

# POULTRY RESOURCE HANDBOOK

HOW TO RAISE A BACKYARD FLOCK

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EXTENSION

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## Resources

*American Standard of Perfection Forty Fourth Edition*, American Poultry Association, 2015

*The Chicken Encyclopedia*, Gail Damerow

*Pocketful of Poultry*, Carol Ekarius

*4-H Poultry Fitting & Showmanship*, Michigan State  
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# **POULTRY RESOURCE HANDBOOK**

*To Dad, for volunteering to shovel more chicken poop than most people could ever dream up just  
because you love me.*

*To Mom, for trooping out with me on dark nights to keep me company even when I knew we  
could both picture hungry coyotes watching us.*



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**Acknowledgments**

**Notes**





## Chapter 1

# What is 4-H?

Congratulations on your decision to join 4-H! This organization will give you innumerable opportunities for your future, whether in school or in your adult life. Although this book will focus on poultry projects, there are numerous other projects in which you can be involved. But what is 4-H exactly? And how does it work? No matter what project you choose, 4-H works the same way.

**4-H** is a nationwide organization that offers projects for youth ages eight through eighteen. Members are divided into three age-based groups: juniors, intermediates, and seniors. **Juniors** are eight to ten years old; **intermediates**, eleven to thirteen; and **seniors**, fourteen to eighteen. A member's group is determined by his or her age before December

### TIDBIT

The 4-H year lasts from October 1 to September 30.

31 of the current 4-H year. Projects are often divided by this grouping, so your "4-H age" is important to know.

4-H members are a part of a local club in their county. These clubs usually meet monthly and have fun meetings where members can make new friends and learn from each other. They are led by four members holding offices. In any club, there are a minimum of four officers: the president, vice president, treasurer, and secretary. Some clubs also have a parliamentarian, historian, or reporter.

## Completing a Year in 4-H

To successfully complete a year in 4-H, you need to be a member in a local club. You must also complete two additional activities that include a demonstration and a community service project as well as any other requirements your county may have.

- **Demonstration**—This is a short presentation given to the members of your club. It can be about anything related to your 4-H interests: your project, a related science fair project, or even about something you are passionate about like a hobby. You can



also give a demonstration about your favorite recipe, favorite animal, or a skill you have learned (like knitting or woodworking). Make sure to have a visual aid, such as your ingredients or a poster board with pictures and information for fellow members.

- **Community Service Project**—Many clubs will host community service projects, like park clean-ups, food drives, and other events, for their members. You may also fulfill this requirement by volunteering to serve your community in another 4-H sponsored event, such as at a county fair or during a project workshop.

Some counties may also require the completion of a **record book** to complete a project. Your record book includes your costs and the equipment you used. For



a livestock project, such as the poultry project, your record book will also include your feed costs and what you did to keep your birds healthy. Although the record book can seem daunting, it really is quite manageable if you start keeping records at the start of the 4-H year (October 1). Write down how much you spend and what you buy for your project throughout the year and your record book will be easy! Contact your local 4-H office or your club leaders to receive your record book or go online to download a copy of your record book in a digital format.

Although presenting your project is not required in order to complete a year in 4-H, most county-wide 4-H organizations will organize a time for you to present your project, oftentimes at a county fair. Your project will be judged against other members' projects. For poultry, your birds will be compared to other birds and the bird that comes closest to the definition of perfection for that breed wins. Although a county fair is the easiest way to present your project, there are other ways to show your hard work and what you have learned over the year. For poultry, you can enter your birds in fancier poultry shows, which take place around the country throughout the year. However, these shows tend to have much steeper competition than 4-H specific shows. Many of the people who show at these specific shows breed and

#### TIP

For more experience, enter your birds in a large **fancier** show!

raise birds with the intent of perfecting a particular breed and consequently produce more competitive fowl than can be bought

from a commercial hatchery or feed store. Even so, all shows are a learning experience!

These three steps—completing a demonstration, completing a record book, and showing your project—are spaced out over your entire 4-H year. If you need help, contact your club leaders, project leaders (who help pre-

pare 4-H members for competitions), or project **superintendents** (who organize and coordinate a project at the county fair). They would be happy to help with any questions you might have about 4-H and how it works.

## The Importance of Good Sportsmanship

Raising any kind of poultry is a challenge. It tests and grows your responsibility and character, while allowing you to grow and develop skills that will help you throughout life. However, 4-H is not perfect and neither are all of the judges involved. Sometimes you may not agree with the decision of a judge or may feel frustrated with your project. The sportsmanlike thing to do is ask for help or for clarification.

Sportsmanship is one of the most important lessons 4-H has to offer. Being sportsmanlike means that you resolve conflict maturely and ask for help when you need it. Give a smile and a handshake to a member who may have placed higher than you did in a competition. Let them know that you respect their work and complement them on their project. Learn from their successes and discover what they did that helped them outperform and place higher than you.

On the other hand, it is also very important to be considerate of others when you place high in a 4-H project. Be humble and compliment other members on their projects, even if you think you did better. Everyone is still learning and growing. No matter how long you have competed in 4-H, you should always seek to encourage and build up the members around you.



## Chapter 2

# Chicken Breeds

## The American Standard of Perfection

There are so many different breeds of chickens in the world that no one bothers to keep count anymore. The number is estimated to be in the hundreds, but only a fraction of those breeds are **recognized**. A bird must be a recognized breed to place high in a show. Non-recognized birds may also be shown, but may not place as well. There are two main authorities who keep track of these recognized breeds: the **American Poultry Association (APA)** and the **American Bantam Association (ABA)**. The APA recognizes not only breeds of chickens, but also breeds of turkeys, ducks, geese, and guinea fowl.<sup>1</sup> The ABA focuses only on bantam, or selectively small breeds of chickens and recognizes

**TIDBIT**  
The APA recognizes over 400 breeds of poultry.

more bantam breeds and colors than the APA. Most county fairs use the APA and its **American**

**Standard of Perfection** to judge poultry at county fairs because it includes other species which can be shown, like waterfowl and turkeys.

The Standard of Perfection is a standard against which all birds are judged by outlining what a perfect chicken in each breed should look like. The goal is to have a bird that matches the bird outlined in the Standard. The birds that are closest to the APA definition of perfection are placed higher in shows.

## Sorting Chickens Into Classes

The Standard divides all recognized breeds into **classes**, or categories. For large (regular or **standard-sized**) chickens, there are six classes: American, Asiatic, English, Mediterranean, Continental, and All Other Breeds. These classes are based off of where the breed originated (i.e. America, Asia, England). **Bantam** (a quarter of the size of their standard-sized counterparts) breeds are categorized based on their physical characteristics into another six classes: Modern Game,

Old English Game, Single Comb Clean Legged (SCCL), Rose Comb Clean Legged (RCCL), All Other Combs Clean Legged (AOCCL), and Feather Legged.

Once breeds are categorized by their size and by their origin or physical appearance, they are further classified by their variety.<sup>2</sup> Some breeds are only recognized in one color while others come in over ten different colors. The Standard of Perfection contains a section which defines each color.

## How to Use the Standard

To find a chicken in the Standard of Perfection, find the name of its breed using the index in the back of the book. The breed description of that particular fowl will be on that page, with each description organized into a chapter based on the breed's class (American, English, etc.). Breed descriptions include information on the ideal conformation and coloration of both hens and cocks. The paintings of each breed are located at the end of the class chapter.

## Common Color Varieties

Chickens come in a wide variety of beautiful colors. Here are a few of the most common:

- *White*—all white feathers
- *Black*—all black feathers
- *Buff*—all yellow/golden feathers
- *Light Brown*—medium brown feathers with golden neck feathers and black in tail feathers
- *Silver*—silver-grey body with black feathers in tail and salmon pink in breast
- *Red*—dark red body with black feathers in neck and in tail
- *Columbian*—white body with black in neck feathers and in tail
- *Silver-Laced*—all feathers are white with black edging
- *Golden-Laced*—all feathers are buff (golden yellow) with black edging
- *Barred*—feathers are white with black stripes horizontally across each





Although these are the most common colors, there are many, many others, such as Partridge, Golden and Silver-Spangled, Wheaten, and Splashed. Some breeds cannot be shown if they are in a certain color and some breeds must be a certain color in order to be shown. To assist in determining if a chicken has good coloring, the Standard also contains painted pictures of the ideal coloring for each breed, one picture for the male (the **cock**) and one for the female (the **hen**). The coloring for cocks and hens is different in most breeds, with the cocks having longer and more pointed neck feathers, or **hackles**, and longer tail feathers, or **sickles**. In hens, the neck feathers, or **cape**, and tail are shorter and rounded.

## Comb Types

One last notable difference in breeds is the comb type. A **comb** is a fleshy outcropping on a chicken's head which aids in regulating a chicken's body temperature. The Standard of Perfection recognizes eight different types of combs.<sup>3</sup> If a chicken has a different comb than the Standard of Perfection calls for, then that bird will be placed last or disqualified. (If a bird is disqualified,

it is too far from the Standard to be judged in a show.) Oftentimes the comb is the only way to tell two breeds apart. Therefore, it is very important to know what kind of comb your bird should have.

**Cushion.** Cushion combs are rounded, small combs that fit close to a chicken's head.

**Pea.** An ideal pea comb consists of three rows of small bumps that start at the nostrils and extend to the back of the head.

**Strawberry.** Strawberry combs resemble unspiked rose combs, except they are more pitted and are raised higher.

**Single.** The single comb is the most common and consists of a straight row of spikes that extends from the chicken's nostrils to the back of the bird's head.

**Rose.** The rose comb is flat and close to the chicken's head. Some rose combs have a point (spike or blade) while others do not. The presence of a spike is determined by the breed.



Courtesy of Diane Jacky





**Walnut.** Walnut combs are large, pitted, and round and almost resemble their namesakes.

**V-Comb.** V-Combs are present mostly in breeds with crests. They should be small and nearly buried in the crest. V-Combs resemble horns and create a “v” shape.

**Buttercup.** The buttercup comb consists of two larger combs that create a cup shape. Only Sicilian Buttercup chickens have this kind of comb.

## Common Recognized Breeds

Each recognized breed has a different purpose. Some were bred to have heavier muscles and thicker legs more suitable for eating (i.e. the Cornish). Others were bred to produce lots of eggs (i.e. the Leghorn). Still others were

bred just to look beautiful, or be for exhibition (i.e. the Silkie). This means that every breed will have a different look and personality, or

**temperament.** It is important to choose breeds that have the temperament and purpose for you and your situation. All recognized breeds can be found in the Standard, but the most popular breeds are listed with a brief description below. Not all are perfect for first-time 4-H members, but all have specific benefits and are useful for different purposes.

### Plymouth Rock

#### Class

American

#### Purpose

Eggs, Meat

#### Temperament

Docile

#### Varieties

Barred, White, Buff, Silver Penciled, Partridge, Columbian, Blue

#### Comb

Single

#### Egg Color

Brown

Plymouth Rocks are one of the most popular breeds for backyard flocks because of their generally sweet disposition and aggressive foraging behavior. They come in different colors, but the most common is the “barred” color, also called “hawk color,” a pattern that flying predators are unable to see. Plymouth Rocks handle both hot and cold weather well and lay throughout all seasons. According to the Standard, all Plymouth Rocks should be rather fluffy (or **loosely-feathered**) and

shaped a bit like a gravy boat with a rounded tail on both the males and the females. Plymouth Rocks should have four toes.



Barred Plymouth Rock hen

### Rhode Island Red

#### Class

American

#### Purpose

Eggs, Meat

#### Temperament

Docile, some aggressive individuals

#### Varieties

Single Comb, Rose Comb

#### Comb

Single

#### Egg Color

Brown

Rhode Island Reds are a very popular choice for a backyard flock.

They tend to be a little more aggressive than Rocks, but that does not mean that they aren't great birds for backyard production. This breed has a sister breed, the Rhode Island White, which can be harder to maintain because white feathers become dirty more easily. The ideal body type for a Rhode Island is sleek with a more square breast, so that they should look oblong from the side. Rhode Islands should have four toes.



Rhode Island Red hen



## Cochin

### Class

Asiatic

### Purpose

Meat, Exhibition

### Temperament

Docile

### Varieties

Buff, Partridge, White, Black, Silver Laced, Golden Laced, Blue, Brown, Barred

### Comb

Single

### Egg Color

Brown

Cochins were originally called “Shanghai Fowl.” Their enormous appearance and the feathers on their feet and legs rocketed them to extreme popularity in the 1800s. Cochins do not produce as many eggs as other common backyard birds. However, they do have an amazing temperament that makes this breed great for young 4-H members or for raising chicks. Cochins come in a wide variety of colors and should have 4 toes on each foot, with both the outer and middle toe feathered. They have yellow skin and reddish brown eyes.



Splash Cochin hen

## Brahma

### Class

Asiatic

### Purpose

Meat, Exhibition

### Temperament

Docile

### Varieties

Buff, Light (Columbian), Dark (Silver Penciled)

Brahmas are larger than Cochins, with longer legs and feathers that fit closer to their body. However, Brahmas are no less friendly than Cochins and can be quite productive for such a personable breed. Brahmas were also imported in the 1800s and became enormously popular when Queen Victoria of England kept a small flock of Dark Brahmas. Along with Cochins, Brahmas sparked

### Comb

Pea

### Egg Color

Brown

the Cochin Craze in the New World, when fluffy chickens became all the rage. Brahmas should have four toes, yellow skin, and reddish brown eyes.



Dark Brahma hen

## Orpington

### Class

English

### Purpose

Eggs, Meat

### Temperament

Docile, often brood

### Varieties

Buff, Black, White, Blue

### Comb

Single

### Egg Color

Brown

Orpingtons are fluffy and generally sweet birds with a heavier build. They can be very productive and make good mothers. Orpingtons are great for children but are so large that they can be difficult to hold. They were developed in England in the nineteenth century and were brought to America in 1895. Orpingtons' plumage is of utmost importance; it should be full and smooth, adding to the massiveness of the bird. They should have four toes and yellow skin.



Buff Orpington hen





## Sussex

### Class

English

### Purpose

Eggs, Meat

### Temperament

Docile, some aggressive individuals

### Varieties

Speckled, Red, Light (Columbian)

### Comb

Single

### Egg Color

Brown

Sussexes are prolific and hardy birds popular in many backyard flocks. They are **tightly-feathered** in comparison to Orpingtons or Wyandottes and tend to be a bit more aggressive or standoffish. However, Sussexes do come in some beautiful color patterns. The most popular is the “speckled” color, which describes a pattern with dark red feathers, each with a black horizontal stripe at the end and a white tip. Sussexes are one of the oldest English breeds and were originally raised in the County of Sussex

for meat. Sussexes should have four toes, have white skin, and reddish brown eyes.



Speckled Sussex hen

## Leghorn

### Class

Mediterranean

### Purpose

Eggs

### Temperament

Skittish and flighty

### Varieties

*Single Comb:* Black, Dark Brown, Light Brown, White, Buff, Silver, Red, Black-tailed

Leghorns are so prolific that they are primarily used in the egg production industry, but they also can be kept in backyard flocks. The most common color is white, but this breed comes in many different colors. Usually, white Leghorns tend to be the most skittish while other colors of Leghorns are a little more personable. The color of the bird does not affect its

Red, Columbian, Golden

*Rose Comb:* Dark Brown, Light Brown, White, Black, Buff, Silver

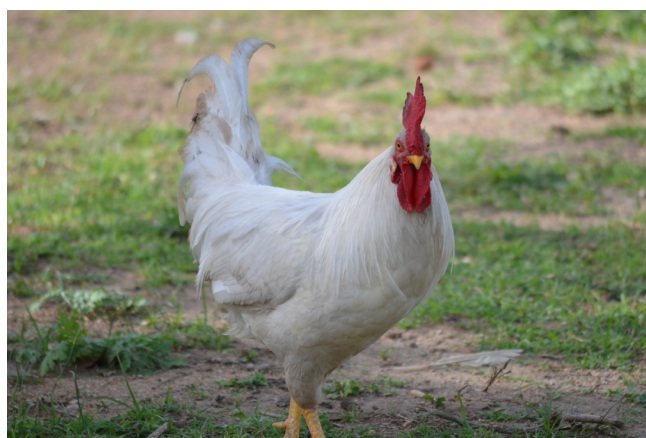
### Comb

Single or Rose

### Egg Color

White

laying ability, so it is generally recommended to not purchase white Leghorns. Leghorns do not make great showbirds for 4-H members due to their skittishness. However, they are very active foragers and are extremely hardy. It's best to keep Leghorns for what they do best: laying lots of eggs.



White Leghorn cock

## Welsummer

### Class

Continental<sup>4</sup>

### Purpose

Eggs

### Temperament

Skittish, some docile individuals

### Varieties

Dark reddish brown body, golden hackles, black tail, black breast

### Comb

Single

### Egg Color

Dark Brown

Welsummers, a member of the Northern European subclass, are popular mostly for their egg productivity. Their eggs are large and brown, some with darker speckles, which attract many people who desire a bird with beautiful eggs. This breed comes from Holland and is notable for its large eggs and full body, which makes this breed a decent table fowl as well as a prolific backyard bird. Welsummers are cold and hot weather hardy and usually do not go broody. The Welsummer's lovely plumage and speckled egg coloring is unique to the breed. Welsum-

mers should have four toes on each foot, have yellow skin, and reddish bay eyes, as well as a single comb.





Welssummer hen

## Faverolle

### Class

Continental

### Purpose

Eggs, Meat

### Temperament

Docile, some flighty individuals

### Varieties

Salmon, White

### Comb

Single

### Egg Color

Light Brown

Faverolles, a member of the French subclass, were originally bred for meat production and as a breed that produced during the cold winters in France. This breed is most often seen in the “salmon” color, a pink-brown color with a white head. Faverolles have a beard and **muffs**, which are extra feathers on the side of a chicken’s face. Many Faverolles have quirky personalities and are rather “talkative,” which makes them an entertaining addition to a backyard flock.

This breed is cold-weather hardy and lays medium-sized eggs. Faverolles have five toes unlike most other breeds, with the fifth toe being smaller and very distinct from the other four. The bird’s legs should be feathered lightly, with the skin being white, and the bird’s eyes should be reddish bay.



Salmon Faverolle hen

## Polish

### Class

Continental

### Purpose

Exhibition

### Temperament

Skittish

### Varieties

*Bearded:* Golden, Silver, White, Buff-Laced

### *Non-Bearded:*

White-Crested Black, Golden, Silver, White, Buff Laced, White-Crested Blue, Black-Crested White

### Comb

V-comb (Birds with no comb are preferred.)

### Egg Color

White

Polish are among the most striking of **ornamental** birds because of their small body size and enormous **crest**, a large tuft of feathers that grows on the bird’s head. In the Polish breed, the crest should be so large that it covers their eyes and also should be free from any splits. The Polish comes in two different varieties, the Bearded and the Non-Bearded, which are further broken down by color. Many breeds of poultry, including the Polish, have a **beard**, a tuft of feathers that grows below the beak. Other Polish do not have a beard, and this is more common. Because most Polish cannot see well, they are often skittish, but can be tamed if handled frequently when young. Polish

should have four toes and slate blue legs, a requirement for the breed that results in a disqualification if not present.



Buff Laced Polish hen

## Ameraucana

### Class

AOSB<sup>5</sup>

### Purpose

Eggs, Meat

Ameraucanas are among the most popular backyard fowl because of their docile temperament, hardiness, unique personalities and their blue-green eggs. Ameraucanas should have a beard





### Temperament

Docile

### Varieties

Black, Blue, Blue Wheaten, Brown Red, Buff, Silver, Wheaten, White

### Comb

Pea

### Egg Color

Blue

and muffs with a full, fluffy body. Unfortunately, because Ameraucanas are so popular, the purity of the color of their plumage is usually lost in birds from mass hatcheries. This does not pose a problem to backyard keepers, but to 4-H members, it can be difficult to acquire an Ameraucana that actually conforms to the Standard in color. It may be

necessary to contact a breeder to acquire an Ameraucana that is a recognized color.



### TIDBIT

Ameraucanas' genes for blue eggs originally came from chickens from South America.

Blue Ameraucana hen

## Naked Neck

### Class

AOSB

### Purpose

Eggs, Meat, Exhibition

### Temperament

Docile, intelligent

### Varieties

Red, White, Buff, Black

### Comb

Single

### Egg Color

Brown

The Naked Neck is one of the strangest looking chickens; it has no feathers on its neck! In fact, Naked Necks have only half of the feathers a regularly-feathered chicken has. Not only do they lack feathers on their neck, but they also lack feathers around their vent, legs, and breast. This makes Naked Necks easy to pluck for meat purposes. However, this breed is not used solely for meat. Naked Necks lay large brown eggs year-round and stand cold

weather well. They are extremely personable and curious and do well in backyard flocks. As with Ameraucanas,

purity of color is hard to find in Naked Necks from mass hatcheries, resulting in their colors varying widely.



### TIDBIT

Naked Necks are also called "Turkens," as some say they look like a mix of chicken and turkey.

Barred Naked Neck hen

## Serama

### Class

SCCL

### Purpose

Exhibition

### Temperament

Docile, some flighty individuals

### Varieties

White

### Comb

Single

### Egg Color

Cream

Seramas are one of the most recently added breeds to the Standard of Perfection and are bred for extreme smallness. In fact, Seramas are said to be the smallest breed in the world with a standard male weighing in at a little under sixteen ounces. Although only recognized by the APA in White, Seramas are bred in Asia in a wide variety of colors where they are kept as house pets. Seramas are delicate, often brood, and are generally very docile.



### TIDBIT

Seramas are kept in Asia as house pets, where they often wear diapers to prevent messes.

Multi-colored Serama cock



## Japanese

### Class

Single Comb Clean Legged Bantam (SC-CL)<sup>6</sup>

### Purpose

Exhibition

### Temperament

Docile, some flighty individuals

### Varieties

Black-Tailed White, Gray, Mottled, Black-Tailed Buff, Black, White, Barred, Brown Red, Wheaten

### Comb

Single

### Egg Color

Cream

Japanese bantams are a mixture of all poultry extremes. They have incredibly short legs and an enormous tail that, if angled correctly, should almost touch the back of their head. The head, comb, and wings should also be disproportionately large. Japanese are extremely fun birds to have in a backyard flock and come in beautiful color varieties. The hens often brood and the cocks are typically rather docile. Japanese should have four toes on each foot and red to dark brown eyes.



White Japanese hen

## Rosecomb

### Class

Rose Comb Clean Legged Bantam (RCCL)

### Purpose

Exhibition

Rosecombs, named for the large spiked rose comb that crowns both the cocks and hens, are often called “little aristocrats” because of their stately appearance and tendency to easily win poultry shows. It is rare indeed when a Rosecomb is not present on champion row at a large com-

### Temperament

Docile, some flighty individuals

### Varieties

Black, White, Blue

### Comb

Rose

### Egg Color

Cream

petitive show. Rosecombs are thought to be the original bantam breed from which all other bantams were bred and are even mentioned by Marco Polo in his writings as he traveled through Asia in the thirteenth century. King Richard III of England also kept a pet flock in his garden which he would show off to guests. Today, this breed has been extensively bred

for extreme smallness, with an enormous tail, spiked rose comb, and white earlobes. However, because of all of this breeding, fertility is generally low in pure flocks and birds bred at hatcheries tend to be of extremely low quality. The Rosecomb seldom broods and, because of its small size, can fly well.



Black Rosecomb hen

## Sebright

### Class

RCCL

### Purpose

Exhibition

### Temperament

Varies, some docile, some flighty

### Varieties

Golden Laced, Silver Laced

### Comb

Rose

### Egg Color

Cream

The Sebright breed is regarded with awe and respect in much of the poultry fancier world. In 1810, Sir John Sebright finished developing the first Sebrights after thirty years of intensive breeding. His birds had almost perfect **lacing** and the males were entirely **hen-feathered**, meaning that they had no male feathering characteristics (i.e. pointed hackles and tail feathers). Because of high inbreeding (that results in poor bird genetics) in the United States, it has become more difficult





to find high quality, healthy Sebrights. As a result of these genetic problems, many of the Sebrights bred by hatcheries are hybrids with healthier genetics but poor combs and lacing. Although these birds make fun additions to any backyard flock, hatchery Sebrights do not place well in poultry shows. Sebrights do not typically brood. Because of their small size, they fly very well and can end up in trees, over fences, and even on houses.



Silver-laced Sebright hen

## Belgian Bearded d'Uccle

### Class

Feather Legged Bantam

### Purpose

Exhibition

### Temperament

Docile

### Varieties

Mille Fleur, Porcelain, White, Black, Golden Neck, Mottled, Self Blue

### Comb

Single

### Egg Color

White

Belgian Bearded d'Uccles make amazing showmanship birds for any member in 4-H due to their docile temperament. The Mille Fleur is the most common color, so common in fact, that sometimes d'Uccles will be called "Milles" (pronounced "mil-ees"). Belgian Bearded d'Uccles have muffs and a beard, as the name suggests, as well as profuse feathering on their legs. They also come in a non-bearded variety, which is not as common as the bearded. These birds are called Booted Bantams, and they have a similar temperament to the d'Uccles, although

they come in fewer colors. Both Booted Bantams and d'Uccles have four toes on each foot and have eyes that range from red to dark brown depending on the color of their plumage.



Mille Fleur d'Uccle cock

### TIP

Belgian Bearded d'Uccles are an excellent choice for a showmanship bird!

## Silkie

### Class

Feather Legged Bantam

### Purpose

Exhibition

### Temperament

Very docile, often brood

### Varieties

*Bearded:* White, Black, Blue, Buff, Gray, Partridge, Splash, Self Blue

*Non-Bearded:* White, Black, Blue, Buff, Gray, Partridge

### Comb

Walnut

### Egg Color

Cream

The Silkie is a strange, but well-loved, bird with characteristics not seen anywhere else in the poultry world. Silkie feathers lack barbs that create typical sleek feathering. Instead, Silkie feathers appear to be more like hair, with this kind of fuzzy feathering preferable throughout all parts of the bird. All Silkies have a crest and some also have a beard and muffs. These extra feathers often impair Silkies' vision. This breed also shows an amazing dedication to broody behavior. Some poultry breeders keep a few Silkies in their flock to raise chicks from other breeds who will not hatch their own eggs or will even place fertile turkey or waterfowl eggs underneath broody

Silkies. Silkies will happily raise any breed or species, from ducks to quail. The downside to this fun little breed is that they do not do well in cold weather and get wet and chilled easily. They also are poor layers. In spite of these drawbacks, Silkies are still loved by many breeders who work to perfect this breed.



**TIDBIT**

Many Silkie breeders brush their birds' feathers to make them extra fluffy for show!

White Silkie cock

## Hybrid Breeds and Egg Production Classes

Some breeds have existed for as long as time itself. Marco Polo first ogled over the massive Cochin, and ancient kings of England kept Rosecombs as pets for their private gardens. Even emperors and rulers from the Middle East have kept and bred Sultans for the beauty the breed brought to their palaces. Many types of game fowl (i.e. Modern Game, Aseels, Shamos) originate from the Red Jungle Fowl of the eastern tropics which were bred for cock fighting.

However, most recognized breeds are hybrids to a certain degree. For example, Wyandottes are a composite breed of Brahmas, Hamburgs, Cochins, and Leghorns, all of which were bred into the Wyandotte line at different points in order to create desired colors and shapes in the Wyandotte. Now however, the Wyandotte as a distinct breed has been bred to the point of having its own characteristics unique from the breeds in its lineage. This means that two birds a breeder claims to be Wyandottes can be bred together and produce offspring that closely resemble the parents and have the defining characteristics of Wyandottes (and not have defining characteristics of Leghorns or Brahmas). Since Wyandottes are able to produce offspring similar to themselves, the breed is said to **breed true**. This process of perfecting a breed goes back centuries and has resulted in some of the most beautiful breeds in the world. These old breeds and hybrids are those that appear in the Standard of Perfection. These breeds are static and do not change because

their genetics have been solidified by years and years of breeding to the Standard.

Although there are many prolific and beautiful breeds in the Standard, many breeders wish to create new breeds that function even better for backyard flocks and for the meat industry. These new hybrids have not had time to become perfected to the point of having their own defining characteristics. Therefore, they cannot be exhibited in a poultry show where birds are judged to the Standard. The judges do not have a perfect bird to compare a new hybrid against; so they cannot accurately place the hybrid chicken.

Even though hybrids cannot be shown in an APA or ABA show, in 4-H they can be shown in an egg production class and/or barnyard class, since many new hybrids are bred specifically for producing large eggs. **Egg production classes** are based on the combined characteristics that indicate the most prolific laying and best egg quality. The judge will measure the width of the pubic bones and the depth of the body of all entries, with the wider pubic bones and deeper bodies placing higher since this indicates that a hen is an active and consistent layer. Other characteristics are also brought into consideration, such as the redness of the bird's comb and face and the bleaching, or lightening in color, of the legs in yellow-legged breeds (which occurs as the bird lays). Judges will also consider the consistency of a pen if multiple birds are entered together, meaning that all hens in the entry should have the same characteristics listed above.

Note that any hen or pullet can be entered into the egg production class, regardless of breed. However, some hybrid breeds are known for being able to lay larger eggs than any recognized breed. Some of the most popular laying hybrids are Red Sex-Links and Black Sex-Links.

