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MARKETING EGGS IN EASTERN SOUTH DAKOTA: A STUDY
OF PRICING POLICIES AND PRACTICES
OF COUNTRY EGG DEALERS

By
Turner Leo Oyloe

A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science at South Dakota
State College of Agriculture
and Mechanic Arts

August, 1957

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**MARKETING EGGS IN EASTERN SOUTH DAKOTA: A STUDY
OF PRICING POLICIES AND PRACTICES
OF COUNTRY EGG DEALERS**

This thesis is approved as a creditable, independent investigation by a candidate for the degree, Master of Science, and acceptable as meeting the thesis requirements for this degree; but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Thesis Adviser

Head of the Major Department

ACKNOWLEDGEMENTS

The author wishes to express his appreciation to Dr. R.L. Kristjanson and Dr. Travis W. Manning, thesis advisors, and to Professor L.T. Smythe, Mrs. Marjorie Smythe, and Gerald Marousek for their helpful comments.

Credit is also expressed to Miss Lenore Johnston for the typing of this manuscript.

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CHAPTER I

INTRODUCTION

Egg sales provide producers with a fairly steady income throughout the year. This helps the producer over periods of low income and high expense resulting from the seasonal nature of income from major cash crops.

More than one-half of the eggs produced in South Dakota are shipped to out-of-state markets. In 1955 cash income derived from egg sales by producers was \$28,116,000 or 6.1 per cent of South Dakota's net farm income.¹ Poultry and poultry products ranked fourth in importance of income derived from livestock and livestock products during the period from 1952 to 1955 in South Dakota.² According to the 1950 Census of Agriculture chickens were reported on 81.3 per cent of the 66,450 South Dakota farms.³

The state's poultry industry is concentrated in the eastern one-third of the state. Three-fourths of the state's total chicken population are produced and marketed from farms in the eastern one-third of the state.⁴

¹ South Dakota Agriculture 1956, South Dakota State-Federal Crop and Livestock Reporting Service, Sioux Falls, South Dakota, page 75.

² Ibid.

³ Trends in the Poultry Industry and the Effects Upon the Midwest, NC Regional Publication No. 73 (Wisconsin Bulletin 523), Agricultural Experiment Station, University of Wisconsin, June 1956, Table 5.

⁴ South Dakota Poultry Production and Marketing, Crop and Livestock Reporting Service, Sioux Falls, South Dakota, November 1951, pages 1-24.

Reasons For Undertaking the Study

The problem of pricing eggs at country points so as to reflect consumers' preferences for various qualities is important to producers in receiving the best prices for eggs. In order for this to occur, sellers and buyers must be acquainted with market structure and pricing mechanisms to insure the highest possible income above expenses for producers' eggs. However, inadequate knowledge and restricted competition tend to cause imperfections in egg markets.⁵

Prices are important as they affect the income of farmers and as they influence the production and marketing of different quality eggs. The ability of producers to maximize returns is in part dependent upon the producer's knowledge of the relative demand for different egg grades. An example of this problem to the producer is whether to market eggs as current receipts or graded to size and quality. Which type of sales will yield the greatest returns above market costs? The answer to this question in part rests upon the producer's knowledge of the pricing structure within which he is engaged in marketing his eggs.

Pricing policies vary between markets because of differences in organization and composition of the structure studied.⁶ Therefore,

⁵ Don L. Long, Factors Motivating Farmers In Their Choice of Market Outlet for Eggs, Agricultural Experiment Station, New York College of Agriculture, Ithaca, New York, March 1952, page 48.

⁶ Earl W. Benjamin, Howard C. Pierce, William D. Termohlen, Marketing Poultry Products, Fourth Edition, New York: John Wiley and Sons, 1949, page 21.

markets must be studied individually to gain an insight into the pricing problem.

Objectives of the Study

The specific objectives of the study were:

- (1) To determine the organization and structure of markets among egg dealers in eastern South Dakota;
- (2) To discover the effects of marketing practices on egg prices;
- (3) To determine the relationship between various pricing policies and practices and the nature of dealers' operations;
- (4) To discover pricing policies and the influence of terminal market prices and grades on country egg dealers' operations.

Procedure

The data for this report were obtained from country egg dealers in two areas in eastern South Dakota (Figure 1). One hundred and eighty-seven dealers were interviewed in the summer and fall of 1956. These interviews included all known country egg dealers within the area studied. The area chosen to carry out this study includes a major portion of South Dakota's egg producing and marketing sector. A list of licensed egg dealers was obtained from the South Dakota Department of Agriculture.

Volume data were collected for 1955. All other material collected was for market operations occurring in 1956.

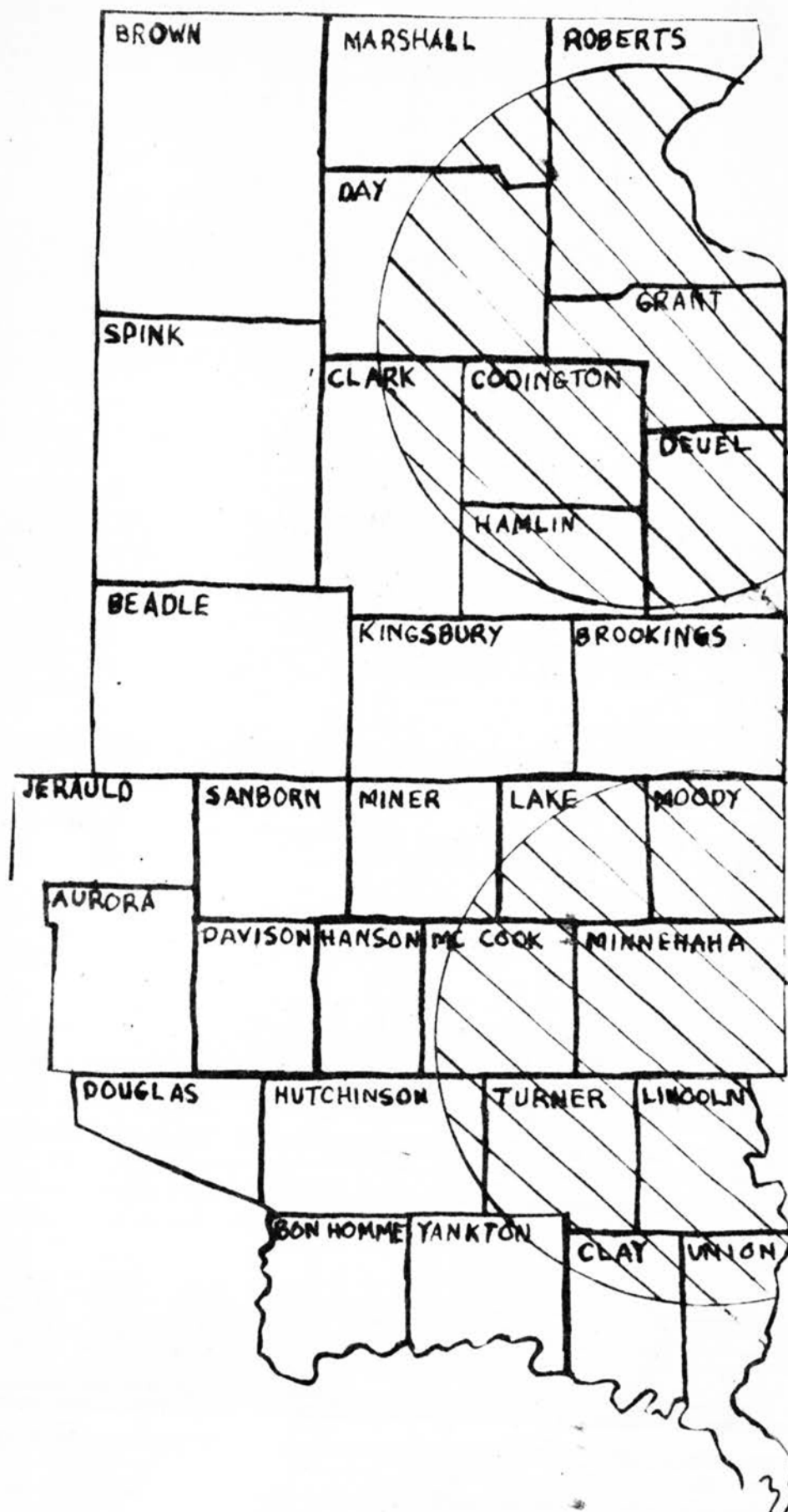


FIGURE 1. Two Areas in Eastern South Dakota Included in the Country Egg Dealer Survey, 1956

Definition of Terms Used

In this paper the following terms are used:

Country Egg Dealers: Country egg buyers include produce buying stations, buying branches of central assembling plants, retail stores that buy eggs primarily from farmers, and other types of non-specialized buyers who purchase eggs for wholesale disposal.

Egg Assembly Plants: Egg assembling plants are wholesale buyers who are engaged in concentrating shipments in carlot and trucklot quantities for disposal to wholesale, retail or institutional trade, or for processing purposes.

Producer: A producer is a person who produces eggs for sale to country buying stations, egg assembly plants or any other sales outlet for eggs.

"A" Quality Eggs: "A" quality eggs are eggs in which the shell is clean, unbroken, the air cell is two-eighths inches or less in depth, the white is clear and reasonably firm, the yolk is well centered, slightly outlined, and practically free from defects.⁷

"B" Quality Eggs: "B" quality eggs have clean, unbroken shells. They may be slightly abnormal. The air cell is two-eighths to three-eighths inch in depth. The white is clear and may be slightly weak. The yolk may be off center, outline well defined, may be slightly enlarged and flattened. It may show definite but not serious defects.⁸

⁷ "United States Standards for Quality of Individual Shell Eggs," United States Department of Agriculture, Washington, D.C., 1954.

⁸ Ibid.

"C" Quality Eggs: "C" quality eggs have clean unbroken shells, but may be abnormal. The air cell may be over three-eighths inches in depth and may be free and bubbly. The white is clear, but may be weak and watery with small blood spots. The yolk may be off center, enlarged and flattened, and may show clearly visible germ development, but no blood. The outline may be plainly visible.⁹

⁹ Ibid.

CHAPTER II

REVIEW OF LITERATURE

Some of the factors distinguishing egg marketing areas are climate, transportation and feed cost. However, certain principles apply to all areas. This chapter will concentrate on a review of the more recent studies in the field of egg and poultry pricing.

Uncontrolled Factors Affecting Egg Prices

Included by Botsford as uncontrolled factors in egg prices are the price level and cost of feeds. The method used in measuring relative price levels by Botsford included calculating "purchasing power" which he defined as the relative price of eggs in comparison with commodities purchased by the producer.¹⁰

Darrah states that price is the most efficient means of letting poultrymen and dealers know what the consumers desire. Included in his uncontrollable factors are price level, production and stocks. Also considered are the consumers' want and utility.¹¹ The quantity of eggs which people are willing to purchase varies inversely with the price of the items.¹² High prices result in less

¹⁰ Harold S. Botsford, The Economics of Poultry Management, New York: John Wiley and Sons, Inc., 1952, page 24.

¹¹ L.B. Darrah, Business Aspects of Commercial Poultry Farming, New York: Ronald Press Company, 1952, page 52.

¹² Ibid., pages 39-40.

eggs being ^{being} sold than do low prices. However, low quality eggs tend to have a more inelastic demand than high quality eggs.¹³

Benjamin includes in his uncontrollable factors production, seasonal demand, price of substitutes, buying power of the public and anticipation influences.¹⁴ It is of interest to note that Benjamin does not include price level in his list of price factors, but considers public buying power as in direct relation to the price level of eggs.

Pearson and Vial, in a series of analyses for separate months, in which the data were expressed as a percentage of that for the same month in the preceding year, showed that for the period 1920-1941 the three variables, production, stocks, and the general price level explained between 71 and 93 per cent of the variation in egg prices.¹⁵

Controlled Factors Affecting Egg Prices

According to Long, the poultry producers' management decisions are influenced by the following factors: size of flock, alternate enterprise opportunities, proximity to large consuming centers, type of people.¹⁶

¹³ Supply and Price Relationship for Large Grade AA Eggs, Agricultural Experiment Station, New York College of Agriculture, New York, August 1955, page 34.

¹⁴ Benjamin, Pierce, and Termohlen, op. cit., pages 304-305.

¹⁵ Frank A. Pearson and Edward H. Vial, Prices of Dairy Products and Other Livestock Products, Ithaca, New York: Cornell University Press, 1946, pages 45-46.

