PRICING EGGS at Wholesale in NEW YORK CITY

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PREFACE

The effectiveness with which the price-making process operates is of major importance in the marketing of agricultural products. As technological and other developments prompt changes in the location of producing areas and consuming markets, in numbers and kinds of buyers and sellers, or in other attributes of market structure, analyses are needed to learn what effects they may have on prices and price-making processes.

In several commodity markets in recent years, questions have been raised concerning the nature and performance of pricing processes. This report presents the findings and preliminary conclusions of a study undertaken to learn how prices for eggs are established in New York City. The study is part of a broad program of research aimed at improving the organization and operation of markets for farm products. It complements research under way at the Illinois, Indiana, Missouri, Ohio, Pennsylvania, and New Jersey agricultural experiment stations dealing with the pricing of eggs at country points.

Marketing Research Reports 173 and 161 provide similar information on the egg markets in Chicago, Ill.; St. Louis, Mo.; and Los Angeles, Calif.

This report describes the New York egg market and its pricing of eggs to country shippers, wholesalers, other handlers, and retail stores. The prices established in New York are believed to have considerable influence on prices paid farmers throughout large parts of the United States. The report presents a preliminary evaluation of the pricing mechanism and indicates possible means of overcoming shortcomings in it.

The report is designed to assist farmers, egg handlers, students and teachers of the marketing of farm products, and others to gain a better understanding of the marketing and pricing processes for eggs in a major market.

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SUMMARY

The structure of the New York City egg market is complex and it is undergoing substantial changes. The principal marketing firms in this market are the large wholesale receivers and the large corporate food chains. Some 36 large egg wholesalers received about 5 million cases of eggs in 1954, or about 40 percent of the estimated needs of the metropolitan area. Five large food chains handled roughly another 20 percent of the receipts. The rest of the eggs were received and distributed by an undetermined number of small chains, wholesale receivers, and jobbers. The New York Mercantile Exchange provides facilities for public trading in eggs. The Urner-Barry Company and the Federal-State Market News Services report values and other statistics of interest concerning the New York egg market for the information of the egg industry. Both the exchange and the Urner-Barry Company are integral to the price-making processes in the market.

The large wholesalers and food chains buy wholesale lots of eggs from independent country shippers, farmers' cooperatives, and producers under long-term quotation pricing arrangements. Purchases generally are made f.o.b. receivers' warehouses. Prices usually are the Urner-Barry quotation for a given grade and size of eggs, day of arrival, plus or minus an agreed-upon differential. A cash settlement usually is made on the same day or on the following day. The grade of eggs is seldom determined by a third party, and disputes between buyers and sellers on quality and other matters usually are handled by informal negotiation. The most important difference between the buying practices of the chains and the wholesalers interviewed is that the latter group stated they generally accept all volumes of eggs sent to them by country shippers, whereas the chains restrict purchases to the approximate needs of their retail outlets. The wholesalers sell eggs as received primarily to jobbers, who service the thousands of retail stores and eating places in the city. They also supply the chains with a small part of their needs.

The New York Mercantile Exchange provides facilities for daily trading in eggs for immediate delivery. Most of the traders on the daily spot call market for eggs are the larger wholesalers of bulk eggs. Volumes of eggs sold on the call, however, usually are small—less than 1 percent of the estimated annual receipts in the market. Individual sales usually involve relatively small lots, since, in practice, the principal purpose of trading is to establish base prices for the various grade and size classifications of eggs.

The base prices are the quotations published daily by the Urner-Barry Company, a private market reporting and publishing firm, and are based largely on the results of the daily spot call. The quotations are used with customary trade differentials to provide a set of prices likely to move current supplies of eggs through normal distribution channels at normal trading margins. The quotations are also widely used as a basis for pricing eggs in many other markets and producing areas.

The Federal-State Market News Service reports on street (wholesale) and exchange trading and related information. The wholesale selling prices it reports usually fall in a range of about 2 to 3 cents per dozen around the

commercial quotation. The quotation usually is at or near the bottom of the range reported by the Market News Service. Recently, the service also initiated a semiweekly report of prices paid for cartoned eggs by retailers in the city. The commercial reporting firm also reports prices to retailers.

The small volume of trading and the limited number of active traders in eggs on the exchange have raised serious questions of the "representativeness" of this trading. Although the findings of this study do not warrant definitive conclusions on these questions, it is felt that if base pricing is to become more efficient, consideration should be given to means of broadening trade participation in exchange trading. Rules of the exchange might be broadened to permit direct and more regular participation by traders outside New York. Free inspection of eggs for exchange trading might augment trading volumes by eliminating a currently major cost of exchange trading, specifically a cost of being prepared to trade day by day.

Finally, looking into the future, the powerful forces that have produced important changes in methods of egg marketing and egg pricing will continue to have their impacts. The traditional system of marketing eggs through terminal market wholesalers has been declining in importance for many years as more direct, integrated marketing procedures have developed. These developments already have reduced the basis for exchange trading under rules implying a wholesale selling level of trading--particularly in Chicago and other cities, but to a lesser degree in New York--and may eventually eliminate it entirely. For these reasons, it is important that consideration be given to development of improved means of gathering and reporting information essential to price formation in the increasingly decentralized market for eggs. As an initial step in this direction, it is important to continue current efforts of the Agricultural Marketing Service to develop new market reports, especially in important egg-producing areas.

PRICING EGGS AT WHOLESALE IN NEW YORK CITY

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THE PROBLEM

The quotation system of pricing eggs has been used extensively by the egg trade for many decades. The Urner family began regular reporting of New York wholesale prices of eggs and several other farm commodities in 1857 (12). 1/ Gradually these price reports came to be used regularly by the egg trade as price quotations. 2/ Today, large quantities of eggs in many parts of the United States are traded at prices fixed on the basis of the New York wholesale quotations reported by the Urner-Barry Company (1). Additional large volumes are priced on the basis of quotations established in other central markets.

The quotation pricing system may be viewed as a form of price leadership by a group of firms active in establishing quotations on a commodity. This leadership may have developed not so much from the initiative of the leadership group as from the passive acceptance of the quotations by a large number of other firms desirous of a convenient formula for pricing a product. The system also has many similarities to basing-point pricing. In general, a quotation pricing system has three basic elements (2, 3, 5, 7, 9, 10).

One element is the general practice of trading a commodity, such as eggs, on the basis of oral understandings or written agreements that specify the terms of trade, including the particular price quotation and differentials, if any, from it to be used in fixing actual transaction prices. Transfers of eggs may be made before the quotation has been established, but with the transfer prices subject to the quotation when issued.

A second basic element of the system is the quotation. Technically, the quotation is a published statement of market values by the market reporting firm. By trade usage, it has become widely accepted as the ruling base price for the market. 3/ Quotations are intended to reflect base values for specific

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1/ Underscored numbers in parentheses refer to Literature Cited, pp.30-31.

2/ "Of the various products quoted in 'The Producers' Price-Current,' five commodities—butter, cheese, eggs, dressed poultry, and live poultry—have come to be sold to a considerable extent on the basis of 'The Producers' Price-Current' quotations." (12)

3/ Although price reports of the Federal-State Market News Service are at times used by traders as market base prices, or quotations, they are not issued for this purpose.

grades and sizes of commodities at a constant level of trading, so that interested parties can interpret market values more readily and can apply usual trading differentials in fixing transaction prices.

A third basic element of the system is the mechanism through which prices are publicly registered and adjusted. This enables independent market reporters to obtain essential information from the trade (or leadership group of traders) for quoting or reporting prices on a regularly recurring basis.

The principal objective of this report is to evaluate tentatively the pricing process for eggs in New York City. A second objective is to describe aspects of market organization and trading in eggs that are related to the pricing system. Consideration is given to the major complaints of farmers, country shippers, and others that (1) central market price quotations generally are below true market values, and (2) central market prices fluctuate more frequently than is necessary for efficiency in marketing eggs. 4/ These criticisms imply an underlying distrust of at least one basic element of the quotation pricing system—the mechanism through which quotations are established—relatively few critics have suggested that the system as a whole be abandoned. They apparently believe that quotation pricing has important advantages as well as disadvantages. This pricing system probably saves much time and expense in marketing in comparison with such alternative procedures as day-to-day bargaining between widely scattered buyers and sellers. The system may also reduce price uncertainties by providing a basing point for determining transaction prices.

Information for this study was obtained principally through interviews in 1955 with a cross section of about 45 New York egg wholesalers, jobbers, and chainstore egg buyers, and with Mercantile Exchange officials and Federal-State and private market news reporters. Some of the information came from secondary sources.

WHOLESALE EGG PRICES

The New York City wholesale egg trade uses 13 commercial classifications of shell eggs for trading and pricing purposes. These classifications involve combinations of four types of minimum standards: Quality, size (weight), color, and origin (area of production). The basic division is between "nearbys" (eggs produced in northeastern United States) and Midwesterns. The principal classification of nearbys in terms of trading volume is Extra Fancy White Heavyweights, but Extra Fancy Browns and Mediums also are traded in considerable volume in some seasons. Midwestern eggs have a wider range of quality classifications, including Fancies, Extras Nos. 1 and 2, Standards, Checks, and various colors.

4/ Similar criticisms have been made of central market prices for butter (6). Also see (11).

