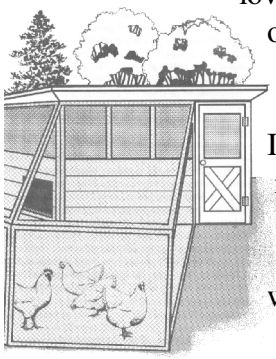
Management Guide for the Backyard Flock

Cooperative Extension Service - The University of Georgia College of Agricultural and Environmental Sciences

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. The relatively low price of poultry results from improvements in the management of commercial poultry operations. Still, despite the reasonable cost of poultry products on the market, raising backyard chickens remains popular.



If you are thinking about undertaking a small scale poultry operation, start 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 with this endeavor. This booklet has been prepared for those desiring to raise a small flock of chickens (50 or less) for meat as well as eggs 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. Provide enough room to accommodate the growth of the birds. A good rule of thumb is to provide 3 to 3 ½ 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 per bird will require about 75 square feet of floor space; a building 8 feet by 10 feet will be quite 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 house must stay at least 70 degrees F. The type of enclosure needed to maintain this temperature will vary with the local climate. Many commercial houses in the state of Georgia have open sides covered with reinforced-plastic curtains on rollers that can be raised or lowered.

Provide a source of fresh air by opening curtains or windows. A circulating ceiling fan also enhances air movement in large houses.

Allowing the birds to go outside is another option. This contributes to a rural atmosphere and provides you with visual enjoyment. A word of caution, though: fence in small flocks of birds for their own safety. There are many predatory animals around and 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 of the fence is small enough to keep chicks in. Chicken wire works well; it can be found at most livestock feed and supply stores. Cover the top of the enclosure, as well,

to prevent flying or climbing predators from entering.

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 is in the business of raising 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 access to your neighbor's land, you may be putting his or her entire livelihood in jeopardy.

ENVIRONMENT

Use a good, absorbent litter material for bedding. Pine shavings, rice hulls, peanut shells and ground corn cobs are all good products. Hardwood shavings are not recommended. Mold sometimes grows in hardwood shavings that have been composted during storage. This mold 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 70 degrees F. Maintain a temperature of 90 degrees 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 70 degrees. During normal weather, infrared heat lamps placed 1 to 1 ½ feet above the chicks will usually provide enough heat to start with. Keep the chicks near the source of heat the first week by placing a cardboard ring around the general area. Make sure, however, that there is enough room within the ring area for the chicks to move away from the heat in case they become overheated (Figure 1). 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.

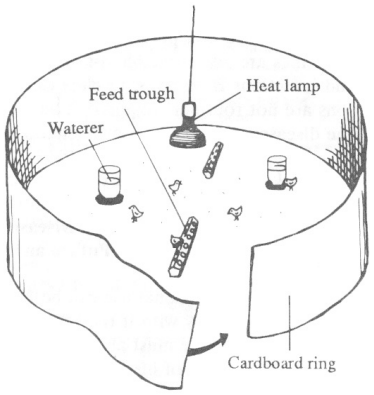


Figure 1. A ring of cardboard will confine young chicks near a source of food, water and heat.

Adjust the height of the lamp to adjust the temperature. Raising the lamp a few inches a week should be about right. For a thorough discussion of brooding chicks, get Cooperative Extension Service Bulletin 855, **Environmental Factors to Consider When Brooding Chicks,** from your local county Extension agent.

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 to 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 those birds kept as layers.

CHICKS

After making the necessary housing decisions and arrangements, choose the type of chicken you want to raise. Different breeds of chickens have been developed for egg production and meat production; a few breeds produce both fairly well. While the Leghorn strain of chicken will produce the most eggs,

these birds are quite small. They are not a good choice for meat. The Rock-Cornish commercial broiler-type bird 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; overweight birds have more problems during the laying period.

