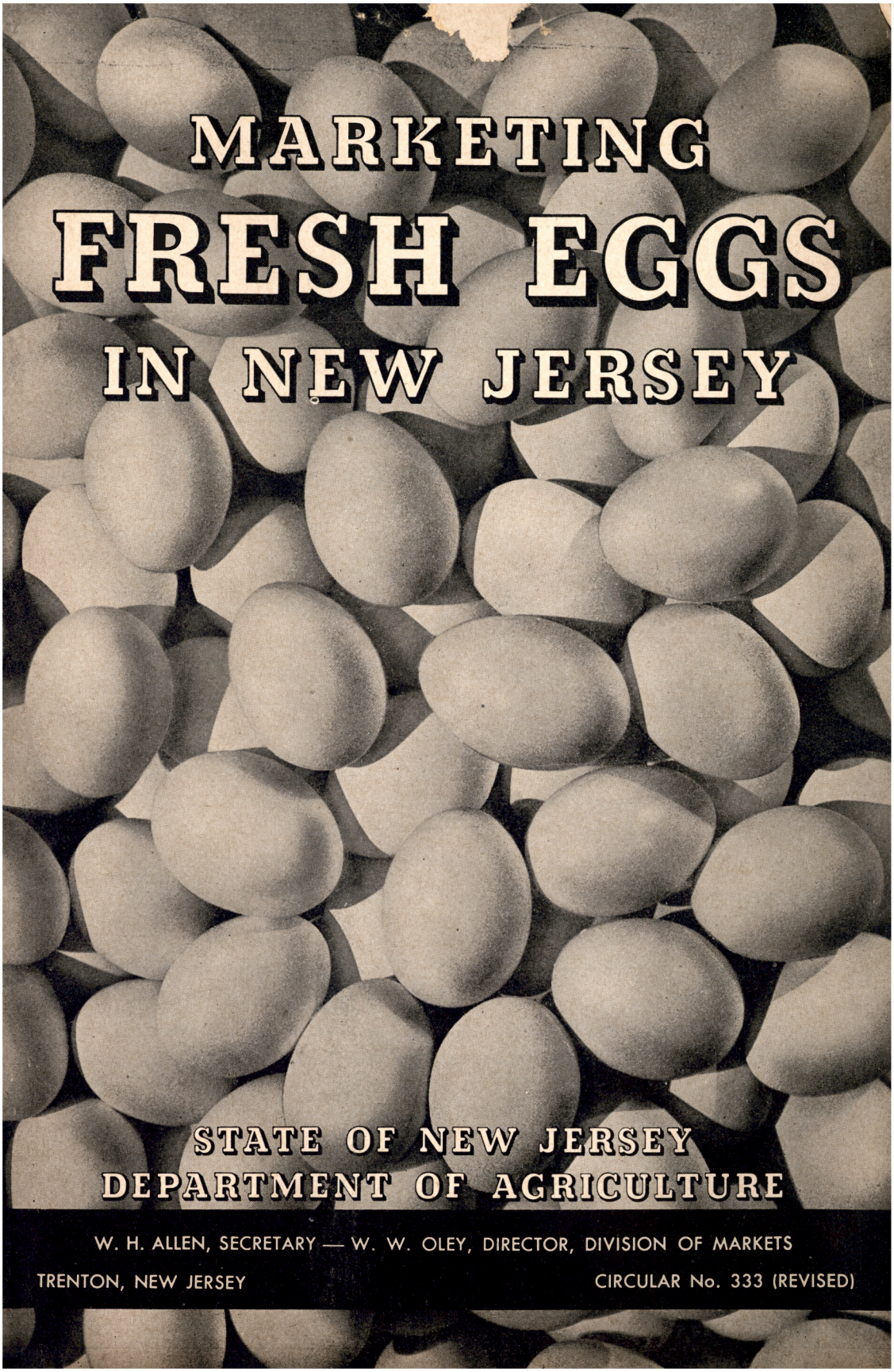


MARKETING FRESH EGGS IN NEW JERSEY

STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE

W. H. ALLEN, SECRETARY — W. W. OLEY, DIRECTOR, DIVISION OF MARKETS

TRENTON, NEW JERSEY

CIRCULAR No. 333 (REVISED)

Marketing Fresh Eggs in New Jersey

ENTERPRISING wholesalers and retailers, progressive poultry keepers and thrifty homemakers agree on the necessity for the protective measures provided by the State of New Jersey under the "Fresh Egg Law" of 1934.

RETAILERS, usually storekeepers and milk dealers, and the operators of egg candling and packaging companies which serve retailers, have benefited in several ways. By purchasing according to grades, they are assured of their wholesale dollar's worth, because the official standards of egg quality have also become standards of value for pricing purposes. They have greatly increased the volume of egg sales because public confidence has been developed in a commodity which formerly involved considerable risk for the consumer.

POULTRY KEEPERS also have an important stake, because their future security depends upon a sound foundation for their marketing programs. The poultry industry has grown into a leading position in New Jersey agriculture during recent years under the impetus of increased demand for eggs of high quality. New Jersey farmers realize that most consumers want fresh eggs, and they have catered to this demand. Having developed efficient production practices and streamlined marketing facilities which make it possible to meet the specifications for fresh quality, they do not want to see eggs of inferior qualities sold under false pretenses to discriminating consumers whose confidence in good eggs may thereby be undermined.