¹⁶ Don L. Long, Factors Motivating Farmers in Their Choice of Market Outlet for Eggs, Agricultural Experiment Station, New York College of Agriculture, Ithaca, New York, March 1952, page 48.

Benjamin states management factors which can be controlled by the producers include cost of production, quality, and wastage.¹⁷

Darrah feels that upon marketing the product the number of middlemen should be kept at a minimum, for egg prices increase as more service costs are included. Long shipments are likely to increase the number of agencies through which eggs pass. Each agency though essential, absorbs a portion of the consumer's dollar. A more direct passage lowers the number of agencies involved from producer to consumer, and increases the portion of the consumer's dollar which the producer will receive. In 1950, thirty per cent of the consumer's dollar spent went to the middlemen.¹⁸

Indiana Study

The Indiana study of pricing structure for eggs at the first assembly point found there were two types of buyers: those selling to terminal markets, and those selling locally. The group engaged in selling to terminal markets have a strong influence on prices paid to producers, and could be designated the price leaders. Most of the price leaders based their price policies on terminal markets.

The study questioned the efficiency of terminal markets in settling the price for eggs sold at the country egg-buying point. This problem is caused by an insufficient volume of eggs passing through the terminal market which in turn fails to reflect the

¹⁷ Benjamin, Pierce and Termohlen, op. cit., page 305.

¹⁸ L.B. Darrah, op. cit., page 74.

actual supply and demand for the product.

The opinion was expressed that producers do not concern themselves with shopping for the highest price, but accept the price quoted by the buyer to which they traditionally sell their eggs.¹⁹

If this analysis is true, then producers tend to sell to traditional buyers without regard to price differences which might exist between market outlets. Two conclusions suggest themselves from this concept. Producers might feel that buyers are offering equal prices. Therefore, shopping for prices by the producer is a waste of effort. The second conclusion is that producers are not interested in earning the highest monetary return, but rather are satisfied with what they receive from traditional market channels.

¹⁹ Paul E. Farris, The Pricing Structure for Poultry and Eggs at the First Assembly Point in Two Indiana Areas, Agriculture Experiment Station, Department of Agricultural Economics, Purdue University, Lafayette, Indiana, May 1956, pages 17-18.

CHAPTER III

DESCRIPTION OF COUNTRY EGG DEALERS' MARKETING ARRANGEMENTS

Individual country egg buyers in eastern South Dakota vary as to type of organization, volume of eggs marketed, and size of trade areas from which eggs are received. These factors are influential in determining the price and non-price policies followed by country egg dealers.

Organization

Country egg buyers' marketing operations include three types of buyers. The first group consists of buyers whose businesses are devoted primarily to egg marketing. Included in this group are local produce stations, branch and feeder stations, and truckers engaged in purchasing eggs from producers. In the second group are those organizations in which egg buying is of secondary importance in the firm's overall business operations. Egg assembly plants, creameries, and hatcheries are included in this category. The third sector concerns those egg marketing agents where egg operations are limited and of minor importance in the firm's business. Retail grocers are included in the third category.

Local produce stations depend on their egg buying operations as a major source of revenue. Their main suppliers are producers. Other sources of supply include retail grocers, branch and feeder stations, and other produce stations. Central market wholesalers and egg assembly plants are their market outlets. Minor sales of eggs were made to retail grocers and directly to consumers.

Branch and feeder stations are owned by other country egg buyers, usually produce stations. Their buying operations are dictated by the home plant. They do not function as sellers, but rather as egg collection stations.

Truckers engaged in country egg buying activities purchase eggs directly from producers. They in turn sell their eggs to wholesale dealers. Usually truckers have regular routes in which they pick up eggs from producers.

Creameries' egg operations are similar to produce stations. Egg assembly plants operate similarly to other country egg buyers, with the exception of retail grocers. Added operations performed by egg assembly plants include freezing eggs and preparation of shell eggs for cold storage. Egg assembly plants are marketing agents for eggs shipped to buyers out of state. One dealer also sells eggs to the Army.

The hatchery demand for eggs is at a peak during late winter and early spring. Hatcheries observed tend to buy eggs from a limited number of producers. In order to insure an adequate supply of eggs during hatching season, they buy the producers' egg output over a twelve-month period. During non-hatching periods, they sell their eggs to other country egg dealers.

The majority of country egg buyers are retail grocers and operators of produce stations (Table I). Retail grocers regard their egg buying activities as a service to producers, and as a source of eggs for retail sales. Income from egg sales was usually not included

TABLE I. Number of Egg Buyers by Type of Business Operated in Two Areas in Eastern South Dakota, 1956

Type of Business	Number	Percentage of Total
Retail Grocers	88	49.7
Local Produce Stations	52	29.4
Creameries	13	7.3
Branch and Feeder Stations	8	4.5
Hatcheries	7	4.0
Egg Assembly Plants	6	3.4
Truckers and Others*	<u>5</u>	<u>2.8</u>
Total	177	100.0

* Include seed, feed, fertilizer dealers.

as a primary source of revenue to the dealers. Egg buying activities were looked upon as good-will expense in business operations. The majority of retail grocers engaged in country egg buying operations tended to be located in rural communities and were usually characterized by their individual ownership and use of family labor in business operations. The primary source of eggs purchased by retail grocers were from producers. Secondary sources of eggs purchased included local produce stations, egg assembly plants, and creameries. Retail grocers sold directly to consumers the bulk of eggs purchased from producers. Local egg supplies were not always equal to consumers' purchases. During seasons of short local production retail

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grocers supplemented eggs purchased from producers with eggs supplied by egg assembly plants, local produce stations, and creameries. In the seasons of excess local production the reverse was found to be true.

Ownership

Seventy per cent of the country egg dealers in the areas under study were individual proprietorships (Table II). Most local produce stations, retail grocers, and truckers were in this category. This group is the most heterogeneous in egg marketing operations. Individual proprietors vary from small retail grocers handling under five hundred cases of eggs yearly to large egg assembly plants processing over 50,000 cases of eggs yearly. Partnerships tend to show the same qualities as do independent proprietors in market organization.

TABLE II. Number of Egg Buyers by Type of Ownership in Two Areas in Eastern South Dakota, 1956

Type of Ownership	Number	Percentage of Total
Individual Proprietorship	125	70.6
Profit Corporation	18	10.2
Partnership	18	10.2
Cooperative	<u>16</u>	<u>9.0</u>
Total	177	100.0

The market organization of cooperatives and other corporations function in a like manner. They serve as egg wholesalers to smaller country egg buyers and tend to be the main channels of egg sales to out-of-state markets. Cooperatives and other corporations include nine and 10.2 per cent respectively of the country egg buyers in the two areas studied.

Volume of Eggs Marketed

Egg volume handled by country egg buyers varies among dealers. Nearly one-half of country egg dealers market less than 1,000 cases of eggs yearly and nearly two-thirds of them handle less than 5,000 cases of eggs yearly (Table III). Thirty-five per cent of the egg dealers studied handle over 5,000 cases of eggs over a twelve-month period. Retail grocers market the smallest volume of eggs with 61 firms purchasing less than 500 cases of eggs yearly (Table IV).

TABLE III. Number of Egg Buyers by Volume of Egg Business in Two Areas in Eastern South Dakota, 1955

Cases of Eggs Handled in 1955	Number of Buyers	Percentage of Total
Less than 1,000	81	48.5
1,000 - 4,999	27	16.2
5,000 - 24,999	45	26.9
25,000 - over	14	8.4
Total	167	100.0

TABLE IV. Volume of Eggs Purchased by Country Egg Buyers in Two Areas in Eastern South Dakota, 1955

Number of Cases	Retail Groceries	Produce Stations	Creameries	Branch and Feeder Stations	Hatcheries	Egg Assem- bly Plants	Truckers and Others
number of buyers or dealers							
Under 500	61	4	0	0	1	0	2
500 - 999	12	1	0	0	0	0	0
1000 - 1999	6	6	0	0	0	0	0
2000 - 4999	3	7	1 4	2	1	0	1
5000 - 24,999	1	29	5	6	3	1	0
25,000 - over	0	4	5	0	0	5	0

Produce stations have the greatest spread in volume of eggs purchased. However, over half of the produce stations observed purchased 5,000 to 24,999 cases of eggs yearly. Egg assembly plants handle the largest volume of eggs. Five of the six plants purchased in excess of 25,000 cases of eggs yearly with one firm purchasing less than 25,000 cases of eggs yearly. Branch and feeder stations, creameries, and truckers are intermediate egg purchasers with volumes ranging from 2,000 up to nearly 25,000 cases of eggs purchased per year. Creameries' volume is equally divided between firms purchasing over 25,000 cases of eggs yearly and from 5,000 to 24,999 cases of eggs yearly (Table IV). Small volume egg buyers tend toward indifference to egg marketing operations due to the minor role of egg marketing in their overall business operations. Country egg buyers whose egg volumes exceed 1,000 cases yearly generally are interested in egg marketing as a source of direct income, not as a service to other sectors of their business. Because of their financial interest in egg marketing, large volume operators play an important part in determination of egg marketing policies.

Country Egg Buyers' Egg Procurement Areas

Country egg buyers' procurement areas vary with type of business. Retail grocers' procurement area radii vary from less than one mile to 50 miles. The purchasing areas of grocers in the southeastern area averaged six and one-half miles, and ten miles in the northeastern area.

The five hatcheries studied were located in the southeast area. Their procurement area radii were from five to 20 miles with an average of about 12 miles. Truckers, feed and seed stores, and fertilizer stores' procurement radii vary from less than one mile to ten, with an average of six miles. Branch and feeder stations in the northeastern area have a greater average procurement radius with 21 miles, while the average procurement radius in the southeast was approximately 25 miles. Procurement radii varied from about 12 to 30 miles for branch and feeder stations in the northeastern area, and ten to 20 miles in the southeastern sectors.

Creameries and produce stations had approximately the same size procurement areas in the north and south averaging around 18 miles in radius. One exception was creameries located in the southeastern area which average around 25 miles radius in procurement areas. Produce stations' procurement radii vary from less than one mile in the southeastern area to 50 miles. Northeastern produce stations vary from four to 50 miles in the radii of their purchasing areas. Creameries in both areas studied had approximately identical variations in procurement with radii varying from seven to 50 miles.

Egg assembly plants have the largest range and average size purchasing areas. Ranges vary from 30 to 300 miles in the northeast, and 25 to 150 miles in the southeast area. Average radius was slightly greater in the northeastern area, being 118.7 miles, than in the southeast which averaged 101.9 miles average purchasing area per dealer (Table V).

TABLE V. Average Radii of Trade Areas of Country Egg Buyers
by Type of Business in Eastern South Dakota, 1956

Type of Business	Number of firms	Procurement radius in Mi.	Average radius in Mi.
<u>Retail grocers</u>			
Northeast area	41	0-50	9.7
Southeast area	40	0-50	6.4
<u>Produce Stations</u>			
Northeast area	16	4-50	17.3
Southeast area	35	0-50	18.0
<u>Creameries</u>			
Northeast area	5	7-50	17.9
Southeast area	6	8-50	24.5
<u>Branch & Feeder Stations</u>			
Northeast area	2	12-30	21.0
Southeast area	4	10-20	13.9
<u>Hatcheries</u>			
Southeast area	5	5-20	11.9
<u>Egg Assembly Plants</u>			
Northeast area	4	30-300	118.7
Southeast area	2	25-150	101.9
<u>Others, Truckers Feed & Seed, Fertilizer</u>			
Southeast area	3	0-10	6.0

Country egg buyers' purchasing areas overlap. This overlapping condition makes it possible for producers to have a choice in market outlets for their eggs.

CHAPTER IV

MARKETING PRACTICES

Marketing practices include the operations of country egg buyers from the time of purchase to the sale of eggs and egg products. Buying, selling, storing and transportation will be the marketing practices with which we will concern ourselves in this chapter.

Buying and Grading

Eggs are purchased by country egg dealers as current receipts or graded to size and quality. Current receipt purchases do not include individual egg quality; rather, eggs are purchased by the case (thirty dozen container) without regard to the quality of eggs. Graded eggs are purchased by individual egg quality. Decisions as to which method of buying is most advantageous are dependent upon the type of egg demand individual firms are involved in satisfying.

