THE MARKETING OF EGGS THROUGH RETAIL FOOD CHAINS IN THE DETROIT AREA

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THE MARKETING OF EGGS THROUGH RETAIL FOOD CHAINS IN THE DETROIT AREA

By

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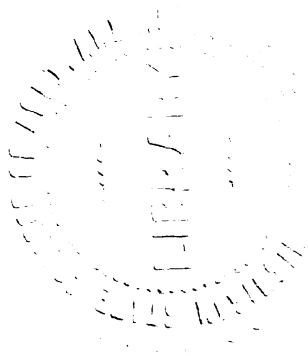

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CHAPTER I

INTRODUCTION

The egg industry has taken tremendous strides over the last fifty years. Today, egg production is almost 400 percent greater than it was at the turn of the century. Consumption has followed suit and in 1945, for the first time in United States history, the per capita egg consumption was more than an egg a day for every man, woman, and child in the country.[1] Egg consumption for 1953 is expected to exceed four hundred eggs per person.

The third largest source of farm income today is from poultry and eggs. Only beef cattle and dairy cattle rank higher. The gross income from eggs is almost two and one half billion dollars a year![2] That income goes to about six million American farms on which some five hundred million hens lay sixty billion eggs a year.[3]

The job of marketing these eggs includes not only the producer's act of making the sale, but also the performance of the many services that move eggs along the way from producers to consumers. This includes not only the tasks involved in handling the eggs, but also the establishment of prices at the various market stages. Marketing difficulties, though complex and many, usually arise from one of three major problems: (1) the

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[1]United States Department of Agriculture. Agricultural Statistics 1952. Washington, 1952, p. 545.

[2]Ibid., p. 543.

[3]Loc. cit.

seasonal production relative to the time of consumption, (2) the location of the product with respect to the consumption centers, and (3) the maintenance of quality through the marketing channels while the eggs are being held or transported.

General Marketing Problems

Seasonal Production. If eggs were produced at a uniform rate throughout the entire year, the supply would be uniform and the problem of marketing much simplified. However, egg production is relatively high during the spring and early summer months, and it gradually declines in the late summer and fall until it reaches its low point in November. Approximately one half of the country's egg supply is produced in March, April, May, and June.[4] This uneven seasonal production results in a surplus during the spring and a scarcity during the fall.[5] It is one of the functions of the wholesale egg trade to equalize the supply and to meet the demand of all seasons as nearly as possible. This is accomplished by moving part of the spring eggs through the usual channels for immediate consumption while the rest are packed and placed in cold storage where they are held until the late summer and fall months.

A trend has been underway in egg producing circles for a number of years to even out production and thereby eliminate or substantially reduce the seasonal problem. A seasonal hatching of chicks seems to be the reasonable solution although many rearing difficulties are encountered.

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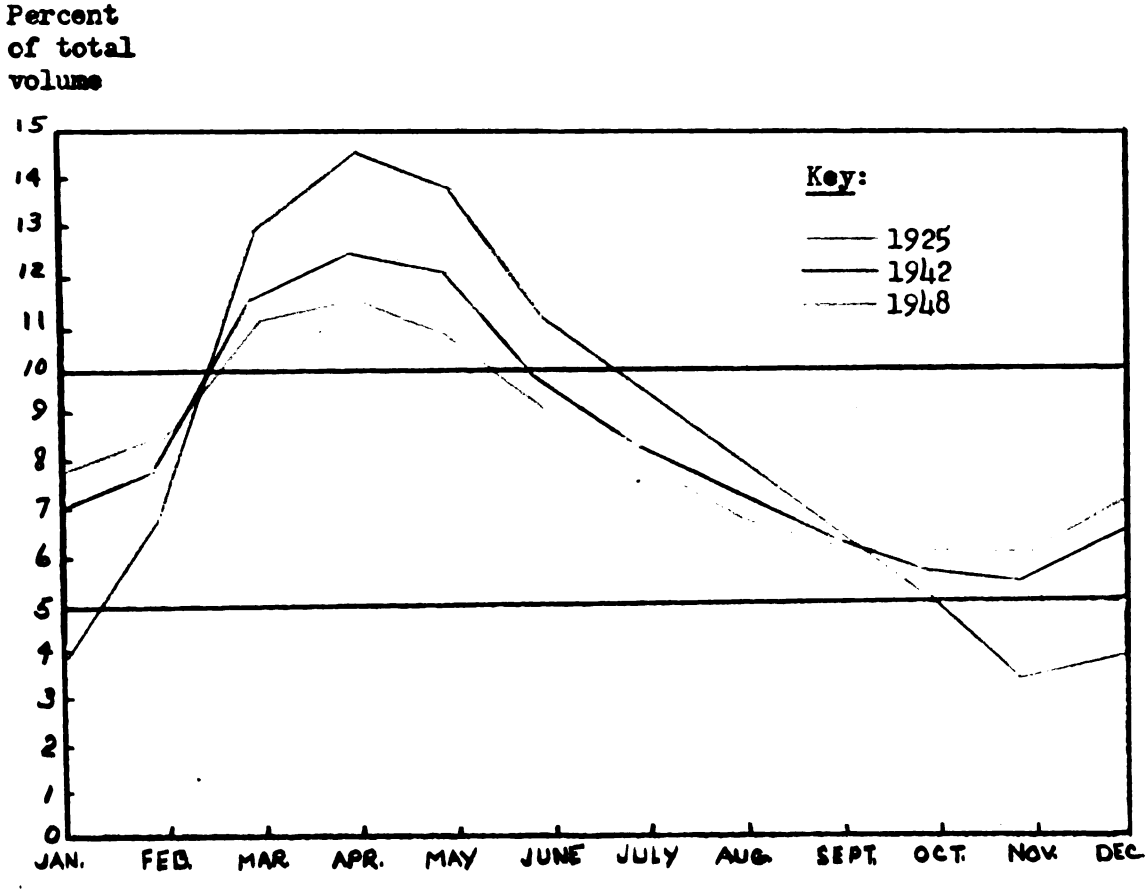
[4] C. F. Phillips and D. J. Duncan. Marketing Principles and Methods. Chicago: Richard D. Irwin, Inc., 1950, p. 25.

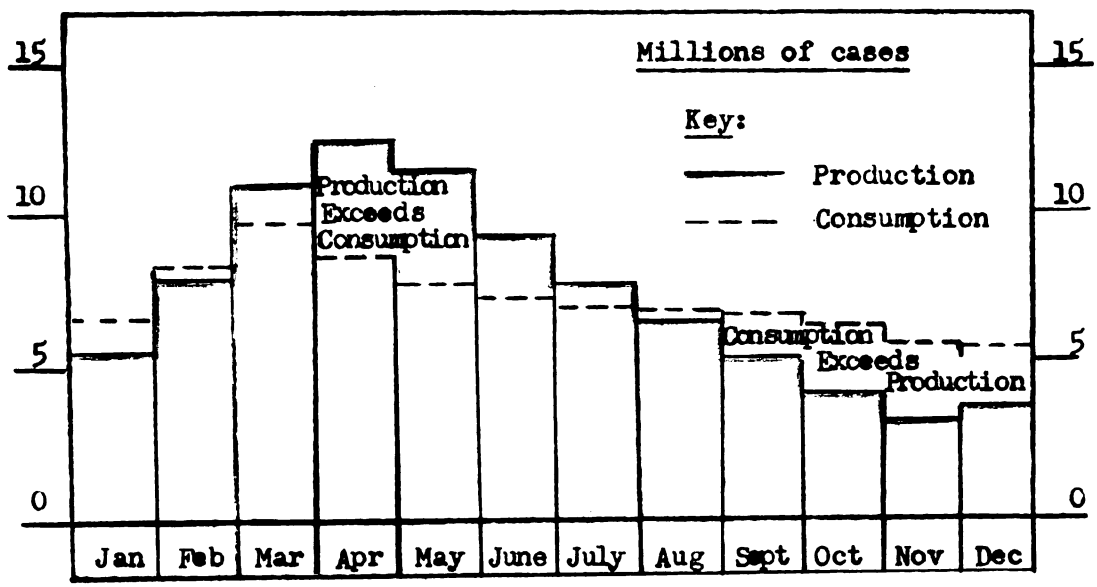
[5] See Figure 2 on page 4.



Source: Data from The Poultry and Egg Situation. United States Department of Agriculture, Bureau of Agricultural Economics, February, 1949, p. 15.

Fig. 1. Seasonal variation in egg production in the United States during the years: 1925, 1942, and 1948.

Progress has been noticeable, however, and it has been estimated that within twenty-five or thirty years the problem will not even be a significant one. Evidence of this fact is presented in Figure 1.

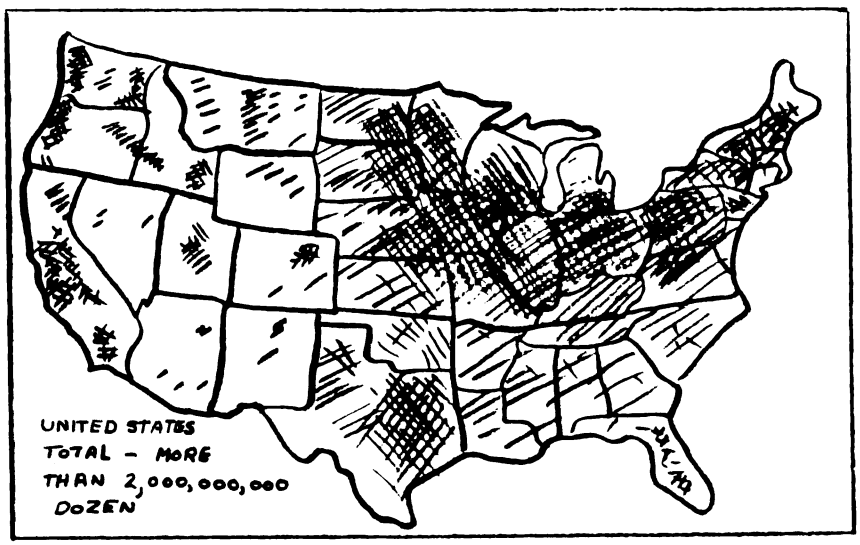


Source: A. R. Winter and E. M. Funk. Poultry Science and Practice. New York: J. B. Lippincott Company, 1946, p. 457.

Fig. 2. The relation of production and consumption of eggs by months ten year average--1926-1935 inclusive.

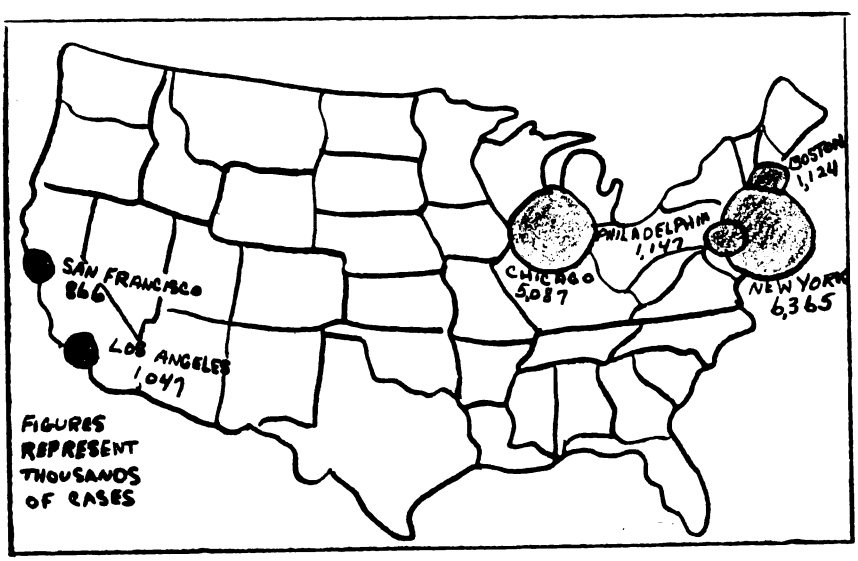
Production areas. In a young or more self-sufficient agriculture, food products are consumed by those who produce them or by nearby consumers. In colonial times in America each family produced the eggs and poultry necessary for its own use; but as our national life became more complex, poultry raising became more specialized. Poultry followed the grain regions, particularly the Corn Belt, and thus the production centers for poultry and eggs shifted far west of the industrial cities where the great bulk of the surplus poultry and eggs is consumed.[6] The problem

[6]See Figures 3 and 4 on page 5.



Source: United States Department of Agriculture. Marketing Eggs. Farmer's Bull. 1378, Washington, D. C., June, 1941, p. 2.

Fig. 3. Areas of egg production



Source: United States Department of Agriculture. Marketing Eggs. Farmer's Bull. 1378, Washington, D. C., June, 1941, p. 4.

Fig. 4. Receipts of eggs at the principal markets (1939) give some indication of the leading centers of consumption.

of production areas being separated from consumption areas is also apparent on a smaller scale and to a certain extent in Michigan as shown by the map on page 7.

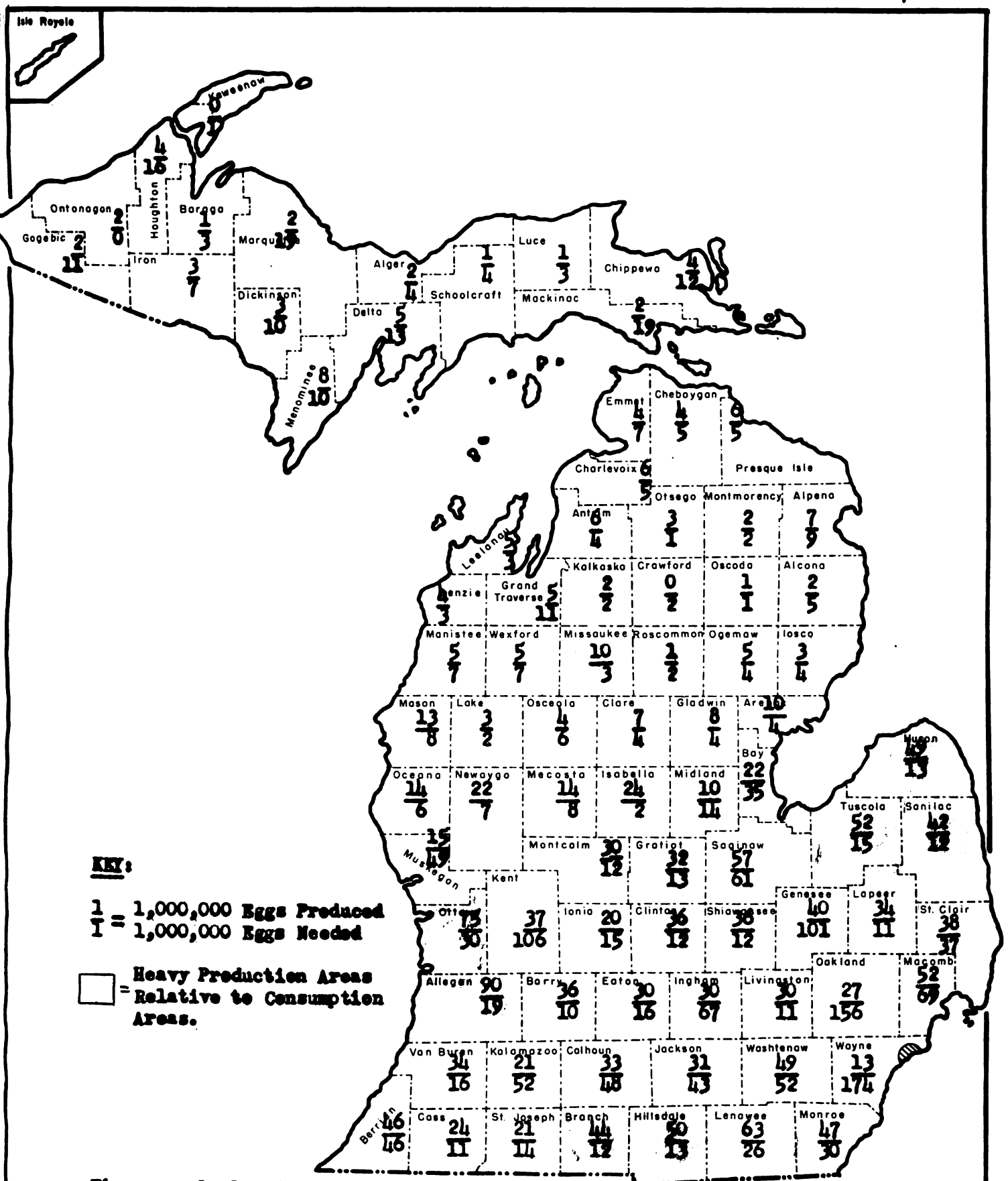
Problem of quality. An ideal marketing system would enable the most remote consumer to obtain eggs of the finest quality during all seasons of the year. Such an ideal may never be attained, but it may be an appropriate goal of marketing agencies.

Quality is one of the most important factors in the market value of the egg. A good market egg requires good production practices on the farm and good handling methods during its journey to market. Even though eggs are quite perishable, especially under high temperatures, the rate at which they deteriorate is not ordinarily realized by the producers or even the handlers. This is mainly because the appearance of the shell does not change sufficiently for the average observer to determine how much the interior quality has been reduced. Proper refrigeration of eggs from the time they leave the producers to the various markets is of vital importance in preserving the inner quality of the eggs. Since the production and consumption centers are widely separated, considerable time is required to transport these products to the retail markets. During such time, quality of the eggs is being decreased to an extent dependent upon the conditions under which they are being moved to market.

Purpose of the Study

It is the purpose of this study to:

1. Describe the systems employed by the retail food chains in the Detroit area in the procurement of eggs.
2. Describe and discuss the sources of supply of these chains and their efficiency in handling a delicate product.



KEY:

1/I = 1,000,000 Eggs Produced / 1,000,000 Eggs Needed

□ = Heavy Production Areas Relative to Consumption Areas.

Figures calculated by multiplying hens and pullets on farms by counties by 143

Source: Data from Michigan Agricultural Statistics, 1950.

Fig. 5. Egg consumption and production by counties

3. Describe and evaluate retail pricing procedures.

4. Compare the actual quality of eggs being offered for sale at the retail level with the claimed quality and offer suggestions for improving the situation.

5. Describe some promotional plans and ideas and offer suggestions for increasing egg sales.

In general it is the author's desire to convey an overall picture of the final steps in egg marketing. Criticisms are made freely and suggestions are offered in the hope that they may play a part in improving the marketing system.

Sources of Data

The data for this thesis were obtained primarily from interviews with representatives of six retail food chains in the Detroit area and conversations with egg dealers operating throughout the state of Michigan. Helpful supplementary information and background material was obtained from books, periodicals, government bulletins and reports.

The study was limited to the Detroit area in an effort to make the research more meaningful and exact. Other areas may differ greatly in marketing procedures and problems. It is for this reason that the findings of this study should not be applied freely to other areas.