HOMEMAKERS, whether they buy "fresh" eggs for table use or second quality eggs for baking and cooking, want to be sure they get their money's worth of nutrition and satisfaction. Because eggs—a "protective food"—are so desirable nutritionally, perhaps the greatest benefit derived from the New Jersey egg marketing program has been increased per capita consumption of eggs and consequent betterment of health. The New Jersey law, the inspection service provided by the State Department of Agriculture, and the educational program backed up by law enforcement are safeguards for all consumers who cooperate by buying eggs according to retail grades.

Fresh Egg Law Interpreted

This publication deals with the New Jersey law concerning eggs for food, qualities and grades of eggs, and the inspection and enforcement services provided by the State government, all of which are basic in serving the best public interests of consumer, distributor and farmer. Because the producer, wholesaler and retail distributor are most concerned in the marketing steps leading to the consumer's table, their functions and responsibilities are emphasized, with appropriate recommendations on quality conservation and proper merchandising methods.

Most of the table eggs sold and consumed in New Jersey today are "fresh" eggs, and would so qualify under the law. There are also offered on local markets relatively large supplies of eggs that are not of sufficiently high internal quality to qualify as "fresh," under the *State law and the State Department of Agriculture standards for Grade A.

NON-FRESH EGGS MAY BE SOLD

The fact that the quality of some eggs is below the legal "fresh" **standards of quality does not mean that these cannot be sold in New Jersey. Of course, there are regulations forbidding the sale of eggs classed as "inedible" because of adulteration, processes or faults which render them unfit for human consumption. However, there is no restriction on the right to sell edible lower quality eggs if these are not claimed to be fresh or of highest quality. Those who prefer lower quality eggs, for reasons of price or individual tastes, should have opportunity to purchase the grades of their choice. But, it should be emphasized that lower quality eggs, as well as fresh eggs, should be properly graded and marked to aid the consumer in making her choice.

MEANING OF THE NEW JERSEY LAW

The State law says, in effect:

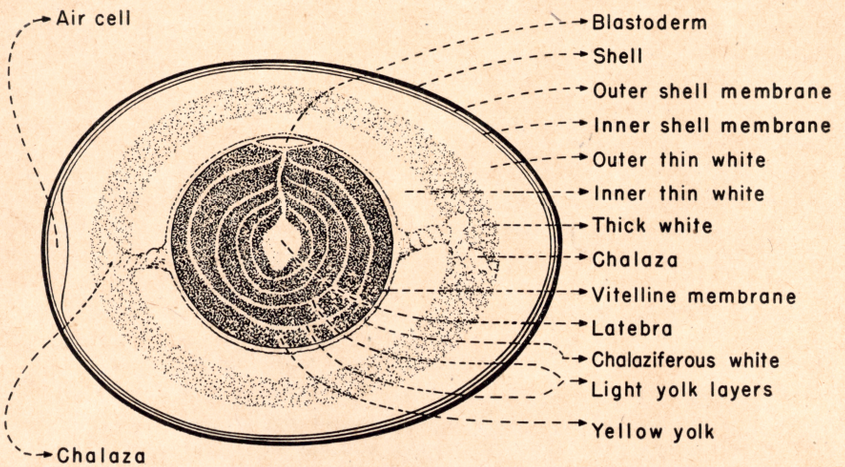
(1) Eggs sold as "fresh", or sold or advertised under any descriptive term which means "fresh" or "high quality", must be of Grade A quality or better;

(2) Eggs of B quality shall be sold as Grade B eggs or simply as eggs with no superlative term or description which may deceive or confuse the consumer. Grade B eggs are not "fresh".

***See Page 15**
****See Pages 8, 9 and 10**

Parts of the Normal Egg

The main parts of the normal chicken egg are: The shell with two shell membranes; the white in four distinct layers and the yolk with its various divisions.



The Shell—97 per cent of the dry shell weight of 5 grams is calcium carbonate, laid down in three layers. Covering the outer shell layer is a protective cuticle of protein, called "bloom." The outer shell layer is comprised of calcite crystals whose long axes are at right angles to the surface. The middle spongy layer of small calcite crystals has no definite arrangement. The crystals of the inner layer are knoblike, distributed over the outer shell membrane. The irregular minute openings in the shell material are called "pores," and permit evaporation of moisture and the escape of gases. Two membranes line the inside of the shell; when a newly laid egg cools, and its contents contract, these membranes separate, to form the air cell, usually at the large end of the egg, where the shell pores are more numerous.

The White — more than half (57 per cent by weight) of the egg is the white, which consists of 10 per cent protein, about 88 per cent water, 0.8 of 1 per cent minerals, and 0.5 of 1 per cent carbohydrate. Careful examination reveals four distinct layers of white — the outer thin, the thick white, the inner thin, and a layer of firm white enveloping the yolk. This latter is the chalaziferous white extending at opposite sides of the yolk into the cord-like chalazae, which anchor the yolk in the center of the egg.

The Yolk — 31.6 per cent fat, 16.7 per cent protein, 49 per cent water, and 1.5 per cent mineral — is by weight about one-third of the total egg. It is contained within a thin protein sac called the vitelline membrane (from the Latin "vitellus" meaning yolk). On the surface of every yolk lies the blastoderm or "germ spot" leading into the latebra which extends to the yolk center. Embryo development begins at the blastoderm, but can occur only in fertile eggs. In the normal market egg, usually infertile, the blastoderm is inconspicuous.

