Elementary Egg Basics

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Inside an Egg
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 xanthophyll 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
$G = \text{Chalaza}$

- 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 high-quality, 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
Practice

Grade AA
Practice

Grade Inedible
Practice

Grade B
Practice

Grade A
Practice

Grade AA
Practice

Grade B
Practice

Grade A
Practice

Grade AA
Practice

Grade Inedible
Practice

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)