The definition of a retail food chain as applied to this thesis is a company retailing groceries, meats, dairy products, and produce through at least five retail stores. Eight such chains operating in Detroit were contacted and six provided assistance by explaining their operation and supplying necessary data.

CHAPTER II

BUYING ORGANIZATIONS AND PROCEDURES

The controversy over the ability and the practice of chain stores selling goods at lower prices than their independent competitors has long revolved about the question of purchasing. In the past, strong competition among retailers was generally considered to be desirable although it led to some inefficiencies such as too many stores of small volume. As new and more efficient forms of retail stores developed, operating on lower margins, the less efficient smaller units found survival increasingly difficult and, consequently, sought relief through legislation. "In this effort they were backed by wholesalers who depended upon their trade and by some manufacturers who thought that their trade advantages arising out of product differentiation and price leadership were endangered by the chain stores' price cutting."[1] One of the forms taken by this legislation was a variety of so-called "fair-trade" measures designed in effect to hamper the activities of low-cost, low-margin agencies. "Loss leaders" were prohibited and it became unlawful for a seller to discriminate in price between the purchasers of his goods. More and more the advantage of the chain store became dependent upon efficiency and volume.

The large volume and scope of business enabled many chains to employ experts in all phases of their business. In the purchasing department, as

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[1] F. L. Thomsen. Agricultural Marketing. New York: McGraw-Hill Book Company, Inc., 1951, p. 382.

in other segments of the enterprise, organization and operating know-how became a "must". Because of the absence of some former purchasing advantages, the procurement of many items became a routine matter. More stress was placed on sales promotion and advertising and the three functions rightfully became greatly coordinated in the successful enterprise. Among the perishable items, however, it was still necessary for the buyer to know his product well, to understand ever changing market conditions and to be able to make rapid decisions.

Naturally, the size and plan of the purchasing system and its success will vary from company to company. There may be described, however, a typical or general purchasing setup to which singular variations may be related.

Typical Purchasing Procedure

Typically, at regularly scheduled intervals, the store manager or authorized subordinate contacts the dairy buyer, operating from a central office, and places an order for eggs along with orders for other related commodities. The buyer, in turn, compiles all such orders and relays the results to the appropriate supplier or suppliers. The supplier then makes up the order and delivers it to the company warehouse. Here the eggs are transferred to company trucks and delivered to the stores.

Typically, these company trucks are small insulated vehicles used solely or primarily for delivering eggs, dairy products and meats. Sometimes the trucks are refrigerated. Five of the chains interviewed are careful to avoid putting products carrying an odor on the same truck with the eggs. The reason, of course, being that eggs readily absorb odors.

The sixth company feels that the eggs are on the truck such a short time that no harm will be done. The purchasing organization of a company must, of course, be adapted to the needs of its particular operation. For this reason exceptions to the foregoing description are easy to find.

One of the larger chains has an order department through which the formal orders are sent. Stores phone in all orders to this office which in turn relays them to the appropriate buyers.

The stores of two of the smaller organizations deal directly with the supplier. In these instances, orders and pricing arrangements are made without consulting the central office and deliveries are made directly to the stores by the supplier.

One of the companies has its own country buying station from which it gets its eggs. This station purchases local eggs via truck routes and supplements its needs by outstate purchases and purchases from other dealers. Nevertheless all of the eggs sold by the Detroit Unit of this company must be candled and graded at the station. For the most part the station is operated as an independent grading station.

Formerly (within the last two years), two of the chains had operated their own city egg departments. The departments would buy eggs in bulk form and candle or recandle them prior to their sale in company stores. Under this system the actual buying was delegated to the egg department head.

One of the companies made the change after being bought out by another organization. The reason behind the move was to improve quality standards which at the time were in a pitiful state. Formerly, to give an example, eggs of this company were often sold as "light dirties, heavy dirties,

et cetera". The new company seems to be making a serious effort to improve the reputation of its egg quality. Although the company seems sincere in its efforts, the climb is hampered seriously by the following circumstances:

1. The company still places price and per package profit above quality. This can be an obstacle to a real quality program.

2. No one in the company seems to understand the product. The former egg department head may, but his record shows him to be irresponsible.

3. For all practical purposes, no quality checks are made on the new suppliers.

4. The new suppliers are large meat packing concerns whose reputation quality-wise for eggs leaves much to be desired. This is a common opinion through the industry supported by A. H. Kantner in a recent doctoral thesis[2] in which he says:

> Retailers that purchased eggs from meat packers, chain warehouse and milk dealers had relatively low average quality in the eggs on hand. For example storekeepers claimed that 97 percent of the eggs they had received from meat packers were grade A. But inspection showed that only 19 percent of those eggs were grade A while 24 percent were grade B, 22 percent grade C, 20 percent "no grade" and 15 percent inedible.

In a recent interview with this company's supplier the author was told that the eggs were candled at rates up to five cases per hour (1,800 eggs). The industry average is considered to be approximately three cases. The rapid pace employed by such candlers suggests a flash candling technique designed primarily to segregate inedibles and checks from current

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[2] A. H. Kantner. Marketing Eggs in Retail Food Stores. Unpublished Ph.D. thesis. Cornell University, 1952, p. 84.

receipt lots with the remainder of the eggs being packed and sold as grade A. Positive suggestions for a quality control program may be found in the latter part of Chapter V.

The other company which abandoned its egg department did so for an entirely different reason. This company had used the department to foster a quality and freshness control program. Rigid standards were developed on the premise that high and consistent quality would sell more eggs. Evidently the premise was sound as for many years the egg business has increased proportionately and in volume.

The reasons for the change centered primarily around two facts. About 60 percent of the eggs sold in the stores had been candled and cartoned by outside suppliers for approximately three years prior to the change. During this period the company standard of quality had been adhered to by all sources and they were now considered reliable. The suppliers at the time of the change were also fully equipped to handle their share of the increased volume. Quality checks are made on the suppliers' products at the cartoning point, at the company warehouse, and at the stores.

The second reason centered primarily about the fact that the finished cost of the eggs processed through the company department averaged three to four cents a dozen higher than those processed by the suppliers. This, of course, made it difficult to match prices of competitors. Among the reasons making such a city processing plant prohibitive are the higher overhead costs and the higher cost of bulk eggs.

Since the company has abandoned its city egg department, it has realized, on eggs, a lower average retail, a higher gross margin and,

consequently, a sales volume increase over the previous year of 9.27 percent.

Ordering Procedures

The ordering system of one chain was selected to be described in detail since it contains most of the principles embodied in other systems. Other procedures may then be more easily explained and readily understood.

Every store of this chain maintains order guides or sales charts which are tabulated daily or weekly depending upon the product. By referring to these charts each department head within a store can know at a glance the daily or weekly sales of his products. Upon these data he bases his orders for a replacement supply.

The entire next week's supply of eggs is ordered on Thursday of each week. The anticipated amounts for each day are based upon the experience of previous weeks as shown on the order guides. The department head fills out an order form of his anticipated requirements and submits this to the store manager who in turn rechecks it and sends it along with other orders to the order department. The amount submitted is not always the final order but it gives the ultimate supplier an opportunity to work toward a given goal. All stores have the privilege of adding or cutting their orders of eggs which is often necessary because of unexpected fluctuations in business. Any change, however, must be submitted to the order department at least two days prior to the delivery date. The two-day deadline is necessary because of the time element involved in preparing and delivering the product.

The order department makes a "recap" daily of the total requirements of each brand of eggs required to fill all the store needs. The final recap of an order (two days prior to delivery) is given to the buyer who, in turn, notifies the suppliers so they may adjust their shipment accordingly. An example of the way the order department recaps store orders for eggs is shown below. The procedures used by other chains differed in varying degrees.

THURS. 6/21	ORIGINAL RECAP	CUT / ADDS	FINAL RECAP
Jumbo A	11	-1	10
Large A	180	+8	188
Medium A	160	+3	163
Small A	190	-11	179
Large B	80	-4	76
Medium B	21	-	21
TOTAL	642		637

Fig. 6. Recap guide used in ordering

Some of the companies permitted no recap. These chains claimed that their stores were seldom "out" of eggs and an overstock would merely result in a smaller order the following week.

The buyer of one company received the individual store orders then adjusted them to what he thought the store should have before contacting the supplier.

In two instances the supplier discussed quantity needed with the department head in the company stores. The two would reach an agreement as to the amount needed.

Within the larger chains, eggs are ordered and delivered daily, in the smaller chains--once and twice a week. On the once a week arrangement, the bulk of the eggs came from the midwest. For this reason some contact is maintained with local suppliers who may be called upon when western shipments are delayed or when, for other reasons, a shortage occurs.

Anticipation of Purchase

Anticipation of purchase did not seem to be a real problem among the typical retail egg buyer. In many instances, this was left up to the supplier in whom the buyer had complete faith. The supplier in such instances appreciated the store needs of his clientele and offered what was probably sound assistance in judging future needs.

Under the purchasing systems where orders were given daily, the prediction problem was minimized, but in no instance was it eliminated. The egg is a perishable product which, if not moved, will decline in value and, if moved faster than predicted, may result in lost sales. From predictions, sales promotion programs are set up weeks in advance and store managers are warned of expected peaks and slumps so their orders may be influenced accordingly.

In formulating his predictions of future store needs, the buyer could take much into consideration. Such things as the comparative abundance of eggs of different size and quality and previous egg sales of the

prevailing season are important. The buyer must be aware of holiday seasons which might cause an increase in egg sales--Easter and Christmas for example, and many other religions holidays. Most of the necessary data are supplied through company records and sales charts with which he can be continually familiar. Important auxiliary information is supplied by Government and sundry reports and by periodicals, trade journals, et cetera.

In some of the companies daily records are kept of egg sales within the stores. The data are easily converted into charts or graphs for a quicker, easier, over-all analysis. Many such graphs and tabulations may be kept--among the most popular being: total daily shipment to stores, comparison of weekly shipments with other units, proportion of eggs sold within the stores, inspection reports, market quotations plotted daily, and quantities supplied by suppliers.

The graph on page 18 is an analysis of weekly egg shipments for 1951 and 1952 of one Detroit chain. The shipments are broken down to show the relative quantities of different sizes of eggs sold. To one familiar with the natural life cycle of the chicken and with present day rearing practices the variation over the year seems logical. Female chicks hatched during the normal hatching season (February 15 - April 15) may be expected to reach sexual maturity at approximately 140 to 200 days of age. This means that a pullet hatched March 1 will start producing eggs within the range of June 15 to August 15. The greater majority of the pullets will be in production during the latter part of August. Looking at the graph this seems to hold true as September and the latter part of August are the big months, so to speak, for pullet eggs.

Fig. 7. Analysis of weekly egg shipments for 1951 and 1952 of one Detroit chain.

Likewise, one may notice that medium size eggs begin to take over as the volume of the small or pullet eggs tapers off. This is merely a reflection of the fact that the young stock is maturing.

The yearling hens, meanwhile, are generally completing their biological laying year and are going into their first annual molt. When this molt begins, egg production usually ceases; therefore, it is readily understandable that there is a shortage of large fresh shell eggs in the late summer months. Since many producers only keep their chickens for one laying season, the new crop of pullets is significant. The egg buyer or supplier may refer to statistics concerning hatchery sales to get an idea of the amount of oncoming pullet eggs.

The general slump in egg sales during summer months is a recurring phenomenon which is attributed, in part, to the amount of people away on vacations during these months. However, this is only an assumption and other factors such as people eating less during the hot weather and relatively higher egg prices are factors not to be ignored. One will notice that the high peaks during holidays are always followed by a rather drastic slump, in turn followed by a rise to a more normal level. The three Easter periods shown on the graph are excellent examples.

Although general trends may be observed, sales during specific weeks or periods may fluctuate violently from year to year. More is necessary than a knowledge of past sales in forecasting future developments.

In this chapter the egg purchasing systems of the Detroit area chains have been observed. It should be remembered that the buying organization must be adapted to the particular needs of the operation and that its structure will vary with the size of the company.

CHAPTER III

SOURCES OF SUPPLY

Types of Suppliers Available

At least nine types of suppliers are available to the food chain buyer in his egg procurement program: independent grading stations, federal grading stations, carlot shippers, large poultry farms, producer's cooperatives, country stations, small town creameries, brokers, and meat packers.[1]

By independent grading stations is meant the numerous independent agencies which have among their functions most or all of the following: (1) assembling the eggs from producers, (2) keeping them under proper holding conditions, (3) grading, including candling, and (4) transporting them to retailers or larger concentrations points. Many of these are excellent sources of supply.[2]

The federal grading stations are also recognized as a good source of supply.[3] The fundamental difference between them and rival independent stations rests in the name that may be attached to the former's product. Here all eggs are candled and graded according to federal standards under the supervision of a licensed federal grader. These eggs

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[1]The brief descriptions to follow are generalities as there are exceptions to every rule. Many suppliers may fall into a combination of the stereotyped definitions.

[2]By a good source of supply is meant a dependable source for quality and volume.

[3]The term federal grading station as used in the trade and in this thesis refers to those egg grading plants operating under contract with the federal-state poultry products grading service. A licensed federal grader is a person employed directly by the government and indirectly by the egg grading station to supervise the candling of eggs within the station.

may be identified as federal inspected when sold at retail. Some believe this to be a distinct selling advantage.

Carlot shippers as used in this thesis refers to any supplier who assembles eggs in large quantities and ships them, via train or truck, to distant markets. This type of middleman is commonly located in surplus producing areas where eggs are plentiful and absorbing nearby markets are absent. Since Michigan is a deficit producing state, carlot shippers are not important resident middlemen. Those mentioned in this thesis operate from western corn belt states and Minnesota. The bulk of the top quality eggs shipped by these middlemen seem to be sent to eastern seaboard states where quality is demanded and premiums more readily paid. As a result, Michigan egg buyers fear the receipt of second rate or unreliable merchandise when they purchase western eggs. Since eggs from these areas are produced primarily from small flocks, the buyer also faces a problem of assorted sizes and colors.

Large poultry farms are usually among the better sources of supply. This seems only natural when one considers their closeness to the production of the product. Their size often facilitates and encourages the use of the best available methods for producing and maintaining eggs of good quality. Since the eggs are produced under similar conditions, they are also more uniform in quality, size, and color.

Egg producers in many sections of the country have formed producer cooperative marketing associations. Many of these are operated as federal grading stations. Because of this and its close contact with the producer, the farmer's cooperative has many advantages in marketing its products.

By country stations is meant the many country grocery or feed stores which handle eggs as a sideline. They are generally not equipped with refrigeration and seldom do candling or grading. The quality of their eggs is usually unreliable resulting in lower than average prices. These stores are important in some areas where they have a rapid turnover and are the only source of egg supply.

The small town creameries are of two types. There are those that pick up eggs along with their cream and are equipped with grading and candling facilities. They are usually considered to be dependable suppliers. Other creameries assemble eggs only as an accommodation to the farmer and sell them as they bought them. This type at best can only be rated as fair.

Many brokers handle eggs but this source of supply is usually considered poor and unreliable. Eggs are a perishable product and, therefore, need a rapid turnover. The broker generally does not understand fully the quality problem involved and consequently a few days may be permitted to pass before a sale is consummated.

Meat packing concerns very often handle eggs along with their other products. Their reputation as egg suppliers is discussed more thoroughly on page 12.

Types Utilized by the Chains

The supplier selected and the kind of eggs received depend, to a great extent, upon what is wanted, the resourcefulness of the buyer, and his ability in checking on the supplier. Some chains feel that quality is a good thing but that they would sacrifice it willingly to maintain

the most desirable selling price. The buyers of these chains reason that consumers as a whole do not recognize quality in eggs. When inedibles are removed from a pack their interest in quality diminishes. Their primary concern is price.

A minority of chains interviewed attempted to retail a superior product in the face of a price handicap. These chains were successful quality-wise, and one, because of an exceedingly low markup, competed at lower than average retails.

The majority of companies attempt to strike a happy medium by selling a fair product at a reasonable price. The fact that the great majority of eggs are retailed at a lower grade than claimed is demonstrated in Chapter V. Many buyers are unconscious of the situation. Some seem not to care.

The independent grading stations are the most popular egg suppliers among Detroit's food chains. They are utilized as a sole source of supply by half of the chains interviewed. One company used two major meat packing concerns as egg suppliers. One purchased midwestern eggs through contacts in the supply states (carlot shippers) and supplemented the supply through local independent stations. The company maintaining its own grading plant operated it as a federal grading station. All the eggs sold by the Detroit unit of this company were candled and graded at this point. The source of egg supply selected by the chains either employed the better salesmen or met the needs of the food chain in a more satisfactory manner.

Most of the chains depended upon one supplier as their sole or basic source of egg supply. This was a convenient situation for the buyer in

that time spent ordering, et cetera was minimized. One company, in reverse of the norm, regularly utilized the services of six suppliers. A large volume of eggs sold enabled this concern to do so where it might have proved impractical for others. Many advantages are noticeable in the policy, however, which seem worthy of review.

First of all, this company emphasizes a quality product. It is the belief of those handling egg procurement that top quality can be more readily obtained and more easily controlled by limiting egg purchases to locally produced products. Since Michigan is a deficit producing state, a number of suppliers is needed to assure sufficient volume of a local product the year around.

Since it is not dependent upon any one supplier, the chain is in an effective position to enforce its quality demands. The threat of smaller orders or a lost account tends to keep suppliers "in line". By the same token a number of scattered suppliers keeps the buyer informed on actual market conditions and serves as a price check on all the suppliers. To a certain extent a competitive situation exists between them.

If, for any reason, a supplier cannot deliver his share of eggs, the amount can usually be divided among the others thereby minimizing lost sales due to lack of product. The six suppliers are located in the heavy egg producing sections of the thumb, the southwestern section of the state, and northern Ohio. Difficulties embracing one supplier are not so apt to hamper the services of those in other sections.

Services Rendered by Suppliers

All of the suppliers candled, graded and cartoned the eggs. In the majority of cases the chain's own brand was used on the carton. The

smaller chains and the one purchasing from meat packers used supplier's brands. One company used both supplier and company brands but on a different size of egg. It is interesting to note that only one company carried more than one brand on the same grade of eggs. It felt that in this way customers were given a greater selection and were better served. Other chains denounced such a policy on the grounds that it was "unnecessary" and that it would only serve to confuse the customer.

All of the suppliers delivered the cartoned eggs either to the company warehouse or directly to the retail stores. Care was taken by most of the suppliers in the interim to maintain desirable conditions for the eggs.

The cartoned product was packed into regular thirty-dozen fiberboard cases by most of the suppliers. A few suppliers packed into fifteen-dozen cases on the reasoning that it would be a more convenient size for handling and filling of small orders. The lighter package was also more easily handled by female employees.

Federal grading stations undoubtedly feel that they are offering an additional service by maintaining a government grader and offering the prestige of a federal stamp.

