

Chapter 1

A Picture of Backyard Flock Health

In This Chapter

- ▶ Appreciating the useful and fascinating backyard chicken
 - ▶ Increasing your awareness of the hazards of the backyard chicken's lifestyle
 - ▶ Scrutinizing the stats of common backyard chicken illnesses, injuries, and causes of death
 - ▶ Investigating how flock keepers prevent, treat, and find help with chicken health problems
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Chickens have fascinated people for thousands of years, ever since humans and red junglefowl met in Southeast Asia and began a productive relationship together. Humans have taken full advantage of the partnership and of the chicken's versatility. The wild junglefowl hen lays a scanty 15 to 30 eggs a year; after thousands of years of selection and care by people, modern domesticated hens can surpass the 300-egg-per-year mark. Today, chicken meat is a major source of protein for human nutrition around the globe.

People clearly benefit from the human/chicken bond, but what does the chicken get out of this relationship? In exchange for eggs, meat, entertainment, and a wholesome connection with nature, backyard flock keepers protect their birds from danger and disease, and free them from worries of finding a good meal and a cozy place to sleep at night. In this book, we offer advice to help you keep up your end of the bargain.

Ideally, flock keepers also remember that chickens are, down deep, still wild junglefowl, driven to dustbathe, forage, and establish pecking orders. Caretakers can and should provide opportunities for chickens to be chickens and to express their inner junglefowl.

In this chapter, we introduce you to backyard chickens, their troubles, and what you can do to prevent health problems and respond to unfortunate events.

Introducing the Backyard Chicken

Throughout this book we make the distinction between backyard and commercial chicken flocks. Although you can probably point out general, sometimes overlapping differences between commercial and backyard flocks in terms of management style, reasons for raising chickens, types of birds, and farm sizes, we stick with a simple definition. For the purpose of this book, we consider a farm with 1,000 or more chickens a *commercial flock*, and call a place with fewer than 1,000 chickens a *backyard flock*.

Okay, 999 birds is *extreme* backyard flock keeping, and as you may suspect, most backyard flocks have far fewer than 1,000 birds. The majority of backyard flock keepers in the United States have fewer than 25 chickens, according to informal surveys.



You may already be savvy to the lingo of backyard flock keepers, but to keep us all on the same page, we provide a list of poultry terms used in this book:

- ✓ **Pullet/hen:** In poultry show circles, a pullet is a female chicken less than a year old, and a hen is a female chicken 1-year-old and up. Other folks consider a pullet to be a female chicken that has not yet laid an egg, and a hen as one who has.
- ✓ **Cockerel/rooster:** A cockerel is a male chicken less than a year old. A rooster is a male chicken 1-year-old and up.
- ✓ **Egg-type chickens:** Chickens of breeds developed for egg production. Commercial white egg layers are Leghorns, and commercial brown egg layers were developed from the Rhode Island Red, New Hampshire, and Plymouth Rock breeds of chicken.
- ✓ **Broiler:** A young chicken suitable for grilling, roasting, or barbecuing. Very fast-growing *meat-type* chickens that make excellent broilers were created from the Cornish and Plymouth Rock breeds of chickens. You may hear meat-type chickens described as “Cornish cross” or “Cornish Rocks.”
- ✓ **Dual-purpose chickens:** Chickens of breeds that are suitable for both egg and meat production, such as the Delaware or Plymouth Rock breeds.
- ✓ **Gamefowl:** Chickens of breeds developed for the purpose of producing fighting cocks, such as the Modern Game and the Old English Game breeds.
- ✓ **Bantams:** Very small chickens belonging to breeds that are often miniature versions of larger chicken breeds.

Backyard menageries are the norm

In a 2004 USDA survey, backyard flock keepers were asked what types of birds they kept. Four out of five flocks had more than one type of bird. The following shows the percentage of backyard flocks that had different types of chickens and other birds:

Chickens

- ✓ Chickens for egg production: 63 percent
- ✓ Gamefowl: 23 percent
- ✓ Chickens for meat production: 17 percent
- ✓ Show chickens: 10 percent

Other types of birds

- ✓ Ducks: 21 percent
- ✓ Guinea fowl: 12 percent
- ✓ Turkeys: 7 percent
- ✓ Caged pet birds: 4 percent

The 2004 USDA backyard chicken study is the most recent scientific survey on this topic. You can read the entire report to get a bigger picture of U.S. backyard flocks at www.aphis.usda.gov/animal_health/nahms/poultry/downloads/poultry04/Poultry04_dr_PartI.pdf.