Variable Standards

Specific minimum standards for these commercial classifications are established by the New York Mercantile Exchange in terms of United States standards for shell eggs. The requirements of the commercial classifications, particularly on nearbys, however, do not remain fixed. Currently, the practice of the exchange is to vary the requirements to make them coincide fairly closely with the actual quality of the bulk of the eggs received by New York wholesalers. Similarly, minimum weights may be altered from time to time. The practice of altering the minimum standards of the commercial calssifications seasonally, or more frequently, is a controversial subject within the egg trade. It has important implications for some users of the New York egg quotations, particularly those country shippers and others buying and selling eggs on the basis of other, nonvariable commercial classifications, or on the basis of U. S. grades. These implications will be discussed more fully later in this report.

Price Patterns

The general patterns of price movements in New York, Chicago, and Los Angeles are shown in figure 1. The similarity of the patterns in the three cities is readily apparent. Since eggs rarely are shipped from one large city to another, the closely similar patterns of prices in the three cities may result from the activities of country shippers of eggs in the Midwest seeking to market eggs where their net returns will be highest, or from competition among traders in the cities for Midwestern suppliers. The absolute differences in prices shown in figure 1 are not important for purposes of this study. They reflect differences in egg qualities, marketing services, levels of trading, and transportation costs.

Seasonal Price Variations

Seasonal variations in prices in New York and differences in prices among eggs of different sizes tend to be similar to those found in many other markets and nationally. That is, prices of top-quality eggs tend to be lowest in the spring and highest in the early fall. The seasonal variation in egg prices in recent years has been substantially less than in earlier years because of the sharp decline in seasonal changes in volumes of eggs received in the market. The altered seasonal pattern of egg receipts is shown in figure 2.

The spread between prices of large eggs and smaller eggs generally widens in the late summer and early fall because the relative supply of large eggs is lowest in these periods. For the opposite reason, these differences tend to be narrow in the late winter and early spring. Similarly, the lower average quality of eggs in hot weather tends to widen price spreads between eggs of the top and lower qualities. In view of the general similarity of these relationships in New York to those in other markets, little can be gained here from more intensive analysis of them.

Within-Week Price Variations

The general practive of paying farmers for eggs on selected days each week on the basis of the Urner-Barry quotations for those days has created much interest in whether prices are higher or lower on certain days of the

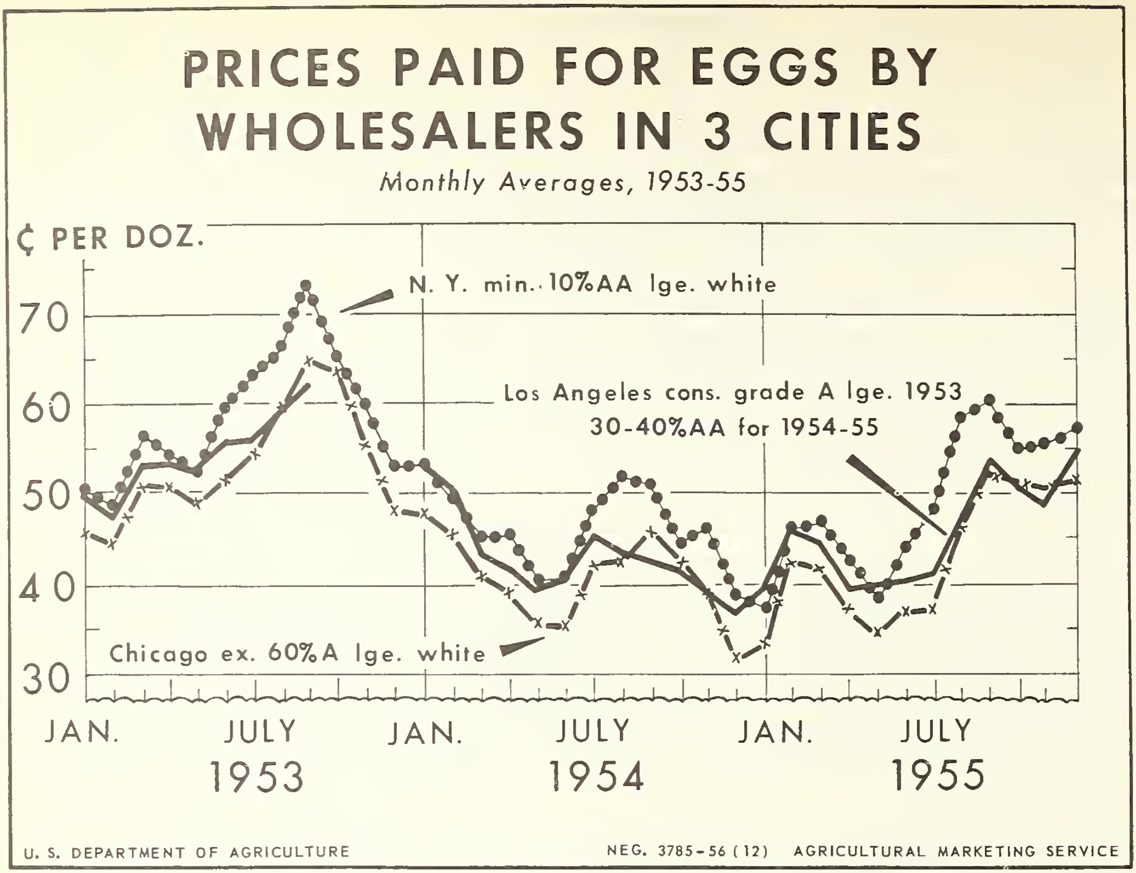

Figure 1

week than on others. Eggs are received, priced, and paid for in New York City every business day, but the volumes vary considerably from day to day. As a rule, the largest volumes of eggs are received on Tuesdays and Fridays If New York receivers failed to consider this regular within-week pattern of receipts in trading and pricing eggs, it seems probable that egg prices generally would be lower on those days than on others. Apparently, however, the trade is fully aware of the pattern and, in pricing, regularly discounts "normal" day-to-day differences in receipts. In 1954, Friday quotations on top-quality nearby eggs were the highest quotations for the week about as often as they were the lowest (table 1). Tuesday quotations were the highest for the week a few more times than they were the lowest. 5/ But these differences were not significant. Other analyses of within-week price differences based on average of prices for each day of the week for a year or more have brought forth similar conclusions (13). In other words, the random selection of a price quotation or selection of a particular day or days--say, Tuesdays and Fridays--as a base for pricing and paying for eggs is not likely to affect a producer's gross returns either favorably or adversely by a significant amount, provided that the producer holds to the arrangement long enough to permit chance price variations to average out.

5/ The within-week pattern of prices on top-grade Midwesterns is similar to that of nearbys.

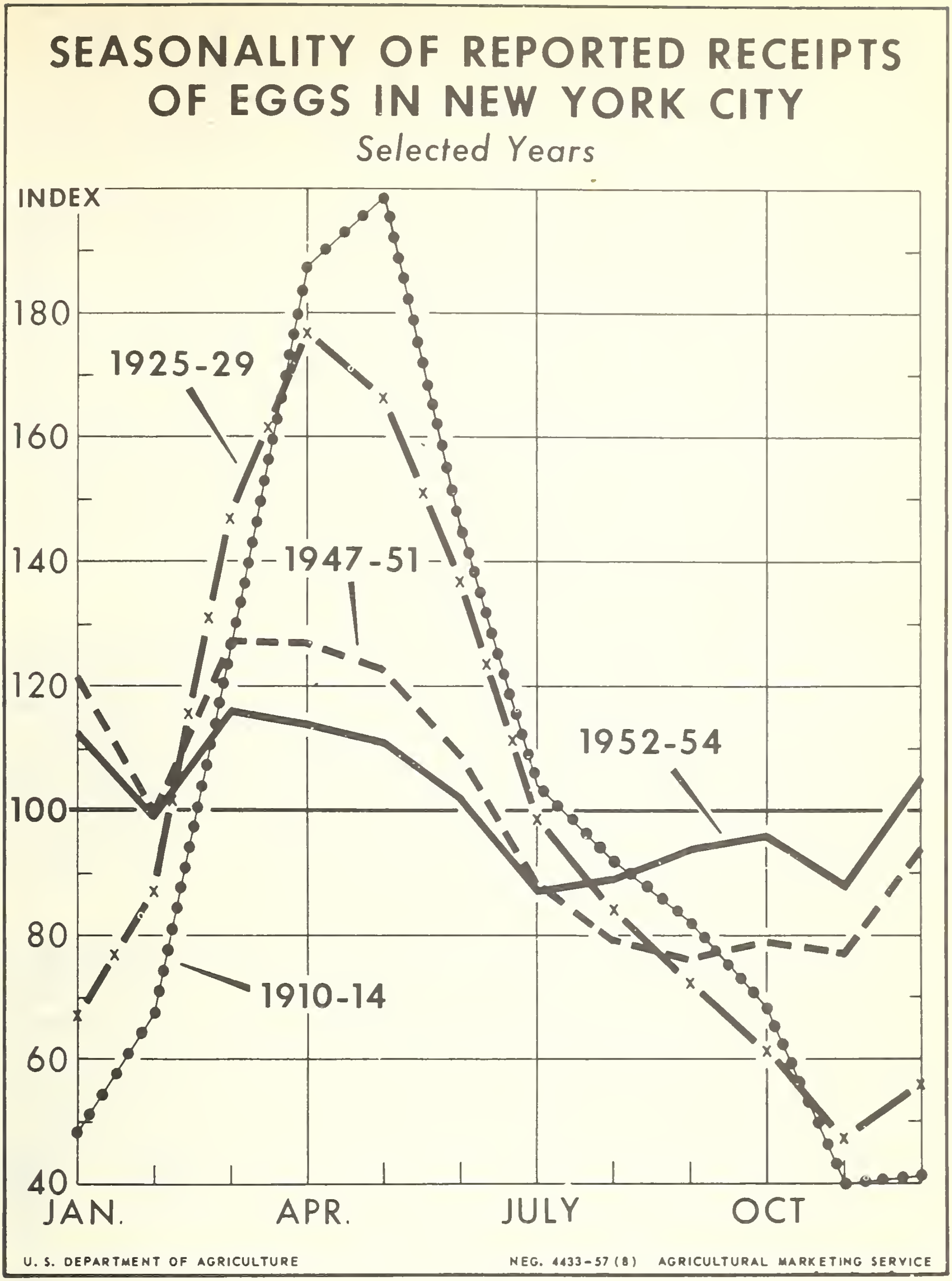
SEASONALITY OF REPORTED RECEIPTS OF EGGS IN NEW YORK CITY
Selected Years
INDEX
180
160
140
120
100
80
60
40
1925-29
1947-51
1952-54
1910-14
JAN.
APR.
JULY
OCT
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Figure 2