Chemical and Physical Changes in Eggs

Determination of grade depends upon several factors. Enlargement of the air cell is principally caused by evaporation of water through the shell pores. This is hastened by warmth and dryness (see pages 6 and 11).

Meanwhile, physical and chemical changes occur and affect the appearance and flavor of both white and yolk. Evidences of chemical changes are revealed by physical changes which the trained candler can see and interpret.

BENEFICIAL CHEMICAL IN FRESH EGGS

Nature places a small quantity of carbon dioxide (CO_2) in eggs. This beneficial chemical is revealed by the tell-tale cloudiness of the thick white sometimes observed in broken-out newly laid eggs. While this material is present, the desirable fresh flavor and attractive appearance of white and yolk are conserved at the peak of quality. The cloudy appearance of the egg white usually disappears soon after the egg is laid. The CO_2 content is lost gradually, the rate of its loss being hastened by improper holding conditions. At the same time, the hydrogen-ion concentration undergoes a change. The alkalinity of the white increases from a normal pH of 7.6 in newly laid eggs to a pH of 8.6 and higher in eggs held for long periods.* The alkalinity of yolks, which have a normal pH of 6.02 in newly laid eggs, increases to pH 7.5 and higher in stored eggs.

VISIBLE PHYSICAL CHANGES OCCUR

These chemical changes cause visible physical changes in the white and yolk. The fresh egg's thick white contains a high proportion of mucin fibers, which hold the white together, firmly enveloping the yolk in the manner characteristic of top quality "poaching eggs." Loss of the carbon dioxide and increased degree of alkalinity, probably with an accompanying enzyme action, cause a breaking down of the mucin fibres. The firm white becomes thin as freshness is lost. Instead of being held firmly centered in an envelope of thick white, the yolk of a non-fresh egg has greater mobility; i.e., it "swims around" in the deteriorated white. The candler or inspector may detect this mobility of the yolk by observing the yolk shadow or outline before the candling light. The deteriorated white permits the yolk to move off center, resulting in an unattractive "lop-sided" appearance when such an egg is hard-cooked.

While these chemical changes are occurring in the egg white, the yolk quality also deteriorates. By osmosis through the vitelline membrane, the yolk absorbs moisture from the white. As the yolk membrane stretches to accommodate the increased volume of water, it is weakened. That is why a non-fresh egg, broken out, has a relatively flat yolk, causing an unappetizing appearance in fried eggs, for example. The weakened membrane also ruptures easily, causing broken yolks.

*Poultry Science, March 1945

How Long Do Eggs Stay Fresh?

The age of an egg is only one of several factors which influence quality. Two other principal factors—temperature and humidity—are important in the question of freshness.

Ideally, eggs should reach consumers as soon as possible after production. However, even the speediest methods rely upon coolness and controlled humidity (air moisture) to maintain top quality.

If eggs are exposed to warm, dry air, high quality is quickly lost. Eggs are like flowers or fruits in this respect; they "wilt" or go stale in a short time unless kept in a cool, humidified atmosphere. Therefore, the lapse of time between hen and consumer is usually less important than the physical conditions surrounding the eggs.

WHAT HAPPENS WITHIN THE EGG

When a normal egg is laid, its contents completely fill the shell. As it cools, the volume of the contents contracts, pulling the egg membrane away from the shell membrane (see diagram, page 4), forming an air cell at the large end. In eggs of best quality, the air cell is small, about the size of a dime. Such eggs are described as "full."

Evaporation through the pores of the shell causes the contents of the egg to shrink as it grows older. This shrinkage occurs at a rapid rate if the surrounding atmosphere is warm and dry. Rough handling and excessive vibration also cause air cells to break down. Thus, improperly kept and carelessly handled eggs only a few days old may have larger air cells than much older eggs kept in humid coolness and handled with care.

ALWAYS KEEP EGGS UNDER REFRIGERATION

Many farmers who sell their eggs on the basis of official grades use special egg rooms where cooling and humidifying equipment produces proper atmospheric conditions to retard the rate of quality deterioration.

Enterprising retailers continue the quality conservation efforts right to the consumer. In their stores, eggs are kept under moderate refrigeration. Egg quality deterioration is speeded by temperatures beyond 60° (F.). The ideal temperature range for quality maintenance appears to be 45° to 55° (F.).

The New Jersey State Department of Agriculture compared the interior qualities of eggs kept for a week in a mechanical refrigerator and of eggs displayed on the floor of a store. All eggs came from the same flock, and were originally of New Jersey AA-quality. Fifteen dozen (180 eggs) were placed in the refrigerator at a continuous temperature of 40° (F.) Fifteen dozen were placed on a store counter, where the temperature averaged 78° (F.).

The results showed that the "breaking point" in the quality of the improperly kept eggs occurred after the fourth day. By the eighth day, nearly half (45 per cent) of this lot of eggs were Grade B. The refrigerated eggs retained their fresh quality so well that only 5 per cent (10 eggs of the original 180) were Grade B on the eighth day.

