
Brooding of Domestic Fowl

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If you plan to raise baby chicks, waterfowl, or any other fowl, it is very important to realize that the baby fowl is totally dependent upon you to meet its needs.

Baby fowl need proper environment, proper nutrition and protection. This fact sheet will help you get your flock off to a good start.

Preparing the Brooder Environment and Equipment

It is important that you have brooder equipment set-up at least 24 hours before your chicks arrive.

HEAT SOURCE

The first decision you must make is what heat source you will use. Artificial heat sources include ordinary light bulbs, heat lamps, electric hovers, gas hovers, and hot water radiators. Each of these works satisfactory as long as it is set-up in a safe manner and maintains a constant temperature comfortable for the chicks.

For small flocks, the wooden chick brooder with ordinary light bulbs is the most economical. Heat lamps are more expensive to use but are the most popular.

THE WOODEN BOX BROODER

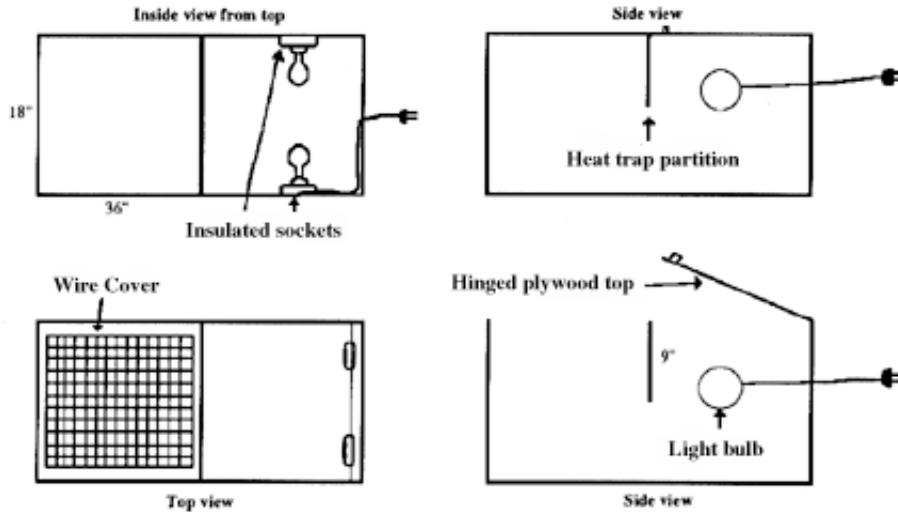
The plywood brooder on the next page is easy and inexpensive to build. The proportions can be changed if necessary. The brooder is designed to trap heat in half of the unit to keep the chicks warm. The other half allows the chicks to eat and move about. The top above the light bulbs should be hinged to allow you to open the top to clean the brooder and catch the chicks.

Use 2 light bulbs on the heated end of the brooder. If one burns out, the other will help maintain heat in the brooder. Two 40-watt bulbs will usually produce enough heat. However, adjust the size of the light bulbs to regulate the temperature. It should be 95°F. in the heated side for the first week, then decrease the temperature by 5°F. per week by decreasing the light bulb size. Some people build in a thermostat to help control the heat more accurately.

Place a layer of newspaper about 5 pages thick in the bottom of the brooder and cover with two layers of paper towel. This will keep the chicks from slipping and hurting themselves.

SPECIFIC HEATING RECOMMENDATIONS

- Always measure the temperature at the chicks level, directly under the heat source. Do not overhead brooding areas. Excessive heat causes dehydration, poor growth and increased mortality.

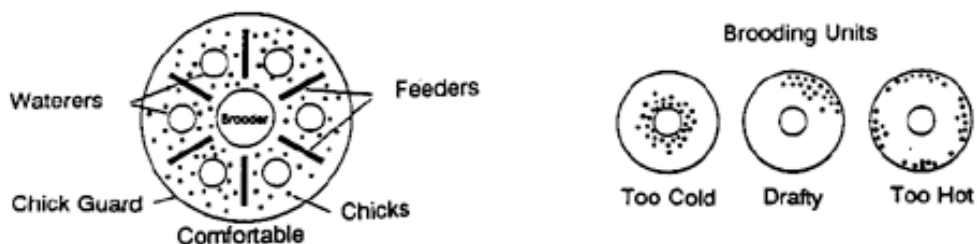


- Secure all heat sources so they can not be moved or drop too close to flammable materials.
- Supply 95°F. at chick level under the heat source for the first week. Decrease the heat by 5°F. per week until the normal daily temperature is reached.
- Be sure that chicks don't get chilled during extremely cold nights or large temperature swings. High/low thermometers are good to insure the temperature in the brooder do not get too hot or too cold when you are not able to observe the brooding area.
- The brooding area should be draft free.
- Whatever your heat source, make sure it is adjusted properly and works effectively through the day and night temperature changes.

Two methods of observing the chicks can help you understand the chicks comfort level:

1. Comfortable chicks are spread evenly through the brooding areas. Cold chicks will huddle under the heat source. Chicks which are too warm will be seen as far from the heat that is possible. Chicks in a drafty brooding area will huddle away from the source of the draft.

Ideal Brooding Temperature and Equipment Arrangement



2. You can also tell if the temperatures are too extreme by looking at the young fowls legs. If the chicks are chilled, their legs will be cold to the touch and appear puffy and swollen. If the brooding area is extremely hot, the legs will look dry, thin and dehydrated.