### Red Sex-Link

**Purpose**  
Eggs

**Temperament**  
Varies

**Varieties**  
Range from red to buff with white markings in tail and wings

Red Sex-Links are a hybrid breed, bred specifically for the purpose of being a prolific egg layer. This hybrid is known by many different names which vary by hatchery, where different breeds of males and females are used to produce these **sex-**





**Comb**  
Single

**Egg color**  
Brown

**linked** chickens. The science behind producing this hybrid is complicated but always involves crossing a “gold” male with a “silver” female. The “gold” male is usually a Rhode Island Red or New Hampshire Red and the “silver” female is usually a Delaware or a White Plymouth Rock. This specific “gold-silver” cross results in chicks that have sex-linked color; all of the male chicks will be distinctly silvery white while all of the female chicks will be distinctly reddish brown. By sex-linking the chicks, hatcheries can nearly guarantee that they will be shipping female chicks to feed stores and other customers, making the Sex-Link very profitable. Because there are many different “sub-breeds” that can be labeled as Red Sex-Links, it is difficult to attach a specific temperament to the hybrid breed as a whole. In general though, all Red Sex-Links are fantastic layers of large brown eggs, out-laying all of the parent breeds. Note that although Red Sex-Links are aggressive foragers and can occasionally be aggressive themselves, the public opinion of this breed is that they make a very good layer and backyard bird. Red Sex-Link hens range in color from buff to red and usually have white in their tail feathers, neck, and wings. Because of the high demand for only hens in this breed, chicks known to be male are usually not shipped from the hatchery and are rather rare. Mature males are mostly white with red or buff in their wings, saddle, and neck. Red Sex-Links stand cold weather well but may sunburn due to their light color.



Red Sex-Link hen

## Black Sex-Link

**Purpose**  
Eggs

**Temperament**  
Varies

**Varieties**  
Females are black with red in their necks.  
Males are barred.

**Comb**  
Single

**Egg Color**  
Brown

Black Sex-Links are not quite as common as their red counterparts and come with far fewer hatchery names. This hybrid is also sex-linked and is made by crossing a solid color male (usually a red or “gold” male of any breed) with a barred hen (usually a Barred Plymouth Rock). This cross produces black male chicks with a distinct white dot on their heads and female chicks that are completely black, guaranteeing a hen every time. This hybrid, al-

though less common than the Red Sex-Links, lay slightly larger eggs and tend to be more docile. Black Sex-Link hens are typically all black with coppery or red feathers throughout their plumage. Few cocks are shipped from hatcheries and are rather rare despite the commonness of the Black Sex-Link hens. Those males that are allowed to mature are barred with red in their wings, saddle, and neck. This breed stands cold weather well and will lay through the winter.



Black Sex-Link hen

Note that neither of these hybrids will breed true, meaning that two sex-linked chickens will not produce sex-linked chicks. Therefore, Rhode Islands, Barred Plymouth Rocks, or any other parent breed must be used to produce all sex-linked chicks.

Hybrids are not the only birds shown in the egg production class. In fact, Plymouth Rocks are often shown and beat out many hybrid breeds. Rhode Islands and New Hampshires also have a tremendous laying ability. You



really can show any chicken you wish in the egg production class; the chicken with the largest capacity to lay eggs will win, regardless of breed or conformation.

In the egg production class, although conformation does not play a role in the placing of the birds, good conditioning plays a major role in how the hens are placed. Note that Red Sex-Links can become sunburned or yellow if allowed to range in the sun and both breeds come with all of the same risks associated with any other breed. As with all breeds, any chicken with a deformity, such as a crooked toe or crossed beak, should never be shown.

Mature hens will usually place higher than pullets in the egg production class, since the hens have had more time to grow and reach their full egg laying potential. If you intend to show pullets in the egg production class, you must purchase your chicks as early as possible in the year. That will give the pullets time to mature so that they are laying regularly by the time of the show.

It is very common to show trios of hens in the egg production class. These trios must contain either hens or pullets, never both, and must be all of the same breed. Trios of strong laying hens can place high in this class and rarely disappoint.

## Choosing Your Breeds

When choosing a breed for a flock, keep the following in mind:

1. Why do I want chickens? (Do I want them for egg production, meat production, or for fun?)
2. What do I want to do with these chickens? (Do I want to show them or keep them as backyard entertainment?)
3. Where do I live? (Do I live in a neighborhood with limited space or in the country with more space? What is the weather like?)

By answering these questions, you can get a better understanding of what breeds will work best for you and your setup. Don't just go to the feed store and buy a few chicks. Do your research beforehand and know which breeds will be best for you.

Also keep the temperament of the breeds that you consider purchasing in mind. By making some extremely broad generalizations, it can be easy to tell what the temperament of a breed will be before you buy it. This method is not foolproof, but it can be very helpful. In general:

- Loosely-feathered breeds are more docile than tightly feathered breeds.
- Feather footed breeds are more docile than clean legged breeds.
- Tightly-feathered breeds tend to be more prolific egg layers.

Note that individual birds can differ from these generalizations and breeds can vary in temperament. Outliers are common in the animal kingdom and breed temperaments are never guaranteed.

## FRIZZLES

“Frizzling” is a genetic anomaly that can occur in any breed. When a bird has the **frizzle** gene, its feathers curl back on themselves, giving the bird a hilariously adorable appearance.



A frizzled bantam Cochon hen

Any recognized breed can be shown without being discriminated against if it has the frizzle gene.

Frizzled Cochons are extremely popular and common both in the show circuit and in backyard flocks since Cochons already have a round fluffy shape that accentuates the wild frizzled feathers. (Hatcheries and feed stores will often sell “frizzles” as a breed in itself, but these are actually just frizzled bantam Cochons.) There is a breeding drawback to frizzles, however; if two birds with the frizzle gene are bred together 50% of their offspring will be “curlies,” which means that they will have extremely brittle feathers that easily break off, leaving the bird nearly featherless after a time which is highly undesirable. In order to breed quality frizzles, a frizzle should be bred to a “**smooth**” bird, one without the frizzle gene, to ensure that no curlies are bred.





## Chapter 3

# Getting Started with Chicks

### Setting Up a Brooder Box

Chicks need a protected and warm place to mature until they grow in all of their feathers and can survive outdoors. In nature, this is under a mother hen (who went broody and hatched eggs), but because most people do not have the convenience of a broody hen at the right time, a brooder box must be used.

A brooder box is a container that can be almost anything. For five chicks or less, a plastic storage tub will work for the first few weeks of the chicks' lives. For more than five chicks, a larger box is needed. It is recom-

#### TIP

Only use pine shavings as bedding as other materials, like cedar shavings, can be toxic.

mended that a metal horse trough with rounded edges be used to prevent any chicks from being suffocated in a corner, but many

find success with a large cardboard box or by building their own. Keep in mind when you are designing your brooder box that chicks need to be able to get away

from the heat source, which is typically a heat lamp or brooder plate, and also need to be able to get right underneath it. Chicks are extremely delicate and can easily die or become sick from being too cold or too hot. They must be able to find a comfortable temperature within the brooder box. Be sure to have a thermometer in the brooder box so that you can always tell exactly what the temperature is. Some stores actually sell temperature monitors that can send alerts to a phone or computer if the temperature in a brooder box dips too low or goes too high. This can help protect your chicks from power outages or even bad heat lamp bulbs that, if they go out in the night, can chill or kill your chicks.

The brooder floor should be covered with bedding. The recommended bedding for young chicks is pine wood shavings, either fine or medium size. If chicks are kept on a surface that is too slick (such as newspaper), they can slip and develop splayed legs.

The heat lamp should be secured well to the side of the box or to a nearby wall to prevent it from falling into the

#### TIP

Brooder plates are a great choice for warming your brooder box, as they are safer for your chicks.



Courtesy of Colorado Avian Health Program



## BROODIES

**Broody** hens (often called “broodies”) are common in many breeds, including Silkies, Cochins, and Orpingtons. When a hen prepares to “go broody,” she makes a nest in a dark, secluded place and lays an egg there every day, until she has a sizable clutch of eight to fourteen eggs. (Chicken eggs remain fertile for up to two weeks after they are laid by a hen.) After she has laid her clutch, the hen will go broody, sitting on her eggs while warming them and rotating them hourly. If allowed to brood for twenty-one days, the hen will hatch her eggs if they are fertile. In order for eggs to be fertile, a rooster must be present and have mated with the broody hen before she laid her eggs. However, hens will go broody even if a rooster is not present and the eggs are not fertile, resulting in eggs that will not produce chicks. If you do not wish to have a broody hen hatch eggs, you can take her eggs away. If she remains persistent, take her off the nest frequently until she gives up.



Although broodiness may seem inconvenient, especially in a flock when the eggs are not fertile or when you do not want to hatch chicks, a broody hen can actually be used as a brooder box. If a hen broods for long enough, she will often accept chicks that you can buy at the feed store or from a hatchery as her own if you place the chicks beneath her and remove any eggs that she may have underneath her. Note that the longer a hen has brooded, the more likely she is to accept store-bought chicks. If you do decide to use a broody hen, you must watch her closely in the first few days after you place chicks under her to be sure that she accepts them. There are numerous benefits to using a broody hen as a surrogate mother for store-bought chicks. A broody hen teaches chicks how to eat and drink on their own and reduces the stress chicks undergo in their first few days of life. This reduces the chances of chick diseases and, consequently, chick death. Broody hens also are adorable to watch as they protect and chirp to their chicks. However, chicks raised by a hen tend to be more skittish than hand-raised birds and require more attention from you in order to tame them.

brooder by accident. This can not only kill your chicks, but it can start a fire. It is important to use a secured, red-tinted 250 watt bulb.

For the first week, the brooder should be kept at about 95 degrees Fahrenheit. Every week after that, the temperature should be lowered by 5 degrees until the temperature inside the box matches the average temperature outdoors.

### TIDBIT

Red light keeps chicks from seeing blood, which protects injured chicks from being attacked by their flock-mates.

wire lid on the top of the brooder box to keep them from flying out.

Keep in mind that chicks enjoy exploring and flying as they get older. This might necessitate a

It is important to set up your brooder box the day before you buy chicks in order to test-run your equipment and make sure that everything is working properly. Be sure the temperature is set to 95 degrees before you bring the chicks home, so that they can immediately be warmed.

## Purchasing Healthy Chicks

Now that you know which breeds are best for you and have your brooder box set up, it's time to buy chicks! It is typically easiest to buy chicks from your local feed store, where they are carried from January through September. However, you can also purchase chicks from a breeder or hatchery, both of which will ship your chicks by mail





to your house. Wherever you purchase them, the rule for buying chicks in 4-H is *the sooner, the better*. It is highly recommended that chicks that you intend to show in 4-H be purchased as early as possible within the year to ensure that they are mature enough to show. If you are just buying chicks for your backyard flock, be mindful of the fact that birds bought in the summer or autumn may still be small when the winter arrives, which can stress or kill your young birds.

Although you can mail order your chicks from a large hatchery, this can be risky and pricey for you. These hatcheries also require bird minimums, which means that you must order a minimum number of chicks in order to have them shipped to your home. Ask your local feed store in November or December if they can special order chicks for you for the late winter. This way you can get the birds you want and not have to worry about the shipping process.

If your feed store does not do special orders, request their poultry order schedule. Look over the breeds they plan to have in January and February and choose from those breeds.

If you purchase your chicks from a feed store, you must check your chicks before leaving the store to be sure that the birds you are purchasing are healthy. Because it is im-

possible to tell if the conformation of a chick matches the Standard for its breed, you must focus on choosing the healthiest chicks. The healthier the chicks, the less chance you will deal with disease or deformities, or even chick death, later in the year.

To choose the healthiest chicks, look for those that are eating, drinking, cheeping, and generally milling around. Avoid any chicks that are being stepped on, have their eyes closed, are sitting, or are rocking back and forth. Once you have determined which chicks are healthiest, ask the feed store employee if he or she can pick it up for you or if you can hold it. Examine the chick up close. Here are some things to look for when examining a chick:

- Check the eyes of the chick. Both should be bright, clear, and free from any discharge.
- The chick should not be squinting or sneezing.
- Toes should be straight and firm, not crooked or bent. (Know which breed you are considering and how many toes belong to that breed. Most breeds should have four toes, but a few, such as Faverolles and Silkies, have five.)
- Does the breed you're looking at have feathers on its legs and feet? If so, your chick should as well. Know the requirements of the breed you are considering. (A chick that has feathers on its legs and is not supposed to will place last or be disqualified in a show.)

## HATCHERY OR BREEDER?

A big question for chicken keepers, especially those in 4-H, is if it is worth the money to buy birds from an experienced breeder. Having high quality chickens is exciting and fun, but it comes at a financial cost. These birds can range from \$30 to over \$100 each. It is important to know what you are getting into before you buy breeder birds. These birds should place well in shows, but you do pay for the wins. If you are not as concerned with showing your birds, consider purchasing chicks from a hatchery or feed store. Even though they might not place as well as breeder birds, they are much cheaper. This lets you build experience before you buy expensive birds. If you do decide to try your hand at buying and breeding chickens, do your research on the breed. Choose one with high fertility and one known for healthy chicks. If you can, buy young adult birds instead of chicks and house your breeders separately from your main flock. This way you know that you are receiving and hatching quality chickens. Depending on your goals, hatchery or breeder chicks might be a better choice; however, regardless of where you purchase your birds, your chickens will still provide an exciting experience.



- The wings on the chick should be carried close to its body, and it should be cheeping and squirming in your hand.

Once you have chosen your chicks and checked them for sickness or defects, you can bring them home. Make sure that whatever box you bring them home in has a lid to keep them from jumping out. If you can, bring along a hot pad to place under the box or turn up the heat in your car to keep the chicks as warm as possible.

## Heating, Feeding, and Watering

Chicks are extremely delicate, especially in their first two to three weeks of life. In this stage, chicks can easily overheat or become too cold, which can stress or kill them. This problem can be mitigated by leaving plenty of space in the brooder box for the chicks to get away from the heat or get closer to it.

You can tell if the temperature in your brooder box is wrong by observing the chicks themselves. Happy chicks at the right temperature will be scattered around the box, some eating, some drinking, most sleeping. Cold chicks will be piled up right under the heat source or in a corner.<sup>7</sup> If this happens, try to trap the heat in the brooder box with a lid or move your heat lamp or brooder plate closer to the ground. Hot chicks will try to get away from the lamp by retreating to the far side of the brooder box. You can solve this problem by moving the heat source up or increasing airflow in the brooder box. However, drafts can be deadly to chicks, so don't use a fan to cool down your brooder box.

Keep your brooder box at 95 degrees for the first week. Then bring the temperature down by five degrees each week. Do this until the temperature in the box matches the temperature outside or until the chicks are too large to be kept in the brooder.

Chicks also need constant access to clean water and food. You can buy a chick feeder and waterer at any live-stock or ranch equipment store. If possible, buy them in yellow or red. Chicks are attracted to these colors and will be more likely to eat and drink from them.



Colorful feed and waterer bases like these encourage chicks to eat and drink more frequently.

Water is critical for your chicks and it's very important that your chicks get a drink right when they get home. As you are putting your chicks into the brooder box, dip their beaks once in the water to help them hydrate and learn where their water is. Monitor your chicks for the first few hours to make sure at least a few of the chicks understand the concept of water and drinking. Even if only a few chicks understand at the beginning, chicks (and all kinds of poultry, old or young) learn from example. Once one chick is drinking, the others will follow in suit. Chicks also benefit greatly from having sugar or electrolytes in their water when they first arrive home. This helps perk up tired chicks and improves their chances of survival. Use about three tablespoons of sugar for every quart of water or follow the instructions on the electrolyte bag. Remember that if you do use sugar water or electrolytes, the water must be changed every twenty-four hours. If you don't, the water can go sour and can make your chicks sick.

If you have bantams, fill the bottom of the waterer with brightly colored marbles. Chicks tend to fall asleep everywhere and can actually fall asleep in their waterer. Marbles can help prevent any drownings and also attract chicks to the water which helps them learn how to drink.

"Complete" chick food is crumbled feed with a high protein percentage, around twenty-four percent, and all of the nutrients and minerals young birds need to grow. Some chick feeds are also labeled as "medicated" and contain medication to prevent coccidiosis in young birds. There is no need to ration how much your chicks are eating; they won't eat any more than they will need.



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## Chick Health

Below are some of the most common diseases and problems that can happen to your chicks, along with their treatments.

### Pasty Butt

A threat to a chick's health in their first few weeks of life is pasty butt which can be caused by brooder temperatures that are either too high or too low. This occurs when droppings build up and block a chick's vent. If not treated, pasty butt can kill chicks in twenty-four hours. To treat pasty butt, use a paper towel wet with warm water to gently wipe and pull away the droppings until no more are stuck around the chick's vent. Young chicks should be checked daily for pasty butt.

### Splayed (Spraddle) Legs

This problem occurs when chicks are kept on a surface that is too slick for them to stand properly. The chick slips and appears to "do the splits." This causes the chick to be unable to walk. They won't be able to walk to their feed or water or get closer or farther from the heat. To cure splayed legs, make a small hobble for the chick with tape by wrapping it around their legs. This keeps the chick's legs from slipping out again and allows it to move, though not very efficiently. The chick's legs should heal within a few weeks if hobbled correctly.<sup>8</sup>

### Coccidiosis

Coccidiosis is the number one cause of death in chicks. It is an internal disease caused by a protozoa that thrives in a wet and dirty environment. Chicks that become infected are listless and have bloody diarrhea. Coccidiosis can kill all of your chicks quickly, but it's very simple to prevent. Just keep your brooder box reasonably clean and make sure that the waterer is not leaking and making the shavings wet. It can help to raise the waterer off the ground a little bit to keep the water fresh. Coccidiosis can also be prevented with the help of medicated chick feed that is available at most feed stores. If you do notice bloody droppings and realize that you may have a coccidiosis problem, other medications can be acquired through a veterinarian or you can contact your superintendents or another experienced member for help.



Scissor beak in a mature hen

### Crossed (Scissor) Beak

Crossed beak, or scissor beak, is a genetic defect where a bird's upper and lower beak do not line up properly. If you can catch the problem in young chicks, you can trim the beak back into a more normal position. Chicks with crossed beaks can have a hard time eating and drinking, but they can survive to adulthood and live normal lives. When trimming a beak back into a normal position, make sure to cut only a little bit off at a time. Be very careful not to cut the inside of the chick's mouth, as this could cause them to stop eating altogether. See the adult chicken health section for pictures on how to trim a beak.

### Toe Picking

Toe picking occurs when other chicks peck at one chick's toes until they bleed. This can cause lameness and even death if not caught in time. Sometimes chicks are just curious and toes look a bit like grubs or food and they end up doing damage to each other. If a chick is the victim of toe picking, separate it from the other chicks and use cornstarch to stop the bleeding. To prevent toe picking to the extent of bleeding, use a red-tinted bulb for the heat lamp. This will cause any blood to blend in with the chick's surroundings and keep its fellow chicks from targeting it.

### Respiratory Diseases

Chickens have very delicate respiratory systems that can be harmed by various types of viruses and bacteria.





Courtesy of Colorado Avian Health Program



Marek's disease often manifests itself in chicks through the nervous system, causing paralysis.

Respiratory problems become evident if chicks seem to have a hard time breathing or are wheezing or sneezing. Other symptoms include coughing and eye and nasal discharge. This can be caused by excessive dust in the brooder box from extra fine shavings, cedar shavings, or a respiratory disease. To help prevent respiratory problems, clean the brooder regularly and use larger flake pine shavings as bedding. Any bird exhibiting disease symptoms should immediately be quarantined to protect the rest of the flock.

## Marek's Disease

Marek's Disease is the number two killer of chicks and can manifest itself in chicks or adults. It attacks white blood cells, which creates issues with the nervous sys-

tem, causing paralysis, stumbling, and/or incoordination or other symptoms in the chicken before it dies. Marek's disease is incurable; however, there is an effective vaccine that, if given at a young age, can prevent the disease from occurring. However, some hatcheries and most breeders do not vaccinate, so it is important that you check with your supplier to ensure that the chicks you purchase are vaccinated. In many cases, you may request that birds you purchase be vaccinated if they are not marked as being immunized already.

## Biosecurity in Chicks

The best way to prevent disease and other problems in your chicks is to keep their brooder box clean and keep droppings out of their water. Know how your chicks usually behave and note any abnormal behavior. By being familiar with your chicks, you can spot problems fast enough to prevent damage to your flock. If you so notice a bird exhibiting signs of a contagious illness, be sure to quarantine it immediately to prevent the spread of a disease within your flock. By preventing the spread of disease in this manner, you are practicing **biosecurity**, which is extremely important in the world of poultry and in keeping your flock safe.





## Chapter 4

# Caring for a Flock

### Designing a Coop

Chicks can only stay in a brooder box for a limited time before they outgrow their box and are ready to see the outside world. You will need to have a coop ready for your little birds when the temperature in the brooder box has been lowered to the temperature outside, or about 65-70 degrees. Then when you move your chicks out, keep a heat source out in their new coop with them to keep the temperature of the coop warm. But what does a good coop look like? And what does it take to keep your birds happy?

A good coop has one purpose: *to protect your flock*. It should protect your birds from the weather, from predators, and from bright light when they are trying to lay their eggs. It also needs to be big enough to not crowd your birds.

Coops come in different shapes and sizes and can be made with various materials. However, here are some tips to keep in mind while buying or building a coop.

- Make sure to secure the gaps and windows of your coop with wire mesh or hardware cloth, as well as latches that only humans can open.<sup>9</sup>
- Nail all wire and cloth down to prevent predators from breaking into your coop. Note that chicken wire or any other light gauge wire will only keep your birds inside a coop or run; they will not keep predators out.
- Avoid using wire bottoms on your coop unless the wire is resting directly on the ground. Wire floors are hard on chickens' feet and can cause lameness later in their lives.
- Provide adequate ventilation to prevent the coop from becoming too stuffy. However, make sure that the coop is never drafty. Just like chicks, adult chickens can become sick from drafts.
- If you live in a cold area, insulate your coop, but do not expose insulation (fluffy or hard) to chickens. They will eat exposed insulation, which can be toxic to them.
- Always waterproof your coop. A saying runs among chicken fanciers: A wet chicken is a dead chicken.
- If your coop is raised above ground-level, you will

#### TIP

Standard-sized breeds need three square feet of space per bird in a coop. Bantams need two square feet per bird.



need a ramp that leads from the ground to the chicken door, or **pophole**, on your coop for easier access for your birds.

After the coop is built, make sure to add roosts and nesting boxes to the inside. Chickens like to perch on **roosts** while they sleep at night. These roosts can be made of one-by-one boards secured horizontally to the walls. You can also use tree branches that are screwed into the walls. Chickens prefer smaller perches that they can get their toes wrapped around instead of wide, flat perches.

**Nesting boxes** are essential inside your coop. They provide a place for your hens to lay their eggs in a dark, quiet place where they feel safe. These boxes can be made of plywood, metal, or even plastic buckets. The possibilities are endless, just as long as the box is dark and secluded. Remember to regularly clean these nesting boxes and remove any droppings or soiled bedding.

## Food and Water

As chickens mature, they need less and less protein in their feed. Chick starter is about twenty-four percent protein, but the average laying hen only needs from sixteen to twenty percent. Chicks need to start being transitioned to lower protein when they are about two months old.

To switch your chicks to a new feed, slowly begin mixing lower protein feed into the regular chick starter. Gradually increase the amount of adult feed in the chick starter



Notice the dividers in this plywood nesting box that keep the hen enclosed and feeling safe.



Roosts can be as simple as sturdy branches installed in your coop. They can give a more natural sleeping place for your birds at night.

until the chicks are fully transitioned. It is very important to switch feeds gradually, since a dramatic change of feed can stress chickens.

Complete chicken feed comes in two different types: crumble and pellet. Crumble is great for chicks or young pullets, but the birds quickly learn how fun it is to scratch the crumble out of the feeder. Not only is this wasteful, but the unused feed quickly becomes needlessly expensive and can attract predators. Pellets are a better option, as they stay in the feeder and therefore reduce waste.

Chickens also love occasional treats, such as vegetable peelings, fruit, and birdseed. Chicken scratch, a cracked corn mix, also makes a good treat for birds, especially in the winter when the corn helps chickens stay warmer. However, note that scratch should *never* be used as a substitute for complete chicken feed, which includes nutrients and minerals that scratch lacks.

The type of feeder does not matter much for chickens. The feeders designed for poultry, such as gravity-fed tower feeders, work best since they discourage food waste and can last for a long time before needing to be refilled. Never give chickens moldy feed.

Water is critical to the survival of any animal. Chickens are no different; they need access to clean water at all times. A rubber tub of water works for a flock or plastic poultry waterers are also available at stores and can be hung from the ceiling of a coop. These hanging waterers tend to keep dirt and straw that the chickens scratch up





out of the water. However, these can be less convenient to fill. Some people also use drip (or “nipple”) waterers, to provide water to their birds, which helps keep the water clean as well. However, many believe that these particular types of waterers are not as healthy or natural for birds to drink from. Note that if you do decide to use drip waterers, you must teach your birds to use the drips; chickens cannot learn how to drink from drip waterers on their own.

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## Health

The best way to monitor the health of a flock is to know each bird and its personality. Some chickens are energetic and forage constantly while others prefer to hang out in the coop or in shady places all day.

The tell-tale sign of a sick bird is one that loses its vigor and relegates itself to a corner, ceasing to eat and drink or interact with other birds. Sick chickens will pull their neck in, shut their eyes, and have droopy wings.



Open water tubs are easy to refill, but are often harder to keep clean.

The faster you can recognize one of your birds is not feeling well, the sooner you will be able to treat it. Once you realize that a bird is ill, immediately separate it from the rest of the flock to prevent other birds from becoming sick. Create a “chicken hospital” by putting a small pen around a plastic dog crate or similar shelter. Pad the “hospital” with soft bedding, such as wood shavings or soft hay. Always provide a sick bird with food and water, even if it seems to be disinterested in eating or drinking. To encourage drinking, add electrolytes or sugar to the sick bird’s water (three tablespoons of sugar for every quart of water). Change sugar or electrolyte water every twenty-four hours.

Here are some common diseases and health problems to be familiar with to better protect your flock.

## Lice

There are a number of external parasites that are very common in all flocks of chickens. One of these parasites is poultry lice. These are specific to poultry and cannot survive on humans. They are small, straw-colored insects that eat dead skin trapped under the chicken’s feathers. Lice thrive in damp or moist places, such as around the vent, under the wings, and under the beak. They lay their eggs, or **nits**, on feather shafts or in the lower fluff on feathers. These nits look like tiny white balls or salt crystals.

Adult lice can be killed easily by sprinkling a permethrin-based poultry or garden dust, such as Prozap



Courtesy of Colorado Avian Health Program



Dusting is sometimes easier when one person holds the bird and another sprinkles the dust.

or Y-Tex, on and around a chicken's vent, under its beak, and under its wings. However, nits are impervious to this toxic dust. They will hatch about a week after they were laid regardless of the presence of permethrin. Therefore, feathers with nits attached can be pulled to prevent repeat hatches or afflicted birds can be dusted after the nits hatch. Note that permethrin is not only toxic to lice, but also to humans. When dusting your birds, wear gloves and appropriate clothing, such as a mask, to prevent contact with the dust.

For added protection and a more natural remedy, use food grade diatomaceous earth (powdered shells and fossils found at most gardening stores) in the chickens' **dust-bathing** sites or in the nesting boxes. However, diatomaceous earth by itself will not keep a flock free from lice. This product is best used preventatively with permethrin, the primary delousing agent. Note that some birds are prone to becoming infested while others may never have a single insect on them. It is important to keep your flock as free from lice as possible so that your chickens are comfortable and healthy.

## Mites

Mites are another kind of common external parasite. Like lice, mites live on a chicken's skin and on its feather shafts where they lay their eggs. But, unlike lice, mites drink the chicken's blood. This poses an even more serious risk to a chicken's health, since a chicken infested with mites can actually become anemic and even die from too much blood loss or too little iron.



Lice eggs (nits) appear white on these feathers.

Mites are tiny black or red insects in the arachnid family. They look like teeny-tiny specks on a chicken's skin, but can cause serious discomfort. Like lice, mites thrive in damp places, such as around the vent and under the wings and beak. Mites can also live in the nooks and crannies of a coop or under containers and, if left unchecked, can cause a serious infestation.

These arachnids can also be killed with permethrin dust. Mites create very damp, almost sandy, colonies in the feathers of a chicken where they lay their eggs. These colonies must be dusted regularly (once a week), until the colonies are dried out enough to fully die. To kill the mites quicker, use gloves to manually disrupt and break the colonies apart.

Courtesy of Colorado Avian Health Program



The mites are the tiny black specks around the feathers. Their colonies are the matted grey part of the feather.





## Scaly Leg Mites

Scaly leg mites are extremely common in chickens and are readily diagnosed by observing a chicken's legs. A chicken with scaly leg mites will have leg scales that seem to peel upwards. This condition is painful for the chicken and may stress the bird to the point of causing them to lay fewer eggs. The mites themselves can usually be seen on the legs, but any lifting scales that continue down to the toenail are a sure sign of their presence.

A bird with scaly leg mites should be treated by dipping its feet in vegetable oil or by rubbing Vaseline on its legs daily. These oily coatings suffocate the mites and help rehydrate the bird's legs.

## Frostbite

Chickens are prone to frostbite, especially on their comb and wattles. Frostbite is not only caused by low temperatures, but also by poor ventilation in a coop. Frostbite appears first as a whitening in the tips of the comb or edges of the wattles that eventually turn black and fall off. To minimize the chance of frostbite, reduce humidity and drafts in your coop and rub Vaseline on large combs before a cold night. If you live in an especially cold region, avoid purchasing breeds with large combs that are especially susceptible to frostbite.

Frostbite usually does not need to be specially treated, although it can be prevented. However, the chicken can lose points on its comb if continuously exposed to freezing temperatures. This can cause a chicken to be undesirable to be shown at a poultry show.