Candling Reveals Interior Quality

Commercially, egg quality is determined by the process known as "candling." A ray of light reveals the depth of air cell, and the condition and behavior of the white and yolk.

The candler cannot "see through" the egg, of course, because the shell and contents are translucent, not transparent. However, a proper candling light will sufficiently illuminate the various parts of the egg so that, by studying the lights and shadows, a trained candler can translate what he sees into the probable conditions of quality within the egg. This requires good vision, training and judgment on the part of the candler.

Before the candle, the yolk of a fresh egg is *well centered* and its outline is only *moderately defined*. The white of an egg of good quality is *firm* and *clear*. Deep and tremulous air cells, freely moving yolks that cast dark shadows before the candle, and weak or watery whites are reliable indications of egg staleness and age, poor original quality or improper handling.

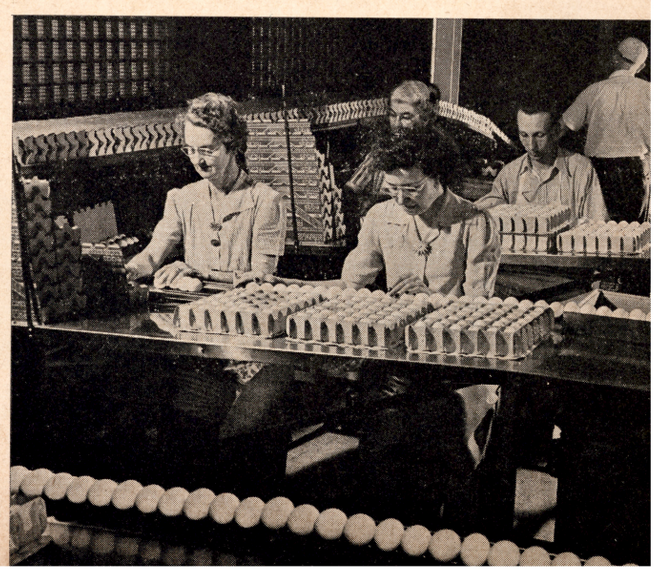
Candling also reveals faults and blemishes which cannot be detected without the use of lighting, including fine cracks in the shell, spots on the yolk or in the albumen, germ development of fertile eggs and discolorations of white and yolk.

Inspection by the candling method is the measuring stick for interior quality under the New Jersey Fresh Egg Law and the New Jersey Official Grades and Standards. Many successful businesses that offer fresh eggs to the consuming public candle all eggs, and reject those eggs which do not conform to the standards of fresh quality.

Studies show that the average New Jersey commercial producer's lot yields about 90 per cent eggs which are suitable for the "fresh" or Grade A consumer carton. Of the 10 per cent which are "reject eggs", an average of 2 per cent are blood or meat spots; and cracked and Grade B eggs account for the balance. Defective eggs are more numerous from May to October, than from November to April, the New Jersey records indicate.

CANDLING SPECIFICATIONS

The candling light should measure 350 to 450 foot candles of light at the opening. Less light will cause the eggs to look poorer in quality than they actually are. Too much light also causes errors in candling. At right is pictured a modern candling room in New Jersey.



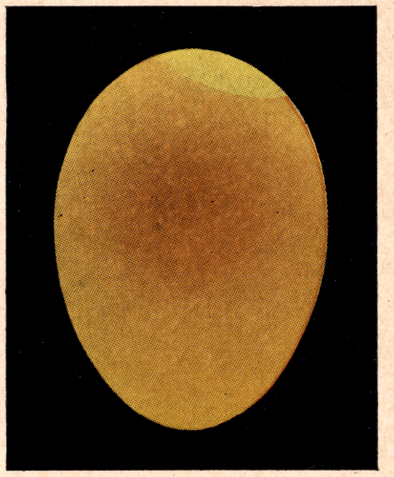
NEW JERSEY--UNITED STATES STANDARDS FOR QUALITY OF INDIVIDUAL SHELL EGGS

Illustrations of candled appearance of white-shelled eggs showing maximum depth of air cell and outline and position of yolk in each quality



AA Quality

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



A Quality

1. Shell—clean; unbroken; practically normal.
2. Air cell—2/8 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.



B Quality

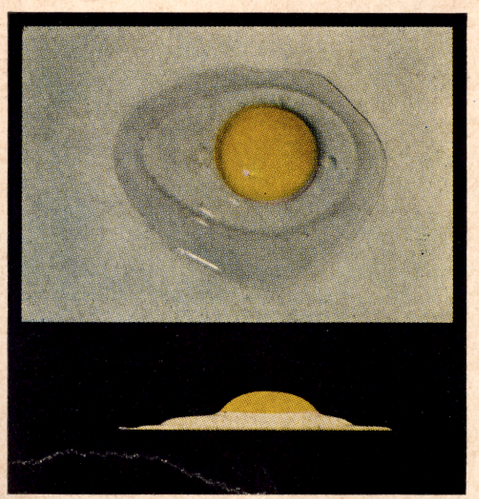
1. Shell—clean; unbroken; may be slightly abnormal.
2. Air cell—3/8 inch or less in depth; may show movement not over 3/8 inch; if not over 2/8 inch, may be free.
3. White—clear; may be slightly weak.
4. Yolk—may be off center; outline well defined; may be slightly enlarged and flattened; may show definite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



