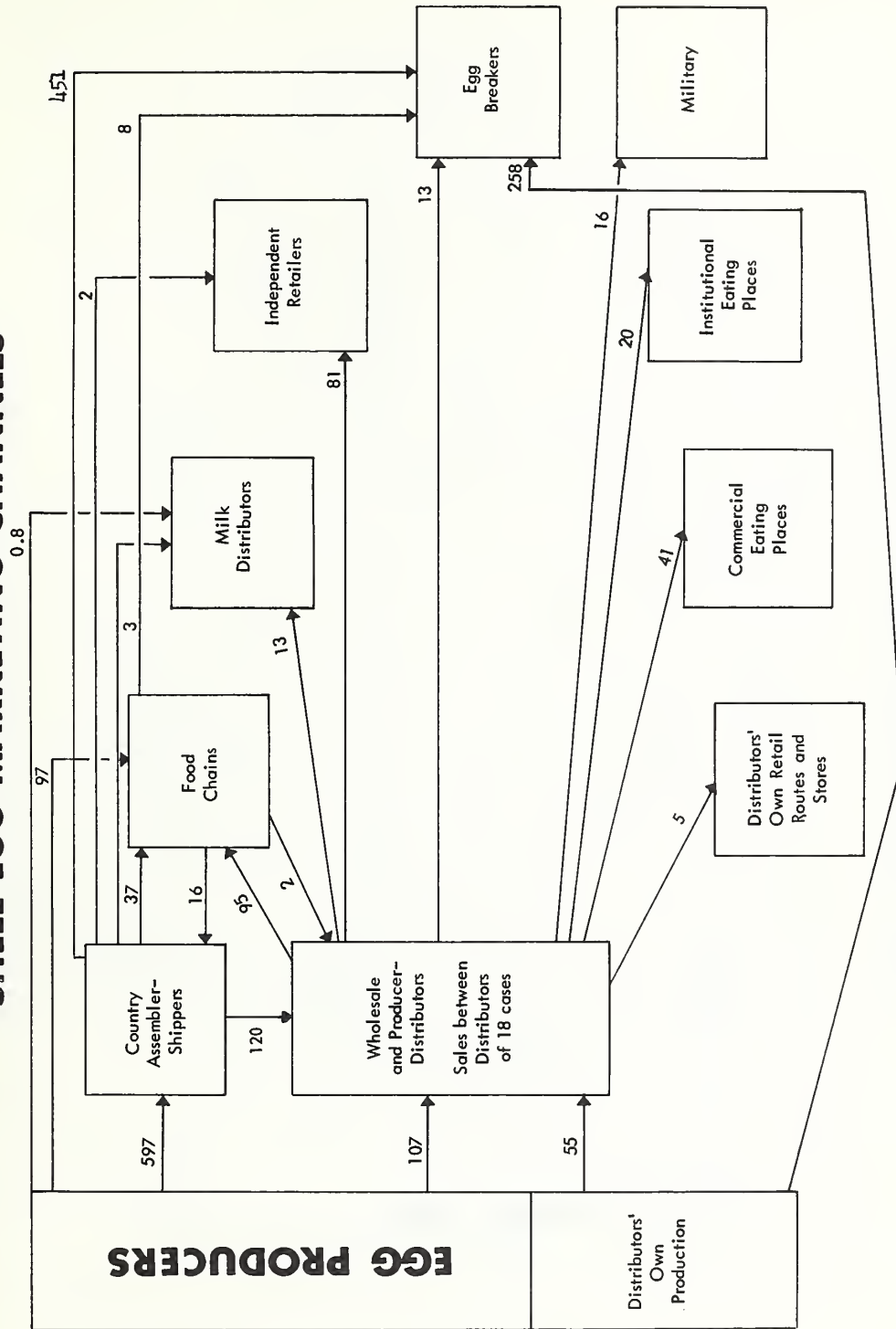
\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3456-65 (1) - ECONOMIC RESEARCH SERVICE

U. S. DEPARTMENT OF AGRICULTURE

Figure 3.

