

Raising Meat Chickens in Small or Backyard Flocks

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Raising chickens at home for meat is becoming a popular practice. (Meat chickens are often referred to as **broilers**). Chickens raised in a backyard flock tend to be larger than commercially produced chickens found in grocery stores.

There are two important questions you should ask yourself before starting a small flock of meat chickens:

- **What do you want to accomplish with a home flock?** It is unlikely that you will be able to produce a chicken for less than the cost of purchasing one at the grocery store. A home broiler flock is a good 4H/FFA or family project. It's possible to produce a variety of chicken sizes (Cornish game, fryer, roaster, and so on) by slaughtering at different times—for example, slaughtering one-third of the flock at intervals of five, seven, and nine weeks of age.
- **Are you up to the challenge of taking care of a flock of chickens for multiple weeks?** Chickens require daily care, every day, including weekends and holidays. Consider the time and effort required for the care of a flock before deciding whether or not to start a poultry flock of any kind.

Additional Considerations

- **Do the local zoning regulations permit you to raise poultry?** Laws and ordinances in some communities might prohibit or restrict the raising of poultry in your neighborhood. Some neighborhoods have restrictions on the processing of animals. If local laws or ordinances allow you to raise birds but not process or slaughter them, you must determine where you will take the birds for processing.
- **Do you have the necessary equipment?**
 - *Housing:* Chickens need a clean, dry, draft-free habitat that provides at least 1.5 sq. ft. of space per chicken.
 - *Heat source:* Chickens require a reliable heat source, such as a heat lamp.
 - *Waterers:* Chickens require an adequate water supply. Typically a one-quart waterer is sufficient at first, and a gallon-sized or larger waterer is appropriate as chickens grow. Fresh, clean water is essential for proper chick health and growth.
 - *Feeders:* Simple chick feeders can be used when birds are young, but a larger feeder will be necessary as chicks grow. Keep in mind that chicks double their size in only a couple of days and will continue to grow rapidly through their first six weeks. They will need an ever expanding daily water and feed supply.
 - *Bedding material:* Broilers need some form of bedding or litter to help keep them warm and to absorb moisture. Wood shavings, sawdust, or rice hulls are good litter choices. The floor of the broiler pen should be covered with a layer of litter at least 3 to 4 in. deep. The caked, or matted, litter should be removed every day. Also, the rest of the litter should be turned or stirred up once a day to make it absorb more moisture and last longer between changes. Change the litter weekly, depending on the dampness of the

bedding. Never place chicks on slick surfaces such as cardboard, plastic, or newspaper. The smooth surface may result in leg problems.

- **Is the housing at sufficient distance from neighbors to prevent them being disturbed with any noise, odor, or flies that might be generated?** Use care in siting and constructing housing for your chickens, and develop a plan for manure management that will prevent odor problems.
- **Are you able to butcher your chickens yourself or is there a facility nearby where you can pay to have them butchered?**
- **Do you have enough freezer space to accommodate the number of chickens you plan to produce?**

Getting Chicks

It is strongly recommended that your purchase day-old chicks from a **NPIP-certified** hatchery. The breeders from such hatcheries have had their blood tested for some important poultry diseases. It is possible to get your chicks through the mail, so the hatchery you chose does not have to be within driving distance. For chicks shipped through the mail, however, a minimum order of 25 chicks is typically required.

Meat-type chicks are usually purchased on a straight-run (males and females mixed) basis. Some producers prefer to raise only pullet chicks (females). Others buy unsexed chicks, which are typically cheaper. Pullets carry more flesh over the back and breast than cockerels (males) and generally have a more rounded appearance to the breast, thighs, and legs. Cockerels, however, grow faster and reach market weight earlier than pullets.

The most economical chicken breed to raise for meat is the commercial broiler, which is a hybrid cross of different breeding flocks. Broiler chickens have been selected for fast growth and are normally the breed raised in state broiler contests. Broilers or fryers are slaughtered at seven to nine weeks of age, when they weigh 3 to 5 lb. and dress as a 2.5 to 4 lb. carcass. The same bird that when slaughtered at five weeks of age provides a Cornish game hen can be grown out to twelve weeks or longer to make a delicious roaster. If you are looking for something that grows a little slower, consider a New Hampshire, Rhode Island Red, or White Plymouth Rock.

Preparing for Chicks

Clean and disinfect the poultry house, feeders, and waterers at least two weeks before the chicks arrive. Wash down the house with soap and water. Then spray a commercial disinfectant labeled for use in poultry houses. Be prepared for the chicks two days in advance. Put at least 4 in. of litter on the floor of the cleaned, disinfected house.

Turn on the heat source to warm up the brooding area before chicks arrive. Infrared lamps are a convenient, easy-to-use heat source. Use porcelain sockets approved for these lamps and hang them with a chain or wire. Make certain that lamps are secured so they cannot fall to the litter and create a fire hazard. The lamps should hang so that the bottoms are 18 to 24 in. from the litter. Lamps can be raised or lowered depending on temperature conditions. Heating lamps should **not** be hung with the electric cord. The use of more than one heat lamp is often recommended, especially during cold weather, so chicks will not be without heat if a bulb burns out. There are two-bulb units that come with a thermostat, which may make it easier to control the temperature in the space. It is important to remember that you are heating the chicks and not the air, so air temperature measurements may

not be the best guide when using infrared lamps. When chicks arrive, monitor the temperature at their level and observe their behavior to determine whether the temperature is appropriate (more information below).

Feed and water should be ready in the chick pen before the chicks arrive. The bottom halves of egg cartons make good feeders for the first two to three days; after that, switch to metal or plastic feeders.