Graded eggs have some of the following advantages in marketing operations: homogeneous product, less perishability among uniformly high quality eggs, and ease of produce evaluation. Shell eggs vary in quality and consequently price. Therefore, country egg buyers purchasing eggs on a grade basis tend to pay producers for the quality of the eggs as well as the quantity. Perishability of shell eggs is dependent upon quality. High quality eggs are less prone to quality deterioration than low quality eggs. Therefore, egg dealers engaged in storage operations demand quality

eggs for long storage life.²⁰ Out-of-state egg procurement agencies engaged in buying eggs from South Dakota dealers do so without observation of the physical product.

This situation is brought about by use of modern means of communication. It is possible for egg buyers in an urban city such as Los Angeles, California, to procure eggs from a dealer in Sioux Falls, South Dakota. The eggs in turn may be shipped to Los Angeles and sold to other distributors by the procurement agency without being seen by the buyers. Knowledge of egg quality is then dependent upon mutual understanding of standards between buyers and sellers.

A major disadvantage in graded egg purchasing is labor cost. Grading demands more handling of shell eggs than does current receipts.

Current receipt eggs are purchased by local grocers for retail sales, and by egg assembly plants for breaking purposes. Local retail stores buy eggs from producers with whom they are acquainted. These dealers expressed the opinion that egg quality varied with producers. Therefore, it is possible for retail grocers to classify eggs in regard to source of purchase making grading less necessary. Current receipts are useful in manufactured egg products because of the homogeneity of the resultant commercial product following processing with little regard to the quality of the eggs

²⁰ Benjamin, op. cit., page 38.

prior to processing.²¹ Disadvantages to buying eggs on a current receipt basis are fluctuations in price and limited demand. As will be shown below, price variations for current receipts is greater than graded eggs due to seasonal demand of plants engaged in breaking operations. Limited demand for current receipts is indirectly caused by urban consumers' preference for graded eggs.²² This situation evolves from consumers' tendency to evaluate shell eggs by grade. Central market traders further hesitate in buying current receipts because of lack of knowledge as to the quality of the product being purchased.²³

In the area studied, thirty per cent of eggs purchased by country egg dealers were from other dealers. Purchasing eggs among country egg buyers follows a pattern. Large volume operators purchase eggs from smaller volume operators. Retail grocers' surplus eggs are purchased by truckers and local produce stations. Egg assembly plants, creameries, and large produce stations in turn purchase dealers' eggs from local produce stations and truckers. Retail grocers located near wholesalers engaged in exporting eggs sell directly to them. Eggs purchased as current receipts by dealers from producers are often graded before being sold to wholesale egg dealers.

²¹ In referring to quality eggs, below "C" or putrid eggs are not included.

²² Darrah, op. cit., page 40.

²³ Ibid., page 42.

Selling

Local produce stations, creameries, hatcheries and branch and feeder stations sell over 90 per cent of their eggs on a graded basis. Retail grocers and truckers sell eggs as current receipts. Egg assembly plants split their egg sales about evenly between graded and broken-out stored eggs (Table VI).

Market channels used by producers in selling eggs on grade and as current receipts to country egg dealers are shown in Figures 2 and 3 respectively.

TABLE VI. Percentage Distribution of Eggs Sold by Country Egg Dealers in Eastern South Dakota According to Market Classification, 1955

Type of Operation	Percentage Sold on Basis of		
	Grade	Current Receipts	Broken or Stored
Creameries	98.1	1.9	---
Local Produce	94.1	5.9	---
Branch and Feeder Stations	92.5	5.5	2.0
Hatcheries	78.2	21.8	---
Egg Assembly Plant	53.1	---	46.9
Retail Grocer	6.4	93.6	---
Truckers and Others	---	100.0	---

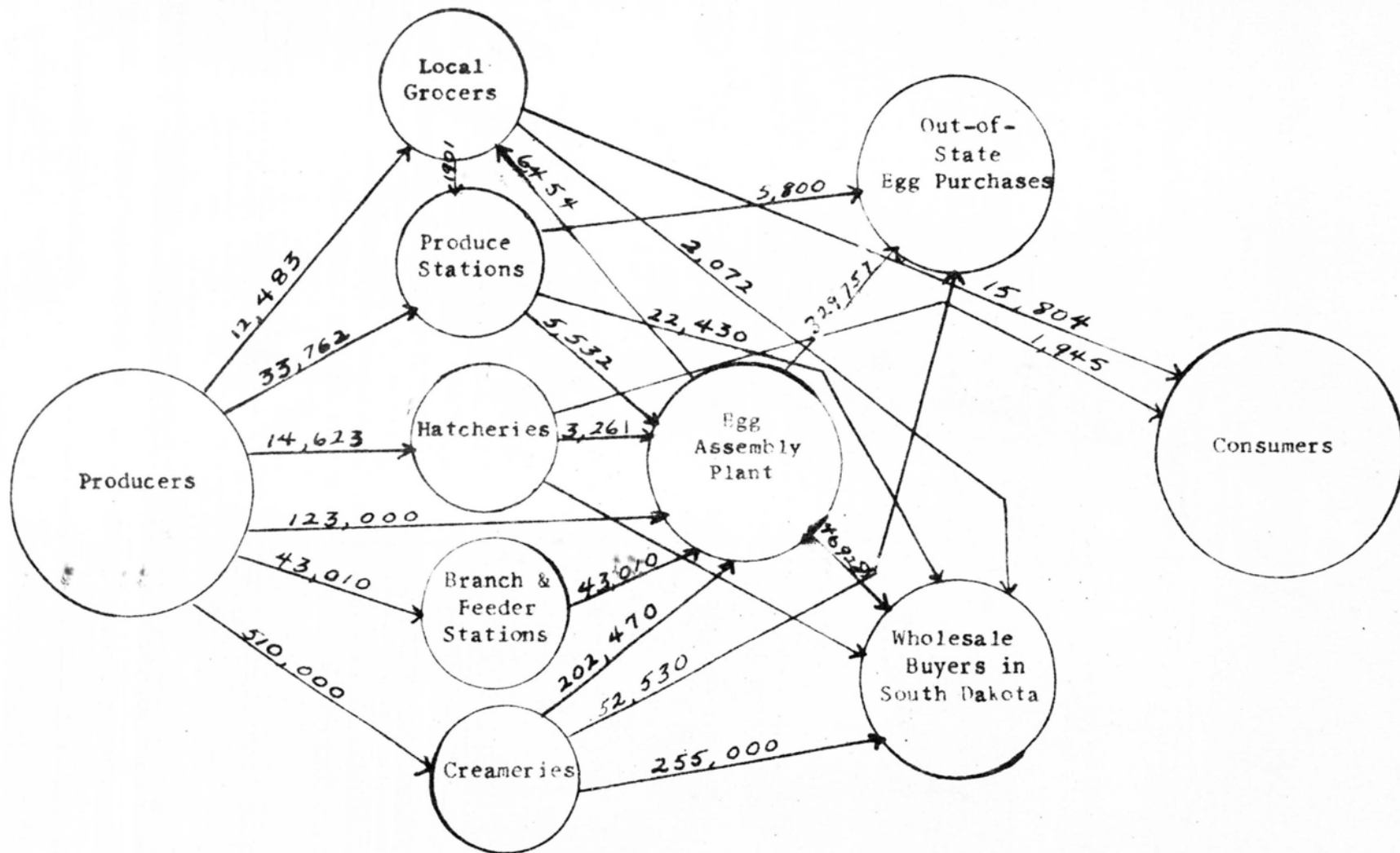


FIGURE 2. Major Market Channels Used by Country Egg Dealers When Purchasing Eggs on a Graded Basis From Producers in Two Areas in Eastern South Dakota, 1955, Showing Volume in Cases

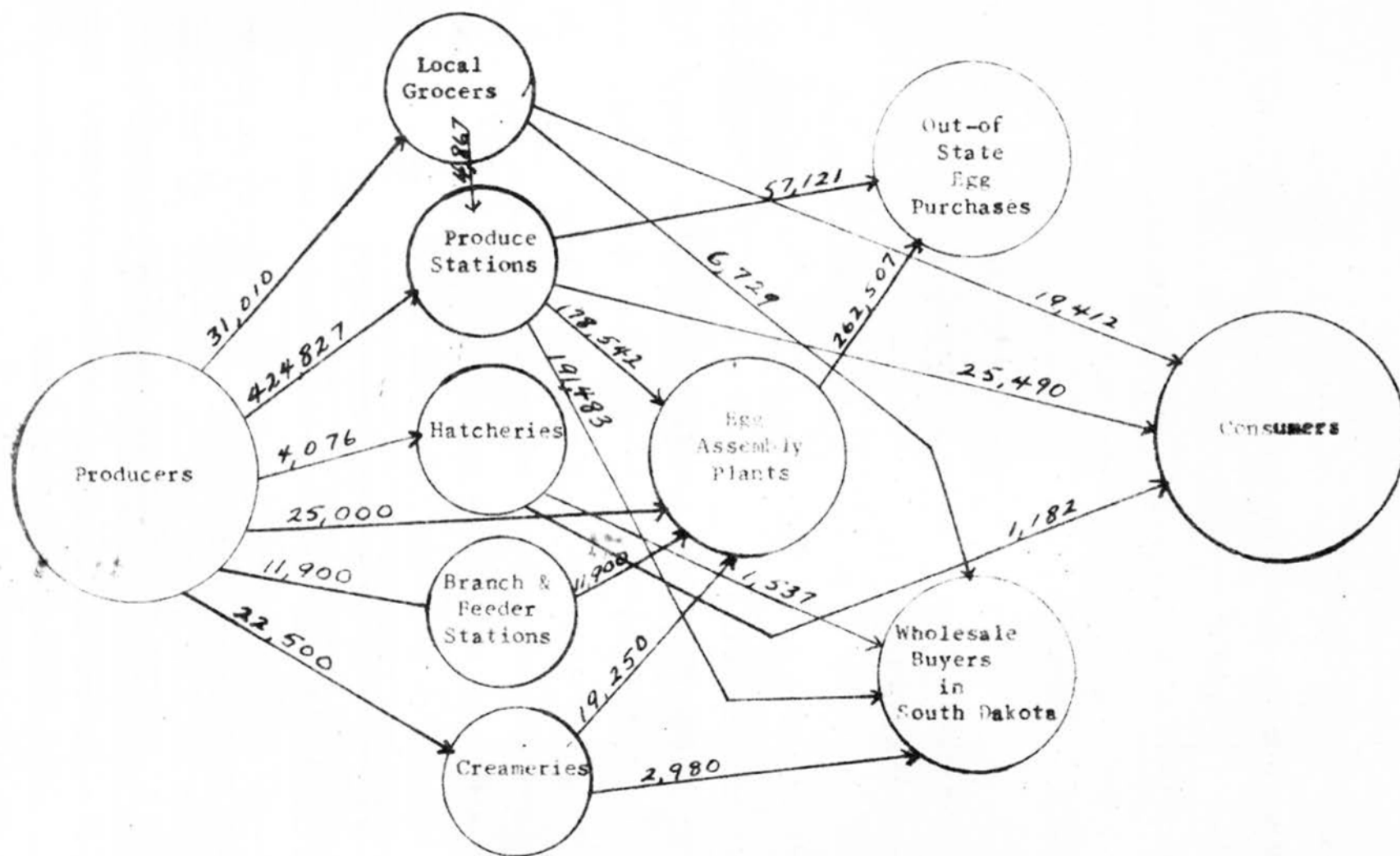


FIGURE 3. Major Market Channels Used by Country Egg Dealers when Purchasing Eggs as Current Receipts from Producers in Two Areas in Eastern South Dakota, 1955, Showing Volume in Cases

Egg assembly plants along with produce stations and creameries market approximately 95 per cent of the graded eggs purchased from producers in the two areas studied. The primary outlets for country egg dealers selling graded eggs were found to be wholesale buyers in South Dakota, and out-of-state purchasers. A minor volume of eggs was sold by country egg dealers directly to consumers.

Current receipts marketing was concentrated in produce stations who marketed 85.4 per cent of the current receipts in the two areas studied. Retail grocers accounted for approximately four per cent of the current receipts marketed which were sold to consumers.

Producers sold 74.5 per cent of their graded eggs to creameries, and over three-quarters of their current receipts to produce stations. Hatcheries and branch and feeder stations and creameries purchased eggs as current receipts from producers; however, in some instances they graded producers' current receipts and sold these eggs on a graded basis.

Country egg dealers tend to buy and sell eggs among themselves. With the exception of branch and feeder stations, country egg dealers use more than one trade channel in marketing eggs.

Transportation

Transportation of eggs from producer to the first assembly point varied with country egg buyers. Producers transport eggs when selling to retail grocers. Egg assembly plants, local

produce stations and truckers have regular pickup runs. Creameries transport eggs along with milk and cream.

