

Artificially Brooding Hatchlings

BROODER: A brooder is a heated enclosure in which young fowl or livestock are raised. Brooders need not be sophisticated or permanent structures; they need only to protect young hatchlings from cold, drafts, and dampness. A simple plastic tub with a screen covering placed in a back room is well suited for many beginners. A good brooder has the following traits:

1. **LOCATION:** Brooders should be located within a structure with a relatively stable environment free from drafts and moisture. Almost any small building with good ventilation is suitable in the late spring or early summer. Greater protection is required when temperatures are extremely low or high. An insulated or semi-heated garage or shed may be suitable for a brooder during colder weather.
2. **SPACE:** Hatchlings need sufficient space to move, when necessary, away from the heat source. A large 30 gallon plastic tote is large enough for 10 chicks for up to 3 weeks. General space recommendations include:

Age of chicks	Floor space per bird	Sample Enclosure for 10 birds
0 to 4 weeks	½ square feet	2 ½ foot x 1 foot
4 to 8 weeks	1 square feet	3 foot x 3 ½ foot
Small chick juveniles	1 ½ to 2 square feet	3 foot x 6 ½ foot
Large chick juveniles	2 to 2 ½ square feet	3 foot x 8 ½ foot

Since chicks tend to push and pile on top of one another, any enclosure with more than 25 chicks should have rounded corners to prevent suffocation.

3. **ENCLOSURE:** The brooder should have a wall height of 12-18 inches or more to protect against drafts and to keep hatchlings corralled. A screen or wire lid will prevent older chicks from flying out of the enclosure.
4. **HEAT:** A single 250 watt red heat lamp suspended 18 inches above the brooder floor is sufficient to brood 80 chicks. Two 60 watt yellow bug light may provide sufficient warmth for 20 or less chicks within a controlled environment. When possible, avoid bright, white light as it induces picking and may be disrupt sleep. Temperature is very important and the use of a thermometer at floor level is highly recommended. For small birds, such as bantam, the temperature may need to be slightly higher.



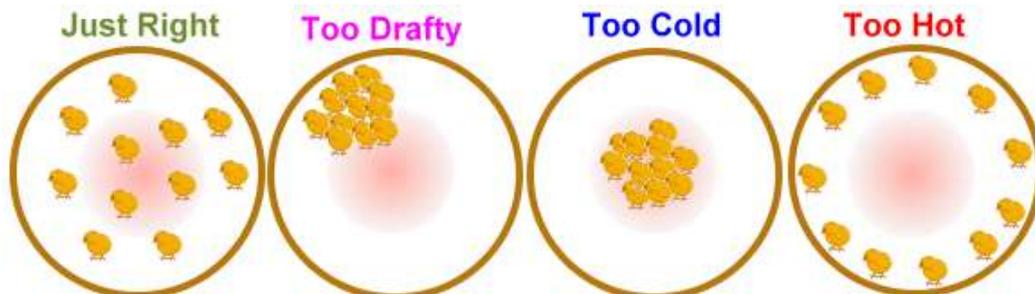
General Heating Requirements													
Week	0	1	2	3	4	5	6	7	8	9	10	11	12
Temp	95°	90°	85°	80°	75°	70°	65°	60°	55°	50°	45°	40°	35°



CAUTION: Over time, heat will accumulate in the brooder and bedding. Always ensure that hatchlings have sufficient space to move away from the heat source should they become overheated. Too small of space can result in injury or death.

CAUTION: Heat lamps in brooders and coops are a major source of home fires. Use only ceramic receptacles with an appropriate reflector. When using clamp-on types, secure the lamp with a secondary safety cord in case the lamp falls.

Visual observation best evaluates hatchling comfort. If the hatchlings bunch up under the heat source, they are too cold. If the hatchlings scatter to the edge of the enclosure, they are too hot.





Two lamps are important. If one burns out in the wee hours of the night, the other will keep the chicks warm until morning. Placing a sheet of cardboard over the brooder helps retain heat, but be very cautious about keeping anything flammable away from hot bulbs.

