Chick Placement Checks

H&N TECHNICAL TIPS

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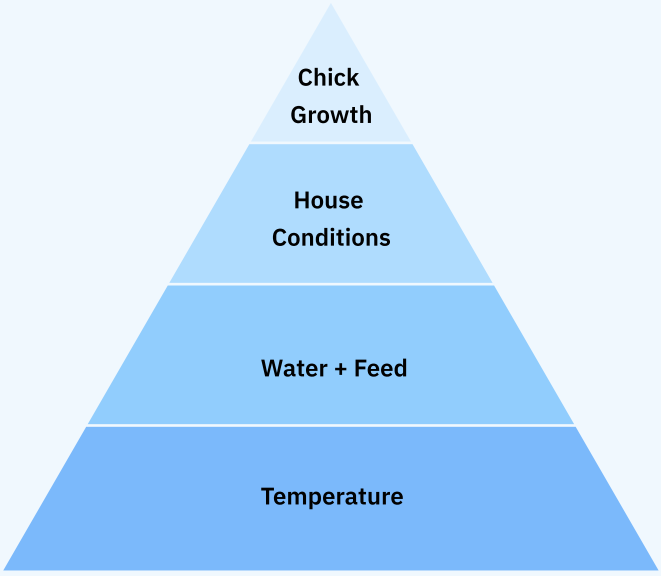
Key factors for successful placement

Figure 1. Priorities when placing chicks. Each factor contributes to building a strong foundation that supports optimal chick growth.



Temperature – the most important

Pre-heating the house at least 24 to 48 hours before placement is non-negotiable for ensuring correct temperature is achieved uniformly throughout the house. Time required for pre-heating will vary by season and house heating capacity, but checks throughout the house can help ensure that temperatures are correct.

Areas where temperatures should be checked and the recommended temperature ranges are outlined in Action Item 1. Monitoring these areas will verify that the house temperature is correct and uniform before the chicks arrive.

Action Item 1. Monitoring House Temperature Before Arrival

Temperature Location		
Air	**Litter or Paper**	**Concrete or Ground**
34-36°C (93-97°F)	32°C (90°F) or higher	28°C (82.4°F) or higher

Technical TIP

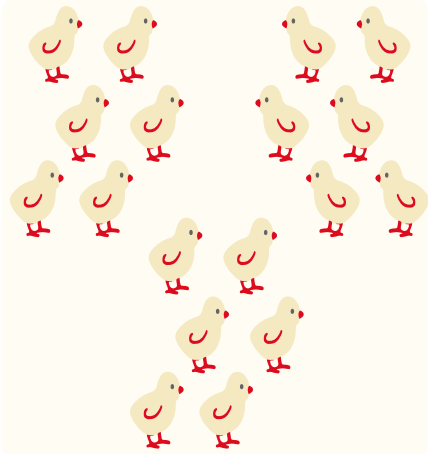
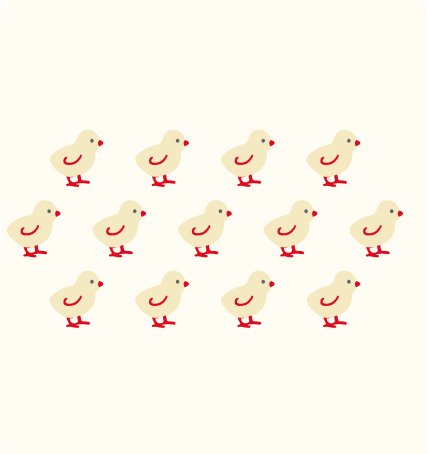
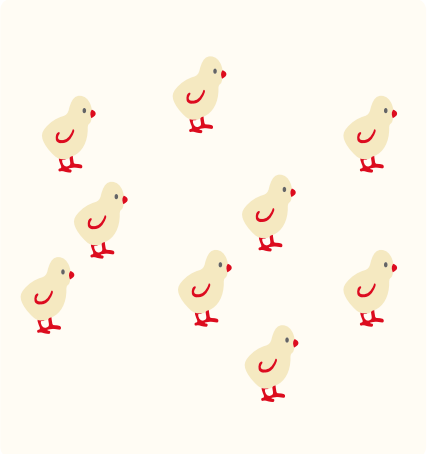
Place smaller chicks in the warmest cages/areas of the house.

Smaller chicks require a higher temperature (1 to 2°C or 1.8 to 3.6°F above recommendations) to maintain their body temperature.

Chick comfort should also be assessed through observing behavior as shown in Action Item 2.

