

## Chapter 1

# Joining Forces: Companion Gardening with Chickens

---

### *In This Chapter*

- ▶ Adding another dimension to your garden with chickens
  - ▶ Creating sustainability in your own garden
  - ▶ Introducing variations of free-ranging chickens
  - ▶ Enjoying incredible fresh eggs as a food source
- 

**G**ardening has so many benefits: bringing beauty to your space, giving yourself a chance to grow your own healthy foods, introducing a “green” way of living to your family, helping the environment through composting, and many, many more. When you add free-ranging chickens to the mix, you really amp up the value of your garden space and what you can do for yourself, your family, and your environment. It’s amazing what your garden can do for chickens and what chickens can do for your garden!

*Gardening with Free-Range Chickens For Dummies* is a guide to help you manage chickens in your garden. We cover the basics of raising chickens, as it relates to gardening with free-range chickens. For more in-depth information on backyard chickens, check out *Raising Chickens For Dummies* by Kimberley Willis with Rob Ludlow (Wiley).

In this chapter, we cover how owning chickens has risen in popularity and how it began. We also discuss the concept of free-ranging and how it works. From there, we move on to describing different types of chickens and how they can work in your garden. Lastly, we discuss creating a sustainable garden and how you can have fun with showing your personality through style and structures.

## *Getting Down to the Roots with Keeping Chickens*

To move forward, it helps to look to the past. Gardening has evolved quite a bit over the years. And, from modern gardening, the addition of backyard chickens has come to the mainstream.

### *Looking at the evolution of gardening*

Nearly four decades ago, a quiet “fresh local food” movement began in the U.S., and this food movement is still going strong today. Alice Waters opened her groundbreaking Berkeley, California restaurant, Chez Panisse, and heralded growing your own food, eating seasonal food grown locally, and educating school children about fresh food by creating school gardens. In that same time frame, also out of the Bay Area, Rosalind Creasy pioneered mixing flowers and vegetables and called her philosophy edible landscaping. She taught people to exchange water-thirsty front lawns for beautiful landscapes of fruits and vegetables.

In the past decade, food writers like Michael Pollan, author of *The Omnivore’s Dilemma* (Penguin), and others have graphically written on the dangers of how much your food has been industrialized and its impact on the environment, as well as the impact on nutrition in the typical Western diet.

In 1986, the “slow food movement” began in Italy, as an alternative to fast food and a goal of championing local agriculture and a return to artisanal food. Now, globally it has 100,000 members in more than 100 countries. Its goals are sustainable foods and the promotion of people and businesses involved in local food — such as chefs, restaurateurs, and local farmers producing quality artisan foods that are highly praised for their unsurpassed flavor and breadth of satisfaction. It strives to preserve traditional and regional cuisines, and promotes local farming and agriculture that’s part of the local ecosystem.

Today community gardens are just as popular as the necessary “Victory Gardens” were during the years through World War I and II, in the United States and in many other countries. During war times, the U.S. government asked private citizens to grow their own food at private homes and public parks for the purpose of easing the food shortages and rationing brought on by the war effort. See Figure 1-1 for an example of how Americans were asked to help.

**Figure 1-1:**  
A newspaper ad  
asking  
people to  
help the  
war effort  
by raising  
chickens.

**Uncle Sam Expects You  
To Keep Hens and Raise Chickens**



**Two Hens in the Back Yard for Each Person  
in the House Will Keep a Family  
In Fresh Eggs**

**E**VEN the smallest back yard has room for a flock large enough to supply the house with eggs. The cost of maintaining such a flock is small. Table and kitchen waste provide much of the feed for the hens. They require little attention—only a few minutes a day.

An interested child, old enough to take a little responsibility, can care for a few fowls as well as a grown person.

Every back yard in the United States should contribute its share to a bumper crop of poultry and eggs in 1918.

**In Time of Peace a Profitable Recreation  
In Time of War a Patriotic Duty**

For information about methods of Back-Yard Poultry Keeping suited to your location and conditions, write

**Your State Agricultural College  
or  
The United States Department of Agriculture  
Washington, D. C.**

This Space Donated by the Publisher

©Poultry Tribune

Now, it isn't uncommon to see abandoned vacant city lots transformed into urban "Gardens of Eden" by willing community residents. There's something empowering about working together for a common goal, and sharing the abundant fruits of your labor, as these community gardens demonstrate. For more information about community gardens in your area, contact the American Community Gardening Association at <http://www.communitygarden.org>.

Taking a cue from Alice Waters, schoolyard vegetable gardens are prevalent in our school systems today. Children learn how to grow their own food in these school gardens which have become living classrooms. Their enthusiasm for gardening, often spills over exuberantly to do more in their own backyard.

Today, families like the satisfaction of growing their own food, having control of how their food is raised, and the unsurpassable quality seasonal fresh food tastes from their garden.

## *Working toward growing your own food*

As a nation, the U.S. has been influenced and educated over time by this local fresh food movement. Today many people want to have their own vegetable gardens, and grow their own food in their own backyards. In doing so, you have the capability to really make a difference for the environment and ultimately the planet.

If you grow your own food, you save energy on freight and transportation costs, save wildlife habitats by not having to clear the land and use it for agriculture, send less plastic packaging materials into landfills, have control of chemicals and pesticides used in your food, have freedom to grow “nearly lost” heirloom edibles and raise endangered poultry breeds for future generations, and lastly enjoy fresh seasonal food that abounds with incredible wholesome flavor and health for your bodies. Growing your own food has become very popular for all these reasons. Raising chickens in your own garden and property is the next easy step if you want more.

## *Checking on the trend of owning chickens*

Free-ranging chickens isn’t a new concept. At the turn of the 20th century, most poultry was raised on small family farms. Farm flocks were small, letting the hens fend for themselves through foraging, and supplemented with a little grain and kitchen scraps. Eggs were the primary value, and meat was considered a secondary product. Roast chicken was the special Sunday dinner.

The concept of pasturing poultry, letting chickens free-range during the day, and prudently confining them in secure housing at night was prevalent. A faithful watchdog was another important element to guard the flock during the day.

This popular method of pasturing poultry, reached a peak in the U.S. from the 1930s through the 1960s. Farmers saw that free-ranging poultry not only improved their soil, but also ultimately produced tastier eggs, as well as firm and better textured meats. In addition, it was humane treatment. Farmers often integrated pasturing poultry after other grazing livestock, such as cows, for managed grazing benefits.

