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RAISING BACKYARD CHICKENS

The growing interest in raising chickens has produced a surge in backyard coops. Chickens can be a great source of enjoyment if properly managed and given appropriate care. This document offers a condensed review of basic poultry-keeping practices.

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Purchasing Chicks

As a backyard chicken keeper, you can be pretty confident that the chicks you purchase are indeed hens, and you won't have to figure out what to do with unwanted roosters as the baby chicks grow.

If your primary goal is to raise pullets for egg production, it might be beneficial to order sexed chicks when purchasing, as it ensures that males are separated from the females. Cockerels (male chicks less than a year old) and cocks (males over a year), more commonly known as roosters, are only needed if you want fertile eggs for hatching or meat production from dual-purpose breeds. While searching for a suitable chicken for your coop, you may come across the term "sex-link chickens." Sex-link chickens are a type of hybrid chicken breed. Hybrid chicken breeds are the result of cross-breeding two or more heritage or purebred chicken breeds, usually to produce offspring that lay more eggs, produce more meat, or have other desirable traits like a particular plumage color, body shape, or temperament.

Sex-link chickens can be identified by their dominant feather color on the day they hatch. In simple terms, male and female chicks have different colors. For example, hatching brown might indicate female chicks.

It's important to note that the offspring of a sex-linked cross cannot be used to produce a second sex-linked cross. Sex-linked chickens are hybrids, not purebreds, so you must continue using the original cross to achieve the same results. The ability to determine a chick's sex at hatch is limited to the first generation.

Alternatively, auto-sexing occurs in purebred chickens. Similarly, you can distinguish between the sexes based on coloring and/or patterns.

Breeds

There are hundreds of different breeds of chickens. However, all breeds can be separated into three major categories: layers, dual purpose, and meat birds. There are also other types of

Common Breeds Recommended for Wyoming			
Meat Breeds	**Dual Purpose Breeds**	**Egg Breeds**	**Hobby/Pet Breeds**
American Bresse	Bielefelder	Ameraucana	Bantams
Cornish/Cornish Cross	Brahmas	Australorp	Hamburg
Delaware Broiler	Buckeye	Welsummer	Houdan
Ginger Broiler	Chantecler	Whiting True Blue	Modern Game
Rangers	Cochin	Whiting True Green	Old English
	Delaware		Polish
	Faverolles		Silkies
	Jersey Giant		Turken/Naked Neck
	Maran		
	Niederrheiner		
	Orpington		
	Plymouth Rock		
	Sussex		
	Wyandotte		

chickens within those breeds—standard size and Bantams (Banties), which are smaller.

Layers are bred and developed to produce the most eggs or have a unique eggshell color for the least amount of feed. Most egg producers lay around four to six eggs per week.

Dual-purpose breeds work well for most situations in Wyoming. These chickens lay eggs and also work for meat production.

Meat birds, also known as broilers, are extremely fast-growing chickens developed for meat production only. As a result, meat chickens give the most meat for the least amount of feed.

Use the following to help decide which breed of chicken is best for you:

- Egg production (how many eggs per day).
- Shell color—if selling eggs, brown shell producers may be preferred.
- Cost and availability of the chickens.
- Breed climate hardiness.
- Personality type—different breeds of chickens have different personalities. If you want chickens that make great pets for kids, try the Cochins or Silkie varieties. Avoid Polish and Phoenix; they are flighty and easily scared.
- Foraging ability (some chickens will travel farther from home than others).
- Ability to control insects (some varieties naturally hunt more than others).

Heating

Newly hatched chicks are sensitive to temperature because they cannot regulate their body heat without feathers. For the first week, the heating source temperature should be 95°F.

The recommended temperature for the first few days is about 95–99°F. If hatchlings crowd under the heat lamp, they are cold. If they move away from the heat lamp, they are hot. Scattered and dispersed hatchlings in the brooder are comfortable.

Chicks are fully feathered near six weeks of age. When the temperature outside is at least 65°F, they are ready to be moved to the coop. However, if the temperature is below 65°F, supplemental heating may be required for a while longer, either in the brooder or the coop.

Housing

Most chicken owners face attacks from predators at one point or another. Unfortunately, Wyoming has a lot of predators that would like to get your chickens. Common backyard chicken predators include cats, dogs, bobcats, coyotes, foxes, raccoons, skunks, weasels, hawks, and owls. Keep your chickens safe from your pets and, more importantly, your neighbor's pets, who may not be familiar with chickens.

A predator-secure coop close to the house is an excellent option for many. The coop should have the ability to be shut at night to protect the chickens from predators. However, additional protection is often needed. One product many poultrists use is an electric net fence. This type of fence is easily moved and can fit an area of almost any shape.

If chicks are purchased in the winter or early spring, make sure the building has enough insulation and minimal drafts to maintain the chick's heat requirements. Chicks generally require ½ square foot of housing or brooder space per bird up to six weeks of age. After that, depending on the breed, growing pullets need 1½ to 2½ square feet of confined floor space per chicken. Proper spacing is essential as cannibalism may occur from overcrowding, too little space, poor nutrition, poor ventilation, too much light, or injured birds.