- ✓ **Heritage breed chickens:** Chickens belonging to breeds that were recognized by the American Poultry Association prior to the mid-20th century. Heritage chickens are ideal for backyard settings, because they're active, long-lived, outdoor foragers.



Visit the American Livestock Breeds Conservancy website at www.albc-usa.org/heritagechicken/definition.html for more information about heritage breed chickens.

Creating a Healthy and Contented Life for Your Flock

A free-range backyard hen seems to have an idyllic life, enjoying the freedom to scratch and forage for interesting, wiggly things to eat, and experiencing the contentment that comes with flopping in a dustbath and snuggling close with her flock mates on a nighttime perch. See Chapter 3 for a more complete account of chicken behaviors that apparently express a cheerful enjoyment of life.

A backyard hen, however, trades that full and interesting life for a higher risk of early death due to predators or disease, compared to hens kept in cages on commercial poultry farms. In fact, surveys

from around the world have shown that the typical mortality rate in free-range chicken flocks is at least twice the mortality rate of flocks kept in cages.



Despite the stacked odds, you can prevent many of the injuries and illnesses in backyard chickens. That's why good management of a backyard flock is so important — to make sure that rich quality of life is also a long and healthy life. These sections highlight a few areas that you can help make your flock safer and sound. Chapters 4, 5, and 6 cover additional ways to protect your flock by keeping your birds clean, comfortable, and well fed.

Recognizing risky free-range encounters

Almost all backyard flocks are *free-range* — by that, we mean they have at least part-time access to the outdoors. Some backyard flock keepers have an extremely liberal free-range policy and allow their chickens to roam away from their backyards; the rest confine their birds to a yard, coop, barn, or less commonly, cages.

Most backyard flocks have regular contact with other animals. The animals that often coexist in a backyard with a flock keeper's chickens are

Meeting your fellow flock keepers

You probably have a lot in common with other backyard flock keepers, including your reasons for keeping chickens, where you get them, and how you care for them. If you're just getting started with raising chickens, you're in a large class of students; our informal poll suggests to us that most U.S. backyard flock keepers have been raising birds for less than three years.

By far, having fresh eggs is the most important and common reason that people keep backyard chickens. When we ask backyard flock keepers why they keep poultry, they often tell us

the following reasons, listed roughly in order of importance:

- ✓ Eating fresh eggs
- ✓ Having chickens as pets
- ✓ Controlling bugs with a foraging flock
- ✓ Fertilizing a garden with chicken manure
- ✓ Eating fresh meat
- ✓ Exhibiting at poultry shows
- ✓ Making extra income from selling eggs, meat, or birds

- ✓ Wild birds
- ✓ Flock keeper's dogs or cats
- ✓ Neighbors' dogs or cats
- ✓ Neighbors' poultry



Free-range chickens risk becoming the neighborhood dogs' next snack (or chew toy), or picking up an infectious disease from wild birds or someone else's backyard poultry. See Chapter 4 for tips on protecting your flock from hazards outside of your yard with common sense biosecurity measures.

Feeding chickens for good health and production

Feed is the major ongoing expense of raising chickens. Good nutrition pays off in healthy chickens who lay lots of eggs, so wise flock keepers carefully consider what they pour into the feeder each day. Chickens must get protein, energy, vitamins, and minerals from their food. Daily requirements for these nutrients change according to the bird's age and occupation. Flock keepers can choose among different diet formulas for different types of chickens and stages of life, including:

- ✓ **Meat-type chicken starter, grower, and finisher diets:** These rations are intended for broiler chicks as they grow up.
- ✓ **Egg-type or dual-purpose chicken starter, grower, and finisher diets:** These rations are designed for feeding chicks destined to lay eggs. They work well for young pet chickens.
- ✓ **Layer diets:** These rations are formulated for hens laying eggs for eating or hatching.



