

# MU Guide

## Small Flock Series: Managing a Family Chicken Flock

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Maintaining a small poultry flock can be rewarding and will provide an opportunity for various family members to participate in animal care. Chickens are best maintained as a flock and are well suited for such management. Other species of poultry are also well suited for family flock management; however, mixed flocks (mixed ages or species) are not recommended because of increased risk of disease.

With proper care and consideration, the small family flock may be maintained on farms or small acreages near urban areas.

### Before you start a flock

Make sure that your enjoyment of your flock does not infringe on your neighbors' enjoyment of their properties. Check to see if zoning regulations or other property restrictions prohibit or restrict raising poultry on your property. Fence in small flocks of birds for their own safety and to keep them home.

It is essential not only that your poultry operation be considered legal, but also that it be considered appropriate for the neighborhood. Consideration of neighbors and discussions with them before bringing livestock into a residential community may avoid future problems. There are also many predatory animals even within municipal boundaries and chickens are usually easy prey. Chickens on roadways are a hazard both for themselves and for motorists. Backyard flocks of chickens are a potential source of disease that can spread to commercial birds. Disease organisms may be carried on shoes and clothing. To contain and protect the flock, extend poultry yard fencing all the way to the ground and make sure the mesh of the fence is small. 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.

### Care requirements

Proper care of poultry requires the owner or caretaker to supply environmental protection and adequate nutrition. Environmental protection is usually provided by housing or shelter. Poultry housing

should provide clean, dry, comfortable quarters for birds throughout the year. Moisture is a common problem in poultry houses. Keep fresh air circulating but keep the house free of drafts. Allowing the birds to go outside is an option for the farm poultry flock.

Care of birds requires a commitment to provide them adequate feed and water for the birds' needs. Over the life of the animals, this may amount to many times the initial cost of the eggs, chicks or eggs.

In addition to the requirements for shelter and proper feeding, managing a small flock requires a commitment of time and labor to provide daily care and attention to the birds. If these basic elements of care are not available, then the flock should not be established.

### Choosing the breed

Breeds of large or medium-sized chickens have been developed for egg or meat production; a few breeds produce both fairly well. While the Leghorn strain of chicken produces more eggs than other breeds, these birds are quite small and 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; this can prevent these birds from producing many eggs.

Breeds that 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 lay fewer eggs than the Leghorn type but are large enough to provide a good source of meat. Bantam breeds are popular in small hobby farm flocks; crosses between various chicken breeds are also common in these flocks.

### Preparing the house

In Missouri, poultry needs housing particularly during severe winter weather. Within the poultry house, it is essential to use a good, absorbent litter material for bedding for all chickens maintained on the floor. A good litter, properly managed, will greatly assist in proper management. The litter

should be clean, mold free and dry, but not dusty. Litter may be any absorbent material that reduces the moisture in the poultry house and serves as an insulating material in cold weather. Pine shavings, rice hulls, peanut shells and ground corn cobs are all good products. Hardwood shavings sometimes produce a mold that can cause a serious infection when inhaled by chicks or human caretakers. Place a 3- to 4-inch layer of litter on a base of clean, dry sand or directly on the clean floor of the brooder house several days before chicks arrive. Add new litter as needed. During cold weather, litter may reach a depth of 8 to 10 inches. Less litter is needed in hot weather. Provide a source of fresh air by opening curtains or windows. A circulating ceiling fan also enhances air movement in large houses.

Keep litter as dry as possible. Whenever necessary, stir the litter to keep it from packing. Move feeders and waterers to new locations to help prevent the development of wet areas. As wet spots develop, remove the wet litter and add new, dry material.

Provide heat until chicks are well feathered. Birds are more likely to develop respiratory troubles if heat is removed too early. In winter, heat may be continued for six weeks for new brooding chicks to prevent waterers from freezing. Winter brings concern about low temperatures, which can affect even mature chickens when they are kept in small groups within buildings or confinements with no supplemental heat or where there is inadequate insulation to contain the heat produced by the birds. Temperatures less than 15 degrees Fahrenheit usually cause egg production to slow down or stop. Temperatures of about 10 degrees will probably lead to frozen combs or toes. Heavy or dual-purpose birds that are well feathered and fat and have small combs will fare best.

