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CIRCULAR NO. 219
(Revised)

GOOD EGGS FOR MARKET

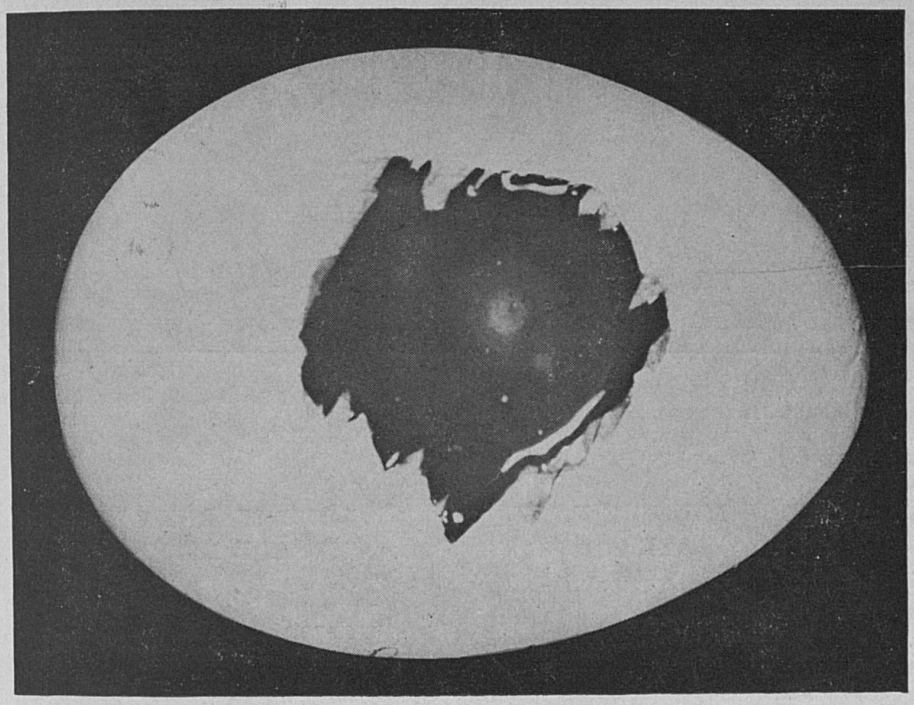

FIGURE 1. An infertile egg which has been kept at 103 degrees F. for 48 hours. It is still good for food. The white spot in the center is found in all eggs.

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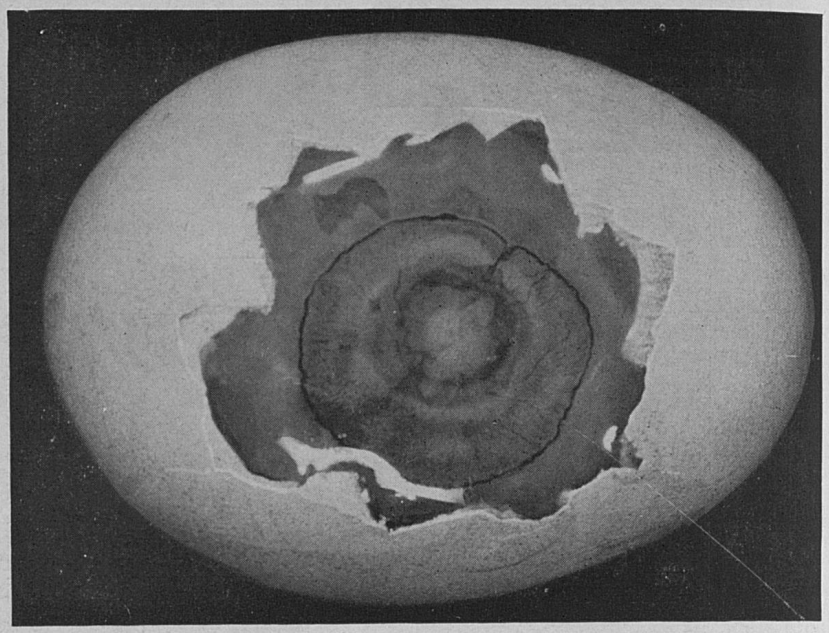

FIGURE 2. A fertile egg which has been kept at 103 degrees F. for 48 hours. Blood has formed and made the egg unfit for food.