Other services offered by suppliers may include being prompt on deliveries, maintaining a uniform and correct quality pack and offering advice and suggestions to the chain buyer.

For the most part, the suppliers do a good job in bringing eggs from farm to store in a minimum amount of time. On the average only three to five days lapse between purchase from the farmer and sale to

the consumer. Since eggs are usually purchased once each week from the producer, the average egg age at this point is about three and one-half days. It is concluded, therefore, that eggs bought from Detroit food

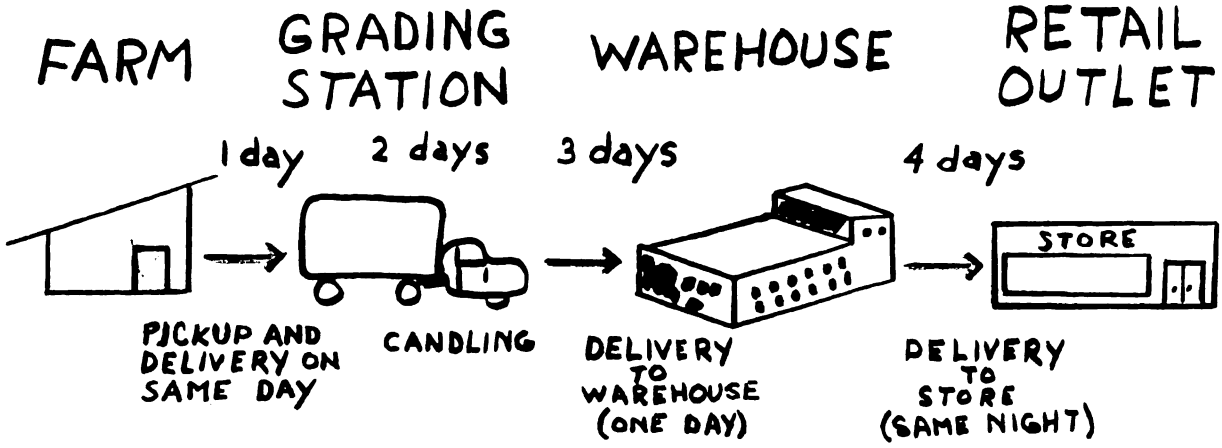

Fig. 8. Lapse of time between purchase at the farm and sale in the retail store.

chain stores are about a week old at the time of purchase. The range may be anywhere from three days to two weeks in a flush season and longer in seasons when storage or held eggs are used.

Marketing Costs

Despite the many systems of moving eggs to the consumer the relative cost of marketing is extremely low. According to government studies, in 1950 the farmer received 67 cents of every consumer dollar spent for eggs. This represents the smallest producer consumer spread among all agricultural commodities except butter which is the same.[4]

[4]Marketing Eggs in the Lake States, University of Wisconsin, Madison, Research Bulletin 168, July, 1950, p. 9.

Studies are available showing a farmer's share of up to 76 cents of every dollar spent for eggs. Whatever the actual proportion may be, the point is interesting and of value. It at least refutes the old farmer's adage (on eggs, anyway) that the middleman gets the biggest

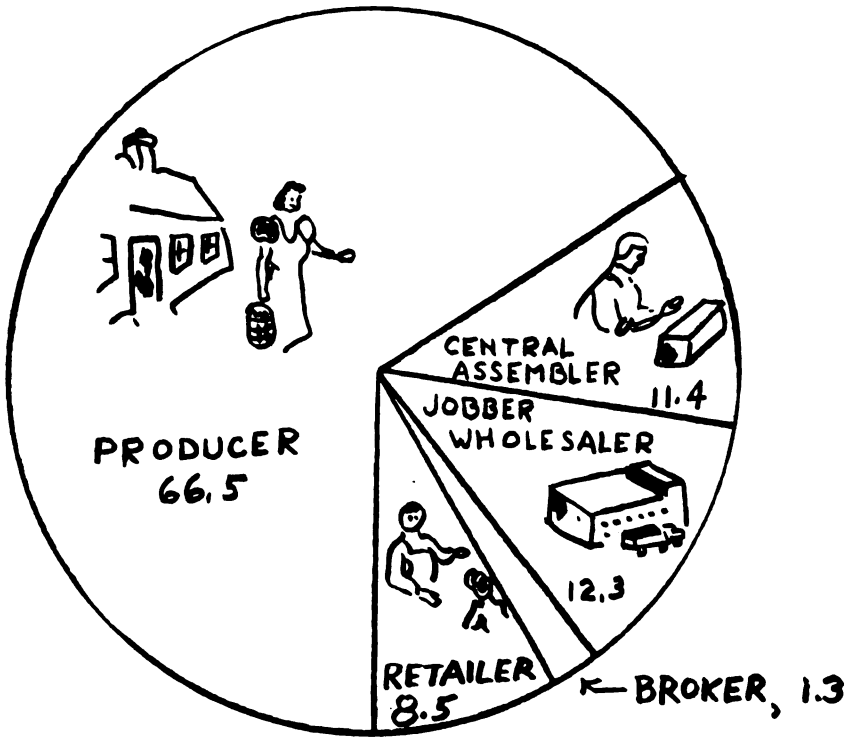

Fig. 9. Division of consumer dollar

slice of the pie. Actually, the egg middleman must operate on a small and sometimes dangerously small margin of profit.

Data have been gathered with which one can estimate the typical Michigan grading station's minimum charge for handling a dozen or a case of eggs.[5]

[5]These estimates are fairly well agreed upon by: (a) actual data taken from the financial statement of a large egg cooperative, (b) examination of data collected by Dr. Henry Larzelere, (c) data in bulletin by Raymond E. Cray, and (d) author's experience.

The data will be listed and then a sample case will be worked out to illustrate the minimum charge calculation.

1. Estimated cost of grading each case = $1.00. This figure includes all costs except trucking and management and the cost of cartons if used. .56 cents
2. Truck and truck labor costs average 25 cents a mile.
3. Cartons cost 2-2.5 cents a piece.
4. Management costs should figure about $8,000.00 a year, possibly broken down to $3,000 for a part-time bookkeeper and $5,000 for owner's salary.

Dr. Henry Larzelere, using the study of Raymond Cray, has derived the following data. Average competition has been considered.

1,000	chickens	per	sq.	mi.	- ½	mi.	per	case	of eggs
800	"	"	"	"	1	mi.	"	"	" "
550	"	"	"	"	1½	mi.	"	"	" "
300	"	"	"	"	2	mi.	"	"	" "
150	"	"	"	"	2½	mi.	"	"	" "
Less than 50	"	"	"	"	3	mi.	"	"	" "

Assuming 300 chickens per square mile and a 600 case a week operation, costs may be calculated as follows:

1. Transportation Cost (collecting eggs)
   - A. 600 cases X 2 miles = 1,200 miles for collection
   - B. 1,200 X $.25 per mile = $300.00 = cost of collection
   - C. 30 dozen in case X 600 cases = 18,000 dozen
   - D. 18,000 divided into $300.00 (collection cost) = $.017 per dozen transportation costs
2. Administration Cost
   - A. 18,000 dozen per week X 52 weeks = 936,000 dozen per year
   - B. 936,000 divided into $8,000.00 administration costs = $.0085 cents per dozen administration costs.
3. Cost of Operation
   - A. 30 dozen divided into $1.00 a case operating cost = $.033 per dozen operating cost

4. Transportation to Market
   - A. Assuming an average of 100 miles to market
   - B. 100 miles X $.25 per mile = $25.00
   - C. $25.00 X 2 (return trip) = $50.00
   - D. 18,000 dozen divided into $50.00 = $.0028 per dozen - to market costs.

5. Cartoning Cost
   - A. Labor is included under operating costs
   - B. Cost of carton is 2-2.5 cents per dozen

Collecting the result of these calculations:

	per dozen
Transportation (collection) costs	$ .0167
Administrative costs	.0085
Cost of operation	.0333
Transportation (to market) cost	.0028
Cost of cartons	.0225
Cost of handling	$ .0838

It must be remembered that this is a minimum cost figure and that it could vary greatly depending upon the size and efficiency of the operation. The fixed asset requirements of an egg grading station have not been discussed. It is another item depending upon many variables and will range anywhere from a few thousand dollars to forty or fifty thousand dollars accordingly.

Tremendous working capital requirements are necessary for the average grading station. Those having accounts with retail food chains usually must wait about ten days before getting paid for delivered merchandise. Producers, on the other hand, usually request payment at the time of purchase. Assuming ten days to be the average length of time for the grading station to collect on its accounts, the working capital required by a

station handling 600 cases of eggs a week would average about $11,340.00.[6] This requirement would fluctuate over the year with the seasonal production of eggs. However, seasonal heavy volume and lower prices would tend to balance the seasonal smaller volume and higher prices. At any rate the figure seems high for the amount of profit earned.

The net profit on a dozen of eggs may run between one and two cents, but this figure will vary greatly. Therefore, the price to the retailer averages ten or eleven cents above the price received by the farmer. Nevertheless, this is a small portion of the pie compared to the price received by the farmer and the 10 percent average markup used by the retailer.

[6]Six hundred cases a week X 30 dozen in a case = 27,000 dozen in a week and a half (10 days). Twenty-seven thousand dozen X $.42 a dozen or the average paying price to farmers = $11,340.00.

CHAPTER IV

ESTABLISHING RETAIL PRICES

The fact that eggs are sold by the dozen rather than by the pound is probably the result of custom and of technical problems in the marketing of eggs. Customers find the number a convenient amount to carry and an easy unit to store. Some of the retail stores are furnishing eggs in a perforated carton--one which may be broken in half to permit smaller quantity purchases.

Actually weight is an important factor in establishing a price per dozen for eggs. The United States Department of Agriculture has recommended weight standards for individual shell eggs which have been quite generally adopted by industry members and state governments as a basis for developing grading systems. The retail food chains in the Detroit area purchase grades patterned after these standards. Since it is necessary for the retail dozen of eggs to fall into a certain weight range to be classified as large, medium, et cetera, the eggs for all practical purposes may be considered as being sold by weight.

Setting the Retail

An important feature of pricing eggs for sale is the gross margin that the buyer adds to the cost. In most instances, unless he feels that his gross margin will force him into an undesirable competitive situation, the chain buyer will accept the price quoted by his supplier. To this cost the typical buyer adds a percent or monetary markup to attain his retail price.

Gross margin percentages ranged from 5 percent to 12 percent on retail with the mode being about 10 percent. After adding the gross margin some of the chains would adjust one cent up or down if necessary in order to retail at an odd price. Some companies made it a policy to do this, but the six interviewed were about equally divided as to its value. In some instances the markup percentage was lowered when cost fell below a certain figure and occasionally different sizes commanded different markups. Companies buying from more than one supplier would take a weighted average cost figure from which to calculate markup, if all the eggs were to be sold under the same brand name. If the eggs were sold under different brands the same markup could be used and different retails would result. A justly puzzled customer may wonder sometimes how eggs of the supposedly same size and quality in the same store could retail at widely different prices. The situation is not too difficult to find.

It is interesting to note that the chains carrying the lowest markups handled the best eggs and sold the most. The low markup in these cases was probably necessary to stay competitive after paying more for the superior product.

Since the retail prices must be determined at least two days in advance to be used in newspaper advertisements, it is necessary for the buyer or merchandiser to estimate price in advance. As a general rule the companies will hold this price for the duration of the ad regardless of how high the market jumps but may lower it if the market falls. Sometimes the market fluctuates enough to significantly change the gross markup received by the end of the week. When this happens most of the

chains will bear the brunt of the loss or take the gain. One company, however, tries to balance its average gross markup by raising or lowering it in succeeding weeks. For example, if that company operated on an 8 percent average markup and during one week the gross margin dropped to 5 percent, the average might be built up by charging a 10 percent markup the next week.

It was mentioned that the chain buyers interviewed, and in this case the city's volume retailers, generally offer little resistance to the price quoted by their suppliers. It is obvious that a "good account" plays an important role in keeping the respective suppliers "in line". The reader may wonder how the supplier arrives at a price and if the buyer has any concrete check on the fairness of the offer. Some suggest a solution of buying on a "market basis",[1] or of using the market quotations as influential guides. It is in an attempt to answer these questions and/or to clarify the problem that the following two sections are included.

Value of Market Quotations

In New York and Chicago, market reporting is performed by private concerns and also by the Market News Service of the United States Department of Agriculture. The private agencies receive an income for their work by selling their reports to news distributors, such as the telegraph companies and press associations, and by publishing them in daily and

[1]By this is meant purchasing at the price listed in a certain market report quotation or at that price plus or minus a certain monetary figure.

weekly publications.[2] In Detroit, the Market News Service is the sole market reporter.

The New York market reporters usually estimate market values in the following manner:

> They confer with traders on the New York Mercantile Exchange floor during the morning egg call, where they have an opportunity to learn the receipts reported for the day, watch the offers and bids as they progress under the call, and judge the relative firmness and weakness of the bulls and the bears. Upon leaving the exchange, the reporters visit the houses on the street, comparing statements of one with those of another, and they finally form an opinion of correct values. These estimated values apply to eggs in the hands of the first receivers and as they are sold to the jobbers.[3]

The method of data collection is a good one and it assures a sound and reliable picture of what is happening in the nation's largest consumption center. As a result eggs are commonly purchased and sold in and around New York City on a market basis. Dealers, jobbers, large food chains and other wholesale volume traders are guided and greatly influenced by the daily quotations. Also these quotations are valuable buying aids for the inexperienced market buyers of many institutions, grocery stores, and the like. They place such buyers in an informed position and furnish them with a bargaining knowledge.

Benjamin, Pierce, and Termohlen say:

> . . . and a large proportion of price contracts in cities east of the Rocky Mountains are based on the New York quotations; . . . In fact, many large distributors estimate what price the eggs or poultry command in the New York market, then deduct shipping costs and calculate the proper selling price for interior and western points even as far west as the Pacific Coast. Packers in the West use the New York quotations as a basis for determining their buying prices, and sellers in consuming markets use them as a basis for establishing values.[4]

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[2] E. W. Benjamin, H. C. Pierce and W. D. Termohlen. Marketing Poultry Products. New York: John Wiley & Son, Inc., 1950, p. 313.

[3] Ibid., p. 317.

[4] Ibid., p. 322-323.

The authors would have us believe that this is a market which may be used as a basis for egg tradings throughout the country. Undoubtedly many dealers follow and watch the major markets, but to say that these may be used throughout the United States as a price setting instrument greatly oversimplifies the total picture. The price quotations from a particular area reflect conditions in and around that area that may easily be unique or different from conditions in other areas. The weather, labor difficulties, uneven supply and uneven demand (e.g. Army purchases, sectional holidays, et cetera) are but a few of the unavoidable elements that create such situations. By looking at the chart on page 36 it is not difficult to find periods when one of the major markets is dropping while another is rising. The lines as indicated on the chart, save one, represent price quotations from three markets over the country--New York, Chicago, and Detroit. The red line becomes a "control" in that it represents the actual price of cartoned grade A large eggs to one of the large food chains in the Detroit area. If a market quotation can be used as a price guide, the lines (red line and particular market quotation) should fluctuate together; if the quotation is to be used as a basis for price discovery then the fluctuations should be even less pronounced.

The particular market quotations were selected over others for a number of reasons. The quotes are for the better eggs in the respective markets. This becomes a criteria because the dealers and buyers are interested in furnishing a grade A pack. Also these particular quotations seemed to be the most popular among those interviewed. The New York Nearbys represent a local product and since many Detroit buyers attempt

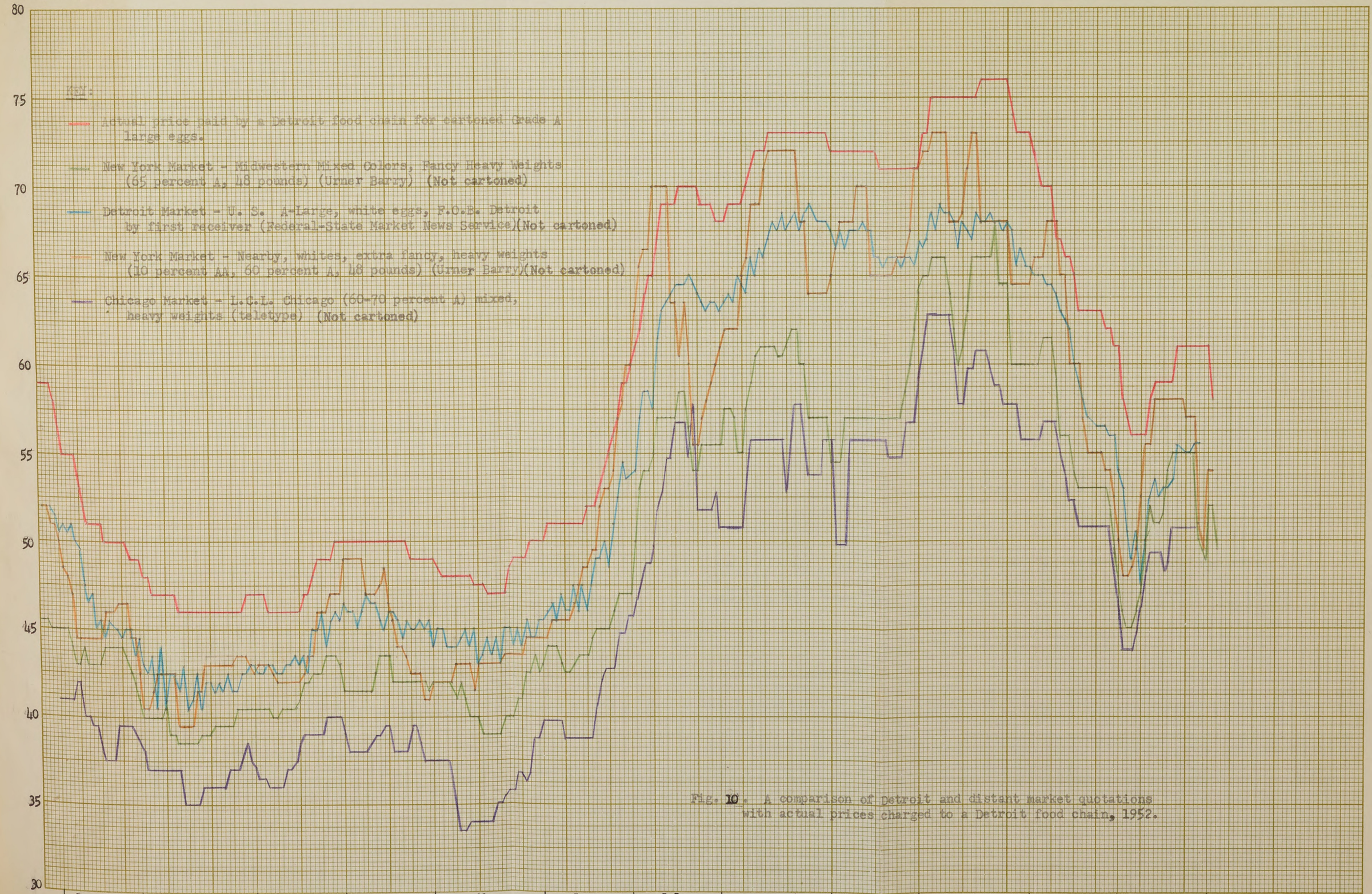

Fig. 10. A comparison of Detroit and distant market quotations with actual prices charged to a Detroit food chain, 1952.