Table 1.--Position of egg prices in the weekly price range by days of the week, Nearby Extra Fancy Heavyweights, New York, 1954

	Days in each position in weekly range			Days at constant price during week	Holidays	Total days
	Top	Bottom	Inside			
	Number	Number	Number	Number	Number	Number
Monday	20	18	5	5	4	52
Tuesday	17	11	17	5	2	52
Wednesday...	17	6	24	5	0	52
Thursday....	19	9	17	5	2	52
Friday	22	20	3	5	2	52
Total.....	1/ 95	1/ 64	66	25	10	260

1/ High price was maintained for a period of 2 or more days within weeks more often than was low price.

Price Fluctuations

The egg markets in New York and other large cities often have been criticized for "excessive" price fluctuations in terms of both frequency and amplitude of changes. Of the 248 trading days in 1954, quotations on nearby Extra Fancy Heavyweights remained unchanged from the previous day on 116 days (table 2). The quotations moved up on 73 days and down on 59 days, a total of 132 daily price changes. This was an average of about 1 change every 2 trading days. The quotations remained unchanged for a week or more only 5 times during the year, and at no time remained steady for as long as 2 weeks. The average amount of the 132 price changes on nearbys was 1.7 cents a dozen and of the 121 price changes on Midwesterns, 1.4 cents a dozen.

Table 2.--Price movements for eggs, nearby Extra Fancy Heavyweights, New York, 1954

Price movement	Successive days of similar movements						Average	Total days
	1 day	2 days	3 days	4 days	5 days	6 days or more		
	Number	Number	Number	Number	Number	Number	Number	Number
No change	25	11	5	6	3	2	2.2	116
Up	22	8	1	3	0	3	2.0	73
Down	19	10	3	1	0	1	1.7	59
Total	66	29	9	10	3	6	2.0	248

Price cycles--from price peak to price peak--for top-grade nearby white eggs averaged 11 days in 1954. In the average cycle, prices rose 7 days and fell 4 days. There were 12 periods of rising prices that lasted 6 or more days in 1954. Price cycles for top-grade Midwestern eggs averaged longer, 13 days, but the phases of rising and falling prices were about equal in duration.

The degree of price flexibility in New York appears to be about the same as in Chicago. Variations in rates of egg production and in rates of movement from farms into trade channels may be responsible for some of the fluctuations in egg prices in these and other cities. But it seems probable that some aspects of the organization and operation of the markets may be at least equally important factors. In this connection, it is of interest that in Los Angeles, where eggs are produced, marketed, and priced by sharply different methods, egg prices in 1954 changed on the average only about once each 2 weeks. They have remained unchanged for as long as 3 months. However, the question whether egg prices in New York fluctuate too frequently and by excessive amounts (or in Los Angeles not enough) is difficult to answer, since adequate criteria for evaluation are not available. The problem is discussed further later in this report.

MARKET ORGANIZATION, CHANNELS, AND INSTITUTIONS

The New York market for eggs is made up of hundreds of trading firms and several specialized marketing service organizations. Among the handlers are wholesale receivers, corporate food chains, jobbers, general food distributors, hucksters, and others not easily classified. Most of these firms are small. In contrast, about 40 of the largest wholesalers and corporate food chains receive more than half of the estimated shell egg requirements of the New York metropolitan area.

Large Independent Wholesalers

The most important group of egg handlers in New York City consists of the large independent wholesale receivers. Each of some 36 of these firms receives more than 1,000 cases of eggs a week. In 1954, they received about 5 million cases of eggs, or about 40 percent of the estimated shell egg needs of the metropolitan area.

These firms, with a few exceptions, are located in a small, highly congested area on the lower west side of Manhattan Island adjacent to the wholesale produce market. The egg trade refers to this section of the city and to the firms located there as "the market." The term, as generally used, also includes a few large wholesalers located in other parts of the city.

In addition to their New York houses, several of the large firms operate egg assembly stations at nearby country points and in the Midwest. As a group, the large wholesalers in 1954 obtained about 30 percent of their egg receipts directly from farmers, about 57 percent from farmers' cooperatives and independent country shippers, 3 percent through dealers in other cities, 9 percent from New York receivers (including purchases from firms within the group), and 1 percent by purchase on the New York Mercantile Exchange. Approximately 54 percent of their receipts came from nearby producing areas, principally in New Jersey, Pennsylvania, and New York, and 46 percent from the Midwest. Less than 1 percent of the eggs received in 1954 by the wholesalers were candled and cartoned, and only 2 of the 12 firms of this type interviewed were receiving eggs in this form.

Several wholesale firms distribute candled and cartoned eggs to retail stores and other outlets, but most of the eggs are sold as received. Sales in 1954 were distributed approximately as follows: Jobbers, 43 percent; chainstores, 28 percent; retail stores and eating places, 14 percent; New York wholesalers (including sales to firms within the group), 4 percent; dealers in other cities, 2 percent; sales to foreign countries, 8 percent; and sales on the New York Mercantile Exchange, 1 percent.

The large wholesalers are the principal link in the traditional and declining marketing channel consisting of farmer, country shipper, city wholesaler, jobber, and independent retailer. Several firms have been in the egg wholesaling business at their present locations for decades. At least one company has been receiving eggs more than a century. A principal practice in buying and selling eggs involves the use of established price quotations under trade arrangements that have changed little over the years. The usual terms of trade, established by oral and written agreements with country shippers, are about as follows:

Purchases are made f.o.b. receivers' houses. Eggs may be delivered in either new or used cases, which are usually returned to shippers free or at an agreed price, say, 15 to 30 cents per case. Prices usually are the Urner-Barry quotation for a given commercial classification of eggs, day of arrival, plus or minus an agreed-upon price differential. Most actual prices to shippers seem to be in the range of 1 cent below the quotation to 1-1/2 cents above, depending on quality, service, bargaining power, and other conditions. A cash settlement usually is made on the day of arrival or the day following. The quality of eggs received in the market is seldom determined by a third party, such as an official grader of the U. S. Department of Agriculture. Few nearby eggs that arrive in New York are candled for quality by the wholesalers except on a sample basis. The eggs are wholesale lots from which obvious loss eggs have been removed, and they have been sorted for size by producers or shippers. The principal quality indicator is the producer's or shipper's "mark," or brand, and wholesalers know from experience that the eggs will generally candle out within an acceptable quality range. Disputes between buyers and sellers on quality and other matters are usually handled by informal negotiation, either in person or by telephone.

Agreements between receivers and country shippers generally do not specify the volumes of eggs to be delivered in any given time. They simply establish the terms of trade for any deliveries made. Sellers are not required to deliver their entire volumes to a single receiver and the receiver normally is not obligated to receive the full output of a shipper. But it is customary for the large wholesalers to accept any volumes of eggs that farmers and country shippers wish to send them. Both routine and extraordinary transactions as a rule are completed on a highly informal basis by long-distance telephone or by mail.

Although most of the purchases and sales of eggs by the wholesalers are made in terms of "over or under" the Urner-Barry price quotations, there appear to be some exceptions to this practice, particularly on the larger transactions. Only 1 wholesaler said that he sometimes changed the differentials on single purchases, but several admitted negotiating differentials for single sales. Both the major buyers (wholesalers and large chains) and the major country shippers have many alternatives open to them. New York is only one of many markets available to both nearby and Midwestern shippers, and the receivers also have alternative sources of supply. The extent to which customary terms of trade, including differentials from quotations, are modified in day-to-day bargaining between these large firms was not determined. But it reportedly is unusual for traders to attempt to price eggs counter to the trend in prices indicated by changes in the quotation.

The wholesalers sell eggs on much the same terms and in about the same form as they buy eggs, with spreads usually of 0.5 to 1.0 cent a dozen. Most transactions are made by telephone or at the wholesalers' houses, and actual transaction prices generally are understood to be an Urner-Barry egg quotation plus a premium. Although premiums are not inflexible, they often remain unchanged for extended periods of time. Frequently, sales are made with all terms agreed upon, or understood by reason of past practice, except for the amount of the quotation which will be announced during the day. Only a small fraction of the wholesalers' sales are made on the basis of direct negotiation without reference to a quotation. Even most "street trading," usually thought to be conducted without use of a quotation, is in fact based on current quotations, against a background of available information on market conditions. A partial reason for this may be that many street trades are made on a mutual-accommodation basis among wholesalers and involve small lots. Sales to jobbers and many other outlets usually are made on open account, with payment due in 10 to 30 days. The cost of this credit to wholesalers is substantial, but it may also be a factor of considerable importance in holding many of their accounts.

