Management Guide for the Backyard Flock

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Over the last several decades, poultry production has become a large and profitable industry. This is partly because of increased demand for a nutritious, low-fat protein source such as chicken and partly because low prices have tended to increase consumption of poultry products. Although relatively low poultry prices have resulted from improvements in commercial poultry operation management, raising backyard chickens remains popular.

If you are thinking about starting a small-scale poultry operation, begin with some research and planning. Check to see if zoning regulations prohibit raising poultry on your property. Once you have made sure that there are no restrictions, you can decide on your purpose – egg production, meat production or both – and how much time you are willing to spend. This publication focuses on raising a small flock of chickens (50 or less) for meat and eggs (either for hatching or eating). To accommodate smaller or larger flocks, simply adjust the amounts specified here.

Housing and Confinement

Before you buy chicks, there are many preparations to make. First, arrange for adequate housing that will accommodate the birds' growth. The minimum space required per bird depends on the type or breed of bird you select, and will range from 3/4-1 square feet for smaller breeds to 3-4 square feet for turkeys. A good rule of thumb is to provide 3-31/2 square feet of floor space for each bird you intend to keep for egg production. If you buy straight-run chicks (a mixture of males and females), allow space for about half the number of chickens you start with. For example, if you start with 50 chicks, figure on using 25 for meat production and 25 for egg production. There will be some deaths, so the actual numbers may be a little lower. Twenty-five birds with 3 square feet of floor space each will require about 75 total square feet of floor space; a building 8 feet by 10 feet will be adequate. If you intend to raise chicks as replacements, however, there may be times when space is tight. If there is a chance of this, make your floor plans with future expansion in mind.

The poultry house must stay at least 70º F. The type of enclosure needed to maintain this temperature will vary with the local climate. Commercial houses in Georgia are now being built with solid walls that have temperature control systems that cool or heat the interior when

needed. Heating or cooling systems are not necessary for backyard houses; simply provide a source of fresh air by opening curtains or windows. A ceiling fan also enhances air movement in large houses.

Allowing birds to go outside is another option that contributes to a rural atmosphere and provides you with visual enjoyment; however, small flocks of birds should be fenced in for their own safety since chickens are usually easy prey. Fencing also protects your birds from other hazards such as cars. Extend the fencing all the way to the ground and make sure the mesh is small enough to keep chicks in. Also cover the top of the enclosure to prevent flying or climbing predators from entering. Chicken wire works well and can be found at most livestock feed and supply stores.

Besides protecting your birds, fencing is important for good neighborhood relations. Other people may not have the same appreciation for roaming livestock as you do, and this may cause social or legal problems. Since Georgia is one of the leading poultry-producing states in the nation, it is likely that one of your neighbors raises chickens commercially. In this case, even more is at stake. Birds from backyard flocks can transmit disease to commercial poultry. If you allow your birds to access your neighbor's land, you may be putting his or her entire livelihood in jeopardy.

Environment

Use a good, absorbent litter material such as pine shavings, rice hulls, peanut shells or ground corncobs for bedding. Hardwood shavings are not recommended. Mold sometimes grows in hardwood shavings that have been composted during storage, and can cause serious brain infection when inhaled by chicks or human caretakers.

You need an adequate heating system to brood new chicks. Do not allow room temperature to drop below 70º F. Maintain a temperature of 90º F at chick-level for the first week. Drop the temperature 5 degrees each week until the chicks are five weeks old; after that, maintain the temperature at 70º F. During normal weather, infrared heat lamps placed 1-11/2 feet above the chicks will usually provide enough heat to start with. Adjust the height of the lamp to adjust the temperature. Raising the lamp a few inches a week should be about right.

Keep chicks near the heat source during the first week by placing a cardboard ring around the general area. However, make sure there is enough room within the ring area for the chicks to move away from the heat in case they become overheated. A diameter of 6 feet should provide plenty of space for 50 chicks. Keep track of the temperature at chick-level by hanging a thermometer within the cardboard ring at the same height as the chicks.

There must be adequate feeder and drinker space to accommodate the number of birds you intend to raise. Chickens require 1 inch of drinking space and 4-6 inches of feeder space. The house and equipment should be clean and in good repair, and before the chicks arrive the house should be preheated. You will need to add nest boxes later for layer birds.

Chicks

After making the necessary housing decisions and arrangements, choose the type of chicken you want to raise. Different breeds have been developed for egg production and meat production; a few breeds produce both fairly well. Leghorns will produce the most eggs, but since these birds are quite small, they are not a good choice for meat. The Rock-Cornish commercial broiler has been bred for rapid meat production, but can become extremely overweight if not properly managed. Their tendency toward obesity can prevent these birds from producing many eggs since overweight birds have more problems during the laying period.