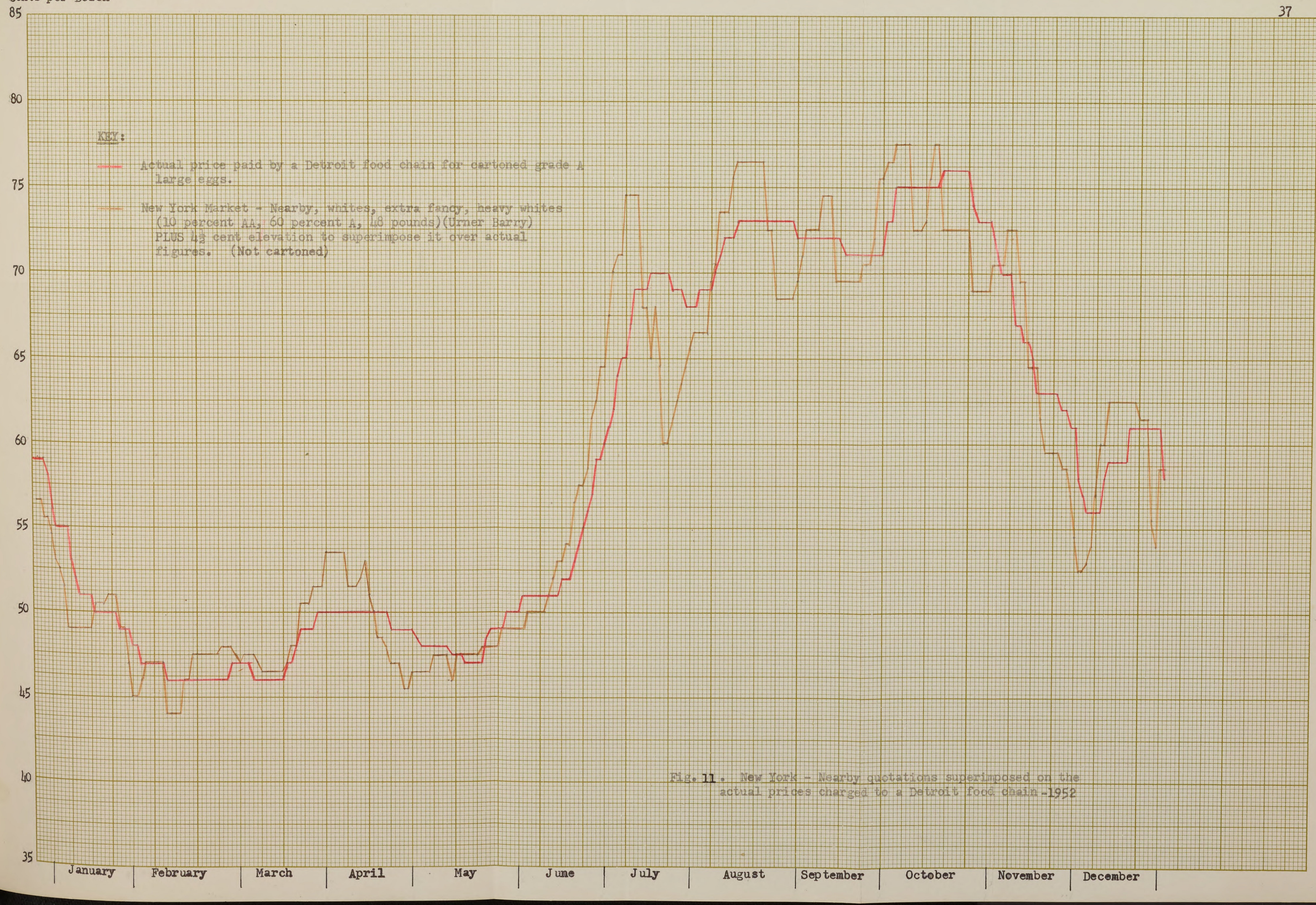

Fig. 11. New York - Nearby quotations superimposed on the actual prices charged to a Detroit food chain -1952

to purchase a local product the comparison seems natural. The quotations seemed to be as good or better than others.

During the interviews with the six large food chains in the Detroit area, two of the companies claimed to buy on the basis of a distant market quotation (one on Chicago, the other New York). These companies claimed to use these respective markets as the principal factor in price determination. One company admitted to having used the New York market as a pricing basis but that the policy was discontinued. The reason given was that retail prices during the period were often "out of line" with those of competitors.

The methods used by these large food chains in establishing retail egg prices have already been explained. The cost to the company in effect determines the retail price since in all cases a certain markup or markup range is used. A chain, whose prices follow the market, would vary daily in retail offerings and may even, on occasion, be retailing the product at less than a current market price. This happens on the New York market where market quotations are followed religiously by some in their buying procedures. This may be done in markets like New York where quotations are reliable and where the product is advertised more than once or twice a week.

Figure 11 illustrates the New York Nearby quotations superimposed over the actual cost data of a large food chain. By adding the average differential between the two ($0.045) and elevating the New York quotation accordingly the result was accomplished. This comparison may enable the reader to appreciate more fully the possible danger present when buying on a distant market basis. A retail operation operating on this

basis would continually be bucking one of two obstacles and depending upon the relative severity of the peaks and troughs may be quickly forced out of the egg business or into a policy changing decision. When the cost would rise above that of competitors, the market following retailer would be forced to sell below cost and lose money or to price above competitors and lose sales. When the paper market is lower than the actual market he would have difficulty obtaining eggs of bargained quality or in obtaining eggs at all.

One may agree with the inadvisability of using the New York or Chicago quotations as important price guides in the Detroit market and in the same breath wonder why Detroit's own quotation does not perform the function. Conceivably it could, if all in the area followed its fluctuations in their pricing practice. They do not, however. A retailer following the fluctuations could in this way also be consistently "out of line" with competitors. Store buyers do not purchase at Detroit market prices and wholesalers (at least the two interviewed on this question) would not sell over a period of time at the listed market prices.[5] The daily fluctuations would create a nerve-racking situation for the buyer who must maintain a certain markup and still keep his retail at the advertised price.

The six chains usually place newspaper advertisements on eggs once or twice a week and the price holds in a rising market for the remainder

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[5]Reasons given besides those already mentioned include the risk element. The wholesalers operate on a small but regular margin or profit. They would rather make pennies per dozen consistently than make and lose nickles. Their eye is to long-run profits and not get-rich-quick-schemes.

of the week or until the next advertisement. This advertising policy may have a stabilizing effect on prices since the suppliers realize when retails will hold. In a falling market, however, the chains may well drop their retails below an advertised price in a competitive move. In such a situation the supplier might be pressed to lower prices. Probably the large chains in Detroit sell the bulk of the city's eggs. The suppliers of these chains in turn must handle the bulk of Detroit's eggs. The opinion of these suppliers is greatly influenced by the food chains and their combined opinion discovers the actual market. One can, therefore, visualize the constant level of retail prices as having a steadying influence on a rising market.

A primary reason for the unreliable and bobbing nature of the Detroit market quotations can be found in the method of data collection. Finding it impractical to gather directly from the records as in New York, the Market News Service satisfies itself by telephoning each dealer and asking what he is paying for his eggs. This fact alone creates the possibility of a dealer controlled market. It requires no great skill or tact on the part of egg dealers to misquote a price in his favor and in doing so play a part in portraying a distorted picture to inexperienced or uninformed purchasing clientele. For example, a dealer may say he paid fifty cents a dozen for grade A large eggs when actually he only paid forty-five cents. Since these figures are published as the going price, he has somewhat of a bargaining point when trading his product.

A few years back the Detroit market quotations were more readily accepted than they are today and at that time distorted market pictures and fantastic price ranges were also common. One Detroit dealer when asked

if he ever over-quoted replied, "Of course, why not?" When price ranges in the news report ran to seven and eight cents regularly, the service declined in all but guiding value.

ing prices: Extras, (Min. 70% A) Lg (45-48#) 67-70¢, Med 62-64¢; Extras, (Min. 60% A) Lg (45-48#) 67-69¢, Med 62-62 1/2¢; Standards 61-62¢, Current Receipts 60-61¢, Checks 45-45 1/2¢.
LIVE POULTRY: Market irregular, Hens unchanged to 2¢ higher and supply light. Fryer stock ample to moderate demand. Turkeys reported at 30-32¢ for Toms with Hens nominal 40-42¢. Geese steady to firm at 34-35¢. Undertone unsettled. F.O.B. paying prices No. 1 Quality: Hens, Heavy 25-26 1/2¢, Light 21 1/2-22 1/2¢; Roasters, miscellaneous lots 25-30¢, Fryers, commercially grown 24-26¢, Old Roosters 18-18 1/2¢.

NEW YORK MARKET

BUTTER: Market steady to firm, supplies moderate, demand good. Wholesale Selling Prices: Grades AA(93 score) 65 3/4-66 1/4¢, A(92 score) 65-65 1/2¢, B(90 score) 63 1/4-63 1/2¢, C(89 score) 61 3/4-62 1/4¢.
CHEESE: Market firm, prices sharply higher. Supplies light to moderate, demand fairly active. Swiss steady to firm, demand light to moderate. Wholesale Selling Prices: S. Daisies 38-40¢, Flats 35-38¢, Cheddars 35 1/4-37 1/2¢, Swiss Grade A 43-45 1/2¢, 5# Process American Loaf 37 1/2-40 1/2¢.
EGGS: Market weak. Receipts light to moderate, demand late in day curtailed sharply. Wholesale Selling Prices: (Min. 10-15% AA) Lg (48-50#) 78-80¢, Med 72-74¢ (CON: Med on Friday's report should have read 73-74¢); no Specials. Extras, (Min. 60% A) Lg (48 1/2-50#) 78-80¢, Lg (45-48#) 76-78¢, Med 70-74¢; Dirties 62 1/2-63¢, Checks 60-62¢.
LIVE POULTRY: Market firm on heavy Hens, weak on other classes. Receipts: 47 1/2 truckloads; direct receivers 5 1/4 truckloads. Wholesale Selling Prices No. 1 Quality: Hens, Heavy 30-33¢, fancy 33-36¢, Fryers 23-28¢, Caponettes 26-38¢, Young Turkeys, Hens 48-52¢; Toms 33-35¢.

COLD STORAGE HOLDINGS - THIRTY-FIVE CITIES

Butter(lbs)	Cheese(lbs)	Eggs(cases)	Dr.Pltry(lbs)	Fr.Eggs(lbs)

Fig. 12. A bulletin issued by the Federal-State Market News Service of the Department of Agriculture as a market report for the Detroit area. Note the spread in paying prices published in the bulletin.

Currently, the price spreads seem to have shortened but the daily bobbing continues. Those understanding the situation take all this into account and use the free report only as a guide. A few inexperienced buyers persist on seeking contracts on the Detroit market basis. A supplier chancing such contract will lower quality rather than lose money.

This is not a good method of purchasing or a safe selling policy, yet many large organizations and institutions revert to this type of buying.

The Detroit market quotations on Figure 9 follow the control quite closely. The critical reader may point this out as evidence that the quotations are sound and that they could safely be followed in any pricing program. The fact that none of the volume buyers in the area have been trading on the Detroit market may account in a large part for its current reliability. If volume purchases were made on a market basis, it is quite probable (for the same reasons that caused its reputation decline) that the Detroit market picture would be different.

The purpose of this section was not to condemn any of the market news agencies or market quotations. The services have accomplished a great deal by reducing variations between markets and by publicizing trends in various sections of the country. As guides they may be very helpful to the industry but their value in the Detroit market is limited.

Price Discovery

If market quotations are of little immediate value, just what must a supplier do to determine his price and how can the retailer know if that price is a fair one? There is no set formula and many mistakes are made, but it is this difficult and ever escaping phenomenon that makes the egg business the fascinating and sometimes pocketbook breaking industry that it is.

As Thomsen puts it, "Middlemen do not determine prices, since they do not determine consumer demand or market supplies. They merely 'discover' prices, based on evaluations of the quantities available and in

prospect and what consumers are likely to be able and willing to pay for those quantities".[6]

The process of price discovery according to Thomsen has two distinct phases:[7]

1. Evaluating the conditions of supply and demand, and determining the general level of prices for the commodity which will result from these conditions.

2. Determining the value of a specific lot of the commodity being exchanged, relative to the general market level.

If there is an abundance of eggs available, the market will be weak and dropping, whereas a product scarcity will result in a firm and rising market. The statement seems obvious enough, and many in the egg business follow with great concern market receipts and storage statistics. The real problem, however, resides in discovering the situation before it occurs.

There are many factors that can play a part in creating a long or short supply situation. The following may be considered especially important:

1. Production cycle. As explained in the introduction, eggs are produced at an uneven rate throughout the year. Though the cycle is lessening the industry can still expect a surplus and lower prices in the late spring months and the reverse in the late fall and winter months.

2. Storage. The available supply over the year is somewhat leveled by moving a part of the surplus into storage until it is needed in the

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[6]F. L. Thomsen. Agricultural Marketing. New York: McGraw-Hill Book Company, Inc., 1951, p. 191.

[7]Loc. cit.

spring. In this manner, supply is altered and price may be affected. As the seasonal production problem improves, relatively fewer eggs are being stored and the egg storage statistics have a weaker and declining influence on the market.

3. Hatchery statistics. These figures are, after all, a reflection of producer opinion which actually is the father of a long or short supply situation. The alert supplier can make surprisingly accurate estimates of egg production throughout the year by simply recording hatchery statistics and applying his knowledge of poultry. He knows mortality rates, maturity dates, and rates of lay throughout the year. He cannot confidently predict prices for a period but he can forecast their direction.

4. Volume tradings. Heavy imports or exports (e.g. Canadian egg imports into Detroit in 1949-50) or government purchases may drastically affect a local market for a short period.

5. Labor conditions. Labor difficulties may directly or indirectly affect the egg supply, and in turn the price per dozen. An outstanding example of this occurred during the middle of July, 1952, in New York City. At this time a local shipping strike caused the accumulation of "too many" eggs within the area. As a result the market for the local product dropped rather drastically. The situation was local but supply and, consequently, price was affected and markets over the country were affected to a certain extent. This is just another of the countless variables affecting price.

6. Weather. Nature, herself, can easily alter the egg supply. Besides affecting production the weather may tie-up transportation.

An integrated knowledge of all these factors should enable an alert businessman to foresee most of the sudden changes in his market and in that way capitalize via his buying and pricing procedures.

It is the writer's guess that in the actual market those familiar with the above conditions are few and those making practical use of the available knowledge--much fewer. Such investigations would require extra effort plus experience before a sound interpretation could be derived. There is little doubt that the large operators follow such factors in predicting the market fluctuations, but how do the others manage?

The average supplier is not interested primarily in discovering a price. His intention and goal is to stay in line--to sell all of his product and to make a fair profit. It is not solely for social reasons that the egg houses in Detroit and throughout the state remain in frequent contact. Word travels fast in these competitive circles. And whenever possible, in payment of a similar good turn or a possible future one, a dealer will assist another in finding a market or replenishing a depleted supply. Going prices and other bits of market information are often exchanged. An unwritten code of business ethics seems to exist. These dealers may need one another to replace the knowledge and weight carried by larger and more influencial operators.

A top example of the latter in Michigan is a large producer's cooperative located on the western part of the state. This organization operating from the center of the heaviest production area handles up to 12,000 cases of eggs each week and has a long standing reputation for trading quality eggs. The paying prices of the organization are published by a large circulating newspaper and are watched by many throughout the state.

It has already been explained how newspaper advertisements by the larger food chains assist the egg wholesalers in discovering egg prices. In turn buyers for large chains and institutions may have no better check on their supplier's prices than the retail price offerings of competitors. The circle is an unending one. Occasionally the market will go opposite to all predictions and trends. The most those concerned can do is play with the puzzle in the hope of "discovering" (not determining) the correct answer. What may be readily seen in theory is often blurred in practice by those variables which can never quite be held constant.

CHAPTER V

ACTUAL VERSUS CLAIMED EGG QUALITY AT THE RETAIL LEVEL

The purpose of this chapter is to compare the actual quality of eggs being sold at the retail level with that claimed by the vendors. Of all the people interviewed, representing the six chains which form the source of much of the thesis material, not one doubted the quality as sold in his store. This, of course, is not surprising. One would not expect a company representative to state in an interview that his company's product was not the grade as marked. Most of these people were thoroughly convinced that they sold a "top notch" product. Those buying government graded eggs were especially certain that their eggs were tops--that they had to be good because they were government graded. This is not a criticism against the Federal Grading Program for it has undoubtedly done much to improve the general quality level of the product over the entire nation. It does seem, however, that much more needs to be done before the program is an effective one. The fact that less than 10 percent[1] of the eggs sold in this state are federal graded is an indication, in itself, that the program is not a very imposing one and that others can do as well or better without its influence. The state has inspectors who on "rare occasions" check eggs. These people seldom check federal graded eggs on the premise that they have already been checked.[2]

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[1]Interview with Dr. Henry Larzelere, Agricultural Economics Department, Michigan State College.

[2]Many in the trade will vouch for this and Mr. Clifford Bracy of the State Marketing Enforcement Agency (Michigan) reported that it is their policy never to check a federal graded carton if it has been packed within the past seven days.

Those not buying federal graded eggs were sometimes even more convinced of the quality standards of their product. If they purchased from a national supplier, it seemed only natural to carry the supplier's good reputation in other products over to his eggs. Often the local supplier had impressed the food chain buyer with modern plant facilities and impressive chatter about chickens and eggs. In many instances the buyer seemed to have a rather limited knowledge of the nature of the product. It is little wonder then that some could be easily impressed by most anyone with a "gift of gab" and a little knowledge about the product. It was very common for the buyer to rely and lean almost completely on the advice given by the supplier. Quality checks at the store level were made by only one company. This all may be a very satisfactory method to use in purchasing many products but in the opinion of the writer it is highly undesirable in the purchasing of eggs or any other highly perishable demand commodity.

In an effort to defend some of the uncomplimentary statements of the preceding paragraphs, a comparison has been made of the claimed quality as already described with the actual quality as found in the stores (Independent Study). In general, this study duplicates results of studies made over the country by various research agencies.

A Highly Perishable Commodity

In all fairness, before discussing this point and offering suggestions for improving the situation, let us dwell briefly on the nature of the product and the method used in determining quality.

