

# BACKYARD POULTRY EGG PRODUCTION: Know Your Chickens, Know Your Food

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## INTRODUCTION

Chickens were first thought to be domesticated as early as 5400 BC in Southeast Asia. European settlers or possibly Polynesians visiting the New World, however, first introduced chickens in North America (Smithsonian, 2012).

Today, poultry production continues to be one of the fastest growing sectors in the agricultural industry. According to the 2007 United States Department of Agriculture's Agricultural Census, Alabama had a total of 2,417 farms with 9,624,254 laying hens; this includes farms with inventories ranging from 1 to 100,000 or more pullets. In addition, the census shows there were 1,897 farms housing a range of 0-99 layers for an inventory of 35,995 pullets across the state.

With the steady growth of the poultry industry, there is also growing interest in supporting local agriculture and becoming more food self-reliant. As a



*Figure 1. Chickens love to eat bugs, and beside providing fresh eggs, are a form of natural pest control.*

## 10 REASONS TO RAISE BACKYARD CHICKENS

### *Raising backyard chickens can...*

1. Provide you with fresh eggs in an environmentally friendly setting.
2. Help recycle produce and garden scraps that might otherwise end up in landfills.
3. Help kids to understand animal science and food production, and to develop agricultural ethics.
4. Teach kids about animal care and responsibility.
5. Provide a sense of pride and bonding for family members.
6. Be a part of the food chain and help families better understand sustainability.
7. Leave a smaller carbon footprint compared to larger poultry operations.
8. Have a more efficient feed conversion ratio compared to other livestock.
9. Produce poultry litter that can be composted then used to fertilize your garden.
10. Help you make new friends with similar interests, and learn new things in the process.

consumption or as pets. To meet this growing demand, small-scale poultry grazing systems can be integrated into many small farmsteads and even in urban areas. As a result, many urban municipalities are implementing legislation to accommodate poultry ownership. This publication will help you get started in raising poultry for egg production right in your own backyard.

## BREEDS & UTILITY

There are more than 100 breeds of chickens worldwide and they are identified by their size, color, toes, feathers, egg color, and place of origin (*Wikipedia*, 2013). For a detailed list of breeds, origins, and features visit [http://en.wikipedia.org/wiki/List\\_of\\_chicken\\_breeds](http://en.wikipedia.org/wiki/List_of_chicken_breeds).

Layers are known for their ability to produce eggs almost daily, whether the eggs are white, brown, or green. Broilers are known for their body styles and carcass characteristics that are ideal for meat production and growth efficiencies. Show or game birds are known for their colors, feather styles, and other features. Multipurpose breeds often serve as good layers and meat birds. While show or game birds tend to lay smaller eggs,

and less frequently, they do lay eggs. Some breeds recognized for their egg production include Rhode Island Reds, Red Star, Plymouth Rock, Light Sussex, Leghorn, Cuckoo Maran, Black Star, and Barred Rock.

## PURCHASING OPTIONS

**Chicks** (baby chickens) like any type of young animals are cute but require special care and attention since they are vulnerable to health issues. To house and care for baby chicks you will need: clean and warm housing, plenty of food and water, and frequent monitoring. Baby

chicks need to remain in a dry environment of 90-98 degrees. After the first two weeks, you can reduce the temperature by 5 degrees a week until birds are fully feathered. Use sawdust or shredded corn cobs as bedding and frequently change. Do not use straw, hay, or shredded newspaper as these tangle up around their legs. Feed chick starter crumbles as feed, either medicated or non-medicated; make sure they always have access to water.

**Pullets** (hens, female chickens) are fully feathered and an ideal way to get started with chickens. Breed choices will vary,



*Figure 2. [right]*  
Chicks need a warm environment with dry bedding



*Figure 3. [left]* Chicks must have access to water and starter crumbles.

Source: Photo of Chicks Feeding by Derek Oyen, <http://www.flickr.com/photos/33752469@N00/3482166580/> / <http://creativecommons.org/licenses/by-sa/3.0/>

depending upon your intent for eggs or meat, but layers are most common and somewhat easy to locate for purchase. Adult chickens have minimal health care requirements since they have built up immunities and are more resilient. However, older chickens may be slightly prone to health issues, and most people do not retain older birds because they are not productive. A rooster is not needed for pullets to lay eggs! Hens will start laying eggs around 20 weeks of age, and should provide 100-150 eggs per year.

**Roosters** or male chickens tend to be colorful, noisy, and bossy. Many owners like them for those reasons; however, most urban areas are generally not appreciative of these characteristics. Although a rooster is not needed for layers to lay eggs, roosters are needed to breed more chicks.



*Figure 4. [left]* A partially enclosed shelter with a roosting area and attached fenced area is adequate in the Southeast. Fresh air is more important than a fresh coat of paint.