Largely as a consequence of these trading policies, the receipts, sales, and floor stocks of the large wholesalers fluctuate widely. The wholesalers reported that they accept nearly all offerings (at a price), including offerings from irregular suppliers and that this policy affords them little control over volumes of eggs received. In periods when their receipts are unusually large, they are under heavy pressure to find outlets for these excessive supplies. At other times, as the result of a policy of attempting to fill demands from all outlets, including irregular buyers, wholesalers actively seek additional supplies of eggs.

Thus, the large wholesalers, either willingly or by force of business necessity, are the principal "surplus" segment of the New York market. As a result, their operations lessen, to some degree, short-term imbalances between egg receipts and sales in the market. The extent of the performance of this function by the large wholesalers is partially indicated by comparison of ranges in weekly egg receipts and of variations in floor stocks of three important groups of receivers.

In 1954, the range in weekly egg receipts of large wholesalers was from 50 to 164 percent of average receipts. Smaller wholesalers, generally committed to accept offerings from only a limited number of regular suppliers, had a range in weekly egg receipts from 90 to 124 percent of their average. The large chain food stores, exercising considerable, but not complete, control over volumes of eggs received, had receipts in the range of 85 to 113 percent of their average. This range was only slightly larger than the estimated variation in weekly receipts for the market as a whole of about 89 to 111 percent of average in 1954.

Although neither the smaller wholesalers nor the large chains were able to maintain their current stocks of eggs at constant levels, they were able to hold fluctuations in inventories within narrow ranges compared with the variations experienced by some of the larger wholesalers. Floor stocks of some of these firms, interviewed in 1955, varied by as much as 3 weeks' average receipts. Other firms held variations in their stocks to as little as 2 days' supplies. Although these firms generally expressed the desire to maintain the smallest floor stocks with which they could conduct normal operations, they were not able to achieve this goal at all times. In spite of the extra costs of holding larger floor stocks and the attendant risks of quality and price declines, market conditions, at times, made such accumulations less unattractive than other alternatives. With the resulting pressure to bring receipts and sales into balance, wholesalers reported that they employed a variety of practices. These included offering eggs on the exchange, lowering selling premiums, diverting eggs en route to New York to other markets, moving eggs into long-term storage and, in a few instances, refusing to accept further shipments from some of their less satisfactory shippers. In times of shortages of eggs, the reverse of these practices was followed.

Large Corporate Food Chains

The 5 largest corporate food chains operating in the New York metropolitan area received about 2 million cases of eggs in 1954. Approximately 85 percent of these receipts were purchased from farmers' cooperatives and independent country shippers, and of this part of the receipts, about 60 percent came from nearby areas and 40 percent from the Midwest. The remaining 15 percent were purchased from large independent New York wholesalers.

The buying practices of the large chains appear to be essentially the same as those of the wholesalers, with one important exception. The chains determine the volumes they will accept and do not accept eggs in any volume offered at any time from sellers from whom they do not buy regularly. Thus, the chains control volumes of receipts and hold variations in them to low levels, while the wholesalers' receipts fluctuate widely in volume. The chains regularly pay premiums over the Urner-Barry quotation. But when a comparison of the differentials is made, the resulting transaction prices do not appear to be significantly higher than the prices paid by wholesalers when quality and service differences are considered.

Most of the eggs purchased by the large chains are candled and cartoned in their own warehouses for distribution to their stores. In 1954, only 15 percent of the chains' egg receipts were candled and cartoned by suppliers, although some of these firms were then studying the advantages and disadvantages of increasing these purchases. 6/

Other Receivers and Distributors

The remaining 40 percent of the shell egg receipts in the New York metropolitan area came into the city in several different ways. Small wholesale receivers handle some, but direct distribution of eggs to retail stores and to consumers by innumerable small distributors, hucksters, and producers probably was most important. Some of these firms operate out of locations in the city, but many are located at nearby country points. Their operations are varied and do not fit neatly into a readily definable type of function.

Small Wholesale Receivers

The 9 small wholesale receivers interviewed in 1955 bought 59 percent of their egg receipts from farmers and 18 percent from independent country shippers. Of these receipts, 88 percent came from nearby areas and only 12 percent from the Midwest. The small receivers bought 23 percent of their supplies from other wholesalers in the city. Their buying methods are similar to those of the large wholesalers.

In selling eggs, these small receivers differ sharply from the large wholesalers, not so much in terms of trade as in types of outlets. Their 1954 sales breakdown was: Independent retail stores and eating places, 59 percent; chain food stores (mostly the smaller organizations), 21 percent; jobbers, 17 percent; and other receivers, 3 percent. A high proportion of these firms' sales are candled and cartoned eggs. The traditional wholesaling function for most of these firms is a minor function, and the companies combine wholesaling and jobbing operations. Like the large chains, they exercise considerable control over the volumes of eggs they receive, and they look to the large wholesalers for supplies when receipts from regular sources are inadequate.

Jobbers

A jobber's chief function is to candle and carton eggs and to deliver them to retail stores and eating places. In 1948, Greater New York had about 88,000 such retail establishments. The total number of jobber firms in the city is not known, but it may easily exceed 400. Many are 1-man or 1-family operations, handling only 150 to 300 cases of eggs a week. Net earnings in many cases reportedly do not exceed union wage rates for egg candlers in the city. Turnover (failures and birth of new firms) is reported to be high. The jobbers located in the city purchase eggs primarily from the wholesalers, but

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6/ Since 1954, purchases of eggs in cartons have increased in relation to total purchases, according to independent observers of the market.

some buy eggs directly from producers and country shippers. Those located at country points buy from producers, country handlers, or others. It is said that a considerable number of these small operators perform all the functions of country assembly, grading, cartoning, and distribution to retail stores and consumers. Little is known definitely about them or their marketing practices.

The New York Mercantile Exchange

The New York Mercantile Exchange, organized in 1872 under a different name, provides facilities for public trading in eggs and several other agricultural products. It is thus a specialized marketing service agency. Membership in the Exchange, limited to 500, is open to any person or firm with good business standing. To obtain a seat, or membership, on the Exchange, however, it has long been necessary to buy one from a member and also to secure the approval of the Exchange. The Exchange is governed by an elected president and executive committee. Routine business is under the supervision of the secretary and business manager.

Although trading in egg futures in New York ceased several years ago, the spot call is still operated daily. 7/ Trading on the call is conducted exclusively by members of the exchange, either for their private accounts or as brokers for nonmembers. This trading is carried on publicly by voice before a set of blackboards on which exchange employees record offers, bids, and sales. Elaborate rules prescribe the conditions under which trading is done, including the definitions of weight and quality classifications, delivery procedures, methods of payment, and related factors. Penalties for violations of Exchange rules are provided. The manner in which the rules are administered was not studied.

All sales of eggs on the spot call are for cash by 2 p. m. of the same day. Eggs sold on the exchange must bear certificates of quality from egg graders of the U. S. Department of Agriculture, and must meet minimum exchange standards. The 13 classifications of eggs used by the exchange are trade classifications of long standing and are defined in terms of United States Grades and Standards for Shell Eggs. However, the requirements for these exchange classifications are changed in relation to U. S. grades from time to time, sometimes seasonally, as the average quality of eggs received in the wholesale market varies.

The minimum size of lot which may be offered or sold on the exchange is 25 cases of "nearbys" or 50 cases of "Midwesterns." Although no maximums have been established on the size of lots traded, most of the trading is conducted on the basis of units of 25 or 50 cases.

The principal participants on the daily spot call are the large New York wholesalers. As many as 75 traders may be in attendance on a given day, but typically there are less than half this number. Since many of these refrain

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7/ "Spot call" is the trade term for the trading on the exchange in eggs (and other commodities) for cash and immediate (same day) delivery.

from actual trading most of the time, the number of active traders on a given day usually represents only a small fraction of the exchange members actively engaged in marketing eggs in New York.

In November 1955, the names of 45 different individuals appeared on the egg spot call board of the exchange 1 or more times. Of these, 38 were identified as wholesalers and 7 as egg brokers. The name of the most active trader appeared on the board 1 or more times on each of 15 of the 20 trading days that month. Only 6 individuals made bids, offers, or sales on each of 12 or more days in any of the 13 classifications of eggs; 7 were active on 8 to 11 days; 13 participated on 4 to 7 days; and 19 traded on 1 to 3 days. The average number of different names appearing on the egg call boards during the month was 13 a day. Informal observation of trading activity in other months of 1955 indicates that November may have been slightly below average in activity.

Activity on the spot call may also be measured by the number of offers, bids, and sales, and by the volume of eggs sold. In April 1954, for example, there were 22 spot calls and 109 sales in all 13 classifications, involving 8,982 cases of eggs. Based on estimated disappearance, this volume is about 0.7 percent of the estimated 1.2 million cases received in the city that month. During the full year 1954, it is estimated that about 0.5 percent of total disappearance of eggs in the city were sold on the exchange. In addition to the 109 sales in April 1954, unfilled offers and bids recorded on the call boards totaled 448. Trading in nearby Extra Fancy Heavyweight White eggs, the most important of the 13 classifications, totaled 15,650 cases in 1954. Sales were made on 104 of the 248 trading days, or an average of 2 days a week.

Activity on the spot call is regularly observed by reporters of the Federal-State Market News Service and the private reporting firm who, as described below, publicly report trading results. The exchange itself does not quote prices, and it disclaims any part in pricing other than providing facilities for public trading. The spot call, however, is an integral part of the system of establishing and quoting base values for eggs in New York.

Reporting Procedures of the Private Reporting Firm

The Urner-Barry Company is a private firm which collects, analyzes, and reports New York wholesale prices of many farm products, including eggs. Since 1858, the company has published its price quotations, a weekly statistical market review, and other publications. The firm also sells its market reporting services to some commercial market wire services.

