

What is Chicken?

Perhaps a simplistic review of what a chicken is could be helpful in understanding some of the "hows" and "whys" in poultry incubation, production, management, and health.

A chicken is a bird. One of the features that differentiate it from most other birds is that it has a comb and two wattles. The comb is the red appendage on the top of the head, and the wattles are the two appendages under the chin. These are secondary sexual characteristics and are more prominent in the male. A few other birds have a comb or similar appendage, in some cases bearing a different name such as helmet in the guinea, and a few have wattles with some having a single median one rather than a pair. The comb is the basis of the Latin name or classification of chickens. In Latin, gallus means comb, and the domestic chicken is *Gallus domesticus*. The Red Jungle Fowl, ancestor of most domestic chickens, is *Gallus bankiva*. There are eight recognized kinds of combs: single, rose, pea, cushion, buttercup, strawberry, V-shaped, and silkie.

The chicken has two legs and two wings, a fact that influences housing and management. Domestic chickens have essentially lost the ability to fly. Heavy breeds used for meat production cannot do more than flap their wings and jump to a little higher level or move more rapidly along the ground. The lighter-bodied birds can fly short distances, and some can fly over relatively high fences. The feet and shank portions of the legs have scales.



Respiration rate is higher in chickens than in larger animals. In general, it can be said that the smaller the kind of bird the faster it breathes. For example, a hummingbird

breathes more times a minute than a chicken. The male chicken breathes about 18 to 21 times a minute and the female about 31 to 37 times when they are not under stress.

The heart beat of chickens is rather fast, being about 286 times a minute in males and 312 in females in a resting condition.

Digestion rate is somewhat rapid in chickens. It varies from 2 1/2 to 25 hours for passage of food depending on whether the digestion tract is full, partially full, or empty when feed is ingested.

The chicken's temperature is about 107 degrees to 107.5 degrees F.

Chickens are hatched, not born in the truest sense of the word.

Chickens are covered with feathers but have a few vestigial hairs scattered over the body. The average consumer does not see these hairs, because they are singed off in the processing plant. The chicken has a beak (or bill) and does not have teeth. Any mastication occurs in the gizzard. Many commercial poultry producers do not provide grit to their chickens, because they feed a ground feed of fine meal consistency that can be digested by the bird's digestive juices.

The chicken has pneumatic bones, making its body lighter for flying, if it had not lost the ability to do so.

There are 13 air sacs in the chicken's body, again to make the body lighter, and they are a functioning part of the respiratory system.

Chickens have comparatively short life spans. Some live to be 10 to 15 years old, but they are the exception, not the rule. In commercial egg production, birds are about 18 months old when they are replaced by new, young stock. It takes close to six months for a female chicken to mature sexually and start laying eggs. Then, they are kept for 12 to 14 months of egg production. After that their economic value declines rapidly, so they are disposed of when they are about 18 months old.

Chickens have both white (breast) and dark (legs, thighs, back, and neck) meat. The wings contain both light and dark fibers.

Classifications of Chickens

The breeds and varieties of domestic chickens known today are generally believed to have descended mainly from the Red Jungle Fowl (*Gallus bankiva*, also called *Gallus gallus*) of Southeast Asia where it still exists in the wild. Domesticated chickens may have been kept in India as long ago as 3,200 B.C., and records indicate they were kept in China and Egypt as early as 1,400 B.C. The earliest domestications of fowl were mainly for cockfighting rather than for food. Cockfighting was suppressed in the Western World and replaced by poultry exhibition before the 18th Century. Poultry exhibitions started in America in 1849. Interest in these shows grew and numerous breeds and varieties were and continue to be developed, leading to the large number of varieties now in existence.

There are approximately 175 varieties of chickens grouped into 12 classes and approximately 60 breeds. A class is a group of breeds originating in the same geographical area. The names themselves — Asiatic, American, Mediterranean, and so on — indicate the region where the breeds originated.

Breed means a group which possesses a given set of physical features, such as body shape, skin color, carriage or station, and number of toes. Variety is a category of breed and is based on feather color, comb, or presence of a beard and muff. Thus, the Plymouth Rock may be Barred, White, Buff, or one of several other colors. The Rhode Island Red may have either a single or rose comb. In each case, the body shape and physical features should be identical. Breed and variety tell little about the qualities of good producing stock.

Strain, however, does. A strain is a group or breeding population within a variety or cross that has been bred and developed by a person or organization to possess certain

desirable characteristics. Many commercial strains exist, such as Babcock, DeKalb, Hyline, and Shaver, that have been bred for specific purposes.

Chickens are classified by sex and age, too. Although these terms tend to vary considerably, depending upon whether they are being applied to exhibitions, or commercial poultry production. Cockerel is a male chicken under one year of age; cock or rooster is a male more than one year old; pullet is a female under one year, and hen is a female over one year of age. When chicks are first hatched, they may be separated by sexes and are then called sexed chicks. If they have not been separated, they are known as straight-run chicks.

In market terms, a broiler or fryer is a young meat-type chicken that can be cooked tender by broiling or frying and usually weighing between 2 1/2 and 3 1/2 pounds. A roaster is a young meat-type chicken that can be cooked tender by roasting and usually weighing 4 pounds or more. A stewing chicken, hen, or fowl is a mature female chicken, often the by-product of egg production, with meat less tender than that of a roaster and can be cooked tender by stewing or a similar method.