Figure 1. Brooding chicks. Source: Jacquie Jacob, University of Kentucky



Caring for Chicks

The first thing that chicks need when they arrive, especially if they were shipped through the mail, is water. Dip the beak of each chick into the water to teach them where the water is. This will prevent the chicks from getting dehydrated.

Young chicks are not able to adequately regulate their body temperature, so they need a source of heat for the first few weeks (referred to as the **brooding period**). It is important that the chicks have enough room to move toward or away from the heat source to find their individual comfort zones. For the first week, the chicks' environment needs to be in the range of 90°F to 95°F. Reduce the temperature gradually, five degrees each week, until the broilers are three to four weeks old or until the pen temperature is 70°F. Place waterers a good distance from the lamps to prevent splashing water from cracking the hot bulbs. When using a heat lamp, you can change the brooding temperature by adjusting the height of the heat lamp above the floor. The temperature should be monitored with a thermometer at chick level and by observation of the chicks' response to the heat source. Cold chicks will huddle together under the heat source; hot chicks will move to the outer limits of the brooder guard; comfortable chicks will stay in a semicircle around the heat zone.

Construct a cardboard **brooder guard** (brooder circle) to keep chicks near heat, water, and feed during the first week. When the chicks are seven days old, the brooder guard can be removed to provide the chicks freedom to move around all of the pen. Distribute the feeders and waterers around the pen.

Light should be provided 24 hours a day for broilers. Twenty-four hour light (natural or artificial) increases feeding time and weight gain and improves feathering in broilers. One 40-watt bulb, hung about 6 ft. above the chicks, is needed for each 200 sq. ft. of pen space. It is a common practice to expose the chicks to short periods (10 to 15 minutes) of darkness once or twice early in the project. This will prevent panic or piling if the electricity goes off during the project.

Broilers must have adequate space to grow to their maximum potential, and the amount of required feeder and waterer space increases as the broilers get bigger. There should be enough feeder space for all the chicks to eat at one time. For chickens, feeding is a social activity, and they tend to eat as a group whenever possible. For the first two weeks, about 2 in. of feeder space is required for each chick (remember to count both sides of a long, straight feeder). After two weeks the chicks will need double this amount (4 in. per chick). To prevent feed spillage, fill the feeders only halfway. To prevent litter and chicken manure from getting into the feeders, raise the feeders off the floor as the chicks grow. A good rule of thumb is that the height of the feeders should be at the height of the chicks' backs. When switching to a new type of feeder or waterer, leave the old ones in the pen for a few days to allow the chicks to adjust to the new feeder or waterer.

Chicks also need access to fresh, clean water **at all times**. Since chickens do not eat as much if they cannot drink, it is important to have adequate waterer space. The waterers need to be cleaned and filled daily with fresh water. As with the feeders, the height of the waterers needs to be raised as the chicks grow. The lip of the waterer should be level with the height of the chicks' backs.

Commercial feeds are available that provide the required nutrients for growing chickens. Typically a high protein diet is fed the first two weeks, and then feeds with less protein are fed thereafter. Check with your feed dealers to see what types of feeds they have available for purchase. A 22% to 24% percent protein starter mash is usually fed to poultry meat birds for the first four weeks. Many feeding programs then switch to a 20% protein finisher feed until broiler market time. Meat birds grown on chick starter and developer feeds with lower protein and energy content will not gain weight as rapidly as those on a broiler feeding program. When switching from one type of a diet to another, it is a good practice to mix the two feeds for a few days to provide a slow transition from one feed to the other. Broilers typically consume 2 lb. of feed for each pound of weight they put on.

Broiler chicks grow very fast, sometimes faster than their feathers. As a result, the chicks may look "half-naked" during much of the growing period. This is normal and not cause for concern.

It is possible to purchase chicken feed containing a coccidiostat as a means of controlling **coccidiosis**. If you keep your housing clean, you should not require this preventive measure. If you do need to use a coccidiostat, it must be removed from the feed several days prior to butchering (the withdrawal time should appear on the feed label).

Feather pecking and **cannibalism** can occur within a flock and are caused by overcrowding, improper ventilation (air movement), improper nutrition, and insufficient feeder or waterer space. If cannibalism cannot be controlled with proper management of these factors, the beaks of the broilers can be trimmed at any age. Beak trimming involves removing a portion of the upper mandible (beak) with a hot blade.

Poor **air movement** in small poultry houses during hot, humid weather can result in excessive broiler mortality, especially when the broilers are approaching market weight. Placing fans in the house to blow air past the chickens can greatly reduce mortality from this problem.

During the growing period, check the broilers for **external parasites** such as mites, lice, and ticks. If you encounter a problem, a commercial dust is available that can be applied directly to the chicks. Providing the chicks with an area to dust bathe will also help to control external parasites.

Family Safety

Protect your family from bird-transmitted disease by following these guidelines.

- Always wash your hands thoroughly with soap and water after handling poultry and/or poultry equipment.
- Do not allow toddlers to handle poultry.
- Avoid contact with poultry feces.
- Wash your hands, counter tops, and utensils with hot, soapy water after handling raw poultry.

For More Information

General Information

Raising broilers. Tom Danko, University of New Hampshire.

Home production of broiler chickens. William Owings, Iowa State University.

The small flock for poultry meat. Melvin Hamre, University of Minnesota.

Production of eggs and home-raised, home-butchered broiler and turkeys. Scott Beyer and Rhonda Janke, Kansas State University.

Break-even analysis of small-scale production of pasture organic poultry - University of Idaho

4-H and/or FFA Projects

The broiler project. Theresia Lavergne and Keith Fontenot, Louisiana State University.

Raising broilers and turkeys for competition. Susan Watkins, Frank Jones, F. Dustan Clark, and Jerry Wooley, University of Arkansas.

Raising broilers and roasters as 4-H and FFA projects. David Laatsch, University of Wisconsin.