In Kansas City, March 1961\*

# SHELL EGG MARKETING CHANNELS

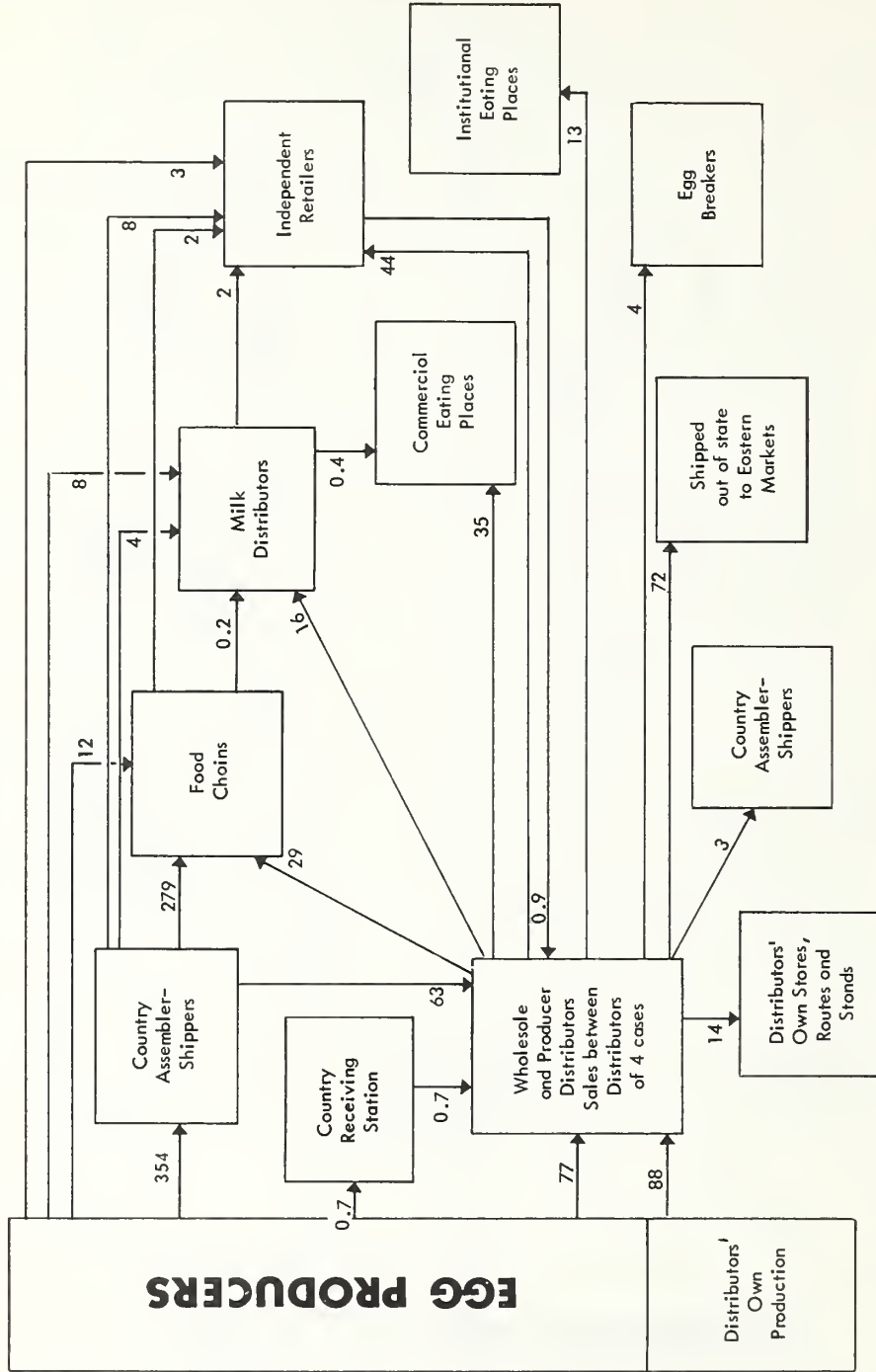


\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3457-65(1) ECONOMIC RESEARCH SERVICE

Figure 4.