The egg is a highly perishable commodity. So much so, that what appears to be a grade A egg today could possibly be a "rot" tomorrow.[3]

The effect of heat on eggs has been shown in a number of studies. Sharp and Powell[4] in 1930 found that temperature is more important than age in egg quality deterioration. They reported that eggs of known interior quality reached the same degree of yolk flatness when held at:

Temperature (Degrees Fahrenheit)	Number of Days
98.6	3
77.0	8
60.8	23
44.6	65
37.6	100

The effect of atmospheric humidity on eggs is so dependent on the accompanying temperature that the two should be discussed together. Excessive evaporation is the result of dry air passing rapidly over the eggs. Warm air causes more rapid evaporation than cold air; and at any given temperature, the amount of evaporation will be decreased by increasing the moisture in the air.

Various degrees of evaporation are distinguished for purposes of grading eggs on the markets. The criteria for judging is the size of the air cell. High humidity is desirable to prevent the loss of moisture which causes increased air cell size. However, a low temperature is probably more important than high humidity in egg quality preservation.

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[3]Interview with Dr. Lawrence E. Dawson, Poultry Husbandry Department, Michigan State College. This has happened, although it is not common.

[4]P. F. Sharp and C. K. Powell. Decrease in Interior Quality of Eggs as Indicated by the Yolk. Journal of Industrial and Engineering Chemistry, (1930) p. 908-915.

Of course, improper temperature and humidity conditions open the door for the ever present Proteus Melanovogenes and Pseudomonas Bacteria[5] which greatly hasten egg deterioration and are probably responsible for the bulk of egg spoilage.

Another common factor in egg quality deterioration is rough handling. The egg shell is a very poor commercial package in that it is very delicate as well as very porus.

All of these factors plus many others make it extremely difficult for the retailer to maintain quality in the eggs he is selling. He may buy eggs at one grade, sell them at another, and then receive complaints after the eggs have dropped another grade while in the consumer's home. The importance of proper keeping conditions and handling should be impressed upon store managers so as to keep such quality loss at a minimum.

Although temperatures of 30 to 35° Fahrenheit are ideal (eggs freeze at 28° Fahrenheit) for egg storage they are seldom practical. For temperatures below 50° Fahrenheit a relative humidity of 60 percent appears satisfactory.[6] With a temperature of 50 to 60° Fahrenheit, the humidity should be about 80 percent.

The Inadequacy of Candling

Besides being highly perishable, the egg is a difficult product to grade without destroying its marketability (i.e. without breaking the

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[5] E. M. Funk. Experiments in Cleaning Soiled Eggs for Storage. University of Missouri, Columbia, Bull. 426, 1948.

[6] E. W. Benjamin, H. T. Pierce, W. T. Termohlen. Marketing Poultry Products. New York: John Wiley & Sons, Inc., 1950, p. 135.

shell). Candling is the only commercial method available and it is far from satisfactory. Small blood and meat spots and other minute foreign matter may be understandably overlooked by the tired, distracted, or careless candler. The average candler handled about 1,000 eggs an hour. The necessary speed is alone a hindrance to accurate grading.

Brown shelled eggs create another of the many obstructions in determining interior quality by candling. Brown shells greatly reduce the transmission of light[7] and thereby make interior shadows even more difficult to see. In addition, the shell pigment appears red by transmitted light and thus introduced the complicating factor of color. Standards of judgment for brown eggs are difficult to formulate because the range of pigmentation is so much wider than in white shelled eggs.

Considering the inadequacy of candling, is it any wonder that study upon study can be found demonstrating the inaccuracy of candler's grades as compared with broken out quality? Combine this fact with the possible rates of quality decline and the fact that many retail stores are selling eggs below labeled or claimed quality becomes more readily understandable.

The study illustrated in Figure 13 is one example of the wide discrepancies between candler's grades and the actual condition of the egg as revealed when the egg is opened.

Professors Lawrence Dawson and Charles Sheppard of the Poultry Husbandry Department of Michigan State College recently conducted an

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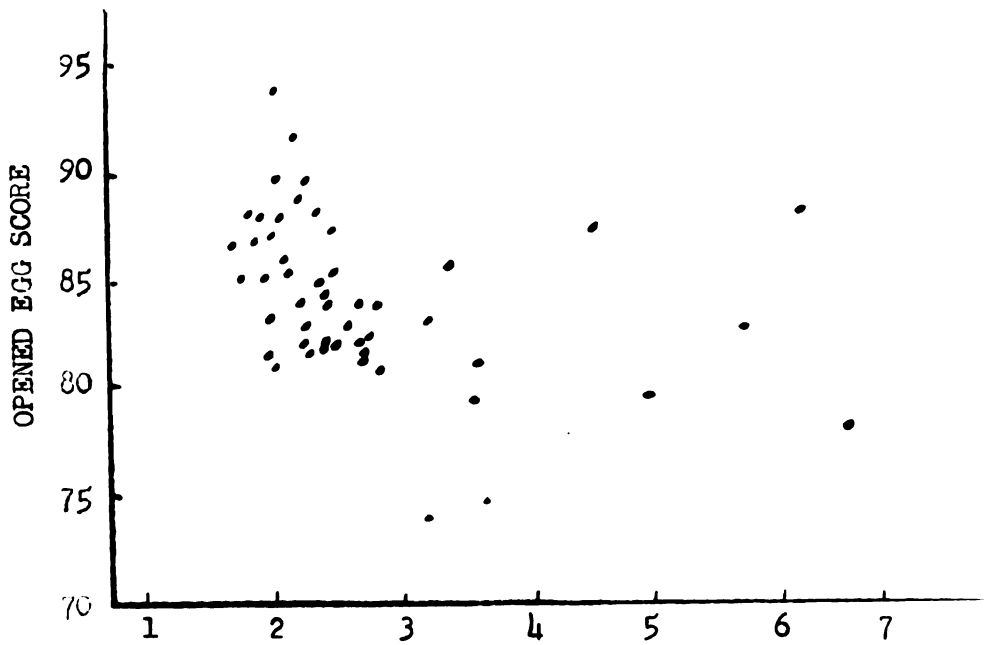
[7] A. L. Romanoff and A. J. Romanoff. The Avian Egg. New York: John Wiley & Sons, Inc., 1950, p. 635.

experiment of their own along these lines. They candled 600 eggs, that had just been candled by a commercial grading station. They then broke open all of the eggs and compared the candled graded with the actual grade



Source: A. L. Romanoff and A. J. Romanoff. The Avian Egg. New York: John Wiley & Sons, Inc., 1950, p. 639.

Fig. 13. The relationship between candlers' average scores and the opened egg scores for 51 dozen fresh chicken eggs.

as measured in Cornell units. They found that AA eggs could be separated from grade C but that accuracy on the intermediate grades was not too reliable. The detailed results are illustrated in Figure 14. Evidently the reason for what seems to be downgrading is the fact that all of these eggs were comparatively fresh. Similar studies conducted in the same department show an upgrading trend. The point remains that candling can be mighty inaccurate.

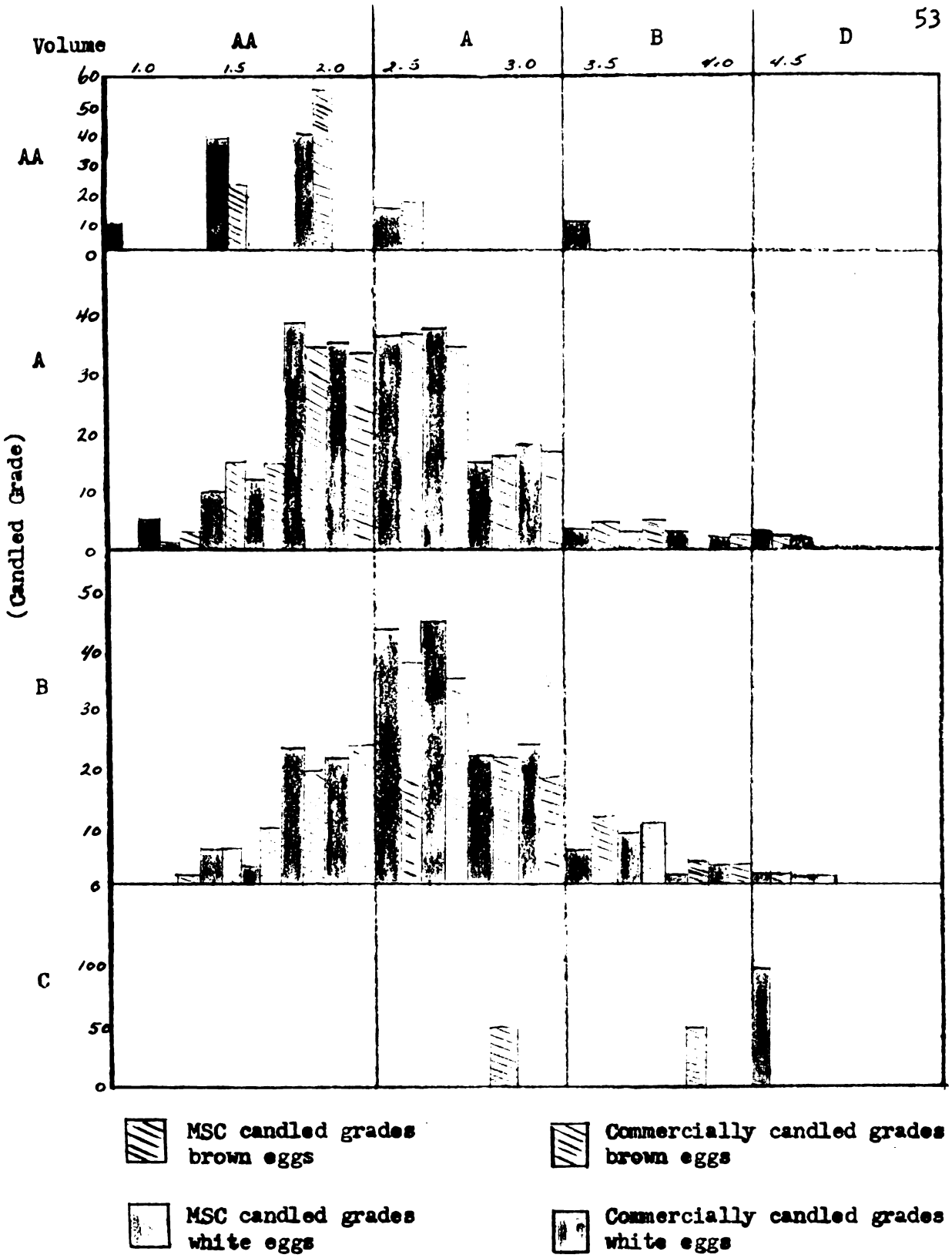


Fig. 14. The relationship between candler's scores and the opened egg scores for 600 eggs (MSC Study)

Romanoff seems to agree with these findings when he states that:[8]

> Candling assures the elimination of practically all inedible eggs, but it is probable that edible eggs are graded correctly only to the extent of 75 percent, at the most. However, for practical purposes, this degree of accuracy is adequate, since studies indicate that the judgment of candlers is fairly trustworthy in regard to eggs of high and low quality. Disagreement occurs chiefly in classifying the intermediate grades.

It is the opinion of the author that experienced commercial candlers can grade much more accurately than these figures would indicate. Little or no check on candlers' judgment and speeded-up grading programs both play major roles in making candling the inadequate method that it is. A third factor resides in the fact that many grading station managers, though completely honest men, seem to have developed an elastic conscience since entering the egg business. Although complete accuracy may never be attained, measures may be taken to obtain a better quality pack. These are covered in the last section of this chapter entitled "What Can Be Done About the Situation".

Studies Comparing Actual with Claimed Quality

Returning to the main point of this chapter, a number of studies has been gathered which seem to illustrate that actual egg quality at the retail level is quite different than claimed. In these commercial channels an upgrading is typical. It is interesting to note the great proportion of eggs that are below station quality, and then to note the amount that are more than just one grade below.

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[8] Ibid., p. 639.

Northeast study.[9] In July, August, and September of 1949 a survey was made of approximately four thousand retail stores in the Northeast. This area embraces twelve states: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, and West Virginia. The stores were selected in such a manner as to represent all the retail food stores in the region. Altogether 3,907 retail stores were included in the study. A sample of the eggs from each lot offered for sale in these stores was inspected and graded by trained egg graders.

When claimed quality was matched against federal standards, about three-fifths of the eggs were of a quality lower than that claimed for them.

The 4,277 lots of eggs reported in Table I include those from all stores regardless of how many classes of eggs they offered. Over one-eighth of all the lots were below grade C. The retailers who stated that they were receiving either B or C, or below C grade eggs, actually had about one-sixth of their eggs below grade C. They did not differ much from ungraded eggs in this respect. About one-eighth of the egg lots of those who stated that they received A or AA were found to be below grade C. In New York City, nearly all the retailers stated they were receiving graded eggs. About 7 percent of the lots found in New York City were below grade C and 9 percent were grade C, 43 percent grade B and 41 percent grade A or better. Eggs in New York City graded considerably higher than those in any of the other city sizes. Of 1,464 lots sampled in the

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[9] N. Nybroten. Marketing Eggs in Retail Stores of the Northeast. 1949. West Virginia University Agricultural Experiment Station, Morgantown, Northeast Regional Pub. 7, Bull, 353, 1952.

TABLE I

COMPARISON OF QUALITY CLAIMED FOR EGGS WITH ACTUAL QUALITY SOLD IN 4,277 LOTS OF EGGS

City Size and Grades Retailers Stated They Were Receiving	U. S. Consumer Grades of Sample Egg Lots As Determined by Inspectors			
	AA or A	B	C	Below C
	Percent of Total			
New York City				
AA or A	43.2	41.4	8.7	6.7
B or C	12.5	56.2	25.0	6.3
Below C	*	*	*	*
Ungraded	*	*	*	*
Total	41.4	42.7	9.3	6.6
100,000 and over /				
AA or A	16.3	44.5	20.3	18.9
B or C	7.7	51.9	26.9	13.5
Below C	14.7	50.0	20.6	14.7
Ungraded	27.2	41.6	12.4	18.8
Total	18.5	44.2	18.7	18.6
10,000-00,000				
AA or A	37.7	39.1	14.6	8.6
B or C	5.1	57.0	20.2	17.7
Below C	9.1	45.4	27.3	18.2
Ungraded	50.0	28.4	9.7	11.9
Total	40.3	36.1	13.2	10.4
Under 10,000				
AA or A	35.5	41.3	13.2	10.0
B or C	8.9	35.7	33.9	21.4
Below C	*	*	*	*
Ungraded	35.1	36.0	11.2	17.7
Total	33.6	38.2	13.5	14.7
The Northeast				
AA or A	29.90	41.82	15.75	12.53
B or C	7.39	49.75	26.11	16.75
Below C	14.58	47.92	20.83	16.67
Ungraded	39.04	34.56	10.88	15.52
Total	31.56	39.96	14.75	13.73

*In these cases the data were too few to have any meaning but have been included in the totals in the table.

/New York City omitted.

Source: N. Nybroten. Marketing Eggs in Retail Stores of the Northeast, 1949. West Virginia University Agricultural Experiment Station, Morgantown, Northeast Regional Pub. 7, Bull. 353, 1952.

cities of 100,000 and over, 18.5 percent graded A or better. There was a greater percent of the ungraded lots actually found to be grade A than there was of the lots the retailers claimed to be grade A or AA when they received them. This also was true in the cities of 10,000 to 99,999 where 50 percent of the ungraded lots were actually found to be grade A or AA. Only 37.7 percent of the lots retailers stated they had bought as grade A actually were found by inspectors to be grade A. Table I summarizes the findings of this study.

Cornell study.[10] The following is quoted from a Cornell University bulletin:

> The storekeepers assume that the eggs they sell are of the retail grade marked by the supplier. As a matter of fact the actual quality often differs substantially from the retail marked grade. When inspected for quality it was found that the proportions of the dozens falling into the various grades was quite different from the claimed grades. For the State as a whole, storekeepers in July and August, 1949, claimed that 91 percent of the dozens of eggs they had on hand were grade A but only about one-third were determined to be grade AA and A (Table II). Retailers claimed that 7 percent were B and C but inspection revealed 27 percent.
>
> The table on page 58 summarizes the data.

Kantner study.[11] From a recent thesis submitted at Cornell University the following is quoted:

> The source of supply of eggs used by retailers was associated with the actual quality of the eggs on hand in retail stores. In general the actual quality was substantially below the quality claimed, but there were variations according to the source of eggs. Eggs from

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[10] A. H. Kantner. Kind and Quality of Eggs Sold in Retail Food Stores, article in Farm Economics. Cornell University, Ithaca, Bull. 187, November, 1952, p. 4914.

[11] A. H. Kantner. Marketing Eggs in Retail Food Stores. Unpublished Ph.D. thesis, Cornell University, 1952, p. 83-84.

TABLE II

CLAIMED AND ACTUAL GRADE OF EGGS IN RETAIL FOOD STORES, NEW YORK STATE, JULY-AUGUST 1949

Item	Grade AA	Grade A	Grade B	Grade C	Un-graded	No grade	Inedible or loss*	Eggs on hand Per cent	Eggs on hand 1000 dozen
Dozens, 000 omitted:									
Claimed	4	904	36	34	18	--	--	---	996
Actual	66	273	348	14	--	13	4	---	996
Percent of dozens:									
Small stores									
Claimed	--	92	2	3	3	--	--	100	302
Actual	4	24	38	16	--	14	3	100	302
Medium stores									
Claimed	1	91	2	4	2	--	--	100	531
Actual	10	30	33	11	--	13	3	100	531
Large stores									
Claimed	**	89	10	1	--	--	--	100	163
Actual	--	24	36	22	--	11	7	100	163
All stores									
Claimed	**	91	4	3	2	--	--	100	996
Actual	7	27	35	14	--	13	4	100	996

*According to New York State Retail Grades and Standards for Eggs, inedible eggs are: black rot, mixed rot, blood ring, seeping yolk, large embryo, bloody white, moldy egg, crusted yolk and stuck yolk.

According to the United States Standards for Consumer Eggs, no grade eggs are: "those eggs that are of possible edible quality but fail to meet the requirements of an official grade . . . ."

The New York State consumer grade of "C" includes "eggs which have been candled and found edible but not meeting the requirements for fancy grade, Grade A or B, or edible eggs which have not been candled". This excludes inedible eggs but includes eggs that would be called "no grade" under United Stated standards.