C Quality

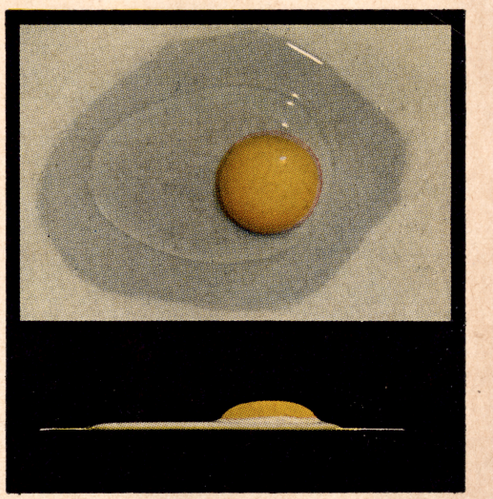
1. Shell—clean; unbroken; may be abnormal.
2. Air cell—may be over 3/8 inch in depth; may be free or bubbly.
3. White—clear; may be weak and watery; small blood clots or spots may be present.
4. Yolk—may be off center, enlarged, and flattened; may show clearly visible germ development but no blood; may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

Illustrations of broken-out appearance (top and side views) of each quality—1/2 actual size



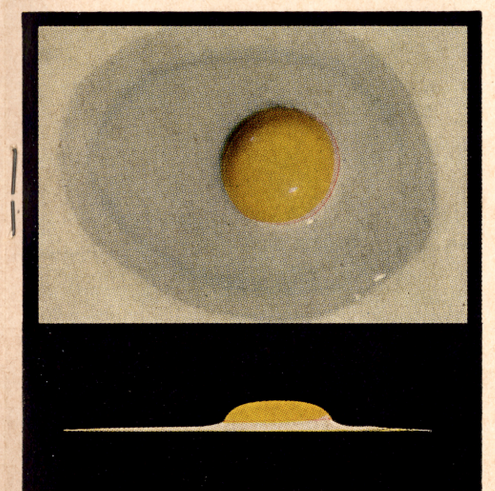
AA Egg covers small area; much thick white surrounds yolk; has small amount of thin white; yolk round and upstanding.

Use for poaching and top quality cooking purposes, for babies and invalids.



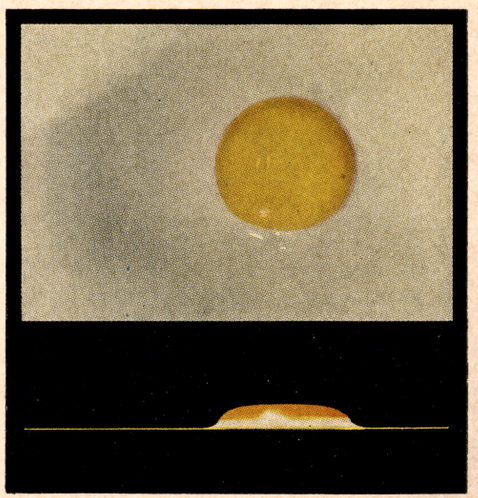
A Egg covers moderate area; has considerable thick white; medium amount of thin white; yolk round and upstanding.

Use for frying, soft or hard cooking, poaching, all purposes. The popular "table egg."



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

Use for scrambling, omelets, baking and general cooking in which quality eggs are not necessary.



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

Use for general cooking and baking recipes not requiring quality eggs.

New Jersey Egg Grades Standards

The New Jersey official grades are based upon the "Standards for Quality of Individual Shell Eggs" (see color plates).

Officially graded eggs shall conform as nearly as possible to the specifications of the respective standards of quality. Tolerances (a total of two eggs in each consumer-graded dozen) are permitted within each grade only as an allowance for variable efficiency and interpretation of conscientious graders; normal changes under favorable conditions during reasonable period between grading and inspection; and reasonable variation from inspector's interpretation.

NEW JERSEY CONSUMER GRADES

CONSUMER GRADE AA (Fresh) — In 30-dozen lots, at least 80% AA-quality; 15% may be A-quality or better, and not over 5% may be of the qualities below A, in any combination, but not including dirties. *Tolerance: In retail lots, 2 Grade A eggs per dozen.*

CONSUMER GRADE A (Fresh) — In 30-dozen lots, at least 80% A-quality or better; 15% may be B-quality or better, and not over 5% may be of the qualities below B, in any combination, but not including dirties. *Tolerance: In retail lots, 2 Grade B eggs per dozen.*

CONSUMER GRADE B (Non-fresh) — In 30-dozen lots, at least 80% B-quality or better; 10% may be C-quality or stained, in any combination, or better, and not over 10% may be dirties or checks in any combination. *Tolerance: In retail lots, 2 Grade C eggs per dozen.*

CONSUMER GRADE C (Non-fresh) — In 30-dozen lots, at least 80% C-quality or stained, in any combination or better, and the balance may be dirties or checks in any combination. *Tolerance: In retail lots, 2 dirty or checked eggs per dozen.*

"TOLERANCE" MUST NOT BE ABUSED

The candling plant manager who is building a reputation for his eggs among retailers and consumers must not say: "A tolerance of two eggs, which may be in the next lower grade, is allowed per dozen. Therefore, I'll put in 10 sound, fresh eggs, and two 'not-so-good' eggs." If he makes that error, not only does he hurt his reputation and lose sales because of the two "not-so-good" eggs, but one or more of the 10 originally fresh eggs may go downhill in quality. Then, the State Fresh Egg Law inspector will find that the legal tolerance has been exceeded, and a violation of the law must be reported.