Commercially prepared feed takes the guesswork out of chicken nutrition. The tag on the feed bag tells you what type of chicken the feed is designed for, and how to feed it. Flock keepers can prepare nutritious homemade chicken feed, but that's a project that takes more time, skill, and attention to detail than opening a bag of complete commercial chicken feed. Chapter 6 provides more information about practical options for feeding your flock well.

What Can Go Wrong?

Chickens that are well fed and kept in clean, comfortable quarters have remarkable natural resistance to disease. As tough and resilient as chickens are, however, they're far from invulnerable or immortal.

Despite your best care, you're likely to be faced with a sick chicken at some point in your flock-keeping career. In this book, we cover common health problems of adult chickens and chicks, guide you to a diagnosis for puzzling signs of illness, and help you investigate sudden death when it occurs in your flock. Read on for a preview.

Common health problems

In general, larger backyard flocks are more likely to suffer health problems than smaller flocks. Closed flocks (ones in which no new birds are introduced) are less likely to catch something than flocks where birds come and go. The following list gives common backyard chicken health problems along with the chapters in this book where you can find more information:

- ✓ External parasites, such as mites, lice, and fleas (see Chapter 13)
- ✓ Unexplained death (see Chapter 10)
- ✓ Respiratory signs, such as cough, sneeze, swollen face, or discharge from nostrils or eyes (check out Chapters 8 and 9)
- ✓ Weight loss (refer to Chapter 10)
- ✓ Diarrhea (check out Chapters 8 and 9)
- ✓ Droopy birds (birds who show they don't feel well for any number of reasons by drooping their heads) (see Chapter 10)
- ✓ Lameness (refer to Chapters 8 and 9)
- ✓ Decreased egg production (check out Chapter 10)
- ✓ Neurologic signs, such as lack of coordination and weakness (flip to Chapters 8 and 9)

Major causes of death

Most backyard flock keepers experience the death of at least one of their chickens each year (other than chickens slaughtered for human consumption). On average, about one out of ten chickens in a backyard flock dies during one year (a mortality rate of about 10 percent).

The following list shows major causes of death for free-range hens that we compiled from a number of surveys around the world. We list them roughly in order of importance along with the chapter where we discuss the cause of death in greater detail.

- ✓ **Predator attacks:** Almost everywhere in North America, raccoons, opossums, foxes, and skunks prowl around chicken coops, and hawks and owls patrol the skies. These predators love a nice chicken dinner. See Chapter 11 for how to protect your flock from four-legged and winged marauders.

- ✓ **Cannibalism or vent pecking:** They're aggressive acts by flock mates; refer to Chapter 11.
- ✓ **Colibacillosis:** Also called egg peritonitis; check out Chapter 12.
- ✓ **Vent prolapse:** This is when part of the internal reproductive tract becomes misplaced and protrudes outside a hen's body; refer to Chapter 8.
- ✓ **Fatty liver hemorrhagic syndrome:** This is internal bleeding from a diseased liver; see Chapter 10.



Flock keepers can take many precautions to prevent predator attacks, cannibalism, and vent pecking, three of the most common causes of death for backyard hens.

Doing Your Part to Keep Your Flock Fit

Preventing disease is far more successful and less frustrating for small flock keepers than treating health problems after they appear in the flock. We emphasize prevention over cure throughout this book.

Although you can't keep your chickens in a sterile bubble, we have some practical tips to help you maintain a healthy flock. Start your flock with disease-free chickens, and help keep them that way by choosing new birds wisely and building biosecurity routines into daily flock chores.

All's not lost if a minor disease does show up in your flock. Often, you can medicate or vaccinate chickens to limit the damage, and chicken health advisors are available to coach you in your battle against flock ailments.

Safely sourcing new birds

About one-third of backyard flock keepers in the United States introduce at least one new bird each year to the flock. Most flock keepers get their birds from friends or neighbors, a feed store, or by mail-order. Auctions, flea markets, fairs, and shows are other places where chickens destined for backyards can be found. Bringing home new birds is risky business, because a flock keeper can unknowingly bring home an infectious disease along with a new chicken.