Only keep chickens of a similar age together. You wouldn't want to mix four-week-old chicks with newly hatched chicks because the younger ones could get trampled, smothered, or bullied by the older chicks.

For used housing, clean and sanitize thoroughly, including all surrounding walls, nests, perches, and troughs, before receiving chicks. Scrub the walls and floor with a good disinfectant. Ensure all cracks are cleaned and all old litter or bedding is removed.

Pine wood shavings are good litter and absorb well. Expanded vermiculite or mold-free straw can also make a suitable litter. Remove wet spots and apply fresh litter as needed. Chick starter paper may be placed over the litter during the first five days to prevent the chicks from eating it. Do not use newspaper as the ink chemicals may

cause defects in the chicks. Avoid slick surfaces as this can cause splayer (also know as spraddle leg) injury.

Perches

While not essential, it's generally a good practice to provide flat perches that are 3–4 inches wide for chickens. This allows them to roost off the ground, especially at night, and reduces the risk of toe problems and frostbite. A good guideline is to provide 6 to 10 inches of linear perch space per chicken.

Nest Boxes

Provide nesting areas for hens in egg production. Nest box height and width should be 12 to 15 inches; depth should be at least 12 inches. One nest box is required for each four to five hens. Maintain at least 2 to 3 inches of clean, dry shavings in each nest box to reduce egg breakage and minimize the number of soiled eggs.

Egg Production

Most chickens begin laying eggs at 16 weeks if given proper nutrition. Sometimes dual-purpose hens can take a few extra weeks before they start laying. Typically, egg production decreases after the first two years.

As fall approaches and daylight is lost, egg production decreases. Increasing day length stimulates egg production; the presence of males does not.

Molting

During the fall, the days become cooler and shorter. For chickens, it's a sign to take a break from egg-laying and renew the feathers on their body, a process called molting. The natural process of shedding feathers allows the growth of new and healthy feathers before cold winter days arrive.

Chickens start molting and losing feathers at around 18 months of age. Molting occurs annually after the first time. However, modern

Minimum Nutrition Requirements			
Type	**Protein %**	**Calcium %**	**Phosphorus %**
Broilers			
Starter (0–6 weeks)	23	0.9	0.5
Finisher (6 weeks to market)	10	0.8	0.5
Pullets			
Starter (0–8 weeks)	20	0.9	0.5
Developer (8–20 weeks)	14	0.8	0.5
Laying Hens			
Layer	16	3.0	0.5

Source: Mississippi State University Extension

layer strains have been bred to maintain high egg production over a long period. Consequently, you may find your flock simultaneously laying eggs and losing feathers.

If you're an owner of a backyard chicken flock, you probably want to know how long this phenomenon lasts. You should expect four to eight weeks of feather loss and regrowth, but it could take up to sixteen weeks for some chickens. Also, remember that each chicken breed is different, so the length and duration of a molt may vary.

Hens generally produce fewer eggs with each molt. Eggshell strength may also be reduced with each subsequent molt.

Lighting

Laying hens require at least 14 hours of light to maintain good egg production. Most experts recommend 16 hours of light per 24-hour period. Putting a light on a timer to turn on early in the morning and then shut off after sunrise is the best strategy if you want your chickens to continue to lay eggs.

Nutrition

It is essential to follow the instructions on the feed bag for how long the chickens should be fed various feeds. The recommendation for laying hens is 15 percent protein. Broilers should receive feed with a protein content of at least 24 percent. Chickens not laying eggs do not require a calcium supplement. Once hens start laying, their diet needs to include at least 3% calcium.

Once egg production starts, begin the layer ration. When changing feed, gradually change from one ration to another ration specific to the animal and age. Mix them together (first more of the original and then more of the new one) and make the change over three to four days.

The nutrient consumed in the greatest quantity by a chicken is water. Assist the chicks in drinking water by dipping their beaks in the water dish. Shallow waterers, which provide an inch or less water depth, work best for new chicks.

Water should be changed frequently to prevent bacterial growth, over-warming (in summer), or freezing. One gallon of water will provide enough daily water for 12 to 15 adult chickens during cool weather and 6 to 12 during hot weather.

Feeders should be raised off the ground, and generally positioned level with the mid to upper breast region of the chickens being fed.

Allow 1 linear inch of feeder space per chick and 2 to 3 linear inches per adult chicken. It's okay to let your chickens forage around for bugs and greens, but always provide them access to the appropriate type of formulated balanced feed as well.

Manure Management

A clean brooder area and coop will help prevent the spread of disease and keep the chickens clean. Remove soiled litter daily. A buildup of ammonia in a brooding area or coop will occur if the site is not kept clean.

Lice and Mites

Mites and lice are annoying, pesky problems to have with your backyard flock and must be treated quickly, as they can spread to all the other feathered friends. Mites and lice travel on birds, rodents, and other animals or wildlife.

Common signs of an infestation are dirty-looking vent feathers; decreased activity or listlessness; a pale comb; changes in appetite; a drop in egg production; weight loss; feather pulling; bald spots; redness or scabs on the skin; dull and ragged feathers; crawling bugs on the skin; or nits on feathers.