## Flystrike

Flystrike is a problem that occurs when a chicken becomes infested with fly larvae, or maggots, which begin to eat the bird alive. Flies prefer dark, warm, and moist places to lay these eggs, so the vent area is the preferred place. Brooding hens and birds with open or partially healed wounds, a dirty vent, or a heavy louse infestation are the most susceptible to flystrike. Take precautions to keep wounds as clean as possible and to regularly inspect your flock for filth and louse. Flystrike should be treated as an emergency, since it can kill chickens within a few days. The affected bird should be quarantined from the flock as soon as possible to prevent cannibalism.



Birds with feathery feet and legs are more likely to be afflicted by scaly leg mites.



Notice the frostbitten tips on this rooster's comb that have begun to turn white. The black tops of each spike will soon fall off.



When treating a bird for flystrike, look for the infested place and bathe the chicken in warm water to drown as many maggots as possible. Physically remove any remaining larvae and then rinse the area with saline. Blow-dry the chicken after the bath to prevent the birds from becoming chilled. Then use an infection-prevention spray to further cleanse the wound. Never use ointments as a flystrike treatment, since they create a goopy environment that is still favorable to flies. Sometimes it may be more humane to euthanize the bird, since many chickens cannot recover from a bad case of flystrike.

## Coccidiosis

Coccidiosis is a protzoa that affects the intestinal tract of a chicken and causes severe diarrhea and dehydration which can kill chickens quickly. Although coccidiosis

### TIP

Cleaning your coop once a week is the easiest way to guard against coccidiosis and other diseases.

mainly affects chicks, adult chickens are at risk of becoming infected with this disease if the birds are kept in dirty conditions.

Infected birds will typically have bloody and/or runny droppings, become listless, and stop drinking. Coccidiosis can be prevented by keeping a coop reasonably clean and keeping the run free from mud and filth.

Since coccidiosis is highly contagious, make sure to separate a sick bird to prevent them from spreading the infection through the flock. Once this is done, the most important step to take in saving your bird is to rehydrate them. Using electrolytes in water can encourage the bird to drink a little more. In addition to rehydrating and quarantining the sick bird, treat it with medicine specific to coccidiosis from a veterinarian.

## Marek's Disease

Marek's disease is highly contagious and can easily kill an entire flock. Although most large hatcheries routinely vaccinate their birds against Marek's, this disease is still extremely common in backyard flocks. Always check with your supplier to see if your chickens were vaccinated against the disease as young birds. The main symptom of Marek's is paralysis, although most often birds will suddenly die without any symptoms.

Unfortunately, Marek's disease is untreatable and incurable. If you suspect that your chicken has Marek's, contact a veterinarian to determine the best course of action.



This bird has contracted a respiratory disease. Notice its swollen nasal cavities are so enlarged its eye is forced shut.

## Respiratory Diseases

Respiratory diseases are some of the most common diseases that surface in backyard flocks. Signs of respiratory issues include sneezing, discharge from the beak or nostrils, trouble breathing (such as wheezing), bubbly eyes, sores in the mouth, or swelling of the face and nasal cavities. Afflicted birds may remain carriers even after their symptoms go away. If you notice respiratory issues in your flock, contact a qualified veterinarian for a diagnosis and advice.

If you need help treating your chickens or have an infected flock, contact the a qualified veterinarian through your superintendent. Call a vet if you notice paralysis, widespread respiratory issues, or constant unexplainable poultry deaths in your flock. These could all be signs of an infectious disease that only a professional can address.

## Predators

In addition to these common health issues, chickens can be attacked by predators, which can either kill or seriously injure them. The most common predators are dogs, cats, raccoons, and birds of prey. Depending on where you live, bears, cougars, bobcats, minks, foxes,





skunks, coyotes, and snakes can also be a problem. Each predator leaves a distinct mark behind. If you do lose

#### TIP

Automated chicken doors that close at a set time every evening are an easy way to protect birds!

birds to a predator and are unsure of which predator is at fault, look for these specific markers to determine the culprit and prevent

more bird loss. However, the best way to prevent predation is to lock up your poultry before dusk and let them out after sunrise to discourage the especially frustrating nocturnal predators.

## Dogs

Dogs are the most common predator to chickens. Even dogs that are well trained can lose control when encountering poultry. Dogs will usually kill many chickens and a large portion of the carcasses will be left. To secure your flock against further dog attacks, make sure that there are no holes in the fence, that your coop is secured with heavy gauge wire, and that your chickens have a place to hide from an excited dog.

## Cats

Cats can also be problematic but usually do not go after adult chickens. Cats will go after chicks or very small chickens. If a cat does kill a chicken, the cat will almost always eat most of the carcass but leave the head and feet behind. To secure your coop against cats, patch holes in the fence and make sure a cat cannot climb your fence.

## Raccoons

Raccoons are one of the most difficult predators to deter because they are extremely clever and have opposable thumbs which allow them to open locks and doors that other predators cannot. Raccoons hunt and kill for sport; so if a raccoon does get to your chickens, often-times it will kill all of your birds and only eat one or two. Raccoons leave distinctive scat behind and will leave feathers and bits of carcass scattered around the coop. Raccoons are nocturnal; so as long as your chickens are secured in a solid coop without loose wire or holes, they will be safe. Keeping a radio playing loudly near your coop can help scare away these predators.



#### TIP

If you have a dog, be sure to keep it on a leash around your flock of birds.

## Birds of Prey

From hawks to eagles to even early-hunting owls, birds of prey can be problematic for your chickens. If a bird of prey does attack and kill a chicken, it will usually carry it away to eat it elsewhere, leaving very little evidence of the attack except for a few scattered feathers. To minimize bird of prey attacks, provide lots of shrub and tree cover to your birds so that they can escape from flying predators. Covering your run with netting also deters these flying predators and other climbing nuisances, such as raccoons. Also consider avoiding the purchase of white-colored chickens. These are easy for birds of prey to spot, unlike brown, barred, or similarly colored birds.

## Foxes

Foxes are sneaky and intelligent predators that leave little evidence of their attack behind. Sometimes foxes will kill only one bird and then carry it away leaving nothing but a few scattered feathers. Other times, foxes will kill multiple birds and then drag them away one at a time to their den. Sometimes, foxes, which are usually solitary, will even hunt in small packs resulting in even greater bird loss. Because foxes are able to squeeze in through tiny holes, you must make sure that both your coop and run fencing are tight and fox-proof. A loud radio can also help keep these predators away.



## THE BENEFITS OF ROOSTERS

Although the best ways to keep your flock safe are by securing your coop and run and locking your birds up before dark, a rooster can also help protect your flock by warning the hens if a predator is close. Male chickens tend to have instincts that are sharper than hens when it comes to spotting predators. Roosters can even fight off predators long enough for a human to get to the scene. If you are worried about aggressive behavior from male chickens, consider purchasing a bantam rooster of a docile breed, such as a Cochin or d'Uccle. These roosters will still protect their hens while generally leaving people alone or even being friendly towards their owners. If you are able to have a rooster in your area, it may be worth the extra noise to add another safeguard to your flock.



Even bantam roosters can protect a flock. Plus, they tend to do less damage to hens.

### Skunks

Skunks are another tricky predator. Like raccoons, skunks are able to squeeze through small holes in a coop or fence. However, skunks also have the ability to dig, meaning that they can burrow under fencing that may keep other predators out. Skunks usually will not attack

full-sized chickens; instead, they will suck the insides out of eggs or kill small birds or chicks. The tell-tale signs of a skunk attack are empty egg shells and/or decapitated chickens, as well as a lingering odor. To protect your flock against skunks, bury your fencing down in the ground to deter burrowing and patch any holes in your coop or fence.





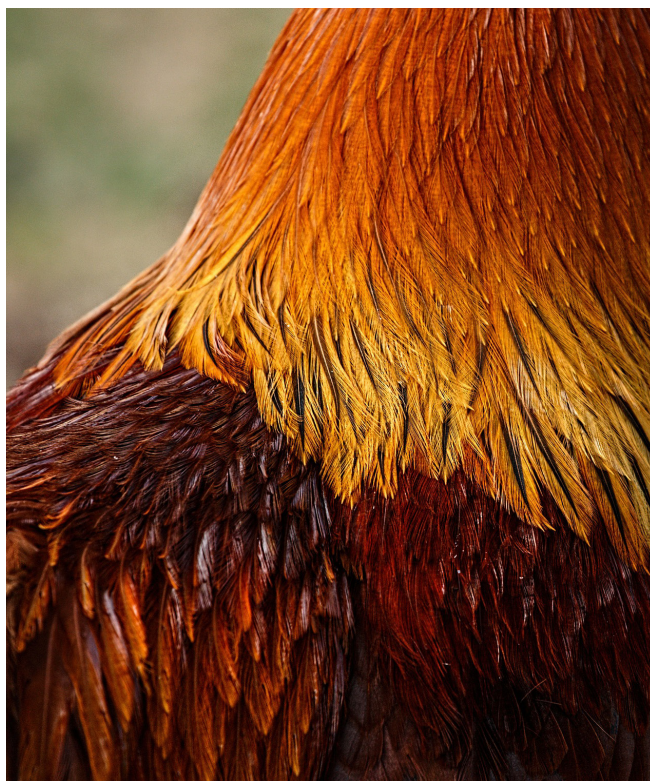
## Chapter 5

# Preparing for a Show

### Know What You Have

About a month before a show, you must register your birds via a registration or entry form. In order to fill out this form, you must know (1) if your chicken is male or female, (2) how old your chicken is, (3) what breed the chicken is, (4) what class the chicken is in, and (5) what color or variety the chicken is.

1. It is not too difficult to tell males and females apart once the birds reach about five months of age. Males will have bigger combs and wattles, larger and more extravagant tails, spurs on their legs, and will most likely be crowing. Females will have smaller combs and wattles, more modest tails, and have very small spurs. Color will also vary between males and females, with the males typically having more vibrant colors and females having more subtle coloring.



Notice the sharp hackle (golden) and saddle (amber) feathers that characterize this rooster. These sharp feathers help distinguish males from females.

2. You do not have to know exactly how old your bird is; a rough estimate will do for a birth date. However, although the day itself does not matter so much, the year of birth is important. In order to be considered “young,” chickens must be less than a year old. Chickens are considered “old” birds if they are more than a year old. A male hatched in the same year as he is being shown is considered to be “young” and referred to as a **cockerel**. A young female is called a **pullet**. A male hatched before the year of the show is called an **old cock**, or simply a cock or **rooster**. An older female is called an **old hen**, or just a hen. Chickens at a show are judged against birds in their own age range, so it is important to correctly label your bird as a cock, cockerel, hen, or pullet.
3. You must know what breed your chicken is in order to show it. Oftentimes feed stores or hatcheries accidentally sell you the wrong breed, so do not rely on the receipt to tell you what breed your chicken is. Instead, look up pictures of the supposed breed online or in the Standard of Perfection to verify that you indeed have the correct breed. If you cannot determine which breed you have, ask your superintendent or other experienced poultry fancier for their opinion.
4. Once you have determined what breed your chicken is, refer to the APA Standard of Perfection to determine which class your bird falls into (i.e. American, Asiatic).
5. Use the Standard of Perfection to determine what color your chicken is. If your chicken is a variety that is not recognized by the Standard, still include its variety on your entry form. However, birds whose varieties are not recognized will not place as well in a show as those with a recognized variety.

**TIP**  
Always ask your superintendents if you have questions or need help for your registration.

The show superintendents set up the barn every year and organize hundreds of birds based on these registration forms. It is important that you know exactly what you have and give them as much information about your birds as you can.



## Showmanship

The point of a poultry show is for a judge to compare bird vs. bird and determine which fowl is superior to the other. In showmanship, a judge quizzes 4-H members on their poultry knowledge and handling expertise to determine which member displays his knowledge and his bird the most successfully. Although showmanship is very fun and rewarding, it does take some time to prepare yourself and your bird. Showmanship is easiest done with a small chicken but can also be done with any kind of fowl, from ducks and turkeys to geese and pigeons. Keep in mind that the bigger the bird, the harder it is to handle and the more difficult it is to show your bird to the judge correctly.

## Preparing for Showmanship

### Choosing a Bird

When choosing a bird for showmanship, avoid using a flighty bird. Skittish chickens are difficult to work with and make practice miserable. Since points are given on the showmanship scorecard based on the tameness and manageability of your bird, choosing a bird that is already tame is advantageous. (See Appendix for a sample showmanship scorecard.)

However, if you are starting out with chicks, it's best to start working with one from a young age, preferably when it's just a few weeks old. If you have an older flock of laying hens, choose a bird that you are able to handle easily, that cooperates with and trusts you. Bantams are often somewhat easier to handle, but standard-sized breeds can work as well.

If you have a large flock or a rooster, it's best to separate the bird you want to use for showmanship a few months before the show starts to protect the bird from the rest of the flock. If possible, keep a small group of birds you want to show, about three to five hens or docile roosters, apart from your main flock. Not only does this help to keep all of your show chickens looking beautiful, but a chicken in good condition will reflect well on you during showmanship. A well groomed bird shows the judge that you took the time and thought to keep your bird looking nice.

In the weeks leading up to the show, start training your bird. Begin by holding it frequently, feeding it treats from your hand (such as mealworms or sunflower seeds), and speaking gently to it. This preliminary training will help your bird stay calm as you both master the maneuvers discussed in this manual.

However, even the best laid plans can go awry. Predators, disease, and other unforeseen circumstances can make the bird you have worked with unsuitable for show. If possible, train at least one backup chicken. It may not be quite as well handled as the "Plan A" showmanship chicken but will work in a pinch.

### What to Know

Numerous different things take place during a showmanship session with a judge. Although the actual protocol may differ between judges, the concepts they are looking for are universal. Every poultry member should know a few important things:

1. the breed, age, gender, and variety of the bird they are showing,
2. all of the anatomical parts of the bird being shown as well as knowledge of all poultry anatomy,
3. how to hand a bird to a judge and place a bird in a cage,
4. facts about all species of poultry, such as history, functions of body parts, and about the Standard of Perfection and the breeds listed in it, and
5. knowledge of feeding and how you prepared the bird for the show.

There are four basic maneuvers to master before you compete in showmanship: holding the bird correctly, spreading the wing, flipping the bird over, and handing the bird to the judge or placing it into a cage. All of these maneuvers should be done without the bird panicking or squirming excessively.

First, the basic poultry hold must be mastered before the rest of these maneuvers can be done correctly. The proper hold ensures that your chicken will not be able to scratch or escape from you during the competition. When holding a chicken, place your middle finger between the legs of the bird and then squeeze the legs together using your ring and pointer fingers with the palm of your hand supporting the birds weight (Fig. 1).





If the bird flaps, you can use your free hand to gently pin its wings together from the top or to press the bird into your chest to keep the bird calm (Fig. 2). Judges will always look to see that you are holding your bird in this way, so it is critical that you master this basic hold.

The second maneuver is spreading your chicken's wing. Start by holding the chicken close to your chest in the proper hold. Then, with your free hand, reach around the chicken's breast and gently grab the wing elbow, or the place where the wing bends backward (Fig. 3). Then, with your thumb on the bottom, use your fingers to spread the feathers out. When spreading your chicken's wings, always grab the wing from underneath, displaying all of the feathers without your arm or fingers getting in the way (Fig. 4). Make sure that every feather can be seen, but do not spread the wing so far that it causes the chicken discomfort.

Third, judges also look to see if you are able to turn the chicken over without it panicking. When training your bird to flip over calmly, cradle it in the crook of your arm, like a baby, and support its head (Fig. 5). This is the most comfortable pose for a chicken held on its back and will help calm it. While the chicken is in the cradled position, gently stretch the chicken's legs out, spreading out the toes and exposing the main parts of the leg. Use this position when the judge asks you to describe the anatomy of the legs and feet of a chicken.

The last maneuver to master is how to hand the bird to the judge or how to put it into a cage. The key when handing off a bird or placing it in a cage is to pin its wings to its sides so that the bird can't flap or catch its wings on the cage. To pin the wings correctly, hold the chicken in the proper hold (with its legs squeezed between your fingers), then press the bird to your chest with your free hand (Fig. 6). Remove your hand from between the chicken's legs and use it to pull the chicken away from your chest, so that you have one hand on either side of the bird, pressing its wings to its sides (Fig. 7). Always transfer a bird in this hold and always move the bird so that it is going headfirst. In other words, the head should always be pointing away from you. Practice going from the proper hold to the transfer hold and back again, so that you can successfully both hand off your bird and hold it correctly.



**Fig. 1** The proper chicken hold. Notice the fingers can be squeezed together to keep the chicken secure.



**Fig. 2** If your bird flaps, you can use your free hand to pin its wings to its sides while grasping its legs in the hold above.



**Fig. 3** Grasp the bird's wing at the elbow joint, where the wing begins to point downwards.



**Fig. 4** Use your fingers to spread the rest of the wing feathers out. Notice how your arms should not obstruct the view of the judge when showing the wing.







**Fig. 5** Notice that the bird's back and lower neck are supported in this cradle hold.



**Fig. 6** Press the bird to your hip with one hand while releasing its legs.



**Fig. 7** Put your hands on either side of the bird, pressing its wings to its body. The bird's head is pointing away from you as you hand the bird to the judge or place it into a cage.



**Fig. 8** When posing a bird, tap under its chin and set its legs square beneath it.

Some judges require showmen to pose their bird while it is in the cage. To pose a bird, use your finger or a posing rod to gently tap underneath the chicken's beak, raising its head to look alert and perky (Fig. 8). The chicken's legs should be square and sturdy beneath them and their tail should be held at the correct angle for the breed (refer to the Standard of Perfection for this angle). Train your bird to stand still for as long as possible. However, if on showing day your bird refuses to pose, it is okay to forgo this step.

## Practice Questions

Because 4-H members are divided into three groups based on their age, the judge will tailor his or her questions toward the age of the member they are interview. To put it simply, juniors will have easier questions directed at them than seniors. However, some questions remain the same regardless of a member's age. Most members will be asked questions based on the foundational information below. Also be prepared to answer any question not only about your bird but also about other species of poultry.

All members should be able to answer these basic questions:

1. What breed is your bird?
2. What gender is your bird?
3. How old is your bird?
4. Into what age category does this bird fit (pullet, cockerel, hen, cock)?

The questions below are harder. Juniors should know at least some of the answers and intermediates and seniors should be able to answer all of these questions easily.

1. What color pattern is your bird?
2. Is this a recognized variety?
3. What class is your bird in?
4. What are some other breeds in this class?
5. What was the original purpose of this breed?<sup>10</sup>
6. How did you prepare this bird for the show?
7. What kind of feed do you use?
8. Is this the correct feed for this variety and why?
9. Does your bird have any defects or disqualifications?
10. What is the difference between a defect and a disqualification?
11. Why do some hens squat when you go to pick them up?



12. How should one introduce a new bird into a flock or reintroduce the bird currently being shown into the main flock?
13. What and where are the axial feathers?

The hardest questions will be reserved for seniors. These questions vary widely and can be about all species of poultry or anything found in the Standard of Perfection. Here are some of the questions that may be asked and all apply to the Standard.

1. Where and when was the first American Poultry Show held?
2. Name one chicken in the American Class.
3. Name three chickens imported from China in the 1800s.
4. What are caruncles and on what kind of bird can they be found?
5. Is a lopped comb a defect or a disqualification?
6. Would your bird be disqualified if it had five toes?<sup>11</sup>

These questions are just the beginning. A simple online search will yield many more practice questions, but the

#### TIDBIT

Showmanship is a chance to exhibit everything that you have learned about poultry. Have fun showing the judge what you know!

essential ones are listed above. Even if you are a junior or an intermediate member, look through all of them and at least try to find their answers.

This will prepare you for any tricky questions you may be asked during your showmanship session. If you study as much as you can and prepare your bird for the judge, you will do great in showmanship and have a lot of fun doing it! Keep in mind that many times, the registration for showmanship is different from the registration for your birds. Make sure to double check with your superintendent that you are signed up for showmanship or if you have any doubts, difficulties, or questions.

## Preparing Your Bird for Show

Even if you are not competing in showmanship, your bird should be in the best condition possible. A bird in **good condition** has few to no frayed or broken feathers. Its toenails should be clipped and its beak trimmed. It should have an alert expression, and an overall vigor. Such a chicken will win out any day over an **out of condition chicken** with broken, dull feathers, cloudy eyes, overgrown toenails, etc., even if the out of condition chicken conforms more to the Standard. A judge wants



Notice the glossy feathers on this Polish hen which is in good condition.

to give the award to a healthy bird, and it's up to you to make sure your chicken is fit and ready for the show.

Hard dirt, direct sunlight, and roosters can contribute to a bird looking out of condition. An easy way to keep your birds in good condition and avoid these problems is to keep them in the shade and on grass, straw, or wood shavings, not dirt, since this can tear up their feathers and their feet. A chicken that is constantly in the sun will lose its shine and white birds will even turn yellow. If you have a rooster, keep your show hens separated, since roosters will **tread** on the hens, pulling head, neck, and back feathers from them as he mates.

In addition to the above problems, lice and mites can contribute to your bird looking out of condition. For example, a chicken infested with scaly leg mites will have gnarly legs and will look uncomfortable and unhealthy. To prevent your birds from becoming infested with bugs, check for infestations weekly and dust as needed. Always do a louse check a week before the show and make sure that there are no nits present and that there are no adults. Dust the bird, pull any feathers with nits, and then keep an eye on the chicken throughout the week.<sup>12</sup> All shows will have a **vet-check** that a bird must pass in order to compete in the show. The presence of lice, mites, and/or nits is reason to have your birds turned away, leaving them unable to compete in a show.

#### TIDBIT

A vet-check is a procedure before a show when veterinarians inspect your birds for any sign of illness, injury, or parasites.





Even if you do follow the above tips in keeping your birds in good condition, all chickens will need a touch-up before they go to the show. There are three main ways to prepare your chicken for show and get it in the best condition possible: bathing it, trimming its nails and beak, and shining it up.

## Bathing a Chicken

It is not always necessary to bathe a chicken before show but is especially helpful if the bird is having a lice or mite problem, has droppings stuck to its fluff, or is just dirty in general. Note that very tightly feathered breeds (i.e. Modern Game, Cornish) should not be bathed. To bathe a chicken, first fill a bucket, large sink, or tub with warm water.<sup>13</sup> Add gentle baby or dog soap to the water and stir until bubbles appear. Before you place the bird in the bath, pull any large droppings from the fluff feathers and the legs. Once the largest pieces have been removed, slowly lower the chicken into the warm bath up to its neck. If the chicken struggles, stop lowering it until it relaxes, then lower it in further.

Once the chicken is in the bath, carefully begin working the soapy water into the bird's feathers, focusing on the problem spots that are especially dirty. Make sure to get the water under the oily outer feathers into the under-fluff and work any dirt out of these feathers. Note that

### TIP

Be extremely careful about always keeping the bird's head above water. Birds that get water in their lungs can die quickly.

you should always clean *down* the bird, going with the feathers, never against them. Utmost care should be taken not to damage the feathers as you

wash the bird. Start at the shaft and work your way down to the tip of each feather. Use a toothbrush to scrub at the chicken's feet and toenails and work any scabs off of the comb. Once the chicken has been sufficiently cleaned, remove the bird from the bath, empty the bucket and refill it with clean warm water. Then place the bird back into the fresh water and rinse it off, still being careful not to get any water in the ears, eyes, or beak.

When the chicken is rinsed, pat it dry with a clean towel and either place it in the sun or blow dry it until the chicken is almost completely dry. This may take a while, but it is critical that the bird is not put back in with the rest of the flock while wet. A wet bird may become chilled or could pick up more dirt on its wet feathers.

If you do decide that one or more of your chickens needs to be bathed, you must bath it three to five days before the show. This ensures that the bird will have enough time to work its oil back into its feathers. A bird without oil on its feathers will look out of condition to a judge and will score lower. Therefore, it is never a good idea to bath your chicken a day or two before a show or even at the show.

## Trimming Nails and Beaks

Nails should always be trimmed before a show unless the chicken is a very vigorous forager and wears its nails down all by itself. To trim the nails of a chicken, first hold it tightly under one arm so that its head is pointing downwards so that its legs are easily accessible. It sometimes helps to have another person hold the chicken for you. Then use dog nail clippers or regular nail clippers to gradually trim away the excess nails. Be careful not to hit the **quick** of the nail, or the nail will bleed. Don't forget to clip the back toe!

Usually, chicken beaks do not become overgrown and it is best to not clip them. Only clip the beak if you are sure that it is overgrown. However, if the chicken is especially inactive or does not often forage, it may be necessary. If you do decide to clip the beak, only clip the upper mandible (the upper part of the beak). Make sure to only clip a little bit at a time to keep from hitting the quick.



Beak and toenail clipping can be done with dog nail clippers. If you have trouble clipping the nails by yourself, have another person hold the bird for you while you clip.





## Cage Training

A show can be extremely stressful for your birds. Loud noises, the constant flow of people, and the small show cage can all be contributing factors to a stressed chicken. Stressed birds can easily become sick or overheated, especially in the summer months. One of the best ways to prepare your birds is by **cage training** them, a method of simulating the show in your own backyard. All birds should be cage trained to a certain extent, but free range birds should have more time to learn how to live comfortably in a cage.

To cage train your birds, first take them to a quiet and relatively cool place. Carefully put your chicken into a medium-sized dog crate. Always put a chicken in a cage head-first so that they do not get their wings caught on the cage and potentially break them (Fig. 9). It is very important to monitor your chicken when it is in the cage. If the bird tries to fly or jump, take the chicken out and try again. To remove a bird from a cage, turn them around so that they are facing you. Pin their wings to their sides with your hands (Fig. 10). Then pull the bird headfirst (Fig. 11). It can be helpful to put some treats, such as fruit or seeds, in the crate with the chicken to distract them from the small space.

Some chickens will become used to a cage after one training session while others never fully are comfortable with the small space. It can take patience to cage train your birds, but it's important that you do train them. If your chickens are too stressed at a show, they can panic and hurt themselves trying to escape from a cage. It is well worth a few hours before the fair to train your birds and make the show a little less stressful for them.

## Show Supplies

There are numerous different things that must be brought to every show.

1. Waterers (1 per bird) that your birds are comfortable using
2. Feeders (1 per bird)
3. Feed (the kind your birds normally eat)
4. Wood shavings (preferably low-dust pine)
5. Toenail clippers
6. Baby wipes (water-based)



**Fig. 9** Always place the bird head first into a cage with its wings pinned to its body.



**Fig. 10** Turn the bird towards you and pin its wings to its body before pulling it from the cage.



**Fig. 11** Remove the bird headfirst from the cage to keep it from snagging its wings or nails.



7. Bucket
8. Small trowel or hoe
9. Gloves
10. Permanent marker
11. Watering can (long, thin spout)
12. Zip ties
13. Hole punch
14. Toothbrush
15. Baby or vegetable oil
16. Washcloth
17. Q-tips

These supplies can easily be stored in a large plastic storage bin during the show and should remain at the show the entire time your birds are there. Make sure to label everything with your last name to ensure that you can find everything again after the show.

Waterers that are specially designed to be attached to the side of a wire cage work best, since chickens have

a harder time knocking them over. If needed, other make-shift waterers can be used. Sturdy plastic cups or yogurt cups with two holes punched near the top can be attached to the side of the cage with a zip tie. Avoid using flimsy plastic such as milk cartons, since these can easily be broken by a bored or frightened chicken.

Bring one feeder and one waterer for each bird, along with a few extras. If you are showing a trio, two waterers and one large feeder will suffice.

The cages should be cleaned at least twice a day. Use a bucket to catch soiled shavings scraped from the cages using a trowel or small hoe. There is usually a dump site at every show where you can dispose of soiled shavings.

**TIP**

Bring a watering can to a show to refill your birds' water without having to detach the waterers from the cage.



## Chapter 6

# The Show

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### Transporting Your Birds

Transporting your chickens to a show can be a bit complicated depending on the weather and the season. The easiest way to transport birds is in dog kennels bedded with old towels. These help the birds keep their balance during the drive to the show. Make sure that the kennels are secure and that their doors cannot swing open. You can also transport your birds in a open wire or wooden cage, or even in a cardboard box. If you use an open wire cage, wrap it loosely in a tarp or a blanket to keep the birds calm. However, be mindful of your birds' feathers and be sure that they do not snag or fray on the sides of the cage. Cardboard boxes may be used *only if* they have adequate ventilation; birds placed in these boxes in the summer can easily die if there is no airflow in the box.

Placing the kennels or crates in the back of a truck or livestock trailer makes for the easiest transportation, but sometimes there is no other choice than to fit the kennels in the back of a car. If you must put your birds in the back of a car, make sure that they have plenty of airflow and that the crates are not too stuffy. Chickens can easily get heat exhaustion or even die if conditions are too hot.

If your birds seem especially hot, mist them with water during the drive, focusing on their combs and wattles where they expel heat.

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### The Vet-Check

Once your birds arrive at the show, they must pass a vet-check. A vet-check ensures that no unhealthy or contagious birds are allowed into the show. Because poultry are kept so close to each other during a show, it is incredibly easy for diseases and external parasites to travel quickly between birds.

During the vet-check, veterinarians look for any signs of disease, such as diarrhea, external parasites (i.e. lice and

mites), nits, and especially respiratory disease. Sometimes the bird's mouth and throat are swabbed so that the samples can be tested later to monitor the health of the poultry in a state or county.

Vets will usually turn away any bird that has more than three feathers with nits on them or if they have a lot of live adult lice or mites. The way to prevent a stressful vet-check experience is simple: check your birds every week before the show to make sure that there are no pesky bugs on them, dusting and pulling occasional feathers if necessary.

Vets have the authority to turn any bird away that looks unhealthy or seems to be carrying a contagious disease. If you think your bird is sick, do not bring it to the show.

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### Situating Your Birds

Chickens are usually kept in fairly small cages provided by the show, with the bantam cages being smaller than the standard. These cages give the chickens enough room to turn around, but not much room to flap or jump. (This is why cage training is so important.)

