

Basic Guide for the Backyard Chicken Flock¹

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Raising a small, backyard chicken flock has gained interest in recent years as many small-farm owners desire to produce their own high-quality food. In addition, youngsters can learn to care for animals and experience the enjoyment of keeping animals as a 4-H project.

Brooding

Newly hatched chicks need a heat source the first few weeks of life. The most common way to brood a small flock (25–50 chicks) is with a heat lamp. The 250 watt heat lamp should be placed 12–18 inches above the chicks. Day-old chicks need a temperature of 90°F–95°F. The behavior of the chicks is a good indicator of their comfort. If the chicks are huddled close to the heat source, they are cold; if they stay away from the heat source, they are too hot. Quiet, evenly distributed chicks are a sign of optimum temperature. A thermometer is the most accurate way to keep track of the temperature. Be sure the height of the thermometer is at the same height as the chicks for an accurate temperature reading at "chick level." The temperature should be lowered by five degrees per week until the chicks are four-weeks-old or have feathered. Adjust the height of the lamp to adjust the temperature. Raising the lamp a few inches each week should drop the temperature by five degrees. More information on the care of baby chicks can be found at (<http://edis.ifas.ufl.edu/an182>).

Housing

A flock house in Florida does not need to be expensive or elaborate. An area that is covered by a roof and enclosed with a minimum of two sides for protection from prevailing rain and wind is sufficient. The size of the house should be based on a minimum of three square feet of floor space per bird. Twenty-five birds with three square feet of floor space will require about 75 square feet of floor space; a house 8 feet by 10 feet will be sufficient for this example. The use of fencing (chicken wire) helps in confining the birds and provides protection from predators. The top of the enclosure also needs to be covered to prevent flying and climbing predators from entering. Using an enclosed run or free range during the day provides an open area that reduces stress, pecking, and will allow the birds to supplement their diets with a variety of greens and insects.

Feed and Water

The type of feed recommended varies with the age and intended use of the bird. Good nutrition is very important in maintaining a healthy flock.

If the chicks are female, the following feeding schedule can be used to grow the birds until and during egg production:

- Newly hatched chicks will require a commercial starter feed (20–24% protein) that is usually fed until six weeks of age.
- Expect to use at least four pounds of starter feed per bird.
- After six weeks, switch to a grower feed (16–20% protein), and feed this up to 18 weeks of age. Many feed stores carry a combination starter/grower feed that will work well for both stages of growth.
- At 18 weeks, switch to a layer feed (14–16% protein) to prepare the birds for egg production.
- Do not feed layer feed to birds less than 18-weeks-old or starter/grower feed to birds producing eggs.
- To support rapid growth, the starter diet for chicks has the highest level of protein a chicken will receive during its lifetime.

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- If layer feed is fed to male or female chicks, a reduction in growth can be expected and an unnecessary stress will be placed on the young birds.
- Chicks fed layer feed will develop kidney problems and rickets since the calcium to phosphorus ratio is out of balance.
- Layer feed normally contains approximately 3.5–4.0% calcium; however, birds less than 18-weeks-old require only about 1% calcium in their diet.
- Layer-age birds need a diet lower in protein and higher in calcium for eggshell formation.

If the chicks are male, then they can be fed the same starter or starter/grower feed as the females until six weeks of age and then switched to the grower feed indefinitely.

- Do not feed layer feed to males.

Many commercial starter feeds are medicated to control coccidiosis. This disease is caused by a microscopic parasite that infects the intestinal tract. The mild strength of the drug used in the feed will kill most, but not all, of the parasites. This will allow gradual immunity to develop so the birds usually will not have problems with coccidiosis as adults. Grower and layer feed usually do not contain medication.

It is important that chicks have easy access to clean, fresh water. Manufactured chick waterers usually consist of a quart or gallon jar with screw-on base that allows for water level adjustment. If water spills occur in the location of the waterer, then these should be cleaned as soon as possible to prevent bacterial growth that leads to odors and possibly disease. An automatic waterer placed six inches off the ground is the most adequate way to ensure the birds have clean, fresh water daily. A constant supply of clean, fresh water is essential for healthy birds. Twenty-five hens can drink a gallon of water each day. Water consumption will increase dramatically during hot weather.

Nesting

As the birds reach the age of 18–20 weeks, nesting boxes should be in place. Boxes measuring 12 x 12 x 12 inches, half filled with straw are ideal. Provide one nest box for each five hens in the flock, and place them about two feet above the ground. A perch may be placed in front of each box allowing a spot for hens to land before entering the box. Nesting boxes should be checked twice a day for eggs. Eggs should not be allowed to accumulate in the nests. Otherwise the hens will go out of egg production and want to sit on the eggs to incubate them. This type of hen is commonly referred to as a "broody" hen.

