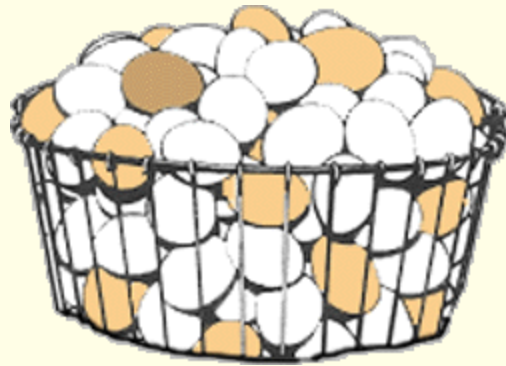


The EGG and I

Presented by:
Kentucky Egg Council
&
US Poultry & Egg Association

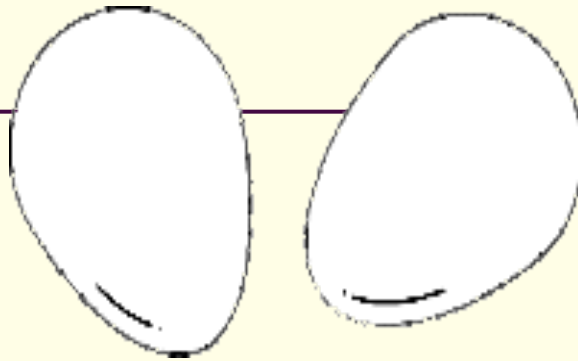
Time to Leave the Nest



- The average hen lays 257 eggs a year
- It requires 24 to 26 hours to make and lay one egg

Look at items around you, what
shape is an egg?



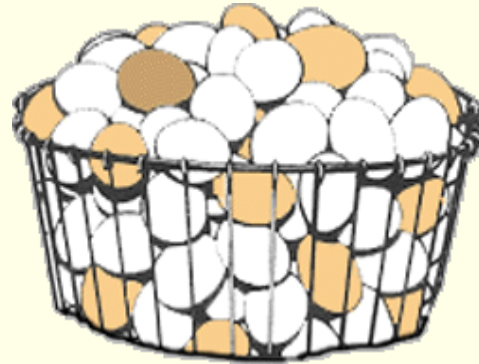


If you said an oval, you are RIGHT!

But, what is on the inside of the egg -
Baby chicken? Yolk?