In the 1950s, the trend began transitioning away from the family farms to industrialized, larger-scale, specialized operations that confined and housed chickens full time for greater production benefits. At this same time, the concept of raising chickens, called “broilers,” for meat production began. Broilers had the ability to grow to maturity very quickly, and be ready for the consumer market in an amazing 6-8 weeks time.

Today, having backyard chickens is incredibly popular, and in a way it’s reminiscent of nostalgic past times on the farm. You may be lucky enough to live

on a farm, but statistics currently indicate the majority of the U.S. population lives closer to cities and urban areas. Perhaps gardens and an interest in raising chickens are what helps keep people grounded to the land.

Chickens are a natural as garden companions because they help with garden chores such as weeding, eating insects, keeping a lawn mowed, and depositing fertilizer. If that is not enough, they have fun little engaging personalities, are very sociable, and provide us with protein-rich eggs.

## Defining the Free-Range Concept

Many people are used to thinking of commercial chickens in cages, within enclosed buildings, under artificial lighting. Free-ranging chickens is a very different approach to raising chickens. Chickens by their very nature are foragers, and they're the happiest when they're able to eat their natural diet from their surrounding environment. *Free-range* is defined as keeping livestock or poultry in conditions natural to them, with freedom of movement.

Chickens prefer to be on the move, looking for food, and exploring their immediate domain and what it has to offer. Chickens will never overeat, yet will eat all day, unless they're brooding, and unless it's night. Chickens don't eat in the dark. Chickens will free-range generally as a flock or a unit. This means that all your chickens generally forage together in close proximity of each other. For this reason, we recommend at least 250 to 300 square feet of space per bird.



*Brooding* is the hen's maternal instinct to remain in the nesting boxes, warming a clutch of eggs. If the eggs are fertile, the mother hen keeps the eggs warm with her body, allowing the embryos to develop and grow. In 21 days, chicks hatch out of their shells.

## The process of free-ranging

Chickens in natural conditions forage for tender young succulent plant growth. Along the way they delight in finding bugs, insects, worms, and larvae. Chickens eat a wide range of foods such as plants, edibles, weeds, grass, berries, seeds, and more. Chickens can be a natural cog in the ecosystem wheel of your garden and landscape setting.



As an owner of your flock, it's up to you to be proactive in keeping your chickens safe from anything that could be harmful to them in your garden setting. A short list is hazardous materials, predators, pesticides, and known deadly poisonous plants.

Chickens need a habitat that is heavily layered with plants, that provide food, shelter, and protection, which essentially simulates their original jungle-like environment. With dense plantings and many layers in a garden, chickens will be occupied, happy, fed, and will be less likely to destroy your garden. They will also be sheltered and protected by plant density, and the many layers of a garden. In Chapter 6, we go into detail the many layers and suggested plant lists.

Chickens, no matter how endearing and fun they are to have in your garden, are essentially small livestock, and must be effectively managed like any other type of livestock if you intend to free-range them. See later in this section for the many different methods of free-ranging chickens to accommodate your lifestyle.



This book is based on providing information for free-ranging your chickens effectively. Chickens do very well, however, in a confinement setting, such as a well set-up chicken coop, and adjoining secure outside pen, giving them ample space and square footage per bird. We don't, however, recommend confining chickens in cages, otherwise you are raising chickens the same way they are raised in commercial poultry operations. Chickens are active, curious creatures. They prefer to have freedom of movement in seeking their natural diet, and their eggs will be tastier and healthier for you.

If you open your lush, beautiful gardens every year to be on a garden tour, you may not want to give your chickens free rein of the garden. If your property butts up next to a wilderness area, perhaps the predator risk is too high, and you'll want to have your chickens restricted to their coop and a totally enclosed secure outside pen. Maybe you have a homestead farm, and you plan on rotating your chicken flock in multiple pastures. No matter what your setting or situation is raising chickens, you have a variety of methods to choose from.

There are many variables to consider in laying out your land for some form of free-ranging chickens:

- ✓ The size and design of your property and garden.
- ✓ The type of plants and landscape growing in it.
- ✓ How your property is maintained and managed.
- ✓ Balancing your flock size with your allotted space. Always check your city/county zoning for flock size stipulations. See Chapter 3 for details.
- ✓ How you manage your chicken flock with your lifestyle.
- ✓ How much dedicated time will your chickens be allowed to forage for themselves.

## *Free-range methods to choose from*

Here are our suggested free-ranging chicken methods. We caution you that free-range means different things to different people, and in different parts of the country, and the world. We define free-range chickens as allowing chickens to access their outdoors freely with sun, soil, and with the ability to forage freely for their natural diet in a sheltered and protected plant landscape. Free-range can be categorized into two basic categories, free-range and confined free-range.

### *Free-range*

Here are two main types of free-ranging:

- ✓ Free-range in the garden all the time. Chickens spent most of their entire day in a dense, well-layered garden. They return each night to their chicken coop, and are securely locked in and protected for the night. See Chapter 4, for more details and illustrations of non-layered and well-layered landscapes.
- ✓ Free-range in the garden part time. Same as above on a part time basis, or weekends.

### *Confine-range*

For most of us, a managed confined-range method works best for the health and well-being of our chickens, yet lets us as gardeners manage our chickens effectively, and in balance with our gardens. Here is our list of confined-range methods for chickens. Your lifestyle and region you live in makes a huge difference in how to raise your chickens. See Chapter 3, for more information on how lifestyles and regional variables make a difference. See Chapter 4 for an in-depth look at the following types of confined free-ranging methods:

- ✓ Confined-range with rotating permanent runs or zones
- ✓ Confined-range with temporary runs
- ✓ Confined-range with mobile chicken coops
- ✓ Confined-range with mobile chicken tractors

These free-range and confined-range management methods for chickens, include lots of variations to adapt to your particular setting and your lifestyle.

## *There's No Beef About Chickens*

When we speak of free-range chickens in the garden for this book, we're basically referring to raising chickens for egg-laying purposes. We may give tips or facts regarding other breeds from time to time. We go into more detail about the various breeds for planning your home flock in Chapter 2.

