

Poult Temperature Management

The first week of a poult's life is a sensitive time that requires a lot of attention to ensure a good healthy start to life. When a poult hatches, its thermoregulatory system is not totally developed, meaning it cannot control its internal body temperature. The development of this system takes place during the first 4 – 6 days after hatch. The poult attempts to keep their internal temperature in a thermal neutral zone. When the environment is not optimal, this forces the birds to alter their metabolic rate in order to regulate their temperature. In doing so, this diverts the necessary resources from general development of the bird and in extreme cases can lead to death.

Therefore, it is of utmost importance to assess poult temperature. When in the thermal neutral zone, poult are able to keep their body temperature at a constant level without altering their metabolic rate and focus on the basic requirements of growth at this time, such as eating and drinking.

Temperature Assessment

- Poult temperature should be assessed at the hatchery, at the following stages:
 - During pre-pull assessment
 - At time of pull
 - In the service room
 - In the poult holding room
- Poult temperature should also be checked upon arrival at the farm for placement.
- Poult temperature can be assessed directly or indirectly.

Direct Assessment

Direct assessment is achieved by physically taking the poult's temperature via a specialized thermometer and is the best way to confirm the internal temperature of a poult.

- Requires the use of an accurate e-thermometer such as the Braun Digital Stick Thermometer PRT1000.
- Sampled poult should be taken from different areas of the containment.
- Expose the cloaca, then slowly introduce the thermometer.
- Thermometer depth should not exceed 6 – 8mm (1/3")
- Poult with very dirty or wet cloaca should not be sampled.

Appropriate internal temperature (thermal neutral zone) should be 39.4 – 40.0 °C (103 – 104 °F).



Figure 1 Example of thermometer depth (Notice that some of the silver tip is still exposed)

Indirect Assessment

Indirect assessment includes identifying particular behaviours. Poults naturally change their behavior to compensate for temperatures that affect their thermal neutral zone. For example, significant changes in vocalization can indicate the environment is too cold or too hot. Below you will find examples to consider when evaluating poults temperature indirectly.

- Indication that the environment is too cold
 - Poults will huddle together
 - Poults refrain from eating or drinking



Figure 2 Poults Huddled Together

- Indication that the environment is too hot
 - Poults will pant
 - Poults will open their wings



Figure 3 Poults panting with mouths open

Prewarming the barn prior to poults placement is an important step in achieving the target environmental temperature. When both the environmental temperature and the poults' internal temperature are within appropriate ranges, you will find the poults are quiet and evenly spread out in their surroundings.

Summary

The best way to be sure the poults are maintaining an appropriate internal temperature, at any stage during the first week, is via direct assessment with a thermometer.

Indirect assessment is important to consider and a good indicator of poults temperature. Additionally, poults temperature can be taken at the hatchery and during transport via weight loss assessment.