The showroom will be organized by classes: American, English, Asiatic, Single Comb Clean Legged Bantam, and so on. Each of these large classes will be broken down into six smaller classes: pullet, hen, cockerel, cock, young trio, and old trio.<sup>14</sup> Assuming that you entered birds in multiple classes, your chickens' cages will be scattered throughout the showroom. It may take some hunting to find them all.

As you search for the cages labeled for each of your birds, bring your woodshavings along. Pine wood shavings are one of the only beddings acceptable at a poultry show. Occasionally a show will provide you with shavings but most do not. You will need to cover the bottom of each cage with a thick layer of shavings.

When you have located your specific cages, place each bird in the appropriate cage and provide them with food





Courtesy of Gabriel Dupon Photography



Many shows will be set up with the chicken cages on tables and the waterfowl cages on the floor to keep the show cleaner.

and water immediately. A change of environment is very stressful for chickens and offering water right away can calm them down. A slice of fruit, such as a watermelon rind, or some bird seed as a treat can also distract and calm your birds.

Find a place where you can store your bin of supplies, bag of feed, and your woodshavings, like under a table.

Once all of your chickens are comfortable in their cages, go to all your birds a second time bringing the baby wipes. Chickens can often have droppings smeared or stuck on their feet or on their feathers from the car ride and it is important to get the droppings off before they stain the chicken. Use the baby wipes to gently wipe down each bird's legs and feet until there are no more visible droppings on the scales. Be sure to wipe underneath the toenails and on the underside of the foot.

After the legs have been cleaned, check the beak, comb, and nostrils. If anything is stuck to the chicken's face, gently clean it off with a wipe, being careful to avoid the eyes.

Next, look over the chicken for any feathers with spots, looking especially on their undersides (abdomen) and fluff. If you find any droppings, gently wipe or pick them off. Be careful not to damage the feathers while you clean the bird.

## Leg Bands

Leg bands may be required for all poultry at a show to help identify individual birds. This ensures that if your bird escapes, the show coordinator will be able to determine to whom the bird belongs and in which cage it needs to be. They also help judges to identify individual birds in a class of similar-looking fowl. Many shows sell plastic leg bands, so it should be easy to acquire some for your birds. Keep in mind that leg bands come in different sizes, with the smallest being for bantam chickens and the largest for turkeys. If you are unsure which size would fit your bird correctly, ask an experienced poultry keeper or a superintendent. The leg band should go on the right leg and be loose enough to be able to move up and down but tight enough that it cannot come off of the foot.



## The Daily Routine

Most poultry shows last for a few days. You will need to be present at the barn to clean your cages at least twice a day, preferably in the morning and in the late afternoon. Keeping every cage immaculate greatly lessens the overall smell of poultry and also keeps your birds clean. Being a responsible showman means that your cages are always clean and your birds always have food and water.

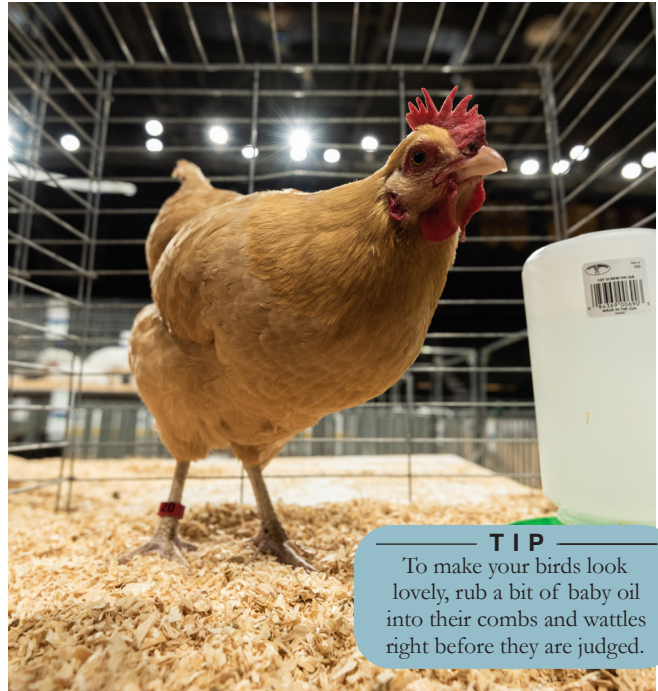
When you do your rounds in the morning, make sure that your waterers and feeders have not sprung a leak or broken. Be sure to have extra feeders and waterers on hand just in case you need to replace any during the course of the show.

Once you have checked the feeders and waterers, clean out the cage by scraping all of the soiled shavings into your bucket. Sometimes it helps to have another person hold the chicken while you are cleaning the cage so that the bird does not panic, try to escape, and injure itself. Make sure to remove all of the shavings every time you clean so that no hidden droppings begin to smell or attract flies.

While you are cleaning, inspect the chicken to make sure it is healthy and not stressed. The comb should not be bloody, and the chicken should not be panting. If your chicken seems to be excessively stressed at any time during the show, the responsible thing to do is to request to remove the bird from the show and take it home.

## Judging

Judges organize their placings by class. For example, the judge will first compare birds within varieties and breeds to determine a “best of breed,” or a first place designation. Using his knowledge of the Standard of Perfection, the judge will award a first through tenth placing for each breed. He will then do the same for all of the breeds within a class until he has multiple “best of breeds.” Then he will compare these six winners against each other and, again, using his knowledge of the Standard, will award a Champion and Reserve Champion for each class (i.e. Champion American). The judge will do the same for every class of chickens, awarding Champions and Reserve Champions as he goes.



Once every chicken class has been judged, the judge will compare all of the standard-sized Champions and award an Overall Standard (or Large) Chicken Champion and a Reserve Overall Standard Chicken Champion. He will do the same for the bantam breeds so that he has two Overall Chicken Champions.

Usually at poultry shows, other species of poultry are shown besides chickens. The judge will go through the same process for every other species, first comparing the birds in the same class and age group, then in the class, then for the species. For example, when a judge decides on a champion for the American class, he begins by comparing all of the birds of the same breed and age, such as all of the Plymouth Rock pullets, and choosing a first place bird out of this category. Then, the judge will do the same for the other age groups within that breed—cock, hen, cockerel, pullet—until he has chosen four first place winners. From those four, he will choose a “best of breed.” He will then follow the same procedure for all other American breeds until he has awarded a “best of breed” award to each breed. From these “best of breed” winners, the judge will choose his Champion American fowl and then his Reserve Champion American fowl. These two champions will then be eligible to compete against the champions and reserve champions of the Asiatic, English, Mediterranean, Continental, and All Other Standard Breeds for the Champion and





Reserve Champion Standard Chicken awards, which will then be able to compete against the champions of other species for the Overall Champion Poultry Award.

In the end, a typical poultry show will have an Overall and Reserve Standard Chicken Champion, an Overall and Reserve Bantam Chicken Champion, an Overall and Reserve Waterfowl Champion, an Overall and Reserve Turkey Champion, and an Overall and Reserve Pigeon

#### TIDBIT

The Overall and Reserve Waterfowl Champion is decided by comparing the Champion Duck and Champion Goose and choosing a winner.

Champion. The judge will then choose his Overall Grand Poultry Champion and his Overall Reserve Grand Poultry Champion

from this pool of twelve Champions. These two birds are the two fowl that conform closest to the Standard in body type, color, and condition.

Some shows will bring in two different judges, so that two opinions are used to determine the winners of the show. The coop tag or card will be flipped over for the second judge so that he cannot see what the placings of the first judge were. This ensures that he will have an unbiased opinion on all of the birds.

Judges look for other factors when they are judging, not only how the chicken conforms to the Standard. Judges will look for overall health and vigor. Many judges will even take the friendliness of a bird into consideration! Most judges would prefer a docile bird over a terrified, flighty one. But the single most important factor that judges look for when judging, besides the conformation and color of the bird, is the condition of the bird. A bird with shiny, lustrous feathers will almost always place higher than a bird with better conformation, but with dull, ratty feathers. Just having a chicken that is beautiful to look at can place you higher in a class.

Judges have the authority to drop any bird from the show by disqualifying them. When a bird is disqualified, the judge is sending a message saying that something is wrong with the bird. For example, the bird could have five toes when the Standard calls for only four or could have the wrong type of comb. Or something could have been done to the bird, such as clipping feathers or even cutting off part of the comb, to make the bird look different than it actually does.

When a bird is disqualified, the judge will not award any kind of placing to the bird. To avoid having one of your birds disqualified, study the Standard and find what exactly is called for, so that you don't enter a faulty bird into the show. The specific **disqualifications** for each breed are listed at the beginning of each breed section, and the general disqualifications are listed in the front of the book.

Here are some common disqualifications that are genetic and are unable to be corrected:

- Wrong number of toes.
- Wrong comb for breed.
- Wrong colored legs and feet.
- Too many wrongly colored feathers. (Ex: A black Cochin with more than 40% of its plumage being white.)

If one of your birds is disqualified, there is no reason to be upset. Judges don't know to whom each bird belongs, so the score of your bird will not reflect negatively on you or the rest of your birds.

Judges also look for defects when judging poultry. A **defect** is a flaw in a bird which is not serious enough to disqualify them, but is enough to move the bird down in the placings of a class. For example, a Mille Fleur d'Uccle may not have enough spangling (white speckles) in its feathers. This may cause this d'Uccle to place lower in the class, but will not drop them from the show altogether. Defects are common in poultry; in fact, every chicken has at least one defect. No bird can ever fit the Standard of Perfection perfectly! Instead of agonizing over the flaws in your birds, remember to look at their good traits. That d'Uccle may have an amazingly full beard and muffs and may have a very docile temperament even though its spangling is not perfect.

In the end, although judging is entirely subjective, judges have gone through special poultry training and licensing and understand poultry standards very well. Respect their decisions and listen in as they judge the birds if you have the opportunity. Learn as much as possible about your chickens and other breeds and classes by listening to a judge give his opinion.





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## Cleaning Up

Check-out (sometimes called **coop-out**) is usually in the evening. Before checking your birds out, clean all of your cages thoroughly and help sweep the showroom. Make sure that you have all you brought with you to the barn and pack your birds out in the same crates or kennels in which you brought them. When removing your birds from the show, sometimes you must acquire a ticket detailing how many birds you have and who you are. This ensures that no one takes birds that don't belong to them.

Once all of your belongings and all of your birds have been removed, help clean up the rest of the showroom if you can. Folding the wire cages, sweeping, and moving the tables or sawhorses will help your superintendents immensely. The more people who help with cleaning up the easier it will be and the faster the showroom will be cleaned.

After the showroom is clean and your birds and supplies have all been packed out, the show is over and you can finally take your birds home for some much needed rest.

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## After the Show

With so many birds so close together at a show, disease and pesky lice can spread quickly. Although the vet-check is meant to greatly reduce the possibility of an outbreak of disease or lice, poultry can still be carriers and infect the birds around them. Therefore, it is highly important to protect the rest of your flock by quarantining any birds that return from a show.

To **quarantine** your birds, make sure that you have a separate coop and run for the returning birds. If you had already separated your show birds from the rest of your flock, then this part is easy, and the birds can be returned to the “show coop.”

For the next three weeks after the show, monitor these quarantined birds for any abnormal behavior. Be on the lookout for chickens that act differently than they normally do, such as refusing to come out of the coop in the morning or acting listless. Other signs of disease are sneezing, discharge from the nose or mouth, diarrhea, and paleness in the face and comb. All of these symptoms could tell you that your chicken picked up some-





Shown here is a fenced run inside of a larger chicken run. This allows the main flock to become accustomed to the birds in the smaller enclosed run without the two flocks physically interacting.

thing at the show and needs special care from you or a veterinarian and should not be returned to the flock until those symptoms are treated and are resolved.

While you are quarantining your chickens after a show, check them for lice and mites regularly and dust them weekly. This will help clean your returning show birds before you reintroduce them into your flock.

Once your returning show chickens have been separated from the main flock for three weeks, it is time to reintroduce them into the main flock. When “new” chickens are returned, the newcomers can often be picked on or hurt by the more established birds.

There are numerous ways to integrate your show birds back into their old flock. One way is to move the show coop alongside the main chicken run so that the chickens from the established flock can see the returning birds. If your coops are immobile, you can also put your returning chickens into a smaller, temporary run inside of the main flock’s run, which also acclimates the established chickens to the returning birds.

Once you have acclimated your returning chickens to the main flock by separating them until the new birds no longer seem frightened and the older birds ignore the new ones, you can reinsert the returning birds into the established flock. Whenever reintroducing birds into a main flock, never allow the returning chickens to mingle with the established flock on their first day back. Instead, always put the new chickens into the coop at night. The darkness helps keep all of the chickens calm and allows the new chickens to relax in their new environment. For the next few days, keep a close eye on the newly introduced show chickens to make sure that they are acclimating well. Look for any bloody combs, limping birds, or pulled feathers as these could be signs of abuse from a more established hen or rooster.

Remove an abused bird from the main flock for a while and try keeping it in a temporary coop inside of the main run. This gives time for the injured chicken to heal while allowing the other chickens to get used to the presence of the new bird. If the bird seems too injured to be reintegrated within a week, move a few other more docile chickens in with the injured bird to keep it company and prevent it from becoming lonely.





## Chapter 7

# Waterfowl

### Duck Breeds

So far this manual has focused on chickens, because chickens are the most popular and widely kept species of poultry. However, other species of fowl are just as fun and rewarding as chickens. Ducks, turkeys, geese, pigeons, and doves all make exciting additions to a backyard or ranch flock. The keeping of these species is largely the same as chickens, but there are some notable variations for each species.

Ducks are a type of waterfowl and are widely kept for their eggs, meat, and for their hilarious personalities. Just like chickens, ducks come in many different colors and breeds and are divided into classes in the Standard of Perfection based on their weight: Light Weight, Medium Weight, Heavy Weight, and Bantam. Just like in the world of chickens, bantam ducks are smaller than the ducks in all of the other classes. However, unlike chickens, the recognized bantam breeds of ducks do not come in a larger size.

Male ducks are referred to as **drakes** and the females are referred to simply as **ducks**.

#### Pekin

##### Class

Heavy Weight

##### Purpose

Eggs, Meat

##### Temperament

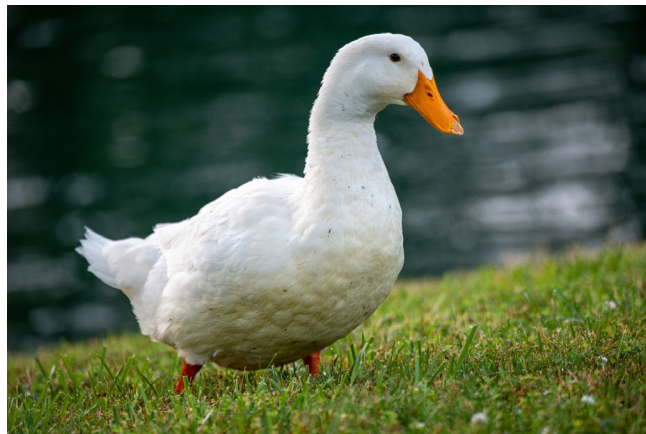
Talkative, social

##### Colors

White

Pekin ducks are large and used commonly in the duck meat industry, just like the Cornish-cross is used in the chicken meat industry. The Pekin should be massive and thick while being loosely feathered to give an all around enormous appearance to the bird. Both males and females should have an orange-yellow bill and feet with dark eyes and creamy white plumage all throughout. Pekins are known

for being friendly and fun ducks in backyard flocks and lay large white eggs.



White Pekin duck

#### Rouen

##### Class

Heavy Weight

##### Purpose

Eggs, Meat

##### Temperament

Very docile

##### Colors

Specific to Rouens

Rouens (pronounced “ruins”) are even more massive than Pekins. These ducks make excellent table fowl and are very popular with fanciers. This breed comes in one color, with the females being a medium brown with dark brown penciling. The wings of the hens are colored distinctly, with the wing coverts, secondaries, and primaries each being a different shade of slate, dark

brown, black, green, or white. The females should have orange-yellow bills and feet. The drake looks entirely different, with a green head, a grey-green body, a greenish yellow bill, and dark orange feet.



Rouen duck





## Muscovy

### Class

Heavy Weight

### Purpose

Meat, Exhibition

### Temperament

Docile, some aggressive individuals

### Colors

White, Black, Blue, Chocolate

Muscovy ducks are perhaps one of the most unique breeds of duck, easily identified by the fleshy red growth on their heads called caruncles. Feral Muscovies still roam their native South America, but have also expanded their range into Central America and parts of the southern United States. Domesticated Muscovy ducks are popular in the show circuit and in backyard flocks for their meat and mothering abilities. Female Muscovies make excellent mothers, but must stay

on their nests longer than any other duck breed since Muscovy eggs have an incubation period of thirty-five days (instead of the typical twenty-one days for all other duck breeds). Muscovy ducks are also unique because of the fact that when they are crossed with a different breed, their progeny are always sterile.

### TIDBIT

Male Muscovies are almost twice the size of the females.



Muscovy duck

## Crested

### Class

Medium Weight

### Purpose

Meat, Exhibition

### Temperament

Varies

The Crested duck has a large topknot of feathers atop their head, appearing to look almost like a hat. They originally are thought to have come from the East Indies and are featured in art dating back 2000 years. These ducks are a challenge to breed, as only 50% of Crested duck offspring actually will have a

### Colors

White, Black

crest. Nevertheless, they are a fun addition to any flock with their unique appearance. This breed, despite its clear exhibition purposes, also makes a good table fowl and can be used for meat.



White Crested duck

## Cayuga

### Class

Medium Weight

### Purpose

Eggs, Meat, Exhibition

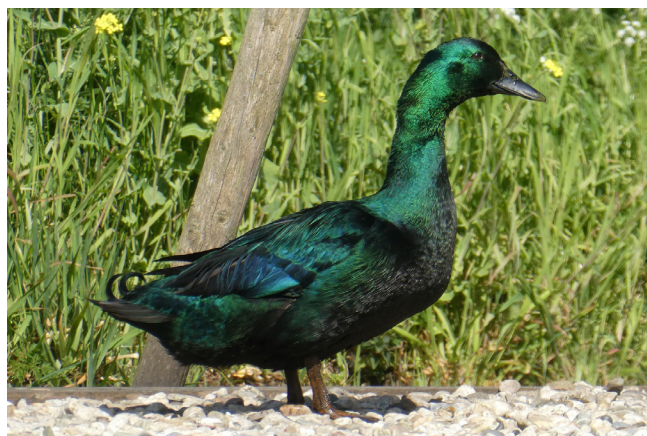
### Temperament

Varies

### Colors

Black

Cayugas are beautiful, entirely black ducks. They should be of medium build with a moderately long body and should carry their breast higher than their tail. Cayugas lay very distinct eggs which are nearly black when young females first begin laying. These dark eggs gradually lose their pigment as the duck matures and lighten to a vibrant blue.



Cayuga drake





## Campbell

### Class

Light Weight

### Purpose

Eggs, Meat, Exhibition

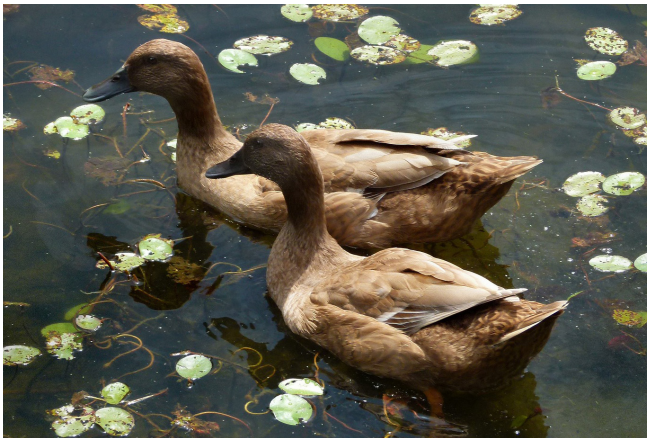
### Temperament

Varies

### Colors

Khaki

Often referred to as Khaki Campbells, this breed is very prolific, even rivaling the Runner in the number of eggs laid each year. Campbells originated from a cross between a Runner and a Rouen, so this breed makes both a good table bird or an excellent layer, like its Runner ancestors. The khaki color can only be found on this duck and is described by the Standard as being the “color of khaki military uniform cloth.”



Campbell ducks

## Welsh Harlequin

### Class

Light Weight

### Purpose

Eggs, Meat, Exhibition

### Temperament

Varies

### Colors

Silver

Welsh Harlequins were bred to be gorgeous show ducks and active foragers while being prolific egg layers. In type, Harlequins are similar to Campbells and make good table fowl while also being excellent mothers. The plumage of both the male and the female is striking, with highly contrasting patterns. The male sports a striking green head that contrasts with his silver body. Harlequins have most-

ly creamy white plumage spotted through with fawn, reddish fawn, brown, grey, and black frosted with white. This silver color is very specific to the Harlequin.

Courtesy of Gabriel Dupon Photography



Welsh Harlequin drake

## Runner

### Class

Light Weight

### Purpose

Eggs, Exhibition

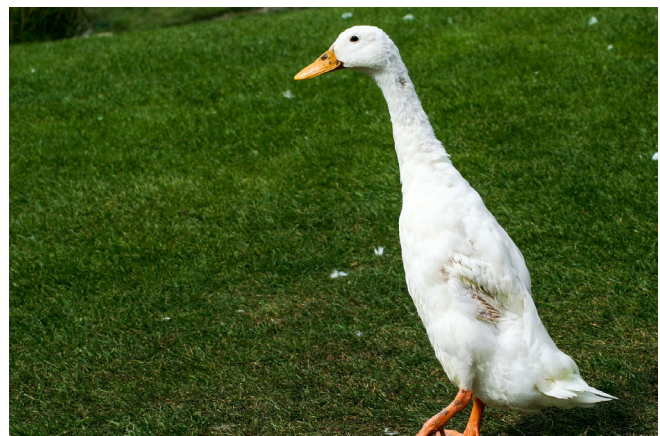
### Temperament

Varies, some flighty individuals

### Colors

Fawn and White, White, Penciled, Black, Buff, Chocolate, Cumberland Blue, Grey

The most important feature in Runners is their type, or body shape. The Runner should be upright, long, straight, and narrow, almost stick-like, with a straight bill free from any concave shape. When the duck is alert, its body should be almost perpendicular with the ground and while the bird is at rest it should lean slightly forward. The build of this duck should speak to its active foraging behavior and quick step, which is distinct from the waddle of all other breeds of ducks. This breed is very hardy and will lay throughout the winter.



White Runner duck



## Call

### Class

Bantam

### Purpose

Exhibition

### Temperament

Docile, talkative

### Colors

Gray, White, Blue, Snowy, Buff, Pastel, Butterscotch, Chocolate, Blue Fawn

Call ducks are loved everywhere for their big personalities and adorable features. Calls should have a tiny bill, large eyes, and a cobby neck with a head the shape of a tennis ball. The body should be short and plump and the duck should hold itself nearly horizontal to the ground. Calls come in a wide variety of colors and are very popular among fanciers. However, they tend to be difficult to breed due to their short bodies and are prone to nasal and eye infections because of their miniature bills.



White Call duck

## East Indie

### Class

Bantam

### Purpose

Exhibition

### Temperament

Varies, some docile, some flighty

### Colors

Black

East Indie ducks are small black ducks which were originally bred in South America. This breed is very popular in the show circuit, but can be difficult to raise due to its ability to fly. The East Indie should be more refined than the Call duck but not racy or too sleek. The body shape of the East Indie should be moderately long and small, with the bird carrying itself nearly horizontal to the ground. East Indies are known

for the lustrous greenish sheen over their feathers, giving them a unique coloration in the poultry world.



East Indie drake

## Goose Breeds

Geese are another kind of waterfowl recognized by the Standard of Perfection. Just like ducks, they have spicy personalities, lay gigantic eggs, taste delicious, and liven up any backyard flock. Geese have been bred in the past for meat production and for feather production. However, today most breeds of geese exist purely for exhibition purposes and not for their economic qualities.

Geese come in various breeds and color variations and, just like ducks, are divided into three classes based on their weight. Male geese are referred to as **ganders** and female geese are referred to simply as **geese**. The females generally resemble the males except that they are typically smaller in size. Below are some of the most popular breeds of geese in each weight class.

## Embden

### Class

Heavy Weight

### Purpose

Meat, Exhibition

### Temperament

Varies, many docile

### Colors

White

Embdens (or Emdens) are kept mostly for meat production as they are one of the largest and oldest breeds of domesticated geese. This all white bird is often fairly docile, especially when handled frequently from a young age. This breed should appear to be extremely massive, with a deep rounded breast, long flat back, and long curving neck.







Embden goose

## African

### Class

Heavy Weight

### Purpose

Meat, Exhibition

### Temperament

Varies, many docile

### Colors

Brown, White

Africans are regarded to be one of most docile of all goose breeds. Like Embdens, this breed should be massive in stature and size, fulfilling its original economic purpose of being a meat-producing bird. Although they are quite large, they are not as large as Embdens. Africans have a distinct dewlap under their bill and a knob between their eyes.



Brown African goose

## Pilgrim

### Class

Medium Weight

### Purpose

Meat, Exhibition

Pilgrims are fairly easy going, making good barnyard fowl. They are very hardy and are unique due to the fact that they are naturally sex-linked, meaning that the male and female goslings can be divided by color at hatching.

### Temperament

Varies, many docile

### Colors

Sex-Linked

This quality is highly unusual in nature and makes this bird even more desirable. Pilgrim males are entirely white when they mature and the females are mostly grey, fading to

white on their face, breast, abdomen, and paunch. They also make a good table fowl.



Pilgrim gander and goose

## Chinese

### Class

Light Weight

### Purpose

Meat, Exhibition

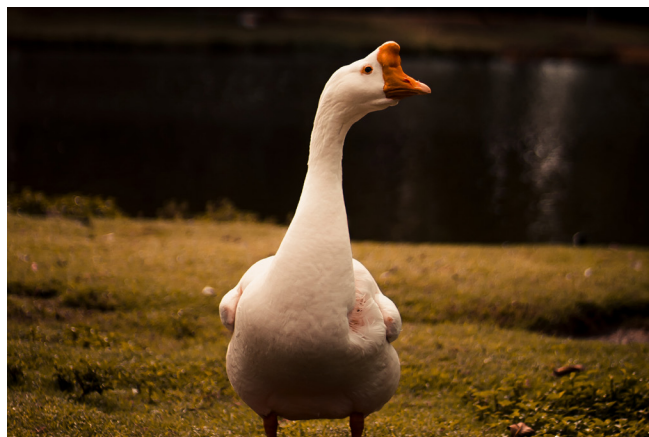
### Temperament

Pugnacious

### Colors

Brown, White

Chinese geese have been used as guard animals due to their loud and pugnacious nature, even though they have never been an important bird economically. These geese are very talkative and are prolific egg layers. Chinese geese have a distinct knob set in between their eyes and have long, arched necks. Although they are smaller in size than most other geese, the Chinese still makes a good table fowl.



White Chinese goose



## Getting Started with Ducklings and Goslings

Ducklings and goslings can be successfully raised in a brooder box, just like chicks. In fact, a brooder box used for ducklings and goslings can be exactly the same as one for chicks. Note that a brooder box should never be drafty, as this can kill any kind of young poultry.

Mature female ducks and geese also can go broody and hatch ducklings and goslings. The incubation period for both duck and goose eggs is about twenty-eight days, although the eggs of larger breeds tend to take a little longer to hatch.

## Buying Healthy Ducklings and Goslings

Although most feed stores carry ducklings and goslings in the spring, they often do not order these species until March or April. Therefore, it is often necessary to request a special order of baby waterfowl for January or February in order for them to have enough time to mature if you intend to show them at Fair. The heavier breeds should be purchased as soon as possible or shown as old birds (hatched before January 1 of the year of the show). The later that heavier breeds are purchased, the less chance they will have to mature to their full massive potential by late summer or fall.

Lighter weight breeds can be purchased a little later (around March) and still mature enough for a summer show. However, the oldest of the young birds will usually do best in a show.

When choosing ducklings or goslings at a feed store, look for active birds which are playing with their water or eating. The ducklings or goslings should be able to run easily and not have any obvious deformities or defects. One of the most important things to check on a duckling or gosling, while looking for signs of disease, are the nostrils. Baby waterfowl are prone to nasal infections when water gets caught in their nasal cavities. This type of infection is present if the bird is coughing or sneezing or has discharge from its nostrils. The eyes of the bird should be clear and free from any discharge as well.

Make sure to have your brooder box all set up and warmed before you bring any baby waterfowl home. This will ensure that all equipment is functioning properly and that the ducklings or goslings are not stressed by the cold.

## Heating, Food, and Water

The temperature in a waterfowl brooder box should begin at 95 degrees and then be lowered by five degrees each week, just as it should be for chicks. However, because waterfowl can be reservoirs for chicken diseases, it is recommended to raise them separately. There are



Notice the wet streaks on the duckling on the left (indicative of a nasal infection as a sick duckling will wipe a dripping bill on its back) and its hunched posture. The healthy duckling on the right has clean eyes and bill and holds itself in a perky stance.





some key differences in the care of baby waterfowl and chicks.

First, waterfowl are extremely messy. Since they are waterfowl, they will splash and spill their water all over the brooder box. Because of this, the box will need to be cleaned at least once a day to keep all of your young poultry healthy, especially as they grow older. If the box is kept damp, disease spreads quickly, nasal infections occur more often, and mold can begin to grow, posing its own health risks. Ducklings and goslings need a dry place to sleep at all times and can easily be chilled if they cannot find a warm, dry place in the brooder box. Therefore, it is of utmost importance that the brooder box be kept as clean and dry as possible.