Keeping a backyard flock of chickens and free-ranging them in your garden are very rewarding. Doing so adds another dimension to your garden, another purpose, giving it a living pulse. Your flock helps your garden flourish by aerating and fertilizing your soil and acting as weed and pest police.

Chickens are adaptable and can live in urban, suburban, and rural areas with ease, provided you give them the essentials to be happy and enjoy their lives. They don't require much space. Chickens are brimming with personality and charming amusement, and they can quickly become endearing family pets.

In fact, chickens can easily become part of the family, just like the family dog or cat. When properly cared for, a chicken's average life span is usually five to seven years, although some have life expectancies of 12 to 15 years. Life expectancy varies within the different breeds, and their environment. Unfortunately, too often a predator's attack ends a healthy chicken's life.

It is important that you know how best to manage chickens, just like any other animal, bird, or living thing you may care for. Providing your free-range chickens with a bit of training, guidance, management, and attention to detail ensures a rewarding and beneficial experience for you both. (Check out Chapter 9 for more information.)

Our book is all about you too, the gardener, and the type of garden you have, or want to have. Chickens and gardens work well together, but there has to be some "give and take," and common sense management involved. Managing your flock in your garden is key to having a winning relationship with your chickens and a garden that flourishes.

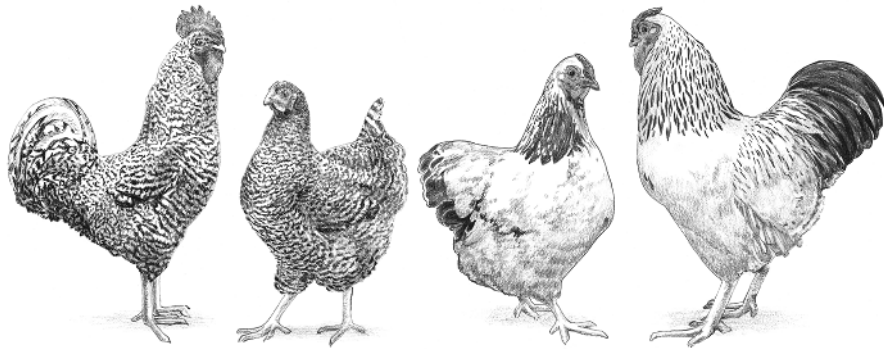
### *Categorizing chicken breeds*

Chicken breeds, like dog breeds, can be categorized by their different purposes serving humans. Dogs are bred for many purposes, such as physical abilities, appearance, temperament, and show. Chickens have been bred for many purposes, too. Sometimes these purposes overlap, as chicken dual-purpose breeds do. Here are some of the categories:

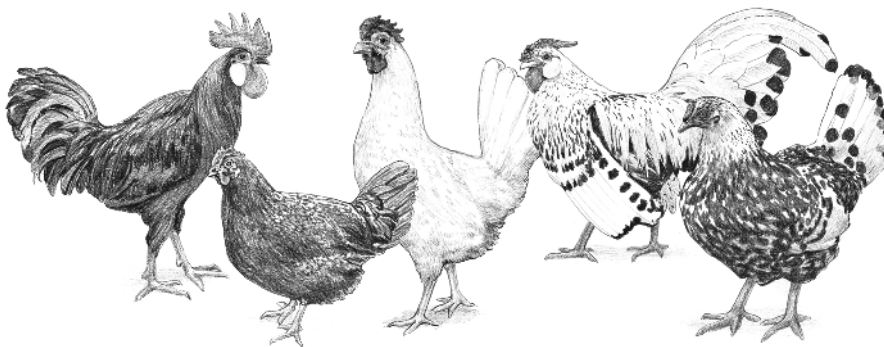


- ✓ **Dual-purpose breeds:** They have formidable egg-laying capabilities and heavy-breed configurations for meat consumption. They function well for both purposes. These are good breeds for free-ranging in your garden, and the majority of backyard flocks are made up of this group of breeds. These breeds can weigh six to eight pounds at maturity, and they aren't able to fly well. See Figure 1-2 for examples of these breeds.
- ✓ **Egg-laying breeds:** Most of these breeds are known for their prolific egg-laying capabilities: 250 to 300 eggs per year in their first one to three egg-laying years. See Figures 1-3, 1-4, and 1-5 for examples of popular egg-laying breeds.

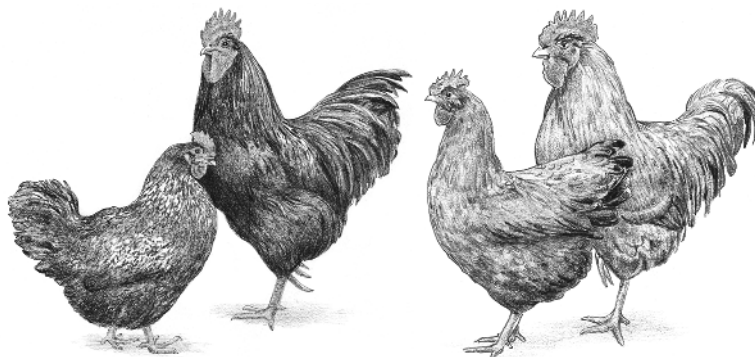
**Figure 1-2:**  
Common dual-purpose breeds — Barred Rock (left) and Wyandotte (right).



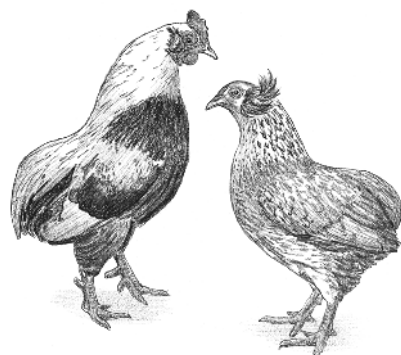
**Figure 1-3:**  
Common breeds that lay white eggs — Minorca (far left), white Leghorn (middle), and Hamburg (right).