In Minneapolis-St. Paul, April 1961\*

# SHELL EGG MARKETING CHANNELS

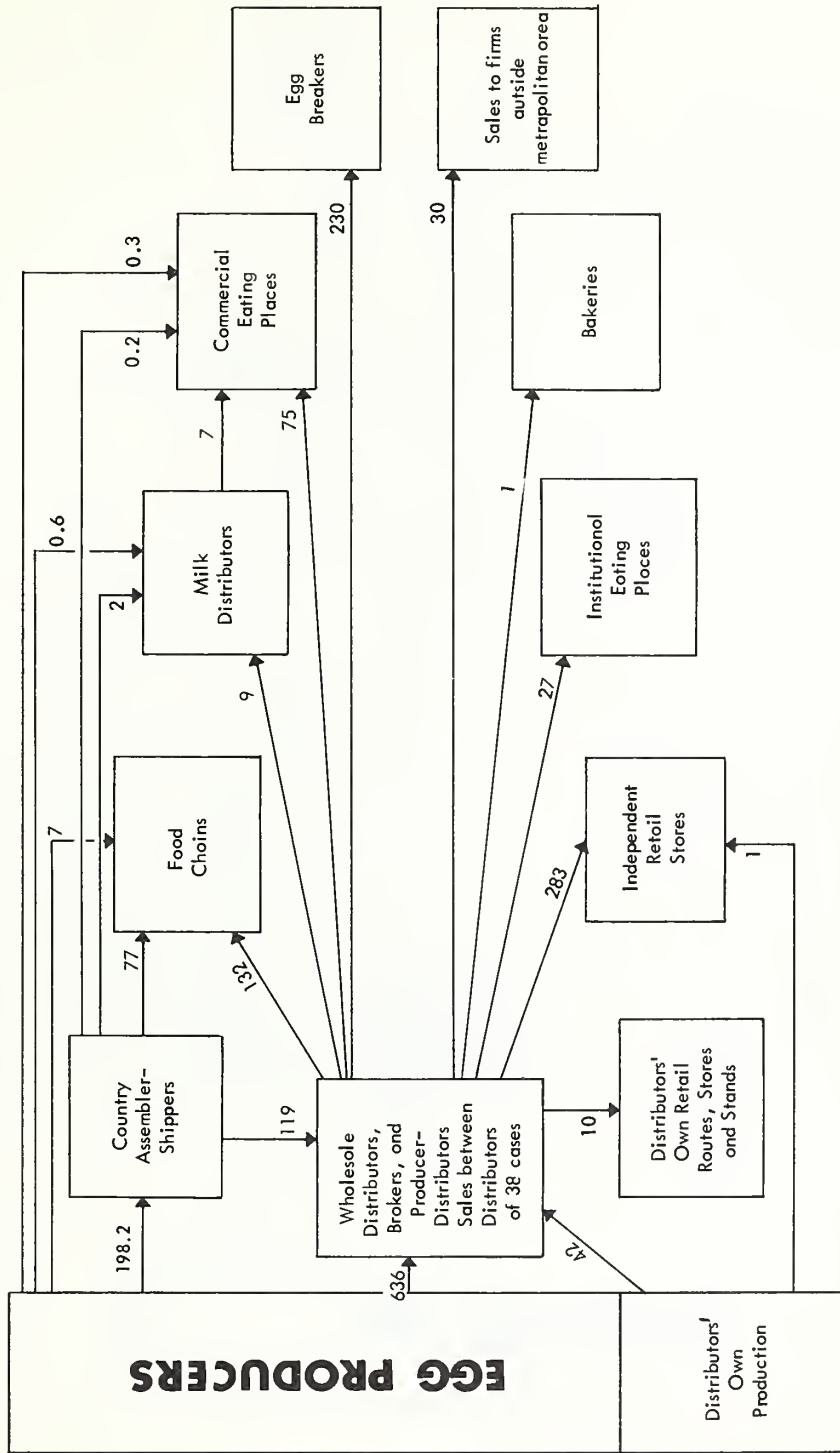


\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 345B-6S(1) ECONOMIC RESEARCH SERVICE

Figure 5.

In St. Louis, March 1961\*

# SHELL EGG MARKETING CHANNELS

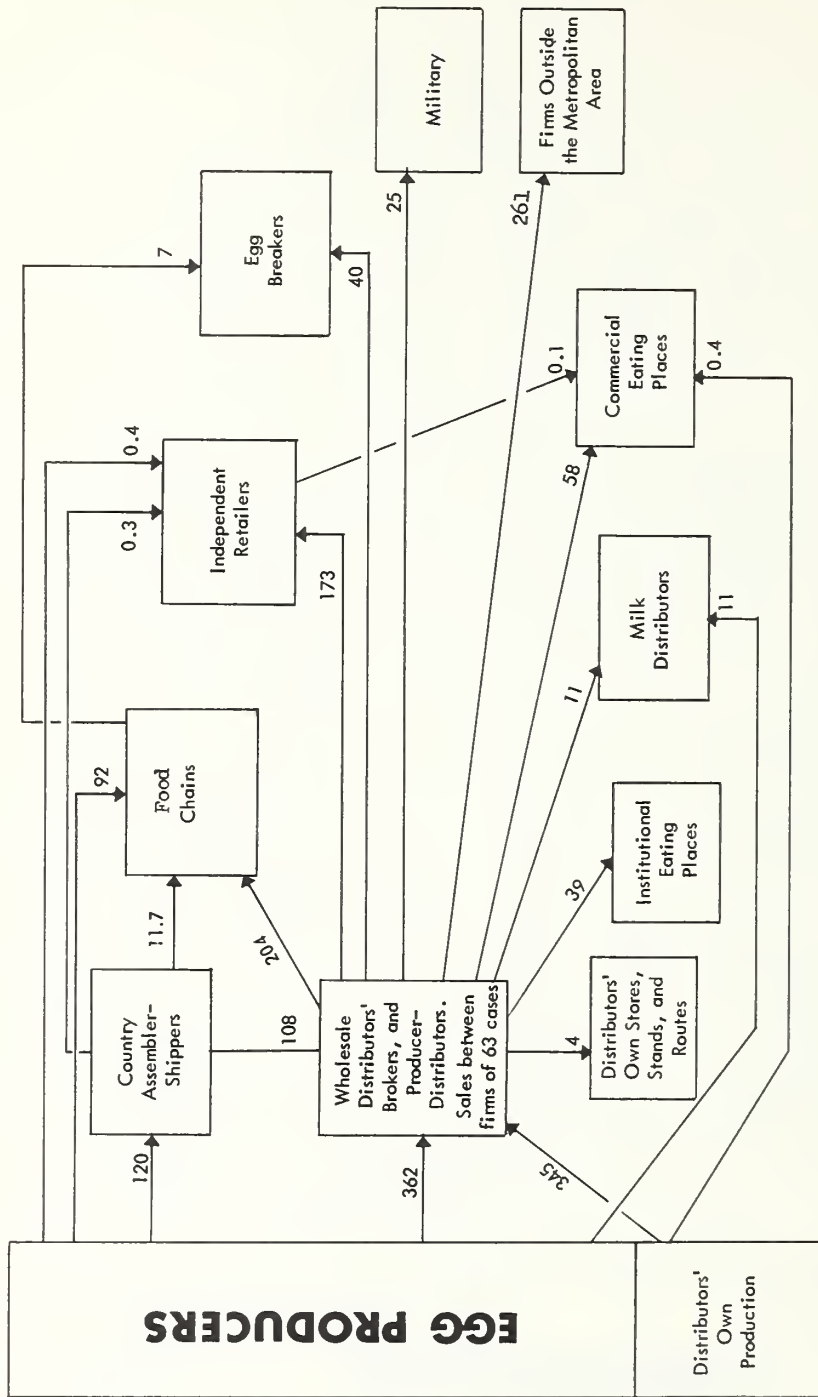


\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3459-65(1) ECONOMIC RESEARCH SERVICE

Figure 6.