Another key difference is that waterfowl require a starter feed with less protein in it than chicks do. Chicks can tolerate feed with protein from twenty to twenty-eight percent. Ducklings and goslings, however, should not be fed starter feed with protein higher than twenty percent. If they are fed too much protein, the waterfowl will develop curling wing feathers, or angel wings, as they grow older, which are highly undesirable. This not only causes the bird to be unable to use its wings but ruins the look of the adult waterfowl.

Ducklings and goslings also grow much faster than chicks do. In only a few weeks, baby waterfowl can

outgrow their brooder box and will need a new, heated home. This can be your “show coop,” or even with your main flock, but young waterfowl will need a heat lamp at least for the first two months of their life. If you live somewhere with cold spring weather, then a heat lamp might be necessary for a few weeks more.

## Duckling and Gosling Health

As stated before, ducklings and goslings love water. They love drinking water, bathing themselves, and generally enjoy just making a mess. As the ducklings and goslings grow, it can be fun to let them swim in a tub or something similar. This helps them develop their swimming skills while letting them have some fun. However, waterfowl that were hatched in an incubator at a hatchery and raised by humans, and not by a mother duck or goose, will not have the oil on their feathers that waterproofs them and keeps them from becoming soaked and chilled. Any ducklings or goslings that get into cold water can easily become chilled and die of hypothermia.

If you do decide to allow your young waterfowl to swim, remember that your birds need constant supervision. If ducklings or goslings swim for too long, their down becomes soaked through. This can cause the bird to become exhausted and even drown if they are not removed



### TIP

Always supervise baby waterfowl while they are swimming to avoid accidental drownings.





from the water in time. Keep a very close eye on your swimming birds and assist any that appear to be struggling. The water in which your ducklings or goslings are swimming should also be warm to keep them from becoming chilled. When you do remove all of the baby waterfowl from the tub, pat dry them with a warm towel or blow dry them. Do not put wet ducklings or goslings outside or in a drafty place, as this can easily chill them. Once ducklings and goslings develop their adult feathers, they will be able to preen themselves and waterproof themselves with their own oil. At this point, the ducks and geese will be able to swim without supervision.

Waterfowl in general are very hardy creatures that tend to be very healthy throughout their lives. The primary health issues to watch for in ducklings and goslings are nasal and eye infections. These can be prevented if the brooder box is cleaned regularly and if the ducklings and/or goslings are kept from becoming chilled. The baby waterfowl should always have a dry place and should be kept away from drafts.

## Caring for a Flock of Waterfowl

Ducks and geese can be kept in any chicken coop. However, there is one primary difference in waterfowl and chicken housing. In chicken housing, special attention is given to the roosts and nesting boxes of the chickens, since chickens can fly and prefer to be above the ground when sleeping. Ducks and geese, on the other hand, cannot perch or fly like chickens do. Therefore, ducks and geese must have a safe place to sleep on the floor of a coop.

When planning where to keep your waterfowl, make sure they have clean bedding (straw or woodshavings) to nest in at night and are kept away from drafts. The coop should have good ventilation to keep it cool in the summer and warm in the winter. It is highly recommended to house your waterfowl and chickens separately because of the risk of disease transmitted between the two. Ducks and geese need nesting sites on the ground (since they cannot roost like chickens) and nesting boxes. These boxes should be resting on the ground and easy for the ducks or geese to access.



Notice that this nesting box rests on the ground so that ducks can easily access it.

## Food and Water

Ducks and geese thrive on regular chicken rations of sixteen to eighteen percent protein. They can handle pellets and crumble food equally well, but just like chickens, tend to waste the crumble. Ducks and geese also enjoy treats such as bird seed, watermelon rinds, and overripe fruit.

The most important feature of a pen for waterfowl is the water itself. A tub or specific poultry waterer is fine for consistent watering, but ducks and geese will also need a place to bathe themselves. When ducks and geese bathe, they splash water over themselves using their bills. If their waterer is deep enough, they may fully submerge themselves in the water, splashing about to clean the dirt from their feathers. Waterfowl must be able to bathe, which helps them preen themselves, keeping them healthy and waterproof. Ducks and geese also love mud or dirt and will root through it with their bills, looking for tasty insects.



Unfortunately, this bathing and rooting can make a mess of any poultry waterer, since waterfowl will root in mud and then take a drink with dirt still caked on their bill. Many people have found success with nipple waterers, which force the fowl to drink by pushing their bills against a tab. This keeps the water source clean and prevents the birds from making a muddy mess of their pen, but it can be very difficult to train waterfowl to drink from these waterers.

Usually, it is recommended to have a kiddie pool that is filled with water so that your waterfowl can have a place all to themselves to bathe and splash. However, the birds will still spill and dirty the regular waterers too, even if they do have a place to bathe.

If chickens are kept with waterfowl, it may be helpful to place a second waterer out of reach of the ducks and/or geese. This will ensure that the chickens always have a clean source of water, because chickens do not dirty their water in the same way waterfowl do.

## Health

Waterfowl are incredibly hardy. Because they bathe and oil themselves so often, ducks and geese do not struggle with lice. However, in rare cases, mites can surface in waterfowl that do not clean themselves as often, such

## PROTECTING LANDFOWL

If you do decide to place a kiddie pool or similar tub out with your waterfowl, chickens will sometimes try to drink from the pool and can fall in. Chickens, unlike ducks, cannot swim and will easily drown if they cannot get out quickly. To prevent any drownings, place cinder blocks or steps of some kind in the pool if you have a tub that is deep enough for chickens to possibly drown. Also, waterfowl can be asymptomatic carriers of diseases that can affect landfowl. For this reason, it is recommended to house your waterfowl apart from your chickens and turkeys.





Courtesy of Colorado Avian Health Program

as a brooding duck or goose. Despite this, you do NOT need to dust your ducks or geese. (Dusting waterfowl can actually be detrimental to their health, since they may ingest the dust as they preen or leach the dust into their bathing water.) If you do find mites on your waterfowl, bathe them yourself to remove the parasites.

The primary health concern for ducks and geese is cleanliness. Because waterfowl are constantly splashing water and playing in mud, they can quickly dirty their pen. If your ducks and geese are not kept at least reasonably clean, they can be prone to diseases that could have been prevented, like eye infections. To ensure your waterfowl are healthy, clean their coop at least once a week, change their drinking water multiple times throughout the day, and refill their pool (if you choose to keep one) several times a week.

## Angel Wings

**Angel wings**, or slipped wings, is one of the few ailments to which waterfowl are susceptible. Although some theorize that it is the result of feeding baby waterfowl feed that is too high in protein, most breeders also now suspect that angel wing is caused by the young duck holding its wing feathers incorrectly. A bird that has angel wings will have feathers at the end of its wings that curl outwards and are useless in flight. These curling feathers cause the adult duck or goose to look unbalanced and are highly undesirable in waterfowl. Angel wings develop when the bird is between eight to twelve weeks old and should be corrected as soon as it is spotted. When angel wings first begin to appear, the young bird will let its wings droop and the feather anomaly will become apparent. If angel wings are allowed to develop in adult waterfowl, they cannot be corrected.

If caught early on, angel wings can be treated and corrected by taping the wing tip down to the duck's body for a few days or up to two weeks to help teach the bird how to hold its wing properly. The tape, specifically vet tape, should be checked daily to ensure that it stays in place. If the young bird is being fed a feed that contains more than sixteen percent protein, it should be moved to a lower protein feed as well. Although angel wings do not affect the health of a domesticated waterfowl, it does render them unappealing to show. Birds with angel wings will always either be disqualified or placed last.



A duck with an eye infection. Notice the dripping around its eye and the crusted residue on its head from the infection.



Angel wings can be taped in order to fix them in young birds.

As with chickens, strange things can happen to ducks and geese and they can die for apparently no reason. Waterfowl that are not feeling well will seem lethargic or may not want to swim or drink. If you suspect your bird is sick, contact your local veterinarian or veterinary hospital for assistance.

## Showing Waterfowl

Both ducks and geese can be shown at most poultry shows. Showing waterfowl is an exciting and rewarding experience but varies slightly from exhibiting other species of poultry.





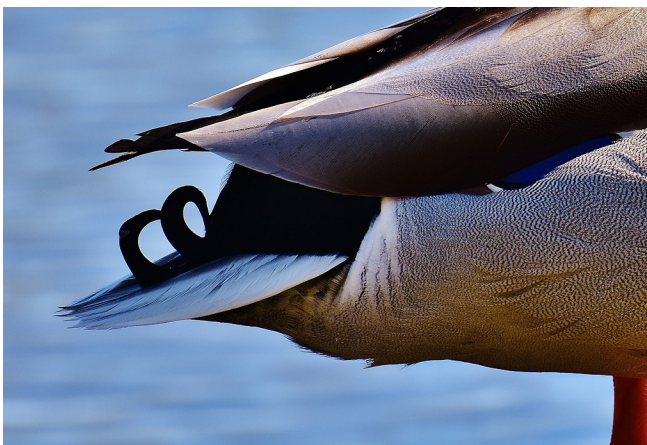
## Know What You Have

When you register your waterfowl for a show, make sure to know what breed, color variety, age, and gender your birds are. This will help the superintendents determine the correct class for your birds and allow the judge to place your birds accurately.

If you are not sure if you have a male or female duck, the easiest gender-defining characteristic is the **sex feathers**. These are a few small feathers at the base of a drake's tail that curl backwards and are unmistakable. Drakes are also larger than females and are much quieter, producing a raspy quack instead of the louder piercing quack of the females. Besides being noisier, females have generally more neutral colors than the males.

Male and female geese can be distinguished mostly by their size. The male and the female also may have different color patterns depending on the breed and color variety.

If you have any doubts about what breed you have, there are many resources available. You can look up the pictures in the Standard and decide for yourself the breed, or you can ask someone who is familiar with waterfowl to give their opinion. Just like in chickens, there are numerous different kinds of duck and goose hybrids that are meant to lay more eggs or produce more meat. Remember that hybrids cannot be shown and there are no egg production classes available for waterfowl. Only breeds that appear in the Standard can be shown.



This drake has the distinct curling sex feathers on the end of his tail that help mark him clearly as a male.

A duck can be shown as an old drake (a male more than a year old), a young drake (a male less than a year old), an old duck (a female more than a year old), or as a young duck (a female less than a year old). Ducks can also be shown in pairs, which should contain one male and one female of the same age, breed, and color.

Geese can be shown as old ganders or old geese (over a year old) or as young ganders or young geese (under a year old). Just like ducks, geese can be shown in pairs, which must be the same age, breed, and color.

## Showmanship

Showmanship can also be done with a duck or a goose, even though it can be more difficult with the larger and heavier breeds. Judges will ask questions about ducks or geese (depending on which one you show), both about anatomy and from the Standard of Perfection. See the waterfowl glossary in the Standard as well as questions from Chapter 5 to prepare for your showmanship interview with the judge.

## How to Hold a Duck

A duck should be held in much the same way as a chicken. Place your index and/or middle finger between its legs and wrap your other fingers around the duck's legs to keep it from kicking or escaping (Fig. 1). Ducks' legs are delicate, so it is important to be gentle when holding them. Once you have a good grip on the legs, bring the bird to your chest (Fig. 2). You can place your other hand over the duck's back to pin its wings to its side and keep it from wriggling away. It generally helps to hold the duck's rear end away from you until you are about to hand it to the judge. The judge may ask you to place your duck in a cage while he asks you some questions. Just like for chickens, ducks should always be put headfirst into a cage and handed headfirst to a judge.

## How to Hold a Goose

A goose can be held and handled just like ducks, with your fingers between its legs and your free hand clasped across its back, but some breeds may simply be too large to get a good grip on their legs. If your goose is too





**Fig. 1** If the bird is especially large, it can be helpful to place two fingers in between its legs to get a better grip on it.



**Fig. 2** Resting the duck's breast on your arm while you hold it can make holding it for longer periods of time easier.

large to hold by using one hand between their legs, you can also hold a goose in the same way you would hold a turkey or show it on the floor, kneeling beside them on the ground to present it to the judge.

## Preparing for a Show

Ducks and geese may need to be coop trained for a show. The cages for waterfowl at a show are larger than the cages used to keep chickens, but these pens are still small compared to the pen to which your birds are familiar.

You may also need to allow your birds to become familiar with any new waterers you plan to use during the show. Ducks and geese will drink from most containers, but will spill small ones quickly. Therefore, the ideal

container is a medium-sized can or tupperware which can hold enough water for the bird and can also be attached to the side of the cage. Ducks and geese are not picky with their feeders and will eat from almost anything. A small cup of food attached to the cage will suffice as long as it cannot be knocked over. Keep in mind that since geese are larger than ducks, they will need larger waterers and feeders.

Waterfowl will inevitably make a watery mess of their cage at a show. This means that you will need to bring extra shavings that are very absorbant for your ducks and/or geese at a show and change their shavings frequently.

The only cleaning waterfowl will need before the show is to wipe off their feet and their bills. Use baby wipes or wet paper towels to gently remove any caked mud or dropping from the webbing on their feet or their toe-nails, which may need to be trimmed.

## While at a Show

Ducks and geese should be transported to a show in a crate of some kind. Always use crates that your bird cannot bump their heads on to prevent injury or excessive stress. Do your best to keep them warm or cool depending on the weather. Once you get to the show, your ducks and/or geese will also need to pass a vet-check. As long as your bird does not appear to have any respiratory problems (such as a nasal infection, wheezing, coughing, or sneezing) or other health issues, usually it will pass the check.

Just like with any other kind of poultry, make sure to pack enough food and shavings for the entire show. Bring a tub filled with your supplies and keep it at the show too.

Ducks and geese will be organized by classes and age, much like chickens. If you know what breed your waterfowl are, then you can easily find their designated cage. Ducks and geese will usually be kept on the floor to minimize their mess. Duck cages are typically larger than chicken cages, and goose cages are even larger, so having them on the floor is usually easier than keeping them raised.





Waterfowl will require high maintenance at a show, simply because they are messier than all other kinds of poultry. Ducks and geese love to spill and splash water over themselves and their shavings, making it extra important to clean out their cages at least three times a day.

Like all poultry, ducks and geese are judged by age first, with a first place ribbon going to the best old drake and gander, old duck and goose, young drake and gander, and young duck and goose. The judge will then choose a duck champion and a goose champion from these first place winners. The Overall Grand Champion award will be awarded to the best of the top placing duck, goose, standard-sized chicken, bantam chicken, turkey, and pigeon.

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## After a Show

After the show is over, your waterfowl should be quarantined for three weeks. Check them for signs of disease daily and make sure that all of your birds are acting normally. Once these three weeks are up, your waterfowl can be integrated back into the main flock. Ducks and geese that did not attend the show will usually not pick on the returning birds. However, keep an eye on the entire flock to make sure that no birds are bullied once you reintroduce the returning birds.

## NUPTIAL PLUMAGE

The showy, green-headed plumage—or **nuptial plumage**—of male Rouens, Grey Runners, Mallards, and Grey Calls, is molted in the summer (around June). The males of these varieties then take on the brown female colors, called **eclipse plumage**. In the fall (around August), the males molt again and regain their flashy nuptial plumage. Males with eclipse plumage are not discriminated against in a show unless they are tied. In a tie, the drake with the nuptial plumage wins.



This drake (left) sports his nuptial plumage now, but will soon molt to look like the female duck next to him.



Courtesy of Gabriel Dupon Photography



**TIP**

Clean your waterfowl cages at least three times a day at show to keep them as clean as possible!

Geese are kept in larger cages than most other birds at a show, but the quarters are still tight.





## Chapter 8

# Turkeys

### Turkey Varieties

Turkeys are native to North America, with most varieties developed from the wild turkey in the United States as meat fowl. The turkey industry has grown into one of high economic importance. Turkeys are bred to have a round body and a full breast to embody the importance of the turkey's meat.

The male turkey, called a **tom**, should be broad and round, giving an imposing appearance with straight, squared legs. The female, called a **hen**, is nearly identical to the male, except she should be smaller, lack a **beard**, and have a more refined head.

Turkeys are not divided by the Standard into separate classes, but rather are all grouped together since they are all considered to be the same “breed.” There are eight different varieties of turkeys, each with its own distinct color. The shape of the turkey is universal across all eight varieties. Some varieties are larger and are used in the commercial turkey industry. Others are for ornamental purposes and have been bred specifically for show.

Breeders have created two hybrid turkey varieties, the Broad Breasted Bronze and the Broad Breasted White, which grow to an enormous size, are used almost exclusively to produce meat for the turkey industry, and cannot reproduce naturally. The Standard does not recognize these hybrids; the eight varieties that are recognized are called **heritage varieties**, which are all able to reproduce naturally. All heritage varieties can be used for meat but are more often kept as backyard pets or for show. Below are the most popular heritage varieties.

#### Bronze

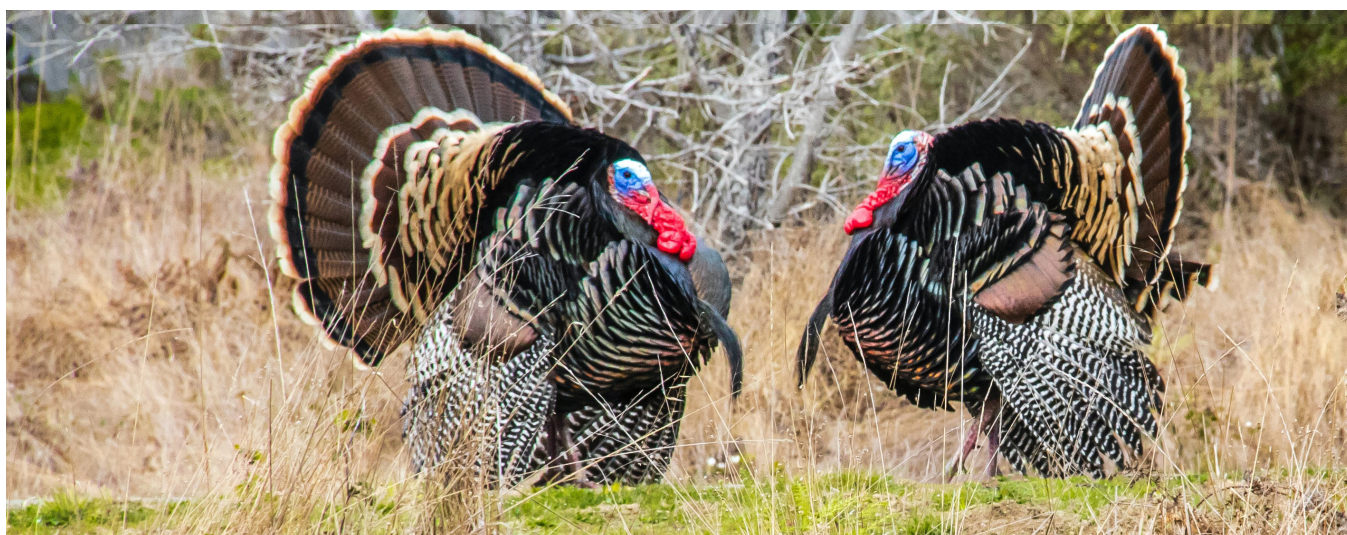
##### Purpose

Meat, Exhibition

##### Temperament

Varies, many docile

The Standard Bronze is the largest of all of the turkey varieties and is known for its gorgeous, iridescent, bronze-colored feathers. The Standard Bronze not only has a coppery brown color throughout its plumage but also has white barring on its tail and wings that sets it apart as a beautiful variety. This variety still retains the ability to reproduce on its own, but breeding flocks are somewhat uncommon. Today, most Standard Bronze birds are kept for show or back-



Wild turkeys like these toms can be found all across North America. Unlike their domesticated kin, wild turkeys are known for their intelligence and are prized hunter's game. These toms' beards can be distinctly seen as a spike of feathers on the chest.





yard production purposes as a more attractive alternative to the White Holland and has kept its reputation as one of the most popular family production turkeys.



Bronze tom

### White Holland

#### Purpose

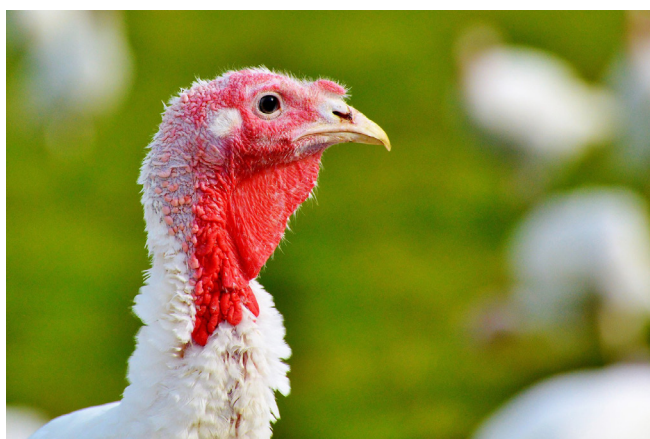
Meat, Exhibition

#### Temperament

Varies

The White Holland is another large turkey variety which was the primary commercial turkey in the United States until the introduction of the Broad Breasted White, the most common commercial turkey today. The White Holland makes an excellent

table fowl and is raised primarily for show and for family meals because of its large size.



White Holland hen

### Royal Palm

#### Purpose

Meat, Exhibition

The Royal Palm is one of the most beautiful of all turkey varieties, with nearly every one of its white feathers tipped in black. Royals Palms

#### Temperament

Varies

are one of the smaller turkey varieties. So, even though they have tasty lean meat, they simply are not large enough to have economic significance. This variety is used by many fanciers in the show circuit because of its beautiful and unique appearance.



Royal Palm tom

### Bourbon Red

#### Purpose

Meat, Exhibition

#### Temperament

Varies, many docile

Bourbon Reds are another variety of turkey used primarily by fanciers for show.

They are a medium-sized turkey and so make a practical backyard bird for a family even though they are smaller than the Bronze. Bourbon Reds are also used in shows

because of their beautiful rich reddish-brown color and contrasting white wings and tail. This variety forages well and is generally mellow.



Bourbon Red tom





# HERITAGE VS. HYBRIDS

Heritage varieties are shown in a **breeding class** in a show, which infers that the purpose of these turkeys is to propagate the variety and to perfect the offspring as much as possible through good breeding practices. The Broad Breasted hybrids cannot be shown as breeders because they usually cannot naturally reproduce, since the hybrid is propagated by artificial insemination. Therefore, these hybrids are shown in a **market class** for birds specifically bred and shown for their meat. Broad Breasted hybrids come in two colors: Bronze and White. The white variety is most commonly used in today's commercial turkey meat industry. Since these hybrids are bred only for their meat, they often are less intelligent than heritage or wild turkeys and usually do not live as long as heritage varieties.



Most turkeys raised today are of the Broad Breasted variety and are bred specifically for commercial meat purposes.

## Getting Started with Poults

Baby turkeys, or **poults**, thrive in a brooder box set to the same specifications as a box for chicks. Note that a brooder box that keeps poults away from drafts is of utmost importance to their health.

## Buying Healthy Poults

Heritage turkeys take about the same amount of time to mature as chicks do, which means that it is best to get your poults as early as possible, preferably in either January or February. Although market turkeys mature in sixteen to twenty-two weeks, they show better the older they are; therefore, it is recommended to purchase all turkeys no later than March. Unfortunately, most feed stores will not ship in their poults until late March, so, if possible, you should special order your birds for earlier in the year.

When choosing a healthy poul, look for a vigorous baby bird who is eating and drinking. It should be able to push others out of its way without problem. Poults should also be free from any obvious deformities, such as crooked toes or crossed beaks and should have bright and clear eyes. Check for any discharge from the nostrils or eyes and listen for any coughing, sneezing, or wheezing in the poul.

## Heating, Food, and Water

Poults are not intelligent fowl, so any poults you buy will need lots of care and supervision, especially for their first few weeks of life.

One of the main difficulties of raising poults is that oftentimes, they will not know how to eat or drink without a mother turkey. Some poults can pick up how to eat and drink fairly quickly while others may not understand. In the first and second days after purchasing your poults, you must check on them frequently to make sure they are all learning how to eat and drink. Poults can actually starve to death or die of thirst simply because they do not understand.

To encourage your poults to eat and drink, put marbles or other shiny objects in the food and water dishes. These shiny things attract the attention of the poults; out of curiosity, the baby turkeys will often peck at them, inadvertently taking a drink of water or bite of food as they do so.

For feed, use a crumbled high-protein turkey starter, which usually contains about twenty-eight percent protein. Poults need to be fed a higher protein content than chicks when they are young and growing, so it is critical to their development that poults have this type of feed.



Poults need the same temperature in their brooder box as all types of poultry do: ninety-five degrees for the first week, then lowered by five degrees each week until the poults can handle the outdoor temperature. Turkey poults need a brooder box that is free from any drafts and is kept reasonably clean.

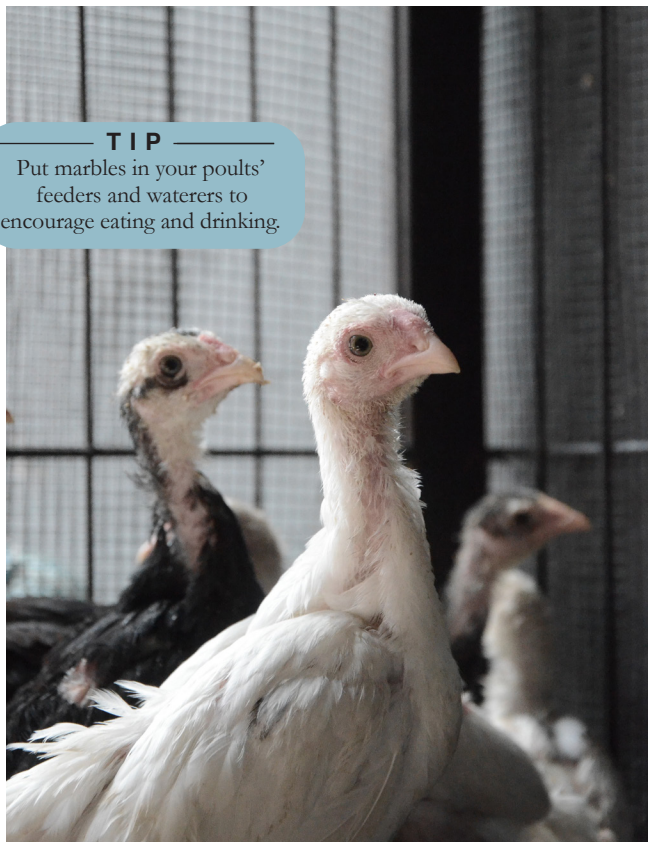
Note that poults are delicate and fragile little birds when compared to chicks. This means that chicks kept with poults can act aggressively towards the baby turkeys and cause problems. For this reason, it is usually best to raise chicks and poults separately, both because turkeys require a higher protein feed than is necessary for chicks and also because chicks can hurt or bully poults.

## Poult Health

Poults are susceptible to similar problems that afflict chicks, primarily coccidiosis and pasty butt. The best way to keep your poults healthy is to keep them warm and dry in a draft-free brooder box.

### TIP

Put marbles in your poults' feeders and waterers to encourage eating and drinking.



Note the clear eyes and nostrils of this poult, as well as its alert posture that infers vigor and health.

## Caring for a Flock of Turkeys

Turkeys are fun and exciting for anyone who has raised poultry in the past. The toms have loud personalities and the hens lay enormous speckled eggs. However, the care for a flock of turkeys is slightly different than the care of chickens and waterfowl.

## Coop Designs

Turkeys, like all poultry, need a safe place to sleep and lay their eggs. A coop of some kind provides this safety for them. Turkeys also prefer to roost at night and are actually very strong fliers, despite their size. Some turkeys even enjoy roosting in trees or on top of houses! This means that to keep your turkeys safe, it may be necessary to clip their wings to prevent them from flying and roosting out of reach. This does not hurt the turkeys and helps them learn the habit of going into the coop every night.

Because turkeys can fly, they can clear very high fences, especially if they have a running start. Therefore, if you choose not to clip your turkeys' wings, they can easily escape the pen. Of course, no kind of poultry wanders too far from their flock and food. But turkeys outside of a fence are more likely to be attacked by predators.

However, even though clipping the wings of your turkeys is an easy way to keep them safe, turkeys with clipped wings cannot be entered in a show. Most judges will immediately disqualify any turkey (or bird, for that matter) with clipped wings. You must allow the wing feathers on your turkeys eight to twelve weeks to grow out before they attend a show.

One way to keep your turkeys safe if you cannot clip their feathers is to put a roof over their pen to discourage them from flying out or from flying up into trees. This not only protects your turkeys from escaping but also protects them from flying predators, such as birds of prey. A roofed pen is a very easy way to keep all of your poultry safe but can be a time-consuming project.

The coop and run for your turkeys should be larger than a standard chicken coop, since many turkeys are more than twice the size of a standard chicken. Large





nesting boxes should be provided for turkeys as well, even though they are not as prolific as chickens when it comes to egg laying. The pophole, or poultry door, may also need to be expanded to allow for a turkey to pass through. Turkeys may also have a difficult time climbing chicken ladders or accessing popholes that are high off of the ground. A pophole for a turkey should be no more than six inches off of the ground or have a gradual ramp that leads up to a higher door to allow turkeys to get into the coop.

## Food and Water

Turkeys can be successfully kept on either chicken feed or turkey feed. The best protein for them is about eighteen percent, although they can stand protein a little higher. Market turkeys (Broad Breasted varieties) must be kept on high protein feed (twenty-six to twenty-eight percent), since they mature in sixteen to twenty-two weeks and need high protein to sustain their rapid growth. Turkeys, just like all birds, also need clean water available to them at all times.

## Turkey Health

Turkeys, like all poultry, come with their own array of diseases. Both external parasites and coccidiosis are common in turkeys. Therefore, a clean coop and regular dusting of your birds is essential to their health. However, there is one major disease that all turkey owners should be aware of: blackhead.