**Figure 1-4:**  
Common  
brown-  
egg layer  
breeds —  
Australorp  
(left) and  
Rhode  
Island Red  
(right).

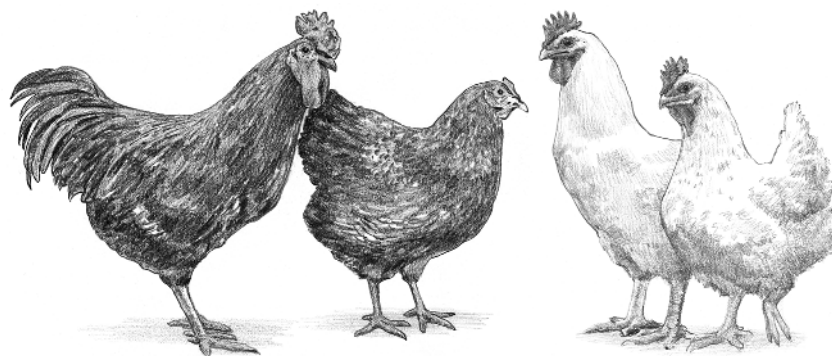


**Figure 1-5:**  
Common  
colored-  
egg layer  
breed —  
Araucana.

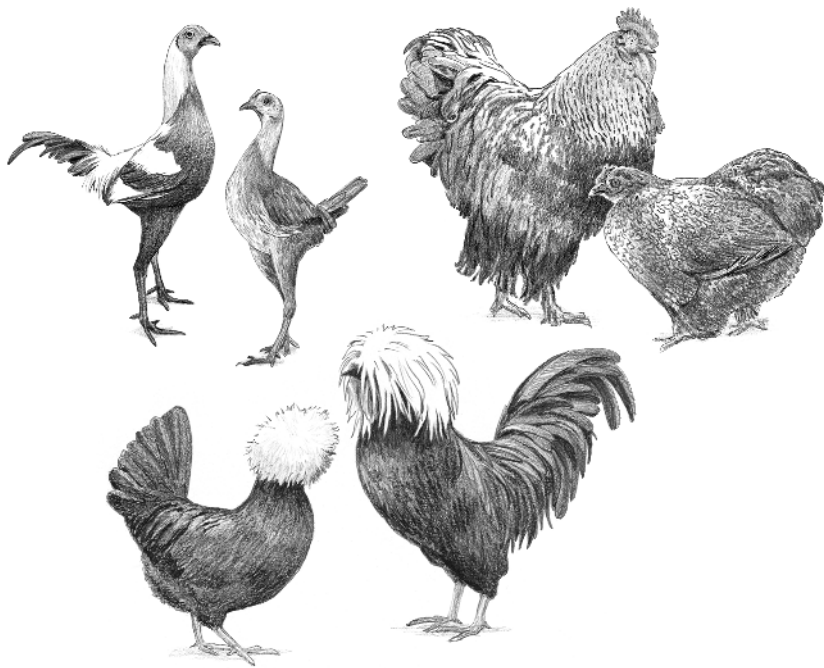


✓ **Meat breeds:** Most meat breeds have been genetically bred. They have the propensity to grow quickly and with heavy-muscling. They fall short in egg-laying, and sometimes lose their capability to efficiently reproduce on their own. See Figure 1-6 for two popular meat breeds.

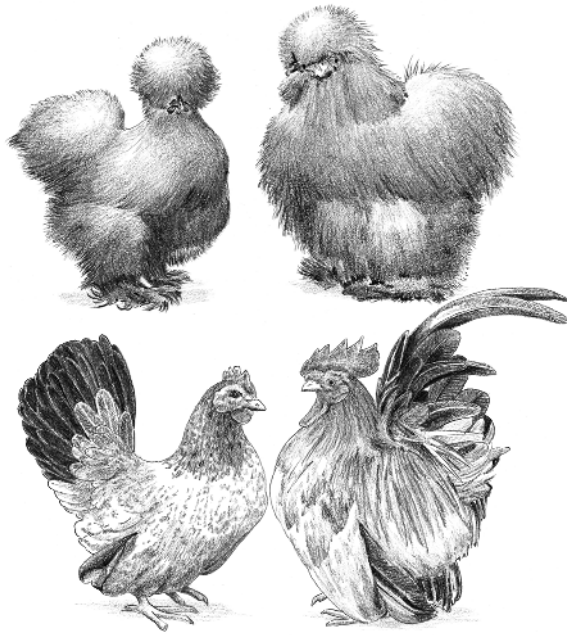
**Figure 1-6:**  
Common  
meat  
breeds —  
Jersey Giant  
(left) and  
Cornish X  
Rock (right).



- ✓ **Show competition breeds:** These breeds are the ornamental breeds of the chicken world. Children gravitate to these breeds, drawn to their appearance and personalities. They aren't prolific layers, and they aren't best for eating. Figure 1-7 shows three examples.
- ✓ **Bantam breeds:** Bantam breeds are miniature chickens, usually three pounds and under. Almost all chicken breeds have a bantam size and a standard size. If a breed has only a bantam size, it's considered a true bantam. Bantams are perfect for urban environments, because they require less space. Look at Figure 1-8 for breed examples.



**Figure 1-7:**  
Common  
show  
and pet  
breeds —  
Old English  
Game (top  
left), Cochin  
(top right),  
and Polish  
(bottom).



**Figure 1-8:**  
True  
bantams —  
the Silky  
(top) and the  
Japanese  
bantam  
(bottom).

## *Helping gardens to flourish*



Chickens are small, adaptable livestock. Chickens leave a small imprint in most gardens, yet they do a big job of benefiting a garden. Balance is key, and your flock size to your garden size must be a healthy ratio for both to thrive. This is the most important factor when adding chickens to your garden or landscape.

Factors that contribute to the amount of space required for a healthy balance of chickens in your garden include the following:

- ✓ Your climate
- ✓ The time of year and season
- ✓ The breed and age of your chickens
- ✓ The quality and condition of your garden or area where you're free-ranging the chickens
- ✓ Is your garden new or mature, established with lots of trees and shrubs that provide important shelter and protection for your chickens

Your garden creates a healthy habitat for chickens to thrive and live well, and in return they keep your garden healthy and provide a sustainable food source.

Chickens roam about the garden minding their own business, fitting into the general landscape, rather than being intrusive. However, if you're in the garden, they're likely to forage near you, because they're always curious and social. Most chicken breeds are stunning in appearance, and the general nature of happy, clucking, cooing chickens makes for a pleasant atmosphere.

Chickens are great diggers and scratchers, which means they're constantly aerating your garden throughout the day with their strong legs and long toenails that dig deep into the dirt. Chickens naturally aerate, or introduce life-giving oxygen into the soil around plants. This digging and scratching naturally benefits the soil, and in turn benefits the plants close by.