In Atlanta, October 1960\*

# SHELL EGG MARKETING CHANNELS



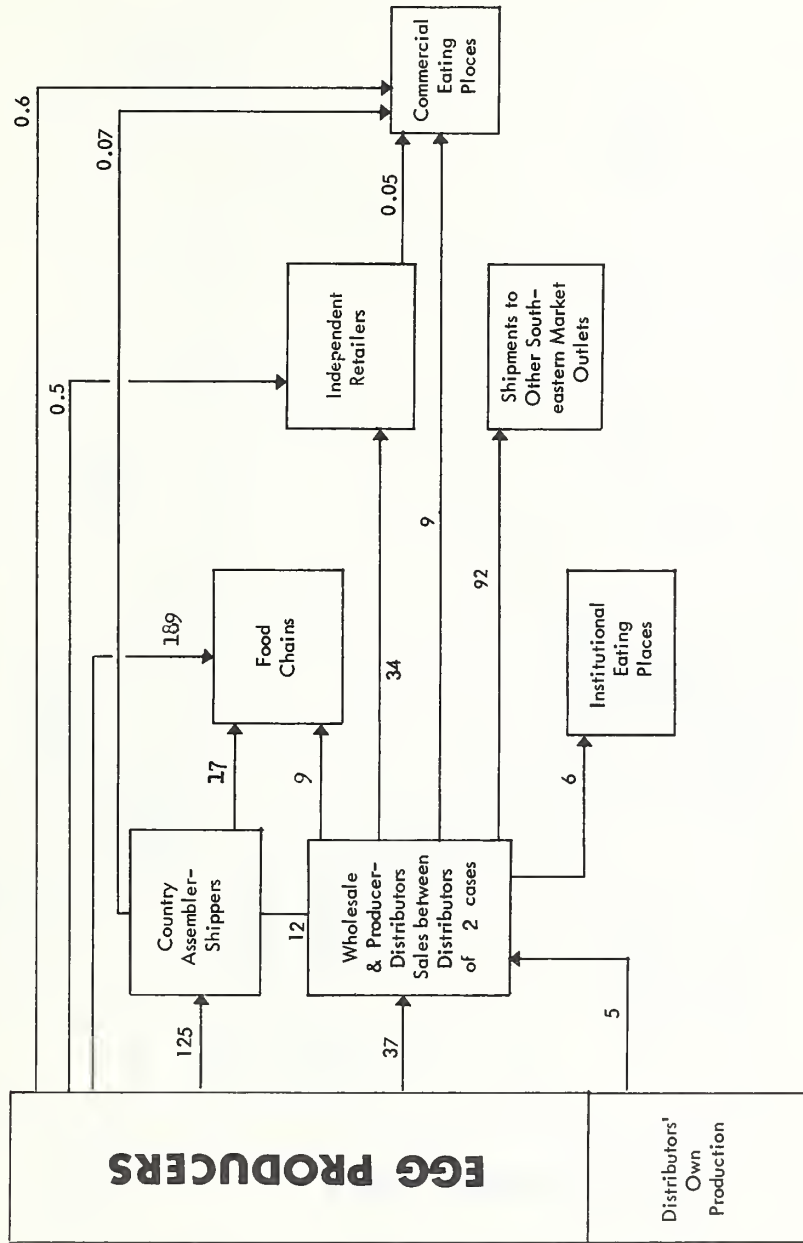
\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3460-65(1) ECONOMIC RESEARCH SERVICE

U. S. DEPARTMENT OF AGRICULTURE

Figure 7.