### Blackhead

Blackhead is a common poultry disease that all types of birds can contract from infected earthworms or cecal worms. Chickens and waterfowl tend to be asymptomatic and, even though they may be infected with the disease, will carry on without issue. However, turkeys are highly susceptible to blackhead and will usually die if they contract it. Turkeys sick with blackhead will have darkened heads, yellow droppings, and drooping wings and will become listless.



Turkeys love treats, just like chickens! Bird seed, sunflower seeds, or overripe fruit all make great turkey treats.



## CAN I KEEP TURKEYS WITH MY CHICKENS?

Blackhead is a serious disease that can quickly wipe out an entire flock of turkeys. Chickens can be asymptomatic carriers of blackhead and other respiratory diseases that can afflict turkeys. However, blackhead, unlike lice or coccidiosis, is a localized disease, meaning that it may not be prevalent in your area. Some regions may have more chickens infected with blackhead and others may have no infected chickens. To see if blackhead is common in your area, contact your local vet hospital. However, because of the risk of chickens transmitting these diseases to turkeys, it is generally recommended to house your chickens and turkeys separately.

Another factor that one must consider before keeping chickens and turkeys together is that turkeys usually do best on a slightly higher protein feed than is necessary for chickens.

This problem is not critical, but turkeys may be healthier on a specifically turkey-specialized feed. Also note that a setup designed for chickens may need to be modified to accommodate turkeys.

If you do plan on keeping turkeys and chickens together, you might consider waiting to introduce your turkeys to a flock of chickens until the turkeys are mature. Poults are delicate and can easily be hurt or killed by more aggressive chickens. When a turkey matures, however, even the largest rooster will usually leave it alone. Even a female turkey is many times larger than a large chicken cock. Mature turkeys also stand a better chance of surviving blackhead if it does surface in your flock, although they do not become immune after contracting the disease.

Also consider keeping your turkeys and chickens separate if you are raising market turkeys (Broad Breasted varieties). Market turkeys are at a much higher risk of contracting blackhead since they are young. Market turkeys also need a higher protein in their feed than is offered in layer rations. Therefore, it usually is not worth the trouble of combining market turkeys with a flock of chickens. Heritage varieties, on the other hand, will be much older when they are integrated and have a better chance of holding their own against disease and aggressive chickens. They also can tolerate lower protein levels better since they have stronger compositions than market turkeys.

There are pros to keeping turkeys with chickens, despite the risk of blackhead and other diseases. Both toms and hens act as guardians to a flock of chickens, chasing off predators like hawks and cats. Many times, turkeys also break up cock fights, often by accident. Turkeys are a beautiful addition to any flock and are very fun birds. But do your research on blackhead before you decide to integrate them into your flock of chickens. Always keep an eye on any turkeys that are living in a flock with chickens.



Turkeys that don't feel well will often hunch their back and pull their neck in, regardless of their affliction. This posture is a good indication of a turkey's health.

Unfortunately, blackhead is untreatable and incurable. The younger the turkey, the less likely it is to survive an encounter with blackhead. Poults and young birds that become sick will usually die within a few days of con-

tracting the disease. Blackhead manifests itself in older birds more slowly, and so it can take a long time before a mature turkey dies of blackhead. Some mature turkeys can survive blackhead, but most turkeys do not.





Infected chickens can spread the disease among turkeys. Because chickens act as reservoirs for blackhead and other diseases, it is highly recommended to house your turkeys and your chickens separately.

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## Showing Turkeys

Turkeys are as exciting to show as any other species of poultry. Most fancier shows have turkey shows within the larger poultry show, many of which can be quite competitive. Regardless of its conformation or placing, a gobbling tom is always a sight that never fails to create laughter in show-goers.

### Know What You Have

When filling out the registration form for any show, it is critical that you know how old your birds are and what varieties you plan to bring. Turkeys can be shown in four age categories, whether they are entered in a market class or breeder class: old tom (male over a year old), old hen (female over a year old), young tom (male under a year old), and young hen (female under a year old).

Once you have determined how old your turkeys are and have entered them in the correct age class, then you must enter them as the correct variety. There are only eight turkey varieties, plus the two Broad Breasted varieties; it should be easy to determine which variety you have. Compare your birds against the turkeys shown in the Standard to determine which variety they are, even if you bought them as a certain variety. Hatcheries and feed stores can often confuse poult's varieties and can give you one variety but say that it is another. Always double check the Standard before you enter your birds, as you would for any species of poultry.

### Preparing for a Show

Just like chickens, turkeys are susceptible to becoming infested with lice and mites and must be treated in order to keep these pests under control. However, note that market birds should NOT be dusted because of the withdrawal period of permethrin. Before using any medication on your turkeys, always check the withdrawal times on the label of the medication.

Bathing turkeys for a show can be difficult because of their large size, but usually it is not necessary to bathe your turkey. However, you should spot clean your birds before a show to make sure that they do not have dirt or droppings clinging to their feathers or to their feet.

Perhaps the most important part about preparing a turkey for a show is to coop train them. Turkeys, especially free range turkeys, do not always adapt well to confinement and will need a little extra time to get used to a cage. When cage training a turkey, always supervise it while it is in the cage. If the turkey becomes distressed or tries to fly or jump, remove it from the cage immediately and try again later. Try distracting it with seeds or fruit if it seems to be having a difficult time adapting to confinement. This process can be time consuming, but it helps prevent the turkey from panicking at the show and injuring itself while there.

### Showmanship

Turkeys can be used in showmanship, although doing so is not typically recommended for beginners. These birds are simply so large that they are difficult to show properly, but that is not to say that using a turkey in showmanship is not an exciting experience.

To hold a turkey, turn it so that the turkey's head is facing your left side. With your right hand, grasp the bird's legs together at the shank area. You can hold the legs with your hands in a fist, so that the turkey cannot scratch you. Once you have grabbed the legs, use your other arm to support the turkey's breast and your other hand to pull the turkey close to your chest. Holding a turkey looks almost as though you are giving it a hug, with your left hand wrapped over the turkey's back and under its breast while your right hand holds the legs together out to the side (Fig. 1).

When showing a turkey, you may bring the bird to the judge in one of two ways. One way is to use a light rod to gently direct the turkey while it walks itself to the judge and then show the bird from the ground (Fig. 2). This is ideal if you are handling a turkey that is too big or too heavy for you to handle. You can also carry your turkey to the judge. This method gives you more control over the turkey but also requires some strength.



Courtesy of Colorado Avian Health Program

**Fig. 1** How to hold a turkey (or a large goose).

Courtesy of Colorado Avian Health Program

**Fig. 2** Showing a turkey from the floor.

Be prepared to tell the judge what variety, age, and gender your turkey is and how you care for it. Note that the judge will ask you questions specifically relating to turkeys, and you will need to be able to recite all of the anatomy of your turkey for the judge. He may also ask you about any poultry species, including chickens, ducks, and geese.

## While at a Show

Turkeys need to be transported to a show in a large crate. The crate should not interfere with the bird's tail feathers by bending or crushing them. Turkeys can also overheat easily. If you are showing in a summer show (or in any warm-seasoned show), make sure to bring along a spray bottle in addition to your other show supplies. Use the spray bottle to spritz the turkey's face and neck if the bird seems to be panting hard or seems stressed. Be prepared for the vet-check at the show by bringing louse-free, vigorous, healthy birds that are free from respiratory diseases (a category of illness to which turkeys are especially prone).

Once you are at the show, find your turkey's designated cages. Turkeys are most often kept on the floor in extra large cages and are organized by class (breeding or market) and then by age.

Turkeys need large feeders and waterers for a show. Most shows require that all turkeys have at least a gallon-sized container of water available to them at all times. This helps turkeys cool themselves and de-stress. Remember that milk jugs or any other flimsy plastic should not be used. Furthermore, they often tend to spill their water if the containers are not secured to the cage. To secure your containers, punch two holes near the rim of the container and then thread a zip tie through these holes and then through the wiring on the cage to keep the waterer in place. The feeders you bring can be smaller than the waterers, but turkeys will still need more food than other kinds of poultry. A one-gallon container secured to the cage will work just fine for turkeys as long as it is refilled at least twice a day. Market turkeys will need more food than breeding turkeys will.

Always clean out your turkey's pen at least twice a day. This will not only help keep your turkey as clean as possible but also keep annoying flies away from the birds.





Use clean pine wood shavings as bedding after every cleaning.

Turkeys are judged by age first, with a first place ribbon going to the best old tom, old hen, young tom, and young hen. The judge will then choose a turkey champion from these first place winners which will then be eligible to win the Overall Grand Champion award and will be compared against the top placing standard-sized chicken, bantam chicken, waterfowl, and pigeon.

## After a Show

After a show, bring your turkeys home and quarantine them for a month, separate from the rest of your birds. Treat them for lice and mites when you return home and then again before you reintroduce them to their flock. While quarantining your turkeys, keep an eye out for any diseases that may be making an appearance. Check for diarrhea, sneezing, coughing, or discharge from the beak, nostrils, or eyes. If all of the birds appear healthy after a month, then your turkeys can be returned to their flock.



Courtesy of Gabriel Dupon Photography



Turkey cages are often just large enough for the bird to turn around in, hence the importance of cage training before a show. Note the ideal large water bucket behind this tom.





## Chapter 9

# Pigeons and Doves

### Pigeon Breeds

Pigeons are different from any other kind of domesticated poultry. The biggest difference is that most breeds of pigeons and doves can still fly and are somewhat feral in nature. This presents a challenge for any pigeon or dove keeper because not only must a **loft** be built to house the pigeons or doves but also an **aviary** to keep the birds from flying away.

Pigeons and doves belong to different species; however, for ease of understanding, the two will be grouped together in this manual. The primary difference between the two species is that pigeons are more aggressive, hardier, and more intelligent than doves. However, both species are kept in much the same way. In this

manual, pigeons will be addressed because they are more commonly shown in 4-H.

The American Poultry Association does not recognize pigeons. Instead, the **National Pigeon Association (NPA)** handles recognizing the vast variety of pigeons that exist (and also recognizes two breeds of dove). The NPA has its own **Book of Standards** that divides recognized breeds into groups: Form, Wattle, Trumpeters, Structure, Syrian, Owls and Frills, Croppers and Pouters, Color, and Tumblers, Rollers, and High Flyers.

Individual research may be necessary to acquire the breed of pigeon that you want. Some breeds, such as the Frillback, sport curling feathers that look like ringlets. Others, such as the various kinds of Pouters, are long-legged birds that can puff their chests out, almost like bullfrogs. Others, like the many kinds of Homers, can



#### TIDBIT

There are over 230 recognized breeds of pigeons.



#### TIDBIT

Thirty-two pigeons were given Dickin Medals, the highest war decoration for an animal, during WWI for their bravery in battle and for saving soldiers' lives with the messages they delivered.

find their way back to where they were hatched from hundreds of miles away and have been used in war for centuries to deliver messages. And still more, like the Parlor Tumblers, cannot fly and

instead somersault along the ground. Each breed is a little different and has a different purpose.

If you wish to raise pigeons, consult the NPA *Book of Standards* or their website to learn more about different breeds of pigeon and what breed is best for you and your situation. Some are kept for meat and others are kept for exhibition. Still others are used in pigeon races and for flying. Do your research before purchasing any pigeons to make sure that the breed of pigeons you buy fits the purpose you have for them.

Male pigeons are called **cocks** and female pigeons are called **hens**. It can be very difficult to tell the difference

**Bottom:** Some aviaries are quite large and give enough room for twenty or more birds. This particular aviary connects to a loft inside the barn with a pophole cut into the barn wall to allow birds in and out.

**Top Right:** Pigeons prefer cubbies over perches in which to sleep, since the cubbies tend to provide a stronger sense of security for the birds.

**Bottom Right:** Pigeons love bowls or small boxes in which to lay their eggs. Ones with higher edges help keep baby pigeons and eggs from falling out.

between a cock and a hen, especially if a bird has not yet mated. For this reason, it is very important that you acquire your pigeons from an experienced breeder, so that you are sure to get the right number of cocks and hens. The easiest way to try to differentiate between the genders is that male pigeons will dance and coo loudly for females to attract a mate or protect their territory. Male pigeons also have broader breasts and tend to walk on their toes, while females have narrower chests and tend to waddle more than the males.

## Caring for a Flock of Pigeons

### Loft and Aviary Design

Pigeons will need both a loft for shelter and an aviary for exercise since they do need to fly regularly. A loft can be anything from an old rabbit hutch to a chicken coop to a barn loft. Pigeons are not picky about their housing, but all lofts need a few things to house pigeons correctly.





First, all pigeon lofts and aviaries must be predator-proof. They should be secure and protect the birds from digging and climbing predators. The loft should also protect the birds from the elements, keeping them cool in the summer and warm in the winter while blocking drafts. Pigeons are very hardy, but good ventilation is still critical to their health in all temperatures. A pigeon loft should also be bedded with either straw or wood shavings to keep it clean and dry.

A pigeon loft should also contain multiple perches and shelves for the pigeons to sit on as well as nesting boxes. Pigeons prefer small plastic storage tubs or bowls as nesting boxes as these containers help keep all of the nesting material in one place and prevent the baby pigeons from falling out. These nesting boxes also are easy to remove for cleaning when they become dirty. Pigeons love building nests from straw, so it can help to have straw, hay, or other long grasses available to them for the construction of their nests.

The aviary for your pigeons should be large enough to allow your birds access to the outdoors and exercise in the fresh air. It should also have numerous perches and roosts but not so many that the birds' flight is restricted while they are in there. The aviary and the loft should be connected so that the birds can move to both the inside and outside depending on the weather or the birds' preferences. The pophole for pigeons can be located on the side of the loft and raised several feet off of the ground so that the birds can get outside. (Note that pigeons have a hard time figuring out how to go down through a pophole on the ground. If you plan to keep your pigeons in a chicken coop that has a pophole located on the floor of the coop, extra training may be necessary to train the pigeons how to go in and out of the loft.)

## Food and Water

Many feed stores sell a feed that is formulated specifically for pigeons. Pigeon feed is typically a mix of seeds and sometimes dried legumes. Unlike chickens that can be fed free-choice food (their food is always available to them), pigeons should be fed only at specific times in the day, usually in the morning and at night, to keep them from overeating. By keeping them on a feeding schedule

like this, you can also train your pigeons to return to their loft at a specific time. Many pigeon owners blow a whistle or make a similar noise to signal feeding time to their pigeons. Since pigeons are fairly wild birds, one of the only ways to motivate them to come to you when you call for them is to train them to come for food at the sound of a whistle.

Whistle-training your birds is especially helpful if you plan to allow your pigeons outside of their aviary. This allows them to fly around and then return when you whistle for them. Note that pigeons are like other types of poultry in that the longer they are kept in their loft, the more likely they are to return to it if they are let out of their aviary. Most pigeons will return, especially if they are fed or hatched there. If you do plan to allow your pigeons out of their aviary, make sure you train them how to re-enter from the outside by manually moving the birds through the pophole over and over again.

Pigeons also need fresh water at all times. They will drink out of any kind of waterer, but chicken waterers usually work best. Pigeons also love to bathe, just like wild birds; if their water is in a bucket or trough, they will splash and bathe in it. For this reason, provide your pigeons with a waterer designated for drinking (a chicken waterer) and another designated for bathing (a shallow bucket or pan). When pigeons bathe, they release natural dust from their feathers, so their dirty bathing water will need to be changed to keep the pigeons from drinking the dirty water.

For optimal health, pigeons must also be provided with supplemental minerals. The ideal kind for pigeons comes



**TIP**

Chickens also benefit from granite supplements; these support consistent egg laying.

from crushed red granite grit. Feed stores do not always carry this type of mineral, so sometimes it must be ordered online.

Always offer minerals to your pigeons in a feeder separate from their regular food.

## Health

Most pigeon breeds are very hardy and suffer from few health problems. The biggest problem for pigeons is usually lice. Pigeons can get poultry lice, although the louse species is different than the type that lives on chickens and turkeys. For this reason, it is important to treat your pigeons for louse if needed around their vent and under their wings. Because pigeons are so much smaller than chickens, they need a significantly less amount of dust to effectively keep them louse-free.

Pigeons are susceptible to a wide variety of other uncommon diseases, but these rarely manifest themselves. Even so, it is very important to know your pigeons and learn how they usually behave so that you can quickly spot any birds that seem to be acting abnormally. Remember that the common signs of sickness in poultry include listlessness, diarrhea, coughing, sneezing, or discharge from the eyes, nose or mouth. If you spot any of these signs of illness in your flock, immediately separate the sick pigeons and contact your local veterinarian.



A newly hatched squab is helpless and tiny with eyes that remain closed until it is about a week old.

Courtesy of Colorado Avian Health Program



Pigeon lice often crawl across and live in wing feathers. They are larger than other types of poultry lice, with a distinct long body. If you notice lice on your pigeons' wings, be sure to dust them.

## The Pigeon Lifecycle

Baby pigeons are called **squabs** when they first hatch. Unlike all other kinds of domesticated poultry, squabs are mostly naked with closed eyes when they first hatch. They cannot move away from the nest and rely on their parents to feed them, protect them, and keep them warm. These characteristics make squabs a kind of **altricial chick**. (In contrast, chicken chicks, ducklings, goslings, and poults are **precocial chicks**, meaning that they can leave the nest within a few days of hatching. They will largely forage for their own food, although they are helped and protected by their parents.)

Pigeons mate for life and will build a nest together once they are firmly paired. Breeders often pen two pigeons together for two to four weeks to bond them and ensure that the breeder knows who the parents of future squabs are. These mated pairs will claim a nesting place and fiercely defend it from all other pigeons in their loft.

Once the pair has mated and built a nest, the female will lay one to three white eggs about a day apart, and she will incubate them for seventeen to nineteen days, until they hatch. Her squabs will range in size from a quarter to the size of a thumb, depending on the breed. They will be mostly naked and will have thin down over them. For the first week of their life, the squabs triple and quadruple in size, growing in the beginnings of their





feathers. Both parents work to feed the squabs by eating and then regurgitating the partly-digested mixture, or **crop milk**, into the squabs' mouths. The hen sits on the nest, covering the squabs, during the night, and the cock warms them during the day.

About two weeks after the squabs hatch, they begin to become very noisy. At this point, many people refer to them as **squeakers**, because of the loud squeaking noise the babies make to let their parents know that they are hungry. It is also at this time that the hen will build a new nest and lay more eggs. For the next two weeks, the cock feeds the squeakers and the hen incubates the new nest until the next batch of squabs hatch.

At about four weeks old, the squeakers have fully feathered out, can walk, and can be removed from their nest and placed on their floor of the loft. They will not be able to fly for another two weeks, but while the squeakers are on the floor, they learn how to eat and drink by themselves. At about six weeks old, the squeakers are able to fly and are considered adults. In the next few months, these young adult pigeons find mates and start raising their own young.

If you plan to purchase pigeons, breeders usually sell young squeakers which are weaned from their parents or older mature birds. It is usually best to purchase younger birds, just so that they can become accustomed to your loft at a younger age and are more likely to return to your loft if released.

## Squabs

Squabs are very delicate when they first hatch and can be accidentally crushed by their parents or die for seemingly no reason. In the first week after hatching, avoid upsetting the parents on the nest to keep them from accidentally stepping on their squabs. If any squabs do die, remove them immediately from the nest.

Most pigeon breeds are highly prolific and will raise their squabs until the babies are flying and eating by themselves. In fact, squabs cannot be cared for perfectly by humans or any other kind of bird, because they require so much special care from their parents. Sometimes though, pigeon parents will abandon their nest for odd reasons (the pair could be too young or be stressed). If



Notice the bulging chests on these two healthy young squabs that indicate that their crops are full and that they have been fed.

the squabs are over a week old, they can be saved, although they may have developmental problems depending on how old they were when they were abandoned.

A healthy and well-cared-for squab should be warm and have a full crop. The crop is located in the baby bird's chest and holds food until it can be fully digested. On a squab, the crop should bulge noticeably and feel squishy to the touch. If the crop is bulging, then the squab is being cared for by its parents. The other way to tell if a squab is getting the care it needs is to see if it is being kept warm by its parents. The parent pigeons should sit on the baby squabs for at least the first one to two weeks of the squabs' lives.

A squab abandoned by its parents will not be kept warm and will die quickly. To justify removing a squab from its parents, the squab's crop must be deflated and empty for an entire day and the parents should not be seen sitting on the nest. Removing a squab from its nest should only



## CARING FOR ABANDONED SQUABS

To care for rescued squabs, keep them warm under a heat lamp. The temperature should be somewhere between 80 and 90 degrees. If the squab is older, then it may be fine in room temperature air. Squabs must be fed at least four times a day and should not be fed at night. To feed a squab, first find a quality food. Baby food designed for parrots or other exotic birds work fine for squabs. Then mix the food with water. It should be very thin at first, like the consistency of skim milk, and then thickened over the next few days. A large plastic feeding syringe (one without a needle) can be used to feed the baby pigeon. Fill it with food, then place a piece of vet tape or similarly self-adhering rubber over the end of the syringe. Secure it with a rubber band and then make a hole in the rubber big enough for the squab to fit its beak into. Allow the squab to “root” in the syringe until its crop is about three-quarters full. If the squab regurgitates any food when you press on its crop, then you have fed it too much. As the squab grows older, offer it small seeds such as millet or softened peas along with its usual food. Gradually reduce the number of times you feed the squab each day, feeding it when its crop is empty. At about four weeks old, the squab can begin to eat seeds on its own and should only need to be fed once a day or every other day until it is fully weaned from the baby food mix.



Squabs as young as this are difficult to save. If a squab's eyes are open, then they can be more easily hand-raised.

be a last resort, but if the crop is empty all day long and the squab seems to be very cold, then taking it is in the bird's best interest. Note that only squabs over a week old (or that have opened their eyes) can be cared for by humans; any squabs younger than that most likely cannot be saved.

### How to Band a Pigeon

To be shown in a pigeon show, a pigeon must have a seamless leg band.<sup>15</sup> Banding pigeons is standard practice among pigeon breeders, as it allows them to differentiate between birds for breeding purposes. These seamless bands never come off of an adult pigeon and are permanent for the pigeon's entire life. These are especially useful if a pigeon escapes from its loft and does not come home. Other breeders can be on a lookout for the lost pigeon and are able to tell that the specific pigeon is domesticated and not feral.<sup>16</sup>

A leg band must be put on a squab's leg when it is 5 to 7 days old. Any younger and the band will fall off,

and any older, the squab's foot will not fit through the leg band. To band your squabs, fold its hind toe on the squab's right leg backward so that it is flush with the baby's leg. Turn the leg band so that it is upside down (so that when you hold the adult bird, the numbers are right-side up). Then slide the leg band up over the front three toes and over the hind toe, past the claw. Once the leg band is on the bird's leg, it should be able to extend all of its toes and bend its knee without the leg band



Here a leg band is shown on an adult pigeon. A properly placed leg band will sit on the pigeon's shank, the scaly part of its leg, without slipping over the back toe or the knee.





interfering. The day after you band your squab, check on it to make sure that the leg band did not fall off. If it did, replace it. Remember to always be gentle when banding your squabs!

## Showing Pigeons

### Know What You Have

Just like all other kinds of poultry, pigeons are divided by the NPA into classes. Consult the NPA Book of Standards if you are unsure to which class your birds belong. You can also contact your superintendent or an experienced pigeon owner to determine which breed you have. (Because most breeders specialize in one or two breeds, it is unlikely that you were given a pigeon that is a breed different from the breed that you were sold.) However, it is still good to double check before you enter any bird into a show.

Any pigeons under a year old should have been banded with a seamless leg band and can be entered as either a young cock or young hen. Old birds are old cocks or old hens.

### Preparing for a Show

Pigeons do not usually need to be cage trained, but they should be inspected for lice before the show and dusted if needed. Provide your pigeons with bathing water in the days leading up to the show to encourage them to wash themselves. If the birds are bathing before the show, there is no need to bathe them yourself. Also check the pigeons right before to show to see if any birds have beaks or toenails that need to be trimmed.

### Showmanship

Pigeons can also be used in showmanship. However, if you plan to use a pigeon, be sure that you are very comfortable with handling your bird and confident that you will not accidentally release it. The best breed of pigeon to use for showmanship are Parlor Tumblers, since these birds actually cannot fly and are mostly ground-dwelling

pigeons. Parlor Tumblers are also quite docile and easy to handle, so they are a good option for showmanship.

When showing a pigeon, it is critical to hold the bird correctly. Pigeons have a series of air sacs in their chest which connect to their lungs. If the bird is held too tightly in the breast area, these air sacs can actually be damaged. To hold a pigeon correctly, slide your left hand under the bird's chest while grasping its legs by putting your index finger in between the pigeon's legs and squeezing them together with your other finger (Fig. 1). Place your right hand over the pigeon's back, pinning its wings to its sides (Fig. 2).

Be prepared to talk all about your pigeon, what breed, age and gender it is, and how you care for it. Note that the judge will ask you questions specifically relating to pigeons including the anatomy of your pigeon. He may



**Fig. 1** Use your fingers to hold the pigeon's legs together, anchoring it to your hand.



**Fig. 2** Cup the pigeon's breast to support its delicate air sacs while pinning its wings to its body with your thumb.





Oddly enough, most pigeons do better in the confined space of a show cage than other types of poultry. The biggest stressor for a pigeon at a show is a noisy or flirtatious neighbor, like the black cock in the background.

also ask you about any poultry species, including chickens, ducks, geese, and turkeys.

## While at a Show

Pigeons can be transported to a show in a dog crate or similar carrier. Just like with all poultry, make sure there is adequate ventilation in these crates. Be extra careful when transporting pigeons and moving them in and out of their transport crate since they can easily escape if handled improperly. Pigeons are also checked by vets because they can carry in lice and mites, just like chickens and turkeys. If you feel uncomfortable with the vets handling your pigeons, ask to hold your own birds while they examine them to prevent accidental releases or ask

the vet to look over the birds while they are still in the cage.

Pigeon shows can be large; but if you know the breed and class of your pigeon, then it should not be hard to find your designated cages. Remember to always place your pigeons headfirst in the cage and bring them headfirst out of the cage.

Pigeons need a feeder and a waterer at a show. Both can be small cups attached to the sides of the cage by zip-ties. Make sure to secure them to the cage itself. Pigeons will perch on the side of their feeders and waterers and spill them if they are improperly secured. Thoroughly clean out the waterers every day to keep the pigeons from drinking dirty water in which they may have defecated.

Pigeons do not make much of a mess at a show (since their droppings are quite small), so their cages need only be cleaned twice a day. When you clean their cage, be very careful not to accidentally let the pigeon out of the cage, especially if it is a flighty or skittish bird.

Judges will place pigeons starting with the best bird in each age category within a class and then compare these four top birds against each other. The top bird in each class will then be compared against the other class winners and a Champion will be selected from those birds, which will be eligible for the Grand Champion award. In a multi-species show, the Grand Champion pigeon will then be eligible for the Overall Grand Champion or Overall Reserve Grand Champion awards.

## After a Show

Once you bring your pigeons home after a show, check them for louse, treat them if needed, and check for any other signs of disease, such as diarrhea, sneezing, coughing, or discharge from the beak, nostrils, or eyes. If you have a place for them, quarantine the returning birds for three weeks after the show. Then you can reintroduce the show pigeons into their flock if they appear healthy and show no visible signs of disease.





## Chapter 10

# Market Poultry

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## Why Market Poultry?

**Market** poultry are birds used for meat and are another facet of showing poultry in 4-H. These birds have been bred to grow to full adult size in a very short amount of time; for example, fryer market chickens are ready to be **harvested** at eight to twelve weeks. Many people choose to raise market poultry because these birds not only generate a decent profit when sold for their meat but because they also only need to be raised until they are harvested. This makes owning poultry more lucrative without as long of a commitment. Although market projects involve raising poultry just like breeding projects, the manner in which the market birds are bought, raised, and shown vary from their breeding bird counterparts.

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## Purchasing Market Poultry

### Market Chicken Breeds

Just like breeding chickens, market chickens come in various breeds. The most common is the Cornish-Rock Cross. Contrary to popular belief, Cornish-Rock Cross are not genetically modified; instead, they are created through the natural and selective breeding of a Plymouth Rock to a Cornish. Both of these recognized breeds are heavy-set and sturdy birds, ideal for meat production. However, when bred together over numerous generations, these breeds produce the Cornish-Rock Cross, a breed that matures in a very short amount of time and has a large body mass.

Since market breeds like the Cornish-Rock Cross are bred by hatcheries and breeders who perfect their own “recipe” for a good meat bird, numerous strains of Cornish-Rock crosses and various other types of market birds exist. Depending on the hatchery, they are called Red Rangers, Freedom Rangers, or Cornish X. All of these different breeds will mature in a different

amount of time, so many counties will specify which market breeds are allowed at their fairs. Usually, the Cornish-Rock Cross is the only breed allowed at most county shows.

### Market Turkeys

Market turkeys also are selectively bred to mature quickly and have an economical feed-to-body-mass ratio. These market turkeys come in two varieties: Broad Breasted White (an all white turkey) or Broad Breasted Bronze (a variety similar in color to the Standard Bronze turkey). Neither of these hybrid varieties can be shown as standard breeds and can only be entered in a market class.

Broad Breasted turkeys reach their harvesting age between sixteen and twenty-two weeks. Because they put on so much weight so quickly, market turkeys generally





Emdben geese are often shown in market classes because of their large size which contributes to their market value.

cannot live long past their harvesting date because of numerous health issues. This rapid weight gain also causes these turkeys to be unable to reproduce naturally.

## Market Waterfowl

Market waterfowl differ from market chickens and market turkeys primarily because the duck and goose breeds used primarily for meat are not only recognized by the APA Standard (and therefore can be shown in breeding classes), but also can live long and productive lives after their recommended butchering date.