## *Chickens as pest and weed police*

Chickens naturally feed on insects and are an organic form of pest control in your garden. Chickens eat pests not always easily seen. Over time, you may notice that you have fewer spiders, or earwigs, and it could be your flock in the garden taking care of business.

Chickens can eat potentially dangerous spiders in your garden, like black widow spiders and brown recluse spiders, and it won't harm them. In fact, they turn the protein from the spiders into delicious eggs — one of the best recycling programs ever.

Chickens love their proteins. They love insects of all kinds, such as sow bugs, ants, earwigs, flies, mosquitoes, spiders, termites, and grasshoppers. They're equally agile at eating tomato worms, larvae of all types, worms, and grubs that frequent a compost pile.

Moving up the food chain, chickens will eat small lizards, baby snakes, and even mice. We have seen chickens eat mice several times, especially if the mice are trapped inside a chicken coop or secure outside pen. Mice are gulped whole by a chicken and quickly passed to an expandable sack called a *crop* where digestive enzymes begin to soften the food and further prepare it for digestion.



Contrary to popular belief, snails and slugs aren't a favorite food of chickens. Snails and slugs can act as intermediaries for parasites such as gapeworms, which can make chickens very ill, and possibly cause death if not treated.

Chickens love greens of just about any kind. They're great experimenters in the garden for the pursuit of food. They eat and scratch, foraging all day.

Chickens especially love succulent, young, green growth. However, they can't really distinguish between weeds and desirable young plants on their own.

Chickens exercise weed patrol by eating weeds, and scratching and loosening weeds out of the soil with their long nails. Some types of weeds are favorite foods for chickens. See Chapter 7 for more information on favorite chicken greens.



Take greater care managing newly planted gardens and young plants that need extra protection, or consider free-ranging your flock in another part of the garden entirely. Otherwise, chickens will eat your plants, whether you want them to or not. Use pre-determined runs or zones, and calculated managing of your garden. We cover creating space for your free-range chickens in Chapter 4.

Free-range chickens don't usually harm established gardens and mature plants. However, don't be alarmed if your chickens sometimes make a mess in the garden, and are usually attracted to the parts of the garden just planted, mulched, and manicured. It usually doesn't amount to more than taking a quick broom or rake to a spot, to tidy up after them.

## *Creating Sustainability in Your Own Backyard*

*Sustainability* is the ability to maintain a desired level of ecological balance without depleting natural resources. To some degree, it's also being self-sufficient. In this day and age, global warming, diminishing water resources, extreme weather, rising energy costs, and genetic engineering of food are just a few reasons to create sustainability in your own garden.

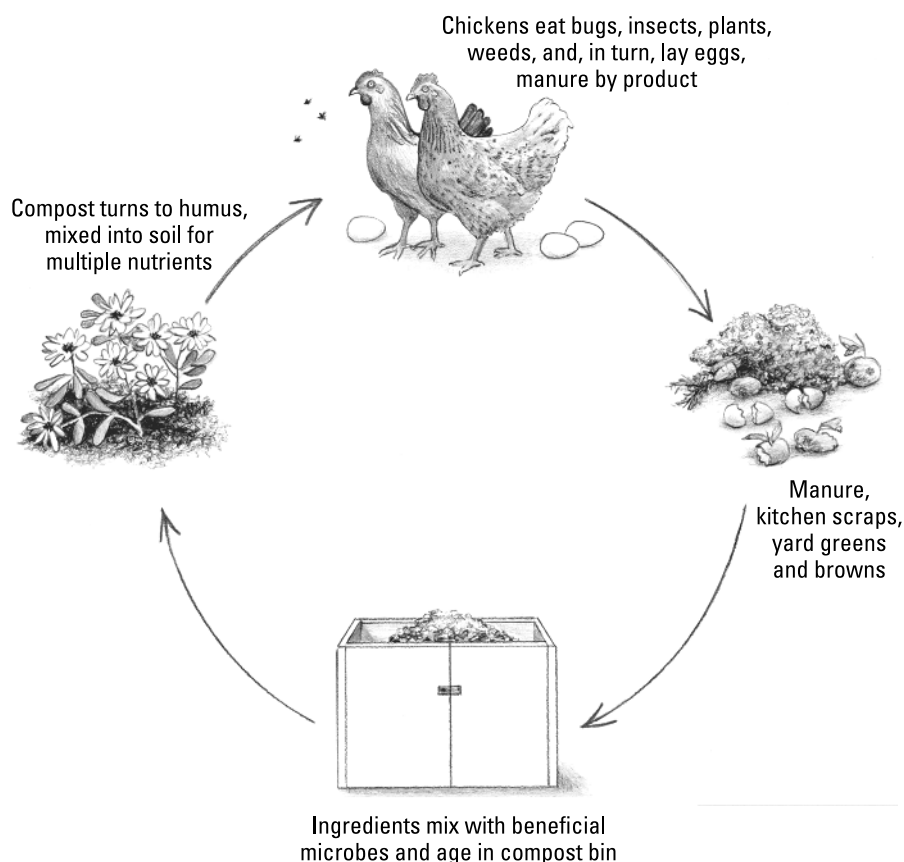
The more time you can devote to growing your own food, raising your own chickens, composting, recycling, collecting rainwater, and conserving resources, the richer and more self-sustainable your life will be. Your food will be more flavorful, and it's rewarding that you grew it and can share it with others. Having a garden and growing your own food naturally aligns you with the rhythms of the seasons. Keeping a flock of chickens in your garden rewards you with the tastiest, most beautiful, and freshest eggs.

Successfully composting and creating humus to return to your soil costs you nothing yet dramatically and organically improves the health of your soil. Figure 1-9 illustrates how chickens in your garden create a sustainability balance.

Today you can see a great renaissance in gardening and animal husbandry to explore the many heirloom seeds, fruits, vegetables, and animal breeds that have been nearly lost or forgotten since the 19th century.

Often, produce varieties that traveled well won out to others that didn't but had better flavor. Animal breeds with high fertility and rapid weight gain were genetically favored over ones that didn't. Man imports and freights food from other countries for year-round availability. Creating sustainability in your own backyard gives you more flexibility to grow a much more diverse array of food for yourself and loved ones.