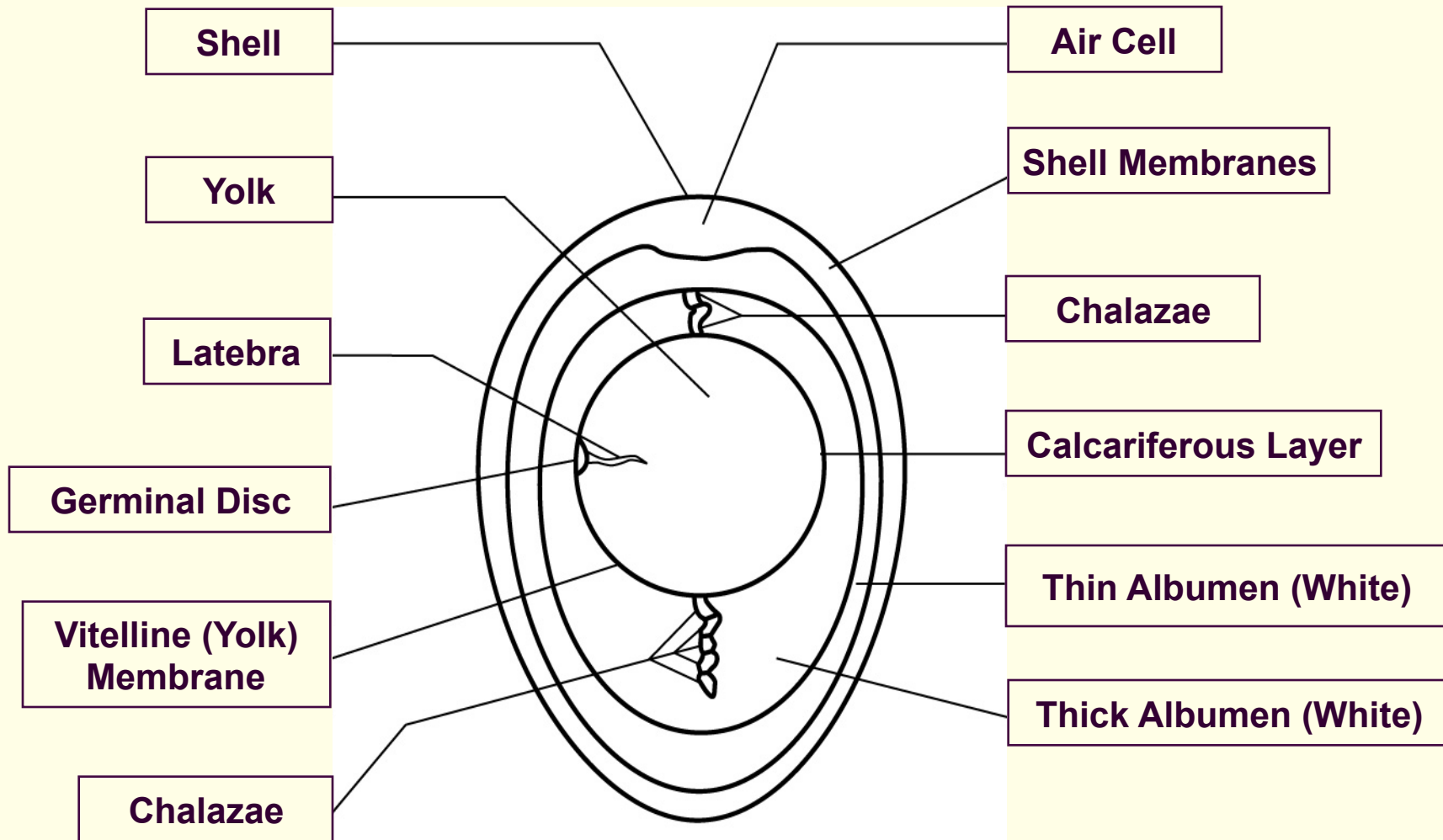
Do you know?

Shell Color



- Can either be white or brown.
- The breed of the hen determines the outside shell color.
- Has no effect on quality, cooking properties or nutritive value.

Composition of the Egg



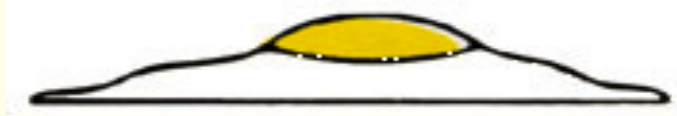
Egg Quality

Grade AA



Grade A





GRADE AA

- Egg will stand up tall. The yolk is firm and the area covered by the white is small. There is a large proportion of thick white to thin white.



GRADE A

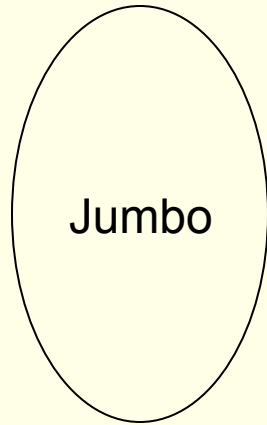
- Egg covers a relatively small area. The yolk is round and upstanding. The thick white is large in proportion to the thin white and stands fairly well around the egg.



GRADE B

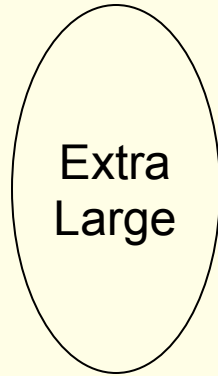
- Eggs spreads out more. The yolk is flattened and there is about as much (or more) thin white as thick white.

Egg Size



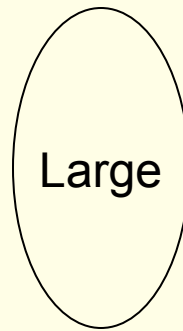
Jumbo

30 oz.