**Less than 0.5 percent.

Source: A. H. Kantner. Kind and Quality of Eggs Sold in Retail Food Stores, article in Farm Economics. Cornell University, Ithaca, Bull. 187, November, 1952, p. 4914.

poultrymen, wholesale egg distributors and producers' cooperatives were of higher average quality than eggs from meat packers, chain warehouses and milk dealers. Storekeepers had claimed that 83 percent of the eggs they had received from poultrymen were grade A or better. Actually 34 percent of the dozens of eggs from poultrymen were of A quality or better while 27 percent were grade B, 13 percent were grade C, 24 percent were classified as "no grade" and 2 percent were inedible (Table III). Eggs from wholesale egg distributors had comparable quality with 37 percent of the eggs grade A or better while 40 percent were grade B, 13 percent were grade C, 7 percent were "no grade"[12] and 3 percent were inedible. Eggs from producers' cooperatives were third in rank in terms of the proportion of the eggs on hand in retail food stores that graded A or better. Retailers that purchased eggs from meat packers, chain warehouses and milk dealers had relatively low average quality in the eggs on hand. For example storekeepers claimed that 97 percent of the eggs they had received from meat packers were grade A. But inspection showed that only 19 percent of those eggs were grade A while 24 percent were grade B, 22 percent grade C, 20 percent "no grade" and 15 percent inedible. This proportion of inedible eggs was the largest of any type of supplier. Although retailers using chain warehouses only claimed that 75 percent of their eggs were grade A and that 25 percent of them were grade B the actual grades were much poorer. Actually the eggs graded out on a per dozen basis as 15 percent grade A, 54 percent grade B, 17 percent grade C, 11 percent "no grade" and 3 percent inedible. Eggs received from milk dealers were claimed to be 100 percent grade A but upon inspection 50 percent were grade B, 49 percent were grade C and 1 percent were "no grade".

Michigan State College study. Over the past three years a study of egg quality deterioration has been underway at this college. The study, under the direction of Dr. Henry Larzelere of the Agricultural Economics Department, has followed top quality eggs from the farm to the retail store in an attempt to determine where and why quality declines and who bears the brunt of the economic loss. Although the findings are not yet ready for publication, Dr. Larzelere has permitted a portion of his work to be used in this thesis.

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[12]All of the dozens of eggs that graded "no grade" were placed in that grade because more of the individual eggs were checked, stained, or dirty than the tolerance for AA, A, B, and C permitted.

TABLE III

QUALITY CLAIMED FOR EGGS COMPARED TO ACTUAL QUALITY IN RETAIL FOOD STORES IN NEW YORK STATE, JULY-AUGUST 1949

Type of Supplier	Quality claimed by stores: Grade AA	Grade A	Grade B	Grade C	Ungraded	Total	Eggs on hand in all stores
	Percent of dozens						Dozens (000)
Poultrymen	1	82	2	9	6	100	311
Meat packers	--	97	3	**	--	100	68
Wholesale egg distributors	--	97	2	1	--	100	500
Cooperatives	--	100	--	--	--	100	49
Chain warehouses	--	75	25	--	--	100	66
Milk dealers	--	100	--	--	--	100	2
Other*	--	100	--	--	--	100	***
Total	**	91	4	3	2	100	
	Dozens (000)						
Eggs on hand in all stores	4	904	36	34	18		996

	Actual quality of eggs: Grade AA	Grade A	Grade B	Grade C	No grade	Inedible or loss	Total	Eggs on hand in all stores
	Percent of dozens							Dozens (000)
Poultrymen	10	24	27	13	24	2	100	311
Meat packers	--	19	24	22	20	15	100	68
Wholesale egg distributors	6	31	40	13	7	3	100	500
Cooperatives	9	18	36	22	13	2	100	49
Chain warehouses	--	15	54	17	11	3	100	66
Milk dealers	--	--	50	49	1	--	100	2
Other*	--	--	100	--	--	--	100	***
Total	7	27	35	14	13	4	100	
	Dozens (000)							
Eggs on hand in all stores	66	273	348	141	133	35		996

*Includes public markets
**Less than 0.5 percent
***Less than 500 dozen

Source: A. H. Kantner. Marketing Eggs in Retail Food Stores. Unpublished Ph.D. thesis, Cornell University, 1952, p. 85.

Altogether, 12,348 eggs were used in the study. Only top quality eggs were selected at the farm so that quality decline could be more readily observed. Of the 12,348 eggs, 60.5 percent were candled as AA and 39.5 percent as grade A on the farm. Most of the eggs were candled four times as they passed through regular channels of distribution. This record enabled the researchers to tell just where the drop in quality occurred and thereby know where to look for causal factors. Only two candlers candled for the entire experiment and each always worked the same eggs.

The fact that only a top quality product was followed in the study implies that the sample at all stages may have been of better quality than a typical lot of eggs. This is mentioned only to impress the fact that the figures the reader is about to see are very probably more favorable than the true picture would show.

The eggs were graded according to federal standards which allow a tolerance of two eggs per dozen to be of the next lowest quality. Even when allowing for this tolerance Dr. Larzelere found over half the dozens offered for sale to be below the marked or claimed quality.

The detailed results of this phase of the study are shown in Table IV. All of the eggs represented here were sold under a grade A label.

Independent study. The following study was conducted by representatives of one of the interviewed companies (company D). Some readers might object to using such a study on the grounds that because of the alliance of those doing the grading the results are bound to be tinted.

The study has much on its side. First of all, the figures were never intended for publication and certainly not with company names attached

TABLE IV

NUMBER OF DOZENS ABOVE AND BELOW THE MINIMUM GRADE REQUIREMENTS FOR GRADE A EGGS AVAILABLE FOR SALE AT RETAIL STORES

	Number of Dozens	Percent	
Above the minimum grade requirements			44.8
All A's or AA's	271	26.3	
A's or AA's except 1 or 2 B's (Permitted tolerance)	190	18.5	
Below minimum requirements because of:			55.2
1 or more checked eggs	94	9.1	
3 or more B's	324	31.5	
1 or more C's	106	10.3	
1 or more rejects	29	2.8	
1 or more leakers	15	1.5	
Total graded at retail store	1,029	100.	
Not graded at retail store	12		
Total	1,041[1]		
Total with 1 or more checked or leaker eggs	181[2]	17.6	

[1]This figure is necessarily larger than the amount of eggs used at the onset of the study since eggs that were broken or of poor quality were replaced at the grading station, therefore increasing the total number of dozens.

[2]This figure includes some B and C grade eggs that were cracked or broken.

Source: H. E. Larzelere. Quality Study at Michigan State College. "Unpublished manuscript".

to them. They were gathered solely for use within the company, and figures intended to be useful must be as much as possible--reliable. The fact that the data have been consistently gathered weekly at random over a long period of time (over three years) is also a convincing fact. Also important is the fact that those conducting the study are accomplished candlers who have been in the business daily for many years. The ability of the candler himself is overlooked in many studies.

In the study, one dozen eggs were selected at random from a retail store representing each of the five largest food chains in the Detroit area. The eggs were candled according to federal standards and the grades recorded. This was done weekly over a three-year period. A typical seven-week period is here illustrated in an effort to show how quality fluctuates from week to week in most retail outlets and to demonstrate once more that quality in the carton is often lower than labeled. The results of the grading for each of the companies are shown on the charts on page 64.

Reviewing the series of charts it can be seen that company A sold over the period of seven weeks about 71 percent of its egg dozens under the legal grade.[13] If grading is to be meaningful in a product it should at least be consistent. In company A's data the variation in grade seems to bounce about considerably. One consolation is the fact that only a small proportion of the eggs are below a grade B level.

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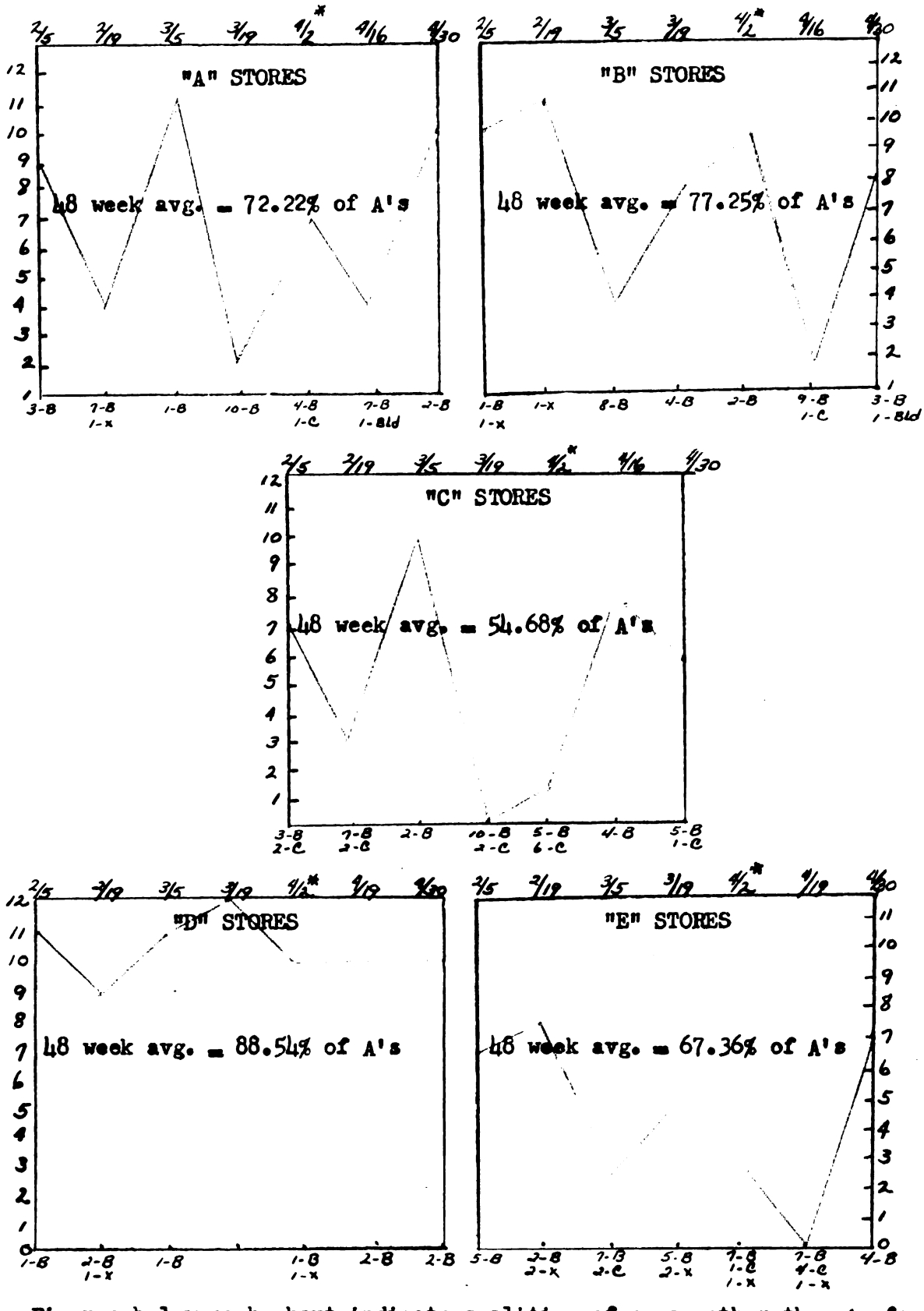
[13] Allowing for tolerances and assuming the sample is representative of the whole.



Figures below each chart indicate qualities of eggs, other than A, found in each carton. Cartons marked grade A containing less than ten grade A eggs are considered illegally labeled. *Easter week.

Fig. 15. Grade A eggs in grade A cartons (Independent Study)

The same trend toward inconsistency is evidenced in the egg checks on chains B, C, and E. Chains C and E seemingly have the poorest quality product as evidenced by the number of grade C eggs in their grade A pack. It is interesting to note that only two of the chains in this study ever handle an egg that is marked below grade A. These chains, company B and especially company D, seem to have the better quality eggs.

Because of the fact that quality can drop rather rapidly in eggs, it is surprising to find so few grade B's offered for sale at the retail level.[14] Could it be that since more money can be obtained for eggs marked grade A, packers are encouraged to think, "who's to know the difference so we'll make 'em all grade A". At times it seems that this is what is happening, but one must not generalize so freely. The cause may lie with the store manager, the merchandiser or buyer as well as the supplier. A careless producer could also be to blame for selling a bacteria infested product that deteriorates at a rapid rate. It is probable that the eggs were of much better quality when candled. Because of their highly perishable nature, however, they have since declined in quality. Retailers must be impressed with the nature of this fragile product. Turnover must be rapid and length of time held in the store should be rigidly controlled if a high quality product is desired. It is one thing if the eggs are grade A when candled and another if they are of that quality when sold to the housewife. Consumers are interested in the quality on their breakfast plate not what it was in an egg case the week before. Egg quality cannot be improved or even maintained. Quality changes, and,

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[14]Only two of the companies interviewed handled eggs marked grade B.

when it does, the only direction it can go is down! Unless the housewife keeps the product under the most exacting conditions, the B quality egg she bought for A quality from her reliable grocer could very easily be of C quality on the breakfast plate.

An interested and challenging grocer at this point may ask, "What is chain D doing that is different than the rest?" First of all, chain D is interested in quality and this is a first requisite in any kind of a quality program. Some of the chains interviewed seemed to place price above quality as their primary consideration. It is little wonder that quality was exceptionally low in these cases.

Chain D operates under the belief that quality eggs are a drawing card and one that will draw and retain steady customers. Because of this belief the company has instigated and enforced a program to insure the meeting of quality standards for its eggs. A company representative frequently pays unexpected visits to suppliers to check on quality in the pack and to see if solely local eggs are being used.[15] Store checks are also made.

Chain D also has its own grading standards which in some ways exceed those set up by the United States Department of Agriculture. The company standards do not allow for tolerances when packed, and supposedly only the top of each grade is packed in that grade.[16] All cartons are dated and the eggs are candled "to be of that grade when they arrive in the store".

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[15]The use of only local eggs is a company policy which, of course, is not possible for many other companies to adopt since Michigan is a deficit producing state as far as eggs are concerned.

[16]Those not associated with the company, including two independent federal graders, have supported this statement.

Of course, a premium must be paid for such a product but the company's belief that good eggs are a drawing card has prompted them to pay this premium. A much lower than average markup on the product enables the company's eggs to compete price-wise. Eggs are kept under continual refrigeration in the stores (except at Easter when aisle displays are often utilized) and must be sold out of the store in three days. A daily ordering and delivering arrangement makes this possible and frequent store checks make compliance probable.

When this chapter was still in its embryo stage, it was hoped that some of the beginning remarks could be further and finally defended by a comparison of actual quality as found in the stores of the chains interviewed with egg sales per $100 store sales. If quality has any meaning at all in a product it would seem that it surely would be reflected in the sales figure. It is the author's belief that the stores carrying high quality eggs also sold the most eggs.

Since it was impossible to obtain a total store sales figure for each of the six food chains, a comparison was not possible. Such figures were available, however, for companies B and D which, according to the Independent study,[17] retail the better quality eggs. Other companies may compare their egg sales with these which, it would seem, are a high standard toward which to aim. Company B in 1952 averaged 3.52 dozens of eggs sold per hundred dollars of store sales and company D averaged 4.43 dozens per hundred dollars of store sales.

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[17] See page 61.

What Can Be Done About the Situation

A number of possible solutions to the situation exist depending upon what is wanted and what is needed.

Within a company. Much can be done within a company to insure a quality pack if that company really wants quality as does company D, for example. Daily orderings and deliveries, if at all possible, combined with rigid quality checks at the source and at store level are basic rules of an internal quality program. The buyer, merchandiser or some company representative should understand thoroughly the product and be given authority to enforce a quality control program.

Customer complaints, which are the most common quality checks, are not enough. It is probable that only a small portion of these complaints are ever carried back to the store and those which are not heard may possibly be those of lost customers. And even in this case a preventative seems much more satisfactory than a cure.

Along these same lines retailers could assume that egg grades (in Michigan at least) do not have any real practical meaning.[18] With this in mind they could promote heavily (as many do) on a brand basis, and in that way develop a strong demand for their particular product. The pack in such a case must, of course, be uniform.

Dr. Charles Davisson has listed three general criteria to consider when determining the value of using a brand on a product:[19]

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[18]Refer to any of the studies in the section of this chapter entitled Studies Comparing Actual with Claimed Quality.

[19]Information from class notes taken in Business Administration 150, marketing course at the University of Michigan under Professor Charles Davisson.

1. The less expert the buyer, the more significant is the brand in the marketing decision.

2. The product must be distinct; that is, there must be something about it that is different or special, something that may distinguish it from similar products.

3. The presence of hidden qualities enhances the use of brand names as these cannot be measured by consumer's inspection.

Relating these criteria to the product in question, it would surely seem that eggs could be sold on the basis of brand. The average consumer is far from an expert on judging egg quality and even if he were the quality factors are so concealed that he could not hope to measure them at the point of purchase.

Brand education in eggs is very possible. It is the general policy of company D (Independent Study) not to carry more than one brand of each egg quality offered for sale. In 1949, during the months of September and October, local egg prices were extremely high. Company D, because of its policy of using only local and fresh eggs in its cartons, was experiencing some difficulty in competing price-wise with other firms using western or storage eggs.

The company wanted the regular brands to continue holding the same high quality uniform product and yet it wished to compete price-wise with competitors and at the same time bring up a slightly slacking volume. The answer came in the form of an experiment wherein some western eggs were purchased and sold at a lower price. These, however, were packed in a different, yet attractive, carton under a different brand name. The sales results following the introduction of this new brand are an interesting story. The history during the complete life of the new brand is shown on Figure 16 on page 70.