We encourage you to explore all the ways you can be sustainable and self-sufficient in your own garden. Consider solar heating, solar power, windmill energy, keeping bees, creating a worm farm, and collecting rain water as a few more suggestions.



**Figure 1-9:** Sustainability is a benefit of raising chickens in your garden.

## Manure management, recycling, and composting

If you have chickens, you will have manure. Fortunately, chicken manure is among the most prized of manures. Fresh chicken manure is considered a “hot” manure. Chicken manure needs to be composted and aged at least two to three months before you use it in your garden. If you don’t wait that long, it will burn your plants.



Manure is a good source of organic material for composting. Not all manures are the same in composition. Nutrient levels can vary within manures considerably, depending on the diet and age of the animals, and the type of bedding manure is mixed with. For instance, manure mixed with straw has a different nitrogen composition than pure manure.

“Hot” manures are high in nitrogen, and they need time to mellow. “Cold” manures, such as from horses, are lower in nitrogen and are generally safe to use at all times. Check out Table 1-1 for a look at manure composition levels in different animals. The first number indicates Nitrogen (N), the second number indicates Phosphorous (P), and the third number indicates Potash (K).

**Table 1-1 Manure Composition Levels: Nitrogen, Phosphorous, and Potash in Different Animal’s Manures**

<i>Animal Producing the Manure</i>	<i>Hot or Cold Manure?</i>	<i>Nitrogen Level</i>	<i>Phosphorous Level</i>	<i>Potash Level</i>
Rabbit	Hot	2.4 N	1.4 P	0.60 K
Chicken	Hot	1.1 N	0.80 P	0.50 K
Sheep	Hot	0.70 N	0.30 P	0.90 K
Steer	Cold	0.70 N	0.30 P	0.40 K
Horse	Cold	0.70 N	0.30 P	0.60 K
Dairy cow	Cold	0.25 N	0.15 P	0.25 K

*Sources: Rodale’s All-New Encyclopedia of Organic Gardening, An Illustrated Guide to Organic Gardening, by Sunset Publishing, and the Rodale Guide to Composting.*



Chicken manure is very high in nitrogen and a very desirable fertilizer for a garden. It is a hot manure, which needs time to age before adding it to your soil. Composting is an ideal method for aging chicken manure.



When we speak of manure management and composting, we're speaking generally of the bulk manure that's coming from your chicken coop after your chickens have roosted overnight. Unless you're diligently picking up after your chickens while they're free-ranging in your garden, free-range chicken manure isn't concentrated enough to be a "hot" manure problem, and will eventually break down into your soil.



Do not walk barefoot in your garden for disease prevention when fresh manure is around. Free-ranging hens will poop manure randomly wherever they are foraging.

Manure takes a lot of management, and it's key in raising chickens in your garden. Where there's manure, there can be flies and sometimes maggots. You want your garden to look good, smell good, and have a nice ambience for entertaining and socializing. Without a manure management program, you'll have nothing but problems. (For more information on daily chicken chores, check out Chapter 3.)

Composting is the easy, practical solution for manure management. Remove manure from your chicken coop every day and turn it into your compost pile. It won't smell, and it will be less accessible to flies, mice, and rodents. In Chapter 2, we detail the manure box component, which effectively catches the bulk of the manure while your chickens are sleeping overnight on their roosting bar. The manure box, in effect, is similar to a cat's litter box. Most of your flock's manure drops and accumulates there. This manure box can be easily cleaned each morning as part of your daily routine.

Composting is great for your garden, rewarding for you, and green for the planet. It's very easy to get started, and an ideal way to manage chicken manure, which is necessary when raising chickens. The following list offers ways you save money with composting in your own garden:

- ✔ You save money by not having to buy commercial fertilizers and amendments.
- ✔ You enhance your soil health and fertility and inhibit weed growth.
- ✔ Your garden will require less water because the soil is able to retain moisture more effectively.
- ✔ By composting and recycling, less yard waste, kitchen vegetables, and fruits scraps, are going into landfills, and the organic humus is going back into your garden.

Develop a routine of adding material to your compost every day by following a routine of emptying your kitchen compost container, followed by your chicken coop muck bucket, and adding these materials to your compost bin every day. Kitchen scraps are a big part of this equation. Follow these easy steps to get the most out of your composting:

1. **Find a workable nice container, place it under your kitchen sink where you can collect each day's coffee grounds, coffee filter, fruit scraps, eggshells, and vegetable peels.** The next morning, when you are opening up your chicken coop, take the previous day's kitchen compost container with you, destined for the compost pile.
2. **When you open your chicken coop for the day, skim your manure box droppings, and place your chicken manure and any soiled bedding in a "muck" bucket.** The type of material you use as bedding in your chicken coop is considered a "brown" compost material, which works as a fantastic companion to the chicken manure, which is considered a "green" compost material. These two ingredients naturally work together in the decomposition process. Examples of popular bedding for chicken coops are pine shavings, straw, and rice hulls. All these things go into your compost bin together.
3. **In addition to the kitchen scraps and chicken manure, layer your compost bin with leaves from the yard, grass clippings, and any other green or brown ingredients from your yard.** Aim for a mixture of 50% browns (leaves, twigs, coffee filters, chicken coop bedding) and 50% greens (kitchen fruit and vegetable scraps, chicken manure, grass clippings, yard greens) for your compost pile. The smaller the pieces you add to your compost, the quicker your added material will break down into compost.
4. **Make sure your compost bin mixture is moist, adding water if your compost bin mixture is dry, and rotate it as often as you can with a pitchfork to aerate it.** Chickens are very effective at aerating a compost pile too, when given access.

In two to three months, especially if you keep your compost bin in a partly shady area and the compost stays moist, microorganisms break down these materials and create an extremely nutrient-rich, dark organic mixture. We recommend having at least two compost bins — one you're working on filling, and one that's nearly ready as humus for your garden. Figures 1-10 through 1-13 illustrate four types of backyard compost bins. For more information on composting, check out *Composting For Dummies* by Cathy Cromell and The Editors of the National Gardening Association (Wiley).