The routine of the company's reporter in collecting information and quoting egg prices on a more or less typical day is about as follows: In the morning, the reporter calls on a number of wholesalers in the Manhattan market. In these personal contacts, he gathers little information on prices because nearly all prices for bulk-packaged, ungraded eggs are determined on the basis of his quotation established the previous day or on the basis of the quotation he will announce a few hours later. He does, however, learn how the traders feel about the current market situation and how readily or slowly eggs are moving into distributive channels in relation to actual and anticipated receipts. To this collection of facts, opinions, and observations, he adds his gleanings of the previous afternoon from telephone conversations with major egg buyers in the New York City area but outside the Manhattan market. Information is obtained also from various sources on conditions prevailing in other markets and supply areas.

Shortly before 10:30 a. m., when the 15-minute spot call for eggs opens daily, the reporter arrives on the trading floor of the New York Mercantile Exchange. During the trading session, he observes all trading activity. A few minutes after the close of trading, the reporter announces his egg price quotations, which become the new market base prices until the next spot call on the exchange. Technically, these quotations are only his personal judgment of the market base prices at the moment of their release. As a practical matter, however, they are heavily influenced by the results of exchange trading. The reporter may ignore unfilled bids and offers and other information he believes to be irrelevant or misleading, but he rarely ignores closing prices of an active spot call.

At the same time, the reporter frequently issues a quotation for a given classification of eggs when no trading activity in that classification takes place on the call. For example, in 1954, there were no sales on the exchange of Extra Fancy Heavyweight White eggs on 144 of the 248 trading days. On 52 of these 144 days, offers or bids were recorded on the call boards for these eggs, but on 92 days no activity of any type took place on eggs in this important classification. On such days, it appears that the reporter usually determines quotations for classifications not traded by the use of recent "normal" differentials from quotations established on classifications in which trading took place on that day. Frequently, the differentials used are those established on a previous trading day.

Federal-State Market News Service

The Federal-State Market News Service maintains a small staff of experienced reporters in New York City to cover the dairy, poultry, and egg markets. The reporters regularly contact the principal receivers of eggs in the city in person or by telephone. Through these contacts, information is secured daily on prices, quantities of eggs received, available market supplies, the tone of the market, and related facts and opinions. One of the reporters is present on the exchange during the daily spot call to observe trading. The Service issues a daily report of egg prices, receipts, and related market information and comments. These reports are released at noon each trading day and are distributed free to all persons requesting them, including the major news wire services (Associated Press, United Press, and International News Service). A leased wire system is used to transmit the reports to other Market News offices throughout the United States and to receive comparable information from them, some of which is included in the daily reports. The Service also issues weekly summary reports.

In addition to reporting results of exchange trading in eggs, the Service reports prices for street trading in wholesale quantities during the most recent 24-hour period wherein quality and service factors are reasonably comparable. No prices are reported unless the reporter has positive information on sales at those prices. Although the reporters regularly search for independently priced transactions, most of their price information is received in the form of differentials from the quotations published daily by the commercial reporting firm. The range of prices reported by the Service reflects these differentials. This range always includes the commercial quotation, because nearly all wholesale sales of eggs in the city are made on the basis of the quotation and a relatively stable pattern of premiums and discounts, and because the Service always has considered exchange transactions as wholesale sales. The quotations, however, are at or near the bottom of the Market News price ranges much more frequently than near the top.

In addition to the Market News Service, the U. S. Department of Agriculture provides egg inspection services in New York on a fee basis. The Department issues a certificate on each lot of eggs inspected. This is accepted by the exchange and others as <u>prima facie</u> evidence of the quality of eggs in the lot. The extent to which the Market News and commercial reporting firm's reporters rely on official graders, as compared with trade opinions, in estimating the qualities of eggs which are traded off the exchange and for which they report prices was not determined.

EVALUATION

In evaluating the efficiency of a pricing system, such as the one for eggs in New York City, in terms of the accuracy with which actual prices reflect market conditions, more knowledge is needed of the cost and pricing forces underlying the movement of eggs from producing areas into markets and into and out of storage in different seasons. Unfortunately, adequate information of these types is not available and this report develops no more than a fraction of the basic information needed for such an evaluation.

However, the egg-pricing system in New York can be evaluated in terms of its potentials for establishing base prices to be used in pricing eggs under quotation-pricing agreements. The evaluation presented here is based on criteria drawn from the highly generalized principles of accepted pricing theory for competitive markets.

The structure of a central, or basing-point, market affects the efficiency of a pricing process and the conditions under which its price quotations, or base prices, can be used efficiently. A central market should be able to absorb large volumes of different qualities and forms of a commodity. It should have the broad and varied outlets and specialized marketing facilities necessary for the orderly distribution of supplies at reasonably stable prices and costs. The market should draw supplies regularly from a large producing area. And it should have a mechanism through which market values at one or more levels of trading can be registered accurately and can be reported at frequent intervals both promptly and accurately.

These considerations imply a market structure that (1) facilitates orderly, continuous "clearing of the market," (2) provides a satisfactory degree of "representative" trading as the basis of price reporting, (3) permits price flexibility without erratic fluctuation, (4) prevents market rigging, and (5) provides for a satisfactory flow of current and accurate market information (3, 5, 7, 9, 10).

Our evaluation of the pricing system for eggs in New York City is treated, for convenience and brevity, in relation to seven aspects of market structure and practice. These are: (1) Supplies and market outlets, (2) the nature of the few firms actively participating in establishing market base prices, (3) the level of trading reflected by activity on the New York Mercantile Exchange spot call, (4) the primary purpose of spot call trading, (5) the tendency toward price instability, (6) the small volumes of spot call trading, and (7) the suitability of the quotations for use in pricing eggs at various levels of trading.

Supplies and Outlets

The New York metropolitan area is the largest urban market for eggs in the United States. It receives on the average about 500 truckloads, or 250,000 cases, of eggs a week. In 1954, the estimated market disappearance of more than 12 million cases was nearly 8 percent of total egg production in this country. Estimated receipts in the city were only slightly less than total sales of eggs off Iowa farms in that year. In 1954, most of the eggs received in New York City originated in the 5 States of New York, New Jersey, Pennsylvania, Iowa, and Minnesota. But small quantities were received from 22 other Eastern and Midwestern States and Canada.

Although the city draws eggs in all seasons from large areas in the United States, the demand for eggs from city receivers is essentially local in nature. The primary demand for shell eggs in New York is for immediate consumption. 8/ In 1954, an estimated 96 percent of all shell eggs received were consumed in the city. Another 3 percent were exported to foreign countries. Exports generally are much larger in the late summer and fall than in other seasons, and represent a more important outlet for small eggs than for larger sizes. Less than 1 percent of the estimated 1954 receipts were reshipped to other United States cities. High costs of egg handling in the city make reshipment to other markets uneconomic except under exceptional situations. Direct shipments from country points to outlying markets eliminate the high cost of egg handling in terminal markets associated with transshipments, and this once important phase of the business of New York and other terminal market wholesalers has almost disappeared. On the other hand, some New York egg wholesalers reported in 1955 that they frequently diverted shipments in transit to other cities. These diversions included shipments from independent country shippers as well as shipments from their own country plants.

8/ In no week in 1954 did "into-storage" or "out-of-storage" movements in New York exceed a sixth of estimated weekly consumption in the metropolitan area. However, several receivers reported that their storage operations were conducted at Midwestern points rather than in New York.

In spite of the unifying force of common supply areas for New York and many other urban markets, particularly in the East, the localization and limitation of the outlets available to New York receivers might be expected to create widely divergent movements in prices among urban markets. But this is not the case. The similarity of the price patterns for eggs in New York, Los Angeles, and Chicago, shown in figure 1, appears to reflect activities of traders of various types in balancing supplies among markets. These operations are of two types: One is the competition among egg receivers in various consuming markets for egg supplies from shippers in common producing areas. The other is the diversion of eggs by country shippers from one market to another in seeking to market eggs where net returns will be highest. In either case, a substantial decentralization of price-making forces and a corresponding decline in the importance of central markets, such as New York, in pricing eggs are implied. That is, with the growth in volume of eggs bypassing central market wholesalers and moving through more direct marketing channels, trading and basic pricing forces have become less centralized. These developments further imply a need for a re-evaluation, presented later in this report, of the use and importance of New York egg quotations in balancing supplies among markets and of the needs of the national egg trade for market information.

Few Trading Firms

The few firms that participate in the establishment of wholesale egg prices in New York City represent primarily one segment of the metropolitan area market. They are a link in the traditional and declining market channel consisting of farmer, country shipper, city wholesaler, jobber, and independent retailer. They also supply a small part of the needs of chainstores, and occasionally act as brokers of shell eggs. On the average, roughly 40 percent of the eggs received in the metropolitan area pass through their hands.

Only one of the highly active participants in spot call trading directly represents country shippers and farmers. However, representatives of a few other organizations of egg producers and egg shippers participate occasionally, and some of the trading activity of brokers may be for principals who are country shippers. Whether or not the ownership of country egg-buying stations by some of the principal wholesalers influences their trading viewpoints and actions is not known.

The firms that use the more direct marketing channels and handle most of the eggs received in the city do not participate directly in the trading that serves as the principal basis for the quotations. Their influence on market base prices, therefore, is indirect. It is felt through the effects of their purchasing and distribution activities on country purchases, direct receipts, and sales of the wholesalers active in spot call trading. The large chains may also exert additional indirect influence on market base prices through their influence on retail prices and sales of eggs. The potency of these indirect influences was not studied, and the extent of the time lags involved is uncertain.