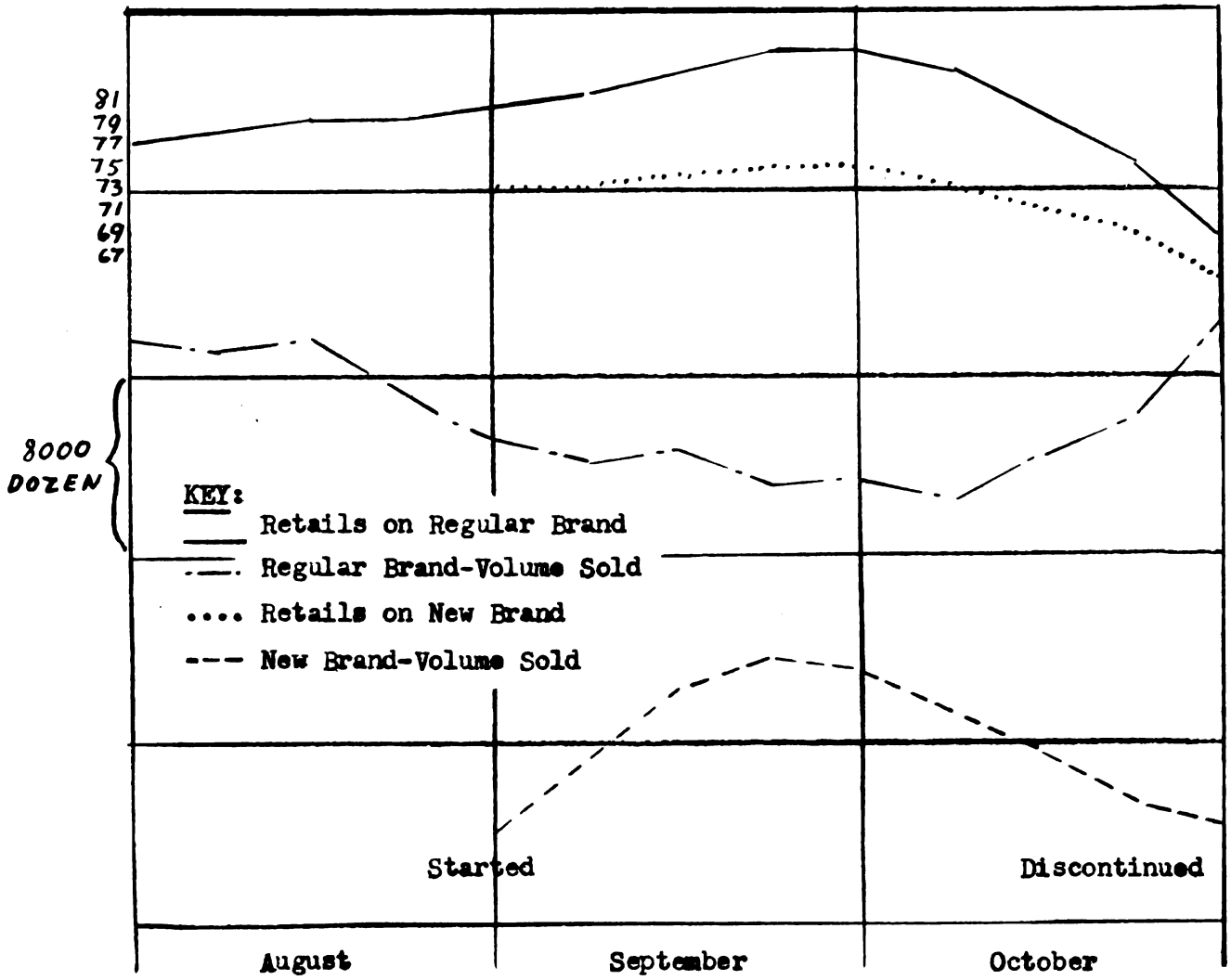

Fig. 16. The affect of extreme price differentials of a new brand on regular brand sales as experienced by a food chain.

It is difficult to say whether the introduction of the new brand caused the slight drop in regular brand sales or whether they would have dropped anyway because of the high prices. At any rate, the company did pick up extra sales by having the new brand in the stores--as much as three hundred cases a week. When local egg prices dropped, the regular carton sales increased whereas the new carton sales decreased to a point which hardly warranted their being continued in the store, and late in October they were discontinued altogether. It is significant to note that the peak of new carton sales occurred at the time of the greatest (ten cents) price differential.

During 1947, a serious shortage of egg cartons confronted company D and others in the industry. Only a limited supply of the regular branded cartons could be obtained and these were rationed out to all the stores. The company resorted to purchasing plain cartons wherever it could, stamping them with the regular brand name and packing the remainder of the eggs in these.[20] Figure 17 on page 72 shows the results of this operation. The digits show the percent of all eggs that were packed in regular cartons each week. Comparing these percentages with the fluctuating sales volume of corresponding periods, it can be seen that volume tended to drop when less regular cartons were available and to rise as more became available. The lower the percent of the regular brand, the lower the sales volume.

The reader may note that during a two-week period in December a complete supply of regular cartons was furnished all the stores at the

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[20]These generally did not move until the regular cartons were all sold.

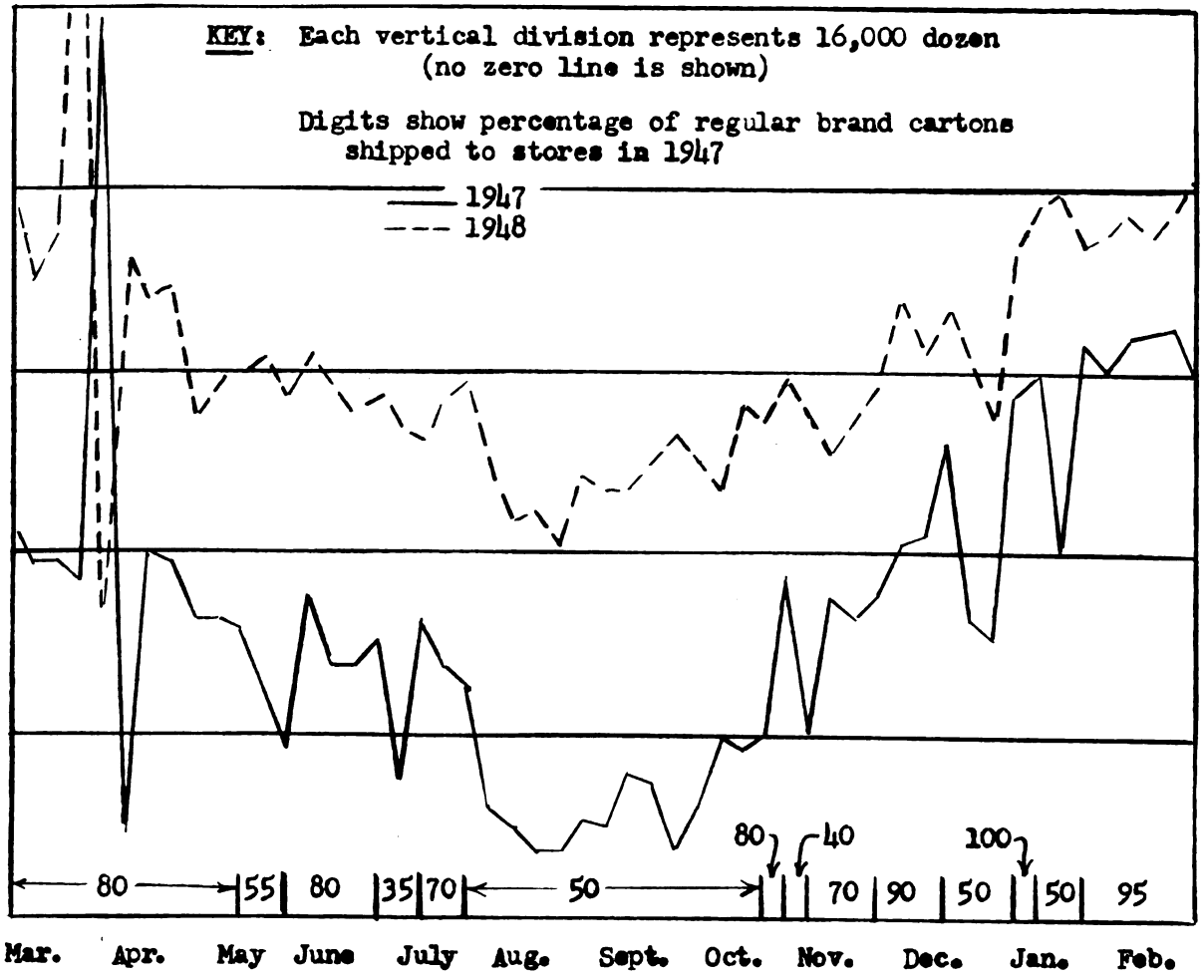

Fig. 17. Fluctuations in sales volume as affected by percent of regular brand cartons used by a Detroit food chain during an emergency period in 1947.

expense of supplies of adjoining weeks. The move was conducted as an experiment and the results add further proof to the premise that customers of company D purchase eggs on a brand basis.

In 1948 the company had practically a complete supply of regular cartons. The sales volume for this period is included on the chart for comparison purposes.

Outside the company. Viewing the situation from the standpoint of the consumer rather than the retailer another solution presents itself, namely--enforcement. A good egg law might speed up distribution from farm to home and improve handling techniques along the way. If this were combined with rigid inspections, especially at the retail level, it is conceivable that quality in the cartons could be greatly improved. Compulsory dating of all egg cartons and refrigeration for the product combined with a licensing of all dealers are just a few of the many things that could be included in such a law.

The reader may inquire, "Doesn't Michigan now have an Egg Law? What is wrong with it?" A common criticism is that it lacks teeth. What good is a law if it cannot be enforced?

Because of its nature the law is frequently referred to by those in the industry and those at Michigan State College as an "inedible egg law". This term has been coined because of the fact that eggs must usually be rotten or inedible before the vendor can be prosecuted for selling them. Inspection officers do not have authority to invoke penalities.

Fines range to a maximum of $100 plus thirty days in jail which might be ample if more often used. Too often a vendor has made a few

hundred dollars selling undergrade eggs and is fined, say $25 or given a warning about his offense.

The enforcement staff is too small to cover the state. For the state, forty-eight people must handle enforcement work, not just on eggs, but for all edible foods[21] in restaurants, bakeries, grocery stores and the like. Six of the forty-eight handle nothing but weights and measures and ten of the total are allotted to Wayne County.[22]

The law, when passed in 1939, was a big step toward better quality eggs in the state of Michigan. Many believe that now is the time for another step forward and that this present law is sorely out-of-date. A copy of the present law is inserted on page 75.

Another and a rather unique solution to the problem of poor egg quality at the retail level is proposed by Professor Charles Sheppard of the Poultry Husbandry Department of Michigan State College in a recent magazine article.[23] In his article Professor Sheppard states that, "Candling will not detect quality differences of good or fresh eggs unless the differences are to the extreme". He goes on to state that since quality is so difficult to determine--why try? And until a better method presents itself for judging interior quality of shell eggs Professor Sheppard offers the following suggestion:

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[21]The one exception is dairy products (milk, butter and cheese) which are handled by another department.

[22]Interview with Mr. Clifford Bracy, Bureau of Marketing and Enforcement, Division of Foods and Standards, Department of Agriculture, Lansing, Michigan.

[23]C. C. Sheppard. Why Egg Quality Contests? Poultry Processing and Marketing, Volume 59, No. 6, June, 1953, p. 11.

State of Michigan
Department of Agriculture

BUREAU OF MARKETING & ENFORCEMENT
(Division of Foods & Standards)
Lansing

Egg Law and Regulations

(Act No. 115, Public Acts, 1939)

Fig. 18. Michigan egg law and regulations

> At the present time, most fresh eggs are good eggs to eat. They might contain a few defects--blood spots, meat spots, yolk blemishes, etc.--but the over-all quality of an egg that is only a day or two old is good. What is wrong with a program of speeded up merchandising? The milk business does it. Milk practically leaves the cow in one squirt and is in the consumer's refrigerator in the next squirt.
>
> There is no excellent, good, fair, poor, and non edible milk. It is either acceptable or it is sent back to the producer. It must pass. Inspection? They have lots of it. Milk must be cooled in a certain length of time. Barns must be clean. Milk houses screened. Regulations: They have lots of them--but milk is still being sold. Consumption is still good. Producers are specializing.

Professor Sheppard goes on to say that "Most consumers are getting poor quality eggs", and that most consumers do not know good quality when they see it anyhow. He proposes a speeded-up plan whereby consumers would get "fresher" eggs and, therefore, generally better quality eggs and at the same time the expense of ineffective grading would be eliminated. Eggs under this speeded-up plan would be flash-candled for easily detected, obvious defects and general quality. "The local plant would make three grades: (1) table eggs, (2) baking eggs, and (3) inedibles. Baking eggs could be marked with a green dye, inedible eggs could be marked in red". Mr. Sheppard who seems to be opposed to legislating for improved quality believes that "an educational campaign that will tell people that defective eggs will not kill them would probably be better".

Maybe this rather unusual suggestion offers a practical solution. The reader is left to draw his own conclusions. It is doubtful, however, that quality can be improved by promoting the idea that quality standards are meaningless. How can progress be made by promoting backward? The idea has some merit, however, in that it encourages a speeded-up marketing program.

A problem and possible solutions have been presented, but the situation cannot be corrected overnight. No solution, as yet, contains all the answers. Progress made since the turn of the century, however, is encouraging. Production is leveling, handling facilities are improving, and the consumer (possibly) is becoming more quality conscious. As interest increases and technology permits, more top quality eggs will be served by the housewife. Improvements will result only from a continual correcting effort. Small gains, here and there, will bring the top of the ladder much closer. "Great oaks from little acorns grow."

CHAPTER VI

HOW TO INCREASE RETAIL EGG SALES

The codfish lays a million eggs,
The helpful hen but one.
But the codfish doesn't cackle
To tell us when she's done;
And so we scorn the codfish coy
While the helpful hen we prize,
Which indicated to thoughtful minds
IT PAYS TO ADVERTISE!

- Anonymous

Evidently most of the retail chains believe in the philosophy of this poem since advertising of all shapes and forms seems to be the motto of the day. All of the chains interviewed regarded eggs as an important sales item; one that could profitably be used in advertising and promotions. As a result, eggs have become a regular or common feature in weekly and semi-weekly advertisements. The stress on eggs in the advertisements was usually determined by price advantage or holiday opportunity, but even during high priced seasons eggs were usually included in list advertisements.

Each of the interviewees was asked what could be done to increase egg sales in his stores. Advertising was most always mentioned as a promotional goal, but the questioning went further to ask what kind of advertising and what kind of promotional gimmicks could be used. As a result a number of ideas were accumulated--some have been tested and tried--some are still just ideas. It is the author's hope that the collection will be of practical value to food retailers in increasing their egg sales and that it may stimulate their imagination to new and better ideas.

Promotional Ideas and Practices

Quality. To many, the soundest way to promote eggs is to offer continually high quality and uniform merchandise. Benjamin, Pierce and Termohlen say, "the quality in a product is its own best advertisement. Of little other merchandise is this as true as of eggs and poultry".[1] The fact that quality can and does affect egg sales is demonstrated more completely in Chapter V. It must be remembered, however, that quality cannot be "talked into" a product.

Price. A good price is most always helpful to sales. It is probably the most frequently used promotional device.

Seasonal value. The production cycle, as shown on Figures 1 and 7 and explained in Chapter II, results in a shortage of large eggs toward the close of the normal laying year. This shortage is supplemented by an influx of small eggs from new pullet flocks. As these birds grow older and larger the egg size increases to the average or large size egg weighing approximately two ounces.

In the very recent past retailers, as a whole, resented handling the smaller eggs because they were difficult to sell. Customers accustomed to larger eggs would hesitate to buy the smaller ones. The situation resulted in small eggs being handled through the entire marketing channel at low prices. No one wanted them.

A few alert retailers began to recognize the comparative value of small eggs. When calculated on a per pound basis the price of these eggs was surprisingly low. Here was a real buy for the economy-minded

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[1] E. W. Benjamin, H. C. Pierce and W. D. Termohlen. Marketing Poultry Products. New York: John Wiley & Sons, Inc., 1950, p. 349.

housewife. (Besides this, pullet egg quality is generally regarded to be high and more easily maintained.) One chain began capitalizing on the idea by pushing the small eggs and by explaining their economy value in newspaper advertisements and to the customers in the stores via loud-speaker systems. Medium sized eggs were promoted in a similar manner during their flush season. Sometimes the eggs are promoted on a low price basis without a mention of size. Too often, in these instances, the housewife on opening the carton feels that she has been deceived and "gypped". The per pound value has not been explained to her and she may not comprehend its existence. An otherwise satisfied customer, for this reason, could become a very perturbed one.

During the 1953 Egg Marketing Day at Michigan State College, it was suggested that minimum weights be printed on each egg carton.[2] The suggestion has merit, for in this way the housewife may become conscious of comparative egg values. Retail price differentials between small and large eggs may amount to as much as sixteen cents per pound.

A large producer's cooperative in northern Ohio is actively helping retailers in an effort to draw pullet eggs through marketing channels. The cooperative has financed the designing and silk screening of many attractive egg posters and window signs.[3] These are offered to its retail customers at cost to stimulate their egg promotions.

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[2]United States Department of Agriculture consumer grade weight classes require that eggs have the following minimum weights per dozen: peewee, 15 oz.; small, 18 oz.; medium, 21 oz.; large, 24 oz.; extra large, 27 oz.; and jumbo, 30 oz.

[3]See pages 81 and 82.

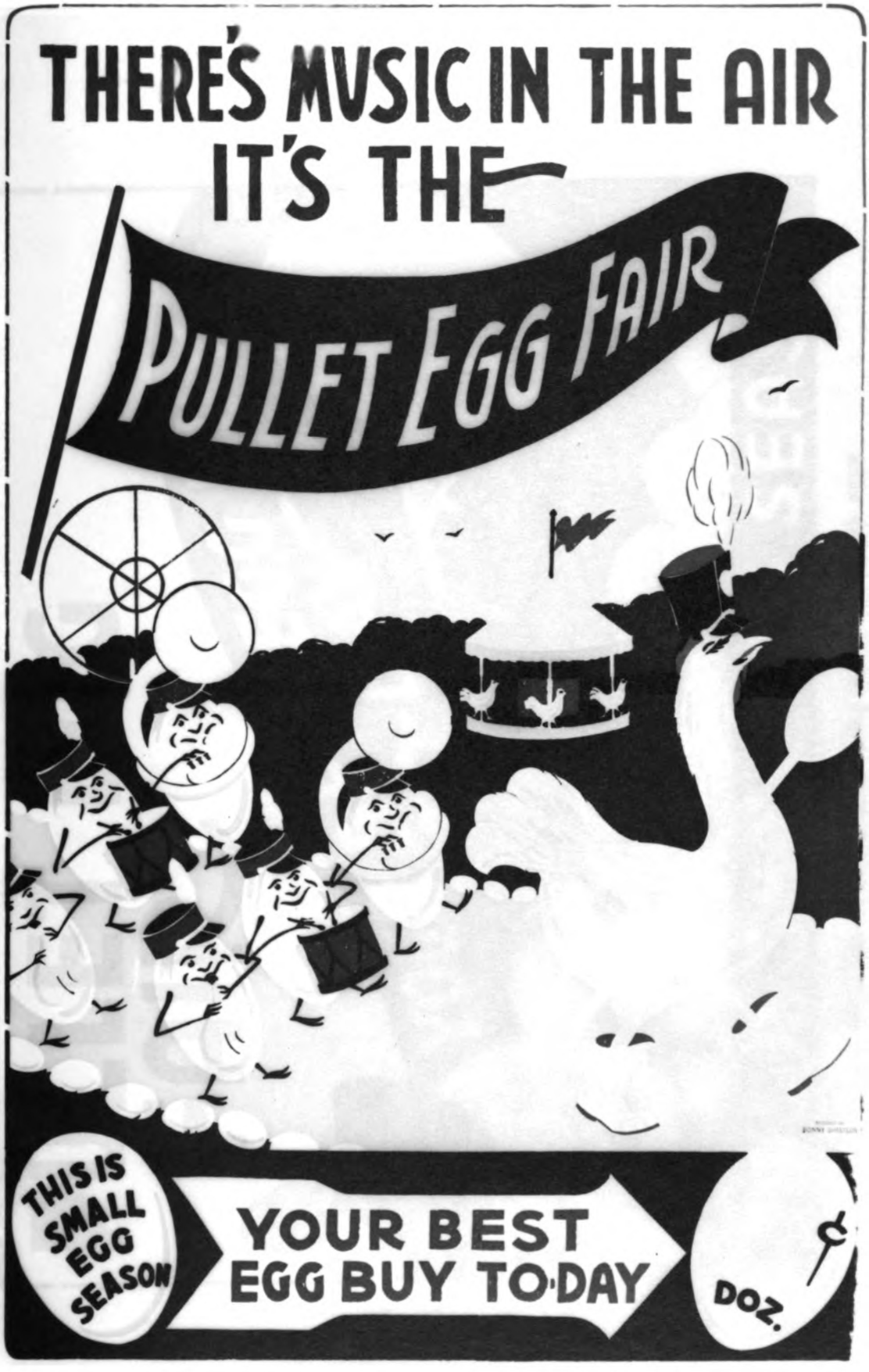

Fig. 19. Window sign promoting sale of pullet eggs

Fig. 20. Poster promoting sale of pullet eggs

Michigan State College does much to promote the agricultural products of the state. Currently (summer, 1953), via television shows from six Michigan cities, the college is explaining the relative value of pullet eggs. A letter announcing the show has been sent to many egg dealers and food retailers throughout the state.