Handling Practices

Eggs are a perishable agricultural commodity with deterioration in quality occurring during the marketing process due to aging and handling practices. In a study carried out by Michigan State College, it was observed that average decline in egg quality was forty-five cents a case from producers to country egg dealers, and thirty-nine cents from country egg buyers to consumers.²⁴

Decline in egg quality can be minimized by proper storage practices and acceleration of egg movement from producers to consumers through marketing channels. Ideal storage practices for preservation of egg quality include cool rooms a few degrees above freezing temperature with high relative humidity. Precautions should be taken to include adequate ventilation insuring eggs from "sweating."²⁵

Storage practices of country egg buyers interviewed are shown in Table VII. Thirty-eight per cent of dealers lacked facilities to protect eggs from quality deterioration. Eighty-six dealers used refrigerated coolers. The group using refrigeration

²⁴ Henry Larzelere, Changes in Egg Quality from Farm to Retail Stores, Agricultural Experiment Station, Bulletin 400, Michigan State University, East Lansing, 1954, page 15.

²⁵ Sweating eggs refer to condensation of moisture on egg shell due to improper ventilation. It causes deterioration in egg quality due to mould growth.

TABLE VII. Storage Practices of Country Egg Buyers in Two Areas in Eastern South Dakota, 1956

Type of storage	Number of firms	Percentage of firms
Refrigerated cooler	86	48.9
Floor of plant	68	38.5
Basement	13	7.7
Insulated rooms	<u>8</u>	<u>4.9</u>
Total	175	100.0

included 15 with humidity control and 71 without humidity control units. Thirteen stored eggs in the basement and eight used insulated rooms.

Seventy-nine country egg buyers studied held egg purchases less than 48 hours. Eighty dealers held eggs over 48 hours and less than 96 hours. Sixteen or 9.3 per cent held egg purchases over 96 hours (Table VIII). It was observed that dealers who held

TABLE VIII. Length of Time Eggs Are Held by Country Egg Buyers in Two Areas in Eastern South Dakota, 1956

Length of Time	Number of firms	Percentage of firms
Less than 48 hours	79	45.1
48 - 96 hours	80	45.6
Over 96 hours	<u>16</u>	<u>9.3</u>
Total	175	100.0

eggs for two days or more were using poor storage practices.

Country egg buyers marketing eggs daily were using constructive storage practices including cold storage rooms, and fans for ventilation.

CHAPTER V

PRICE INFORMATION AND APPLICATION

Country egg dealers were asked whether they used central markets as a source of pricing information. New York was mentioned 42 times, and Chicago 19 times. Market quotations were most commonly received by radio from the Iowa State College station at Ames.²⁶

Country egg dealers whose volume exceeded 25,000 cases of eggs yearly stated that they relied on central market quotations for guidance in their pricing policies. Thirty of the 45 country egg dealers purchasing from 5,000 to 24,999 cases of eggs yearly also relied heavily on central market quotations in forming their price policies.

Upon receiving price information large volume operators disseminated the price information to other country egg dealers within their egg purchasing area. Telephone, post cards and word of mouth are used by large volume dealers in communicating price changes to other buyers. Telephone was mentioned by 40 dealers. Word of mouth from truckers on pickup runs was the price information source mentioned by 26 dealers. Three dealers received price information by post card (Table IX). In some localities local newspapers assist in communicating prices to buyers.

²⁶ One egg assembly plant maintains teletype communication with central markets.

TABLE IX. Communication Media Employed by Country Egg Buyers in Two Areas in Eastern South Dakota When Receiving Prices from Other Than Local Sources, 1956

Medium employed	Number of firms
Radio	56
Telephone	40
Newspaper	31
Truckers	26
Card or letter	3

Prices quoted by local newspapers are received from egg assembly plants or large produce stations located in the same city. Thirty-one dealers mentioned newspapers as a source of price information (Table IX).

Central market price quotations tend to be received by large volume egg dealers and passed on by these dealers to smaller dealers. Fourteen of the local produce stations handling less than 5,000 cases of eggs yearly received prices from egg assembly plants by telephone. Twenty retail grocers received price information by telephone from produce stations, creameries, and egg assembly plants. Retail grocers as a group were on the end of the price dissemination process. Their sources of price information varied with truckers bringing price information to retail grocers located in sparsely populated areas, and newspapers serving small retail grocers located in the towns.

Price information is received daily by a majority of country egg buyers. Daily price reports were received by 113 dealers. Fourteen dealers received price information every other day. Nineteen dealers received price information twice a week. Eight dealers stated they received price information weekly, and twenty-one received price changes when they occurred (Table X). Price dissemination in egg marketing operations is essential due to daily fluctuation in prices on central markets. Firms observed receiving insufficient market reports (two days or more between reports) were located in sparsely populated and isolated areas. Most of these egg buyers were small grocery stores doing a limited egg marketing business.

TABLE X. Frequency with Which Country Egg Buyers in Eastern South Dakota Receive Price Quotations, 1956

Period	Number of firms
Daily	113
Every other day	14
Twice a week	19
Weekly	8
When Prices Change	21

Upon receiving price information, discretion as to when to change prices to conform with the received new price information lies with the individual firms. Thirty-three dealers changed prices immediately upon receiving new prices while the majority of dealers (129) changed prices the following day (Table XI). If a dealer chooses to change prices immediately upon receipt of new price information, he will have the following advantage. The dealer will be basing his prices on existing market conditions, therefore reflecting the relative worth of the product at the time of sale. However, the instability of egg prices can and does vary prices over a period of one day. Therefore, price variations during the work day may cause ill feelings among producers who might receive less money for their eggs due to the time of day eggs were delivered to the dealer. Also dealers' trucks may be already out when new price information is received. Therefore many dealers change price the following business day.

TABLE XI. Time Lapse Between Issuance of Price Quotations and Application to Purchases by Country Egg Buyers in Two Areas in Eastern South Dakota, 1956

Period	Number of firms
Immediately	33
One day	129
Two days	3

Country egg dealers as a group tend to compare different price sources before arriving at decisions on their own firms' pricing policies. Twenty-four dealers use central market quotations when purchasing current receipts, with approximately twice as many dealers relying on central market quotations for graded egg prices. Wholesale prices originate from country egg buyers engaged in wholesale marketing of eggs. Usually egg assembly plants communicate wholesale prices to local produce stations. Thirteen country egg dealers, 11 produce stations, and two creameries use current receipt wholesale prices. Eleven produce stations refer to wholesale egg prices when pricing for graded eggs. Competitors' prices are observed by the greatest number of buyers with 99 referring to competitive prices on current receipts, and 55 using competitive prices for graded eggs. Small volume dealers, especially grocery stores, referred to competitors' prices more often than did large volume egg dealers. Branch and feeder stations use prices established by their home plants. Three branch and feeder stations used home plant prices for current receipts, and seven referred to graded reports. Twelve firms studied used a combination of the above mentioned price sources when purchasing eggs on current receipts. One firm purchasing on grade combined sources of pricing information in determining his price. Final decisions on price policies, in the case of small volume operators, will usually take into consideration competitors' prices. This condition holds especially true for local egg buyers where competition

is keen for producers' egg volume. It is of interest to note many country egg buyers vary their sources of price information according to type of eggs purchased. Graded egg purchasers rely heavily on central market quotations, while purchasers of current receipts in proportion rely more heavily on competitors' prices. This situation is due to current receipts being used in the domestic state market, with graded eggs being sold out of state in competition with out-of-state dealers (Table XII).

TABLE XII. Sources of Price Information Used by Country Egg Buyers in Two Areas of Eastern South Dakota, 1956

Source of price information	Number using current receipts reports	Number using graded reports
Competitors' price	99	55
Central market quotation	24	50
Wholesale price	13	11
Price established by home plant*	3	7
Combination of above	12	1

* Pertains to Branch and Feeder Stations.

A relationship seems to exist between volume of eggs marketed and dealers who disseminated central market price quotations to smaller volume operators. Large volume dealers included in their price quotations to other local buyers their opinion as to what their eggs were worth in the central markets taking into

consideration the expenses in services and transportation from South Dakota to the central market. When interpreting the central market price quotations large volume operators' prices communicated to other country egg dealers became their interpretations of central market prices. To some extent these large volume operators who purchase 80 per cent of their eggs in the instance of egg assembly plants from other country egg dealers tend to be price leaders in the area from which they purchase eggs. Of all 14 dealers marketing in excess of 25,000 cases of eggs yearly none mentioned competitors as a source used in arriving at their individual pricing policies.

CHAPTER VI

PRICE BASIS

After price information has been received by the country egg dealers, other factors which will be taken into consideration before individual prices are established will include one or more of the following factors: competition, marketing agreements, or expected margin of profit on sales.

Competition

Competition among country egg dealers exists in three forms: price, service, or a combination of the two. Firms studied either met, ignored or bettered competitors' prices. Egg assembly plants in five instances ignored competitors' prices and in one case equalled their prices. Produce stations in 33 cases met competitors' prices, and ignored competitive prices in four instances. Seven produce stations bettered competitors with six mentioning services as the method used in meeting competition. The majority of retail grocers (58) ignored competition with nine equalling competitors' prices and 17 paying more for eggs than were their competitors. Hatcheries tended to ignore competitors as did all but two creameries, who equalled competitors' prices.

Transportation of eggs from producers to country egg purchasing stations were services rendered by egg assembly plants and produce stations. Other forms of competition which cannot be adequately measured in the scope of this paper include good will, and traditional selling practices of producers.

Marketing Agreements

Marketing agreements when referred to country egg dealers relate to agreements between dealers on pricing policies. Marketing agreements varied from complete control of egg buyers' pricing policies to informal agreements on pricing eggs between country egg dealers. Complete control exists when the purchaser informs the receiver what price to pay and from what areas eggs may be purchased. Most agreements were between the two extremes. However, country egg buyers usually conformed to wholesalers' pricing policies. Under this situation dealers were either allotted a commission on eggs purchased, or paid hourly wages for hours worked by wholesale buyers. In some instances, a combination of the two, hourly wages and commission, were used. In a minor number of instances, country egg buyers having marketing agreements purchased eggs on their own initiative and sold at the market price. In following this policy the dealer hoped to earn a higher return on eggs handled than would have been possible on a commission-selling basis. Loyalty to wholesalers for benefits received at some earlier period and restricted marketing channels along with financial dependence were given as reasons for keeping marketing agreements.

Informal agreements on pricing policies were found to prevail where country egg buyers were relatively equal in financial strength. It was observed in the southeastern area where three country egg dealers, all of relatively equal strength, listened

to the market reports from Ames, Iowa, and then met for coffee. During this social get-together reported egg prices were discussed and prices for the day were established.

Retail grocers occasionally engaged in marketing agreements with producers. These agreements followed a pattern. Retail grocers agreed to buy the producer's output, and pay him a price related to other buyers in the community. Producers in turn agreed to sell his egg production to the grocer on the price basis acceptable to both parties. These agreements were informal, and usually guaranteed producers a premium over prices quoted by other egg buyers in the community.

Profits

Gross margin is the difference in prices paid for eggs by country egg dealers and prices received when eggs are sold. Country egg buyers expected and actual gross margins are shown in Table XIII. Expected gross margin expressed the dealer's opinion as to what he felt to be a fair return on labor and investment. Actual gross margin was country egg dealers' gross receipts received.

Country egg buyers' gross margins varied with marketing cost and locational factors. Firms engaged in selling eggs outside of South Dakota tended to have greater expenses per case of eggs handled than did local buyers and sellers. Margin expected and received tended to be greater in relation to the services rendered by country egg buyers (Table XIII).

TABLE XIII. Average Gross Margin Expected and Received by Country Egg Buyers in Two Areas in Eastern South Dakota Per Case of Eggs Marketed, 1956

Type of Business	Gross Margin Expected	Gross Margin Received
dollars per case		
Egg Assembly Plants	2.90	3.00
Retail Groceries	1.35	1.50
Creameries	1.25	1.50
Local Produce Stations	.90	.87
Hatcheries	.85	1.50

Country egg buyers engaged in local market operations due to shorter distance of transportation and limited labor expenses were able to operate on a smaller margin of profit than market wholesalers. Local produce stations and truckers handled large volumes of eggs. Operational expenses were minor in relation to volume handled when compared with firms engaged in out-of-state marketing operations. Produce stations, egg assembly plants and creameries engaged in wholesale marketing operations employed labor and shipped eggs and egg products to out-of-state markets. Expenses were therefore higher than other country egg buyers requiring a larger gross margin per case of eggs handled (Table XIII).