Day length influences egg production. If day length decreases during the laying period, the number of eggs may decrease. The use of artificial light can add extra time at the beginning or end of the true daylight. A combination of natural and artificial light resulting in 14–16 hours of light per day is effective to maintain egg production throughout the year.

Egg production for a small backyard flock should be about 200–240 eggs, or 17–20 dozen, per hen a year.

Breed Description

You have two basic choices when deciding what type of poultry to keep. You may choose a breed that excels in egg production or a breed noted for meat production; a few breeds produce both fairly well. Chickens bred to produce eggs fall into two classifications—the leghorn type that produces white eggs and the sex-linked type that produces brown eggs.

While the leghorn strain of chicken will produce the most eggs, these birds are quite small and are not a good choice for meat. The Rock-Cornish, a commercial broiler-type bird, has been bred for rapid meat production. Breeds that may work well for dual purpose include the Rhode Island Red, Plymouth Rock, New Hampshire, Wyandotte, and Orpington.

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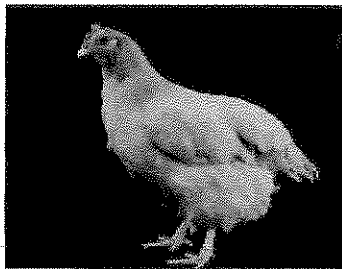


Figure 1. Buff Orpington hen. (Photograph by Tom Wright, UF/IFAS.)

[Click thumbnail to enlarge.]

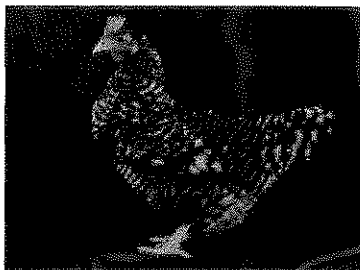


Figure 2. Barred Rock hen. (Photograph by Tom Wright, UF/IFAS.)

[Click thumbnail to enlarge.]

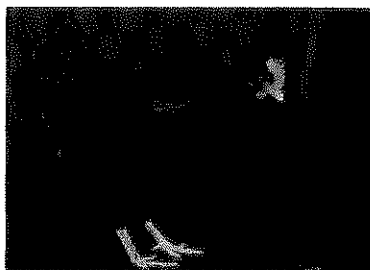


Figure 3. Rhode Island Red hen. (Photograph by Tom Wright, UF/IFAS.)

[Click thumbnail to enlarge.]

Hatcheries

Murray McMurray, P.O. Box 458, 191 Cloz Drive, Webster City, Iowa 50595, (800) 456-3280

<http://www.mcmurrayhatchery.com/index.html>

Ideal Poultry Breeding Farms Inc., P.O. Box 591, Cameron, Texas 76520-0591, (254) 697-6677 <http://www.ideal-poultry.com/>

Mt. Healthy Hatcheries Inc., 9839 Winton Road, Mt. Healthy, Ohio 45231, (800) 451-5603 <http://www.mthealthy.com/>

Cackle Hatchery, P.O. Box 529, Lebanon, Missouri 65536, (417) 532-4581 <http://www.cacklehatchery.com>

Tables

Table 1. Breed Description

Breed	Plumage Color	Eggshell Color	Rate of Lay	Breed Information
Barred Plymouth Rock	Black and white barring	Brown	Excellent	Oldest breed; excellent dual-purpose breed

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Prevention and Control of Fowl Pox in Backyard Chicken Flocks¹

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Gary D. Butcher, D.V.M., Ph.D. and Fred Rossi, Ph.D.²

During the past several years there has been a great upsurge of interest in maintaining small backyard poultry flocks. These birds are raised for hobby, show and food. Though owners have much interest in their birds, the health status is often overlooked. Several diseases which are easily vaccinated against need to be considered in their health management programs. One such disease is fowl pox.

Pox is a relatively slow spreading viral infection of chickens characterized by scab-like lesions on the skin of the unfeathered body parts and/or diphtheritic (wet) membranes lining the mouth or air passages. It has been present in chickens since earliest times and is found throughout the world. Infection with the fowl pox virus will cause the chickens to have poor growth, poor feed conversion and a precipitous fall in egg production. Mortality will seldom be marked if the lesions are limited to the skin. However, death may occur if the oral cavity or air passages become involved.

The disease may occur in any age bird, primarily during the warm months of the year. The virus is stable and can be transmitted by direct contact with an infected chicken or by mosquitoes.

Pox is readily diagnosed by a veterinarian based on flock history, presence of typical lesions, and in some instances by microscopic examination of affected tissues and virus isolation studies.