During warm weather, consider using a mobile pen that can be rotated to new ground as the grass inside the enclosure is depleted. Summer-range shelters are usually small sheds in which the birds are confined at night for their protection. These shelters have slatted floors and are periodically moved to a new location.

Whatever system is used, do not crowd chicks or older birds. Larger breeds and older birds require more space than others. Birds may pile up or smother if they do not have enough space or if they become frightened.

For summer brooding, protect chicks against temperatures above 95 degrees. Keep them comfortable.

## **Feed and water**

The greatest cost of raising chickens is the cost of feed. However, it is not economical to feed an unbalanced diet. Therefore, always provide your birds with quality, commercially prepared feeds. The type of feed recommended varies with the age and intended

use of the bird. It is very important that young birds receive starting diets and mature laying hens receive an appropriate laying diet.

### **Choosing the right feed**

Commercially prepared rations are available for the specific age and type of bird you have, whether it is for meat or eggs or both. Do not try to feed layer rations to younger birds or starter/grower rations to birds producing eggs. 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 bird performance.

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

Poultry feeds should provide proteins, carbohydrates, fats, minerals and vitamins in proper balance. Incomplete or unbalanced diets often result in nutritional diseases.

All types of complete poultry feeds are available as manufactured (commercial formula) feeds. Always follow the manufacturer's instructions for using commercial feed; provide supplements such as corn chops only when and as directed on the tag on the bag of feed.

It is important to follow the instructions on the feed tag. A feed listed as "complete" is formulated and mixed to supply nutritional needs of the bird for which it is specified if fed according to recommendations. It is common tendency among small flock owners to supplement a complete feed with corn chops or grain mixtures. This can lead to a nutritional imbalance and poor performance. Consult your feed supplier if you do not understand the tag's directions.

There is no strong economic advantage associated with mixing poultry feeds on the farm, unless home-grown grains are available. Custom mixing, which combines a concentrate with home-grown grain, may reduce feed cost, simplify milling and ensure the production of a well-balanced diet.

In selecting a diet, consider which feed will give the best results at a competitive price. If the formula is open, consider the kind and amount of ingredients, the percentage of protein, and the energy content. With a closed-formula feed, consider the reputation of the feed itself and the company that manufactures it.

In addition to regular (ground) mash, feed is

available as pellets and crumbles. Processing feed into pellet or crumble form increases the cost over the mash form; however, it also increases palatability and usually reduces feed waste. It also can increase the nutritive value of the feed.

### **Medicated feeds**

Certain drugs have been approved for use in poultry feeds. These drugs may help prevent or reduce disease outbreaks, enable birds to overcome stress conditions, and speed the growth of chicks. Their use may not be justified for replacement chicks under normal conditions. Before using a medicated feed, consult a poultry specialist.

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 usually will not have problems as adults.

**CAUTION:** When using a medicated feed, follow the manufacturer's directions *exactly*. Directions on the label or feed tag are based on U.S. Food and Drug Administration regulations governing the use of a medicated feed, its withdrawal time, and replacement with a nonmedicated feed.

### **Feed management**

To maintain healthy birds, keep fresh feed available at all times. Store feed carefully in a dry place protected against rats and mice.

Feed consumption per bird varies primarily with egg production rate, body size, energy concentration of the feed, and age and activities of the birds. It is also influenced by the health of the bird and by the environment, especially temperature. With balanced diets, 100 lightweight mature layers eat about 25 pounds of feed per day, while an equal number of heavy birds eat about 30 pounds daily. A mature Leghorn or other lightweight bird normally eats 85 to 90 pounds of feed a year. A bird of a heavier breed eats 100 to 110 pounds.

### **Water**

Do not overlook water as an important nutrient. A constant supply of clean, fresh water is essential to maintaining healthy poultry. Twenty hens can drink about a gallon of water each day in cool weather. Water consumption increases dramatically during hot weather. Thoroughly clean water fountains or troughs once a day or more often if necessary. Refill with a clean, fresh supply of water. Be careful not to spill or empty water on litter.