- BEDDING:** Large flake pine wood shavings are the favorite bedding for brooders. Rice hulls, dry straw, or hay can also make good bedding. For the first few days, place an old sheet, cloth towels, paper towels, or similar material on top of the shavings. This better enables the hatchlings to gain their feet, move about easily, and find their feed. **DO NOT USE** fine shavings, saw dust, or sand as very young chicks may consume these materials which can lead to an impacted craw, decrease consumption of feed, and possibly death. Fine shavings and sand may be suitable after a week or two after the chicks learn to eat. Cedar or cypress shavings should be avoided because many consider them toxic.
- WIRE FLOORING:** My brooders have ½” hardware cloth wire flooring with a plastic tray underneath to capture and easily remove droppings. For standard size chicks, the wire is covered with old towels for the first two weeks; for bantams for three to four weeks; and mallard ducks for the first week only. Although some claim that hardware cloth flooring may harm a hatchling’s feet, I have had no such incidents but rather find the practice more sanitary with less odor than traditional pine shavings.
- OUTDOORS:** Except in extremely cold climate, most hatchlings can safely be placed in an unheated outdoor shelter once they fully feather (about 6 weeks for chicken) as long as the shelter is well ventilated but draft free.

FEEDING & WATERING: Just before a hatchling emerges from its shell, it absorbs the remainder of its yolk. This absorbed yolk provides the hatchling with sufficient food and water for 48 to 72 hours. A hatchling may be reluctant to eat or drink for the first 24 hours but should actively be doing both by the end of the second day.

- FIRST DAY:** When moving the hatchlings from their transit box to the brooder, dip each beak into waterer before turning them loose. For the first day, sprinkle feed about the feeder and waterer to make it easy for the hatchling to locate the feed. Avoid sprinkling any feed directly under the heat source. Do place the feeder inside the brooder – the hatchlings should soon locate and use it. Adding smashed boiled egg yolk on top of the feed may help the hatchlings get started and eating right away; remove uneaten boiled eggs after a couple of hours.
- FEED:** Individual species may require a specific starter feed formula, and different feed companies formulate their feed differently. For best results, follow the feeding instructions found on the bag of the feed you use. The following chart illustrates common recommendations.

		GENERAL FEED RECOMMENDATIONS									
Age in Weeks		2	4	6	8	10	12	14	16	18	20
CHICKENS		(Medicated)									
Lone Star		Chick Starter 20%				Chick Grower 18%				Layer 17%	
Agway		Chick Starter-Grower 18%								Layer 16%	
Purina		Start & Grow 18%								Layena 16%	
Dumor		Chick Starter/Grower 20%				Grower/Finisher 15%				Layer 16%	
Nutrena		Chick Starter Grower 18%								Layer 16%	
MIXED FLOCK		Chickens, Ducks, Geese (Non-medicated)									
Purina		Flock Raiser 20%								Layena 16%	
Dumor		Chick Starter/Grower 20%				All Flock 18%				Layer 16%	
TURKEYS		(*Non-medicated)									
Purina		Game Bird Startena 30%				Flock Raiser 20%				Layena 16%	
Dumor		Chick Starter 24%				Chick Starter/Grower 20%				Layer 16%	
Agway		Gamebird/Turkey Starter 26%				Gamebird/Turkey Grower 21%					
Lone Star		Gamebird Starter 28%				50/50 Mix Gamebird & Chick Grower 23%				Layer 17%	
DUCKS & GEES		(Non-medicated)									
General		22% Protein				16-18 % Protein				Layer 16%	
GUINEAS		(Non-medicated)									
General		24-26% Protein				18 % Protein				16%	

- MEDICATED FEED:** Medicated chick feed **DOES NOT** contain antibiotics but rather most likely amprollium – a thiamine uptake inhibitor. Amprollium does not treat Coccidiosis (a protozoa parasite) but rather discourages its overgrowth... it attempts to prevent an outbreak. The dosage of amprollium in chick feed is small and unlikely to result in a thiamine deficiency in hatchlings. Coccidiosis is naturally occurring and present in all chickens.