Action Item 2. Monitoring Chick Behaviour

Chick Behaviour

Low Temperature Distribution	Correct Temperature Distribution	Hot Temperature Distribution
		
Chicks huddled in groups, not active, feed and water intake limited	Chicks evenly spread, actively consuming feed and water	Chicks spread apart, panting, may be drinking but unlikely to eat

Checking chick body temperatures is a reliable way to monitor chick comfort, as shown in Action Item 3.

House temperature should be adjusted to maintain a chick body temperature between 40-41°C (104-106°F).

Action Item 3. Sampling Chick Body Temperature

3.1. Chick Temperature Sampling

Brooding type	Sample size
Floor - partial brooding	20 random chicks
Floor - spot brooding	4 to 5 chicks per brooding circle
Cage or aviary systems	15 chicks from front of house, 20 chicks from middle, 15 chicks from back.

3.2. Procedure

Ear thermometer pressed against the vent can be used to measure chick body temperature.

3.3. Chick Body Temperature Goals

Target
40-41°C
(104-106°F)

- > 0.3°C (0.5°F) → Decrease house Temp. - 0.5°C (1°F)
- < 0.3°C (0.5°F) → Increase house Temp. + 0.5°C (1°F)

→ **Recheck** body temperature

After adjusting house temperatures:

- Check environmental temperatures throughout the house 1-2 hours after adjustments to see that changes occurred uniformly.
- Recheck chick body temperatures after the house temperature has adjusted to allow time for the chicks to respond.

Action Item 4. Temperature loggers or minimum/maximum thermometers should be placed throughout the house to monitor temperature after placement (see different thermometer examples below). Check these instruments often so that incorrect temperatures are quickly detected and corrected.

Temperature Loggers

⚠ (Thermometers must be at chick height in all locations)

Next to feed and water	Centre of house	Perimeters of house
Temperature here is critical as chicks will not eat or drink if they are not comfortable.	This area will be warmest, and overheating can be a concern.	These areas can be cooler, monitor to prevent chicks from being chilled.
Thermo-hygrometer	**Electronic logger**	**Mercury thermometer**

Note: these are only suggested locations, observe chick behaviour as per Action Item 2 and measure body temperature if chicks appear too cold or too hot.

Feed

The easier it is for chicks to access feed, the more likely they will consume enough to double their body weight by 7 days. Using paper and pan feeders ensures that chicks can easily access feed throughout the house while adapting to the house environment.

Feed should be scattered over the paper at placement and refreshed daily for the first 3 to 7 days. Paper must be strong enough to support repeatedly adding feed and chick activity; thin paper will disintegrate and result in feed wastage.

Action Item 5. Setting Up Supplemental Feed

Setting Up Supplemental Feed: **Papers**

Floor brooding

Cover at least 50% of the brooding area with paper, placing it between drinking and feeding equipment.

Cage/Aviary Brooding

Cage wire floors should be covered with paper during the first week. All areas should be covered except the area directly below the drinkers.

Setting Up Supplemental Feed: **Pans**

- Pan feeders should allow about 3.5 cm (1.4 in) of feeding space per chick.
- This usually equals 2-4 feeders per 100 chicks, depending on feeder size.
- Rather add extra feeders instead of having too few.
- Ensure feed covers the bottom of the pan for the first few days following placement.
- Spread pan feeders between drinker and feeder lines throughout the house.
- Do not place feeders directly under the heater as this area will be too hot.

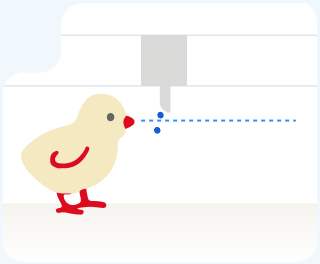
Technical TIP

Pan feeders hold more feed than papers with less spillage and are easier for the chicks to access than the house feeding equipment. Pans are not commonly used in cages, except for cocci vaccine application and recycling (where feed is not added).

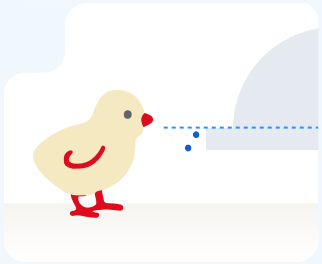
Water

Water is a vital nutrient, as chicks consume approximately twice as much water as feed. Supplemental drinker fonts provide easy access to fresh, clean water at the correct temperature (20-25°C, 68–77 °F) while chicks learn to use the house equipment. Water lines need to be flushed regularly during brooding if the water temperature exceeds 30°C (86°F).

Action Item 6. Drinker Height



Nipple lines should be slightly above chick eye level and nipples should be triggered during the first few days to attract chicks' attention. Cups below the nipple are recommended.



The top of the edge of the bell drinker or cup should be even with the chick's shoulder so they can easily reach the water.

