

# INCUBATION BASICS

Matt Jon covers the basic incubation rules and some hints on cleaning and sanitizing

Cleaning and disinfecting incubators after use is one of the most important steps to insure success in future hatches. Bacteria can build up in incubators. Styrofoam incubators tend to allow for higher bacteria buildup than more expensive models. A mild detergent can be used to clean the Styrofoam. Moisten a cloth with hot water and mild soap and gently wipe the inside. The clear plastic windows can be cleaned with a window cleanser for plastic. The inside of the incubator can also be wiped with antiseptic baby wipes. The bottom, wire floor and plastic liner can be immersed in warm soapy water and cleaned with a soft brush. Be careful to not use cleaning materials or solvents that dissolve or react with polystyrene. A bleach solution works well. There are several commercial disinfectants that can also be used in incubators. These come as either an aerosol or concentrated liquid which should be diluted with water. After cleaning, you can lightly spray the inside of the incubator with the disinfectant and leave it open to dry in the sunshine for a day or two to help remove the odor.

For those concerned about chemicals, Oxine® is a chlorine-based disinfectant that can be used to clean incubators as well as animal premises and equipment. This product is sold in gallons and is OMRI approved – which means it can be used in Certified Organic applications. There are other stronger disinfectants that work well. Whatever your choice, just be sure to follow mixing instructions on any product and don't use them when eggs are in the incubator as they might harm or kill embryos. Allow at least a couple of days for these disinfectants to dissipate before setting eggs. Unfortunately, there is a point where you just need to throw away the Styrofoam incubator and buy another. Depending on use and care, these inexpensive incubators can perform satisfactorily for two or three years to a couple of decades.

Another solution would be to set and hatch in separate machines. We use much larger incubators in our hatchery, but the principle is the same for those using the smaller Styrofoam incubators. Set eggs in one incubator (setter) and at 18 days (for chicken eggs) take them out and place them in another machine dedicated for hatching. This way if you are incubating multiple-aged eggs in the same unit, you don't risk contamination of younger embryos by hatching in the same machine. For example, use one of the more expensive automatic temperature control/



forced air Styrofoam incubators for setting and a less expensive 'thermal air' unit as a hatcher. Obviously you would only need the automatic turner in the setter. The higher bacterial load from hatching and wear and tear from cleaning goes into the less expensive unit.

## **One tool to help you avoid exploders and bacterial contamination is a candler.**

A candler is basically a light that is used to view the inside of eggs. By candling eggs at 7 and 14 days, you can remove the infertile

eggs and early dead embryos and avoid the nasty mess from rotten eggs. Candles can be purchased or homemade. There are several books and university publications that provide instruction for candling eggs.

I personally wouldn't use cedar with any application involving poultry.

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