It is far better for good business and from the legal standpoint, to grade and pack "12 fresh, sound eggs to the dozen"—the New Jersey way to better egg sales.

Fallacies About Eggs

The New Jersey Department of Agriculture is frequently asked, usually by consumers, questions which indicate that certain fallacies about eggs are prevalent. Some of the most common questions are answered below in the interests of a better understanding of an important protective food.

Many erroneously believe that "Strictly Fresh" stands for a better quality egg than "Fresh." Under the law, both terms are the same. To distinguish between the legally fresh grades, it is proper to use the terms AA-quality and A-quality. Grade B and lower quality eggs are not "fresh" or "strictly fresh", and must not be described or advertised by those or similar terms under New Jersey law.

The idea that only a day-old egg can be fresh is a fallacy. Eggs are naturally protected by their shells and membranes, and with the aid of artificial protective methods (coolness, humidity and modern shell-treating methods) fresh quality can be maintained for relatively long periods.

Some believe dark-colored yolks have higher vitamin content than light yolks. Of course, originally dark yolks (caused by feeding grasses and pigmented feeds) are colored by carotene which is pro-vitamin A. However, carotene when converted into vitamin A is colorless. Most New Jersey poultrymen feed scientifically balanced rations containing essential vitamin and mineral supplements.

Blood spots — many fallacies persist in connection with this fault in eggs. Actually, it probably would not hurt to eat an egg with a small spot. However, government regulations classify as inedible an egg with a spot larger than ⅛ inch. Proper candling will detect almost all spots and prevent their going to market.

The chalazae — often described as "stringy material attached to the yolk" — are just as edible as other parts of the eggs. These are simply firm albumen, largely protein placed there by nature to hold the yolk in the center. Chalazae do not indicate fertility.

Brown shells vs. white shells — just a question of personal choice. Shell color has no bearing upon freshness, flavor, or nutritional value. Most of New Jersey's commercial egg flocks are White Leghorns, which produce white-shelled eggs.

Some believe eggs should be kept at room temperature at home. However, tests show that the best quality is maintained in the refrigerator. For some uses, cold eggs are not favored; therefore remove the eggs needed from the refrigerator several hours before cooking. Keep separate from strong-flavored foods.



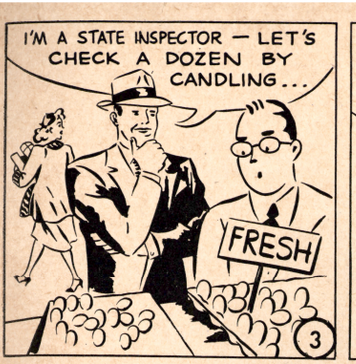
The New Jersey Fresh Egg Program protects consumers and helps farmers and dealers do a better job.



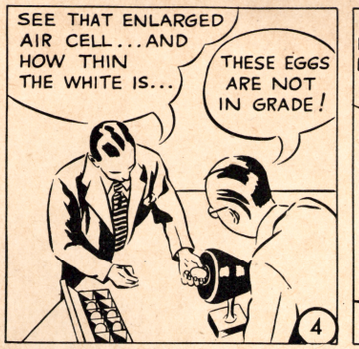
Discriminating consumers demanded the State law guaranteeing honest grading and branding of eggs.



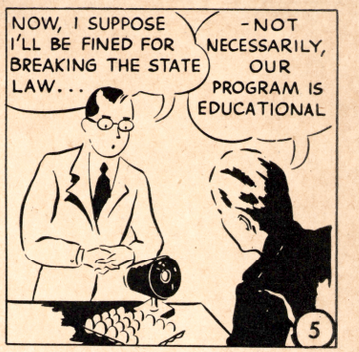
Many enterprising retailers say high quality eggs are a "confidence item," bringing customers back.



State egg inspectors are trained in grading, and study methods by which high quality may be conserved.



How to "grade" for quality is learned quickly. Many retailers take courses in candling.



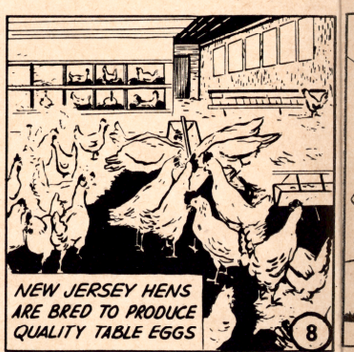
Although law provides penalties for violators, Department of Agriculture prefers educational methods.



A good plan is to follow the steps from egg production through transportation and distribution channels.



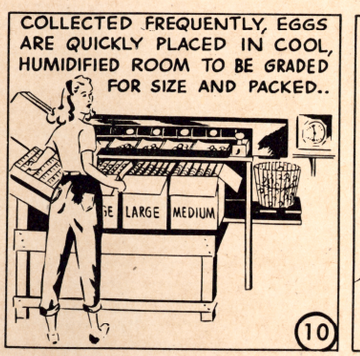
Production of table eggs is a specialized branch of agriculture. Modern poultrymen are trained for their work.



