

# POULTRY Q&A

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## Biology/Behavior/Anatomy

**Q:** Why do chickens bob their heads back and forth?

**A:** Chicken's eyes are located on the sides of the head, not facing the front like our eyes. This allows the chicken to see much more of the world at one time than we can see. They can almost see behind themselves. This helps them see predators and alerts them to danger. But their forward vision is incomplete; they have a blind spot in front of them. They also can't see an object with both eyes at once. They have trouble getting a three-dimensional view of objects so they reposition their heads to get the 3-D picture. That is why they bob their heads.

**Q:** At what age do chickens begin to lay eggs?

**A:** If all necessary conditions (day length, nutrition, etc.) are met, chickens should begin egg production at about 20 weeks of age.

**Q:** What is the average life span of a chicken?

**A:** Many commercial laying hens are kept for up to 3 years. There are undocumented accounts of "yard chickens" living for more than 10 years.

**Q:** From where do chickens originate?

**A:** Chickens were domesticated from jungle fowl in Southeast Asia many centuries ago.

**Q:** What is the scientific name for chickens?

**A:** The scientific name of the domestic chicken is *Gallus domesticus*. The scientific name for its predecessor, the jungle fowl, is *Gallus gallus*.

**Q:** How can you tell the sex of baby chicks?

**A:** Sexing most chickens is difficult. In some lines there are genetic differences in color between the sexes. In some lines there are differences in feathers, with the primary feathers of the male being shorter than those of the female. But these genetic differences are rare and in most lines of chickens sex can not be determined in this manner.

Most chicks are sexed by examining the complex folding of the vent area (which

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roughly corresponds to the anal area). This method is extremely difficult and it takes lots of time and practice to acquire this skill.

**Q:** How can baby chicks survive without a mother hen?

**A:** Newly hatched chicks have certain inborn behaviors. They are curious and they peck and scratch. In this way, newly hatched chicks learn what to eat.

**Q:** Why do hens stop laying eggs?

**A:** Healthy hens stop laying for either of two reasons:

- 1) They have been in production for a while and are entering a molt; or
- 2) They are not stimulated appropriately by light. Hens lay when they receive the required hours of light (day length) each day.

**Q:** How do chickens reproduce?

**A:** The male mounts the hen from behind and stands on her back. The penis transfers semen into the cloaca of the hen. The cloaca is a common receptacle for the intestinal tract, the reproductive system and the urinary system. Spermatozoa are stored in accessory sex organs in the female. There, the spermatozoa are nourished and released over several weeks. So, the rooster does not have to mate with the hen each time she is to lay an egg to produce fertile eggs. Hens remain highly fertile for about 10 days to 2 weeks after mating. Then they need to mate again to increase the fertility of the eggs laid.

Hens ovulate about every 24 to 26 hours. The egg yolk has a germ cell on its surface. The spermatozoa fertilize this germ cell. Then the albumen, or white of the egg, is secreted around the yolk by the reproductive tract. Finally, the shell membranes and the shell are secreted and deposited as the egg travels down the reproductive tract. The egg is laid through the cloaca. This is the way fertile eggs are laid by the hen. The hen would still lay eggs if a rooster were not around, but the eggs would not be fertile.

**Q:** In random chicken matings, what percent of eggs produced result in male offspring?

**A:** The sex ratio in chickens is 50:50.

**Q:** Are poultry comfortable in a modern poultry barn?

**A:** Yes, modern poultry facilities provide optimum conditions for birds to grow. Temperature, humidity, lighting, ventilation, ammonia concentration, litter condition, feed rations and water quality are constantly monitored to provide the birds with a healthy environment. Chickens reared in a poor environment are not productive, so growers have an economic incentive to raise their animals in a comfortable setting.

**Q:** Do domesticated chickens and turkeys prefer to live outdoors?

**A:** A properly maintained poultry barn is a comfortable environment for birds where they are protected from predators and have a readily available food supply. When doors to poultry barns have been left open accidentally, only a few birds have actually left the safety of the poultry facility.

**Q:** Would domesticated poultry be better off if released in the wild?

**A:** No, the natural world is a cruel and inhospitable environment. Feral poultry would immediately face temperature extremes, predators, disease and starvation. Experts estimate that more than 60 percent of Bobwhite Quail die each year because of these natural factors. Today's poultry industry raises birds according to strict animal welfare guidelines, with the aim of providing a humane environment.

**Q:** Are U.S. poultry producers responsible for causing avian influenza?

**A:** No. U.S. poultry producers constantly monitor their birds for diseases and have preparedness plans and biosecurity procedures in place to prevent disease. Commercial poultry in the U.S. have the best possible veterinary care. Also, poultry in modern rearing facilities are isolated from migratory birds, which may transmit avian influenza.

## Incubation/Embryology

**Q:** Which part of the egg develops into a baby chicken, the yolk or the white?

**A:** Neither. In a fertilized egg there is a group of cells on the surface of the yolk in an area called the germinal disc. By the time the egg is laid by the hen, there are several hundred thousand cells in this disc. These cells develop into the embryo, which eventually surrounds the yolk and uses it for food.

**Q:** Should fertile eggs with dirty shells be incubated?

**A:** Dirt on an egg can restrict oxygen and gas exchange in the egg. A very fine sand paper can be used to remove soiled areas. The main problem is that the soiled area can cause bacterial infection. It is best to incubate only clean eggs.

**Q:** Does incubation temperature influence the sex of hatching eggs?

**A:** Incubation temperature has nothing to do with determining the sex of the bird. Altering the incubation temperature will only reduce the number of eggs that hatch and threaten the health of the birds.

**Q:** What is candling eggs and how is it done?

**A:** Egg candling is the process of shining a bright light through the egg to examine its internal contents. One easy way to candle an egg is to use a small, bright flashlight.

**Q:** Will incubation of double-yolked eggs result in “twin chickens”?

**A:** Double-yolked eggs almost never hatch. Even though a double-yolked egg is larger, it cannot support the development of two chicks.

**Q:** What is the purpose of turning eggs during incubation?

**A:** The yolk is less dense than the white, so the yolk floats to the top of the egg. Turning repositions the yolk and white, keeping the yolk and the embryo from pressing against and possibly sticking to the inside of the eggshell.

**Q:** What is the recommended environmental temperature for newly hatched, or brooding, chicks?

**A:** The brooding box should contain a range of temperatures at all times. The area close to heat lamps should be 95 degrees F, but other areas away from the light should be cooler so the chicks can cool themselves if they get too hot. If the chicks huddle together by the light, they are too cold. If they huddle around the edges of the brooder away from the light, they are too hot. The temperature in the brooding box can be decreased 5 degrees each week as the chicks get older.

### Important Information

#### What kind of chickens are these?

The eggs provided by the Extension Office are a mix of breeds and can be male or female.

#### What do I do with the supplies and chicks after they hatch?

A staff member from the Extension Office will pick up all cleaned incubators/turners the Friday after hatching. The chicks will also be picked up that day.