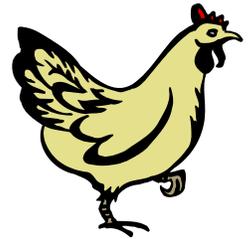


# Chickens & Turkeys (Galliformes)<sup>i</sup>

## Diet and Care Recommendations



### General Information

Chickens are domesticated descendants of the red jungle fowl (*Gallus gallus*) of southeast Asia. There are hundreds of breeds. Domestic turkeys are descendants of the wild turkey (*Meleagris gallopavo*). There are at least 8 recognized breeds including the bronze and white turkeys, which are probably the most common breeds in America. Both chickens and turkeys have been selectively bred to enhance weight gain for meat production, for laying, or for specific external traits in the case of ornamental varieties. Common egg-breeds of chickens include Ameraucana, leghorn, Araucana, Andalusian, and Minorca. Primarily meat-breeds include Jersey giants and Cornish game. Many breeds of chickens are considered dual purpose (meat and egg production) including Australorp, Brahma, Orpington, Plymouth Rock, Rhode Island Red, Jersey Giant, and Wyandotte. There are also exhibition breeds including the cochin, Japanese bantam, modern game, polish, old English game, Sebright, and silkie. The true bantams include silkies, Pekin, Serama, Japanese bantam, and Sebright, among others. Bantams can be very useful as surrogate brooders for falcons, sea ducks, and other endangered species. Turkeys have primarily been domesticated for meat production. Knowing what type of breed your chicken or turkey is can be important for anticipating its needs and potential management issues. Commercial breeds, in particular, are generally short-lived and exhibit severely debilitating orthopedic disease if not fed properly during growth stages. There are local native species of Galliformes in western Washington including wild turkey, ruffed-grouse, California quail, and spruce grouse. The ring-necked pheasant is an introduced species in North America.

### Diet

Galliformes require a formulated diet specific to the species and type of breed, as well as the growth stage (see table below). There are numerous local and national brands (e.g., Purina) of chicken feed for various life stages, such as starter (for very young chicks), grower, layer, molting, and, as a catch-all, “all flock” feed. They may be available as mash, crumbles, or pellets. For adults, the choice of consistency is purely up to the preference of the owner and their chickens. But the life stage of feed should be selected based on the most demanding representative of the flock. In other words, if you have molting and laying hens, it’s best to provide layer feed so that the layers receive their greater demand of protein. Feeding “all flock” is discouraged, particularly if you have growing chickens in the flock.

Feed quality varies, even between batches of the same brand. New bags of feed should be inspected. Feed should not clump when compressed in the hand, should have a slightly sweet smell, and should taste mild (yes, you can taste the feed if it is non-medicated). Transition between feeds should be performed gradually (over a period of a week preferably) to allow bacterial flora in the bird’s gut to adjust to the new forms and proportions of nutrients. Wheat should be avoided as a primary constituent of the diet as it is more difficult to digest. Birds in the starter age group should also not have large clumps or particle sizes in their feed as this can lead to obstruction of their crop (a storage pouch in the esophagus).

Species & Breed	% Protein in Formulated Diet		
	Starter (age range)	Grower (age range)	Finisher/Maint./Layer
Chicken: Layers/Gen Purpose	15% (0-3 weeks)	15% (3-18 weeks)	16%
Broilers	20% (0-1.5 weeks)	18% (1.5-6 weeks)	18%
Turkeys, Pheasants, Quail, Peafowl	24% (0-2 weeks)	22-24% (time varies)	22%

Scratch grains, cracked corn, pasta, and baked goods are not recommended since they provide too much energy resulting in obesity. Exceptions can be made during very cold weather (e.g., sustained freezing temperatures) when energy needs are increased. In addition, vegetables and greens and regular access to a yard or pasture is recommended

for free-foraging. Free-foraging is known to greatly enhance the color of the yolk, decrease cholesterol, and fortify eggs with vitamin A and Omega-3 fatty acids. Calcium-containing grit or oystershell is recommended, particularly in layers.

## Husbandry

Chickens concentrated in earthen pens during months of rainy weather can quickly create a muddy, slippery mess. For this reason, well-drained pea gravel is recommended as a pen substrate. For most chickens, a coop is recommended for roosting at night and the birds will be most comfortable with perches and nest boxes. Perches should be no higher than 3' off of the floor and boxes should have ramps for easy access. If hens lay eggs for long periods of time, bones can become weakened and prone to injury from hard drops. Turkeys and large breeds of chickens do not require perching although very low perches can be provided. The coop should be clean, dry, and well-ventilated. Alfalfa hay or straw can be used to pad the floor of the coop and can also help prevent muddy slippery soil in the outdoor pen. Impermeable artificial flooring such as linoleum or concrete is not recommended as the hardness and slickness can lead to bumblefoot and limb deformities. If a high-pressure washer is used for cleaning we recommend wearing a mask to protect you from inhaling aerosolized pathogens. Protection, particularly at night, from stray dogs and raccoons is also important and pens should have their wire walls buried to a depth of 12 inches to prevent predators from digging under.

## Medical Concerns

Annual examination of your flock or individual birds is recommended. A physical exam and discussion of history can uncover impending problems and allow us to prevent serious disease. Fecal analysis and bloodwork may also be recommended. Some common problems seen in domestic fowl include obesity, aspergillosis, bumblefoot, reproductive disorders, arthritis, and ingestion of foreign bodies.

Obesity is most often a function of too much fat or starch in the diet, a lack of exercise, and genetics. Addressing the diet and increasing room to exercise can help.

Aspergillosis is a fungal infection of the respiratory tract and may occur due to poor air quality, particularly in closed sleeping areas. Keeping quarters clean and dry is the best preventative. For birds under extra stress from transport or introduction, sometimes a prophylactic antifungal regimen is appropriate.

Bumblefoot refers to a number of types of sores, swelling, and infection of the skin of the feet. Lack of dietary vitamin A, obesity, lack of exercise, and foot injury can also promote bumblefoot. Treatment can be difficult so it is best to have foot sores evaluated as soon as they are found.

Reproductive disorders range from egg-binding to inflammation of the abdomen to cancer of the ovary or oviduct. Sometimes multiple types of disorders are involved. Symptoms include alterations in normal laying rhythm, changes in droppings, abdominal swelling or sudden weight gain, labored breathing, and straining to defecate or lay. Sometimes there can be clues on the eggs such as wrinkled or rough shell texture. Treatment should be aggressive and as early in the course of disease as possible. Often surgery is necessary.

Arthritis is more common in large breeds or in obese chickens or turkeys. Slippery substrates and lack of ramps can promote injury to the joints of the legs. Treatment options range from use of anti-inflammatory drugs to antibiotics (in the case of joint infections) to orthopedic surgery to fuse or correct joints.

Commonly swallowed foreign bodies include nails, screws, and wire. The birds are attracted to these items because hard minerals help grind food in the gizzard. Many of these items never cause a problem but occasionally a sharp item will perforate the stomach and lead to illness. Some metal objects can also contain lead which will cause life-threatening disease (weakness, lethargy, green diarrhea, anemia) and must be treated immediately.

## Common Zoonoses (Diseases potentially contagious to people)

- Psittacosis (*Chlamydomydia psittici*)
- Mycobacteriosis (avian tuberculosis)
- Salmonellosis, campylobacteriosis (Obtained from droppings)

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<sup>i</sup> This information is primarily intended for domesticated breeds of chickens and turkeys. Peacocks, quail, and pheasants have different requirements.