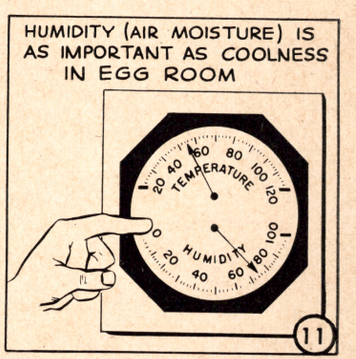
Today's flocks descend from blood-tested breeders selected for laying large numbers of quality eggs.



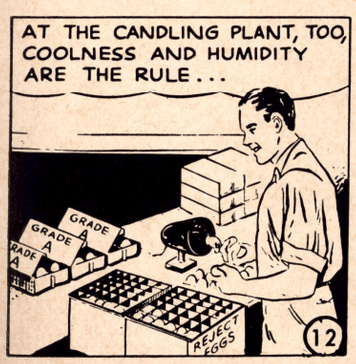
Scientific diets insure ample vitamins, minerals to make eggs the "perfect food package."



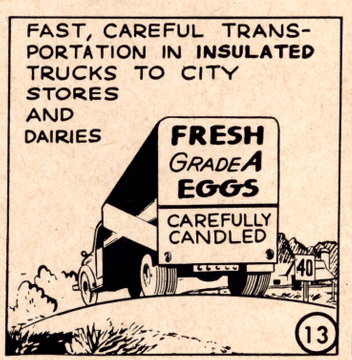
Hourly collecting of eggs, quick removal of body heat, careful handling maintain fresh quality.



Up-to-date farm egg rooms are cooled and humidified to provide ideal atmosphere for conserving quality.



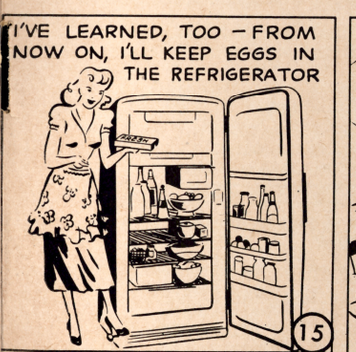
Keen-eyed candling experts, equipped with proper lights, reject faulty eggs; then date and seal cartons.



Warm-dry air and shocks of careless handling cause quality "shakedown" and loss of freshness.



The wise egg retailer follows the rules of "rotating" stock according to date and never overstocks.



Thrifty housekeepers place eggs in refrigerator, too, to conserve fresh appearance and flavor.



Egg farmers, wholesale markets, retailers and consumers work together in New Jersey — and better eggs result.



More high quality eggs are produced and consumed today — thanks to the State Fresh Egg program.

Tips on Egg Sales

TEACH CUSTOMERS the fundamentals of fresh egg quality so that they'll understand what you and the egg farmer are doing for the customer's benefit. Keep your eggs under refrigeration, and urge your customers to do the same.

DATE YOUR CONTAINERS — Ask your distributor to mark the grading date on each carton to assist in rotation selling. If cartons or cases are not plainly dated when delivered to your store, mark them yourself.

FREQUENT DELIVERY — Order your supply of fresh eggs delivered twice a week. Frequent delivery eliminates the danger of eggs going "stale."

FOREIGN ODORS — Never keep eggs near fish, lemons, oranges, onions, bananas, kerosene, or other products from which they absorb odors.

DON'T MIX white and brown, large and small eggs in the same carton. "Eye appeal" is lost by a variety of colors and sizes.

"POINTED END DOWN, air cell up" — that's the proper position for eggs to be packed in cases or cartons. Don't display cartons lying on their sides because that throws the eggs out of position, and the yolks will not be well-centered. Use empty cartons for displays.

MISLEADING TERMS — Although speed in distribution of eggs in New Jersey has greatly reduced the lapse of time between farm and consumer, it is still commercially impractical to retail eggs that are truly "new laid" or even "day old." More important than the time element, within reasonable limits, is the proper care of eggs to conserve freshness and quality. Similarly, it is misleading to advertise or claim in selling that eggs are "candled" or "graded." To say that eggs have been "candled" does not prove that undesirable eggs have been rejected in the process. To say that the eggs have been "graded" means nothing unless the proper grade of the eggs is designated.

USE SAFE CARTONS — A good carton is an investment in safety, paying for itself by preventing egg breakage in transit, in the store and in the home. It also keeps the egg in the upright position essential for conserving yolk quality. The safest cartons are those which cushion the base of the eggs, as well as protect the sides and top.

KNOW WEIGHTS, VALUES: The popular "large" size eggs weigh 24 ounces per dozen — 1½ pounds, all edible but the shells. The accompanying table translates price per dozen into price per pound.

EXAMPLE: If price per dozen is 75c for Large eggs, which weigh 24 ounces per dozen, the price per pound would be 50c if sold on a weight basis.