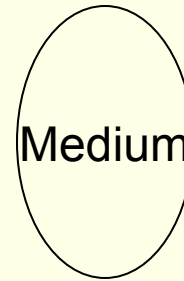
Extra
Large

27 oz.



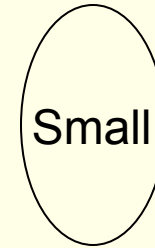
Large

24 oz.



Medium

21 oz.



Small

18 oz.



Pee
Wee

16 oz.

■ Minimum Weight Per Dozen

Egg Nutrition

VITAMINS

Vitamin A
Vitamin B1, B2
Vitamin D
Riboflavin
Nicotinic Acid
Niacin
Pantothenic Acid
Folic Acid
Biotin
Pyridoxine
Chlorine
Inositol
Vitamin E
Vitamin K
Linolenic Acid
Linoleic Acid
Arachidonic Acid

MINERALS

Calcium
Phosphorus
Iron
Iodine
Sodium
Potassium
Chloride
Magnesium
Fluorine
Copper
Sulfur
Manganese
Zinc



BIOLOGICAL VALUE OF PROTEIN QUALITY

Human Milk	95
Eggs	94
Milk	90
Liver	77
Beef	76
Potatoes	67
Corn	60

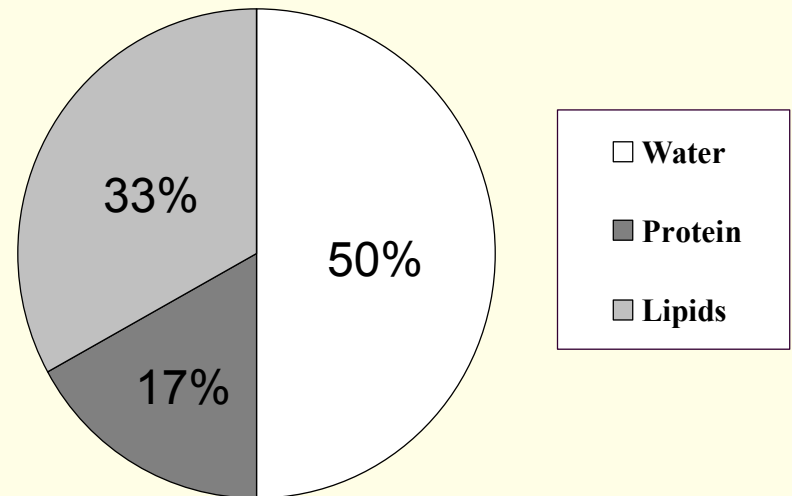
Egg White Composition

- Mostly Water
- Approximately 10% protein
- Contains only a trace of fat
- A good source of riboflavin
- Contains most of the protein, niacin, riboflavin, choline, magnesium, potassium, sodium and sulfur found in an egg
- Contains carbohydrates

Egg Yolk Composition

- Approximately 50% water, 17% protein and 33% lipids
- Minerals: iron, phosphorus, calcium, manganese, iodine, copper, and zinc
- Vitamins A and D, B12, E, biotin, choline, folic acid, inositol, pantothenic acid, pyridoxine and thiamin
- Xanthophylls: main yellow pigment

EGG YOLK COMPOSITION



Eggs May Be Used To . . .

Thicken	Sauces, Puddings, Cream Fillings, Soft and Baked Custards
Leavening	Sponge Cakes, Butter Cakes, Quick Breads, Soufflés, Puffy Omelets
Coating	Breaded Meats, Vegetables, Croquettes, Breads, Rolls, Cakes and Cookies
Binding	Croquettes, Meat Fish and Egg Loaves, Vegetable Casseroles
Emulsifying	Cream Puffs, Mayonnaise, and Salad Dressing
Clarifying	Soup Stocks
Garnishing	Canapés, Soup, Salads, Dessert and Main Dishes
Retarding/ Crystallization	Certain Cake Icings, Candies and Ice Cream

Eggs Add Flavor and Color

- Eggs contain fats which carry and meld flavors in food products
- Eggs add flavor and enhance other flavors
- Egg yolks impart rich color and are used to fortify whole egg blends for a deeper color in baked products
- The pleasing color of eggs is a sign of excellent quality in baked products

Can you think of 101 ways to prepare eggs?