GOOD MARKET EGGS ARE	POOR MARKET EGGS ARE EITHER
1. Large, 24-26 ounces per dozen	1. Small, less than 22 ounces per dozen
2. Egg shaped	2. Round or long
3. Clean	3. Dirty or bloody
4 Infertile	4. Fertile
5. Marketed weekly or oftener	5. Marketed infrequently
6. Uniform in color	6. Mixed in color
7. Strong shelled	7. Thin shelled
8. From properly fed hens	8. From improperly fed hens

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GOOD EGGS FOR MARKET

By STANLEY CATON

In the production of good market eggs both exterior condition and interior quality must be considered.

Exterior Condition is determined by cleanness and strength of shell, size, and uniformity of shape and color.

CLEAN EGGS

Buyers do not pay premium prices for dirty eggs. In order that the eggs produced may be clean, hens should be confined in the laying house until one or two o'clock in the afternoon when the ground outside is muddy. Most of the eggs will have been laid by that time and the flock will then have ample time to range.

Frames covered with poultry netting may be hung from the rafters in such a way as to keep the hens off the dropping boards during the day, and may be raised at night to allow them to go on the roosts. The frames should be made in sections 10 feet long and as wide as the distance from the rafters to the lower front edge of the dropping board.

Plenty of litter on the floor of the laying house is a means of keeping the feet of the hens clean in order that they may not soil the eggs. There should be at least one nest for every four hens. The nests should be kept bedded and clean. The eggs should be gathered twice daily and marketed weekly or oftener.

STRENGTH OF SHELL

Eggs with strong shells stand shipping and handling much better than eggs with thin shells. Plenty of shell-forming material, such as limestone or oyster shell, should be kept before the hens all the

time. Hens should receive direct sunshine (or cod liver oil) if the shell-forming material is to be deposited properly.

SIZE, SHAPE AND COLOR

The size, shape and color of eggs are largely determined by breeding. Weight is one of the factors which determine the grade of eggs. Weight usually is expressed in ounces per dozen eggs. Eggs of high quality which bring the best prices weigh at least 24 ounces per dozen. The small eggs (22 ounces per dozen or less) should not be sold with the larger eggs as they lower the grade. Very large eggs, which often have two yolks, should not be marketed. Market eggs should be oval and uniform in shape. Very long eggs are easily broken when packed in an egg case and if broken are likely to soil other eggs.

The color of the shell is no indication of the quality or food value of the egg. Some buyers, however, prefer brown-shell eggs and others white. Brown-shell and white-shell eggs should not be placed in the same carton or egg case because of the unattractive appearance created.

INTERIOR QUALITY

Interior quality is determined by the use of an egg candle. However, most farmers do not have an egg candle, so must rely on the precautions necessary to prevent deterioration before the eggs are marketed. When an egg is fresh the air cell is very small, not over one-eighth of an inch in depth. As the egg ages evaporation takes place and the air cell becomes larger. When the temperature is high evaporation is rapid and the air cell soon enlarges. The air cell should be in the large end of the egg and not movable. A freely mobile, or bubbly, air cell lowers the grade of an egg.

In summer eggs should be gathered two or more times daily and stored in a cool cellar that is free from odors, especially of kerosene or onions. Eggs which are allowed to cool before they are put into the egg case have a lower rate of evaporation than those which are put into the case warm. Coolness lowers the rate of evaporation and maintains quality.

A freely-moving yolk or a thin white is an indication of age or improper handling. Some eggs which are strictly fresh may have these characteristics, but only occasionally, not as a rule.

The color of the yolk is influenced by the feed consumed. Hens which do not receive an abundance of green feed or yellow corn lay eggs with pale yolks. Alfalfa, clover or lespedeza hay have the same effect on yolk color as green feed. Some consumers prefer eggs with pale yolks. In most instances the only reason for this preference is that the high-quality eggs which they have been buying have had pale yolks. The food value of eggs with deep yellow yolks is equal or superior to that of eggs with pale yolks.

Fertile eggs incubate slowly at a temperature as low as 68 degrees F. After a short period of incubation, blood appears, rendering the egg inedible. Much of the loss in Kentucky eggs may be attributed to their fertility. Infertile eggs deteriorate much more slowly, when the temperature exceeds 68 degrees F, as in summer. Occasional meat or blood spots are factors influencing quality which the producer cannot control. These are the result of some disorder of the organs of the hen.