Overgrowth, however, can be devastating in hatchlings. Unless you have a very specific reason for not using amprolium, it should be seriously considered in all chicken hatchlings.



Decades ago, some medicated chick starter might have been harmful to waterfowl... such is not the case with modern feeds. Although they do not require medicated starter as they rarely suffer from an outgrowth of Coccidiosis, feeding medicated chick starter to ducks and geese is not harmful.¹

4. **WATER:** Using additives to water is generally discouraged as the taste may discourage drinking. Clean, chemical free water is generally the healthiest choice. I use bottled water for the first few days when the quality of the tap water is questionable. For bantams, I also add a packet of Sav-A-Chick to the first gallon. Before letting a hatchling loose inside the brooder, dip its beak into the water source. Never allow hatchlings to run out of water and keep the waterer as clean as possible.

OTHER CONCERNS:

1. **DROOPY HATCHLINGS:** If hatchlings look droopy upon arrival, adding two tablespoons of sugar in one quart of 100° F water and shaken well may help perk them up. Additionally, adding this solution to a small amount of feed and sprinkling the mixture around may prove helpful. Remove any left-over portions of feed/sugar water mixture after a couple of hours to prevent souring.
2. **GRIT:** Chick grit is unnecessary for hatchlings to properly digest starter or grower crumbles. Once placed on the ground, birds will gather what grit they need from the ground. You will need to add chick grit if you intend to feed hatchlings food that requires “chewing” while they remain in the brooder. Chick starter and grower provides all the necessary ingredients for healthy hatching growth; provide additional “treats” sparingly.
3. **PASTY BUTT:** Stress, overheating, and natural occurrence may result in droppings to accumulate on the hatchling’s vent – pasty butt. In most instances, this condition is temporary and results in no harm. However, if sufficient quantities accumulate, it may block the vent. Remove by gently pulling off using a warm moist wash cloth.
4. **PECKING:** Hatchlings may peck each other if they are too hot, too crowded, without fresh air, and even when they are bored. Occasionally, bright lights can cause them to pick and having lights on 24 hours a day can cause stress; changing to a red light may help. An ounce of prevention is worth a pound of cure when it comes to picking. To treat chicks that have been picked, smear some type of menthol ointment on the area that has been injured and keep up the treatment until healed.²
5. **DUCKLINGS & GEESE:** Ducklings and geese mature quicker and require less heat than baby chicks. Medicated feed is not required although the medication will cause them no harm. Waterfowl like to play with water and are messy creatures. Because of this reason, it is not recommended that waterfowl and chickens be brooded together. Special care should be taken with bedding material to ensure that it stays clean and dry. Although tempting, waterfowl should not be allowed to become wet or swim. Wet down may cause chilling and hatchlings can easily drown. Wait until birds are fully feathered before allowing them to swim freely in small pools or ponds.
6. **TURKEYS:** Turkeys require higher protein than baby chicks and their size difference may result in harm to smaller chicks. Chickens may carry diseases and parasites that barely affect them but can be deadly to turkeys, e.g. Blackhead. In general, professional breeders do not recommend turkeys and chickens be raised together or that turkeys be raised on ground where chickens have been in the previous three years. Contact your local county extension agent for further details.



HUMAN SALMONELLA INFECTIONS FROM BABY POULTRY
Baby poultry can carry harmful germs called Salmonella. After you touch a chick, duckling, or other baby bird, or anything in the area where they live and roam, **WASH YOUR HANDS** so you don't get sick!

¹ "Can Medicated Feed Be Used for Waterfowl?" Metzger Farms, November 30, 2011. <<http://metzgerfarms.blogspot.com/2011/11/can-medicated-feed-be-used-for.html>>

² "The Care of Baby Chicks," Cackle Hatchery, <http://www.cacklehatchery.com/pdfs/baby%20chick%20care%20guide2012.pdf>