



4-H GUIDE

RAISING CHICKENS



TARA KINDSCHI



Plan to pick up your chicks at the local post office as soon as they call you. Don't wait for your carrier to deliver them. Open the box right away and take the chicks out one at a time, allow each to have a drink at the waterer, and put them directly into the warmest area of the brooder. *Tara Kindschi*

Nature intended the chick to have extra time under the hen to dry off, warm up after hatching, and strengthen and get walking well before going in search of its first meal. This is why chicks can spend their first one to three days in a shipping box in the postal system.

During shipment, a group of chicks (most hatcheries use twenty-five as a minimum number) can huddle together to provide enough warmth to keep the entire group warm while in a small, ventilated box. This process works to deliver the chicks to your home through the mail. Once home, you need to get an outside source of heat to the chicks, feed them, and provide a supply of water at a comfortable temperature as soon as possible. Chicks will have used up all their reserve energy and strength getting to you.

Chicks are like human babies in many ways. They make a lot of noise when they aren't comfortable and happy. It is your job to determine what isn't quite right in their environment. They will let you know when it is right by quieting down, often within a few minutes of the correct adjustment.

Bantam chicks are much smaller than large fowl chicks. Some of the bantam breeds, such as Sebrights and Old English Games, are extremely small and very fragile. As with adult birds, raising large fowl and bantam chicks together in the same brooder can be very risky. The bantams are often stepped on, pushed into the water, or smothered by the larger chicks. Plan to have separate brooders for each size if you have bantam and large fowl chicks. The same consideration applies if you have chicks of different ages. Chicks grow fast and become more active daily. Putting day-old chicks in with week-old chicks can mean death for the little ones.

Day-Olds

The basic requirements for chicks from a day old to three weeks of age are the same. The same feed and water requirements also apply for a hen raising her chicks. Here are some guidelines to follow for happy, healthy chicks.

Heat

The temperature should be at ninety to ninety-five degrees Fahrenheit for day-old chicks. Each week lower the temperature by five degrees. The temperature can be adjusted by moving the heat lamp farther away or by switching to lower-wattage bulbs, or by using a combination of both.

Light

Lights should be on twenty-four hours a day to keep the chicks eating and drinking as much as possible and to keep them from piling on each other. If you use a heat lamp to warm the chicks, it will probably be your light source as well. Heat lamps can be a fire hazard, so use extreme caution when placing the heat lamp to make sure it can't be knocked over, fall into the pen, or rub against a flammable surface, such as a cardboard box.

Use two 75-watt bulbs versus one 150-watt bulb to warm the chicks. If one bulb burns out, the other will be enough of a heat source to keep the chicks from piling up and suffocating each other. A piling disaster can happen in just a few minutes, often before you even know there is a problem.

Cleanliness

Chicks in dirty environments are prone to diseases. Keep feeders and waterers clean and free of droppings. Put fresh water in each waterer daily. Change the bedding when you notice a buildup of droppings, or every two to five days depending on space and chick numbers.



This brooder setup uses wood shavings topped by a layer of paper towels for the first three days until the chicks learn the difference between what is the feed and what is the bedding. Chicks started on straight wood shavings often eat the shavings in confusion and can die of malnutrition or impaction. *Tara Kindschi*



A large fowl, bearded, silver-laced Polish chick shows signs of good growth and cleanliness at a week old. Get chicks off to a good start by using a complete feed starter ration with at least 21 percent protein. Use starter feed until five to eight weeks of age and then change to grower feed. *Kendall Babcock*

Feed

A small-crumble-type feed designed especially for chicks with at least 21 percent protein is best. Ready-made poultry feeds all contain corn for energy and protein for growth, feather quality, and bone density. Different minerals, salts, and other grains are added for taste and nutrition requirements based on the type of bird being fed. Your chicks should eat a feed labeled as "starter." Layer feed contains calcium and other nutrients that adult birds need but will be too much for young birds and can cause bone deformities.

On day one, sprinkle some of the feed on the paper towels you should use to cover the bedding (see following section on bedding). Make sure the feeders are full so the chicks know where to find the food. Provide feed free-choice and have adequate space at the feeders so that every chick can eat at the same time. Feeders should keep the feed inside and prevent the chicks from hopping into the feeder. There are many types of feeders

available, or you can make your own. The feeder should have covers with holes for the chicks to eat through or a bar across the top to keep them from hopping in. Have enough feeders so you only have to fill them once a day. Add larger feeders or more of them as the chicks grow.