Cartons. An attractive package of convenient size is, of course, an asset in the sales effort. Most eggs are packed in a rectangular one-dozen carton. A fairly new innovation in cartoning is being adopted by many stores although its sales value is questionable. The carton referred to is perforated enabling a purchase of only six eggs or the reduction of the refrigerator package when half the eggs have been used.

Another aid to the pullet egg problem has been the development of a carton in which the small size egg can fit without rattling like marbles in a box. A few years ago these eggs, when packaged, had to be put into cartons designed for large eggs. The result left a poor impression on the purchaser.

An idea for improving the appearance of the average egg carton and increasing product sales appeal may be found in one suggestion of a store manager who wondered why ready-to-serve illustrations were not included in carton designs. The technique, gaining favor in many package designs, appears to be highly successful.

Since some customers believe a brown shelled egg to be better than a white shelled egg or vice versa, it is not uncommon to find customers in a store opening cartons to see what they are getting. This can result in torn cartons and/or broken eggs. To companies retailing a dated and

sealed carton, these incidents were especially annoying and costly. One chain seems to have solved the problem in a very brilliant manner. A carton was developed with small (one-half inch) openings over each egg. This displays the product and shows customers the color of shell they are buying. The destructive incidents have disappeared and egg sales have increased over 30 percent since the new carton has been exclusively used.

Combination sales. A popular and effective device is to advertise eggs in combination with products such as ham or bacon.[4] If the two can be offered at a single bargain price (e.g. 99 cents) so much the better. The appeal lends impulse to a demand item and increases sales of two products.

Breakfast sales. Advertisements promoting nothing but breakfast items are used on occasion by at least one Detroit chain. These harmonious advertisements[5] have the interesting advantage of a theme.

Personal selling. Placing a representative in a store for the sole purpose of promoting egg sales may sound like an expensive proposition. However, many stores having tried the technique with various commodities such as cooked sausages, cheese, cake, et cetera can testify to its success. One food chain has tried the technique with eggs and has been rewarded by rather amazing results. The scheme was an attempt to increase egg sales in a store that was considered below par in egg volume. The experiment was conducted in the fall of 1952 at a time void of holidays. The store, over an eight-week period prior to the demonstration, sold an

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[4] See Figure 21.

[5] See Figure 22.

Fig. 21. Combination sale as advertised in a Detroit newspaper (full page newspaper advertisement)

Fig. 22. Breakfast sale as advertised in a Detroit newspaper (photograph represents full newspaper page)

average of twenty-nine cases of eggs each week. Demonstrations were held in the store Thursday, Friday, and Saturday for two weeks with the following results:

	Week Number	Cases of Eggs Sold
Demonstration Weeks	1	29
	2	28
	3	34
	4	37
	5	45
	6	51

Since that time (almost a year ago) the smallest volume sold during any one week in this store was forty-two cases. After such initial success, the company ran a series of demonstrations in other stores. The results, though not as impressive as the first, were good enough to establish the promotional stunt as being more than worthwhile.

The first requisite of such a plan is a highly capable demonstrator. This person must be an attracting speaker and a good salesman. Above all else he must understand thoroughly the product and be able to answer most all questions.

In the store discussed, the salesman set up a small stand or table near the egg sales case. He posted a large Department of Agriculture chart showing the difference between egg grades both candled and broken out and a sign inviting any questions regarding eggs. No prepared speech or sales talk was necessary. The purpose of the session was to explain quality in eggs, to tell what was done to insure quality eggs in each carton and to illustrate candling techniques by demonstrations with the (and incidently--not especially selected) eggs being sold in the store.

Quality eggs, and a confident, competent, and diplomatic demonstrator are all needed before such a demonstration can be successfully held.

Bad eggs were kept at hand to demonstrate candling techniques. If a small blood or meat spot or otherwise sub-marked quality egg was discovered in a carton the demonstrator would explain the possibility of its presence even though every precaution had been taken to guard against it. It was emphasized at such times that candling minimizes such occurrences

One trick was used in the demonstration. Since Detroit is a premium market for white shelled eggs and since this company sold some of each color at the same price, the demonstrator anticipated arguments against the brown shelled product. He had on hand some eggs of each shell color especially selected for the purpose. The white shelled eggs contained dark yolks and the brown shelled eggs contained light colored yolks.[6]

When a distaste was shown for the brown shelled egg the demonstrator asked (politely, of course) if the customer could tell the difference without the shell. Eggs were broken open behind a screen and invariably, when displayed, the customer pointed out the light yolked egg as the one which had had a white shell. At this point the cause of yolk color was explained and two more eggs broken open to demonstrate the reliability of the first test.

Spectators showed more than casual interest in the performance and the demonstration, as already stated, was considered to be a success. The demonstrator has received invitations to perform at various women's club meetings--a possibility for further sales promotion.

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[6]Yolk color is solely the result of feed consumed. Shell color is dependent upon the breed of hen.

Displays. Displays, in all probability, are the oldest retail devices used to attract customers to a product. Large displays, at one time, were in vogue in egg promotions. This is a fine method of promotion, but it is difficult to use with a perishable product not under refrigeration. For this reason such displays could only be safely used in the cool winter months. Egg sales seemed to drop when cartons were displayed in the old-type closed refrigerated case. The modern open refrigerated case seemed to solve all problems and now eggs may form a pleasing display in a well-lighted, easily accessible open display case. It is recommended that the case never be allowed to look empty and that both brown and white shelled eggs be offered for sale.

Contests. Egg sales always take a jump at Easter, Christmas, and holiday weekends. For this reason an opportunity exists to "cash in" on the increased demand, and an aggressive retailer may take more than his share of the increased sales. Wrigley's Stores Incorporated, a rising Detroit food chain, is attempting to increase Easter egg and dye sales and win customers' good will by running a very interesting, generous and colorful contest. The people at Wrigley's hope that the contest may become a traditional affair.

The Easter Egg Contest is open to everyone over seven years of age except Wrigley's employees and their families. The rules provide for three classes of contestants divided into age groups. This prevents a seven year old competing with an adult. Prizes for each group were selected with the general interest of that group in mind.[7]

[7]See Figure 23.

WRIGLEY'S

ENTER NOW!

EASTER EGG COLORING CONTEST

PRIZES FOR SENIORS 17 YEARS & OLDER

FIRST PRIZE:
$100.00 Food Order . . . Foods of your own choice from Wrigley's wonderful variety of the finest quality foods.

SECOND PRIZE:
$50.00 Food Order

NEXT 10 PRIZES:
$5.00 Food Orders

PRIZES FOR TEENAGERS 12 thru 16

FIRST PRIZE:
Webcor Automatic 3 Speed Record Player.

SECOND PRIZE:
Westinghouse Table Model Radio.

NEXT 10 PRIZES:
$5.00 Record Album Gift Certificates

PRIZES FOR JUNIOR 7 thru 11

FIRST PRIZE:
Deluxe Schwinn Bicycle.

SECOND PRIZE:
4-piece Howdy-Doody Puppet Set

NEXT 10 PRIZES:
Roller Skates.

...ut follow these simple rules — Anyone can enter — Nothing to buy!

- ...up an official entry blank at any Wrigley Market.
- ...must be hard-boiled and decorated size must be no larger than 3 inches wide and ...ches high.
- ...your decorated egg or eggs to any Wrigley Market, along with your filled out ...y blank.
- ...your entry to the store manager who will place the egg in an official container ...ther with your entry blank.
- ...s will be judged for originality, design and artistic ability.
- ...s will be judged by the Art Editors.
- Entries become the property of Wrigley's Stores, Inc. and will not be returned.
- ...s will be accepted at any Wrigley Market on only the following two days: Monday, March 30, 1953, Tuesday, March 31, 1953.
- ...ists will be on display in the lobby of the Veteran's Memorial building on ...riday, April 2, 1953.
- ...r final judging ... the night of Thursday, April 2, all eggs will be distributed to ...hanages a...

Wrigley's

The contest was promoted for a full two weeks before the judging. Television advertising and newspaper advertisements supplemented by store signs and bag stuffers were the primary advertising media. Local newspapers cooperated beautifully in the program and many unsponsored articles were written. The human interest element was added by the fact that all of the entries were distributed to orphanages and children's hospitals. Entries were accepted no sooner than two days before the judging to minimize spoilage. Altogether over 5,400 entries were received.

Needless to say the contest was a tremendous success. Although the immediate results of such a promotion are difficult to measure, the company feels that it has accomplished more than it had originally wished. A copy of one of the bag stuffers giving more of the details is inserted as page 90.

Radio and television. Many companies use these media for regular or spot sales promotion. The Wrigley's Stores Incorporated mentioned above sponsors a regular television program entitled "The Lady of Charm". During the program the Lady bakes, cooks, fixes salads, and in other ways utilizes Wrigley's products. She is an excellent means of advertising special promotions.

Store openings. During a recent store opening, the Kroger Company gave away a one-dozen carton of grade A large eggs to the first 750 customers to visit the store in the morning and to the first 500 customers after 6:00 P.M. A copy of the newspaper advertisement publicizing the event is enclosed as Figure 24.

Federal grading. A government stamp on each carton of eggs may be of value in increasing egg sales. A dated carton should also be of value in establishing customer confidence.

Fig. 24. Eggs help to promote a store opening (newspaper advertisement - actual size)

Guarantees. A written guarantee in the form of an impressive cerficate may be a highly effective promotional device to the retailer of quality eggs. The device has reportedly been used in other areas with considerable success.

Institutional promotions. Promoting eggs in general by the industry is of doubtful value as a whole. However, tempting recipes and attractive advertisements in a chain's own magazine may have a positive effect on company sales.

Brands. The use of brands on eggs has already been discussed in Chapter V. Advertising cannot be highly effective unless a specific product is present to promote. Brands are necessary for this identify.

Relative Importance of Eight Promotional Practices

In a very recent doctoral thesis submitted at Cornell University,[8] a percentage increase in egg sales was calculated for eight prevalent practices used in three sizes of retail stores. The percentage increases for the eight practices were compared and on the basis of that comparison a subjective value was placed on the importance of each practice in increasing egg sales. Based on the information in Table V it appears that the size of the display, the type of display, the number of sizes offered and the use of cartons were the most important promotional practices in terms of increasing the sale of eggs.

Conclusions

Much can be done to increase egg sales in the average grocery store. Obviously, a great deal can be done to increase the sales of any product.

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[8] A. H. Kantner. Marketing Eggs in Retail Food Stores. Unpublished Ph.D. thesis. Cornell University, 1952, p. 105-113.

TABLE V

SALES PROMOTION PRACTICES AND WEEKLY SALES OF EGGS IN RETAIL FOOD STORES IN NEW YORK STATE, JULY-AUGUST 1949

Practice	Size of store	Classifications (average dozens sold)			Percentage increase	Importance of practice
		Front	Back	Sides	Front to sides	
Location of egg display	Small	40	42	54	35	Questionable
	Medium	85	116	149	75	
	Large	374	556	398	6	
		Less than 15	15-29	30 and over	Less than 15 and 30 and over	
Number of dozens displayed	Small	36	55	59	64	Important
	Medium	98	105	158	61	
	Large	251	277	423	69	
		Closed cabinet	Open cabinet	Open cabinet	Closed cabinet to open counter	
Type of display	Small	35	47	54	54	Important
	Medium	65	143	156	140	
	Large	212	387	497	134	
		1 size	2 sizes	3 or more sizes	1 size to 3 or more sizes	
Number of sizes offered	Small	37	91	128	246	Important
	Medium	76	168	250	229	
	Large	357	552	398	12	
		1 color	2 colors	3 colors*	1 color to 3 colors	
Number of colors offered	Small	42	119	191	355	Fairly Important
	Medium	98	247	102	4	
	Large	361	494	804	123	
		No cartons	Cartons		No cartons to cartons	
Use of cartons	Small	34	52		53	Important
	Medium	74	130		76	
	Large	60	432		620	
		No	Yes		No to yes	
Brand name	Small	49	47		-4	Fairly Important
	Medium	119	129		8	
	Large	288	491		70	
		No	Yes		No to yes	
Newspaper advertising	Small	49	68		39	Questionable
	Medium	124	87		-30	
	Large	482	372		-23	

*Three colors means eggs packed as white, as brown, and as mixed colors

Source: A. H. Kantner. Marketing Eggs in Retail Food Stores. Unpublished Ph.D. thesis. Cornell University, 1952, p. 108.

The retailer, of course, should try to take advantage of promotional opportunities, but he should not "lose sight of the forest for the trees". His sales effort should be balanced and not one sided. Many stores have built reputations in certain fields such as meats, dairy or produce, and this reputation has helped to move other products. The food chain operators must remember that their income is derived from a combination of items and not just a few. The continual promotion of a few items may result in stale advertising while many other opportunities are being lost.

The egg is an important item on the grocery list of most housewives. It is an item that is often under-promoted. It is an item upon which a store can build a reputation--good, as well as bad. The enterprising retailer may reap many benefits from proper egg promotion.

One word of caution is offered before leaving the subject. While the egg may be a good item to promote, it is a highly perishable commodity. One bad egg in a dozen may injure the promotional efforts of many weeks. Retailers desiring a "good egg store" should place quality first in any program. Quality cannot be "talked into" a product.

CHAPTER VII

SUMMARY BY CHAPTERS

Chapter II - Buying Organizations and Procedures

The size and plan of a purchasing system and its success will naturally vary from company to company. The buying organization must be adapted to the particular needs of a given operation. Food chains in the Detroit area generally delegate egg purchases to their dairy buyers. The buyer is actually a liaison between store managers or dairy department heads and the egg supplier. He collects and recaps store orders and relays them to the supplier(s). There are exceptions to this general rule.

None of the chains operates its own city egg department. Of course, the volume of eggs handled by many chains is too small to warrant such a department. Although it is difficult to evaluate such an operation, the experience of two chains suggested better methods. Operating and overhead expenses are often much higher for the city egg department than the country grading station. For this reason, one of the two chains found it difficult to compete price-wise and still sell a quality product. The other company that closed its city egg department did so in an effort to improve the quality level of its eggs. Both chains turned to outside suppliers and both have experienced relief in their respective problems.

Under the rapid ordering and delivery systems, a forecasting of store needs did not seem to be a problem. In many instances, store managers were allowed to revise orders two days before shipment and still be assured of delivery. Under such a system, inventory and turnover problems are minimized.

Company records were considered to be of practical value in planning future promotions and in discovering stores below par in egg sales.

Chapter III - Sources of Supply

Although approximately nine types of suppliers were available to the food chain buyers in Detroit, only four were used: independent grading stations, federal grading stations (company owned and operated) carlot shippers, and meat packers. Independent grading stations were, by far, the most popular, supplying four of the six chains interviewed. Most of the chains depended upon one supplier as their sole or basic source of egg supply, but one large chain was regularly served by six.

All the suppliers candled, graded, and cartoned the eggs and delivered them to the company warehouse or directly to the retail stores. For the most part, the suppliers do a good job of bringing eggs from farm to store in a minimum amount of time. On the average only three to five days lapse between purchase from the farmer and sale to the consumer.

The relative cost of marketing eggs is low. The price to the retailer averages ten or eleven cents a dozen above that received by the farmer. This markup must cover transportation costs (collection and delivery), cartoning costs, candling and grading costs, costs of losses due to breakage and off grades, other operating costs and a penny or two profit for the supplier.

Chapter IV - Establishing Retail Prices

In most instances, unless he feels that his gross margin will force him into an undesirable competitive situation, the chain buyer will

accept the price quoted by his supplier. To this price the typical buyer will add a percent or monetary markup to attain his retail price. Gross margin percentages ranged from 5 percent to 12 percent on retail with the mode being about 10 percent.

Individuals do not determine prices since they do not determine supply or demand. They merely discover prices based on evaluations of the quantities available and in prospect and what consumers are likely to be able and willing to pay for those quantities. The retailer, as a result of his ability to discover the actual market and to compare his retail price with those of competitors, has a check on the fairness of the supplier's price. It is considered dangerous to use any one market quotation as a buying basis. As guides, market quotations may be helpful but at times deceiving.

Chapter V - Actual Versus Claimed Egg Quality at the Retail Level

The egg is a delicate and highly perishable product. For these reasons, egg quality is difficult to maintain. Candling, the only practical method of judging shell egg quality, is far from a good method. Mistakes are easily made. This, combined with the necessary speed with which candlers must work, hinders the accuracy of the grading task. Considering these two facts, it is not surprising to discover eggs retailing at a lower grade than marked or claimed.

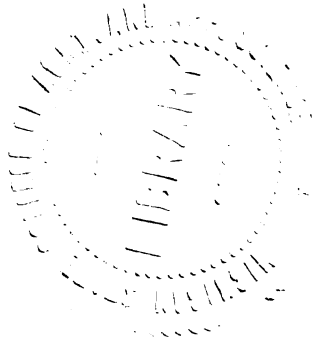
Studies from many section of the country report eggs as being sold at a quality that is inferior to what is claimed. An independent study indicates that the situation is also common among Detroit area food chains.

Much, of course, can be done by an interested company to improve the situation within its stores. Outside of the companies a revised, improved, and enforceable egg law may be a solution.

Chapter VI - How to Increase Retail Egg Sales

Quality is considered to be one of the most important factors in any promotional program. One bad egg in a dozen may injure strides taken over many weeks.

Interviewees were asked what could be done to increase egg sales in their stores. Many ideas were accumulated--some have been tested and tried--some are still just ideas. It is the author's hope that the collection will be of practical value to food retailers in increasing their egg sales and that it may stimulate their imagination to new and better ideas.



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