Study of Prices Paid by Country Egg Buyers

Average egg prices paid by country egg buyers in eastern South Dakota are shown in Table XIV. The spread in prices

TABLE XIV. Average Prices Paid by Country Egg Buyers in Two Areas in Eastern South Dakota for Eggs Purchased on June 1 and September 1, 1956

Basis of Egg Purchases	Northeastern Area	Southeastern Area
	September 1, 1956	June 1, 1956
	cents per dozen	
Current Receipts	23.4	30.1
Grade A Large	32.0	31.3
Grade A Medium and B Large	22.9	27.8
Under Grades	17.6	24.6

occurring between current receipts and Grade A Large was greater in September than in June. These price differentials were in part due to a stronger demand for current receipts in June for egg-breaking operations.

Range in prices paid by country egg dealers from June 1 and September 1 varied from five to six cents per dozen eggs purchased (Table XV). To better understand price fluctuations among country egg dealers retail grocers should be considered separately. Grocers' average prices paid for current receipts were higher than other egg buyers (Table XVI). This situation was due to acceptance of current receipts by consumers from retail grocers. As shown earlier, retail grocers along among country egg buyers retailed current receipts in South Dakota. Other factors included volume and limited handling expense from producer to consumer in retail

TABLE XV. Range of Prices Paid by Country Egg Buyers in Eastern South Dakota for Eggs Purchased on June 1, September 1, 1956

Basis of Egg Purchases	Northeastern Area	Southeastern Area
	September 1, 1956	June 1, 1956
	cents per dozen	
Current Receipts	21 - 36	28 - 42
Grade A Large	30 - 35	29 - 36
Grade A Medium and B Large	22 - 28	26 - 30
Under Grades	15 - 20	18 - 26

TABLE XVI. Average Prices Paid by Retail Grocers and Other Country Egg Buyers in Eastern South Dakota for Eggs Purchased on June 1 and September 1, 1956

Basis of Egg Purchases	Northeastern Area September 1, 1956		Southeastern Area June 1, 1956	
	cents per dozen			
	Retail Grocers	Others	Retail Grocers	Others
Current Receipts	26.3	22.0	31.7	29.3
Grade A Large	---	32.1	32.5	31.0

operations. This made it possible for grocers to pay higher prices than other country egg buyers.

Prices paid by country egg dealers varied with the type of business operation. Retail grocers had greater variation in prices paid for eggs than other country egg buyers in the two periods studied (Table XVII). Retail grocers' price range was probably

TABLE XVII. Range of Prices Paid Retail Grocers and Others in Eastern South Dakota for Eggs Purchased on June 1 and September 1, 1956

Basis of Egg Purchases	Northeastern Area September 1, 1956		Southeastern Area June 1, 1956	
	cents per dozen			
	Retail Grocers	Others	Retail Grocers	Others
Current Receipts	21 - 36	21 - 25	28 - 42	27 - 32
Grade A Large	----	30 - 35	29 - 36	30 - 32

due to inadequate price information and specialized marketing practices. Grocers are traditionally on the end of market pricing dissemination. This situation evolved from indifference on the part of retail grocers and the minor position of egg marketing in retail operations. Egg buying operations varied with retail grocers. Some operators purchased eggs from a few producers paying premiums, while others accepted eggs from producers on barter agreements for foodstuffs. These practices led to variations in prices for eggs purchased from producers by retail grocers. Creameries, produce stations, and egg assembly plants varied less in price due to more adequate price information and competition from other egg producing areas in marketing eggs outside the state.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The main objective of the study was to determine the factors which influence country pricing policies along with a resultant understanding of the competitive structure. Country egg dealers in two areas in eastern South Dakota were surveyed with the following results:

Country egg dealers differed in respect to the importance of egg marketing in their overall operations. Some egg dealers looked upon egg operations as a major source of income, while others considered egg marketing as a service to other sectors of their business.

Country egg dealers varied in volume from a few cases of eggs marketed yearly to dealers engaged in marketing more than 25,000 cases yearly. Large volume operators were found in egg assembly plants, creameries, and produce stations. Other buyers tended toward smaller egg operations.

Eggs were purchased as current receipts or graded to size and quality. Graded eggs were often channeled to out-of-state markets. Current receipts were used in egg-breaking operations. Also retail grocers in South Dakota sold current receipts to local consumers.

Handling practices which help to preserve egg quality were found to be lacking in 38 per cent of the dealers interviewed. The majority of country egg dealers held eggs less than 48 hours.

Cost incurred while marketing eggs was dependent on volume of operations and services rendered.

Price information received by country egg dealers depended on their market position. Price leaders were usually large volume dealers selling eggs out of state. They received price information from central markets. Local egg dealers in turn received price quotations, usually daily, from price leaders. Radio was used extensively in receiving prices from central markets, while telephone and word-of-mouth were used to disseminate price information to other local buyers. Most small volume country egg dealers considered competitors' prices when making decisions on their own pricing policies.

Market agreements between country egg buyers were found to be related to relative volume of the individual firms. Small dealers with market agreements were usually dominated by larger dealers. Large dealers tended toward mutual understandings among themselves in pricing policies.

Competition among country egg dealers included price competition and services. Retail grocers as a group tended to ignore price competition as did other country egg dealers with the exception of produce stations where the majority of dealers equalled competitors' prices. Produce stations and egg assembly plants included transportation services to producers.

Gross margin expected and received by egg dealers was partly dependent on the complexity of dealers' operations. Dealers

selling over long distances and offering other services expected and received a larger gross margin than other dealers studied.

Comparison of prices received by producers on June 1 and September 1, 1956, seems to indicate a greater demand for current receipts in June than in September. This was found to be due in part to egg breaking operations which use current receipts and operate in spring and early summer. Retail grocers taken together were found to have a greater spread in prices paid for eggs than did other country egg dealers. However, retail grocers as individual firms did not show evidence of variation in prices paid to different producers from which they purchased eggs. Restricted purchasing by some retail grocers and purchasing eggs as a service to their customers are probably the two reasons for price variations being greater among retail grocers when compared to other country egg dealers.

Country point pricing policies are largely dependent on central markets for price information. Price leaders receive central market quotations and disseminate them to other local buyers. Central market prices, upon dissemination by price leaders, become the interpretation of prices by these firms. Central market prices in turn become a base used by country egg buyers in pricing policies. The influence of central market prices tend to be related to country dealers' market outlets. Retail grocers sell eggs to consumers at the price which they will move, and refer to competitors' prices only as they affect their ability to purchase

eggs from consumers. Wholesalers selling to out-of-state markets depend directly on central market quotations as price bases for market operations. Consequently, prices paid by price leaders tended to be homogeneous. Other country egg dealers who channel their eggs to wholesale buyers are indirectly affected by these interpretations of central market conditions as seen by price leaders who tend to be collective in their decisions on price policy.

Country egg dealers engaged in marketing eggs either as a source of income or a service to other portions of the dealers' businesses. Where income was dependent upon eggs, prices tended to show less fluctuation than where eggs were purchased as a service to other sectors of the business.

The competitive structure of country egg buyers in the two areas studied included few buyers and was characterized by limited price competition. Competition in the form of services to producers was extended by most of the country dealers. A minor group of retail grocers purchasing eggs for consumer sales were the main agents involved in pricing competition for eggs.

LITERATURE CITED

- Benjamin, Earl W., Howard C. Pierce, William D. Termohlen, Marketing Poultry Products, Fourth Edition, New York: John Wiley and Sons, 1949.
- Botsford, Harold S., The Economics of Poultry Management, New York: John Wiley and Sons, 1952.
- Darrah, Lee B., Business Aspects of Commercial Poultry Farming, New York: Ronald Press Company, 1952.
- Farris, Paul E., The Pricing Structure for Poultry and Eggs at the First Assembly Point in Two Indiana Areas, Agriculture Experiment Station, Department of Agricultural Economics, Purdue University, Lafayette, Indiana, May 1956.
- Larzelere, Henry, Changes in Egg Quality from Farm to Retail Stores, Agricultural Experiment Station, Bulletin 400, Michigan State University, East Lansing, Michigan, 1954.
- Long, Don L., Factors Motivating Farmers in Their Choice of Market Outlets for Eggs, Agricultural Experiment Station, New York College of Agriculture, Ithaca, New York, March 1952.
- Pearson, Frank L. and Edward E. Vial, Prices of Dairy Products and Other Livestock Products, Ithaca, New York, Cornell University Press, 1946.
- South Dakota Agriculture 1956, South Dakota State-Federal Livestock Reporting Service, Sioux Falls, South Dakota.
- South Dakota Poultry Production and Marketing, Crop and Livestock Reporting Service, Sioux Falls, November 1951.
- Supply and Price Relationship for Large Grade AA Eggs, New York Agricultural Experiment Station, New York College of Agriculture, Ithaca, New York, August 1955.
- Trends in the Poultry Industry and the Effects Upon the Midwest, NC Regional Publication No. 73 (Wisconsin Bulletin 523), Agricultural Experiment Station, University of Wisconsin, June 1956.
- "United States Standards for Quality of Individual Shell Eggs," United States Department of Agriculture, Washington 25, D.C., 1954.

APPENDIX A

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13

TABLE I. Percentage Distribution of Eggs Purchased According to Source and Type of Purchase by Country Egg Buyers in Eastern South Dakota, 1955

Type of Businesses	Purchased from							
	Graded Basis	Current Receipts	Producers	Dealers	Dealers on Graded Basis	Dealers on Current R. Basis	Producers on Graded Basis	Producers on Current R. Basis
	(per cent)							
Local Produces	6.8	93.2	98.1	1.9	98.3	1.7	7.1	92.9
Retail Grocers	31.0	69.0	87.8	12.2	98.3	1.7	28.7	71.3
Egg Assembly Plants	50.8	49.2	22.2	77.8	42.4	57.6	83.1	16.9
Creameries	95.7	4.3	99.5	.5	0	100.0	96.0	4.0
Hatcheries	95.8	4.2	100.0	0	0	0	95.8	4.2
Branch & Feeder Stations	78.4	21.6	100.0	0	0	0	78.4	21.6
Truckers & Others	0	100.0	100.0	0	0	0	0	100.0

TABLE II. Percentage Distribution of Egg Products Sold by Country Egg Buyers According to Type of Buyer and Seller, 1935

	(Sellers) Type of Operation							
	Egg Assembly Plants	Creameries	Hatcheries	Branch & Feeders	Truckers	Others	Produce Stations	Local Grocers
GRADED TO SIZE AND QUALITY (BUYERS)								
Total graded sales	100%	100%	100%	100%			100%	100%
Hatcheries				100.0			0	
Egg Assembly Plants		39.7	22.3				16.5	5.7
Shipped to Central Markets	87.4	10.3					16.3	
Wholesale Buyers in S.Dak.	12.4	49.7	64.3				66.9	10.9
Retail Customers	.2	.3	13.4				.3	83.4
CURRENT RECEIPTS (BUYERS)								
Total C.R. sales	100%	100%	100%	100%	100%	100%	100%	100%
Hatcheries								
Egg Assembly Plants	100	86.3		100.0		100.0	41.6	15.7
Shipped to Central Markets							13.4	
Wholesale Buyers in S.Dak.		13.7	56.1		100.0		44.5	21.8
Retail Customers			43.9				.5	62.5

APPENDIX B

10 100
1 100

10 100

10 100

10 100

STATE OF SOUTH DAKOTA
DEPARTMENT OF AGRICULTURE

RULES AND REGULATIONS

pertaining to the buying, selling, candling, and grading of eggs

as

Adopted by the

Department of Agriculture, pursuant to
the provisions of Chapter 82 of the
Session Laws of 1949, this 6th day of
June, 1955.

RULES AND REGULATIONS PERTAINING TO THE BUYING,
SELLING, CANDLING, AND GRADING OF EGGS

The following rules and regulations are adopted pursuant to the provisions of Chapter 82 of the Session Laws of 1949 and these rules and regulations do hereby repeal all previous rules and regulations pertaining to Chapter 82 of the Session Laws of 1949 and shall be in effect the 6th day of June, 1955, and thereafter until amended or repealed.

NO. 1. DEFINITIONS. In construing the law and these regulations

(a) The word "Secretary" means the Secretary of Agriculture.

(b) The term "person" means an individual, firm, co-partnership, corporation, company, society, or association, and shall be construed to imply both the singular and the plural as the case requires.

(c) The word "producer" means poultry raisers, farmers, and other individuals and firms producing eggs for sale.

