# Elementary Egg Basics

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## A = Shell

- Made of calcium
- Hen's diet must have calcium
- Porous
- Allows evaporation of water from albumen over time
- Covered with natural bloom
- Bloom replaced by thin coating of oil after washing



## B = Air Cell

- Formed when contents of egg cool and contract
- Separation of shell membrane from shell
- Located only in large end of egg
- Grows larger over time as water evaporates from egg
- Size indicates interior egg quality



### C = Yolk

- Suspended in center of egg
- Gets yellow color from xanthrophyll in hen's body
- Contains germinal disc where baby chick development starts
- Surrounded by yolk membrane
- Flattens over time as quality of egg lessens



## **D** = Yolk Membrane

Surrounds Yolk
 Keeps yolk and albumen separated



## E = Shell Membrane

Thin inner lining of shell
Separates from shell at large end of the egg to form the air cell



## F = Thin Albumen

Thin white part of egg
Amount increases as thick albumen breaks down over time
Less is present in high quality egg
More is present in lower quality

egg



## G = Chalaza

 Thick strands of albumen that help center yolk
 Appear as shiny spots when egg is candled



## H = Thick Albumen

Thick white part of egg Surrounds yolk; nourishes developing embryo Fresh, high quality eggs have more thick albumen than thin albumen Appears egg-shaped in highquality, broken-out eggs

# Poultry Judging Broken-Out Egg Quality



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## **Broken-out Egg Quality**

Shape and Uniformity of Albumen

- Amount of Thick Albumen
- Shape and Height of Yolk
- Presence of Meat or Blood Spots
  - Less than 1/8 inch diameter = Grade B
  - More than 1/8 inch diameter = Inedible

### **AA Quality**

High AA	Average AA	Low AA

## A Quality



High A

Average A

Low A

## **B** Quality



High B

Average B

Low B



#### Grade AA





#### **Grade Inedible**











#### **Grade A**





#### **Grade AA**





#### **Grade B**





#### **Grade A**





#### **Grade AA**





#### **Grade Inedible**





#### **Grade Inedible**



### More Practice Flash Cards

http://department.caes.uga.edu/poultry/courses/ps2040/EggQualQuiz.htm



### **Practice Website**

http://www.animal.ufl.edu/Youth/poultry/broken\_outs/brokenouts.htm

- www.animal.ufl.edu
- Click on Youth Poultry Judging
- Click on Show Me How
- Click on Go to Main Practice Menu
- Click on Interior Egg Quality (broken out)