What could happen if your chicks don't have a balanced diet? If a chick lacks vital nutrients during bone formation, its growth could be stunted. If chicks get too much calcium, they could suffer from rickets, where the legs grow crooked or the backbone forms a hunchback. Chicks, juveniles, and adult birds are all prone to cannibalism (pecking at each other until blood is drawn or until death) if they are crowded or lack vital minerals.

Water

Keep enough waterers to supply chicks with water for twenty-four hours, even if you plan on filling them more often. Chicks drink a lot of water as they grow, especially if they are a bit too warm. A one-quart jar with a watering base may have been plenty on day one for fifteen chicks, but by week two, they may be drinking two to three times that amount in a day. Choose a shallow base to keep day-old chicks from falling into the water, getting chilled, and possibly drowning. Add a few larger stones or pebbles into the waterer's base to keep the chicks from falling in and to help them get back out if they do fall in. Change the water daily if they don't drink it all. You should have a one-gallon waterer for every thirty to fifty chicks by the time they are a few weeks old.

Container/Brooder

For the first few weeks of their lives, chicks need a container that provides them with enough room for every chick to lie either under or out of the heat. Chicks grow very fast, and you must be ready to increase



The amount of water consumed by growing chicks is astonishing. A waterer like this one is not large enough for six week old chicks. It would have to be refilled several times a day. It's better to use several quart waterers or a one-gallon waterer that you freshen daily. *DeAnn Richards*



Raising and caring for chickens on a daily basis is a great learning experience for young adults. Birds that are handled daily become tame and friendly. Many flock keepers consider their birds to be pets and not just livestock. Poultry keeping is a great hobby for the whole family. *Kelly Damaschke*

To get the maximum amount of joy from your flock, you and your family need to provide your birds with adequate care to keep them healthy and happy. Raising adult birds does require some basic starting supplies and special knowledge about care and management of the flock.

Waterers

Purchase waterers from farm supply stores. Many designs and sizes are suitable for your

The waterer should hold enough water for two days. Place it off of the ground for cleanliness and ease of drinking. A domed top keeps chickens from perching on top of the waterer and keeps their droppings out of the water supply. Use a heated base during cold weather to keep the water from freezing. Automatic watering systems run from a hose and low-pressure valve. They are a great time-saver but only work when the outside temperatures are above freezing.

Feeders

Several types of feeders can be used for adult birds. All are designed to keep the feed from being wasted and the birds and their droppings out of the food source. You will need separate spaces for feed, grit, and oyster shell. Allow enough room at feeders for all chickens to be able to eat at the same time. Cylinder-type metal or plastic feeders can be hung from the coop ceiling at the height appropriate for your birds. Trough-type feeders are often raised off the ground. They should have a rod or wire cover to keep the chickens from hopping entirely into the trough. Feeders can also be built of wood.



A galvanized metal feeder can be hung from the ceiling of a chicken coop and raised or lowered to the correct height for the flock. Weekly cleaning will keep the feeder free of droppings and dust. *Kendall Babcock*



This round plastic feeder holds several pounds of feed and is hung a few inches off the ground for this large fowl flock. It is protected from the elements by a metal roof and is filled daily and cleaned weekly. *Shelly Sonsalla*

Roosts

Have a minimum of eight to ten inches of roost available per large fowl bird and six to eight inches of roost per bird for bantam breeds. A series of stacking bars rising from six inches to

the wall like stair steps makes the best use of space for a large flock. Metal and plastic tend to be too slippery for the chickens to grip comfortably. The area directly under the roosts will accumulate the most droppings, so create

Nesting Boxes

You should have one nesting box for every four to six hens. Boxes can be built using plywood or purchased as metal or plastic boxes. The types that hang on the wall are best, since they won't take up valuable floor space. Boxes should be placed on the west or east wall in a south-facing coop to keep the hens out of the hot afternoon sun. Disinfecting and cleaning is easier with the metal or plastic nests, but their cost may be prohibitive to the small-flock owner. Nest boxes should have a bar attached to the front to help the hens get in and out of the boxes without breaking eggs.