Thus, participation in spot call trading is largely confined to a few of the larger wholesalers and brokers and a representative of a group of farmers' egg Marketing cooperatives. In a practical sense, this group may be thought of as a sort of informal pricing committee without a fixed or defined membership. They carry on a marketing function which the egg trade as a whole has left to them, more or less by default. These traders are generally well informed on egg marketing conditions, particularly in New York City and its principal supply areas. They are also alert to the ever-changing market conditions affecting egg supplies, uses, and market channels. However, they quite naturally tend to be oriented in their outlooks primarily to the city market and to its major supply areas rather than to the national market in which New York egg quotations often are used. Furthermore, as a group, they are interested primarily in obtaining customary, or larger, margins on the eggs they handle, and only secondarily in price levels.

The small number of firms participating in spot call trading, the nature of their operations, and nonparticipation in exchange trading by firms handling most of the eggs received in the city raise the question of "representativeness" of exchange traders and trading for the users of the market base prices resulting primarily from this activity. More basically, the question arises because the growth of market channels which bypass the New York wholesale egg market has reduced the volume and variety of market forces brought together by this presently small group of active traders on the exchange. The fact that New York wholesalers are an important source of eggs for chainstores and others when supplies from regular sources are inadequate, and are an important outlet for country shippers with surplus eggs, does not necessarily prove that the wholesalers are representative of all traders using the quotations. Lack of satisfactory information and criteria for determining whether egg prices and quotations established in New York accurately reflect market conditions prevents at this time a definitive conclusion whether or not this alleged lack of representativeness has adverse effects on market prices.

Furthermore, the basic marketing problem here may actually be the improper use of the quotations, particularly by firms outside the New York market, in the pricing of eggs which are marketed in other cities. In any case, there can be little doubt that New York wholesale egg prices would be more accurate and more representative of efficient market values day to day if participation in exchange and other wholesale trading were on a broader base in terms of numbers of traders and volumes of trading.

LEVEL OF TRADING

The New York spot call for eggs often has been viewed as the wholesale level of trading in the city. At one time in the history of the New York egg market, this interpretation may have been essentially correct. A 1907 statement of policy by the Urner-Barry Company indicates this: "In determining the quotations ... it is the sole object of the reporters to represent the full selling value of all qualities commonly obtainable as indicated by wholesale transactions from first hands, in which the price terms are agreed to by barter and without reference to the quotation. There are sometimes certain particular marks of goods that are engaged by regular buyers at a premium over the quotation. But such sales do not really represent the actual value of the goods on the open market, for the premium represents simply the value of regular service with a known quality of goods, and the saving of the buyer's time in shopping the market. The price at which the goods can be bought by a buyer going from store to store to seek them, or the price at which holders can sell on the open market the quantity of goods imperatively offered, are the prices at which the reporter aims to fix his quotations" (12). However, it appears that the firm now recognizes that it in effect quotes "base values" for eggs rather than actual values.

The growth of quotation pricing arrangements and other trading developments have almost eliminated the exchange as a facility for wholesale trading in eggs, except for the token quantities traded in the process of registering prices. That is, the spot call is seldom used as a means for buying needed supplies or for selling surplus stocks, by either the principal traders or others. Receivers generally find it less costly, more convenient, and otherwise more efficient to buy under quotation-pricing agreements for most of their needs, and to fill additional needs by telephone. When trading on the exchange, both buyers and sellers incur costs in addition to regular costs of receiving (buying) and distributing (selling) eggs under standing agreements or by telephone contact. These costs are both direct and indirect. Such costs as brokerage, exchange, and quality inspection fees are direct and measurable. Indirect and largely nonmeasurable are such costs as time spent in exchange trading, uncertainties of sellers that available stocks of eggs will meet exchange specifications, and uncertainties of buyers that the eggs bought on the exchange will have the quality characteristics of eggs bought through their regular channels.

Similar doubts may be expressed concerning the extent to which spot call trading reflects market values at the city-receiver buying level.

What trading level do exchange trading, and the quotations based on this trading, represent? Under present marketing practices, it appears that spot call trading does not necessarily register market values for either the wholesale selling or trucklot receiving levels of trading. The quotations established on the basis of spot call trading appear to be between the transaction prices for these two trading levels, and the trade regularly uses the quotations as base prices for both buying and selling. The price reports of the Federal-State Market News Service include the quotations within reported ranges. In practice, therefore, the quotations, or base prices, probably not only do not, but also need not, reflect market values at a particular level of trading to provide means of arriving at transaction prices for a particular level. Price change is the significant information provided by the quotation or any other series used as a base. However, both trade understanding of the sense of the quotations and trade practices in using them must remain essentially unchanged from day to day, if savings of time in negotiation are to be achieved. It is also desirable that all users of the quotations have available current information on the structure of premiums and discounts. This is provided by the daily reports of the Federal-State Market News Service. The day-to-day variations in the range of prices reported by the Service appear to confirm the relative stability of these price differentials.

Another problem which further complicates interpretation of New York egg quotations is the variability in and lack of precise knowledge of the quality of eggs received in the wholesale market. The bulk of the nearbys received have been sized by producers and loss eggs have been removed. But in other respects the eggs are wholesale lots. Although eggs sold on the exchange must meet its minimum standards of quality, the purpose of spot call trading (discussed later) and the manner in which the quotations are used indicate that variations in the average quality of receipts are reflected in prices on the spot call and in the quotations. That is, at different times, the quotation may reflect values of eggs of different average qualities. And, of course, as noted earlier, exchange requirements are altered at times. For traders intimately acquainted with spot call trading, no problem of value interpretation may result from these conditions and practices, but for others not so knowledgeable, serious misinterpretations of values can, and possibly do, result. Considerable pricing errors may result in the short run if the quotations are used as the basis for pricing eggs graded in terms of nonvariable specifications; for example, U. S. consumer grades.

PURPOSE OF TRADING

Under prevailing market practices, quotations are used as market base prices. Hence, there is a practical need for a mechanism through which current quotations can be established. Experience in other markets indicates that in the absence of trading on a mercantile exchange, some other device, including use of Market News reports, frequently will be found by the egg trade for establishing market base prices. In New York, the primary purpose of spot call trading in eggs is, in a practical but not in a technical sense, to establish the desired market base prices.

In the daily trading sessions, traders, by offering and bidding for eggs, test the reactions and sentiments of the group of active traders, principally Manhattan wholesalers of eggs, to particular market and price situations to see if adjustments in current quotations may be needed. These adjustments may consist of changes in the general level of base prices or of changes in relationships among the quotations for the different classifications of eggs. In either case, trading appears to be conducted with a view to arriving at a set of quotations which, when adjusted by the prevailing complex structure of premiums and discounts, will provide the transaction prices that at the moment appear most likely to provide a satisfactory movement of eggs through regular outlets. Thus, the underlying purpose of spot call trading is to establish for the New York egg trade a usable current set of transaction prices for a variety of grades and sizes of eggs at several trading levels, involving a variety of trading terms and marketing services.

Trading also may be influenced at times by other considerations. The most important of these probably is the desire of New York traders to avoid losses on floor stocks or to obtain speculative gains. But motives of this sort usually are not as strong as the main goal, which is to obtain regular trading margins on large volumes of eggs moving through regular trade channels off the exchange.

To conclude from the foregoing that this price-making mechanism for eggs regularly understates true market values for eggs, as has been charged, is largely pointless. The quotations based largely on the results of exchange trading are base prices. They usually are not transaction prices. They are means to certain important ends, not the ends themselves. Moreover, the system does not provide adequate information on the premiums and discounts so important in establishing transaction prices. The significance of these conditions may not be understood by many farmers, country shippers, and others in the egg trade outside the New York market. If this is true, an educational job is needed. The important question for further study is whether the transaction prices established under the quotation pricing system, based on New York egg quotations, promote efficiency in the pricing and movement of eggs in marketing channels.

Price Instability

One of the major complaints of farmers and others against the pricing system for eggs in New York and some other central markets is that prices in these cities fluctuate more frequently and widely than is necessary for efficiency in marketing. As noted earlier in this report, wholesale egg prices in New York on the principal classifications of eggs received change on the average about once each two trading days. In contrast, in Los Angeles, which has a markedly different market organization and which uses a different type of pricing procedure, prices paid by city receivers for eggs change on the average only about once each two weeks (4).

The absence of satisfactory criteria for evaluating the reasonableness of these price variations prohibits any conclusion that egg prices in New York, Los Angeles, or any other city fluctuate too much or too little or about enough for marketing efficiency. This lack of criteria also appears to make analysis of daily price data unrewarding. But despite this lack, some valuable insights into this problem may be achieved through study of the structure of the New York market.

Our analysis indicates that certain characteristics of the organization and functioning of the market may create price instability, though they do not necessarily do so. It also indicates that the frequency and amplitude of changes in wholesale prices of eggs could be even greater than they are. In 1954, the weekly changes in egg inventories reported for New York City were significantly related to the relative favorability of hedged storage. This indicates that the market as a whole, and principally the large wholesalers, probably contributed somewhat to price stabilization through fluctuations in stocks. However, the extent of this contribution is not known, and may have been quite limited.

Another factor contributing to price stability is the potential capacity of the New York market, relative to other large markets, to absorb large and varying volumes of eggs, in spite of the limited number and size of outlets other than consumers in the city. The principal reason for this is the large size of the metropolitan area in relation to other urban centers. An excess supply of eggs which might have severely adverse effects on prices, market channels, and marketing efficiency in a smaller city probably can be absorbed, in many instances, in New York with relatively little impact on the market.