The most common breed of duck to use in a market class is a Pekin duck, although other species can be shown as well (i.e. Muscovies or Rouens). These ducks' feed-to-body-mass conversion is optimized only through their first twenty weeks of life, so it is generally recommended to harvest these breeds for meat at about twenty weeks although they can live much longer.

Geese can also be placed in the market class. Similar to ducks, any heavy weight goose breed can be shown in the market class, although the Embden is the most pop-

ular because it is the largest breed. The time it takes for a goose to fully mature with an optimal feed-to-body-mass conversion ratio varies per breed, so check with your superintendent about when to buy your geese to be sure that you purchase them in time to show them at the fair.

## Other Species of Market Poultry

Some county fairs allow other species like pigeons and pheasants to be shown in a market class as well. Check with your superintendent about your fair rules to see what can be shown in your area.

## Making the Purchase

Market poultry can be acquired from a feed store or reputable hatchery. Some counties will even order a mass shipment of market chicks for their 4-H members so that all members have birds that will be allowed at that county's fair. Check with your project leader or superintendent to find the best source of market chicks in your area if your county does not order the birds for you.





Because market birds mature in such a short amount of time, you need to plan out when you will purchase your birds. Unlike breeding poultry that should be purchased early in the year to allow them to mature fully in time for the show, the purchase of market birds should be timed so that they are ready to be harvested at the time of the show. For example, if your Cornish-Rock crosses will be ready to harvest at eight weeks old, you should purchase chicks eight weeks before your show.

Also consider how many young birds you want to purchase. As discussed later, some shows require market chickens to be shown as a trio with all three birds having the same appearance, weight, and sometimes sex. This can be difficult to accomplish if you do not purchase enough birds. Generally, in order to have enough options to put together a good trio, it is recommended to purchase ten birds for every one trio that you plan to show. However, be aware that any surplus birds that you have after a show must be harvested no later than twelve weeks after they are hatched, which means that you need to have a plan for selling or processing your birds before you purchase any market chickens. *Always check your show's regulations before purchasing birds in order to accurately plan ahead.*

## Caring for Market Poultry

Once you have purchased your young market birds, their care and handling mirror that of their breeding counterparts; they will need a brooder box, heat lamp or brooder plate, and all other chick-raising implements mentioned earlier. (Refer to Chapter 3, 7, and 8 for an explanation of how to raise and care for young market chicks, waterfowl, and poults.)

## Housing

Market poultry can be kept in a coop just like other birds after they reach about three weeks of age. However, as they grow older, they have a more difficult time perching and will need more ground nesting space. You can also make your coop easier to access for these heavy birds by minimizing the slope of an access ramp or adding a ramp instead of stairs if your coop is raised off the ground. Market poultry do not free range well, so keeping them in a covered and cool pen helps to protect your birds and stimulate their growth.



Young market birds require the same care and attention as their breeding counterparts to keep them healthy and growing at a steady and economic rate.



Because they grow so quickly, market poultry produce a tremendous amount of body heat, which causes them to be heat intolerant. Adult market birds prefer an ambient temperature of about 70-72 degrees Fahrenheit. Any hotter or colder, and the birds will become stressed, which can hurt their growth rate. Add misting hoses and/or fans to your coop or run as necessary to help keep your birds at a comfortable temperature. Because these birds more often overheat than become too cold, good ventilation is key in a market bird coop.

## Food and Water

Market poultry will continually need more protein in their feed than breeding poultry will. Young market chickens should be fed a game bird or broiler “starter” feed, a complete type of feed that can be purchased from your local feed store that contains about 23-24% protein. Once the birds are three to four weeks old, transition them to a “grower” feed, which has about 21-22% protein. Turkeys also need to be fed a high protein feed. Their starter feed should contain 24-27% protein and they should be switched at about four weeks to a grower that contains 21-24% protein. Keep your market birds on this high-protein feed until harvesting time. Some feed stores may label their feeds differently, so make a feeding schedule with your project leader to keep your birds on track to mature in time for show.

Market waterfowl differ from market chickens and turkeys as they are at a higher risk of developing angel wings if fed a feed with too much protein. Therefore, young waterfowl should be kept on a 18-20% protein feed from the time they are young until they are harvested.

Just like for all other animals, all market birds must also have constant access to water. Because they grow quickly and produce so much body heat, they drink more than average breeding birds. Be sure that your market birds can always reach their waterers and that their water is kept clear of dirt and debris.

As previously mentioned, market turkeys’ and chickens’ breasts and thighs grow so quickly that their legs have a hard time maturing at the same pace. This can lead to these birds walking less and becoming weaker, which causes the primary muscles in the breast and thighs to



Allowing your market birds access to grass and fresh air will improve their quality of life.

shrink, lessening the value of the bird. Sedentary birds that lie next to their feed all day are also at a higher risk of breast blisters which also make the birds’ meat less desirable. An easy way to get your birds to stretch their muscles, strengthen themselves, and prevent breast blisters is by placing your birds’ feed at one end of their pen and their water at the other. Or, if your coop is raised and has an access ramp, place the food at the top of the ramp and the water at the bottom. This forces the birds to move across the pen or up and down the ramp each time they need to eat or drink, creating an opportunity for natural exercise.

Because market birds will be consumed at some point, you need to be aware of all medications you give to your market birds and the **withdrawal times** of these medications. For example, a common medication given to market chicks is a medicated chick starter which helps





to prevent coccidiosis. Be cognizant of the withdrawal time of this medication and transition your chicks to a non-medicated feed in time so that they will be consumable at harvesting time. Another common medication is permethrin dust used to delouse birds. Because of its toxic nature, permethrin dust also has a withdrawal time that will be noted on its canister. Be sure to note down all medications you use on your birds, when you use them, and how long their withdrawal time is in your record book.

## Health Issues

The cost of creating a breed that puts on so much weight in so little time appears in the health defects that manifest themselves within market poultry, especially chickens and turkeys. These species often struggle with heart attacks (from too much body mass for a smaller heart) and leg problems (from underdeveloped and weak legs). These health issues require the Cornish-Rock Cross to be harvested no later than twelve weeks of age and for Broad Breasted varieties to be harvested at twenty-two weeks. After their typical butchering date, the feed-to-body-mass conversion of all market poultry drops off significantly, meaning that these birds consume more food without putting on more weight.

Because heavy duck and goose breeds often used for meat are able to reproduce naturally and can live for many years, they tend to suffer from fewer health issues than market chickens and market turkeys, making them easier to keep in the time leading up to the show. However, if you plan to keep your waterfowl solely for meat, remember that their feed-body-mass conversion fails to be economical after their harvesting date and that you may lose profit through excess feed if you choose to keep them past that date.

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## Showing Market Poultry

### How a Show is Organized

Most shows have an age and/or weight class in which that market birds are divided. If a show uses the bird's age to determine its class, then older birds will be grouped together and younger birds will be grouped to-

gether. Most shows will have two weight classes—fryers and broilers—regardless of whether they also use age classes. The **fryer class** contains all birds that weigh 4.5-6 pounds. The **broiler class**, also called the roaster class, contains birds that weigh 6.1-9 pounds.

Shows organize their market classes in different ways. Some shows will require that all market birds be shown in trios, while others may allow single birds to be shown. Some shows may require that all market bird trios be the same sex (i.e. all male or all female), while others may allow for mixed pens. Always check with your superintendent or project leader to verify what your show requires or allows.

## Choosing Birds to Show

Regardless of the sex of the birds in a trio, all trio birds should be the same size and weight, and their breasts, legs (Fig. 1), backs (Fig. 2), and keel bones (Fig. 3) should feel the same when handled and be the same size. For example, the breasts of some market chickens may feel firm while others may be softer. This means that when you go to form your trios, be sure that firm-breasted birds are grouped together and soft-breasted birds are grouped together so that all three birds in the trio feel the same. This similarity is critical to placing high in any market class. To determine which of your birds should be grouped together in a trio using weight, it is highly recommended to purchase a digital scale on which to weigh your birds. Every week leading up to the show, weigh your birds and record their weight on a spreadsheet. (Weigh your birds at the same time every day since market birds' weights often fluctuate depending on the time of day and when they have eaten last.) In order to identify and distinguish one bird from another when weighing, purchase numbered, plastic leg bands and band your birds. That way you can clearly see the weight gain of each individual bird on your spreadsheet in the weeks leading up to the show.

One to two weeks before the show, divide your flock into males and females and then begin to consider which birds of the same sex are closest in weight to each other. Then, the day before you check your birds into the show, weigh them one last time at the same time that you will check them in the next day. For example, if check-in time for market birds is at six in the evening on a Tues-





**Fig. 1** How to examine the legs of a market chicken. Feel for girth and firmness.

day, weigh your birds at six in the evening the Monday before. This is when you will choose your trios. Remember that trios should physically look the same and should be as close to the same weight as possible. The breasts, legs, and keel bone should all feel similar as well when handled. (On market birds, the longer the keel bone—the long bone extending down the chicken's breast—the more potential for meat that bird possesses.)

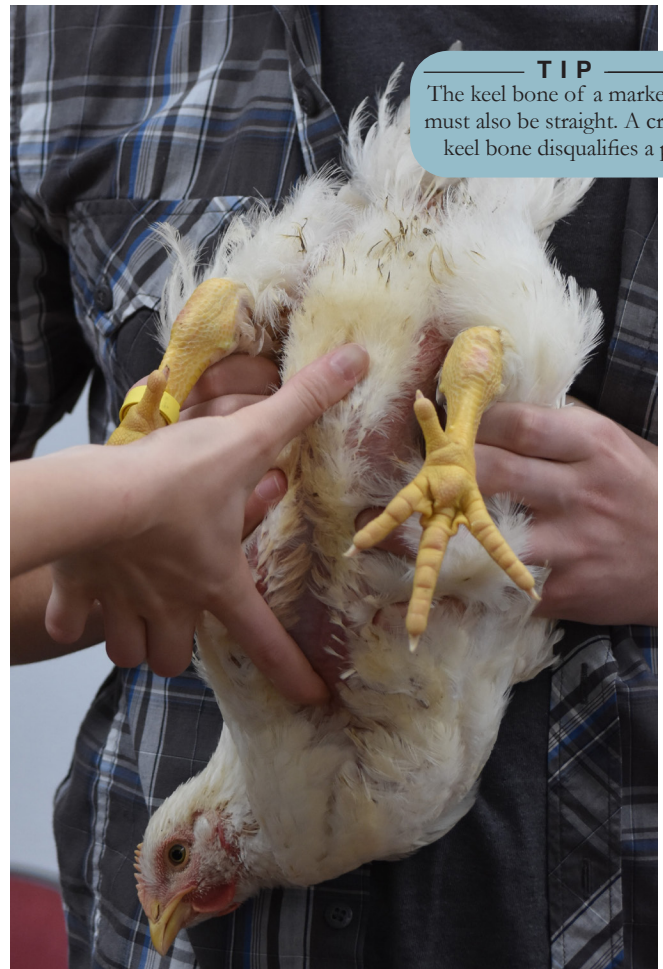
## While at a Show

Once you have chosen your trios to show, transport them to the show in a crate or cage with as much airflow as possible. Market birds are at a higher risk of overheating during transport, so be sure to keep them as cool as possible using your car's air conditioning or spray bottles full of water. Market birds will also be subject to a vet-check just like all other types of poultry, so be sure that your market birds are louse and disease free before bringing them to the show.

Showing market birds closely mirrors that of showing breeding poultry (Chapter 6) with a few key differences. First, market birds require much more food and water than their breeding counterparts, so be sure to bring larger food and water containers for your market birds, especially if they are in trios. Note that these trio pens will be large enough for your birds, but will not leave much space for them to move. Since market birds also move less than breeder chickens, even at a show, they are



**Fig. 2** How to examine the back of a market chicken.



**Fig. 3** How to measure the keel bone. It should be straight and long.





therefore at a higher risk of soiling themselves before they are judged. Therefore, market pens will need to be cleaned more frequently and market birds should be checked before judging to remove any droppings from their feathers. Another way to prepare your pens for show is by removing the food from the pens the night before they are judged. This helps to reduce the manure and soiled shavings in the pen, as well as prevent birds from regurgitating feed when handled by the judge. See Chapter 6 for an explanation of the judging process and a list of actions to take before your birds are judged.

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## After a Show

Once the show ends, you will have birds that attended the show and others that stayed at home. Those birds that went to show are often easily sold there, especially if your pen placed high or was entered into a livestock sale or auction.

However, regardless of if you decide to bring your market birds home or sell them at the show, you will typically have surplus birds at your home that need to be harvested. You can either sell your surplus market chickens or **process** them yourself. Generally, birds that have already been harvested sell for more than birds sold live. Many people who raise market birds will harvest their flock themselves and then sell the carcasses, but if you are uncomfortable with harvesting or do not know how, reach out to your superintendent or project leader. Some counties even have a “Butcher Day” when all 4-H members can have their birds harvested for them.

Regardless of how you finish out your market bird project, be sure to harvest your birds at the appropriate harvesting age. Market chickens and turkeys that live past this date tend to have numerous health issues that seriously affect their quality of life. The humane action is to harvest them before they get to this stage and begin to manifest worse health issues.





Trios of market chickens can quickly soil a pen; therefore, it is very important to clean their small pens regularly to keep your show birds clean.





### **Dear Reader,**

Whatever you end up showing for your poultry project—whether that is chickens, ducks, geese, turkeys, or pigeons—enjoy the experience and have fun! Learn as much as you can from other members and your superintendents to improve your poultry knowledge and grow your fancy. Perhaps someday you will be breeding high quality birds to exhibit at shows across the nation! Whatever you do with poultry, always be sportsmanlike and soak up every 4-H adventure for all it is worth. I hope this handbook helps you along the way.

— Amelia Macy



# Appendices

## Glossary

**4-H** – a nationwide organization that focuses on teaching responsibility, character, and skills in a wide variety of projects and programs

**altricial chick** – baby fowl that hatches naked with closed eyes, cannot move away from the nest, and relies on its parents to feed it, protect it, and warm it (compare **precocial chick**)

**American Poultry Association (APA)** – an organization that promotes the standard-bred poultry industry, encourages poultry shows, and facilitates the publication of the *American Standard of Perfection*

**American Standard of Perfection (SOP)** – a standard against which all exhibited birds are held; outlines the ideal color, conformation, and size of all recognized breeds of chickens, ducks, geese, turkeys, and guinea fowl

**angel wings** – curling wing feathers on waterfowl caused by feed with too much protein and tendon strain on the wing tip

**aviary** – an enclosed space for pigeons and doves to fly without escaping their handler

**bantam** – refers to a bird that refers to a bird that is described in the American Standard of Perfection as being small in size and not large (compare **standard-sized**)

**beard** – in chickens, a tuft of feathers underneath a chicken's beak; usually accompanied by muffs (see **muffs**); in turkeys, a small wiry tuft of feathers on the breast

**biosecurity** – the practice of preventing the spread of disease within an animal population

**breeding class** – a show category specifically designated for breeding poultry as opposed to a market class

**breed true** - when a certain breed has become perfected to the point where it can reproduce without passing on characteristics that are a part of the breeds used to create the new standard breed

**broiler class** – a market class containing larger birds; in market chickens, a class containing birds 6.1-9 pounds

**broody** – refers to a hen that attempts to hatch eggs by incubating a clutch for a long period of time

**cage training** – the process of acclimating a bird to a small show cage

**cape** – the blunt neck feathers on a female chicken

**class** – in the Standard of Perfection, one of many categories into which poultry are organized based on their origin (standard chickens), comb type (bantam chickens), or weight (waterfowl)

**cock** – a male chicken or pigeon

**cockerel** – a male chicken under a year old

**comb** – a fleshy outcropping on a chicken's head used to regulate body temperature





**coop-out** – check-out; the time of cleaning up after a show

**crop milk** – a partially digested fatty mixture of seeds and enzymes that pigeons regurgitate into the mouths of their young

**defect** – a fault in a bird that is not severe enough to disqualify the bird, but still results in a lower placement in the class

**disqualify** – to strike a bird from a show because of undesirable characteristics, faking, or sickness

**drake** – a male duck

**dubbing** – the procedure of removing the comb, wattles and sometimes earlobes of poultry

**duck** – a female duck

**dust-bathing** – the habit of chickens to kick dirt through their feathers while lying on their side, a natural method that helps the bird remove louse and dead skin from their feathers

**eclipse plumage** – the duller plumage characteristic of female ducks that drakes take on after the breeding season (compare **nuptial plumage**)

**egg production class** – a class at a show where all breeds, hybrid or purebred, can compete and the bird with the capacity for the highest production capacity

**faking** – the action of altering the appearance of your bird in a dishonest or injurious way; results in complete disqualification from a show

**fancier** – an enthusiast of poultry, often a breeder and showman

**frizzle** – a genetic anomaly that causes a chicken's feathers to curl backwards as opposed to lie flat and close to the bird's body (compare **smooth**)

**fryer class** – a market class containing smaller birds; in market chickens, a class containing birds 4.5-6 pounds

**Game Subclass** – a subclass within the All Other Standard Breeds Class that contains Old English Game and Modern Game chickens, which were bred specifically for cock fighting

**gander** – a male goose

**good condition** – refers to a bird with few to no frayed or broken feathers, clipped toenails and a trimmed beak, an alert expression, and an overall vigor

**goose** – a female goose

**hackles** – the long, sharp neck feathers on a male chicken

**harvest** – to butcher a bird for its meat

**hen** – a female chicken, pigeon, or turkey



**hen-feathered** – in Sebrights and Hamburgs, a lack of sharp hackles, sickles, and other defining male feathers

**heritage breed** – a breed of poultry that is able to reproduce naturally and is generally kept for backyard production or for breeding; a breed recognized by the APA and developed prior to the mid-twentieth century

**intermediate** – a 4-H member between the ages of eleven and thirteen

**junior** – a 4-H member between the ages of eight and ten

**lacing** – a certain color variation that adds edging to each feather that is a different color or shade than the rest of the feather

**loft** – a building construction to house pigeons or doves, often attached to an **aviary**

**loosely-feathered** – describes a bird that has feathers that do not lie flat to the body and give the bird a fluffy look

**market class** – a show category specifically designated for meat poultry as opposed to a breeding class

**Miscellaneous Subclass** – a subclass within the All Other Standard Breeds Class that contains breeds that do not fit anywhere else in the Standard of Perfection, such as Naked Necks, Phoenixes, and Sultans

**muffs** – tufts of feathers that grow to the sides of a chicken's earlobes, giving the bird's face a fluffy look; usually accompanied by a beard (see **beard**)

**National Pigeon Association (NPA)** – an organization dedicated to creating greater interest and promoting good breeding practices in recognized breeds of domestic pigeons; publishes the *Book of Standards*, which contains standards for all recognized pigeon breeds

**nesting box** – box or other small area in which a hen can lay her eggs

**nits** – lice eggs laid at the base of a bird's feathers; can appear to look like small white balls or salt

**NPA Book of Standards** – publication of the National Pigeon Association that describes the ideal of over 230 breeds of domestic pigeon

**nuptial plumage** – the showy, colorful plumage that male ducks take on during the breeding season (compare **eclipse plumage**)

**Oriental Subclass** – a subclass within the All Other Standard Breeds Class that contains breeds from the East that are not listed in the Asiatic Class, such as Aseels (Asils) and Shamos

**ornamental** – a bird that is bred specifically for exhibition or display

**out of condition** – refers to a bird with broken, dull feathers, cloudy eyes, overgrown toenails, and a lack of vigor

**pophole** – a small door to a poultry coop

**poult** – a baby turkey





**precocial chick** – baby fowl that hatches with open eyes, a well-developed down cover, and can leave the nest within a day or two after hatching (compare **altricial chick**)

**process** – to prepare fowl to be consumed through slaughtering, plucking, etc.

**pullet** – a female chicken under a year old

**quarantine** – to separate birds from the rest of a flock to prevent the spread of disease and louse; commonly done upon return from a show

**quick** – the sensitive flesh inside a bird's hard nails and beak

**recognized** – the status of select breeds of poultry, meaning that the breed is able to be exhibited in a show; being listed in a Standard of Perfection

**roost** – a narrow piece of wood or a branch installed in a coop for chickens to perch on at night

**rooster** – a male chicken

**senior** – a 4-H member between the ages of fourteen and eighteen

**sex feathers** – the curling feathers on a male duck's tail that identify him as male

**sex-linked** – refers to a breed that is bred for males and females that are different colors at hatching so that the chicks can be definitively sexed

**sickles** – the long, sharp tail feathers on a male chicken

**smooth** – the characteristic of a chicken that has feathers that lie flat to its body as opposed to curl backwards (compare **frizzle**)

**squab** – a baby pigeon

**squeaker** – a baby pigeon that has begun squeaking to get the attention of its parents, usually at about a week of age

**standard-sized** – refers to a bird that is described in the American Standard of Perfection as being large in size and not bantam (compare **bantam**)

**superintendent** – an adult who organizes and runs a certain 4-H project or show

**temperament** – the nature or personality of a breed or individual bird

**tightly-feathered** – describes a bird that has feathers that lie flat to the body and give the bird a sleek look

**tom** – a male turkey

**treading** – the mating behavior of a rooster that involves standing on the back of a hen, which can result in the rooster pulling the hen's feathers

**true bantam** – a bantam breed that does not have a standard-sized counterpart

**withdrawal time** – the time it takes after a medication is given to an animal before that animal is safe for human consumption



## Endnotes

- 1 Guinea fowl cannot be shown in most county fairs because they are extremely noisy. However, they can often be shown in other fancier shows.
- 2 Varietal distinctions include comb type, color, bearded/non-bearded, crested/non-crested, etc.
- 3 A ninth comb type, the chrysanthemum comb, does exist, but is only recognized on a single breed—Ko Shamos. The chrysanthemum comb resembles an enlarged pea comb and is often mistaken as such.
- 4 The Continental Class is divided into three subclasses: Northern European, Polish, and French. As a wide generalization, Northern European birds tend to be tightly feathered, prolific layers, and standoffish. Polish, famous for their topknot of feathers are also skittish unless handled frequently at a young age. Birds in the French subclass tend to be more docile, especially the breeds with feathered feet.
- 5 The All Other Standard Breeds Class (AOSB) is divided into three subclasses: Games, Orientals, and Miscellaneous. Game birds tend to be skittish with the roosters being aggressive. The Orientals' temperament varies. However, it is highly recommended to avoid Aseels and Shamos, which are Asian fighting fowl. These two breeds are extremely aggressive and should be raised by only experienced poultry keepers. All other breeds in the AOSB fall into the Miscellaneous class, including Naked Necks, Sultans, Araucanas, and Ameraucanas, all of which are enjoyable additions to any backyard flock.
- 6 Many of the above-mentioned breeds come in a bantam size, which behave in much the same way as the larger breed and have nearly identical characteristics. However, some breeds only come in a bantam size and these are called true bantams.
- 7 The tendency in chicks to pile up or squeeze into a corner leads to the recommendation to use a brooder box with curved edges (no corners). Sometimes a chick can be so pressed into the corner by its fellow chicks that it suffocates. A curved brooder prevents this from happening.
- 8 Look up a video of treating splayed legs for a step-by-step tutorial on how to make a hobble.
- 9 Raccoons, one of the smartest and sneakiest predators, can open many latches because of their opposable thumbs. Make sure to get one that a raccoon can not open.
- 10 Visit the website of the Livestock Conservancy for breed histories on heritage breeds of poultry at [www.livestockconservancy.org](http://www.livestockconservancy.org).
- 11 The answers to these questions regarding defects and disqualifications can be found in the front few pages of the Standard of Perfection. Anything in this section of the Standard is fair game for a judge to ask questions about, especially to seniors, but also to intermediates.
- 12 Remember that feathers can take six to twelve weeks to grow back, so don't pull any feathers within a few weeks of a show that will change the appearance of the bird (i.e. tail feathers, neck feathers, saddle feathers).
- 13 Buckets are preferable since they can be used outside. Wet chickens tend to smell like wet dogs, not a pleasant scent inside a house.
- 14 Each breeding trio consists of two females and one male, all of the same breed and color. Egg production trios consist of three hens, all the same age, breed, and color. Trios get a double cage and are entered into the show as a single entry (as opposed to a single chicken that would count as a single entry). In a breeding trio double cage, a center barrier can be used to separate the male from the females.
- 15 Some shows will allow pigeons with a seamed leg band, but these birds must always be entered as "old" cocks or hens regardless of their actual age.
- 16 In fact, some websites act as forums where breeders can report lost birds. Domesticated pigeons, even though they are more feral in nature, will seek out food and other domesticated pigeons. This means that lost pigeons often end up at other breeder's lofts and can be identified and returned to their owner if they are banded correctly.





## Suggested 4-H Calendar

MONTH	TO-DOs
<b>OCTOBER - DECEMBER</b>	<ul style="list-style-type: none"> <li>• 4-H year begins (Oct. 1)</li> <li>• Begin record book by printing or downloading a copy onto your computer. Fill out your goals for the year.</li> <li>• Decide what breeds you will purchase, if any, for the upcoming show season or for backyard production.</li> <li>• Research breeders or hatcheries if you plan to purchase baby birds.</li> </ul>
<b>JANUARY - MARCH</b>	<ul style="list-style-type: none"> <li>• Purchase baby birds from breeders or hatcheries. You may need to order your birds in January in order to receive them by February or March.</li> <li>• Attend workshop and start asking questions from experienced members or your superintendents.</li> </ul>
<b>APRIL-MAY</b>	<ul style="list-style-type: none"> <li>• Record if you have any birds that you sell before a show. You might sell males that are too loud or extra birds that you cannot keep until the show season.</li> <li>• Continue attending workshops.</li> </ul>
<b>JUNE</b>	<ul style="list-style-type: none"> <li>• Decide which birds to bring to show by comparing them to the APA Standard of Perfection.</li> <li>• Prepare for show by separating your best show birds from the rest of your flock. Keep hens away from roosters or dominant hens.</li> </ul>
<b>JULY</b>	<ul style="list-style-type: none"> <li>• Train for showmanship by taming and cage training your birds. Be sure that all of your birds are comfortable being held and spending time in small spaces.</li> <li>• Update record book until it is almost all filled out with feed, purchase, and health treatment costs as well as other information.</li> </ul>
<b>AUGUST</b>	<ul style="list-style-type: none"> <li>• Attend show and compete in showmanship.</li> <li>• Quarantine your returning show birds for three weeks after the competition.</li> <li>• Finish your record book by having your advisors sign it and fill out any remaining blank spaces. Check with your project leader to confirm the day that it is due to be turned in.</li> </ul>
<b>SEPTEMBER</b>	<ul style="list-style-type: none"> <li>• 4-H year ends (Sept. 31)</li> <li>• Reintegrate your show birds into your flock.</li> </ul>



## Showmanship Scorecard

	Scoring	Score
<b>Appearance and Attitude of Showperson</b>		
a) Clean, conventional clothing	5	
b) Follows instructions of judge. Keeps attention focused on bird and judge.	5	
c) Considerate of other exhibitors.	5	
<b>Appearance of Bird</b>		
a) Clean, unbroken feathers	5	
b) Good body condition (correct size for age and breed)	10	
c) An outward appearance of good health	10	
d) Tame and manageable (obvious signs of training at home)	5	
<b>Showmanship</b>		
a) Removing and returning bird to cage, carrying bird to judging table	10	
b) Posing and presenting the bird to judge or transferring to another person	10	
c) Display and examination of various parts; head, wings, body width, feet and legs, abdominal capacity	10	
<b>Knowledge of Poultry in general and specifically of breed exhibited.</b>		
a) Give the breed, variety, and sex of your bird	5	
b) What was the original purpose of this breed (eggs, meat, or exhibition)?	5	
c) How did you prepare this bird for show?	5	
d) Explain the type of feed you use.	5	
e) Other	5	
<b>Total</b>	<b>100</b>	



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## Chick Supply Checklist

Before you buy chicks or any other species of baby poultry, use this list to be sure that you have purchased all necessary supplies for keeping your baby birds warm and healthy as soon as they arrive at your house.

1. Feeders and waterers with brightly colored bases for your chicks.
2. Woodshavings, either fine or medium flake.
3. Heat lamp shell with extra bulbs or brooder heat plate, in case one goes out.
4. Chick food with 20-28% protein. (Note that ducklings and goslings will need 16% while poults will need 28%.)
5. Thermometer to monitor brooder box temperature.
6. A brooder box with rounded corners.