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

FEEDS

The type of feed recommended varies with the age and intended use of the bird. An excellent publication, Cooperative Extension Service Leaflet 396 entitled Nutrition for the Backyard Flock, may be available from your county Extension agent. That publication provides an overview of feed ingredients found in poultry rations.

The greatest cost of raising chickens is the cost of feed. It is, however, not economical to feed an unbalanced diet. Therefore, always provide your birds with quality, commercially prepared feeds.

There are commercially available rations formulated for the specific age of the bird you have. The types of birds suggested here for multipurpose use would require starter rations from day 1 until 6 weeks of age. One can 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 try to 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. Often these changes are 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 these have not been treated with any chemicals. Table scraps--stale bread, leafy vegetables and peelings--can also provide variety while decreasing feed costs. Limit these treats to what the birds can devour within 10 to 20 minutes. If you overfeed them on scraps, they may not cat balanced diets. Scraps must be fresh. Never use any type of spoiled feedstuff.

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

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 of age (1 ½ to 2 pounds live weight) you may wish to select some to cat as Cornish hens. It is unlikely that you will be able to tell the pullets (young females) from the cockerels (young males) at this age. Since it is the age, size, and

degree of tenderness that is important, it is not necessary to select females. It may seen that these small birds will not have any meat on them, but they will surprise you.

When the birds reach seven to eight weeks of age (3 to 5 pounds live weight), you will be able to 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 to 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. Once you have chosen birds for butchering, separate them and remove feed for eight hours. This will allow the intestinal tracts to empty, making the dressing process easier. Provide water as needed.

DRESSING MEAT-TYPE BIRDS

Once the birds have been selected and their intestinal tracts allowed to empty, kill them humanely. To do this, tie the legs of each live bird and hang it from a branch or a rafter, chest high. 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 head and neck of the bird 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 to 132 degrees F. Completely moisten the bird, leaving it in contact with the hot water for 1 ½ minutes. Water that is too hot will cause the skin to tear easily. After scalding, quickly pluck the feathers. 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. This is a sac filled with dark green fluid that, upon contact, will cause meat to taste bad. Small amounts of fecal contamination can be washed off with water. You can clean surrounding tissue from the liver, heart and gizzard and use them. Wash all edible parts of the chicken thoroughly. If they are to be used right away, store the birds in ice water in the refrigerator. Otherwise you can 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. Prepare the birds for laying by having them on a good plane of nutrition. Provide fresh, clean water daily. When the birds reach 18 to 20 weeks of age, change the diet to a layer ration. This provides the added ingredients needed for egg production.

It is a common misconception that hens need to be around roosters in order to lay eggs. This is not true. But if you want the option of raising replacement chicks, you do need to keep a few roosters. It is a good idea to keep at least one male per ten females to insure good fertility. Save only healthy looking males for breeding.

As the birds near the age of lay (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 each 4 to 5 hens is adequate. Raise the boxes to a height of about 2 feet above the ground. A perch placed 4 inches in front of each box allows a place for hens to land before entering the nest. Most of the eggs are laid in the morning. Still, check the nests twice a day.

Day length influences egg production. Egg production may be delayed if the days start to shorten as the birds approach the age when they begin to lay. Also, if day length decreases during the laying period, the number of eggs may decrease. Fourteen to 16 hours of daylight are recommended; this can be simulated by supplementing daylight with house lights, using 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 and may become very aggressive. It will sit on a nest and prevent other hens from laying eggs there. There are a few ways to discourage broody behavior: do not allow a broody hen to sit on the nest; remove it whenever you find it there. Put 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 the hens to raise chicks, you can 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 will be 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 involves the added expense of an incubator. Incubators of all sizes are available; building your own incubator is another option. Plans for this can be found in 4-H Manual 99, called Egg **Incubation and Embryology Studies for Youth.** For more information on raising laying hens, ask your county Extension agent for Cooperative Extension Service Circular 671, **Managing the Home Flock.**

DISEASES

Disease occurs when there has been some disruption in an animal's normal function. This 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 ability to fight disease. The ability to resist disease is called immunity. 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 is not all-or-nothing. Immunity to a disease-producing organism can be overcome if there are too many organisms present in the environment. This happens when the environment is dirty. Disease producing organisms will build up over time and eventually reach a level at which they can overwhelm the bird's immunity. This is when disease is most likely to occur.