## FACILITIES

**Shelter:** Chickens need protection from rain, snow, extreme heat, cold, or wind. Chickens have feathers that provide insulation, but feathers offer limited protection. A partially enclosed shelter is generally adequate for chickens in the Southeast. Fresh air is important to prevent respiratory stress among birds. Chickens prefer to roost at night; a 2'x 2' board placed at least two feet from the ground will tend to keep them out of reach of most predators.

**Space:** To prevent stress and fighting among the birds, each adult bird needs at least 1.5 sq ft and young chicks need at least 0.5 sq ft per bird.

**Perimeter fencing:** Either 4- or 6-ft high poultry net wire with post spaced every two feet and light gauge plastic net wire across the top is likely to secure birds from roaming, and deter dogs

or nuisance animals from bothering the birds. More secure measures might require electrical fencing along the outside of the pen.

**Flooring:** Housing chickens in accommodations with flooring that is covered with pine shavings is ideal, and any absorbent, non-dusty material will suffice. Replace wet flooring as needed. Avoid flooring with slippery surfaces since they could cause leg problems for your birds. Dirt floors are fine as long as kept relatively clean.

**Nest boxes:** To facilitate finding eggs, provide space for hens to lay eggs in one location at all times. Provide at least one nest box per hen.

**Free range:** Allowing chickens to free range



*Figure 5.* Free range is ideal as long as the birds do not bother neighbors or landscaping & are out of reach of domestic pets or wildlife. A perimeter fence can solve both problems.

Source: Photo of Feeding the Chickens by Evan Long, <http://www.flickr.com/photos/45635774@N00/3406566230/> / <http://creativecommons.org/licenses/by-sa/3.0/>



*Figure 6. [left]*  
 Portable bird facilities with a fenced area and a nest box are called chicken tractors. One this size is safe and can be moved with the aid of a small tractor.



*Figure 7. [right]*  
 This smaller chicken tractor also includes a fenced area and a nest box. It could be moved by just one or two people, but holds fewer chickens.

is ideal as long as they do not bother neighbors or landscaping. You also want to make sure they are out of reach of domestic pets or wildlife. Bugs and grass should provide your chickens with a healthy diet.

**Portable facilities:** Some people choose to maintain their birds in a portable facility that includes a fenced area attached to housing with nest boxes. Because they are relatively easy to move, these facilities are known as “chicken tractors.” The size and design of chicken tractors will vary depending on the number of birds housed, size of facility, portability, etc. Since they have wheels, some facilities can

be moved about by one or two people. Larger facilities may require the aid of a large riding mower or small tractor.

The ability to move chickens to various grazing locations in a chicken tractor offers many benefits. These benefits include such items as controlled grazing for forages and insects, exposure to fresh forages on a regular basis, reduction in need for grain-based feeds, minimal accumulation of manure, and even distribution of an all-natural fertilizer throughout the yard.

## NUTRITION

There are several methods to provide your brood (group of chickens) with proper nutrition.

### **Commercial rations:**

Most farm supply stores will carry several types of rations, scratch mix, layer pellets or crumbles, and other rations designed for poultry.

**Household and garden scraps:** While meat or bone scraps are not recommended, fruit, vegetable, and garden scraps are ideal to feed chickens.

**Organic feed:** Finding organic feed or grains to feed poultry may be a challenge and could be costly. You will have to determine what feeding options work best for you.

**Water:** Chickens should have clean water at all times. Unclean water and containers could result in health problems for birds.

**Supplements:** If a person chooses to provide supplemental grit or calcium, it should be fed free choice in separate containers. Again, make sure chickens have clean feeders and water containers at all times.

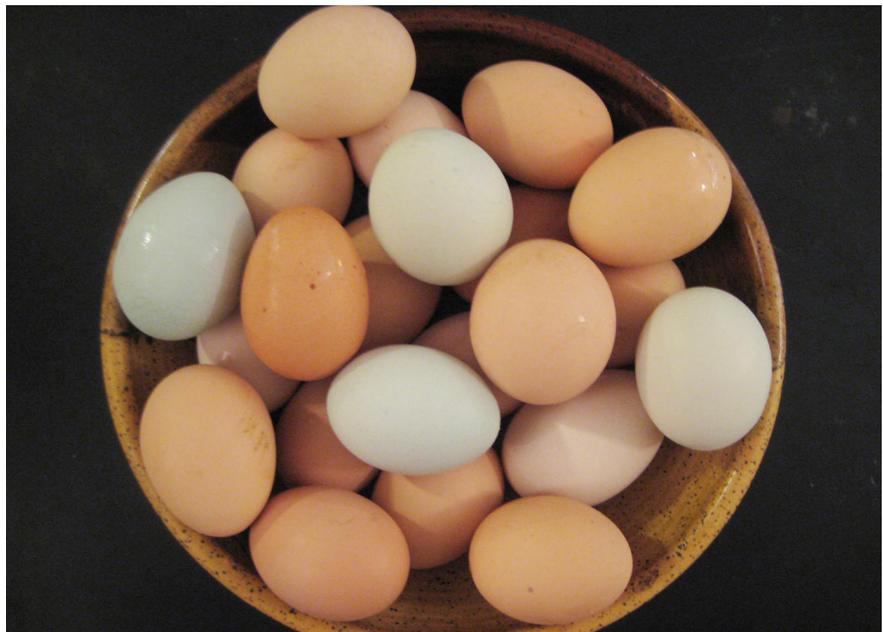
## LIGHTS & LAYING CYCLES

The average person is unaware that hens have laying cycles whereby production increases and decreases. They need 14-16 hours of daylight. Their brains are photo-sensitive and hens will decrease egg production as daylight decreases. A timer connected to lights and set for the specified hours can keep your birds productive as layers.

