



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 better. 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 other 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 the wild bird located in Southeast Asia is *Gallus gallus*.

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

A: Sexing most chickens is difficult. There are some genes in some lines that will produce color differences that indicate the sex of the chick. Another gene that is used in some lines of chickens is the feather-sexable gene. In this case, the primary feathers of the male are shorter than those of the female. These genetic combinations are rare and most lines of chickens are not sexable in this manner.

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Most chicks are sexed at hatch by examination of the complex folding of the vent area (this roughly corresponds to the anal area) of the chick. This method is extremely difficult and it requires much time, effort and practice to acquire the skill.

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

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

Q: Why do hens stop laying eggs?

A: Hens that are healthy 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 should be maintained on a long day or increasing day length schedule.

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. Fertility only remains high for about 10 days to 2 weeks before another mating is needed to increase fertility of the eggs laid. Egg yolks that have a germ cell on the surface are ovulated about every 24 to 26 hours. The spermatozoa fertilize the germ cell, then the albumen, or white of the egg is secreted around the yolk by the reproductive tract. Then 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, as men-

tioned above. 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: Sex ratio in chickens is 50/50.

Incubation/Embryology

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

A: Neither. A group of cells in a fertilized egg are located 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 already several hundred thousand cells in this disc. The tissues begin to develop, eventually surrounding the yolk which the embryo uses for food.

Q: Should fertile eggs with dirty shells be incubated?

A: Dirty eggs can restrict oxygen and gas exchange in the egg. A very fine sand paper can be used to remove soiled areas. But the real problem is bacterial infection caused by the soiled area on the egg. 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 hatch and the health of the birds.

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

A: Candling eggs is the process of shining a bright light through them to examine 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 it is larger, the double yolked egg cannot support the development of two chicks.

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

A: The yolk is less dense than the white. Therefore the yolk floats to the top of the egg. Turning repositions the yolk and white thereby 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 increase in age.

Products/Food Safety

Q: Are hormones used to produce poultry meat?

A: Hormones are not fed or administered to commercial chickens. Their rapid growth rates and feed efficiencies are the result of traditional genetic selection, good nutrition, and good husbandry practices that maintain the health of the chickens.

Q: Why are some of the processed chickens purchased in stores yellow?

A: The yellow color in chickens is the result of natural pigments found in corn or other feed ingredients in the diet of chickens.

Q: What are range-fed chickens?

A: Range feeding refers to chickens that are allowed access to an environment exterior to a chicken house or sheltered area.

Q: Why do chicken and turkey have white and dark meat ?

A: Different muscles do different jobs for the bird. Muscles that are used almost constantly, such as leg and thigh muscles, are dark. Muscles that are used for quick movement for short periods of time, such as flying in chickens or turkeys, are white. Because of their different uses, white and dark muscles have different fuel demands and oxygen usage. The ability to store and use oxygen for energy metabolism determines whether a muscle will appear white or dark.

Q: Do eggs from Araucana chickens really have no cholesterol?

A: No, they have cholesterol just like all other eggs.

Q: How should I store shell eggs?

A: Shell eggs should be left in the carton and stored on a shelf in the refrigerator at 40 to 45 degrees F.

Q: How long can I keep eggs?

A: Eggs can be stored in the refrigerator safely for up to 30 days after purchase.

Q: How long can I keep fresh poultry meat?

A: All fresh meats should be cooked or frozen within 1 to 2 days after purchase.

Q: How long can I keep frozen poultry meat?

A: Frozen poultry meats will retain their quality in the freezer for 3 to 6 months.

Q: What do the terms "Fresh," "Frozen" and "Hard Chilled" mean?

A: The term fresh is allowed for poultry that has never had an internal temperature below 26 degrees F. "Hard Chilled" or "Previously Hard Chilled" is used for products whose internal temperature has been below 26 degrees F but not below 0 degrees F. "Frozen" or "Previously Frozen" refers to poultry that has had an internal temperature below 0 degrees F.

Q: How is the term "Organic" used on poultry products?

A: The term "Organic" cannot be used by itself. However, the U.S. Department of Agriculture does allow the use of "certified organic by (a certifying entity)."

Q: Are there any nutritional differences between white shell and brown shell eggs?

A: No, there are no nutritional differences between white shell and brown shell eggs.

Q: Are there any nutritional differences between fertilized eggs and regular commercial eggs?

A: No, there are no nutritional differences between these two types of eggs.

Q: Are artificial hormones used to produce chicken or turkey meat?

A: No, artificial hormones are not used to produce chicken or turkey meat.

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