There are several basic needs that need to be provided for poultry. These are feed, water, fresh air, light, darkness, proper thermal environment, protection (from the elements, predators, injury and theft) and proper space. Proper housing and equipment will take care of many of these items. Poultry and other animals function normally when they exist in harmonious balance with the other living forms and the physical and chemical factors in their environment. Therefore, it is the role of the poultry owner to properly manage the animals in their care.

**HOUSING**

Poultry require a dry, draft free environment. Depending upon the number of birds to be housed, almost any type of building that provides controlled ventilation, such as windows and doors, can be used. Birds should be reared in high, well drained areas. The windows of the coop and, outside run should face south to allow maximum exposure to the sun throughout the year. This helps with warmth in the winter and dryness during the rest of the year.

If you are building new, consider a concrete floor and starting your walls with two concrete blocks. This will prevent rodents, snakes and other predators from digging under the walls and floors for entrance into the coop. If you use plywood for floor construction, consider using two layers of 3/4" CDX plywood, with a layer of 1/4" or 1/8" galvanized wire mesh between the layers, then raise the floor off the ground with posts or 6" x 6" runners. Using runners allows you to move the coop as needed. Being off the ground also helps prevent rot and moisture in the coop. All this helps prevent predators from chewing through the floor. Some have found that using the double layer of plywood with wire mesh and insulation between the layers helps keep the coop warmer in the winter. Windows should also be covered with wire mesh to keep wild birds and other predators out. For summer, a wire mesh screed door helps keep the coop cooler at night.

Ventilation provides comfort for the birds by removing moisture, ammonia and other gases; provides and exchange of air and helps control the temperature of the pen. You can use natural or gravity fed ventilation with windows, flues and slats. Or you can use forced air ventilation if you have a larger number of birds. In a small coop (less than 150 sq ft of floor space) you can use a bathroom fan in the ceiling and slats in the walls or windows to remove excess moisture in the winter, much as it does in your home. It is important to remove excess moisture and ammonia from the coop, especially in cold weather when ventilation is at a minimum.

For predator protection, keep your birds confined with fence and covered runs. Outside run fencing should be buried at least 12" to 18" with an 6" to 8" “L” or “J” to the outside, backfilled with rocks and soil to prevent digging predators. To prevent problems with flying predators, cover your outside runs with mesh wire or netting. A 3-4 ft. grid over the pen made from bailing twine has also proven effective against flying predators. A good outside run can be made by digging 12-18” with a slight slope away from the coop, and laying plastic sheeting down (if you don’t have good drainage) with...
drain pipe at the end to catch runoff. Add 4-6” of sand, cover with ¼” wire mesh, add 4-6” of coarse gavel, cover with 1/4” wire mesh and top with 4-6” of pea-gravel. Put a barrier around the run of 2x6” to keep the gravel in place. Or you can use a good ground cover of millet, broomcorn, sorghum or other tall leafy vegetation provides hiding space for the birds.

**Space:**
Birds need adequate space for feeding, exercise, breeding, nesting and roosting.

<table>
<thead>
<tr>
<th>Minimum Space Requirements</th>
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<tr>
<td><strong>Type of Bird</strong></td>
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<tr>
<td>Bantam Chicken</td>
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<tr>
<td>Laying Hens</td>
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<td>Large Chickens</td>
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<td>Quail</td>
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<td>Ducks</td>
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<td>Geese</td>
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**Roosts:** Provide chickens with 6-10 inches of roost space per bird. Round roosts are the best, and a tree branch of about 1” to 1.5” in diameter works well. Meat birds and waterfowl do not require roosts.

**Nests:** It is best to provide one nest box for each 4-5 females in the flock. 12-14” cubes with front open with perching space for the birds to stand on while entering the nest.

**Floor material:** Litter floors of wood shavings is the best. Wood has an excellent capacity to absorb moisture and then re-release it into the air. Whatever you use, keep it clean and dry.

**FEED AND WATER**
Birds need free access to fresh feed. Feeders can be made of wood, metal, or plastic, but it is important to provide about 2-3 linear inches of feeder space per bird and up to 6” for meat type birds and turkeys. They should be adjustable in height so the lip of the feeder will be at the level of the back of the bird when standing. Keep troughs only half full to prevent feed wastage.

Fresh water should always be available to your birds, inside or outside. Again, keeping the lip of the waterer level with the back of the bird is essential. For winter watering, metal waterers can be placed on low temp heaters, keeping the water at about 50°F. Nipple waters are the best, since the birds cannot produce suction in their mouth.

Commercial poultry feeds have been specially formulated for the type and age of your birds and are the best source of nutrition for your birds. For egg layers, a 14 or 16% CP laying mash or crumbles can be fed from the first egg until out of production. Chicks should be fed a 18-23% CP medicated starter, unless they received cocci-vac, then use a non-medicated starter feed, for six weeks. Then put on a 16-18% CP layer grower feed till 15 weeks or first egg, then on to the layer feed. Broilers should be feed a broiler starter (21-23% CP) feed for 3 weeks, and a 18-20% CP grower/finisher till market.

**LIGHT**
Poultry require artificial lighting to maintain egg production during the short days of winter. Poultry are long-day breeders and we normally provide laying hens about 16 hrs of light per day throughout the year. Light timers set to come on at 5 am and off at 9 pm will supply the hours required. Low
wattage CFL or Incandescent lamps that supply about 1 foot candle of light at bird level is adequate. Never decrease the hours of light on laying hens or increase the hours of light on a growing bird.