Some sources and age groups of chickens are riskier to bring home than others. Generally, younger chickens are less likely to be carriers of infectious diseases than older ones, so hatching eggs and day-old chicks are safer to add to a flock than adult birds. (Notice

we didn't say "completely safe.") See Chapter 4 for more tips on reducing risk to your flock when you introduce new birds.

Practicing biosecurity

Biosecurity is a set of practices — things you do every day — that helps keep infectious organisms, such as viruses and bacteria, out of your flock. If a disease-causing organism manages to find its way into your flock, the same biosecurity practices can help prevent the spread of the disease between your chickens, or the spread outside your flock to someone else's chickens.

The following list presents some biosecurity practices that are practical for most backyard flock keepers:

- ✓ Control rodents in bird areas
- ✓ Isolate new birds before adding them to an existing flock
- ✓ Keep birds confined to their own yard
- ✓ Change clothes between visiting other birds and caring for own flock
- ✓ Dedicate footwear for bird area or clean footwear before entering bird area
- ✓ Wash hands before handling poultry



How does your biosecurity compare with that of your fellow flock keepers? Take the biosecurity self-assessment test in Chapter 4 to rate your efforts to protect your flock from infectious diseases.

Medicating and vaccinating backyard flocks

Flock keepers in the United States can purchase medications over the counter to treat their chickens according to the directions on the label. The most common place to buy them is at a local feed store. Backyard flock keepers most frequently use antibiotics, coccidiosis preventives or treatments, vitamins, and dewormers.



Any use of a medication in a way that isn't listed on the label is called *extra-label use*, which is illegal in the United States without a prescription from a licensed veterinarian. Talk to a veterinarian if you're considering using a medication for a chicken in an extra-label way.

Most backyard flock keepers don't find it necessary to vaccinate their chickens. We tend to agree, but we think vaccination may be useful in these circumstances:

- ✓ You take chickens to poultry shows and bring them back home.
- ✓ You buy chickens from auctions, poultry shows, or other places where birds gather, and add them to your existing flock.
- ✓ Your flock has had a vaccine-preventable disease problem in the past.
- ✓ Outbreaks of a vaccine-preventable chicken disease occur in the area where you live.



In Chapter 16, we show you how to administer medications and vaccinations to your chickens. The most common methods for getting medications or vaccinations into a chicken are by mouth, by eyedrop, into the skin of the wing web, or by injection under the skin or into a muscle.

Finding help for chicken health problems

Backyard flock keepers consult a variety of sources for chicken health advice, most often the Internet, feed store staff, or other flock keepers. A few flock keepers consult a veterinarian who is willing to work with poultry. We suggest the following go-to people who are in the best position to give you expert advice for treating a sick chicken or managing a backyard flock:

- ✓ Avian veterinarians
- ✓ Cooperative Extension Service agents
- ✓ Veterinary diagnostic laboratories
- ✓ Poultry nutritionists
- ✓ National Poultry Improvement Plan inspectors
- ✓ Poultry veterinarians
- ✓ State veterinarians



Chapter 15 offers suggestions for finding and working with these chicken-savvy professionals.

Disappearing poultry science departments

Quick! Take advantage of these sources of chicken-raising wisdom, before they're gone from your area. Poultry scientists investigate the best ways to manage flocks, hatch eggs, feed birds, and keep chickens healthy, so their knowledge and innovations are invaluable for flock keepers of all types and flock sizes.

Unfortunately, for several reasons, the number of poultry science departments at U.S. universities has declined by more than 80 percent in the last 50 years. The amount of poultry health research and the number of poultry researchers have also decreased with the shrinking departments. Because extension offices are closely tied to universities, the number of poultry experts that extension agents can tap into has decreased as well.

The following six poultry science departments were still standing at the time we wrote this book:

- ✓ Auburn University Department of Poultry Science (www.ag.auburn.edu/poul/)
- ✓ University of Arkansas Department of Poultry Science (www.poultryscience.uark.edu/)
- ✓ University of Georgia Department of Poultry Science (www.poultry.uga.edu)
- ✓ Mississippi State University Department of Poultry Science (www.poultry.msstate.edu)
- ✓ North Carolina State University Department of Poultry Science (www.cals.ncsu.edu/poultry/index.php)
- ✓ Texas A&M University Poultry Science Department (<http://gallus.tamu.edu/>)