In Birmingham, October 1960\*

# SHELL EGG MARKETING CHANNELS



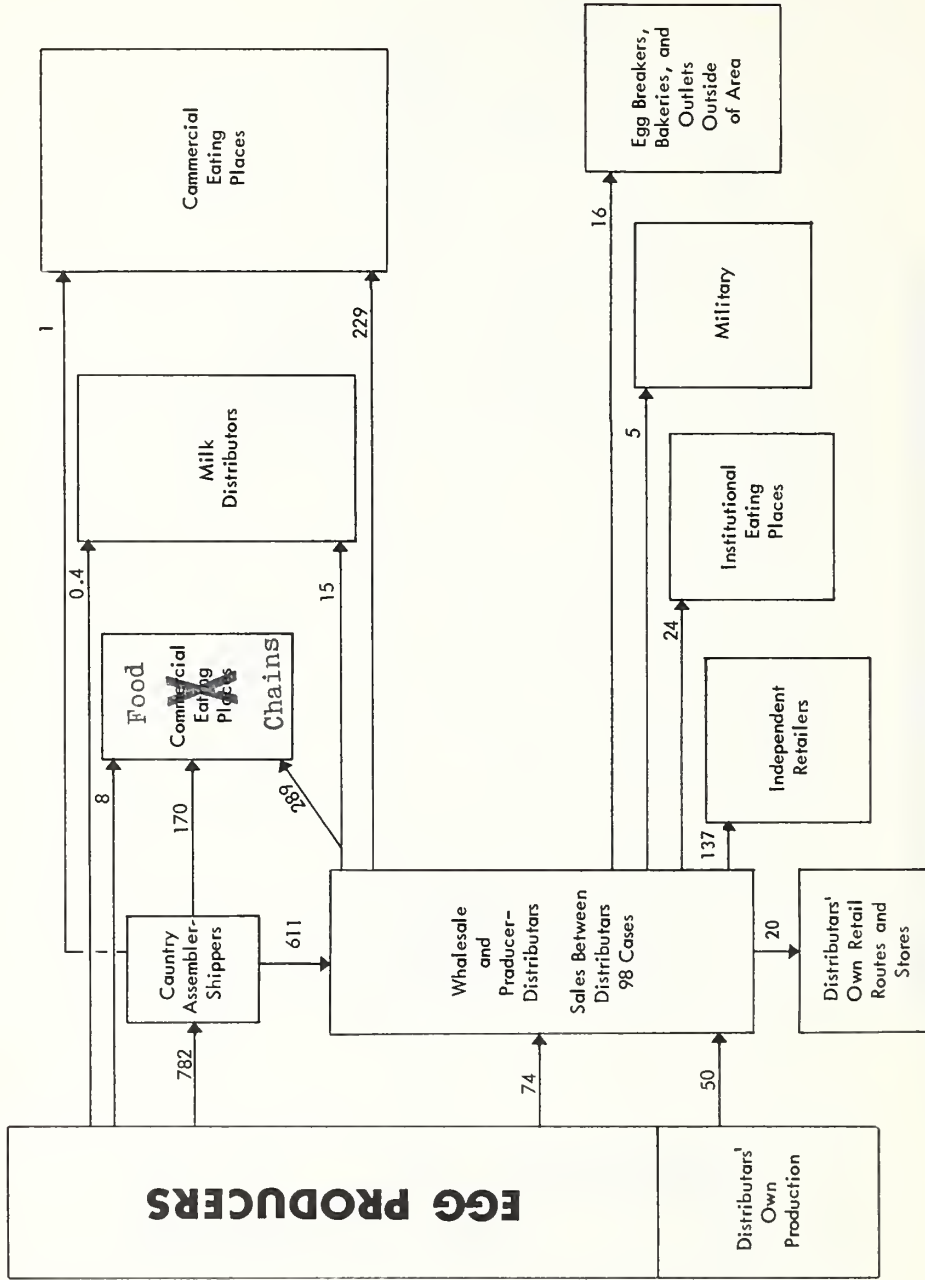
\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3461-65(1) ECONOMIC RESEARCH SERVICE

Figure 8.



In Miami, October 1961\*

# SHELL EGG MARKETING CHANNELS

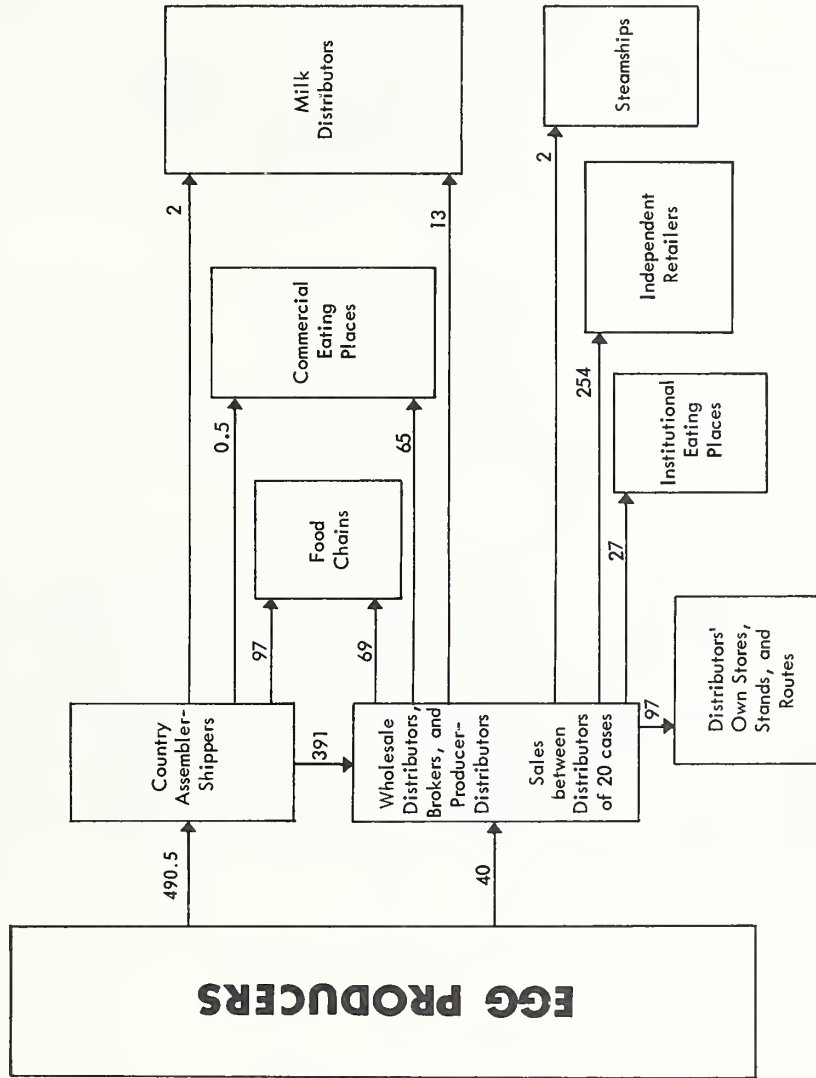


\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3462-65(1) ECONOMIC RESEARCH SERVICE

Figure 9.