**BROODING**

Raising and brooding baby chicks requires special care. Chicks need to be reared in isolation for disease prevention. They should be reared in a clean in disinfected environment. Baby chicks cannot properly regulate their body temperature for a few days after hatching and require a heat source. Heat lamps, brooder stoves, hovers and infrared heaters work well. A brooder guard, a ring of cardboard or plastic at least 18” high on the floor circling the heat source keeps the chicks from getting too far from the heat and reduces drafts. Watch the birds, if they huddle under the heat source, they are too cool, if off to one side, a draft, if spread evenly, just right. For newly hatched birds is it best to provide them with water for the first couple of hours before giving them solid feed. This helps clean out their excretory system. If you get chicks from a distant hatchery through the mail, then give them a 5% sugar water solution for the first few hours to boost their energy level.

**Some Resources for Small Scale Poultry Farms:**

- [http://web.uconn.edu/poultry/poultrypages/](http://web.uconn.edu/poultry/poultrypages/)
- [http://extension.unh.edu/Agric/AGDLEP/PoulRa b.htm](http://extension.unh.edu/Agric/AGDLEP/PoulRab.htm)
- [www.poultrypress.com](http://www.poultrypress.com)
- [http://www.feathersite.com/Poultry/BRKPoultry Page.html](http://www.feathersite.com/Poultry/BRKPoultryPage.html)
- [http://www.backyardchickens.com/coop.htm](http://www.backyardchickens.com/coop.htm)
- [www.amerpoultryassn.com/](http://www.amerpoultryassn.com/) the APA
- [www.bantamclub.com/site/](http://www.bantamclub.com/site/) the ABA
- [www.showbirdbid.proboards.com](http://www.showbirdbid.proboards.com) breed clubs
- [www.poultrycongress.com](http://www.poultrycongress.com) Northeast poultry congresss with links to all New England Shows
- Forsham Cottage Arks; [http://www.forshamcottagearks.co.uk](http://www.forshamcottagearks.co.uk)
- [www.firststatevetsupply.com](http://www.firststatevetsupply.com) Vet supplies
- [http://pubs.ext.vt.edu/category/poultry.html](http://pubs.ext.vt.edu/category/poultry.html) [gallus.tamu.edu/library/dother.html](http://gallus.tamu.edu/library/dother.html) (links to many poultry sites)
- [http://extension.unh.edu/Agric/AGDLEP/PoulRab.htm](http://extension.unh.edu/Agric/AGDLEP/PoulRab.htm)
- [http://www.ansi.okstate.edu/poultry/](http://www.ansi.okstate.edu/poultry/)
- Some good Books and resources for poultry:

**Beyond Cornish Crosses**

North American producers of range poultry who want options other than those offered by the conventional Cornish crosses do not have very much to choose from at present. Their options may be increasing, however.

The Noll family is working to make medium-growing genetics more widely available in North America. Henry Noll offers a Silver Cross that grows to five pounds live weight in nine weeks.

Noll’s Poultry Farm
Kleinfeltersville, PA 17039
717-949-3560
717-949-3722 FAX
Joe Cebe, Sr. offers a Cebe Red and Cebe Black meat variety that grows to 5 pounds live weight in 9 to 10 weeks.

Cebe Farms
P.O. Box 1404
Ramona, CA 92065
760-789-8221

Matt John of Shady Lane Poultry Farm, Inc. is currently developing a new hatchery and plans to introduce several alternative broiler lines during the next several years.

Mt-Di Poultry Farm and Hatchery
Owner/Operator: George Dibert
Address: 131 Hen House Lane
Altoona, PA 16602
Phone: 814.942.7024
Email: mtdfarm@atlanticbb.net
Cornish Cross, Red ranger, Rosambro

Freedom rangers
J.M. Hatchery
178 Lowry Road, New Holland, PA 17557
(717)336-4878

Shady Lane Poultry Farm, Inc.
520 Agawam Road
Winchester, KY 40391
859-737-2636
New breeds of Red or Gray Broilers specific for range rearing:

Yankee Chicks, Inc/Hall Brothers Hatchery
P.O. Box 1026
Norwich, CT 06360
860-608-1389
860-889-6351 FAX
Contact: Jerry Srednicki

Or
Gormavian Farms
Gary Proctor – 860-716-9064

Or
Burr Farms – Morris Burr – 860-455-9964

Moyer’s Chicks
266 E. Paletown Road
Quakertown, PA 18951
Ph. 215-536-3155
Fax 215-536-8034
Several Meat and Layer Breeds

Kosher King (Silver Cross)
Myers Poultry Farm
966 Ragers Hill Road
South Fork, PA 15956
USA
(814) 539-7026
MyersPF@juno.com
www.myerspoultry.com

A more complete listing of hatcheries throughout the U.S. can be found at www.aphis.usda.gov/vs/npip/ and at www.poultryconnection.com/hatchery.html.

Examples of hatchery Web sites

www.belthatchery.com—559-264-2090

www.esteshatchery.com—800-345-1420

www.mcmurrayhatchery.com—800-456-3280

www.myerschicks.com—215-536-3155

www.mthealthy.com/index.html—800-451-5603

www.privetthatchery.com—877-774-8388

www.townlinehatchery.com/chicks.html—616-772-6514

Notes:

Rev 3-21-2013