The effectiveness of these operations and factors in reducing fluctuations in egg prices is not known. Nevertheless, egg prices in New York and other large markets continue to fluctuate considerably. Certain aspects of the structure of the market may contribute to this relative instability of prices.

Price-registering activities, as previously indicated, are conducted largely by traders who represent only one major segment of the market, the larger independent wholesale receivers. This is the segment of traders who have the least stable operating volumes. Wholesalers' receipts of eggs from country points vary from day to day and week to week several times as much as do receipts of food chains, and substantially more than estimated total receipts in the city. Many wholesalers claim that, by necessity, they constitute the "surplus" segment of the market. As a matter of usual practice and business necessity, they stand ready at all times to receive eggs from any seller or to deliver eggs to any buyer at a stated price. In contrast, many other buyers follow the practice of restricting purchases to estimated immediate needs of regular outlets. As a consequence, wholesale receivers frequently receive eggs from shippers only when these firms cannot market supplies readily through regular outlets at usual differentials. It is reported that some shippers with regular outlets in some of the smaller cities in the Northeast occasionally divert eggs to New York when a surplus of eggs in these markets develops to such a level that a sharp break in usual differentials would be necessary to clear the local market through usual channels. Such diversions may be partially responsible for the sudden increases in receipts which occur at times in New York. Conversely, wholesalers are called upon by some chainstores and other buyers only when regular suppliers cannot fill their needs at usual differentials.

Furthermore, it is doubtful that this segment of the market can be expected to reduce these variations in operating volumes materially. Hence, some price instability is to be expected. As a group, New York wholesalers no longer have as broad outlets as they had several decades ago. Most of their sales are made within the metropolitan area and a sizable proportion probably can be considered, in practice, as committed in advance for more or less regular customers.

Although wholesalers, as a group, have the physical capacity to carry large floor stocks and to store huge volumes of eggs, they generally seem unwilling to vary their inventories sufficiently to reduce fluctuations in wholesale egg prices from prevailing levels. Undoubtedly, marked increases in total stocks would be required to achieve any substantial reductions in price fluctuations. Losses from quality and price declines while eggs are held in storage, though small per dozen or per case, can total huge amounts on large quantities of eggs running to thousands of cases. The possibility of such losses constitutes a potent economic limitation on the accumulation and holding of large stocks. Hedging operations can be used to limit losses from price declines (and, alternatively, gains from price advances), but several wholesalers interviewed in 1955 indicated that hedging is not always adequate protection against inventory losses. Furthermore, probably only a few of the large wholesalers have financial reserves in excess of those needed for credit extension to buyers and for other comparatively normal operating purposes, and most wholesalers are not in a position to finance large inventory accumulations. Finally, the generally low operating margins in egg wholesaling, about 2 to 3 percent of gross sales, do not encourage acceptance of the apparently heavy risks of owning large stocks of eggs.

As a result, the typical wholesaler, while varying his inventories at times, endeavors to hold his stocks much of the time to minimum operating levels. This policy requires that he seek the price changes necessary to clear his house of additional or excess supplies. Thus, the general policy of seeking the price flexibility necessary to "clear the market" almost daily becomes understandable.

TRADING VOLUMES

Trading on the New York Mercantile Exchange usually involves small volumes of eggs. This has raised questions regarding the adequacy of this "sample" of transactions for accurate registering of market base prices. The usual small trading volumes, it is argued, increase the likelihood of extreme fluctuations and manipulation of prices. Despite some logic in these arguments, it does not appear possible either to prove or to disprove them on the basis of existing information.

New York traders generally argue that large volumes are not essential to achieve the primary purpose of the trading, which is to discover and register market base prices. Surpluses and deficits in supplies, the traders say, are usually adjusted by street trading more economically than by exchange trading. A few lots of 25 cases each, they contend, normally are adequate to test trade reactions to specific price situations and to obtain the relatively small adjustments usually needed in current quotations. Furthermore, the traders state that complete absence of activity on the spot call on a particular day is not necessarily undesirable; that it may simply indicate the trade generally feels no need for adjustments in prevailing quotations. Under such conditions, they claim the absence of trading may be more meaningful and no more inaccurate in practical effect than sales of hundreds of cases on the spot call. Therefore, they conclude, there is no need to take the time and incur the extra costs of trading truckloads of eggs. They admit, nonetheless, that, given the usually small volumes of trading, any large increase in trading activity may have unsettling effects on the market, particularly if the trading is through brokers.

The counter-arguments of critics that small numbers of traders and small volumes of trading increase probabilities of price manipulation are logical. According to many daily observers of the spot call, a skillful trader may be able to manipulate closing prices on the exchange for one or a few days at a time. Trading of this type may also be responsible for many of the small day-to-day changes in New York egg prices. But the practical probabilities and undesirable effects of speculative trading on the exchange may have been exaggerated by critics of the present system of pricing eggs.

Such trading is subject to serious limitations. The exchange penalizes members found guilty of violating its rules designed to prevent improper trading. Even greater penalties may be exacted by the community of traders by less formal and more rapid and effective means. A trader who attempts to manipulate prices in his favor, if he misjudges market conditions and trade sentiment, may quickly find himself opposed by other equally skillful traders and may buy or sell large volumes of eggs at a loss. Impartial observers of spot call trading, as well as the traders themselves, generally agree that few attempts to manipulate prices on the exchange succeed for more than a day or two and then prices usually return to the levels they probably would have reached in any event. Reporters also are watchful for attempts at manipulation and can, and at times do, refuse to quote a market that, in their opinion, is rigged. For example, the quotations for the top grade of nearby white eggs differed from the prices named in pertinent spot call activities on 5 occasions in 1954.

In short, although the incentives for price manipulation are generally present, deterrents to it also exist. These deterrents undoubtedly would be stronger, however, in a broader market. Furthermore, a broader market probably would be a more stable market. This is generally thought to be desirable for nearly everyone involved excepting, of course, for those few traders primarily engaged in speculative trading. On the other hand, it does not seem possible to prove whether or not the frequent day-to-day price changes in the New York market are detrimental to producers, shippers, or other handlers.

USE OF NEW YORK EGG QUOTATIONS

Much of this report has dealt directly or indirectly with the question of the suitability of New York egg quotations in pricing eggs at various levels of trading in New York and in other markets. Our analysis has led to several somewhat different, but not contradictory, conclusions, which may be modified as additional information becomes available. In this connection, current studies of pricing practices of country egg assemblers and handlers may prove particularly valuable.

In general, the question of the suitability of New York egg quotations in pricing eggs under long-term quotation pricing agreements appears to depend largely on the closeness, in the economic sense, of the particular transactions involved to the Manhattan egg market. Within this limited market itself and for the traders there, the quotations and the methods of establishing them appear to be, on the whole, satisfactory. Traders active in the price-registering process handle nearly all of the eggs that pass through the Manhattan market. They are highly sensitive to prices, and are generally well informed. Although they trade only token quantities of eggs on the exchange, they regularly back up these public expressions of market values with street and other trading of relatively large volumes of eggs on the basis of the quotations determined, in the main, by their own trading activities on the exchange. In short, these firms are the focal points through which Manhattan buying and widely scattered selling interests meet.

On the other hand, the suitability of New York egg quotations for establishing egg prices in the short run under quotation pricing agreements becomes increasingly doubtful as (1) the marketing area under consideration is broadened geographically, and (2) differences in trading levels, associated marketing services, and in egg quality increase. That is, the less direct the economic ties with the New York market, the less likely it is that the quotations will be accurate indicators of market values on a given day in a given market or producing area. The principal bases for this conclusion are to be found in the national production and marketing structure for eggs and in the nature of the price-making system and of the quotations in New York.

For many decades after the development of an efficient rail transportation system in the United States, a few terminal markets were central points at which both supply and demand forces met, emanating from vast producing and consuming areas. The terminal-market wholesale prices, therefore, could be considered to reflect from day to day these many and varied forces and national market values of eggs. Within the last generation, pronounced changes have taken place in the national production and marketing structure for eggs, and these have had their impacts on the terminal markets. Among these changes are: (1) Increases in egg production near major consuming centers relative to other supply areas, decreasing the relative dependence of these urban markets on Midwestern sources; (2) sharp declines in seasonal variations in egg production, reducing dependence on storage operations; (3) substantial decentralization in marketing, as a result of modern techniques of transportation, communication, and distribution, making less necessary the specialized terminal market wholesaling functions and facilities; (4) integration of marketing functions, further reducing the need for the services of specialized wholesaling and jobbing firms; and (5) increases in the average scale of producing and marketing firms, making possible substantial economies in egg production and marketing, especially in assembly and in negotiations on larger volumes of eggs.

Each of these developments has reduced the economic basis for traditional egg wholesaling operations. The need for some of the functions performed by terminal market wholesalers has been reduced materially. An example is the material reduction in the storage function, resulting from smaller seasonal variations in egg production. Some other functions have been absorbed by the integrated firms which, in moving eggs from farms to retail stores, bypass the established wholesale markets. In Los Angeles, for example, integrated egg assembling, grading, cartoning, and distributing firms have almost completely supplanted the old-time wholesaling and jobbing organizations. In Chicago and St. Louis, volumes of eggs handled by wholesalers have declined materially.

