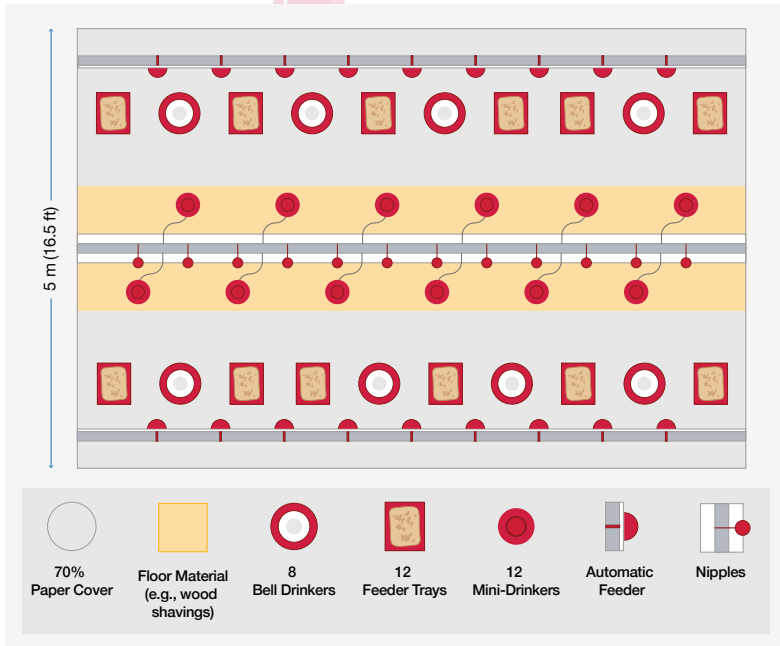


## Why the correct whole-house brooding set-up is important?

- Brooding is the first 7 - 10 days of a chick's life and the objective during this period is to provide the optimum conditions for the development of appetite and feeding behavior.
- The correct set-up of the brooding area will provide the best start for a chick so that it can go on to achieve high levels of flock performance, uniformity and welfare.



## Whole-house brooding set-up



## The procedure for setting up a whole-house brooding area

Start with a clean, disinfected, biosecure and dry house where the litter has been evenly spread over the floor area to a minimum depth of 2 cm (0.8 in).

### Equipment

1. Plastic, card or wood board fencing approximately 50 cm (20 in) in height to partition off the brooding area.
2. Chick paper or alternative floor covering to place in the brooding area.
3. Mini or supplementary drinkers.
4. A thermometer to measure temperature.
5. A hygrometer to measure humidity.
6. Light intensity meter (appropriate to light source).
7. A heat source.

## Procedure for whole-house brooding set-up

When whole-house brooding, it is good practice to reduce the size of the area where the chicks are placed. Calculate the correct size of brooding area needed then place the brooding surround across the house, securing it so that it cannot fall down. Where the mechanical feeding and drinking systems pass through the surround, care should be taken to ensure any gaps are blocked so that the chicks cannot escape.

Allow an initial chick stocking density of 40 chicks / m<sup>2</sup> (3.7 chicks / ft<sup>2</sup>).

**Step 1** Place the chick paper across the brooding area in rows parallel to the mechanical feeding and drinking systems. The paper should cover at least 60% of the brooding area.

**Step 2** Lower the mechanical feeding system onto the litter; make sure the system is level on the floor. If a pan system is being used the flood setting on the pan should be set to fully open. Where a chain feeder is being used the depth setting slide should be adjusted to provide the highest level of feed.

- Run the mechanical feeding system and check the feeders are all full to the correct level.
- To stimulate activity, 40g (0.09lb) per chick should be spread on the paper, with fresh feed added daily until day 3.



Step 2a

**Step 3** Lower the drinker system to allow unrestricted access for chicks.

- If using nipples allow 10-12 birds per nipple.
- If using bell drinkers allow 8 bell drinkers per 1000 birds.