Some signs of disease to watch for include an increase in the number of birds that die, difficult or noisy breathing and bloody droppings. Birds that are not well may try to hide, will not want to move, and may appear weak, with 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.

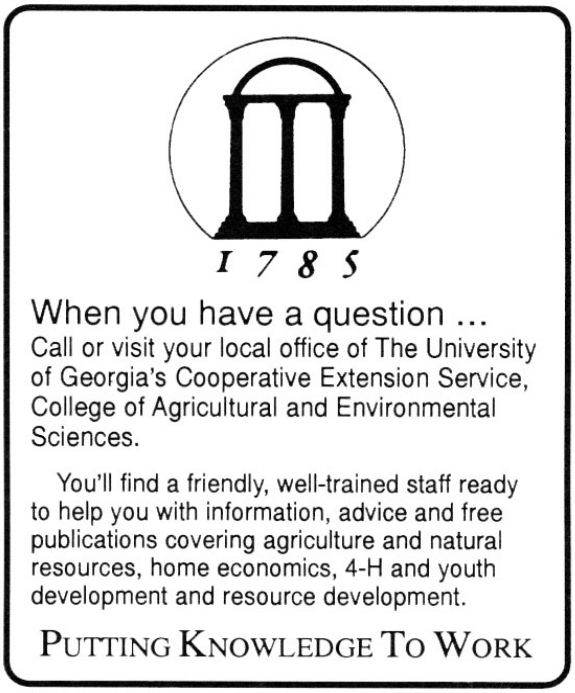
The best approach to poultry disease control is prevention. Like other living things, chickens thrive in a clean environment. Periodic removal of litter material will help decrease the chance of disease. Replace soiled material with fresh litter. Clean feeders when they appear soiled. Scrub drinkers daily using a dilute chlorine bleach solution. Low levels of chlorine bleach can be added to the clean water as well to inhibit bacterial growth. All that is needed is I to 2 teaspoons of bleach for 20 gallons of drinking water. Bleach is also a good disinfectant with which to sanitize cleaned surfaces in the chicken house.

Good nutrition is very important in maintaining a healthy flock. In order for birds to resist disease challenge, they must have the nutrients with which to produce immune cells.

Vaccination may be necessary to control diseases in your area. Chicks received from commercial hatcheries may be vaccinated for Marek's disease before you receive them. However, if you produce replacement chicks, they will not be protected and may require vaccination. In some areas, birds need to be vaccinated for Fowl Pox. This disease is carried by mosquitos and is more of a problem in the southern regions. Vaccines are also available for 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.

Thorough coverage of these and other disease problems in poultry can be found in Cooperative Extension Service Bulletin 797, **Poultry Disease Prevention Guidelines for Broilers, Pullets and Commercial Layers.**

Raising chickens for personal use can be fun and rewarding, but it does carry with it the responsibility of livestock ownership. One must always be aware of the potential consequences of his or her actions. Here in Georgia, many people raise commercial poultry. Backyard flocks of chickens are a continual source of disease spread to commercial birds. Disease organisms are carried on shoes and clothing. If you own yard or pet birds, never enter another person's poultry house. Other diseases are carried by mice and rats. If you raise yard birds, it is your responsibility to control rodents to prevent disease spread. Other disease organisms are carried by insects or the wind. Therefore, 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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Leaflet 429 **Reprinted November, 1999**

Issued in furtherance of Cooperative Extension work, Acts of May 18 and June 30, 1914, The University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating.

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