Nest boxes should be bedded with straw, shavings, sawdust, or shredded paper to prevent egg breakage when hens enter or leave the nests. Broken eggs can encourage an egg-eating habit. Once that bad habit starts, a hen may start to break eggs on purpose to eat them. Other birds may follow suit, and soon you have a whole flock of egg-eating hens. The habit is impossible to break, so care must be used to prevent it from starting. Collecting eggs twice a day will also help avoid egg breakage.

Feed

Chickens require a healthy, well-balanced diet. For adult birds, this is easily obtained through the use of pre-formulated feeds much like they

If your hens aren't laying eggs in the nest but seem to prefer the ground, try putting deeper bedding in the nest and adding a wooden egg or golf ball to mimic a real egg. This sometimes helps hens get the idea to lay their eggs in the nest box.

have eaten since they were chicks. This feed is generally available in fifty-pound bags at local feed or pet stores. There are different formulas for different ages and types of birds, including the following three basic chicken feeds:

- Starter for one day to eight weeks of age; a fine crumble-type feed.
- Grower for birds eight weeks to egg-laying age and for meat birds.
- Layer for adult birds that have started egg production; available as a small crumble or large crumble.
- Mash for egg-layers is a powder-type feed that can be ground at local feed mills.

Many companies carry basic feeds. Some also have special formulas that include all-vegetarian, show feeds with higher oils, scratch feeds to be used as a treat, and concentrates to be mixed with your own grains to form a balanced feed.

Eggs laid in nests without bedding have a tendency to break. Hens scratch and draw bedding out every time they enter a nest. Clean out soiled bedding and add new bedding in the form of straw, shavings, or shredded paper as a part of your weekly chore schedule. *Kendall Babcock*



Pre-formulated complete feeds are the best choice for the backyard flock. There are many feed companies and formulas, such as organic, show, layer, starter, and grower feeds. Plan to purchase only as much as you will use in two to three weeks and store in a clean, dry area away from bird droppings, rodents, and temperature extremes. *Tara Kindschi*

Formulas or recipes for custom-mixed feed are available through your local county agricultural extension office or feed cooperative. The batch size that most feed stores or mills will make is too large for backyard flock use, and the feed can spoil or lose nutritional value if not used right away.

Feed should be offered free-choice, except when raising broiler-type meat birds. Free-choice means to have the food always in the feeder for the birds to eat as often and as much as they like.

It is important to keep your feed supply fresh, dry, and free of droppings from

Did you know chickens don't have teeth? They swallow their food whole. The crop, an enlarged part of the gullet for temporary food storage, uses small stones called grit to grind food before it enters the digestive system.

Chicken-catching can be a time-consuming chore if you have any wild breeds or your chickens are free-range. Several tools are available to help with this chore. A fish net or a net made for avian and bird-catching (with or without a telescoping handle) comes in handy at home or shows. There is also an old-fashioned simple tool called a "chicken catcher" made with a wood handle and a sturdy wire extension that has a hook on the end and is designed to grab a walking bird by one or both feet.

birds and rodents, such as mice and rats. Unfortunately, rodents love chicken coops for the warmth, feed, and feathers for nests. Keep the feed in a sealed container or away from the main coop to prevent access by rodents and to maintain the nutritional value. Try to purchase and store only a week's worth of feed. Old feed, especially in opened bags, can quickly lose its nutrient quality.

Grit

Grit needs to be a part of every chicken's diet. Grit consists of the small stones that a chicken ingests to help its crop grind feed. A constant supply of grit is needed and should be offered free-choice. Start introducing very small grit to chicks at two to three weeks of age by sprinkling a small amount on top of their feed. This tiny grit can be purchased in the caged-bird section at a pet store and comes in small ½- to 1-pound boxes labeled for cockatiels, parrots, and similar caged birds. This amount is perfect for providing twenty-five chicks with grit for several weeks until they move up to the small to medium grit that is available at local feed stores in 20- to 30-pound bags. Plan to share this size of a bag with a fellow poultry enthusiast or store it carefully, since it will keep and last a long time. Chickens





This feeder has legs to raise the trough off the floor to a comfortable height for chickens. It also features a division on each end for grit or oyster shell. A wire cover allows the chickens to eat but keeps them from jumping in. *Kendall Babcock*

that free-range exclusively may find their own small stones while foraging, but always have grit available in case they don't.