Place supplementary drinkers or mini drinkers between the main drinker line and the mechanical feeding system.

- 12 mini or supplementary drinkers per 1000 birds.
- Chicks should not have to travel more than 2 m (6.6 ft) to reach water.

Ideally supplementary feeders should also be placed in the brooding area (1 tray per 100 chicks).

**Step 4** Any electronic or digital temperature or relative humidity (RH) sensors should be calibrated with conventional meters to verify accuracy.

Place sensors at chick height in the front, middle and rear of the house. (See *How To...Monitor Temperature and Humidity*).

At least 24 hours prior to placement, turn on the main heat supply to begin preheating.

Recommended environmental conditions at placement are:

- Air Temperature: 30.0°C (86.0°F).
- Floor temperature 28.0 - 30.0°C (82.4 - 86.0°F)
- Litter Temperature 28.0 - 32.0°C (82.4 - 89.6°F)



Step 2b

**Step 5** Fill the supplementary drinkers with clean, fresh water at the appropriate temperature (18.0 - 21.0°C [64.4 - 69.8°F]). Turn on the automated drinker system and flush the system of residual water.

**Step 6** Use a light meter to check light intensity of 30 - 40 lux (3 - 4 fc) is provided at bird height. This should be checked at different locations in the brooding area to ensure a uniform light distribution.

**Step 7** Gently unload the chicks onto the feed, ensuring they are distributed evenly across the entire brooding area.

**Step 8** Monitor and record.

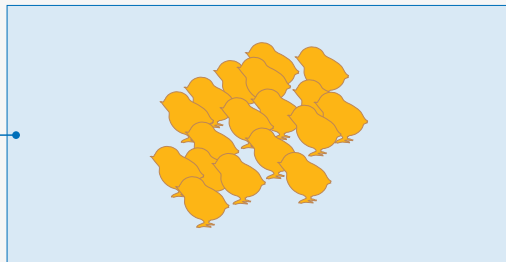
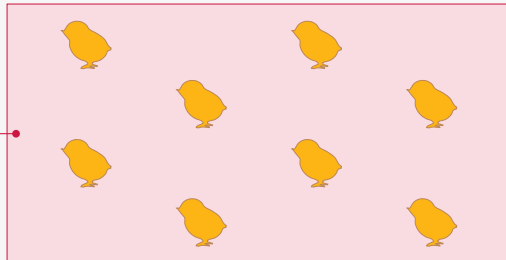
- Check and record temperature at chick level - adjust as required.
- Check and record relative humidity in the house - adjust as required.
- Check and record light intensity and uniformity of light - adjust as required.



## Interpreting results

02

Typical distribution of chicks in whole-house brooding (without chick surround) at different temperatures.



## Interpreting results

In addition to monitoring bird behavior, the following traits should also be assessed:

- Crop fill - If chicks do not have the desired crop fill levels (e.g. if they are more than 5% below target for each age) (*See Broiler How To...Assess Crop Fill in Broilers*).
- Vent temperature - Lower or higher than recommended (39.4°C - 40.5°C [103.0 - 105.0°F]) (*See Hatchery How To...Check Your Chicks Are Comfortable*).
- Mortality - If higher than expected.
- 7 day body weight - If less than 4.5 times day old chick weight (*See Broiler How To...Bulk Weigh Broilers*).

Areas to consider if targets are not achieved:

### Environment

- Ensure that houses are pre-heated prior to chick arrival.
- Ensure chick comfort is optimum by monitoring and adjusting if needed:
  - o Air temperature at chick height
  - o Litter temperature
  - o Relative humidity
  - o Floor Temperature
- Ensure light intensity is at the optimum level in the brooding area.
- Ensure ventilation rates are correct for young chicks.

### Feed and water

- Ensure chicks have unrestricted access to feed and water.
- Ensure that feed is spread evenly on the paper, occupying at least 60% of the brooding area.
- Replenish feed on paper in small amounts given frequently.
- Ensure supplementary (mini) drinkers are used.

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