Breeds that may serve well for both egg and meat production include the Rhode Island Red, Plymouth Rock, New Hampshire, Wyandotte and Orpington. These breeds will lay fewer eggs than Leghorns, but will carry enough meat to provide a good meal without getting too heavy as they enter production.

Feeds

Feed recommendations vary with the birds' age and intended use. "Nutrition for the Backyard Flock," University of Georgia Cooperative Extension Circular 954, provides an overview of feed ingredients found in poultry rations.

Feed is the greatest cost when raising chickens. However, always provide your birds with quality, commercially prepared feeds; it is not economical to feed an unbalanced diet.

Rations formulated for birds' specific ages are commercially available. The types of birds suggested here for multipurpose use would require starter rations from day 1 until 6 weeks of age. Expect to use at least 4 pounds of starter feed per bird. Between 6 and 18 weeks, feed the birds a commercial grower ration. Many feed stores carry a combination starter/grower ration that will work well for both stages of growth. At 18 weeks, start the birds on a layer ration to prepare them for egg production. Do not feed layer rations to younger birds or starter/grower rations to birds producing eggs. The results can be dreadful.

Problems associated with inadequate nutrition can occur rapidly in the growing bird and are often irreversible. What you think you are saving in feed may cost you in birds.

Birds that can go outdoors will supplement their diets with greens and insects. It will not take them long to devour the greens within their fenced enclosure. You may offer them fresh grass cuttings as long as they have not been treated with any chemicals. Table scraps – stale bread, leafy vegetables and peelings – can also provide variety and decrease overall feed costs, but limit these treats to what the birds can devour within 10 to 20 minutes. If you overfeed them on scraps, they may not eat a balanced diet. Scraps must be fresh. Never use any type of spoiled feedstuff.

Many commercial starter/grower feeds are medicated to control coccidiosis, a disease caused by a microscopic parasite that infects the intestines. The mild strength of the drug will allow gradual immunity to develop so that your birds will have fewer problems as adults. Layer rations are usually not medicated.

Do not overlook water as an important nutrient. A constant supply of clean, fresh water is essential to healthy poultry. Twenty hens can drink about 1 gallon of water each day in cool weather. Water consumption will increase dramatically during hot weather.

Selecting Birds

When your birds are four to five weeks old (1½-2 pounds live weight) you may wish to select some to eat as Cornish hens. It is surprising how much meat these small birds have on them. Since only age, size and degree of tenderness are important, it is not necessary to select females (and it is unlikely that you will be able to tell the pullets (young females) from the cockerels (young males) at this age).

When the birds reach seven to eight weeks of age (3-5 pounds live weight), you will begin to see some difference between the males and the females; in particular, the males' combs will be larger. This is the proper age to choose the birds to be used as fryers. Select most of the males now.

At 10 to 12 weeks of age (5-8 pounds live weight), select birds for roasters. This age provides a large carcass for whole bird roasting.

The number of birds selected for use as meat at each age will depend on your own preference. Separate birds chosen for butchering and remove feed for eight hours to allow the intestinal tracts to empty, making the dressing process easier. Provide water as needed.

Dressing Meat-Type Birds

Kill the birds humanely by first tying the legs of each live bird and hanging it from a chest-high branch or a rafter. Allow space between the birds so that they do not touch. Kill the bird by slicing the blood vessels in its neck to allow the blood to drain. Cut both sides of the neck deep enough to sever the carotid arteries, but not so deep as to damage the spinal cord. A very sharp knife is essential. It should take about two minutes for the bird to finish bleeding. A funnel fashioned from sheet metal can be used to restrain the bird during bleed-out. The opening at the small end of the funnel must be large enough to let the bird's head and neck extend several inches. The funnel itself must be narrow and deep enough to prevent the bird from escaping.

After bleeding, submerge the bird in water heated to 125-132º F for 1-1/2 minutes, and then quickly pluck the feathers. Water that is too hot will cause the skin to tear easily. Remove remaining hair-like feathers by rotating the bird over an open flame and singeing them off.

Next, dress the bird: that is, remove the internal organs, head and lower portion of the legs. Start by removing the head high up on the neck and the legs at the joint where the feathered skin begins. Thoroughly rinse the carcass. Remove the neck from the body by cutting it near the shoulders. Make a midline cut between the breastbone and the tail. Continue a circular cut around the vent of the bird, being careful not to cut into the intestines. Gently insert your hand along the wall of the body cavity, separating the internal organs from the body wall.

Once you have reached the top of the chest cavity, circle your fingers around the organs and pull them out the opening in the abdomen. Take care not to break the gall bladder – a sac filled with dark green fluid that, upon contact, will cause meat to taste bad. Wash all edible parts of the chicken thoroughly. Small amounts of fecal contamination can be washed off with water. You can clean the surrounding tissue from the liver, heart and gizzard and use them. Store birds you'll use right away in ice water in the refrigerator, or freeze the carcasses for later use.