In New Orleans, October 1961\*

# SHELL EGG MARKETING CHANNELS



\* FIGURES ARE HUNDREDS OF CASES OF 30 DOZEN EGGS  
NEG. ERS 3463-65(1) ECONOMIC RESEARCH SERVICE

Figure 10

APPENDIX

Table 4.--Number of firms and total volume of eggs handled per month by respondents to the surveys, 8 metropolitan areas, 1960-61

Metropolitan area and survey month	Wholesale and producer-distributors	Food chains	Milk distributors	Restaurant chains	Total					
	No.	Cases	No.	Cases	No.	Cases	No.	Cases	No.	Cases
<u>Midwestern areas</u>										
Detroit										
Nov. 1960.....	80	193,455	20	51,036	19	5,787	14	3,136	133	253,414
Kansas City										
Mar. 1961.....	34	100,975	9	17,306	16	1,578	5	404	64	120,263
Minneapolis-St. Paul										
Apr. 1961.....	54	23,362	18	32,000	15	2,572	--	---	87	57,933
St. Louis										
Mar. 1961.....	53	83,557	11	16,461	17	600	4	77	85	100,695
<u>Southern areas</u>										
Atlanta										
Oct. 1960.....	42	95,580	14	29,245	14	1,974	7	663	77	127,462
Birmingham										
Oct. 1960.....	16	15,250	10	21,469	--	---	2	68	28	36,787
Miami										
Oct. 1961.....	36	83,344	9	30,830	6	1,477	4	1,625	55	117,276
New Orleans										
Oct 1961.....	22	44,999	10	16,544	6	784	4	592	42	62,919
18 metropolitan areas.....	1,459	3,168,326	370	1,343,033	571	194,990	140	29,894	2,540	4,736,243

Table 5.--Estimated consumption of shell eggs compared with net movement into retail outlets, 8 metropolitan areas

Metropolitan area and survey month	Estimated consumption per month <u>1/</u>	Net movement into retail outlets per month	Net movement as percentage of estimated consumption
<u>Midwestern areas</u>	<u>Cases</u>	<u>Cases</u>	<u>Percent</u>
Detroit (Nov. 1960).....	259,185	178,316	69
Kansas City (Mar. 1961)...	75,074	36,741	49
Minneapolis-St. Paul (Apr. 1961).....	100,860	46,320	46
St. Louis (Mar. 1961).....	148,785	62,425	42
<u>Southern areas</u>			
Atlanta (Oct. 1960).....	69,225	62,549	90
Birmingham (Oct. 1960)...	43,206	26,497	61
Miami (Oct. 1961).....	60,566	89,938	148
New Orleans (Oct. 1961)...	58,333	52,910	91
18 areas.....	3,942,848	3,005,831	76
United States.....	12,660,548	3,005,831	24

1/ Estimated consumption was obtained as follows: Standard metropolitan areas were used as defined by the Bureau of the Census. Population within these standard metropolitan areas was obtained from the same source. The population for each standard metropolitan area was multiplied by the U. S. estimated per capita consumption of shell eggs for each of the survey months to obtain estimated consumption. The per capita consumption estimates were obtained from the Economic and Statistical Analysis Division of the Economic Research Service.

Table 6.--Shell eggs handled in cartons, all firms, 8 metropolitan areas

Metropolitan area and survey month	:Received in cartons from--:				: Received		: Total	
	: Country	:	: Producers	:	: loose in	:	:Eggs sold to	
	: shippers	:	:	:	:cases and put	:	:retail outlets	
	:	:	:	:	:into cartons	:	: in cartons	
<u>Midwestern areas</u>	<u>Firms</u>	<u>Cases</u>	<u>Firms</u>	<u>Cases</u>	<u>Firms</u>	<u>Cases</u>	<u>Firms</u>	<u>1/Cases</u>
Detroit (Nov. 1960).....	23	79,504	3	3,471	56	50,785	78	133,760
Kansas City (Mar. 1961)..:	9	4,290	6	1,158	24	25,015	35	30,463
Minneapolis-St. Paul	:	:	:	:	:	:	:	:
(Apr. 1961).....	23	28,965	6	1,581	32	7,384	59	37,930
St. Louis (Mar. 1961)....:	6	7,745	6	7,517	52	36,634	64	51,896
<u>Southern areas</u>	:	:	:	:	:	:	:	:
Atlanta (Oct. 1960).....:	3	1,222	8	3,616	36	48,376	46	53,214
Birmingham (Oct. 1960)..:	3	1,979	11	15,618	9	6,608	23	24,205
Miami (Oct. 1961).....:	7	16,858	2	892	25	38,863	31	56,613
New Orleans (Oct. 1961)..:	14	12,409	2	1,298	9	25,923	24	39,630
18 areas.....	372	596,960	165	84,862	1,123	1,547,037	1,584	2,228,859

1/ The total number of firms does not always equal the sum of the firms in the first 3 columns, because some firms bought eggs in cartons from both country shippers and producers, and in some instances, they also cartoned eggs.