Have you ever seen a chef's hat? It's called a *toque*. A toque is white, stands up tall and has 101 pleats. Chefs say that the pleats stand for 101 ways you can cook an egg.



Major Methods of Egg Preparation

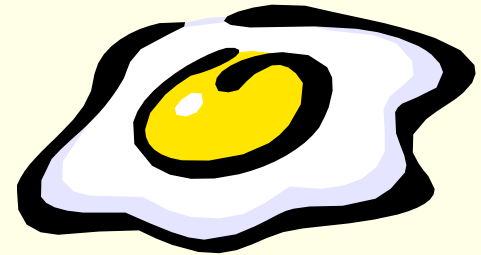
- Fried
- Scrambled
- Hard Cooked
- Poached
- Baked
- Omelets



Basic Principle of Egg Cooking

WHAT

Use a moderate to low temperature with exact timing.



WHY

When eggs are cooked at too high a temperature or for too long at a low temperature, egg whites shrink and become tough or rubbery - - yolks toughen and their surface may turn gray-green.

Egg Safety

- *Salmonella* Enteritidis (SE) has been found inside a very small number of eggs: about 1 out of every 20,000 eggs (.005%)
- SE will not grow at temperatures below 40°F and is destroyed when heated to 160°F during thorough cooking, or in acid media with a pH lower than 4.0
- Pasteurization was federally mandated in 1966 to protect against *Salmonella* organisms, at highest possible safe temperatures:

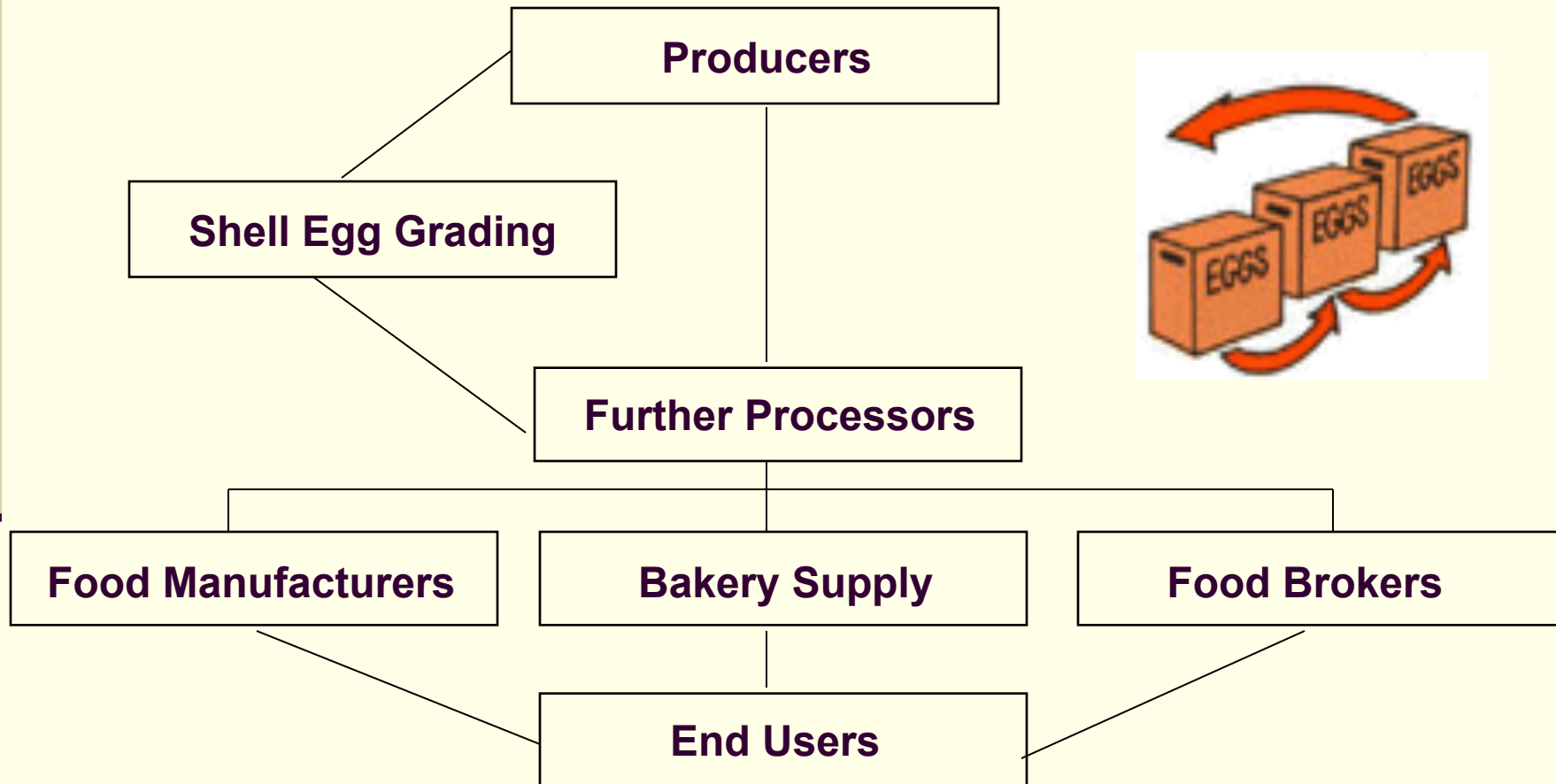
Whole Eggs: 140°F 3-5 minutes

Whites: 143°F 4 minutes

 125 °F 3.5 minutes with addition of hydrogen peroxide

- The main concern is exterior *Salmonella* contamination; care must be taken to limit contact between shell exterior and the egg

Egg Industry Structure



10 Steps on the Journey From Hen to Home

It takes a hen about 24 to 26 hours to form and lay an egg

Step 1: Laying



Step 2: Collecting



Journey from Hen to Home

Step 3: Washing

Step 4: Oiling

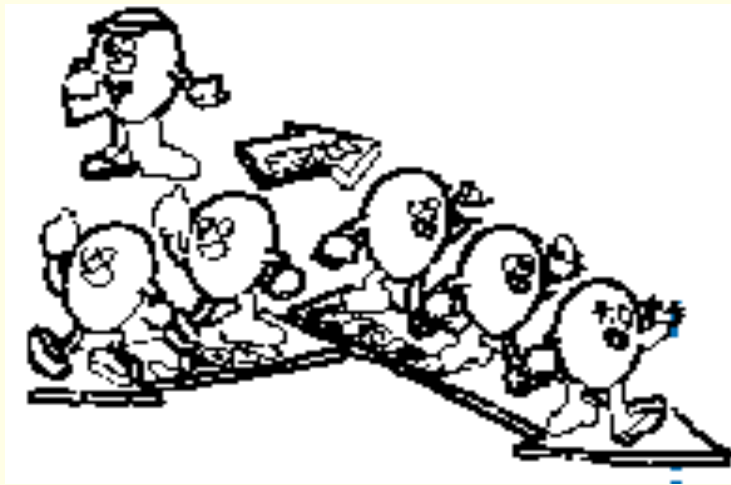


Journey from Hen to Home



Step 5:
Candling and Grading

Journey from Hen to Home



Step 6: Sizing



Step 7: Packing

Journey from Hen to Home

Step 8: Cooling

Step 9 : Shipping

Step 10: Selling



Journey from Hen to Home

- Bring your eggs home and store them in their ORIGINAL carton on an inside refrigerator shelf.
- Cook eggs within 4 to 5 weeks of the Julian Date (pack date) or 3 to 4 weeks of buying them.
- Use hard-cooked eggs within 1 week of cooking.

