

## Hints for Hatchers



Visit these sites for information from the Extension University System.

- ✦ Penn State's 4-H Embryology site <http://extension.psu.edu/4-h/projects/poultry/embryology>
- ✦ University of Illinois- Biological Imaging <http://chickscope.itg.uiuc.edu/explore>
- ✦ University of Nebraska- 4-H Embryology School Enrichment <http://lancaster.unl.edu/4h/embryology/>
- ✦ University of Florida Incubation and Embryology <http://florida4h.org/embryology/index.shtml>

### **Always wash and sanitize all of the incubation equipment before use. Use diluted bleach.**

Remember that the humidity inside the incubator is very important. No guessing is necessary in science because we use tools such a wet bulb thermometer to measure the relative humidity. If your incubator has a digital display it will report this information to you (so you will not need to make a wet bulb thermometer). If you need instructions, call our office for instructions on how to make a wet bulb thermometer. Remember to use a new wick each year.

Use distilled water or boil and cool tap water for the incubator troughs. You can use a microwave to reheat to 99 degrees the previously boiled or distilled water (30 seconds at full power for 8 ounces). You may need to add water every other day. Maintain the incubator at 60% relative humidity for 18 days (86 degrees on the wet bulb thermometer OR the level recommended by the manufacturer=45-55% on the display. Control the humidity in a Hova-Bator by taking out/putting in the red plug(s) or covering part of a water trough with foil. Ask our office to email you a photo. For Brinsea domes use the water cup. For a Turn-Ex incubator adjust the number of wedges that contain water. Also beginning on day 12, "whoosh" the lid once each day. At the end of day 18 raise the humidity to 70% by adding water to another trough or wedge (90 degrees on the wet bulb). Leave at least one red plug of the Hova-bator open. If the **temperature in the room will go below 64 degrees F during the night** the incubator **must** be covered with a cardboard box so that it will be possible to maintain the constant 100 degrees F inside. The box needs to clear the incubator by no less than about 2 inches on the sides and top.

Record the outdoor and indoor temperature and humidity and compare to the incubator data. You should see connections when the incubator's humidity is too high. The ambient relative humidity may be determined by using a wet bulb thermometer in the classroom. Call the office for reference chart for determining the relative humidity.

If you are able to, weigh an egg every third day. Eggs lose 11% of their volume gradually through respiration.

Set up the brooder box on day 19. Use a thermometer in that box, set up at about chick height, to be certain that you are providing the correct heat. Chicks need to be 95 degrees during the first week, 90 degrees the second. If chicks are not warm enough their digestion doesn't work right (develop "pasty butt"), they stop eating and they might also develop respiratory problems or infections. Use a warm, wet paper towel to clean off "pasty butt".

- **NY State law requires that chickens be kept in flocks no smaller than 4.** If you are making alternative arrangements other than raising them yourself you must be absolutely certain beyond any doubt that they will be provided with brooding for the correct time period, correct feed, water, shelter and protection from wildlife. ***These are domesticated fowl and not able to care for themselves in the wild.***

If you have any questions during your incubation project please call Nancy @ 285-4632, from 9 am to 4 pm Monday through Friday. E-mail is [nmc23@cornell.edu](mailto:nmc23@cornell.edu). Happy Hatching!



Cornell University  
Cooperative Extension  
Westchester County

*Building Strong and Vibrant New York Communities*