(d) The term "current receipts" means eggs which have been purchased from producers by the first buyer and which have been properly candled by such buyer but have not been sorted or graded except by removal of all eggs unfit for human food. Current receipts are ungraded eggs.

(e) The terms "rehandled current receipts" and "rehandled eggs" are synonymous and mean current receipts from which checked and cracked eggs, badly stained eggs, dirty eggs and other edible eggs of low quality have been removed.

(f) The term "undergrade eggs" means current receipts from which the Grade A and/or B eggs have been removed.

(g) The terms "case count" and "straight" and other terms of similar import, as applied to methods of buying and selling eggs, mean buying or selling eggs that have not been candled, sorted or graded to determine their actual value or their fitness for human consumption. The law prohibits the buying or selling of eggs on a case count, "straight" or any other basis which does not include careful candling of the eggs involved.

NO. 2. LICENSE.

(a) Every person, except as exempt by Regulation No. 3, paragraph (a), engaged in the business of buying, selling, dealing in, or trading in eggs in South Dakota shall, on or before engaging in such business make an application to the Secretary of Agriculture for license to buy, sell, candle and grade eggs as provided by law. Application shall be made on forms provided by the Secretary and shall be accompanied by the PRESCRIBED annual fee. Licenses will be issued only after inspection and approval of premises and equipment. All licenses expire on the 28th day of February following the date of issue and the license fee shall not be prorated for fractions of one year. No license may be transferred from one person to another person but the movement of the business of a licensee from one location to another in the same municipality shall not invalidate his license, provided he has first advised the Secretary of Agriculture of the proposed move. A vehicle license may be transferred once during the license year from the original vehicle to another (either new or used). If a candler's or grader's license is allowed to lapse, it may be renewed without examination for the period of one year. Dealer licenses must be posted in a conspicuous place at the office in the place of business licensed; candler and grader licenses must be posted in or adjacent to the work area, and in case of truckers, the license shall be kept at all times in each truck of the licensee.

(b) The following phrase in Section One of the law "no person shall engage in the business of buying, selling, dealing in or trading in eggs in any location" shall be construed to mean the buying, selling, dealing in or trading in eggs in or at any point in this state regardless of whether or not such person shall have a permanent or established place of business in the state.

NO. 3. EXEMPTIONS.

(a) A producer who sells to consumers eggs produced by his own flock shall be exempt from Class A and Class B and vehicles licenses and candling provisions of the law. Producers candling and grading their own eggs are not exempt from candling or grading licensing of the law.

(b) Eggs to be used for hatching, appropriately labeled as such, are exempt from the candling provisions of the act and need not carry a candling certificate. Cases containing hatching eggs shall be identified by clearly and plainly stenciling or stamping on one end of each case the words "HATCHING EGGS" in capital letters not less than 1 inch in height.

NO. 4. CANDLING.

(a) Set-in stations. See Regulation #19.

(b) All other buyers. All eggs except as exempt by Regulation No. 3 herein shall be candled as received in the licensee's place of business before the close of the next business day unless candling certificates are attached as herein provided. All eggs which are found to show upon careful candling black, white or mixed rot, sour eggs, green rot, moldiness or mustiness, blood rings, fertilized eggs beyond the blood ring stage, or any other condition showing filth, decomposition or putrefaction shall be rejected as unfit for human food. Cracked eggs which are otherwise clean and sound provided they are not leaking need not be discarded. Leaking eggs are unfit for sale or shipment and must be discarded. The licensee shall pay only for good edible eggs exclusive of those rejected by candling as herein defined. A licensee shall return to the producer all reject eggs and shall render to the producer a written statement showing his name, the total number of eggs received, date received, amount of advanced payment, if any, date of candling, number rejected, number of eggs paid for, price or prices paid for same and final settlement or balance due, where advanced payment has been made. Copies of all such detailed statements to producers shall be kept on file by licensees for ninety days and shall be open for inspection by the Secretary or his duly authorized agents.

NO. 5. CANDLING EQUIPMENT; USE. A place to be adequate for candling eggs must be provided with a bench or table for handling egg cases and candling equipment in such manner that the work may be done with ease, accuracy and rapidity. The room must be in semi-darkness or darker. In every case the candling equipment shall be in condition for immediate use at any time. No candling device intended for the examination of more than one egg at one time may be used, except upon approval by the Secretary. In candling, the egg is held by the hand in a slanting position with the large end against the round opening in the candling device. This hole shall be round and not more than one inch in diameter. A 60 WATT ELECTRIC LIGHT BULB SHALL BE FIXED IN A POSITION OF NOT MORE THAN TWO INCHES BEHIND THE HOLE IN THE CANDLING LIGHT. CANDLING LIGHTS EQUIPPED WITH A MAGNIFYING GLASS AND/OR A REFLECTOR MAY BE USED WITH A 50 WATT CLEAR BULB. A few moderately rapid turns are given to the right and to the left while the operator closely examines the interior of the egg for defects. Mechanical devices, upon the approval of the Secretary, may be used. All eggs purchased from producers shall be candled in a manner and in a room or place subject to approval by the Secretary. All eggs coming into South Dakota from other states for sale must be candled upon receipt unless all cases bear lawful candling certificates from the state of origin showing the contained eggs have been candled.

NO. 6. TERMS DESCRIPTIVE OF REJECTS (INEDIBLE EGGS). A reject or inedible egg means an egg which is unwholesome and unfit for human consumption. All inedible eggs must be rejected during the candling process. The terms defined below are commonly used to identify various conditions of eggs which render them inedible and therefore make their rejection necessary:

- (a) Blood ring means an egg in which germ development has advanced to the stage where blood vessels have formed a red ring clearly visible before the candling light.
- (b) Large embryo means an egg in which the embryo has developed beyond the blood ring stage.
- (c) Eggs showing blood clots and/or spots are eggs in which clots or spots or both appear on the yolk or floating in the white. These clots may have lost their characteristic red color and appear as small particles of foreign material commonly referred to as meat spots. The condition is not due to germ development.
- (d) Black rot means an egg which is in an advanced state of decomposition and the egg contents may appear grey or black in color when observed under the candling light.
- (e) Seeping yolk or addled egg means an egg in which yolk substance is seeping through the yolk membrane and becoming mixed with the egg white.
- (f) Mixed rot means an egg in which the yolk is broken and partially mixed with the white, and in which decomposition has begun.
- (g) Moldy egg means an egg which has developed moldy spots upon the membrane lining the shell or along cracks in the shell. These spots may appear as grey or black areas. Advanced stages of mold may cause the entire egg to appear black before the candling light.
- (h) Stuck yolk means an egg in which the yolk adheres to the shell. Such eggs are not fresh and may be stale.
- (i) Bloody white means an egg in which blood is mixed with the white.
- (j) Musty egg means an egg which has a stale, musty odor.
- (k) Sour egg means an egg which has a sharp sour odor.
- (l) Filthy egg means an egg shell 25% or more of which is covered with adhering manure, blood, egg white or yolk, or any other foreign materials causing putrefaction by any one or any combination of substances.
- (m) Leaker egg means an egg in which the shell and shell membranes are broken to the extent that the egg contents are exuding or free to exude through the shell.

NO. 7. CANDLING CERTIFICATES. Two candling certificates must be provided for every case and they must be applied as required by law immediately after the eggs are candled and filled in the cases. The certificates shall not be smaller than two by four inches and shall be printed on substantial white paper. The form of the certificate shall be the following:

The eggs in this case were candled _____ Date _____

Candler's License No. _____

Of _____
Individual, firm or corporation

Department of Agriculture

License Number _____ Address _____ S. Dak.

One certificate shall be attached by staples or adhesive to an outer end of the case and a duplicate shall be placed inside the case under the top flap. Certificates shall be so attached as to be read without detaching. Candling certificates shall not be required on or in cases of eggs which have been graded according

to law and which are so labeled. No person, except as exempt by Regulation No. 3, paragraphs (a) and (b), shall have in his possession any eggs in cases without proper candling certificates in and on such cases unless such eggs be graded and labeled according to these regulations. All candling certificates attached to cases shall be removed and destroyed or cancelled by mutilation before re-use of any egg case.

NO. 8. PURCHASE GRADES. The grades, under which eggs shall be designated and shipped, shall be the grades adopted and promulgated by the Secretary pursuant to law. Re-handled eggs and undergrade eggs must be identified as required in Regulation 11.

The law does not compel transactions in eggs to be on the basis of grades. The Secretary, however, is authorized to promulgate regulations defining purchase and retail standards and grades for eggs, and hereby promulgates the following:

(a) Purchase grades shall be as follows:

(1) Grade A Large -- Eggs of this grade are of A quality as defined in these regulations, or better. The minimum net weight per dozen shall be 24 ounces; the minimum weight per 30 dozen, 45 pounds and the minimum weight of individual eggs shall be at the rate of 23 ounces per dozen.

(2) Grade A Medium -- Eggs of this grade are of A quality as defined in these regulations, or better. The minimum net weight per dozen shall be 21 ounces; the minimum net weight per 30 dozen, 39½ pounds; and the minimum weight of individual eggs shall be at the rate of 20 ounces per dozen.

(3) Grade A Small -- Eggs of this grade are of A quality, as defined in these regulations, or better. The minimum net weight per dozen shall be 18 ounces; the minimum net weight per 30 dozen, 34 pounds; and the minimum net weight of individual eggs shall be at the rate of 17 ounces per dozen.

(4) Grade B -- Eggs of this grade are of B quality, as defined in these regulations, or better. The minimum net weight per dozen shall be 24 ounces; the minimum net weight per 30 dozen, 45 pounds; and the minimum weight of individual eggs shall be at the rate of 23 ounces per dozen.

(5) Grade C -- Eggs of this grade shall include all eggs fit for human food which are not included in Grades A Large, A Medium, A Small and B, including checks, stains and dirties.

(b) A 20% tolerance in the quality of the above purchase grades will be permitted, provided that the permitted tolerance must be of the next lower grade.

NO. 9. RETAIL GRADES.

(a) Retail grades shall be as follows:

(1) Retail Grade A Extra Large (optional) -- Eggs of this grade are eggs of which at least 80 per cent are A quality and the balance B quality. The minimum net weight per dozen shall be 27 ounces; the minimum net weight per 30 dozen, 50½ pounds; the minimum weight of individual eggs shall be at the rate of 26 ounces per dozen.

(2) Retail Grade A Large -- Eggs of this grade are eggs of which at least 80 per cent are A quality and the balance B quality. The minimum net weight per dozen shall be 24 ounces; the minimum net weight per 30 dozen, 45 pounds; and the minimum weight of individual eggs shall be at the rate of 23 ounces per dozen.

(3) Retail Grade A Medium -- Eggs of this grade are eggs of which at least 80 per cent are of A quality and the balance B quality. The minimum net weight per dozen shall be 21 ounces; the minimum net weight per 30 dozen, 39½ pounds; and the minimum net weight of individual eggs shall be at the rate of 20 ounces per dozen.

(4) Retail Grade A Small -- Eggs of this grade are eggs of which at least 80 per cent are A quality and the balance B quality. The minimum net weight per dozen shall be 18 ounces; the minimum net weight per 30 dozen, 34 pounds; and the minimum net weight of individual eggs shall be at the rate of 17 ounces per dozen.

(5) Retail Grade B -- Eggs of this grade are eggs of which at least 80 per cent are B quality and the balance C quality. The minimum net weight per dozen shall be 24 ounces; the minimum net weight per 30 dozen, 45 pounds; and the minimum net weight of individual eggs shall be at the rate of 23 ounces per dozen.

(6) Retail Grade C -- Eggs of this grade shall include all eggs, fit for human food, which are not included in Grades A Extra Large, A Large, A Medium, A Small and B, including stains and dirties.

(7) Ungraded -- Eggs of this grade are eggs that have been candled and all inedible eggs removed.

(b) All eggs packed on grade by packers or retailers for sale to consumers shall be packed only in purchase grades defined in these Regulations. The 20 per cent tolerance allowed in Retail Grade definitions is permitted only to compensate for exceptional conditions which may result in quality loss while eggs are held by the retailer.

NO. 10. QUALITY STANDARDS FOR SHELL EGGS. The following specifications shall be enforced for maintaining quality standards in eggs:

(a) A Quality -- The shell must be clean, unbroken, and practically normal. The air cell must not exceed $2/8$ inch in depth and must be practically regular. The white must be clear and at least reasonably firm so that the yolk appears at least fairly well centered and its outline only fairly well defined when the egg is twirled before the candling light. The yolk must be practically free from apparent defects.

