Method Demonstration – – GRADING EGGS

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The information in this publication can be used effectively in 4-H Club work team demonstrations in developing and presenting marketing method demonstration manuscripts. The manuscripts may be adjusted to radio and television programs by county extension agents and leaders. They can also be adapted for shorter periods, if necessary.

Mrs. Smith: What are graded eggs and what needs to be considered to grade eggs officially?

Mr. Doe: Mrs. Smith, size and quality are the two factors considered when determining the grade of a lot of eggs.

Mrs. Smith: What do you mean by size and how does that affect the value?

Mr. Doe: Here I have eggs of different size which represent a number of the weight classes for the different grades as set forth in the Specifications for Consumer Grades by the U. S. Department of Agriculture. The Texas Egg Labeling Act states that the grade requirements in Texas shall be the same as USDA. We will place two of these eggs on scales so that our audience can see the difference in weight. We must remember that this is only one egg; when we buy a dozen eggs we are multiplying this difference by 12. You can see that this definitely affects the value of a dozen eggs, because it is possible to get a number of ounces difference in a dozen eggs. If eggs are selling for 48 cents a dozen and they weigh 24 ounces, the cost would be 2 cents an ounce. However, if the eggs weigh only 20 ounces and still sell for 48 cents, the consumer would pay nearly 2 1/2 cents an ounce or about 7 cents more for the amount of food he bought than the customer who paid 48 cents for eggs weighing 24 ounces per dozen.

Mrs. Smith: You also mentioned quality as one of the factors in egg grade. Just what points are considered in quality?

Mr. Doe: Mrs. Smith, four factors are considered; namely: shell condition, air cell, albumen and yolk. Shell condition has reference to whether an egg is sound and clean and without defects. The air cell is normally in the large end of the egg and is an indicator of whether the egg has been handled properly and given proper environment. The albumen of the egg should be thick, and is thus a factor in the yolk being fairly well centered in the egg. The yolk of the egg should be free of blemishes, not showing any germ development, and the vitelline membrane should be so strong that the yolk is upstanding and can not be broken easily when the egg is broken or used.

(Show with pictures.
Show with broken-out eggs.
Show with hard-cooked eggs in the shell.)

Mrs. Smith: You know, this interests me because I can visualize the difference in these eggs you have shown, and I am curious to know just what makes the difference in these qualities.

Mr. Doe: Most people would say that the way eggs are handled is largely responsible. However, I prefer to think of the environment the egg has received from the time it is laid until the consumer breaks the egg for use as being responsible for different qualities. For example, eggs may absorb strong odors...
from such things as onions and kerosene. The eggs may be kept in dirty containers or handled with greasy hands. All of these tend to reduce the quality. However, if the eggs are laid in clean nests, gathered while still clean, put in an egg case which has clean flats and fillers and kept in cool temperatures until the consumer buys the eggs, they are likely to maintain the high quality they had when laid.

(Show some onions, kerosene cans and such.)

Mrs. Smith: You said earlier that different size influenced grade, and I have been wondering what makes eggs of different sizes.

Mr. Doe: That is a good question, Mrs. Smith. Size has nothing to do with the quality of eggs, but it does affect their grade and value, as I explained earlier. The size of the egg is determined largely by the inherited ability of the hens laying the eggs. This is true even when the hens are pullets and begin to lay. If a hen has inherited ability to lay large eggs, her first eggs will be larger than a pullet's which has inherited ability to lay only small eggs. Hot weather also influences the size of eggs that hens lay. Usually the eggs become smaller as the temperature rises during summer months. I think it is highly important, Mrs. Smith, that the consumer keep in mind that weight has a definite influence on the value of eggs. On the other hand, consumers should remember that size has no influence whatsoever on the quality of the eggs they buy.

Mrs. Smith: From what you have said, I believe poultrymen and dealers can control to a large degree the percentage of high grade eggs they offer for sale to consumers.

Mr. Doe: Yes, Mrs. Smith, that is correct. The poultrymen are not to blame for the low-quality eggs after they leave the farm, but the size of the egg is entirely up to the poultrymen and breeders.

Mrs. Smith: Well, now that we have that settled, what needs to be done to give eggs the proper environment?

Mr. Doe: As I stated previously, they should be laid in clean nests, travel through the process of distribution in clean containers and be kept from other products which give off strong odors. Gather eggs often in wire baskets. Cool eggs to remove the animal heat as soon as possible after they have been laid. Keep eggs in a temperature below 55 degrees, and, of course, above freezing. All eggs should be cased with the little ends down so that they can journey through the channels of distribution on their feet and not standing on their heads. Make every effort to get eggs into the hands of consumers as soon as possible after they have been laid. These conditions are the responsibility of both producers and handlers. The consumer after purchasing eggs should put them in the refrigerator, preferably in the hydrator, for best keeping conditions.

Mrs. Smith: What standards do we have that can be used to insure uniformity in grading?

Mr. Doe: The standards which we use to insure uniformity are those issued by USDA and are known as the Specifications for Consumer Grades. The Texas Egg Labeling Act specifies the same grades and specifications as USDA. Many Texas firms today are offering consumers eggs which meet these specifications. Mrs. Smith, consumers can get lower quality eggs and low-grade eggs and still be buying eggs that meet the specifications as set by the U. S. and Texas Departments of Agriculture. The reason for this is that there are four different quality standards. Naturally, the lower quality standards are not going to be the kind of eggs most housewives want to serve their families for breakfast.

Mrs. Smith: You mean that buyers or consumers can buy with more confidence if they know these different grading quality standards and buy accordingly?

Mr. Doe: Yes, Mrs. Smith, and they can buy eggs which have AA or A quality for poaching
Mrs. Smith: From what you have demonstrated and said, I can see that there is a reason for different prices on eggs.

Mr. Doe: Right, Mrs. Smith. There are many definite reasons, and eggs are no different than many other products. Usually, the higher the quality, the higher the price; thus in eggs, the higher the grade, both quality and weight class considered, the higher the price.

PROPERTIES NEEDED:
1. Two pair scales
2. Two hard-cooked C grade eggs
3. Two hard-cooked A grade eggs
4. Two AA grade eggs to break
5. Two C grade eggs to break
6. One egg each representing weight classes—30, 27, 24, 21, 18, 15
7. B-244, Marketing Standards for Grading Eggs
8. Knife to cut hard-cooked eggs
9. Four green saucers to break eggs
10. Blackboard and chalk
11. Cup towel or paper towels
12. Egg candling light
13. Onions
14. Kerosene

Figure 3. Candling eggs as a means of determining egg quality.

or frying for the breakfast table. If they wish to buy eggs for baking, or other cooking uses, they may profit by buying B grade eggs since the cost is lower.