IF PRICE PER DOZEN EGGS IS: (First Column of Figures)

Weight Per Dozen	30c	35c	40c	45c	50c	55c	60c	65c	70c	75c	80c	85c	90c	95c	1.00
	PRICE PER POUND OF EGGS IS CORRESPONDING FIGURE BELOW														
18 oz. (PULLET)	27	31	36	39	44	49	53	57	62	67	71	76	80	84	88
21 oz. (MEDIUM)	23	27	30	34	38	42	46	50	54	57	61	65	69	73	76
24 oz. (LARGE)	20	23	27	30	33	37	40	43	47	50	53	57	60	63	67
27 oz. (EX. LGE.)	18	21	23	27	30	33	36	39	42	45	48	51	53	56	59
30 oz. (JUMBO)	16	19	22	24	27	30	32	35	38	40	43	46	48	51	54

State of New Jersey Department of Agriculture

W. H. ALLEN, *Secretary*

TITLE 4, CHAPTER 3, REVISED STATUTES

ABSTRACT OF ARTICLE 2. SALE OF FRESH EGGS

No person shall sell, offer for sale, or advertise for sale shell eggs as fresh eggs, or under any words of similar import such as "new laid eggs", "hennery eggs", "strictly fresh eggs", et cetera, any eggs which are not fresh eggs as determined by the following standards of quality of fresh eggs as set forth by the New Jersey Department of Agriculture for New Jersey Fancy Grade ("AA") eggs and New Jersey Grade "A" eggs, with such tolerances as are hereinafter allowed for these grades.

The standards of interior quality in the case of New Jersey Fancy Grade ("AA") eggs require that the air cell must be one-eighth inch or less in depth, localized regular; the yolk may be dimly visible; the white must be firm and clear; and the germ must show no visible development. In the case of New Jersey Grade "A" eggs, the air cell must be two-eighths of an inch or less in depth, localized regular; the yolk may be visible; the white must be firm and clear; and the germ must show no visible development.

A tolerance of 10 per cent net is allowed in each of these New Jersey grades which must be in the grade next lower, which, in respect to New Jersey Fancy Grade ("AA") is New Jersey Grade "A"; and, in respect to the New Jersey Grade "A" is as prescribed in the United States Department of Agriculture grade for "U. S. Standard". (Grade "B").

In retail lots, at least ten eggs in each dozen shall conform to the requirements set forth for the respective grade, as indicated on the package and not more than two eggs in any dozen may be in the quality next lower than the grade indicated on the package, in accordance with the grades for eggs promulgated by the New Jersey Department of Agriculture, the same being based on the standards for interior quality as prescribed by the United States Department of Agriculture.

In all cases the final determination as to the meeting of these grade requirements shall be made by candling.

Eggs which fail to meet these requirements of quality shall be sold simply as eggs, except that any eggs, the shells of which have been treated with oil or in any other manner must be marked on all containers as "shell treated" or "shell protected" in a conspicuous and legible manner if sold as fresh.

The Secretary of Agriculture, his employees or agents, may, in carrying out the provision of this article, enter, on any business day, during the usual hours of business, any store, market or any other building or place where eggs are sold or offered for sale and make such examination as is necessary to determine the interior quality of eggs sold, offered for sale or advertised as "fresh".

Any person who violates any provision of this article or the regulations made hereunder for carrying out its provisions, or who fails or refuses to comply with any requirement of this article, or who, with intent to deceive, answers or reports falsely in response to any requirements of this article, or who willfully interferes with the Secretary of Agriculture, his employees or agents, in the carrying out of his duties herein prescribed shall be guilty of a misdemeanor.

Any person who shall violate any of the provisions of this article shall for the first offense be liable to a penalty not exceeding twenty-five dollars and for any subsequent offense to a penalty not exceeding fifty dollars. Recovery of such a penalty shall be by an action at law which may be instituted and the penalty recovered either in the district court of any city or judicial district, or in the small cause court of any county or before the police magistrate or the recorder of any municipality.

The Secretary of Agriculture may make and promulgate such regulations as may be necessary to carry out the provisions of this article.

Source. L. 1934, c. 146, p. 383-385.

Fresh Eggs in Nutrition

What Every Fresh Egg Retailer Should Know

Eggs, with dairy products, vegetables, fruits and whole grain cereals, lead the parade of "protective foods."

With slight differences, the actual nutritive values of fresh and non-fresh eggs are the same. Evaporation reduces the content of water and affects the quality of white and yolk, as the egg loses freshness. Chemical changes affect the flavor as quality deteriorates. But, the food values are not appreciably disturbed.

The New Jersey Department of Agriculture points out, however, that the fresh egg has special values that are important in nutrition. The consumer wants food to be of good flavor and tempting appearance, as well as nourishing. The fresh egg qualifies on all counts.

Fresh, high quality eggs are more appetizing to the person who eats eggs for their nutritional and protective values.

Daily Requirements of Essential Nutrients

	Average Adult Needs, Daily*		Two Fresh Eggs Furnish**	
ENERGY	3,000	calories	150	calories
PROTEIN	70	grams	12	grams
Fat	100	grams	11	grams
MINERALS:				
Calcium	1,000	milligrams	50	milligrams
Iron	12	milligrams	2.6	milligrams
Phosphorus	1,500	milligrams	200	milligrams
VITAMINS:***				
A	5,000	Int. Units	1,100	Int. Units
Thiamin	1.5	milligrams	0.1	milligrams
Riboflavin	1.8	milligrams	0.3	milligrams
Niacin	15	milligrams	0.076	milligrams

***From National Research Council recommendations.**

****From New Jersey Agricultural Experiment Station.**

*****Vitamin content of eggs is variable, largely dependent upon environmental conditions. Most New Jersey egg farmers feed vitamin-enriched rations to their flocks.**

Fresh Eggs are a Protective Food