(b) B Quality -- The shell must be unbroken and may be slightly abnormal and may show slight stains but no adhering dirt. Provided, that they do not appreciably detract from the appearance of the egg. When the stain is localized, approximately $1/32$ of the shell surface may be slightly stained, and when the slightly stained areas are scattered, approximately $1/16$ of the shell surface may be slightly stained. The air cell must not exceed $3/8$ inch in depth, may show unlimited movement, and may be free but not bubbly. The white must be clear and may be slightly weak so that the yolk may appear off-center, with its outline well defined when the egg is twirled before the candling light. The yolk may appear slightly enlarged or slightly flattened and may show other definite, but not serious, defects.

(c) C Quality -- Shall include all eggs fit for human food not included in Grades A and B, including checks, stains and dirties. The air cell may be over $3/8$ inch in depth and be free or bubbly. The white may be weak or watery so that the yolk may appear off-center and its outline plainly visible when the egg is twirled before the candling light. The yolk may appear dark, enlarged, and flattened, and may show clearly visible germ development but no blood due to such development. It may show other serious defects that do not render the egg inedible.

NO. 11. DEFINITIONS OF TERMS USED IN SPECIFICATIONS FOR GRADES OF EGGS, AND FOR QUALITY OF INDIVIDUAL EGGS.

In grading eggs the terms used shall have the following meanings:

(a) Terms descriptive of the egg shell:

(1) Clean -- a shell that is free from foreign matter and from stains or discolorations that are readily visible. Eggs with only very small specks or stains may be considered clean, if such eggs are not of sufficient number in a package to detract appreciably from its appearance. Eggs that show traces of processing oil on the shell are considered clean unless the shell is otherwise soiled.

- (2) Stained -- a shell with stained or soiled spots that together cover not more than $1/8$ of the shell but without adhering dirt.
- (3) Dirty -- a shell with adhering dirt or with stained or soiled spots that together cover from $1/8$ to $1/4$ of the shell surface.
- (4) Unbroken -- a shell that is free from checks or breaks.
- (5) Checked or cracked -- a shell that has an actual break but its membranes are unbroken and its contents do not leak.
- (6) Practically normal -- a shell that approximates the usual shape and that is of good even texture and strength and free from rough areas or thin spots. Slight ridges and rough areas that do not materially affect the shape, texture and strength of the shell, are permitted.
- (7) Slightly abnormal -- a shell that may be somewhat unusual in shape or that may be slightly faulty in texture or strength. It may show definite ridges but no pronounced thin spots or rough areas.
- (8) Abnormal -- a shell that may be decidedly misshaped or faulty in texture or strength or that may show pronounced ridges, thin spots or rough areas.

(b) Terms descriptive of the air cell:

- (1) Depth of air cell -- (air space between shell membranes, normally in the large end of the egg) -- The depth of the air cell is the distance from its top to its bottom when the egg is held air cell upward.
- (2) Practically regular -- an air cell that maintains a practically fixed position in the egg and shows a fairly even outline, with no more than $2/8$ inch movement in any direction as the egg is rotated.
- (3) Free Air Cell -- An air cell that moves freely toward the uppermost point in the egg as the egg is rotated slowly.
- (4) Bubbly Air Cell -- a ruptured air cell resulting in one or more small separate bubbles; usually floating beneath the main air cell.

(c) Terms descriptive of the white:

- (1) Clear -- a white is free from discoloration or from any foreign bodies floating in it. Prominent chalazas, whitish strands at each end of the white attached to the yolk, should not be confused with foreign bodies such as spots or blood clots.
- (2) Firm -- a white that is sufficiently thick or viscous to permit but limited movement of the yolk from the center of the egg, thus preventing the yolk outline from being more than slightly defined or indistinctly indicated when the egg is twirled.
- (3) Reasonably firm -- a white that is somewhat less thick or viscous than a firm white. A reasonably firm white permits the yolk to move somewhat more freely from its normal position in the center of the egg and approach the shell more closely. This would result in a fairly well defined yolk outline when the egg is twirled.
- (4) Slightly weak -- a white that is lacking in thickness or viscosity to an extent that permits the yolk to move quite freely from its normal position in the center of the egg. A slightly weak white will cause the yolk outline to appear well defined when the egg is twirled.
- (5) Weak and Watery -- a white that is thin and generally lacking in viscosity. A weak and watery white permits the yolk to move freely from the center of the egg and to approach the shell closely, thus causing the yolk outline to appear plainly visible and dark when the egg is twirled.

(d) Terms descriptive of the yolk:

- (1) Well centered -- a yolk that occupies the center of the egg and moves only slightly from that position as the egg is twirled.
- (2) Fairly well centered -- a yolk that is not more than one-fourth of the distance from its normal central position towards ends of the egg and swings not more than one-half of the distance from its normal position towards the side of the egg as it is twirled.

- (3) Off center -- a yolk which is distinctly above or below center and swings to the sides of the egg as it is twirled.
- (4) Outline slightly defined -- a yolk outline that is distinctly indicated and appears to blend into the surrounding white as the egg is twirled.
- (5) Outline fairly well defined -- a yolk outline that is discernible but clearly outlined as the egg is twirled.
- (6) Outline well defined -- a yolk that is quite definite and distinct as the egg is twirled.
- (7) Outline plainly visible -- a yolk that is clearly visible as a dark shadow when the egg is twirled.
- (8) Slightly enlarged and slightly flattened -- a yolk in which the yolk membranes and tissues have weakened somewhat causing it to appear slightly flattened.
- (9) Enlarged and flattened -- a yolk in which the yolk membranes and tissues have weakened and moisture has been absorbed from the white to such an extent that it appears definitely enlarged and flat.
- (10) Free from defects -- a yolk that shows no spots or areas on its surface indicating the presence of germ development or other defects.
- (11) Practically free from defects -- a yolk that shows no germ development but may show other very slight defects on its surface.
- (12) Definite but not serious defects -- a yolk that may show definite spots or areas on its surface but with only slight indication of germ development or other pronounced or serious defects.
- (13) Other serious defects -- a yolk that shows well developed spots or areas and other serious defects, such as olive yolks, which do not render the egg inedible.
- (14) Clearly visible germ development -- a development of the germ spot on the yolk of a fertile egg that has progressed to a point where it is plainly visible as a definite circular area or spot with no blood in evidence.
- (15) Blood due to germ development (inedible) -- blood caused by development of the germ in a fertile egg to the point where it is visible as definite lines or blood rings. Such eggs are classified as inedible.

NO. 12. GRADE LABELING. Cases containing graded eggs must be identified by clearly and plainly stenciling or stamping on one end of each case the word "GRADE" together with the letter of the Grade in capital letters not less than one inch in height. Cases containing rehandled current receipts or undergrade eggs must be identified by clearly and plainly stenciling or stamping on one end of each case the words "REHANDLED CURRENT RECEIPTS" or "UNDERGRADE EGGS" in capital letters not less than one inch in height.

NO. 13. IDENTIFICATION OF GRADED AND UNGRADED EGGS. Any person exposing or offering for sale to consumers graded eggs other than of his own production, shall give notice of the grade of eggs in the following manner:

(a) If graded eggs are exposed or offered for sale in cartons, bags, or other containers, such cartons, bags, or other containers shall be plainly and conspicuously marked, in type not smaller than one-half ($\frac{1}{2}$) inch in height, with the exact grade.

(b) If graded eggs are offered or exposed for sale in bulk, there shall be placed among or adjacent to such eggs, a placard, and such placard shall state the grade of such eggs in type not smaller than one-half ($\frac{1}{2}$) inch in height.

Any person exposing or offering for sale to consumers eggs other than his own production, which are not sold under grade, shall label the same "Ungraded Eggs" in the same manner and the same size type as required herein for graded eggs.

NO. 14. RECORDS TO BE FURNISHED TO RETAILERS. Every person, other than the producer, selling graded eggs to retailers, shall furnish to such retailers an invoice showing the grade of such eggs, according to the standards prescribed and specified in this regulation. If eggs are not graded, the invoice shall read "Ungraded Eggs". A copy of each such invoice shall be kept on file by the person selling and the retailer at their respective places of business for a period of thirty (30) days and shall be available and open for inspection at all reasonable times to the Secretary or his agents.

NO. 15. MISBRANDING. No person shall sell, or offer for sale, or advertise for sale, eggs for human consumption if the package containing them, or the label thereon, or any advertising accompanying them shall bear any statement or design which may be false or misleading in any particular.

NO. 16. ADVERTISING. No person shall sell, or offer for sale, or advertise for sale, any eggs without using the exact grade designation. No other descriptive terms of quality may be used and the grade designations must be at least one-half ($\frac{1}{2}$) the size of the posted price.

NO. 17. MISREPRESENTATION. Any person buying eggs from producers who shall by any means make any misrepresentation as to classification or grades of eggs purchased or to be purchased or as to grades or classifications of eggs to be used as a basis of payment, or who shall buy or offer or purport to buy eggs on grade or any other basis than the purchase grades defined in these regulations, shall be guilty of violation of the law and these regulations and punished accordingly.

NO. 18. STORING EGGS.

(a) All eggs shall be held only in a suitable place pending sale and shipment. A place to be suitable for the storage of eggs awaiting shipment must be well ventilated, clean and kept free from products giving rise to strong odors, and must be protected from extreme heat. In every room where eggs are held or stored there must be provided a Fahrenheit thermometer.

(b) Egg cases -- All wooden and fiber egg cases must be clean and well constructed to withstand handling and ordinary shipping hazards. Only clean, sound, dry flats and fillers may be used. Both wooden and fiber cases must have top flats and adequate lids.

(c) Eggs that are to be resold by any buyer must be resold and shipped not later than 48 hours or the CLOSE OF THE NEXT BUSINESS DAY, after purchase, unless the said buyer places such eggs under a temperature not to exceed 50 degrees Fahrenheit.

(d) When eggs are transported on open trucks they should be adequately protected from rain and the heat of the sun. Such eggs shall not be permitted to remain exposed to the weather whereby their quality may be lowered.

NO. 19. SET-IN STATIONS.

(a) A licensee holding a set-in license shall handle all eggs on a set-in basis only.

(b) Set-in Records -- At the time of receiving eggs from the producer, the operator of such station shall record in triplicate the producers name, date received, and number of eggs received. He shall furnish one copy of same to producer, retain one copy and one copy shall accompany each lot of eggs to the Class B licensee.

(c) Time of Holding -- All eggs received by set-in operator shall be moved to Class B licensee to be candled or graded not later than the close of the business day following date of receiving.

NO. 20. CLASS B LICENSEES RECEIVING EGGS FROM SET-IN STATIONS.

(a) Holding time before candling -- The Class B licensee receiving eggs from set-in stations shall candle or grade all such eggs not later than the end of the business day following date of receiving.

(b) Records -- The Class B licensee after candling or grading eggs received from set-in stations, shall prepare in triplicate a statement showing the producer's name, date received from set-in station, name of set-in station, amount of advance payment made, if any, number of eggs received, number of eggs paid for, price or prices paid for same, final settlement or balance due if an advance payment has been made, date of candling or grading, name of Class B firm which is buying the eggs, and name of candler or grader. One copy shall be retained by the Class B licensee for a period of ninety (90) days -- one copy shall be rendered to the set-in station, who shall hold same in his files for a period of ninety (90) days -- one copy shall be furnished the producer when final settlement is made.

The above and foregoing Rules and Regulations Pertaining to the Buying, Selling, Candling, and Grading of Eggs are hereby adopted by the Department of Agriculture for the State of South Dakota, pursuant to the provisions of Chapter 82, Session Laws of 1949, on this 6th day of June, 1955, and shall become effective and be in full force and effect thirty (30) days after filing in the office of the Secretary of State and transmission to the Clerk of Courts of each County of the State, as provided by SDC 65.0106.

Dated this 6th day of June, 1955.

DEPARTMENT OF AGRICULTURE

By:

Charles E. Bruett

Charles E. Bruett
Secretary of Agriculture

ATTEST:

Lucille Purkayile

RECEIPT OF SECRETARY OF STATE FOR DUPLICATE
ORIGINAL

I, Geraldine Ostroot, the Secretary of State of South Dakota,
in accordance with the provisions of SDC 65.0106, do hereby acknow-
ledge receipt of one of the duplicate originals of the above and
foregoing RULES AND REGULATIONS PERTAINING TO THE BUYING, SELLING,
CANDLING, AND GRADING OF EGGS, which said duplicate original I have
filed in my office as of June 6, 1955, in Box 103, File No. 167475
and endorsed said date thereon as the filing date thereof.