## Tips for leftovers

If you have a family, chances are you have leftovers or fussy eaters who don't like their vegetables. Chickens consider leftover oatmeal, vegetables, breads, rolls, tortillas, and pancakes to be real treats. When cleaning out your refrigerator, think about what you can feed

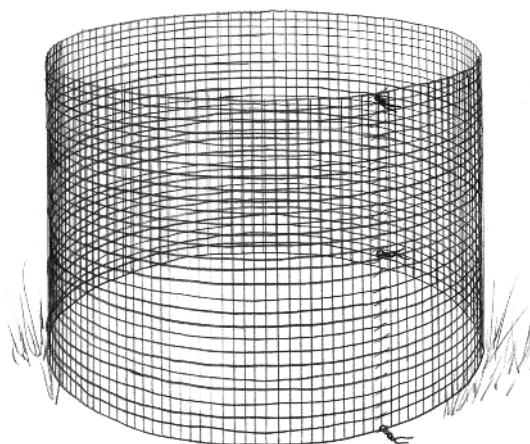
to your chickens and what can go directly to the compost bin. This is another form of recycling. Make sure your leftovers are healthy for your chickens; avoiding high salt, sugar, and processed foods. Give your chickens leftovers in moderation.



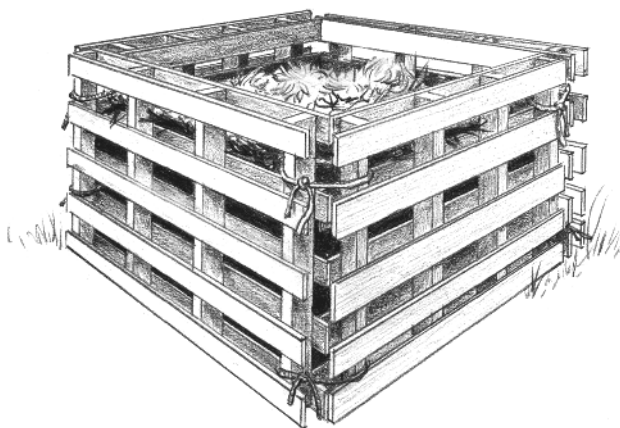
Compost bins can be homemade with simple materials, such as stacked pallets, or half-inch wire hardware cloth in a 12-foot length, that can be wrapped in a circle and held together with a hook and eye at the top and bottom. You can also find plans on the Internet for making various types of compost bins, or manufactured bins available for sale at nurseries and by mail order.

Check with your city to see whether they subsidize a compost bin program. A lot of progressive cities and towns encourage their citizens to compost by offering such a program.

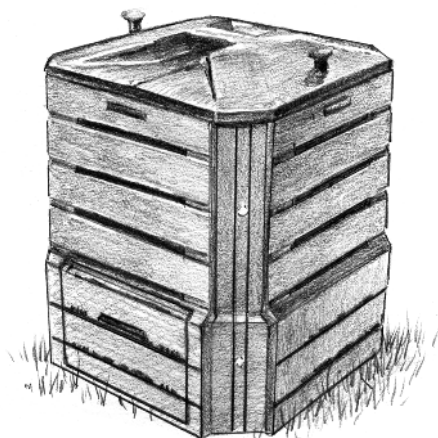
The best compost bin is the one that is convenient, fits your budget, and works best for you. The many types of compost bins illustrated all do a wonderful job of collecting your many layers, and garnish the same end result –a beautiful humus material.



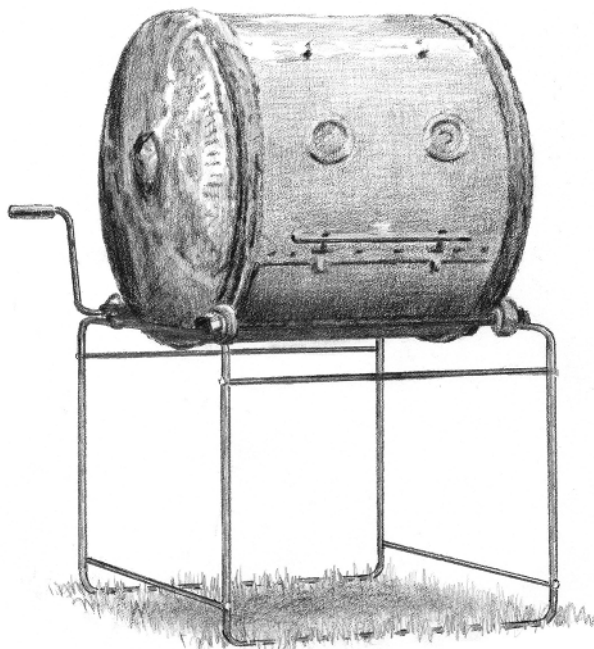
**Figure 1-10:**  
A handmade  
wire com-  
post bin.



**Figure 1-11:**  
A handmade  
pallet com-  
post bin.



**Figure 1-12:**  
A commercial stacking  
compost  
bin.



**Figure 1-13:**  
A commercial turning  
compost  
bin.

## *Every egg is golden*

A very important aspect of sustainability is growing or raising your own food and the undeniable difference in flavor. Free-range chickens in your garden lay incredibly tasty fresh eggs, with yolks that are deep sunset-orange in color, and albumen whites that stand firm.

It makes sense that hens allowed to free-range and eat their natural diet of a variety of seeds, green plants, insects, and worms, along with a supplemental laying mash, will lay incredible eggs. You will be rewarded with every egg being golden.

In 2007, *Mother Earth News* conducted a well-documented study that compared free-range eggs with the U.S. Department of Agriculture nutrient analysis of commercial eggs. The results are astounding. The study shows that free-range chicken eggs had one-third less cholesterol, one-quarter less saturated fat, two-thirds more vitamin A, twice as much omega-3 fatty acids, three times as much vitamin E, and seven times as much beta-carotene.

In your coop, always provide a bucket of properly fortified feed. This feed is a well-rounded balanced food source. It's usually difficult for a backyard flock to get all the nutrients they need solely from foraging in your garden. Give them access to this feed whether they're in the coop or free-ranging in the garden during the day.

When hens are free-ranging, if they have access to their feed located in the coop, they will return to their coop to eat when they wish to. This keeps their food dry and protected from moisture, wild birds, and rodents. Free-ranging hens foraging for their natural diet will eat less laying mash than hens confined to their coop and secure outside pen all day. This is perfectly fine and saves on feed costs. At night, place the feed bucket away in your safe storage area to discourage rodents from free-loading.