Layers

You can expect your heavy hens to start laying just before they are six months old. They will lay more eggs and start earlier if they have been well cared for with a good plane of nutrition and fresh, clean water daily. When the birds reach 18 to 20 weeks of age, begin feeding a layer ration, which provides the added ingredients needed for egg production.

It is a common misconception that hens need to be around roosters to lay eggs. This is not true, but if you want to raise replacement chicks, you do need to keep a few roosters – generally at least one male per 10 females to ensure good fertility. Save only healthy-looking males for breeding.

As the birds near laying age (18 to 20 weeks), nesting boxes should be in place. Boxes 12 inches by 12 inches half-filled with straw or other clean litter material are ideal. One nest box for every four to five hens is adequate. Raise the boxes about 2 feet above the ground and place a perch about 4 inches in front of each box so hens have a place to land before entering the nest. Most eggs are laid in the morning, but you should still check the nests twice a day.

Day length influences egg production, which may be delayed if the days start to shorten as the birds approach laying age. Also, if day length decreases during the laying period, the number of eggs may decrease. Fourteen to 16 hours of daylight are recommended; supplementing daylight with house lights can simulate this. Use a timer to switch the lights on and off. You can add the extra time at the beginning or end of the true daylight or provide extra hours of light in both the morning and evening.

Hens may try to brood a clutch of eggs. Discourage this if the eggs are to be eaten. A broody hen will stop laying eggs, may become aggressive and will sit on a nest to prevent other hens from laying eggs there. Discourage broody behavior by not allowing a broody hen to sit on the nest (remove it whenever you find it there) or by putting the hen in an environment where it would be uncomfortable to sit on eggs. Some producers build a "broody pen" that has pebbles on the floor instead of litter.

If you want to raise chicks, you can either let the hens incubate the eggs naturally or you can collect them and incubate them artificially. The method you choose will depend on how many chicks you want and how much time and money you are willing to invest. The natural method is the least expensive, but will produce fewer chicks. If you allow several hens to brood a clutch at the same time, you may need additional nests to accommodate the hens still laying. The incubator method allows the hens to resume egg production, but is more expensive. Incubators of all sizes are available, or you can build your own.

Diseases

Disease occurs when there has been some disruption in an animal's normal function and usually results from several factors affecting the bird at the same time. Overcrowding, injury, poor nutrition, poisons, lack of fresh air, and a dirty environment all impair a bird's immunity, or ability to fight disease. Immunity to disease can be passed from hen to chick or can be gained through vaccination or natural exposure. Developing adequate immunity is only possible if a bird has the building blocks it needs, obtained through adequate nutrition.

Immunity to a disease-producing organism can be overcome if there are too many organisms present in the environment of if the environment is dirty. Some signs to watch for include an increase in dead birds, difficult or noisy breathing and bloody droppings. Sick birds may try to hide, will not want to move, and may appear weak and have ruffled feathers.

Should you find diseased birds in your flock, there are several diagnostic laboratories throughout the state that can help determine the problem. Your county Extension agent will be able to tell you about the diagnostic laboratory closest to you. A listing of the Georgia Poultry Diagnostic Labs currently in operation can be found in University of Georgia Cooperative Extension Circular 968, "Selecting Birds for Laboratory Examination."

Prevention is the best approach to poultry disease control. Like other living things, chickens thrive in a clean environment. Periodically replace soiled litter material with fresh litter to help decrease the chance of disease. Clean feeders when they appear soiled and scrub drinkers daily using a dilute chlorine bleach solution. Add 1-2 teaspoons of bleach per 20 gallons of drinking water to inhibit bacterial growth. Bleach is also a good disinfectant for sanitizing cleaned surfaces in the chicken house.

Vaccination may be necessary to control diseases in your area. Chicks received from commercial hatcheries may already be vaccinated for Marek's disease; however, if you produce replacement chicks, they will not be protected and may require vaccination. Vaccines are also available for Infectious Viral Laryngotracheitis (Fowl Pox), which is carried by mosquitoes and is more of a problem in the southern regions, and for miscellaneous respiratory diseases such as Newcastle's disease and Infectious Bronchitis. In most cases, these vaccinations are not routinely required. You can use them if the diseases prove to be a problem on your farm.

Raising chickens for personal use can be fun and rewarding, but it does carry the responsibility of livestock ownership. You must always be aware of the potential consequences of your actions. Here in Georgia, many people raise commercial poultry. Backyard chicken flocks are a continual source of disease spread to commercial birds. If you own yard or pet birds, never enter another person's poultry house since disease organisms are often carried on shoes and clothing. Mice and rats carry other diseases. If you raise yard birds, it is your responsibility to control rodents to prevent disease spread. Also, because insects and the wind carry other disease organisms, you must get an early diagnosis if there is a disease problem in your flock. Early detection often improves the success of control programs and is essential in minimizing the spread of disease to other poultry flocks.

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