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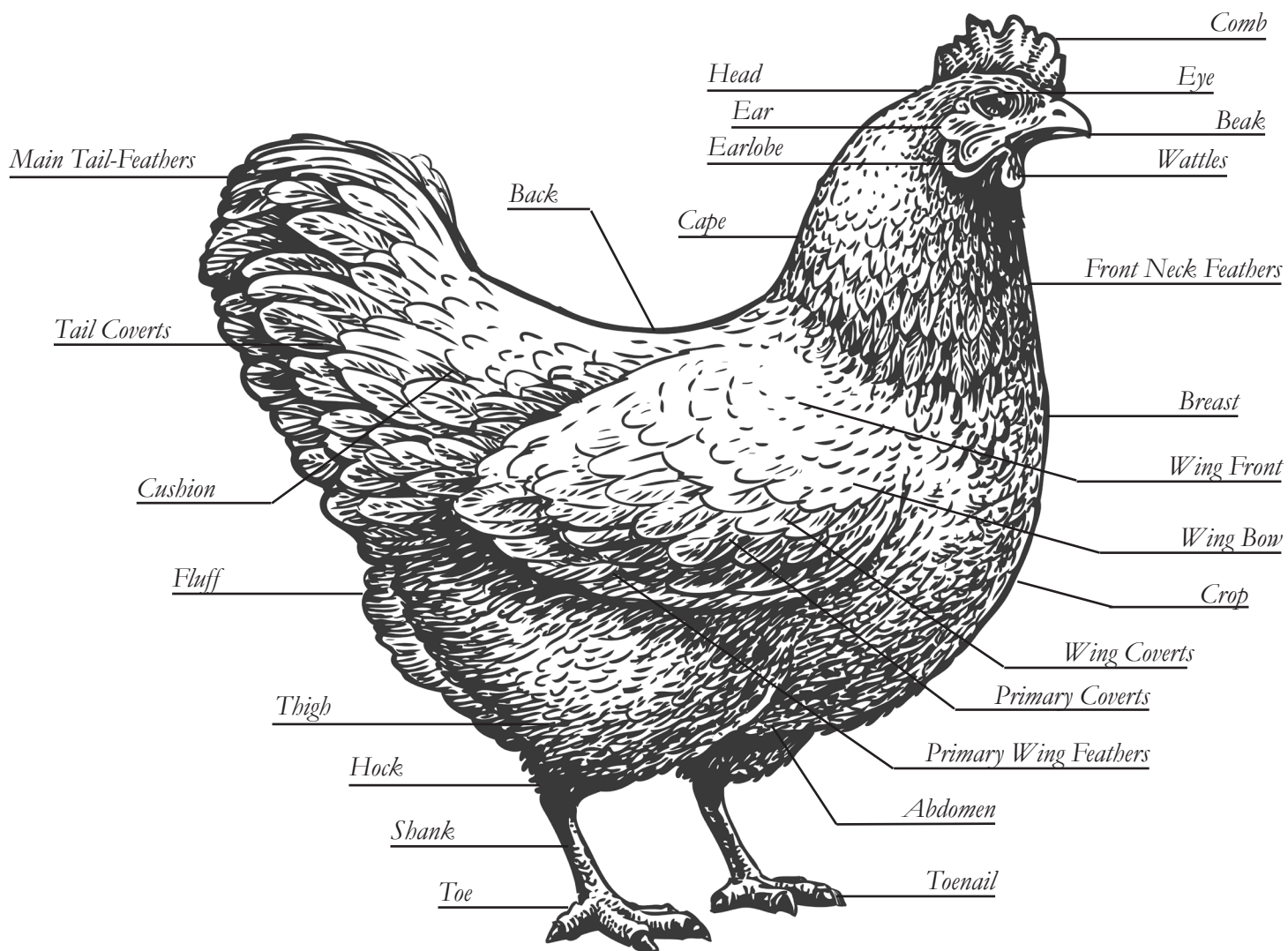
## Show Supply Checklist

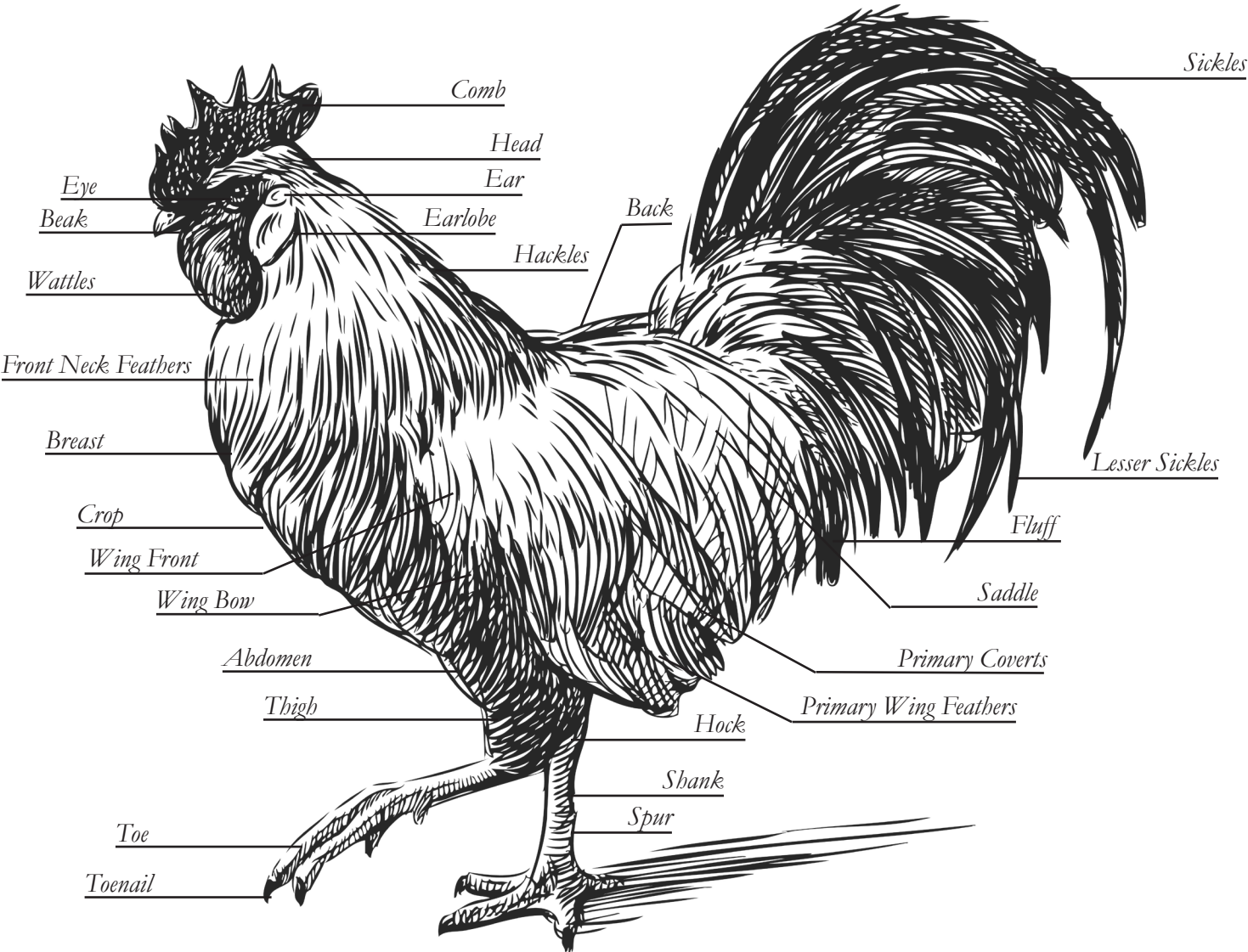
Before you attend a show, go over this checklist to be sure that you have all the supplies necessary to keep your birds happy and healthy during a show.

1. Waterers (1 per bird) that your birds are comfortable using
2. Feeders (1 per bird)
3. Feed (the kind your birds normally eat)
4. Wood shavings (preferably low-dust, medium flake pine)
5. Toenail clippers
6. Baby wipes (water-based)
7. Bucket
8. Small trowel or hoe
9. Gloves
10. Permanent marker
11. Watering can (long, thin spout)
12. Zip ties
13. Hole punch
14. Toothbrush
15. Baby or vegetable oil
16. Washcloth
17. Q-tips



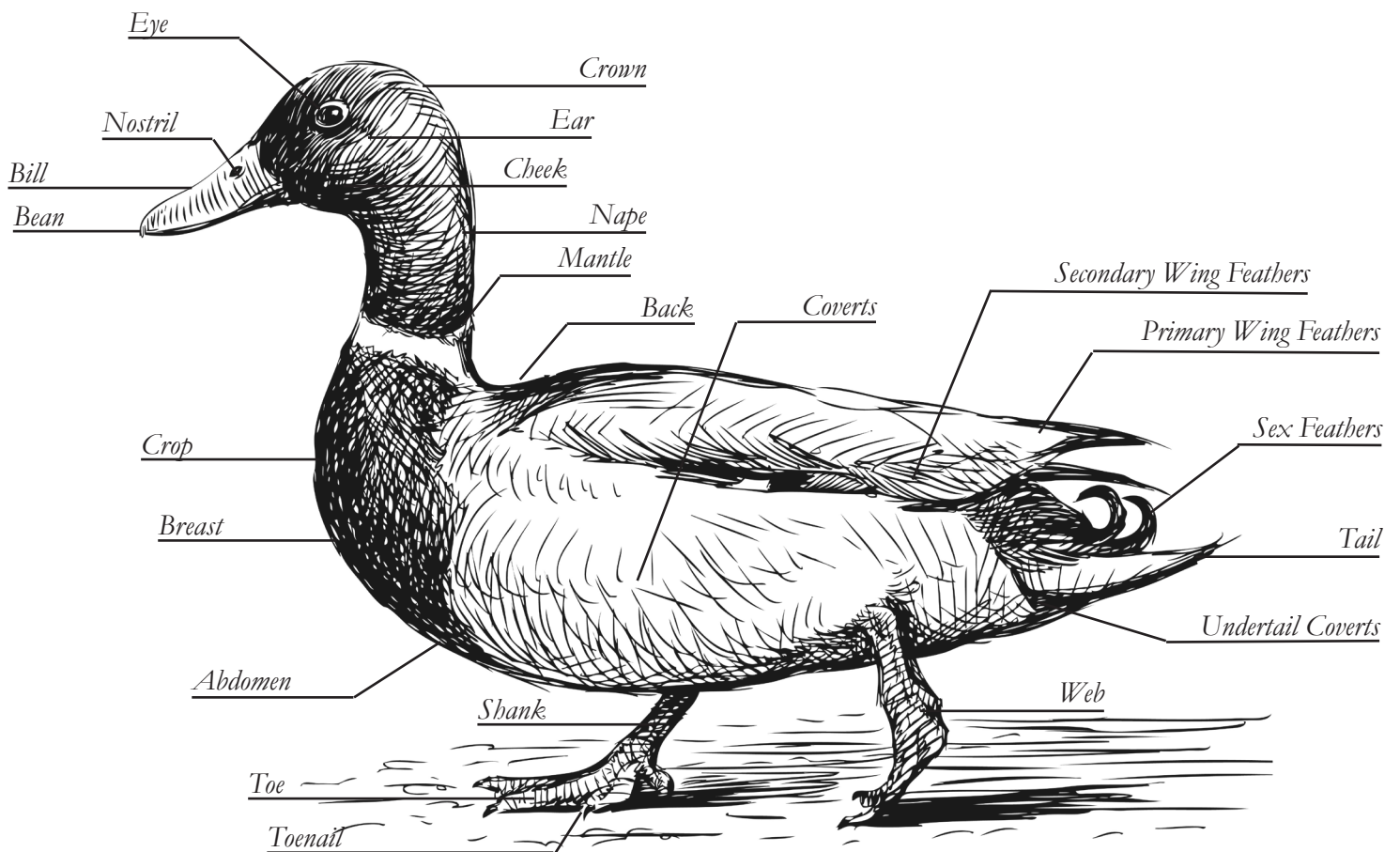
## Chicken Anatomy



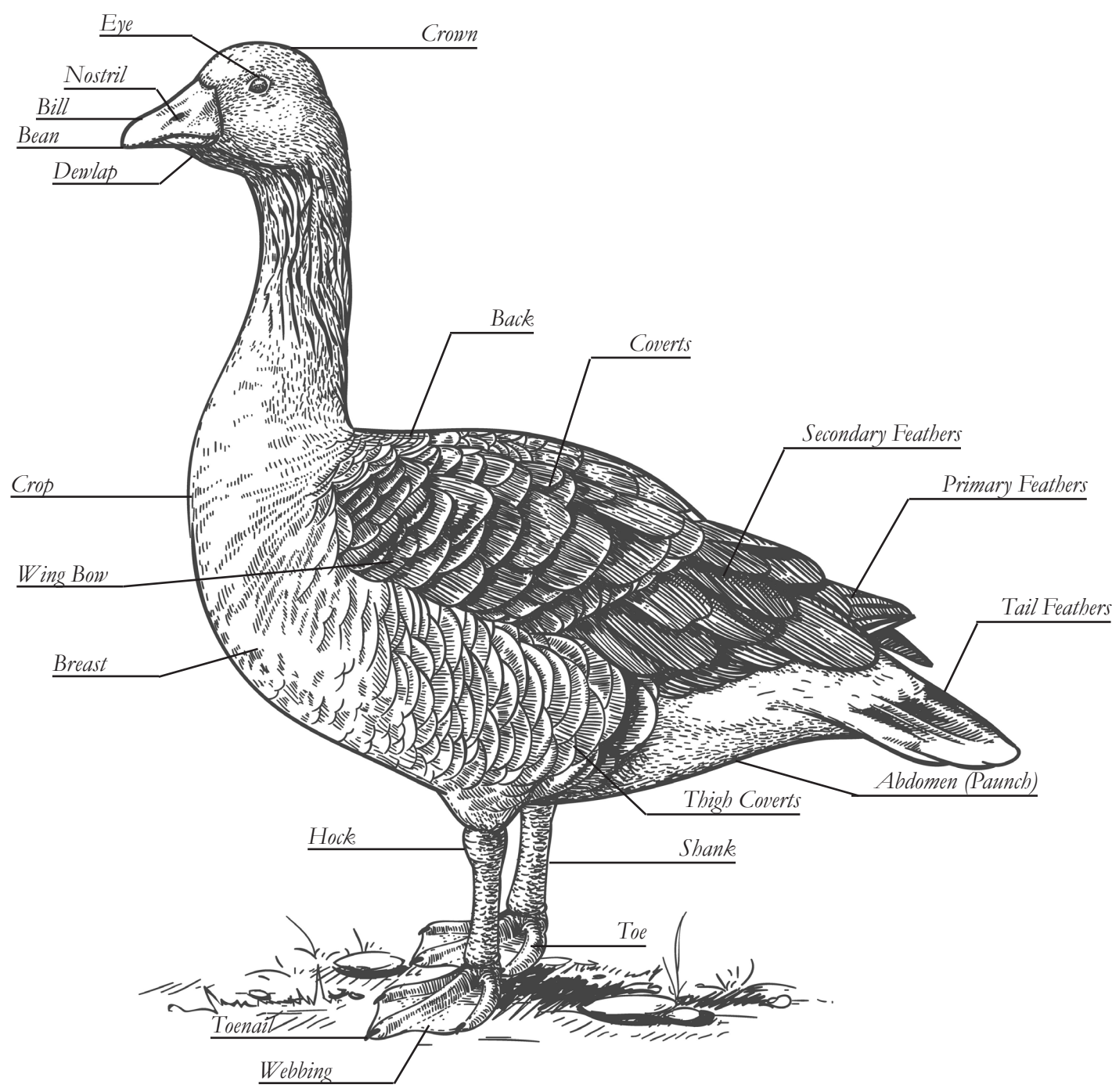




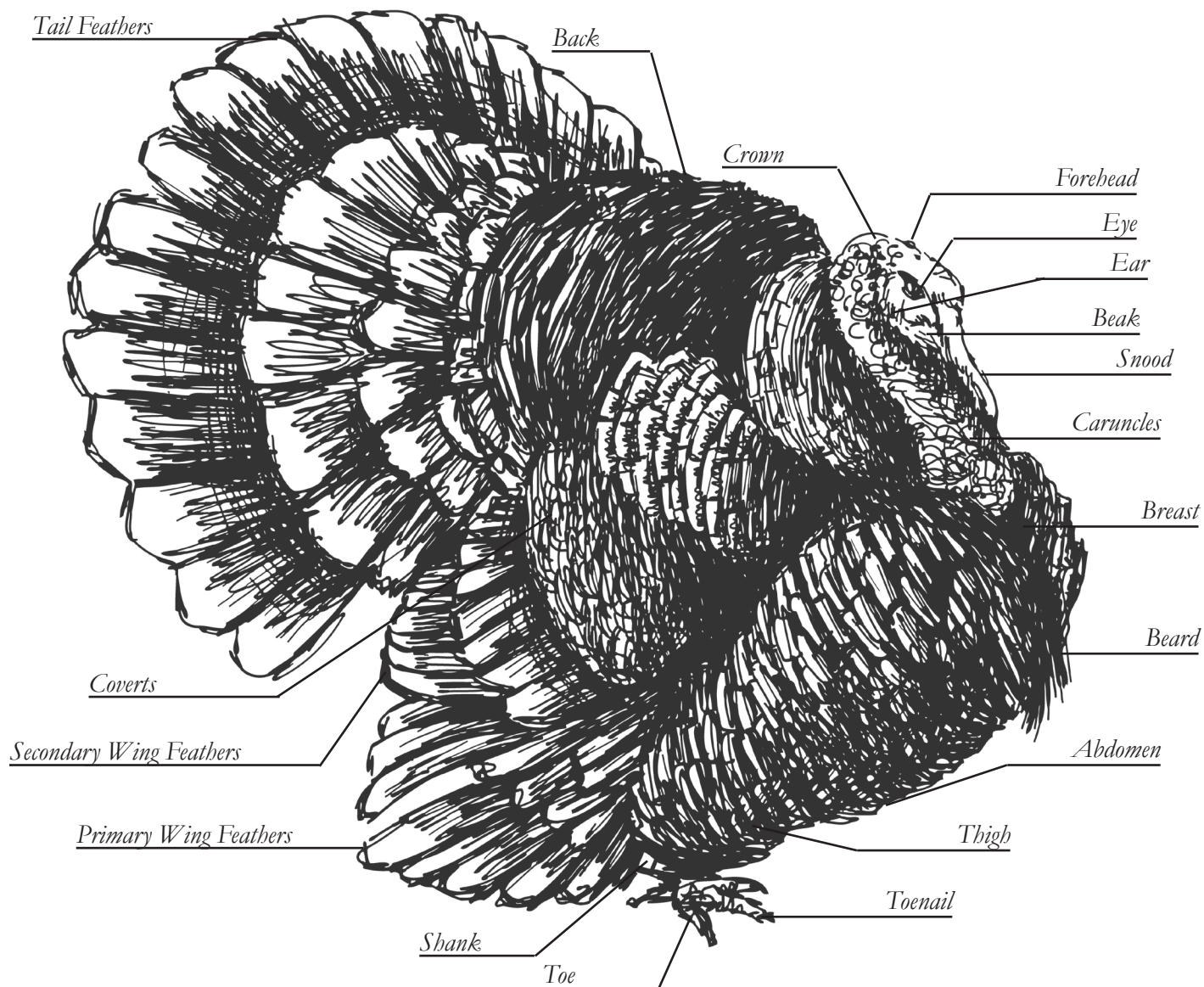
## Duck Anatomy



# Goose Anatomy

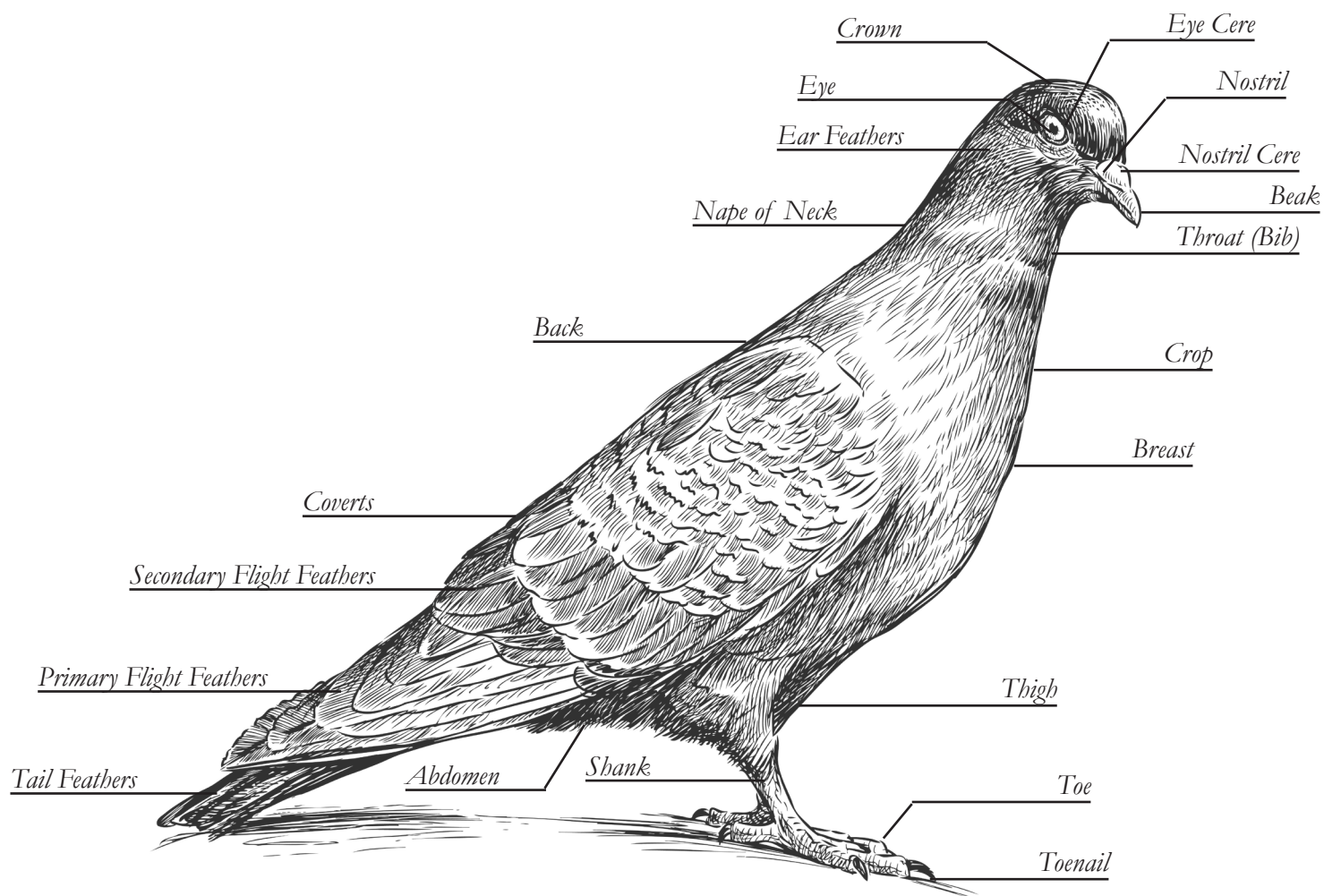


## Turkey Anatomy





## Pigeon Anatomy



# Acknowledgments

Writing a book was no small thing. I never realized how much hard work went into one until I actually tried it for myself. Of course, there is no way I could have written this on my own. Therefore, many, many well-deserved “thank-you’s” are in order.

I have to start with the people who mean the world to me: my family. My mom and dad are really the best parents I could have asked for. I have to give a round of applause to them for keeping their cool through my many pet obsession phases, from the Madagascar hissing cockroaches to the fancy Betta fish. However, although the exotic pets must have been especially trying (especially when the cockroaches hatched baby cockroaches in the tank), they have stuck by my neverending passion for birds without complaint. It started with chickens (which was, ahem, my idea as a six year old) and then morphed into ducks, then turkeys, then pigeons. Hundreds of birds later, I can still name most of these wonderful and beautiful chickens, their breeds and real names (Smoothie the Cochin, Primary the Orpington, Skissors the Naked Neck, Prince Fuzzy the Silkie, Dottie the d’Uccle, Lucy Freckles the Sebright, and Ida the Rosecomb to name a few of my favorites). Because of my parents’ support, this book came into being. Because of the countless hours (and dollars) they have spent on my passion, I am now able to share it with others and for that I am truly thankful. Love you guys!

Although my parents have supported the chicken passion, my love of writing has developed from other places as well as from home. My papa, Tom Macy, has been a huge inspiration in my life. Ever since I can remember, I have dreamt of holding a book in my hands that has my name on the front cover. And ever since I can remember, my papa has read, marked up, and talked me through every manuscript I have ever written (including this one), helping me reach that dream. Thank you, Papa! I could not have done this without you!

My grandma, Cheryl Daugherty, is also a writing genius. Every manuscript that I was serious about went through her and, once we finished, I always felt as though I had imbibed a veritable goldmine of grammar and language knowledge. Because of her, I was able to gain the confi-

dence I needed to write a book in the first place. Thank you, Grandma! I love you!

Although my family has supported me immeasurably in my passion both for poultry and writing, without the poultry superintendents of Larimer County, both passions probably would never have left the house. Marilyn Lasich is perhaps one of the most important people in my poultry journey. I remember attending one of my first poultry workshops eight years ago, where I took notes furiously on the top of a handout that still is tucked away in one of my 4-H binders. Ever since that first workshop and the county fair of that year, I was hooked on poultry. Marilyn has, besides taught me so much about poultry, also given me opportunities to teach poultry workshops that eventually led to the publishing of this handbook. She offered me a spot to teach 4-H members about showmanship at one of her meetings and gave me time to answer the questions of parents as well as get involved with the poultry project on a deeper level. Besides these opportunities, Marilyn has shown me real compassion when I have lost my beloved birds to predators or disease. She has also overseen the writing of this book, going over enormous paper copies with a red pen. Her dedications not only to me as a person but to my passion as well, has meant more to me than words can say.

Superintendent Cathy Simon has also impacted me throughout my poultry-project journey as well. Cathy has always been a bright spot for me at Larimer County poultry shows, which she organizes and where she labels every cage for members. I’m so grateful for all her time and the passion for birds that she has spilled into my life through 4-H.

Russ and Cheryl Spence have organized the meat bird class at shows and are a critical piece of the superintendent team. They have become staples in the Larimer County poultry project and without them, the show would not have gone on year after year.

Jenna Oxenhandler is a newer addition to the core superintendent team but is incredibly knowledgeable about poultry health. In fact, much of the health information



in this handbook was provided by her to make it as accurate as possible. She has taught so many 4-H members, including myself, how to practice biosecurity with our flocks, no doubt saving many members from the heartache from losing birds. Thank you, Jenna, for all of your help both for this book and also for keeping members and their birds safe!

My teachers have contributed so much to my life ever since grade school. Without them, I would not be able to write a page, much less a book. Besides that, many of these wonderful women have poured into me as a person, ever since I was a little kid. So, I'd love to give a big thank you to Mrs. Nancy Breckinridge. I remember learning how to spell so vividly in your class; without that, the rest of this book would never have been possible.

Another huge "thank you" to Mrs. Jaquenou. I know I went overboard with my journal entries to the point that I had made a deal with a fellow second grader about her illustrating my first book, so it comes as no surprise that Mrs. Jaquenou asked to be mentioned in my first book (which was not illustrated by that artsy classmate). I have the most wonderful memories of her class, and I still sing her geography and American history jingles to this day. Thank you!

Another teacher that needs recognition is Mrs. Cory Ausenhaus, my third and fourth grade teacher. She taught me how to write an essay and reaped the consequences. I remember one particular narrative essay assignment that fatefully had no page limit. The story about a run-a-way chicken that ensued was over sixteen pages long, handwritten (by a third grader in third grader scribbles), and completed with drawings. And Mrs. Ausenhaus read every page. When I think of commitment, I picture her squinting at my illegible handwriting but trooping on because she realized how much that story meant to me and how hard I had worked on it. I appreciate your work more than you know, Mrs. Ausenhaus! Thank you!

Mrs. Kyle, my fifth and sixth grade teacher, also was influential in my writing development. I vividly remember listening to her read *Little Women* out loud for the class and thinking about the way she made the story come to life with her voice. I know I wrote many lengthy essays

for her class and appreciate all of her help in growing my love of writing.

Perhaps the most important figure in my writing journey has been Mrs. Shirley Peel, my English teacher through middle school and my wonderful mentor to this day. Although all of my other teachers developed and grew my love for writing, credit must go to Mrs. Peel for investing the time in me to make my writing something good. She encouraged me in so many ways through her constructive criticisms and thoughtful remarks on grammar and style. Even today I run my writing by her, just because I know that a true master can help a manuscript along immeasurably. Thank you so much, Mrs. Peel. I could not have done any of this without you!

If I could hug someone through the paper of this book, I would hug Dan and Sue Hutchens, the adult leaders of my local 4-H club, the Harmony Hustlers. They have committed themselves entirely to the club and to growing the members involved both as people and in their projects. One of my dreams is to help a club of 4-H members the way Dan and Sue have helped me and our club thrive. I appreciate you both more than you know; and, Mrs. Hutchens, I have kept every sweet postcard you have ever sent me. You both mean the world to me, and I can only hope to be as good a person as you two are and have been to me!

And last, but by no means least, I have to thank Alaina Magruder, my best friend of nine years. Ever since the third grade, we've shared a love of poultry. We've shown chickens and ducks together and walked our goats side by side in competitions. We've geeked out about our Silkies and laughed at the antics of our baby goats. She truly understands me, and we have had such a fun journey together until this point. I love you, Alaina! I hope we stay friends forever!





## Notes

Use this space to record your goals for your 4-H experience and for your poultry projects. You can also record the dates you purchase birds, awards you win, or special moments that you don't want to forget!

[illegible]



















# EVERYTHING YOU NEED TO KNOW!



Are you just starting your first year in a 4-H poultry project and are wondering what you just got yourself into? Or are you experienced in raising poultry but want to compete in 4-H poultry shows to exhibit what you know? Whatever skill level you are at, the *Poultry Resource Handbook* is an excellent tool for any 4-H member to better themselves and their project. This handbook covers everything you need to know to have a successful 4-H year, from how to purchase the healthiest chicks, to how to spot diseases in all species of poultry, to what topics to know so that you can impress a showmanship judge.



AMELIA MACY has been in 4-H for eight years as of the publishing of this handbook. She has raised poultry for over a decade, ever since her family bought their first flock of Red Sexlink hens when she was six years old. She has served as the president of her 4-H club at both the local and county level to help other 4-H members grow in any project they embark on. Amelia currently lives in Timnath, Colorado with her wonderful family, four cats, two dogs, two goats, one fish, and many, many chickens, ducks, and pigeons that roam her farm. She hopes to publish more books in the future, either more poultry manuals or fantasy novels, and continue to help others in 4-H.