

How to Feed Your Laying Hens

James Hermes

There is no magic to feeding chickens. Small-flock producers can choose from many brands of feed from several manufacturers. These manufactured feeds are computer formulated by company nutritionists to provide optimal nutrition for each particular type and age of chicken. The formulation of these feeds is similar to commercial feeds and is based on years of research on commercial chickens. Manufactured feeds are considered a complete diet, providing all of the nutrients required by chickens. In most cases, small-flock producers will not need to add supplemental nutrients if they exclusively use these feeds.

Feeds are formulated and manufactured to meet chickens' nutritional needs at specific ages and production characteristics. For example, starter feeds are fed to chicks from hatch to about 6 weeks of age. Grower and developer feeds are fed to "adolescent" or growing chickens from about 7 weeks to just before laying, around 17 weeks. Layer or breeder feeds are fed to chickens that are producing eggs, generally beginning around 18 to 20 weeks of age and lasting for several years.

These different types of feeds have similar ingredients, including common grains such as corn, barley, or wheat for carbohydrates; soybean or canola meal for protein; and other ingredients such as limestone, oil or fat, and a premix of vitamins and minerals. Based on the formulation, the proportions of these ingredients vary to provide the proper level of nutrition for particular birds. Each sack of feed is labeled with its specific use.

It is important to feed egg-producing chickens the appropriate feed from hatch through their productive years to maximize their egg production. Improper feeding at any stage can result in poor egg production throughout their productive lives.

Whether your birds are bantams or large fowl, white or brown egg layers, all chickens have similar



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requirements for protein, carbohydrates, fats, fiber, vitamins, and minerals. Your birds rely on you to provide proper feed. If you do, they will produce many high quality eggs for your family, friends, and neighbors. Following a few simple feeding rules results in a healthy and productive flock of chickens.

Starter feeds

Feed newly hatched chicks a starter diet until they are about 6 weeks old. Starter diets are formulated to give proper nutrition to fast-growing baby chickens. These feeds usually contain 18 to 20 percent protein.

It is not recommended to give meat-bird starter feed to young layer-type chickens. Diets formulated for young meat-type chickens are more expensive and generally higher in protein (22 percent) to maximize growth, which is neither necessary nor desirable for egg-laying chickens.

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Feeds include common grains such as corn, barley, or wheat.

Grower and developer feeds

Once the birds reach about 6 weeks of age, begin using a grower or developer feed. Grower feeds are lower in protein, about 15 or 16 percent, and are formulated to sustain good growth to maturity.

If developer feeds are available, you can substitute them for the grower feed after about 14 weeks of age. Developer feeds are lower in protein than grower feeds (14 to 15 percent) and are formulated to prepare young chickens for egg production; sometimes they contain higher calcium to aid eggshell formation of the first eggs of young layers. (Note: Grower and developer feeds are virtually interchangeable; either one can be fed to chickens between 6 weeks of age and the beginning of egg production.)

Layer feeds

Start feeding layer feeds at about 18 to 20 weeks of age or when the first egg is laid, whichever occurs first. Layer feeds are formulated for chickens that are laying eggs. Layer feeds contain about 16 percent protein and extra calcium (3 to 4 percent) so chickens will lay eggs with strong shells and not deplete the calcium in their bodies. Sometimes “breeder feeds” are available. These feeds are formulated for chickens that are producing eggs for hatching. Breeder feeds are basically layer feeds that contain slightly more protein and are fortified with extra vitamins for proper chick development and

hatching. The value of breeder feeds is somewhat questionable for the small-flock producer, since the increased cost may not be justified by the potential, slight increase in hatchability. Layer feeds will suffice for breeder chickens.

You also may give laying and breeding chickens ground oyster shell. Some high-producing laying birds may require the extra calcium provided by oyster shell even though the prepared diet is a complete feed. You can determine the need to feed oyster shell by examining shell quality. If eggs are laid with thin shells that crack easily or shells that are rough with almost a sandpaper feel, oyster shell may help increase shell strength and quality. When feeding oyster shell, provide a separate feeder to allow for free-choice feeding (the hen decides if she needs calcium) on oyster shell.

All-purpose feeds are formulated as the sole ration for chickens of all ages, from hatch through egg laying. These feeds are formulated to provide adequate protein for young chicks and layers alike. However, read the label carefully. Laying chickens that are fed all-purpose feed will generally not receive enough calcium for proper eggshell formation, so supplemental oyster shell (free-choice feeding) is required for maximum or even adequate egg production.

Medicated feeds

Some starter diets available at local feed stores are medicated to prevent coccidiosis, a common yet serious disease in young chickens. Medications are typically absent in grower or layer diets. Feeds that contain medications are labeled as such.

Check the label for warnings concerning the medication used in feeds. Withdrawal dates will be indicated on the label if there is a risk of the medication’s presence in the eggs. Feed medications are highly researched and regulated, so you can be confident that the eggs are safe to eat if you follow the label instructions.

Non-medicated feeds are commonly available or can be ordered. In some cases, mortality levels, especially in young chicks, may rise to unacceptable levels if non-medicated feeds are fed. You must decide whether the use of non-medicated feeds in the early stages of a bird’s life is justifiable in your situation.