One of the effects of these changes in marketing has been the demise or deterioration of exchange trading in cash eggs in a number of cities where such trading was once the principal means of establishing egg values. Among the four cities included in this study, spot call trading in eggs has not been conducted for a number of years in either Los Angeles or St. Louis; the volume of trading on the Chicago Mercantile Exchange spot call has fallen to such low levels that some are doubtful if the call should be continued (4, 8); and, in New York, exchange trading has declined in volume over the years. It has also lost its significance as a facility for transferring ownership of goods and now is used primarily as a facility for registering prices. At the same time, decentralization of markets has tended to increase the relative importance of other cities and producing areas in establishing egg prices.

In brief, central market wholesalers are not as important as in former years as sources of supplies for many consumer markets or as outlets for producing areas. These large city markets have lost or are losing the functions normally associated with terminal markets and now are essentially no more than large consuming centers. Egg trading now involves far wider areas of action than the central markets, and further decentralization seems likely. As egg trading is decentralized, the task of reporting price information useful throughout broad marketing areas becomes more difficult and expensive, especially if the primary use of the prices reported is as market base prices. The large volumes of trading in eggs of relatively uniform quality and the services needed for accurate base price reporting exist in relatively few market areas.

Although New York egg quotations probably will continue to be influential in price formation in New York and elsewhere, their influence seems likely to decline further. Expansion of reporting of egg movements, prices, and market conditions, especially in major producing areas, might hasten this decline. Some expansion of market information services by the Market News Service, with the assistance of the Marketing Research Division, is now in process both in rural areas and in large secondary markets. These new market news reports may provide information much needed by the egg trade. Many country shippers and egg handlers in the United States may still be using New York egg quotations and wholesale price reports in pricing eggs to farmers and others simply for lack of satisfactory alternative sources of information.

The use of New York egg quotations in establishing egg prices at levels of trading other than wholesale receiving and selling and in other markets also may be questioned on other grounds. Although all egg markets in the United States are interrelated, the relationships among markets and among levels of trading do not remain constant. If these nonconstant relationships reflect true supply-demand-cost differences, a constant differential from a New York egg quotation under a long-term quotation pricing arrangement would not result in efficient transaction prices at all times.

Many transactions at the farm or other levels of marketing involve distinctly different qualities of eggs and kinds and quantities of marketing services than those prevailing in New York and other wholesale markets. Thus, U. S. consumer grade AA, A, or B eggs packed in consumer cartons and delivered to retail stores are, in an economic sense, different products from the eggs traded in bulk lots in the New York wholesale market. Similarly, a country assembler buying eggs on the basis of U. S. consumer grades is procuring eggs on a sharply different economic basis than the firm buying current receipts. Grade-price differentials widen and narrow seasonally, and the quality of eggs reflected in New York egg quotations does not remain invariable. Furthermore, supply-demand conditions for various sizes and grades at various levels of trading may differ from time to time from conditions in a wholesale market in a large egg-consuming center such as New York. These variations may easily become more pronounced as the trend toward bypassing of the wholesale market continues to lessen the closeness of the interrelationships among markets and levels of trading. For these reasons, egg handlers are well advised to examine carefully their own market environments before deciding to use a given quotation or price report as an inflexible indicator of values, or trends in values, in their own markets.

Possible Future Research

Before research in this area of egg pricing is completed, it would be desirable to examine several possible means of improving egg-pricing methods. Some aspects of the problem that merit study are: (1) Means of broadening the base of exchange trading; (2) methods of reducing fluctuations in receipts and in channels of movement of eggs in central-market cities; (3) expansion of coverage of market news information; (4) altering the basis of the quotations used in the quotation pricing system; and (5) securing greater comparability among markets in information on prices and market conditions. Study of these and other alternatives might reveal them to be impracticable or otherwise unsatisfactory, but they deserve consideration.

Enlarging Base of Exchange Trading

The base of trading in cash eggs on the New York Mercantile Exchange might be broadened by expanding the number and types of active traders. For example, active trading by more representatives of country shippers and producers of eggs would broaden the range of trade interests in the price-registering process. If the rules of the exchange were altered to reflect the level of trading f.o.b. market, and to provide for separate trading in either f.o.b. country-point deliveries or delayed f.o.b. market deliveries, spot call trading by producer groups and shippers might be expanded considerably. One possible disadvantage of such rules is that the activities of several large, well financed egg traders might discourage participation by New York wholesalers and even decrease, rather than increase, the range of trading interests and trading volumes.

Use of modern communication methods, not even excluding a closed television circuit, might permit traders at considerable distances from New York to participate directly in this process. Free inspection service for all traders who give notice of intention to participate in activity on the spot call might induce more active participation in daily exchange trading by eliminating the principal cost of being prepared to sell. Reduction or elimination of this and other costs of trading on the exchange through industry or Government support might produce an expansion of trading, accompanied by some improvement in the accuracy and stability of prices and quotations.

Reducing Variations in Volumes of Receipts

Means might be found for reducing the large variations of receipts of eggs by wholesale receivers in the New York market. Country shippers perhaps could make more strenuous efforts to direct the flow of eggs among markets and types of egg receivers so that gluts and shortages would be minimized. Abnormal marketing conditions in New York at times have highly disruptive effects on trade channels, location of stocks, and possibly prices. The practical difficulties involved in such operations probably would be great, and perhaps even insurmountable, but the potential benefits from success seem great enough to warrant their study. Relaxation of delivery rules of the exchange along the lines indicated above might prove beneficial.

Expanding Market News Services

Expansion of the market coverage of the Federal-State Market News Service and other information programs might improve price-making processes. Reports on country-point prices and collection of eggs in all major egg-producing areas, on prices to retailers, and on movements of eggs into retail channels in large cities might prove beneficial. This does not imply that such reports alone would be adequate for the egg trade. Information from time to time on marketing costs, margins, organization, and practices, and on consumption and demand also may be highly useful. As noted earlier, some current research in progress in the U. S. Department of Agriculture is designed to develop some of these needed reports. And in recent years the Market News Service has developed new reports of prices to retailers in several cities, including New York.

Alteration of Bases of Quotations

Modification of the quotation pricing system is a subject for further possible research. For example, producers shipping eggs to Los Angeles distributors are paid at a fixed differential under the prices paid by retailers as reported by the Federal-State Market News Service. Research, of course, would be needed to learn whether any such pricing procedure could operate successfully in other cities where egg marketing conditions and methods and size of firms differ materially from those prevailing in the Los Angeles area (4). Still other price bases, such as f.o.b. market prices or egg futures prices, might be considered.

Increasing Comparability of Market Reports

More uniformity in reporting with respect to grades of eggs and levels of trading would be helpful to all who use the price reports and price quotations. The extent of confusion and marketing errors resulting from existing variability in grades and levels of trading used as bases for reporting, although unknown, may be considerable. This, of course, is a difficult problem which the Market News Service and private reporting companies cannot solve without assistance from the industry and probably from research and extension workers in egg marketing as well.

Integration of Marketing Functions

Finally, looking into the future, careful study needs to be given to the powerful forces, discussed earlier in this report, that have produced and will continue to produce important changes in methods of egg marketing and pricing. The trend toward integration of marketing firms deserves careful watching, not only because of its impacts on pricing methods and market prices but also because of its impacts on efficiency in marketing. The prevailing trends toward geographic decentralization of production and marketing, increasing specialization in production by individual farmers, and integration of marketing functions into the hands of fewer and fewer firms could so alter the marketing system for eggs as to "solve" problems of quotation pricing simply by eliminating this pricing method. Pricing problems, of course, would remain, but they undoubtedly would be of a different nature. Whether they would be more or less amenable to solution than present ones cannot now be predicted.

LITERATURE CITED

(1) Benjamin, E. W., Pierce, H. C., and Termohlen, W. D.
1949. Marketing Poultry Products, 4th ed., John Wiley and Sons, New York.

(2) Brown, A. A.
Mar. 1954. Egg Pricing on the Boston Market. Univ. of Mass. Agr. Expt. Sta., Amherst, Mass., Bull. 476.

(3) Duddy, E. A.
1954. The Place of Terminal Markets. Yearbook of Agriculture, U. S. Dept. Agr., Washington, D. C.

(4) Hester, O. C., and Pritchard, N. T.
April 1957. Pricing Eggs in Los Angeles. Marketing Research Report No. 161, Agr. Mktg. Serv., U. S. Dept. Agr., Washington, D. C.

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

(6) March, R. W., and Herrmann, L. F.
1953. The Establishment of Central Market Butter Prices in Chicago and New York. Marketing Research Report No. 53, Prod. and Mktg. Adm., U. S. Dept. Agr., Washington, D. C.

(7) Norton, L. J.
1954. The Essentials of Good Terminals. Yearbook of Agriculture, U. S. Dept. Agr., Washington, D. C.

(8) Pritchard, N. T., and Hester, O. C.
May 1957. Pricing Eggs at Wholesale in Chicago and St. Louis. Marketing Research Report No. 173, Agr. Mktg. Serv., U. S. Dept. Agr., Washington, D. C.

(9) Shepherd, G. S.
1954. Changes in Structure. Yearbook of Agriculture, U. S. Dept. Agr., Washington, D. C.

(10) Shepherd, G. S.
1955. Marketing Farm Products, 3d ed., Iowa State College Press, Ames, Iowa.

(11) United States Senate
Dec. 1954. Price Spreads on Poultry and Eggs. Hearings before the Committee on Agriculture and Forestry, 83d Congress, 2d Session.

(12) The Urner-Barry Company, Inc., New York
Feb. 9, 1934. The Producers' Price-Current. 77:38.

(13) Vogt, Karl
April 1934. Interrelationships of Daily Prices and Supply in the New York Egg Market. Cornell Agr. Expt. Sta., Bull. 596.

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