

Eggspressive Shells



Would you eat a **green** egg?



Believe it or not, but the eggs in the picture were not dyed or painted! Even though we see mostly white or brown eggs in the store, chicken eggs come in many different colors. Eggs can be blue, green, cream, pink, or even speckled (speh-kuld). Even “brown” eggs are not just brown: some eggs are a dark chocolate-brown, while others are the color of coffee with cream.

People sometimes think that the color of a chicken’s feathers is related to the color of its eggshell. If this were true, white chickens would hatch out of white eggs, red chickens would hatch from pink eggs, and black chickens would hatch from dark brown eggs. However, this is not true. For example, Ayam Cemani chickens are completely black, including the meat, feathers, and bones, but their eggs are pinkish-cream. Many white chickens, including the Marans and Serama breeds, hatch from dark brown eggs. So if the feathers don’t affect the egg color, then what does?

All eggshells start off the same way. The chicken’s body makes a hard layer of calcium carbonate (kal-see-um car-boh-nate) around a new egg. You may know calcium carbonate by its more common name, “chalk.” The calcium carbonate is white and hard. It can protect the new egg when it is in the nest.

Some breeds, like Leghorns, Silkies, or Hamburg chickens, stop making the eggshell after this step. Instead, the hen adds a layer called a “bloom” (blume) or “cuticle” (cute-ih-kle) on top of the shell. The bloom helps to keep germs out of the egg. Then, she lays the egg.

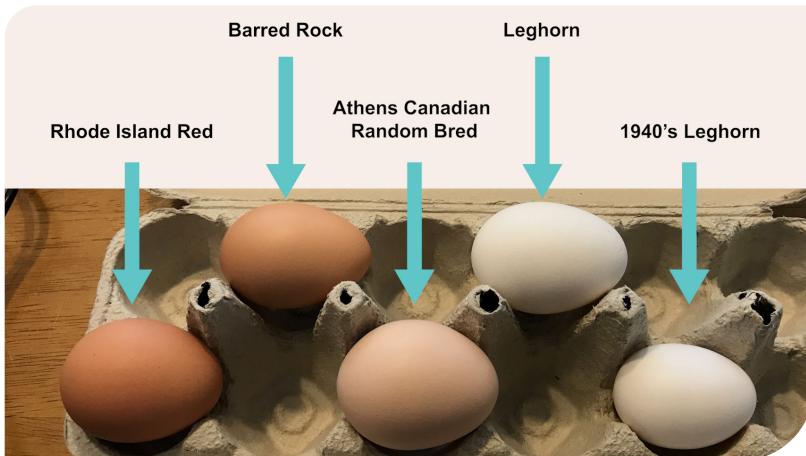


Ayam Cemani

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Breeds that lay brown eggs, like the Rhode Island Red and the Delaware chicken, do an extra step before the bloom. The mother hen adds a brown pigment (pig-ment) on top of the white calcium carbonate. If you open a brown egg, look closely at the shell. You will see a white calcium carbonate layer on the inside and a brown pigment layer on the outside.



Some breeds, like Orpingtons, just use a little bit of brown pigment. They produce light-brown eggs. Other breeds, like Penedesencas, use a lot of pigment and produce very dark brown eggs. Speckled, or spotted, eggs happen if the chicken does not put the brown pigment on the shell evenly.

Chickens who lay blue eggs, like the Ameraucana, have a different process. These chickens produce a blue pigment in their livers. The blue pigment gets mixed with the calcium carbonate before the bloom is added. This is why blue eggs are blue on the inside as well as the outside. Olive Eggers take it one step further: to get olive green, they add a layer of brown pigment on top of a blue egg!



DID YOU KNOW?

There are other ways that chicken eggs get their many colors. The bloom is one thing that can change the eggshell color. Sometimes the bloom can make a wet eggshell look speckled, even if it is not. If the bloom is very thick, it can make a white egg look pink. One breed of chicken, the Croad Langshan, lays brown eggs with such a thick bloom that they can look purple!

A chicken's age can also change the color of her eggs. Young chickens are still learning how to make eggs. Their bodies are smaller, so they may not be able to make a lot of pigment yet. They also may not be able to control how much pigment they use. As chickens get older, they get better at egg-making. They will be able to make eggs with a richer color than they made when they were young.

Even the time of year can change the color of an egg. Chickens will lay more colorful eggs in the spring because that is when they have more pigment in their bodies. Think of the pigment like a pen that writes in rich colors at first. Over time, the color fades as the ink runs out. Eventually, you have to stop writing so you can refill the pen.



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