Backyard Poultry Production: Introduction to the Basics

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Bonners Ferry, Idaho
February 24, 2016
Why keep backyard chickens?

- They produce wonderful eggs!
- Bright orange yolks, full of vitamin A
- High quality protein from your own back yard
- They are great at recycling food scraps and leftovers
- They generate rich manure for your garden
- They will till your garden for you, eating bugs and plants
Reasons you may NOT want to keep chickens

- **Legal**—check your local ordinances
  - Roosters in particular can be annoying in town

- **You will need to care for them on a regular basis**
  - Water must be available
    - Some type of heater or other arrangement for winter
  - Good quality feed is not cheap
    - A mix for layers costs around $15 for 50 lb
  - They need to be protected from predators
    - Fencing must be sufficient for all kinds of predators

- **They need housing**
  - Housing will need to be cleaned on a regular basis
Today’s Topics

- Basics for a small backyard flock
  - Chicken behavior
  - Chicken health
- Housing
  - Fencing
  - Light
- Protection from predators
- Economics of backyard egg production
Chicken behavior

- Habituate chicks to sights and sounds
  - They can be good pets if you socialize them to you
- Social creatures; don’t have just one!
- Harem structure
  - Roosters can be rough on the hens, particularly if you have too many
- Pecking order
  - Introduction of new hens merits watching
    - Try sneaking them in at night!
Foraging behavior

- Foraging is a big part of their daily “work”
  - Looking for food
  - Peck and scratching
- If they can’t peck and scratch the ground, they may start picking on each other!
Preening, dustbathing, oiling

- Keeps plumage clean, water-proof, and insulative
  - Uropygial gland is above their tail
- They remove mites with their beak

![Uropygial gland](image-url)
Roosting behavior

- They use perches at night, and for daytime naps
  - They learn to use these when they are young
  - Use of perches increases adult use of nests for laying
- Heavy strains of birds are less likely to use perches
  - Straw bales may be a good substitute
  - Avoid wire floors
Brooding hens

- Broody hens stay on eggs or chicks
- They are not laying eggs for you!
- Some breeds are much more broody than others
  - Banties tend to be broody
- Prolactin hormone is responsible for this behavior
- You can “fix” broody hens by putting them in a wire cage with a suspended wire floor for several days
  - You have to keep their butt cool!
Molting

- Prompted by declining daylength: fall
- Causes them to lose their flight feathers
- They are less interested in food
  - Affects laying
How to avoid egg cannibalism

- Use “decoy” wooden or plastic eggs or a golf ball in nests
- Encourage use of nest boxes
  - You don’t want them laying eggs on the ground
  - Some nest boxes allow the eggs to roll out
- Isolate suspects
- Cull hens that eat your eggs!
- https://youtu.be/YuqJOQ2r9Os
Common health problems

- Diarrhea with blood
  - Could be coccidiosis or cannibalism
  - Green pasture can cause diarrhea

- Lameness
  - Could be bumble foot (swollen hocks)

- Central nervous system problems
  - Could just be age, particularly if it’s just one hen
  - If it’s more than one, or they are young, it could be Vitamin E or Selenium deficiency
Housing

- Small flocks: allow 3 square feet per bird
- Add more room for feeder, waterer, nest box
  - Waterer needs to be on a platform in a covered area
  - Nipple drinkers stay clean
  - Rabbit type waterers work well
  - In freezing weather a water heater is nice
- Provide a roost of some sort
- Black curtain for nest boxes
  - Black plastic stapled at top with strips cut to allow entrance
- Additional protected run space for daytime

https://youtu.be/xARNapqjWvg?t=4m30s
Nesting box with a roll-out egg holder and a curtain
Manure control in chicken house

- Deep litter is probably the best choice
  - 6” to 8” of shavings
  - Birds enjoy scratching
  - Moisture gets absorbed
  - Healthy foot pad for the bird
  - Add more shavings as needed
  - Clean out completely when it’s too wet or soiled
Egg storage and cleaning

- Store at 55 degrees or refrigerate
- Use fine sandpaper to clean floor eggs
- Wash with a food grade disinfectant
  - Wash water should be the same temperature as the egg
Light requirements for egg production

- Laying hens need 14-16 hours of light per day
  - 6am to 9pm
  - An appliance timer works well

- Without supplemental light, production is typically only for 5 months in northern climates

- Light can be very minimal
  - One foot candle
  - Barely able to read the newspaper
Feeding

- Starter feed for chicks should be 18% protein
  - Give for about 4-5 months
- Laying hens need 3% calcium in their feed
- Kitchen leftovers: Feed right away (same day)
  - Botulism or other toxins can build up in spoiled food
- Laying hens need poultry feed designed for them!
  - Good feed is critical to egg production
  - Don’t dilute their ration with too much other material

Hanging feeders, $19
Chickens need grit for proper digestion and good egg production.
Water arrangements are myriad...

