

Of Waterbeds and Cobbled-up Incubators...

I had garnered some wood off the side of the road earlier, and had found a discarded waterbed heater unit. What more could I need...the basics were there.



I cut up some plywood to make this box with a removable lid, covered the box with blue half inch insulation foam sheathing. The pieces of plywood nailed to the sheathing serve to hold the sheathing in place.

A piece of foam on the top left covers an opening that has glass through which I can see the incubator thermometer.

The U shaped area cut out in the right front of the box has a place where the electrical cord goes into the box, and there is a 1 inch hole through which I can adjust the thermostat.

The lid rests on some foam weather stripping which provides a good seal.



With the lid removed, the inside shelf is visible. This removable shelf is made of hardboard (masonite), and it has 1/4 inch hardware cloth (sandscreen) at both ends so that air can circulate. The screen is visible to the right of the bowl with the green sponge in it.

The duck eggs are resting on a sections of blue foam. I heated a teaspoon and used it to melt depressions in the foam to cradle the eggs. No automatic turner here...all turned by hand. At the left side of the eggs, the incubator thermometer is visible.

If the shelf is lifted out, there is a gallon milk jug that I cut the top from, filled the bottom with water, and inserted a sponge to provide surface area for water evaporation. I will also increase humidity at times by using additional bowls . There are three 100W bulbs as the heat source, a small fan to circulate the air, and the thermostat control unit in the bottom beneath the shelf.

The first control I tried was an old discarded waterbed heater. I had to cut the control box apart with my Dremel tool zizz wheel, but finally got it apart. The temperature maximum had to be adjusted with a set screw, but after a while it was staying around 100F. I hatched several batches of eggs with it, but I decided that a regular incubator control would give me smaller temperature excursions.

I ordered the thermostat and wafer unit #2GHHT from McMurray Hatchery, got prompt service, then installed it. The unit includes a 20 amp switch, sells for \$16.85. Claude McCallister at [Seven Oaks Game Farm](#) has solid state thermostats as well as conversion boards to replace the wafer/microswitch units.

Then I got an old Refrigerator...

I decided to try a different type of incubator, so I scrounged an old refrigerator from a local furniture store. It had a freezing compartment at the top which I could make into a hatching compartment. The bottom could become the incubator.

I stripped the compressor and most of the refrigeration junk out, but I did use some of the wiring and also the fan in the freezer compartment. I cut holes in the top and bottom of one side of the refrigerator compartment and inserted 2 inch pvc pipe for ventilation. I did the same for both sides of the freezer compartment. This old refrigerator has Fiberglas insulation. I think that foam insulation would probably be better and easier to work.



This view inside the refrigerator compartment is very dark...no flash on the camera, but you can see the three light bulbs used for heating and also a spray water bottle at the right. The water bottle is in front of a gallon jug evaporator unit which I find works well.

There are three shelves which I use for incubating eggs. The dark squares on the shelves are pieces of foam which have depressions for holding the eggs. The thermostat control unit is on the top shelf. A fan from an old film strip projector is in the bottom, behind the bulbs, and it circulates the air.



This is the hatching compartment at the top of the refrigerator. To the right side, the ventilation pipe enters; upper center is the freezer fan which circulates the air. On the left side is another piece of ventilation pipe, and toward the rear the

two bulbs for heat.

In front of the bulbs, the grid is some welded wire which is shaped into an arch, put down in the bottom half of a gallon milk jug, cloth then draped over the wire arch, and the jug then filled with water. This makes a good humidifier unit.

To the right rear, between the fan and ventilation pipe, the thermostat regulates the temperature.

I have a towel on the floor of the hatching compartment. The temperature of the compartment is a couple of degrees cooler than the incubator.

I've had good success with both of these incubators, and it **is** satisfying to use something that you've put together yourself...

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