Provide clean, pure water for birds at all times. Increase the supply to 3 gallons per day for each 100 chicks at six weeks of age; to 5 gallons at 10 weeks,

and to 6 gallons at 12 or 13 weeks of age. Supply 6 to 8 gallons of water daily for each 100 layers. Provide additional water when temperatures are above 80 degrees; for example, at temperatures above this level, 100 layers require at least 9 gallons of water per day.

### **Picking and cannibalism**

One of the more frequent problems encountered in small flock management is cannibalism. Prevention is much easier than treatment. Avoid conditions that encourage cannibalism. Introducing new birds is always a risk, because chickens have a social order. Mixing groups of chickens or introducing new birds leads to periods of social upheaval. Definitely do not mix groups of roosters without close attention and care.

Periods of stress, that is, when birds run out of feed or water, are cold, or are placed into strange groupings, are times when picking and cannibalism may begin. An injured, harassed, or picked individual naturally encourages more assaults from other members of the flock. This results in the elimination of weak birds.

For the flock, the best treatment is prevention. Shade windows so that bright beams of light will not encourage picking. Low-light conditions are more beneficial for the bird than bright conditions. Do not crowd the birds, and supply plenty of fresh feed and water.

Beak trimming is the most effective way to prevent picking and cannibalism or to control this behavior once it has developed. Individual aggressive birds may be treated; however, for prevention, it is best to trim the beaks of all the birds.

### **Diseases, parasites and pests**

Prevention is also the most satisfactory way to deal with poultry diseases and parasites. Many diseases can be prevented through good management but cannot be cured once they occur.

#### **Disease prevention**

Like other living things, chickens thrive in a clean and nurturing 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. Bleach is a good disinfectant with which to sanitize cleaned surfaces in the chicken house.

Contagious diseases usually can be prevented by completely isolating the flock; vaccinations are useful against some common diseases. Many inherited diseases can be avoided by using tested, healthy stock. Diseases caused by nutritional deficiencies seldom develop if chickens are fed balanced diets.

Some drugs are effective in preventing specific

diseases or parasites, but they do little good when used haphazardly. Drugs should be used to reinforce good management, not as a substitute for it.

The following are effective preventive measures:

- Clean the poultry house before moving the flock in.
- Provide clean, fresh feed and pure water. Treatment of water is not necessary unless the source is contaminated.
- Keep the poultry house and equipment clean and dry.
- Provide adequate ventilation during hot weather.
- Screen houses to protect the flock from diseases carried by free-flying birds.
- If possible, keep only birds of the same age on the farm. Alternatively, separate birds of different ages into different flocks. Keep flocks at least 40 feet apart.
- Keep the poultry house locked.
- Limit visitors to the poultry house. When a visit is justified, supply visitors with rubber or plastic boots or insist that they scrub and disinfect their shoes or boots.
- Store droppings and litter where they are not accessible to range or wild birds.
- Use a vaccination program recommended for your area.
- Do not let trash or junk accumulate in or near the poultry house.

### Disease control

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, do not want to move, and may appear weak, with ruffled feathers.

Should you find diseased birds in your flock, diagnostic laboratories can help identify the problem. Your local University Extension center or the Missouri Department of Agriculture can tell you about the diagnostic laboratory closest to you. In some cases depopulation of the entire flock may prove the most effective control method, followed by a thorough cleaning and disinfecting of equipment and housing. Allowing the facilities to lie empty and clean for a few weeks or months will help control many disease

and parasite problems.

Vaccination may be necessary to control diseases in your area. 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 mosquitoes and is a more serious problem in southern regions of the United States and in areas near pools of stagnant water. Vaccines are also available from major animal drug companies for Newcastle disease and infectious bronchitis, although these vaccines are frequently sold in packages of 500 or 1,000 doses. In most cases these vaccinations are not routinely required. You can use them if the diseases prove to be a problem on your farm. If required, a vaccination program may be planned through consultation with your extension poultry specialist or veterinarian and commercial suppliers of vaccines. Take care and get consultation when introducing birds that have been reared and maintained following a different vaccination program than you are practicing. If new birds are brought into the flock, use special care and diligence in selecting the source of these birds.

### For further information

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