⚠ *Monitor drinker height daily so that adjustments can be made as the chicks grow.

Action Item 7. Setting Up Supplemental Drinker Fonts

- Supplemental drinkers provide multiple, easy to reach drinking points for chicks.
- Used in both cages and floor brooding.
- Must be refreshed at least once per day to ensure water is clean, fresh, and at correct temperature.
- Drinker space should be about 2 cm (0.8 in) per chick based on the circumference of the font base, not the capacity of the font top.
- Place between the drinker and feeder lines, evenly spaced with the pan feeders.

Action Item 8. Measure Water Temperature

Water temperature is critical as chicks will not drink hot water and cold water can decrease their body temperature. Measure water temperature before placement and regularly check over the first few days after as temperatures remain high in the house. Check water temperatures at different points, as drinkers/nipples closer to water supply will likely be cooler and drinkers/nipples towards the end of the line will be warmer.

Remove the nipple and collect a small cup full of water for temperature measurement.

An infrared thermometer can also be used to measure water temperature.

Follow the graphic below for actions to take if water temperature is incorrect.

Target Water Temperature

20-25°C

(68-77°F)

- Water Temperature > 25°C (77°F) → Flush line, change water
- Water Temperature < 20°C (68°F) → Flush line early to allow time for water to warm up in drinkers

House conditions: Humidity

Relative humidity (%RH) can also impact the temperature experienced by the chicks, with severe consequences, as shown in Action Item 9.

Technical TIP

Adjusting relative humidity within the house is difficult, however **temperatures may be increased during low humidity or decreased in high humidity by 1°C (1.8°F) to help improve chick comfort.**

Action Item 9. Consequences of Incorrect Relative Humidity

Consequences of Incorrect Relative Humidity

Target		
60-70%	RH < 40%	Stress, dehydration, and damage to chicks' respiratory tract
	RH > 80%	Wet litter, heat stress

House conditions: Light

Light intensity must be between 40 and 60 lux during the first week and spread uniformly throughout the house or cage so that there are no shady spots.

Measure light intensity at the drinker level throughout the house as this is where the chicks will perceive its effects.

Action Item 10. Correct Lighting

Recommendation	Intensity = 40-60 lux	Uniform light	Measure light at chick level
Goal	Stimulate activity and feed/ water intake	Low variation in environment, avoid shady/dark spots	Make sure light intensity is correct at chick level, food/ water easily visible
Troubleshooting	Ensure lights are clean (no dust to reduce intensity) and dimmer are settings correct	Ensure correct lights are being used, replace missing or flickering lights	Check for shadows or equipment blocking light, add extra lighting if needed

A lighting program must also be in place, depending on the house type. For more information, see Technical Tip - Lighting Programs Part I.

How do you know you're doing well? Sampling crop fill

If all is correct, birds should be eating, drinking, and off to a successful start. Evaluate your brooding conditions by checking crop fill.

Brooding type	Sample size
Floor - partial brooding	100 random chicks
Floor - spot brooding	40 chicks per circle
Cage or aviary systems	25 chicks from front of house, 50 chicks from middle, 25 chicks from back.

Procedure

- If chicks have consumed food and water, the crop will be full, soft and round, with a dough-like texture
- If chicks are only consuming food but not water, the crop will feel full but hard
- If chicks are not consuming food (and possibly not water), the crop will feel empty

Correct crop fill: crop is full, visible

Empty or low crop fill: crop does not appear to be full of food, may have water.

6 hours after placement	12 hours after placement	24 hours after placement
75% chicks should have feed/water in crop	**85%** chicks should have feed/water in crop	**100%** chicks should have feed/water in crop

Troubleshooting

Feed but no water in crop:

- Check that water is clean and at drinkable temperature (flush lines if too hot)
- Check that water systems are working correctly and water is available (all nipples correctly working, no shavings in drinkers, no blockage in pipes, correct pressure)
- Check if additives are being used - some products can result in a bitter taste

Water but not feed:

- Check that there is enough access to feed throughout the house
- Check that the temperatures are correct to encourage feed consumption
- Check that feed quality and particle size are correct

Empty crops:

- Chicks will reduce feed intake if water is not available, see above check points
- House temperatures that are too high or too low will reduce feed intake
- Ensure that there are sufficient supplemental feeders available for the chicks and that the feed surface temperature is warm (if feed is cold, chicks may avoid it)

Less than 100% crop fill at 24 hours after placement, observe chick activity:

- Are chicks active and moving - incorrect temperatures will reduce activity and alter feed and water intake
- Are chicks crowding feeders and drinkers - more supplemental feeders and drinkers will reduce crowding, allowing more chicks to access feed and water

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