FARM PRACTICES THAT INFLUENCE QUALITY

There are certain practices which the flock owner must follow if he is to produce eggs of high quality.

Breeding. Size, color and shape of the egg are inherited characters. Select for breeding stock hens that lay large eggs and use roosters known to be from parents which were selected for large eggs.

*Feeding.** Proper feed is a factor in producing eggs of the best quality. If the feed is deficient in necessary food factors such as proteins and calcium carbonate or in the food accessories called vitamins, not only will fewer eggs be produced but these eggs will be of poor quality. Eggs furnish certain vitamins needed in the human diet. Eggs produced by hens on feed deficient in certain vitamins are low in these vitamins and are not so nutritious as eggs produced by hens fed a complete or balanced feed.

* Consult Kentucky Extension Circular 287, "Feeding for Egg Production."

*Housing.** A comfortable house of the open-front type not only aids in the production of more eggs per hen but also in producing better eggs. A laying house in which hens may be confined during wet, muddy weather is an important aid in the production of clean eggs. A deep litter should be kept on the floor all the time. Provide sufficient nests, bedded with clean hay or straw to prevent breakage. Eggs, with few exceptions, are clean when laid. Keep them clean.

Roosters. A fertile egg starts germ development at 68 degrees F. Infertile eggs have no germ development. Confine or sell the male birds after the hatching season.

Care of Eggs. Gather the eggs frequently; four times a day is not too often. An egg just laid is in the best condition. Keep it as near this condition as possible. Do not keep market eggs in a place where the temperature exceeds 68 degrees F. or goes below freezing.

Marketing Eggs. Eggs tend to deteriorate with age. Market them as soon as possible; at least once a week.

Kentucky farmers who are making poultry an important source of income should be interested in producing and selling eggs of the best quality. In Kentucky the country storekeeper, huckster and produce buyer pay for eggs according to count, regardless of quality; therefore, in self protection, they must pay a lower price. It is known that eggs from the middle west do not bring so good a price on the major markets as do eggs from certain other sections of the United States. Poor quality is the principal cause of this discrimination. Farmers who are producing high-quality eggs should be paid for them accordingly. If the local market does not pay more for eggs of high quality the producer should try to find a market which does. Under existing conditions the lapse of time from producer to consumer is so great that the quality of the egg is lowered decidedly when the consumer gets it. Many flocks are too small to justify the producer in making frequent trips to a market other than the country store. The development of larger flocks in local areas would

* Consult Kentucky Extension Circular 107, "Housing Farm Poultry."

provide sufficient volume to make frequent trips to a market economical.

DO NOT SELL	SELL
Very small or double-yolk eggs	Normal-sized eggs
Very long or round eggs	Well-shaped eggs
Soiled eggs	Clean eggs
Thin-shelled or soft-shelled eggs	Strong-shelled eggs

APPROVED BUYING GRADES

GRADE No. 1 (Kentucky Grade A):

No individual egg to weigh less than at the rate of 23 ounces per dozen. Average net weight per dozen, 24 ounces. The number of 22-ounce eggs shall not exceed two per dozen or five dozen per case.

Shell: The shell shall be clean and sound.

Air cell: The air cell shall not be over ⅛ inch in depth, localized, regular, not tremulous.

Yolk: The yolk shall be centered and may be slightly mobile.* No germ development.

White: The white shall be clear, free from blood, meat spots and foreign bodies.

GRADE NO. 2 (Kentucky Grade B):

Weight: No individual egg to weigh less than at the rate of 20 ounces to the dozen. The shell shall be reasonably clean, sound. The air cell not over ⅜ inch in depth, localized, regular—may be slightly tremulous. The yolk may be mobile. No germ development. The white clear, free from blood, meat spots and foreign bodies.

UNDERGRADE (Kentucky Grade C):

All edible eggs not fulfilling the minimum requirements of Grades 1 or 2.

Edible eggs may include eggs with blood clots firmly adhering to the yolks, meat spots floating in the whites.

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* Where the yolk is mobile and remains near the center of the egg and moves slightly laterally, that is, from one side to the other, it is not an indication of weakness and the egg should be included in the top grade. Where the movement of the yolk is upward or downward, it is an indication of weakness; the egg should go in second grade.