SELECTED REFERENCES ON EGG MARKETING CHANNELS

Alpin, R.D.

1955. Marketing Eggs in Vermont. Vt. Agr. Expt. Sta., Bul. 584, July.

Anderson, Roice H.

1956. The Organization and Structure of Egg Marketing in Utah. Utah State Agr. Col., Bul. 381, Apr.

Becker, C. A., and Corty, F.L.

1951. Wholesale Egg Marketing in Pennsylvania. Pa. Agr. Expt. Sta., Prog. Rpt. 49, State College, Pa. May.

Broadbent, E.E., and Zawadzki, M.I.

1955. Egg Supply and Marketing in the North Central Region. Ill. Agr. Expt. Sta., Bul. 591, Aug.

Brown, A.A.

1954. Egg Pricing on the Boston Market. Mass. Agr. Expt. Sta., Bul. 476, Mar.

Buck, J.T.

1952. Marketing Practices of Virginia Egg Producers. Va. Agr. Expt. Sta., Bul. 455, June.

---

1952. Marketing Practices of Selected Egg Buyers in Virginia, 1947 - 1948. Va. Agr. Expt. Sta., Bul. 456, June.

---

1955. Egg Marketing by Commercial Egg Producers in Virginia. Va. Agr. Expt. Sta., Bul. 472, June.

---

1962. Marketing Eggs through Retail Stores in Lynchburg, Virginia, 1958. Va. Agr. Expt. Sta., Bul. 532, Apr.

Cornell University.

1950. Business Operations of Northeastern Wholesale Egg Buyers. Cornell Univ. Agr. Expt. Sta., Bul. 868, May.

Cron, L.E., Burdette, R.F., and DeVault, S.H.

1939. Economic Analysis of the Baltimore Egg Market. Md. Agr. Expt. Sta., Bul. 430, Oct.

Davis, R.L., Jr.

1953. Marketing Procedures and Channels for Mississippi Eggs. Miss. Agr. Expt. Sta., Tech. Bul. 37, July.

Faber, F.L., and Pedersen, J.R.

1961. Research to Improve Reporting on Eggs Moving into Commercial Trade Channels. U.S. Dept. of Agr., ERS-11, Aug.

Goble, J.W., and Filley, H.C.

1950. Marketing Poultry and Eggs in Nebraska. Nebr. Agr. Expt. Sta., Bul. 398, June.

Grubb, R.E., and Baker, R.L.

1963. Procurement Practices of Commercial Egg Users and Handlers in Johnstown and Williamsport, Pennsylvania. Agr. Expt. Sta., Pa. State Univ., A. E. and R. S. No. 40, Mar.

Hertsgaard, T.A.

1960. Egg Distribution Pattern - An Economic Analysis of Past and Projected Changes. N. Dak. Agr. Expt. Sta., Bul. 429, Dec.

---

1964. Optimum Patterns of Production and Distribution of Livestock and Poultry Products. Upper Midwest Research and Development Council and the Univ. of Minn., Tech. Paper No. 10, May.

Hester, O.C.

1951. Egg Marketing Channels and Methods Used by Northeastern Producers. U.S. Dept. of Agr., Agr. Inform. Bul. 69.

Jackson, H.

1951. Marketing Practices of Arkansas Egg Producers. Ark. Agr. Expt. Sta., Bul. 506, Mar.

and Law, J.M.

1951. Marketing Eggs at the First Buyer Level in Nine Southern States. U.S. Dept. of Agr., Bur. Agr. Econ., Sou. Coop. Ser., Bul. 18, Dec.

Jones, H.B.

1961. Marketing Commercial Eggs in Georgia. Ga. Agr. Expt. Sta., Bul. N. S. 83, Apr.

Judge, G.G.

1956. Competitive Position of the Connecticut Poultry Industry, No. 7. A Spatial Equilibrium Model for Eggs. Storrs Agr. Expt. Sta., Bul. 318, Jan.

Koudele, J.W., and Heinsohn, E.C.

1960. The Egg Products Industry of the United States Part I. Historical Highlights, 1900-59. Kans. Agr. Expt. Sta., Bul. 423, May.

---

1964. The Egg Products Industry of the United States Part 2. Economic and Technical Trends, 1936-61. Kans. Agr. Expt. Sta., Bul. 466, Jan.

Langston, W.G., and Smith, H.D.

1958. Egg Producer Practices and Market Outlets Available in Maryland. Md. Agr. Expt. Sta., Misc. Pub. 328, Aug.

Manchester, Alden C.

1954. Price-Making and Price Reporting in the Boston Egg Market. Harvard Studies in Marketing Farm Products, No. 7-H, Harvard Univ., Cambridge, Mass., June.

- 
1954. Marketing Channels and Margins in the Boston Egg Market. New England Research Council on Marketing and Food Supply, Harvard Univ. and U.S. Dept. of Agr., Agr. Mktg. Serv., Nov.