The parasites are tiny (about the size of a pinhead) and difficult to detect unless you know how and where to look for them.

The difference between mites and lice is that mites survive by feeding on the blood of the chickens. Some live on the chickens, while some live in the chickens' housing and come out to feed at certain times.

Lice do not feed on blood. They survive by ingesting the skin scales and debris in their feathers. Poultry lice are not the same as human head lice and people can't contract them from chickens.

Chickens and nests should be checked at least monthly for signs of lice or mites.

- Quarantine all new chickens for at least 30 days and keep them at least 30 feet away from your existing birds. Inspect the new chickens for external parasites.
- Check chickens at the base of the feathers and around the vent area for adult lice and mites, or for evidence of eggs. Eggs may appear as dirty gray areas at the base of the feathers, particularly around the vent.
- Look for evidence of lesions or skin irritation anywhere on the chicken's body.
- Examine nest boxes for evidence of mites. Mites may be seen as rapidly moving specks on the nesting material or the hands.
- Provide dusting areas for chickens to care for their skin and feathers. Given the opportunity, chickens will dig shallow ditches (in soil, mulch, sand, or other dry, loose materials) in which they will burrow and throw dirt over themselves.

To effectively eradicate lice or mites, it is crucial to treat the entire flock and coop when parasites are found on one bird. There are different products available to eradicate these pests, each with varying degrees of safety and effectiveness. It's essential to follow the recommended egg withdrawal times, which can vary depending on the product used. Diatomaceous earth is not recommended for prevention or treatment due to irritation of the respiratory system.

Check the label carefully to see if the product is labeled for application to chickens, roosting areas, or both. Always follow label directions for

application. Check the label for age restrictions of chickens and re-treatment interval. Rotate the treatment products to prevent the development of resistance by parasites.

The most common treatment for poultry lice and mites is the use of a dust powder or spray solution insecticide. An easy way to treat the chickens is to dust them with a powder-form pesticide. Wear gloves and apply the pesticide dust under the feathers on the neck, wings, and vent to kill the parasites. The use of a facial mask is recommended to prevent inhaling this medicated powder.

Parasite eggs are unaffected by these insecticides, so a follow-up application is necessary to kill newly hatched larvae.

Carefully read all labels before treatment to ensure withdrawal times are followed for food-producing poultry. The withdrawal period refers to the minimum time from administering the last dose of medication and the production of meat or other animal-derived products for food, such as eggs.

When applying insecticides, the product should be put on coop areas where the parasites hide. The coop floor, side and end walls, cages, and other stationary equipment should be treated. Make sure to complete a second application to kill parasites that may have hatched following treatment. Be careful to avoid feed contamination.

Eggs shouldn't be eaten after applying an insecticide and should be disposed of in the garbage. Check the product's withdrawal period for the number of days. Although some poultry dust treatments say the eggshells only need to be washed well, discarding the eggs is recommended.

Be a Good Neighbor

The following list gives you some ideas for staying in your neighbors' good graces:

- Try to hide the chicken housing or blend it into the landscape.
- Don't locate your chickens close to the property line or the neighbor's patio area, if possible.
- Keep the chicken housing neat and clean.
- Store or dispose of manure and other wastes properly. Chicken manure must be composted or aged before it can be used in the garden; otherwise, the high ammonia content will burn the plants. It makes good compost, but a pile of chicken manure composting may offend some neighbors. You may need to bury waste or haul it away.
- Chickens do not respect property lines. Keep your chickens enclosed and confined to your property.
- Bring some eggs to your neighbors or allow their kids to feed the chickens. A gardening neighbor may like to have your manure and soiled bedding for compost.
- Never butcher any chickens where neighbors can see it. It is best to have a private, clean area with running water to butcher.

Poultry Safety Tips

Anyone handling chicks or other poultry should wash their hands thoroughly immediately

after touching the chickens, collecting eggs, or touching food or other equipment used for the poultry.

Collect eggs at least twice a day. In the winter, the eggs may freeze, causing the shells to crack and break. Washing should be part of your egg-collecting routine. You can sanitize your eggs by dipping them in a solution of 1 tablespoon of unscented household bleach to 1 gallon of water. Dry eggs before storing them to prevent moisture from entering the shell pores.

Make sure to date the storage container or carton and use older eggs first. If stored properly, eggs can be kept refrigerated for at least four to five weeks past the pack date.

If you sell eggs at a farmers' market or similar venue, make sure the eggs are properly chilled. The FDA requires untreated shell eggs to be stored and displayed at 45°F, whether graded or ungraded. Eggs sold should be from National Poultry Improvement Plan (NPIP) certified flocks. Any eggs crossing state lines must be from NPIP-certified flocks as required by each state.

Buy or acquire healthy chickens.

- If a chicken appears sick, separate it from the other chickens.
- Keep vaccinations up to date.
- Clean the coop at least once a week.
- Clean feeders and waterers at least once a week; twice a week is best.
- Immediately remove and replace the wet or dirty litter.

For information on cooking eggs, preserving eggs, and egg food safety, visit the University of Wyoming Nutrition and Food Safety website at uwyoextension.org/uwnutrition.

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