Water

Water is the single most important nutrient that chickens consume. Therefore, it is necessary to provide adequate amounts of clean, fresh water on a daily basis during growth and egg production. Chickens will drink between two to three times as much water by weight as they eat in feed. Their consumption of water increases in warm weather. Clean water is essential for healthy birds!

Scratch (grains)

Chickens love to scratch. They use their feet to disturb the litter or ground to find various seeds, greens, grit, or insects to eat. Feeding scratch grains can promote this behavior, which gives the birds exercise and keeps them busy. Feeding scratch to chickens is not necessary when they receive a complete diet.

Scratch feeds usually consist of a mixture of cracked, rolled, or whole grains such as corn, barley, oats, or wheat, which are relatively low in protein and high in energy or fiber, depending on which grains are used. When fed in concert with prepared feeds, they tend to dilute nutrient levels in carefully formulated diets. Therefore, you should provide scratch sparingly. A general rule of thumb is to feed only as much scratch as the chickens can consume in about 20 minutes, or about 10 to 15 percent of their total daily food consumption.



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Daily access to green grass can be a beneficial supplement to a feed ration but is not a substitute for feed grains.

When feeding scratch, also provide an insoluble grit so the birds can grind and digest the grains properly. If the birds have access to the ground, they can usually find enough grit in the form of small rocks or pebbles. Otherwise, you can purchase grit at your local feedstore. Oyster shell cannot be substituted for grit because it is too soft to aid in grinding.

Table scraps and greens

Chickens, like other family pets, enjoy many of the same foods their owners do. However, feeding your chickens an excessive amount of table scraps and greens is not beneficial to the birds or their productivity. Some supplementation is fine—in fact, greens help to keep egg yolks a deep orange color—but, as with scratch, these foods should be limited. The same rule for scratch applies to table scraps and greens: the total supplementation should be no more than the chickens can clean up in about 20 minutes.

Pasture

There has been a great deal of interest in recent years in “pasturing” chickens to allow them daily access to green grass. While pasturing can be a beneficial supplement to a feed ration, it is not a substitute for the various feeds noted above. Chickens with daily access to pasture consume significant amounts of insects and seeds when available. They also consume small amounts of grass but do not have the ability to properly digest it.

When considering pasture for chickens, the greatest feed value is during the spring and summer when the insect activity and seed production is highest. During the late fall and winter, there is little feed value in the pasture for chickens.

Organic feeds

In recent years, organic poultry feeds have become more readily available. These feeds are formulated to meet the same nutritional requirements as traditional feeds; however, the ingredients are from organic sources and do not include certain additives. Organic grains are typically produced without the aid of commercial fertilizers or pesticides. In addition, the seed stock for organic grain comes from sources that are not genetically modified (GM). As commercially available sources of non-GM feedstuffs become more limited, alternative grains are used in formulating diets.

In addition, certain additives (for example, medications, and animal production and synthetic nutrients, such as supplemental amino acids) are not allowed in organic feeds. (Note: Currently the amino acid methionine is allowed at no more than 2 pounds per ton of feed; this variance to the organic rules may change in the future.) The exception is the vitamin and mineral premix, which is allowed even though these are from primarily synthetic sources.

With the above constraints, organic feeds are more difficult to formulate and often contain ingredients that are imported from other parts of the world, which can significantly increase the feed cost while providing less than optimal nutrition for laying chickens. Careful shopping from reputable sources is the best way to ensure the best nutrition from organic feeds.

Feed and water management

The mechanics of feeding are nearly as important as the feed itself. Supply enough feeder space so that all the birds can eat at the same time. Start with at least 1 linear inch per bird for chicks and increase to at least 4 linear inches for adults. When space is limited, some birds don't get enough to eat. Make sure feed is always available for the birds; meal feeding (giving a limited amount of feed several times each day) can reduce productivity if not managed carefully.

Place feeders and drinkers so the troughs are at the level of the birds' backs. This reduces spillage (which discourages rodents) and saves money by not wasting feed. If bantams and large fowl are feeding and drinking from the same equipment, adjust it to the bantams. For best drinker management, invest in a nipple drinker system. These systems keep the water cleaner and reduce spills that can encourage



Photo by Lynn Ketchum, © Oregon State University.

It is necessary to provide chickens with adequate amounts of clean, fresh water.

certain disease organisms. When managing these systems, it is important to:

- Adjust nipples so that the birds have to raise their heads and look up to reach the nipples.
- Raise drinkers a slight amount during the fast growth period (at least weekly) until the birds are fully grown at about 15 weeks of age.

If the drinkers are too low, the birds will bump into them and spill water, resulting in wet litter. If the drinkers are too high, some birds will not be able to access adequate water.

Store feed for a maximum of 2 months and keep it in a cool, dry place. Some molds that grow in damp feeds are dangerous for chickens, and old feeds can lose some of their nutritional value. Store feed in enclosed solid containers, such as a covered trash can, to reduce its availability to rodents that can eat a great deal of feed and potentially spread disease.

Conclusion

Feeding the proper feeds at the proper times, and managing feed and water delivery will go a long way to ensure a healthy, productive laying flock.