

# HOW TO MAKE A WET BULB THERMOMETER

## Materials Needed

Thermometer  
1-2" Wide Gauze  
Thread or Fishing Line  
Scissors

The purpose of a wet bulb thermometer is to monitor the humidity in the incubator during the incubation period.

To make a Wet Bulb Thermometer:

(Fig 1)

1. Obtain a good quality thermometer.
2. Cut piece of gauze 1" wide and 6" long.
3. Using the thread or fishline, tie the gauze to the thermometer tube just above the bulb.

(Fig 2)

5. Something will be needed on which to lay the thermometer in the bottom of the incubator. A cross section of a styrofoam cup works well. Cut the cup into sections -  $\frac{1}{3}$  and  $\frac{2}{3}$  rds. Lay the thermometer across the cup. Use the remaining bottom of the cup as the reservoir to hold water to be used for the wet bulb. Place the gauze tail into the water.

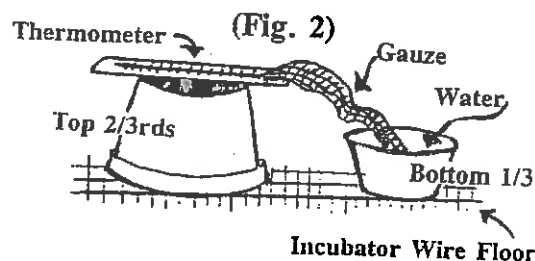
(Fig 3)

The gauze will act as a wick and carry water to the bulb of the thermometer. Evaporation due to air flow over the thermometer lowers the temperature. Using the temperature reading of the incubator and the temperature of the wet bulb thermometer, an approximate humidity can be determined, using Fig. 3.

During the first 18 days of incubation, the humidity should be about 60%. The last 3 days (day 19-21) the humidity should be about 70%.

For more information on humidity, see pages 9 & 10 of "From Egg to Chick", by Christina Winstead.

(Fig. 1)



(Fig. 3)

Relative Humidity							
Incubator temperature	Wet-bulb thermometer readings						
99.5°F	81.5	83.1	85.1	86.1	88.7	90.5	
100°F	81.3	83.3	85.3	87.3	89.0	90.7	
101°F	82.2	84.2	86.2	88.2	90.0	91.7	
102°F	83.0	85.0	87.0	89.0	91.0	92.7	
Relative humidity (%)	45.0	50.0	55.0	60.0	65.0	70.0	