While hens generally start laying eggs around 20 weeks of age and continue for the next 80 weeks, they need to be given a break after 80 weeks and induce a molt that allows their body to rest and restart. After they have molted for about two months they will resume productivity. Without a molt egg production will decrease over time.

## RECOMMENDED PRACTICES FOR HANDLING EGGS

Eggs have the potential to harbor harmful bacteria including Salmonella that may be prevalent on the outside shell or inside the egg. Always wash your hands after working with chickens or in the coop, and after gathering eggs. Food safety is an important aspect of poultry and eggs.



Figures 8 & 9. Clean eggs only when it is necessary, discard the excessively dirty ones. Keep eggs refrigerated since they become perishable food items.

- Maintain clean, dry nest boxes with nesting materials or laying pads, clean when necessary
- Remove eggs on a daily basis
- Clean eggs only when necessary, remove feces, dirt, and egg yolk from broken eggs. Don't get exuberant, eggs have a natural protective coating. Discard excessively dirty eggs.
- Acceptable cleaning methods include: spot cleaning with dry abrasive material such as sandpaper or steel wool; quickly spraying or rinsing eggs with warm water, then immediately drying them off with disposable paper towel. Do not soak or spray with detergents or cleaners,



- unless they are labeled for cleaning eggs.
- Eggs can become perishable food items, so store in sanitary conditions and keep refrigerated.
- Thoroughly wash hands prior to cleaning eggs and afterwards to minimize cross-contamination.

## **BIOSECURITY PRACTICES FOR POULTRY**

- Restrict access to your chickens from outside people, animals, and other poultry.
- Never wear shoes, clothes, or hats that have been on other poultry farms without sanitizing prior to wearing on your farm.
- Isolate new birds for 30 days prior to introducing them to your brood.
- Sanitize transportation and equipment when bringing new birds onto your farm.
- Sanitize equipment borrowed from other farms, including vehicles and trailer tires to eliminate diseases.

Also, know the warning indicators of a sick bird: frequent sneezing or coughing, nasal discharge, diarrhea, lethargic behavior, lack of appetite, sudden drop in egg production, and sudden death. Isolate potentially sick animals from your brood for at least 30 days. Contact your state veterinarian's office or department of agriculture if you suspect health problems.

### **CONCLUSION**

Chicken eggs and meat are popular poultry food products and have the highest per capita consumption in the United States. With fundamental knowledge of

basic poultry management practices, anyone can enjoy and benefit from laying hens. Backyard poultry production can result in personal enjoyment and pride, the privilege of knowing your food source, and an overall unique opportunity. Also, remember to check your local city ordinances for raising chickens in urban areas.

Contact your local Extension office to gather information of various aspects of small-scale poultry production. *Storey's Guide to Raising Chickens* is one of many excellent resources on raising chickens.

## REFERENCES

- Adler, J., & Lawler, A. (2012, June). *How the chicken conquered the world*. Smithsonian.com. Retrieved from <http://www.smithsonianmag.com/history-archaeology/How-the-Chicken-Conquered-the-World.html>.
- Clauser, P. J. (2010). Small-scale poultry production: Management requirements of laying flocks. Code # UM193. Retrieved from <http://pubs.cas.psu.edu/freepubs/pdfs/um193.pdf>.
- Environmental Protection Agency. (2013, April 12). *Poultry production*. Ag 101. Retrieved from [www.epa.gov/agriculture/ag101/poultry.html](http://www.epa.gov/agriculture/ag101/poultry.html).
- Fukumoto, G. K., (2009, July). *Small-scale pastured poultry grazing systems for egg production*. Publication LM-20. Retrieved from <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/LM-20.pdf>.
- List of chicken breeds. (2013, August 15). In Wikipedia: *The Free Encyclopedia*. Retrieved from [http://en.wikipedia.org/wiki/List\\_of\\_chicken\\_breeds](http://en.wikipedia.org/wiki/List_of_chicken_breeds).
- United States Department of Agriculture. (2012, March 27). *2007 census of agriculture*, Vol. 1. Retrieved from [http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/usv1.pdf](http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf).
- UrbanChickens.org. (2012). *Chicken keeping 101*. Retrieved from <http://urbanchickens.org/chicken-care/>.



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