Oyster Shell

Another item that needs to be a part of every laying hen's diet is extra calcium, used to help form strong eggshells. This extra calcium is easily supplied in the form of broken oyster shells, which come in twenty- to thirty-pound bags through a local feed store. Oyster shell should be offered free-choice after pullets start laying.

Treats/Scratch Feed

Chickens love treats in the form of table scraps, grass clippings, weeds from gardens and flowerbeds, whole grains, sunflower seeds, and more! Treats should not be used to replace balanced feed that is available free-choice, but balanced-feed consumption may go down considerably on a day when there are a lot of scraps and weeds given. That is great savings for the pocketbook. Use care and avoid feeding meat scraps and rotten food that may contain harmful bacteria.

Bedding

Bedding materials include hay or straw, wood shavings, sawdust, and shredded paper. Bedding must be dry and absorbent. Shavings and shredded paper are both very absorbent, but hay or straw is sometimes a more cost-effective alternative. Seeds contained in hay and straw are loved by the birds and promote scratching and turning of the bedding. A thickness of three to six inches is recommended for shavings and shredded paper, with six to eight inches for hay or straw bedding.

Once bedding becomes damp or filled with droppings, it must be replaced with fresh bedding. How often it needs to be replaced varies based on number and size of birds, type and thickness of bedding, and weather conditions.

The deep-litter method is a form of in-coop composting with your bedding of choice. It is a very popular solution for avid gardeners, since it supplies them with ready-to-use compost. This method involves a very deep bedding of eight to twelve inches of organic material that is often a mix of hay,

straw, shavings, shredded paper, mulch, and dead leaves. The idea is to have the hens do the turning and composting work associated with a standard compost pile. Scratch feed is sprinkled in the litter daily to force the hens to dig and turn the litter to find the treats. Lawn clippings, garden waste, and the like are added to the mix. The important factor is that there is no spoilage due to excess moisture. When compost is needed for gardens or flowerbeds, all you need to do is remove a portion of the litter from the coop.

Egg Supplies

Supplies that are needed for laying hens include the following:

- **Cartons:**
These can be reused from previous grocery store purchases or purchased from poultry supply houses.
- **Gathering basket:**
The old-fashioned-style basket made of wire works best to keep eggs from rolling and cracking or breaking.
- **Washing equipment:**
Commercial egg-washers are available, but you may find a sink, dish soap, and washcloth are adequate for home use. Check state and local regulations to determine the best egg-washing process if you plan to sell eggs.
- **Egg scale:**
Used to grade eggs by size. This is not mandatory, but it's a good way to determine what size eggs your hens lay. If you plan to sell eggs, check out state regulations concerning grading and labeling.

Confining Birds

Although you may choose to allow your flock to free-range or let your chickens into a yard daily, there are still times when the birds must remain in the coop. It is times like these that you must recheck your bird-numbers-to-square-foot ratio. Reasons to keep your birds in all day include the following:

- **Extreme weather:**
Keep your chickens inside during very cold weather, pouring rain, or deep snow
- **Vacation:**
Be sure birds are safe when you are away for an extended time. It's also easier for a temporary caregiver to attend to the birds in your flock if they are confined.
- **Observation/Catching:**
It's easier to catch birds for washing, blood testing, taking to a show, or giving medications when they are confined.
- **Predator protection:**
Prevent daytime hits by a predator. Keep the flock safe until a predator problem can be dealt with.

Adding Adult Birds

Plan ahead before making an impulse purchase at a show or swap. Your new birds need to be quarantined to keep your existing flock safe and healthy from any diseases or bad habits the new birds may have. There are simple steps to follow to quarantine the new birds. Have a place for the new birds to live away from your current flock for an extended period of time. They need to be kept away from your other birds for at least thirty days. You will need to build a pen or have a large cage in a building separate from your current flock. Don't share feeders or waterers between your flock and the newcomers without first disinfecting both carefully. Visit your existing flock first, and then go to the newcomers. This will help limit the spread of germs and