There is no treatment for fowl pox. Control and prevention in chickens is accomplished by vaccination by the wing web method with a commercially available fowl pox or pigeon pox vaccine. This should be administered to all chickens at 12-16 weeks of age. Vaccinated birds should be examined for takes about seven to ten days following inoculation. A take consists of swelling of the skin or a scab at the site where the vaccine was applied.

A high percentage of chickens showing reaction (takes) indicates a satisfactory vaccination. The absence of a take could be the result of vaccine being administered improperly, use of a vaccine with inadequate potency (improperly stored or used after expiration date), or vaccine being applied to an immune bird.

Precautions should be taken when administering the pox vaccine as it is a live type of virus vaccine. Because the pox vaccine produces a mild form of the disease, only healthy birds should be vaccinated. It is strongly recommended that all chickens in a house be vaccinated on the same day. The vaccine must be applied only to the vaccination site, and precautions taken to prevent contamination of other parts of

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the chicken, the premises and the equipment. Mosquito control should also be part of the preventive program.

These simple precautions will provide protection to your chickens, and allow you to enjoy and raise your flock free of this disease.

Footnotes

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Intestinal Parasites in Backyard Chicken Flocks¹

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Gary D. Butcher and Richard D. Miles²

Intestinal parasites (worms) are very common in chickens in the backyard type poultry flocks. The presence of a few parasites do not usually cause a problem. However, large numbers can have a devastating effect on growth, egg production, and over-all health. The concentration of parasite eggs in the chickens environment is one factor which plays a major role in determining the severity of the infection. The chickens pick up the parasite eggs directly by ingesting contaminated feed, water, or litter or by eating snails, earthworms, or other insects (intermediate hosts) which can carry the eggs.

Clinical signs of parasitism are unthriftiness, poor growth and feed conversion, decreased egg production, and even death in severe infections. Furthermore, parasites can make the flock less resistant to diseases and exacerbate existing disease conditions.

Of all the intestinal worms, large roundworms (*Ascaridia galli*) probably inflict the most damage. Young birds are affected more severely. A mild infection is often not noticed. Large numbers of worms, however, interfere with feed absorption causing poor growth and production. In severe infections there can be actual intestinal blockage by the worms, causing death. Affected birds are unthrifty and more susceptible to other diseases. Roundworms are passed from bird to bird by directly ingesting the parasite egg in fecal contaminated feed, water, or litter, or by eating grasshoppers or earthworms carrying the parasite.

Another worm commonly found in chickens is the cecal worm (*Heterakis gallinarum*). While it rarely causes problems in chickens, its chief economic importance lies in its role as a carrier of the organism *Histomonas meleagridis*, which causes a deadly disease in turkeys known as blackhead. Earthworms ingest the cecal worm egg containing the histomonad organism from the chicken litter. When the earthworms are ingested by the turkeys, they become infected. The cecal worm egg containing the histomonad organism may also be directly ingested by turkeys. Thus, one should never house chickens and turkeys together or allow turkeys on range which chickens have previously occupied.

Other intestinal parasites that cause problems are the small roundworms (*Capillaria sp.*) These parasites infect the intestines causing hemorrhage and thickening of the intestinal walls, leading to poor feed absorption and poor growth. Small roundworms are passed directly from bird to bird by ingestion of the parasite eggs or by ingestion of earthworms, insects, and other vectors carrying the parasite. Tapeworms are also very common, but unlike other worms must be passed through an intermediate host, such as a snail, slug, earthworm, beetle or fly.

Prevention and control of worm infestations in backyard poultry flocks involves proper management of diet, sanitation, and treatment. Chickens need a proper diet, especially an adequate supply of vitamins A and the B complex. A deficiency in these has been shown to increase the susceptibility to parasitism.

1. Thorough removal of litter between flocks of chickens.
2. Keep litter as dry as possible.
3. Avoid overcrowding.
4. Keep wild birds, pigeons and other birds away from chickens. They may be infected and shedding the worm eggs.
5. Provide adequate drainage of ranges and move shelters frequently to decrease accumulation of droppings.
6. Keep birds off freshly plowed ground where ingestion of earthworms and other insects is more likely.
7. Use insecticides to control insect populations.

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The treatment of chickens to control intestinal parasites can benefit the grower by decreasing parasite levels in heavily infected birds. This will result in a decrease in the build-up of parasite eggs in the environment. Specific worm infections require specific medications. A determination of which worms are affecting your chickens should be made by your veterinarian prior to treatment. Proper use of medication in combination with sound management and sanitation practices should limit production losses from intestinal worms.

Footnotes

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