










## EQUIPMENT FOR CHECKING BROODING SET-UP

Correct brooding conditions are important for getting poult off to a good start. You can accurately assess the conditions into which poult are being placed by having the correct equipment at your disposal.

Below is a list of equipment that can be used to monitor brooding conditions.

EQUIPMENT	PURPOSE	METHODOLOGY	SPECIFICATION
 Scales	To take individual weights and CV%	Individually weigh all the poult in one box from each parent stock source flock	A small scale with a 1000g capacity and a 0.1g readability
 Infrared spot thermometer	To measure concrete/ floor and litter temperature	Measure 24 hours prior to poult arrival to achieve recommended temperature and after placement to assess poult comfort	A digital infrared thermometer with a spot laser
 Stick thermometer	To measure water temperature	Drain water into a beaker and measure temperature with the stick thermometer	Proven digital thermometer
 CO <sub>2</sub> meter	To measure temperature, RH% and CO <sub>2</sub>	Taken in the poult brooding area at poult height in three different locations of the house	Digital meter that reads RH, CO <sub>2</sub> and temperature
 Air speed meter	To measure air speed	Taken in the brooding area at poult height	Reliable air speed meter
 Light intensity meter	To measure light intensity	Measure at bird height at nine or ten different locations throughout the house	Reliable light meter
 Feed sieve	To determine feed physical quality	Take a sample of feed which is representative of what is presented to the bird and taken from the feeder	Aviagen Turkeys 'Feed Sieve' tutorial 
 Thermal imaging camera	To highlight, hot/cold spots, drafts, poult comfort	Use before placement to highlight issues with set-up, and after placement to assess poult comfort/temperature	Reliable thermal camera

**Note:** the equipment given in the table above are examples only

## **Poult Placement**

### **Recommended environmental conditions at placement:**

- **Air temperature** (measured at poult height in the area where feed and water are positioned):
  - 36-37°C for whole-house brooding
  - 28°C at the edge of the brooder ring for spot brooding
- **Litter temperature:**
  - 30°C
- **Carbon Monoxide:**
  - <10ppm
- **Ammonia:**
  - <20ppm
- **RH:**
  - 50-70%

**Air speed:**

- Maximum of 0.15 meters per second

**CO<sub>2</sub>:**

- <2500ppm

**Feed:**

- Dust-free crumble or mini-pellet. The crumb should be tested using a sieve to ensure the correct level of crumb is present in the feed.



**Water temperature:**

- 18-21°C

**Drinkers:**

- **Nipple lines** - Follow manufacturers recommendations.
- **Bell drinkers** - Provide 2 drinking points per 100 poult, 50% of which are supplementary equipment.

**Feeders:**

- Ensure 2 feeding points per 100 birds, 50% of which are supplementary equipment.

**Litter depth:**

- Min 7cm in the Spring/Summer
- Min 10cm in the Autumn and Winter

**Light intensity:**

- The light intensity should be 80-100 lux, and this light intensity should be provided over feed and water sources to encourage feed and drinking activity.

### **Feed form:**

Particle Size	<1mm	1 to 2mm	2 to 3mm	>3mm
<b>Starter 1</b>	0 - 10%	45 - 55%	30 - 40%	0%
<b>Starter 2</b>	0 - 10%	25 - 30%	35 - 45%	10 - 15%

Crumb particle size profile

## **1 HOUR after Poult Placement**

After this time, further adjustment of the ventilation, brooder height, brooder temperature, drinkers and feeders may be necessary.

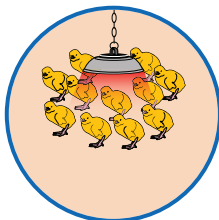
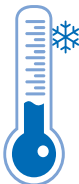
- Check water levels in supplementary drinkers and feed amounts in supplementary feeders.

**Poult behavior:** If poult behaviour indicates that environmental conditions are not correct, adjustments to the environment must be made and behaviour re-assessed.

## **EVERY 2 HOURS after Poult Placement**

Careful observation of the poult's behaviour and house conditions every 2 hours will determine which adjustments should be made.

- Are poult feeding and drinking?
- Check that supplementary feeders and drinkers require topping up.

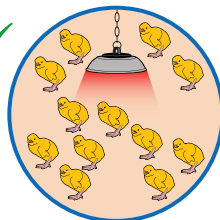


### **Environment too cold:**

Poults huddle together or under heat source, and may be noisy and distress-calling.



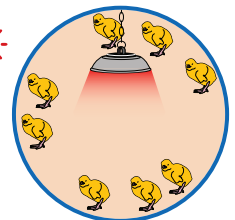
**ACTION**  
Increase temperature



### **Environment correct:**

Poults are spread evenly and noise signifies contentment.

**ACTION**  
No action required



### **Environment too hot:**

Poults move away from heat source, are quiet and pant, and head and wings droop.



**ACTION**  
Decrease temperature