Feed stores have different feeds that are formulated for specific nutritional needs for different chicken ages. These feeds can come in different forms and textures, such as laying mash, crumble, and pellets. What you provide for your chickens is an individual preference and what you think your chickens like best. Make sure your laying feed is at least 16-18% protein. Be sure to read your feed label for its ingredients and expiration dates. Feed loses its nutritional value and can become stale at over six months from when it was processed.

Feed stores also offer organic feeds for various ages of chickens in different forms such as mash and crumble. Organic feeds are certified organic using organic ingredients. Organic feed is generally more expensive.

Feed stores are now offering soy-free organic laying feed, which is a soy-free alternative to the traditional soy-based poultry feed, created out of demand for those with personal health and/or personal nutrition reasons.

Chapter 2 covers more information on the proper food for your chickens.



An egg's flavor is directly related to what a hen eats. Keep free-ranging hens from eating strong-flavored foods — such as onions, garlic, fishmeal,— and excessive amounts of flax seed. Eggs that are stored next to strong foods and odors can also absorb unpleasant odors and flavors. This is also true of environmental odors, such as gasoline, kerosene, ammonia, and mold.

Over the course of their lives, hens generally lay their eggs in a traditional bell curve model. They start slowly in terms of egg size and production. They hit their peak in the first couple years, laying normal-sized eggs. And then they gradually taper off, laying fewer (but still wonderful) eggs as they get older.

Chickens don't lay an egg every day. Chickens that are considered to be excellent egg layers will lay around 300 eggs per year. Chickens that are good egg layers will lay around 200-250 eggs per year. The breed and age of a hen make a difference, too.

Hens usually lay their eggs in the morning. A hen lays her egg an hour later each day, and eventually resets herself by skipping an egg-laying day. She then begins to lay in the morning hours once again for several days. Collecting your eggs every day gives you the freshest eggs possible. It also gives you and your hens a routine and an idea of how many eggs your hens are laying each day. You can even keep a journal and keep track of the number of eggs.

Sometimes you may reach for an egg only to find it's still warm from a hen's body. It doesn't get any fresher than that. At the end of their egg-laying process, hens put a natural protective bloom, a nearly invisible coating, around each egg to seal eggshell pores and keep out bacteria. This coating helps ensure freshness. It isn't necessary to wash your collected eggs, and wash away this protective coating, unless an egg is dirty from manure or mud.

An egg is shaped with a pointed-end and a large end. Store your fresh eggs, pointed-end down, in a covered egg carton in the coolest part of the refrigerator after collecting. Avoid storing eggs in the refrigerator door, because they lose the moisture that keeps them fresh, and are exposed to warm air when the refrigerator is opened. Fresh-laid refrigerated eggs will stay fresh for up to four weeks.



An easy way to determine an egg's freshness is to simply float it in a glass bowl. Eggs have an air cell, which determines how it reacts in a body of water. A fresh-laid egg has a small air cell, and rests horizontally on the bottom of a glass bowl. The older the egg is, the larger its egg cell becomes. A very old egg floats on the surface of a glass bowl.

Cooking and baking with fresh eggs takes you to new culinary heights. Share your fresh eggs with your family, friends, and neighbors, and everyone notices a difference. Give a dozen wrapped with a pretty ribbon as a hostess gift and your host or hostess will be delighted.

## *Having Fun with Style and Structure*

Raising chickens in your garden has huge potential for further creating your preferred garden style, creating the kind of chicken coop you prefer, and how you actually manage your free-range chickens.

People new to chickens can easily get emotionally attached to them. They soon get acquainted with the chickens' charming personalities and find out how much fun they are in the garden. We understand how you can become overwhelmed by the "joy of chickens" and the enjoyment they bring to your garden.



Many people give their chickens funny or endearing names — we know of some named after Hollywood actresses, First Ladies of the United States, and popular singers — and the emotional attachment is cinched. Bonnie had a pair of Black Australorp hens named Thelma and Louise. Everyone always chuckled when the two "ladies" were called.

Naming your chickens is a natural inclination. You may even go further and give their part of the garden, the chicken coop, or your garden a particular name that indicates your flock roams there. Examples of chicken coop names are Coop de Manion and Palais de Poulet (French for chicken palace). More fun examples of chicken garden areas could be Hen Haven and Chicken Little Run.

Every single garden with chickens and a chicken coop can potentially have its own unique style and setup. You can embellish your style, and have a lot of fun with it. In fact, the more creative you are, the better. Your local spring garden tours are great places to find ideas for creating a garden style, adding chickens, and including chicken coops. Chickens have become so popular that they're virtually creative extensions of your garden. Here are a few examples of fun styling in the garden:

- ✓ **Tropical garden style:** Your garden is planted with banana trees, palms, pineapple guava trees, and colorful canna. Your chickens have a coop that looks like a tiki hut, complete with a thatched palm frond roof.
- ✓ **Artist garden style:** If you have a flair for a certain art medium, incorporate it into the décor of your chicken coop and garden. Always make sure it is not toxic or harmful to your chickens. We have a friend, Kathy Lafleur, who's an artist and loves to create mosaics and ceramics. The front façade of her chicken coop is a complete mosaic masterpiece, detailed with mirrors and tiny handmade ceramic embellishments of snails, bluebirds, and garden elements. She even created a life-sized mosaic sculpture scarecrow to stand guard in the nearby garden.
- ✓ **Modern garden style:** Maybe you have a modern style home, and prefer a complementary modern style garden and matching modern chicken coop. Create a modern two-story chicken coop with clean lines. The bottom level could be an enclosed pen, providing feed and water. An incline ladder allows chickens to nest and sleep peacefully in the top level. Strong lines, using plant repetition, ornamental grasses, and horse-tail, could emphasize a modern garden look.
- ✓ **Flea market garden style:** Perhaps you're a flea market junkie and love to decorate with your fabulous finds. Your eclectic taste naturally spills into your garden and chicken coop. You create a unique chicken coop with re-purposed materials, a row of vintage nesting boxes, and great finds. Your chicken coop is a collage of patina colors, perhaps surrounded by textural succulents.

Don't forget about sheds and storage structures. These buildings can also be styled and embellished to fit into your chicken theme and garden ambience. Whatever your preferred style is, you can have fun with playing up style and structure in your garden, with your chicken coop, and most importantly, with your chickens.