

# Temperature management in the first week of a poult's life

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.

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The development of this system takes place during the first 4-6 days after hatch. The poults attempt 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.

## Temperature assessment

When in the thermal neutral zone, poults 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.

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 specialised thermometer and is the best way to confirm the internal temperature.

- Requires the use of an accurate e-thermometer such as the Braun Digital Stick Thermometer PRT1000.
- Sampled poults should be taken from different areas of the containment.
- Expose the cloaca, then slowly introduce the thermometer.
- Thermometer depth should not exceed 6-8mm.
- Poults 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).

## Indirect assessment

Indirect assessment includes identifying particular behaviours. Poults naturally change their behaviour to



Example of thermometer depth (note that some of the silver tip is still exposed).

compensate for temperatures that affect their thermal neutral zone. For example, significant changes in vocalisation can indicate the environment is too cold or too hot.

In the photographs below you will find examples to consider when evaluating poult temperature indirectly. When the environment is too cold, poults will huddle together and refrain from eating or drinking.

An indication that the environment is too hot is when poults pant and open their wings.

Prewarming the barn prior to poult placement is an important step in achieving the target environmental temperature.

When both the environmental temperature and the poult's 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 poult temperature.

Additionally, poult temperature can be taken at the hatchery and during transport via weight loss assessment. ■

Poults huddled together – the environment is too cold.



Poults panting with their mouths open – the environment is too hot.