- 
1954. Supply Area and Marketing Channels for Eggs in New England. Univ. of Mass. Econ. Research Service Bul. 480, Northeastern Region, Pub. 18, Aug.

McPherson, W.W.

1956. The Economics of Egg Marketing. Dept. of Agr. Econ., N. C. State Col., A. E. Inform. Ser. 54, Dec.

Meredith, A.A.

1957. Marketing Eggs in New Jersey. N. J. Agr. Expt. Sta., Cir. 580, June.

- 
1963. The Competitive Position of New Jersey's Egg Industry: III. Transportation Costs and Problems. N.J. Agr. Expt. Sta., A.E. 289, April.

Mortenson, W.P., and Graf, T.F.

1950. Marketing Eggs in the Lake States. Wis. Agr. Expt. Sta., Res. Bul. 168, July.

Nicas, A.P., and Goodrich, D.C.

1961. Direct Marketing of Eggs by New York Poultrymen, 1959-60. Cornell Univ. Agr. Expt. Sta., A. E. Res. 66, May.

Oyloe, T.

1958. Marketing Policies and Practices of Country Egg Dealers in Eastern South Dakota. S. Dak. Agr. Expt. Sta., Cir. 143, June.

Paulhus, N.G.

1950. Wholesale Poultry and Egg Markets in 30 Cities. U.S. Dept. of Agr., Prod. Mktg. Admin.

Pincock, M.G.

1961. An Economic Study of Poultry Management and Egg Marketing Systems. Cornell Univ. Agr. Expt. Sta., Bul. 967, June.



Powell, J.V., and Creek, C.R.

1951. Assembly and Distribution of Eggs in Honolulu. Univ. of Hawaii, Col. of Agr., Agr. Econ. Bul. 2, Sept.

Raskopf, B.D., and Guilford, M.M.

1947. Functions and Practices of Knoxville Poultry and Egg Marketing Agencies. Tenn. Agr. Expt. Sta., Rural Res. Ser., Monog. 225, July.

and Guilford, M.M.

1947. Outside Markets for Poultry and Eggs Shipped from Tennessee and Knoxville Trade Area. Tenn. Agr. Expt. Sta., Rural Res. Ser., Monog. 229, Aug.

and Keaton, C.R.

1950. Distributive Functions of Primary Eggs Buyers in Tennessee. Tenn. Agr. Expt. Sta., Rural Res. Ser., Monog. 254, May.

1953. Egg Marketing--Wholesale and Retail in Tennessee. Tenn. Agr. Expt. Sta., Rural Res. Ser., Monog. 267, July.

Roth, D.E., Haag, H.M., Brown, R., and Christ, P.

1962. Operations and Practices of Illinois Egg Handlers. Southern Ill. Univ., School of Agr., Pub. 12, Feb.

Roy, E.P.

1957. Egg Marketing by Commercial Producers in the South. Pub. by Agr. Expt. Stas. of the South, Sou. Coop. Ser. No. 50, June.

Seale, A.D., Jr.

1964. Equilibrium Prices and Movements of Eggs in the United States for 1958-60 and 1970. Miss. Agr. Expt. Sta., Bul. 690, June.

Seaver, S.K., and King, R.A.

1950. Competitive Position of the Connecticut Poultry Industry 2. Marketing Eggs Through Retail Stores. Storrs Agr. Expt. Sta. Bul. 268, Oct.

and King, R.A.

1951. Competitive Position of the Connecticut Poultry Industry 3. Marketing Eggs Through Wholesale Channels. Storrs Agr. Expt. Sta., Bul. 269, Nov.

1960. Economic Analysis of the Market Organization and Operation of the California Egg Industry. Calif. Agr. Expt. Sta., Mimeo. Rpt. 229, Feb.

Starky, W.M., Hester, O.C., and Herrmann, L.F.

1951. Sales of Eggs by Farmers in the North Central Region. U.S. Dept. of Agr. Inform. Bul. 46, June.

Stemberger, A.P.

1960. North Carolina Eggs in Interregional Competition. N.C. State College,  
A. E. Inform. Ser. 73, Feb.

Todd, B.J.

1948. Egg Production and Marketing Practices in Georgia. Ga. Expt. Sta.,  
Experiment, Ga., Prelim. Rpt., Dec.

U.S. Department of Agriculture

1948. Market Outlets Used by Farmers for Eggs, Chickens, and Hogs, in 1945.  
Marketing and Transportation Situation, Mar.

Voughan, E.D., and Rochrkasse, G.P.

1953. Marketing Poultry and Eggs in Torrington and Laramie, Wyoming. Wyo.  
Agr. Expt. Sta., Bul. 326, Aug.

Voss, L.

1963. Supply Problems of Egg Processing Plants. Mo. Agr. Expt. Sta., Bul. 800,  
Aug.

Williams, R.J.

1962. An Economic Comparison of Egg Marketing Systems. Cornell Univ. Agr.  
Expt. Sta., Bul. 975, July.

Winter, E.P.

1948. Marketing Margins and Costs for Poultry and Eggs. U.S. Dept. of Agr.,  
Bur. Agr. Econ., Tech. Bul. 969, Nov.

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