- **Duo Waterer/Feeder**
  - $14.00
- **Heated Poultry Waterer**
  - $54.00
- **QuickClean Waterer**
  - $4.80 - $26.00
- **Pop Bottle Waterer Bases**
  - $1.30 - $2.70
Early signs of illness

- Change in eating habits
- Dull feathers or color changes in feathers
- Stained feathers around vent, shoulders, eyes
  - Chickens typically wipe their nasal discharge on their shoulders!
- Swelling, redness, or feather loss around eyes
- Crusty material in nostrils
- Favoring or lameness in a limb
Signs of serious illness

- Fluffed or huddled posture
- Decreased appetite or thirst
- Abnormal, labored, or noisy respiration
- Weight loss
- Discharge from eyes, nostrils, or mouth
- Injury or swelling on body
- Bleeding
- Major change in personality or behavior
Avian Influenza

- Infectious viral disease of birds that doesn’t typically infect people WITH SOME IMPORTANT EXCEPTIONS
- Occurs naturally among wild aquatic birds worldwide
- Can infect domestic poultry if they have contact with wild birds
- Several cases of highly pathogenic avian influenza (HPAI) H5 have been confirmed in the Pacific, Central, and Mississippi flyways since Dec. 2015
- Most cases are in domestic flocks worldwide
- For more information, see www.cdc.gov/flu/avianflu
Avian Influenza Symptoms

- Coughing, sneezing, respiratory distress
- Decreased egg production
- Swelling of the head, comb and wattles
- Sudden death
- Contact ISDA State Veterinarian’s office 208-332-8540 or USDA-APHIS at 1-866-536-7593 toll-free
- Sick or dead wild birds should be reported to the Idaho Department of Fish & Game at 208-454-7638
Disease Resources:
http://www.thepoultrysite.com/diseaseinfo/

ThePoultrySite Quick Disease Guide

This area of ThePoultrySite.com lists over 140 poultry diseases / conditions in alphabetical order. Simply select the disease of choice from the list below or the drop down menu above. Diseases listed in alphabetical order.

Choose a Disease:
Amyloidosis

Or... Select a Disease from the links below:

<table>
<thead>
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<th>Disease</th>
<th>Description</th>
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<tr>
<td>Amyloidosis</td>
<td>Infectious Bronchitis, IB - 793b Variant Sudden Death Syndrome in Broiler</td>
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<td>Parents</td>
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<td>Anatipeptifer Disease, New Duck Syndrome</td>
<td>Infectious Bronchitis, IB Egg-layers</td>
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<td>Duck Septicaemia</td>
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<td>Arizona infection, Arizonaosisis</td>
<td>Infectious Bursal Disease, IBD, Gumboro</td>
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<td>Ascites</td>
<td>Infectious Coryza</td>
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<td>Infectious Laryngotracheitis, ILT</td>
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<td>Leukocytozoosporosis</td>
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<td>Malabsorption Syndrome, Runting/Stunting</td>
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<tr>
<td>Avian Leukosis (Serotype J), Myelocytomatosis</td>
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Protection from Predators

- A solid chicken house that is closed at night and opened in the morning if you have predator issues

https://youtu.be/xARNapqjWvg?t=4m30s
Protection from Predators

- Fencing that is tight to the ground or extends underground
- Overhead protection for young birds
  - Particularly if your pen is large

https://youtu.be/xARNapqjWvg?t=4m30s
So many great designs! Here’s a You-Tube link to a beautiful design built by a woman and her daughter. $20 for the plans.

https://youtu.be/3xBiSp6rQM0
Chickens and Dogs

- Dogs will naturally chase and/or eat chickens
- Herding dogs will herd chickens
- You will need to watch them carefully
- They can be trained to NOT bother your hens!
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Chickens and Dogs

- Guardian dogs can be used for protecting poultry
Poultry fencing

- Electric poultry fencing is my favorite
  - High initial cost, ~ $200 for 43” x 165’
- Keeps chickens in and discourages all kinds of predators
- Easy to move
- Long-lasting
- Provides about 1600 square feet (40 feet per side)
- Allows you to move chickens around to different areas to forage/destroy
- There is a great article on this topic
  [http://www.themodernhomestead.us/article/Electronet-1.html](http://www.themodernhomestead.us/article/Electronet-1.html)
Plastic chicken wire offers an alternative to standard wire
Using electronet with a moveable chicken house

Photo: Lauren Ware

Source: http://smallfarm.about.com/od/farmanimals/ss/electricfence.htm#step1
Attach the net to a fencepost

Photo: Lauren Ware
Carry the fencing bundle by the posts, walk backward and drop one post at a time.

Photo: Lauren Ware
Walk around the perimeter and drop the posts

Photo: Lauren Ware
Before you start putting the fence posts into the ground, tie the last fence post to the first one and to the your support post.

You’ll need a fence charger of some sort. She uses an expensive energizer that can be plugged in directly or used a battery. She uses a deep-cycle marine battery to energize it. Every few days, she takes the battery to the shop to re-charge it.
Add a post wherever it sags. You can use a zip-tie to attach the fiberglass pole to the step-in post.

Photo: Lauren Ware
Patriot P5 (AC/DC) Energizer

Our most economical line of energizers, which makes them very popular with our customers. Advanced low impedance electric fence energizer. Dual purpose: can be plugged in or used with a 12v battery. We like them for their combination of versatility, portability and value. Very popular for using with poultry operations, but is also used for many other applications.

Batteries are sold separately.

NOTE: For easily attaching to fence and ground rod when energizer is close to fence, you will also need a Wiring Harness (see accessories tab below). Don't forget to order!
Resources: Backyard Poultry Production

- Backyard Poultry Magazine

**Backyard Poultry Magazine**

Backyard Poultry Magazine is dedicated to helping the small-scale poultry enthusiast raise healthy, happy, productive flocks for eggs, meat or fun -- from the countryside to the urban homestead.

https://youtu.be/dx_CSSl2SR8
Extension.org is a wonderful resource on backyard poultry production from land grant universities.


Deciding what type of poultry to raise in small or backyard flocks

Written by: Dr. Jacque Jacob, University of Kentucky

Once you have decided you want to raise poultry, you need to decide which species of poultry you are interested in. This is primarily based on what you want to do with your birds and the resources you have available. Of course, you should always check with your local city, municipality, or subdivision ordinances to see what you are permitted to keep. Some urban and suburban areas prohibit the keeping of any poultry, while others stipulate which birds you may or may not keep.
Questions?

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Thank you!