Dated this 6th day of June, 1955.

GERALDINE OSTROOT
Secretary of State of the State
of South Dakota.

By: *Kate P. Young*
Assistant Secretary of State

APPENDIX C

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UNITED STATES STANDARDS FOR QUALITY OF INDIVIDUAL SHELL EGGS

Illustrations of Canded Appearance of White and Brown Eggs Showing Maximum Depth of Air Cell and Outline and Position of Yolk in Each Quality

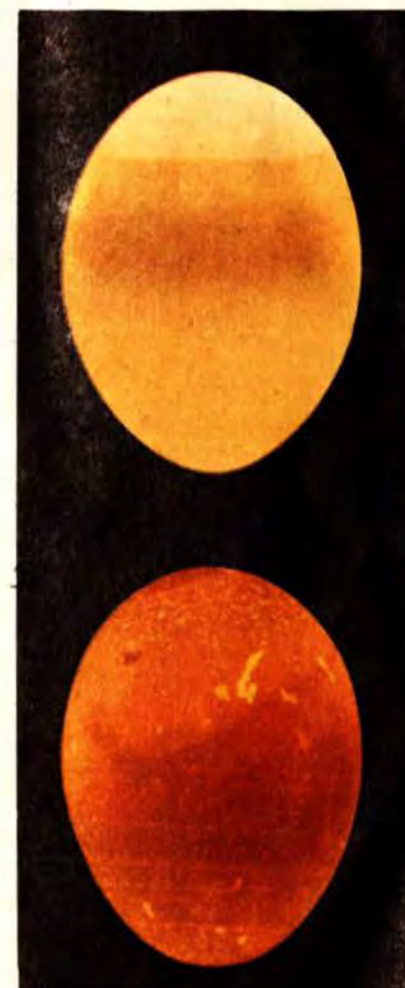
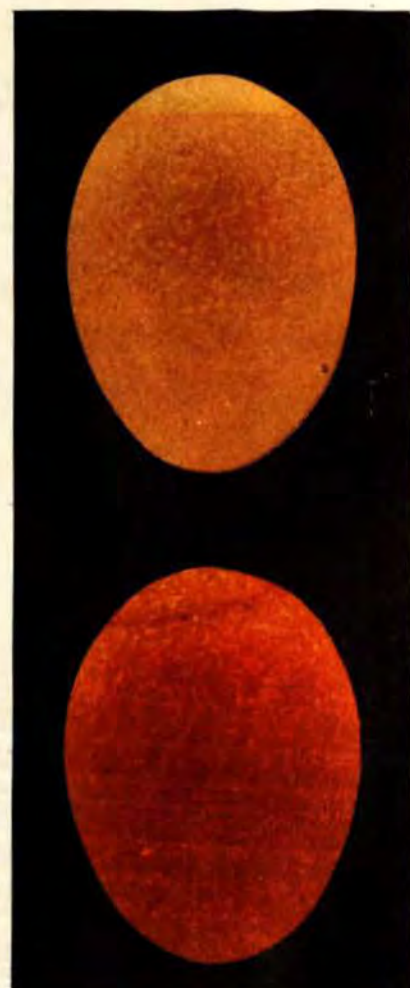
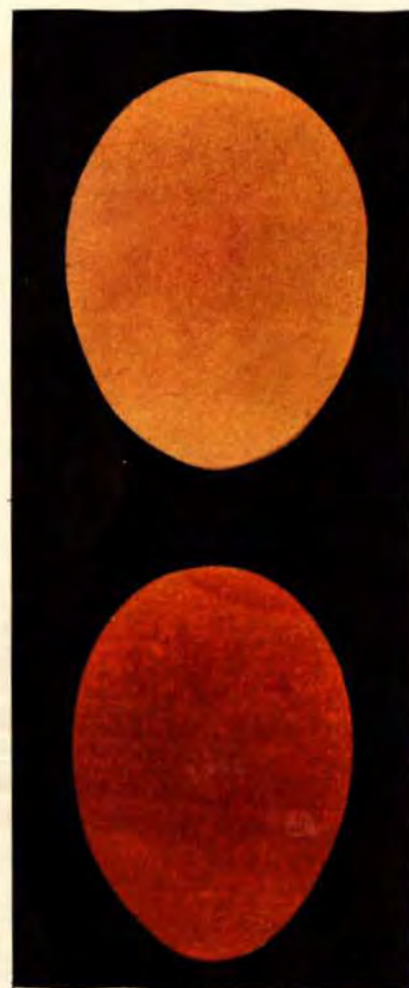
AA Quality

A Quality

B Quality

C Quality

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1. Shell—clean; unbroken; practically normal.
2. Air cell— $\frac{1}{8}$ inch or less in depth; practically regular.
3. White—clear; firm.
4. Yolk—well centered; outline slightly defined, free from defects.

1. Shell—clean; unbroken; practically normal.
2. Air cell— $\frac{3}{8}$ inch or less in depth; practically regular.
3. White—clear; may be reasonably firm.
4. Yolk—may be fairly well centered; outline fairly well defined; practically free from defects.

1. Shell—clean; unbroken; may be slightly abnormal.
2. Air cell— $\frac{3}{8}$ inch or less in depth; may show movement not over $\frac{3}{8}$ inch; if not over $\frac{3}{8}$ inch, may be free.
3. White—clear; may be slightly weak.
4. Yolk—may be off center; outline well defined; may be slightly enlarged and flattened; may show definite but not serious defects.

1. Shell—clean; unbroken; may be abnormal.
2. Air cell—may be over $\frac{3}{8}$ inch in depth; may be free or bubbly.
3. White—clear; may be weak and watery; small blood clots or spots may be present.
4. Yolk—may be off center; enlarged, and flattened; may show clearly visible germ development but no blood; may show other serious defects; outline plainly visible.

Illustrations of Hard-Cooked Eggs Showing Maximum Depth of Air Cell and Position of Yolk in Each Quality

Illustrations of Hard-Cooked Eggs Showing Maximum Depth of Air Cell and Position of Yolk in Each Quality

AA Quality



1. Air cell— $\frac{1}{8}$ inch or less in depth.
2. Yolk—well centered.

A Quality



1. Air cell— $\frac{3}{8}$ inch or less in depth.
2. Yolk—may be fairly well centered.

B Quality



1. Air cell— $\frac{3}{8}$ inch or less in depth.
2. Yolk—may be off center; may be slightly enlarged and flattened.

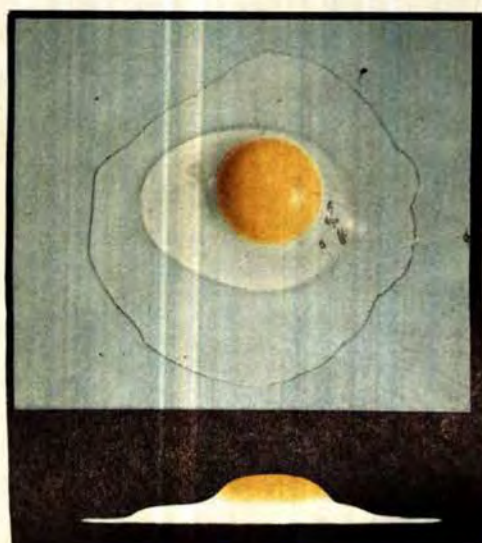
C Quality



1. Air cell—may be over $\frac{3}{8}$ inch in depth.
2. Yolk—may be off center, enlarged, and flattened.

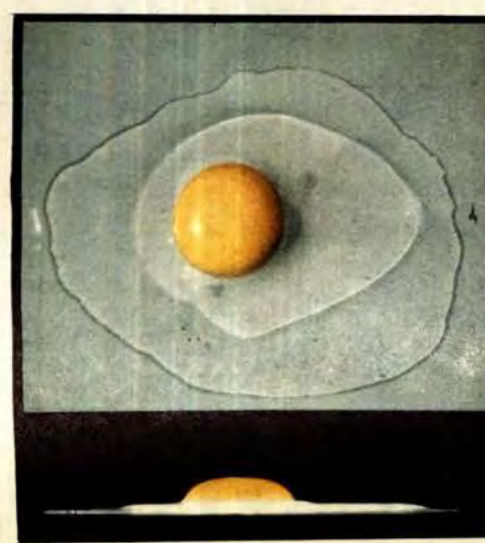
Illustrations of Broken-Out Appearance (Top and Side Views) of Each Quality— $\frac{1}{3}$ Actual Size

AA Quality



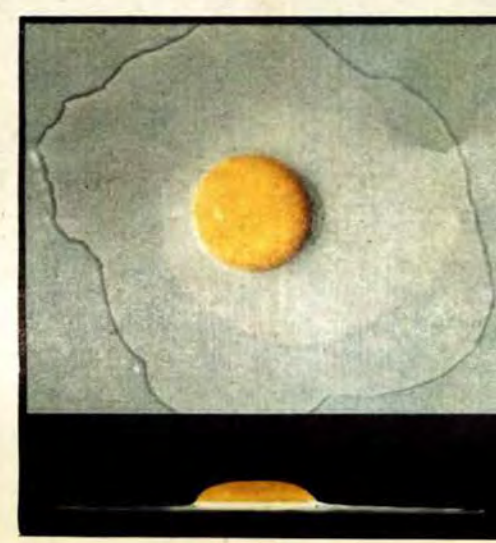
Egg covers small area; much thick white surrounds yolk, has small amount of thin white; yolk round and upstanding.

A Quality



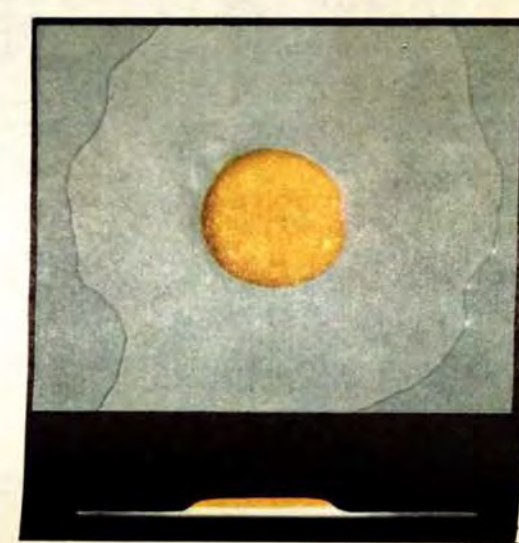
Egg covers moderate area; has considerable thick white; medium amount of thin white; yolk round and upstanding.

B Quality



Egg covers wide area; has small amount of thick white; much thin white; yolk somewhat flattened and enlarged.

C Quality



Egg covers very wide area; has no thick white; large amount of thin white thinly spread; yolk very flat and enlarged.

(Graders should check their work by breaking out an egg occasionally and comparing it with this chart.)

Illustrations of Types of Shell Condition

Stain



No more than $\frac{1}{8}$ of the shell surface stained or soiled; no adhering dirt.

Dirty



Adhering dirt or more than a combined total of $\frac{1}{8}$ of the shell surface stained or soiled.

Practically Normal



Good even texture and strength free from rough areas or thin spots. Slight ridges and rough areas permitted.

Slightly Abnormal



May be unusual in shape; slightly faulty in texture or strength; definite ridges or rough areas permitted.

Abnormal



May show pronounced ridges, thin spots, or rough areas.

Check



Shell broken but membranes unbroken.

Candled Appearance of Loss Eggs

Bloodspot



Blood spot over $\frac{1}{8}$ inch in diameter.

Blood Ring



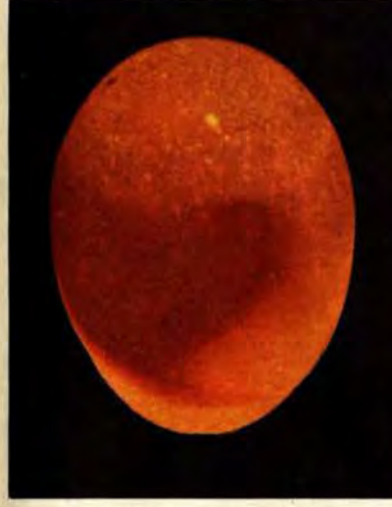
Blood caused by germ development.

Moldspot



Mold development under shell.

Seeping Yolk



Yolk membrane ruptured.

Mixed Rot



Yolk content mixed with the white.

Sour Rot



Pseudomonas-infected egg before an ultraviolet (black) light.