GOOD MANAGEMENT AND SET-UP OF THE BROODER

If the brooding area has been used to raise fowl before, thoroughly clean and disinfect the brooding facilities and equipment at least two weeks before you plan to brood your new chicks. This will allow the area to dry properly.

Completely prepare the brooding area for the young fowl 48 hours before their planned arrival. Preparation should include:

Space Requirements - listed in the "Summary of Brooding Requirements" table on next page.

Litter - If you brood the chicks on the floor, put down a base layer of 3 inches of clean, dry litter. Avoid sawdust or other fine litter for the first few weeks to limit excessive litter consumption. It is a good practice to put a burlap cloth, cheese cloth or paper towels over the litter for the first week so the young fowl can learn to distinguish the food from the litter.

In small brood boxes or coops, it may be easier to line the bottom of the brooding area with 5 to 10 pages of newspaper as a base. Then put a layer of paper towel on the top of the newspaper for traction. When the brooder gets dirty, just roll up the top 3 sheets of newspaper and put another layer of paper towel on top of the fresh newspaper.

REMEMBER ... never brood young fowl on slippery surfaces like newspaper or wood floors. If the young lack good traction they may develop permanent leg damage.

Three-eighths inch mesh wire floored brooders work well for most fowl. However, don't raise bantam chickens, game birds, or miniature waterfowl on wire as their hocks often will drop through the mesh and become trapped. This can be prevented by covering the mesh wire with burlap or rags for the first few weeks.

Waterers - Supply one quart of water for every 25 chicks. Use waterers the young can reach but not fall into. For Bantams, game birds and other miniature fowl, it is advisable to place marbles or pebbles in the water tray so that they can drink but not fall into the tray and drown. Don't let young waterfowl swim freely in water until they are totally feathered. For larger numbers, automatic nipple watering systems work excellent.

Feeders - Place feeders near the heat but not directly under the heat source. To encourage eating for the first week, put feed in an egg carton top or shoe box cover. Only feed non-medicated starter foods to waterfowl to avoid possible adverse reactions to some types of poultry medications. Keep fresh feed in front of chicks at all times. For all other fowl feed an 18-24% medicated starter for the first eight weeks.

Chick guard - If brooding young on the floor, use a chick guard during the first few weeks to prevent drafts and keep the chicks near the heat source. A chick guard is usually made of cardboard and encircles the brooding area. A chick guard 18 to 24 inches high and 6 to 10 feet cross is sufficient for 100 chicks. This is especially good in large floor pens where the chicks can get separated from the heat source & pile up in corners.

Placing the chicks - Newly hatched chicks can live on the unabsorbed yolk in their bodies for about 72 hours if necessary. However, it is best to get them into a brooder with feed and water within 24 hours after they hatch.

With small numbers of young it is helpful to show each bird where the water is by quickly dipping its beak into the water tray.

Check on chicks often to ensure they are comfortable. Chicks need enough room to regulate their body temperature by moving toward or away from the heat source.

As the birds get older, place the feeders and waterers with larger equipment and adjust them to the birds back height to limit wastage.

OTHER MANAGEMENT TIPS TO CONSIDER

- Clean and refill waterers daily.
- Add a vitamin/mineral supplement to the water of young fowl (except waterfowl--see #4 below) for the first week to help them get off to a better start.
- Consider the possibility of predators attacking your flock and provide adequate protection.
- Watch your flock daily for signs of unusual behavior. Failure to eat, drink or react normally are indications of a problem. A quick diagnosis and treatment can save your flock from unnecessary mortality.
- If mortality does occur, get a diagnosis from a diagnostic lab as soon as possible. Give medicines and treatments only after you know the diagnosis.

RECOMMENDED PROTECTIVE HEALTH AND VACCINATION PRACTICES

1. Egg-type or breeding chickens should be vaccinated for Marek's disease at the hatchery or as they are removed from the incubator.
2. All chickens should have a coccidiostat in their diet for the first eight weeks.
3. Quail, turkey, peafowl and other game birds should be treated for blackhead through the feed for the first eight weeks.
4. Waterfowl should not be given any medicated feed since they may have some reactions to antibiotics.
5. Vaccinate chickens for Newcastle/bronchitis via the drinking water at four weeks and eight weeks of age or as recommended by manufacturers.
6. At eight weeks of age most chickens should be vaccinated for pox if there is a history of fowl pox on the farm or in your part of the state.
7. If drugs are used in the feed, recommended withdrawal times before slaughter or marketing must be observed.

| SUMMARY OF BROODING REQUIREMENTS | | | | |
|---|--------------------------|--------------------------|---------------------------|--------------------------|
| Age of Chicks | Temperature ° Fahrenheit | Floor Space sq. ft./bird | Feeder Space inches/chick | Water Space inches/chick |
| 1st Week | 92 - 95°F | 1/4 | 1 | 1/2 |
| 2 - 3 Weeks | 85 - 90°F | 1/2 | 1-1/2 | 1/2 |
| 3 - 5 Weeks | 80 - 85°F | 3/4 | 2 | 1/2 |
| 5 - 8 Weeks | 70 - 80°F | 1 | 2 | 3/4 |
| 8 Weeks and Up | room temperature | 1-1/2* | 3* | 1* |

* Increase appropriately as birds grow and for larger breeds and types of birds.

Reviewed by Audrey McElroy, associate professor, Animal and Poultry Sciences