

Why assess crop fill?

- Assessment of crop fill at key times after placement is a useful means of determining appetite development and checking that all chicks have found feed and water.
- If adequate crop fill is not achieved, appetite development will be depressed, early growth rate will be compromised, feed conversion ratio (FCR), average daily gain and skeletal development will be below the desired levels and flock uniformity and processing performance will be affected.
- Monitoring of brooding procedures.



The procedure for assessing crop fill

Crop fill should be monitored during the first 48 hours, but the first 24 hours are the most critical.

Equipment

1. A catching frame.
2. A pen or pencil.
3. Paper to record crop fill.

Procedure

An initial check 2 hours after placement will indicate if chicks have found feed and water. Subsequent checks at 8, 12, 24, and 48 hours after arrival on farm are required to assess appetite development.

Step 1 Using the catching frame, collect 30 - 40 chicks in total; approximately 10 chicks at a time from 3 - 4 different places in the house (or surround where spot brooding is used).

Step 2 Handling each chick with care, gently feel the crop of each chick in the pen using your thumb and forefinger.



Step 2

Step 3 Record the content of the crop of each chick using the following categories:

- Full, soft, and rounded – Chicks have found feed and water.
- Full but hard with original feed texture felt – Chicks have feed but little / no water.
- Crop empty – Chicks have not found feed or water.

Step 4 Calculate the percentage (%) of chicks in each category by dividing the number of chicks recorded in each category by the total number of chicks assessed and multiplying by 100.

Step 5 Compare your results with the target crop fill assessment guidelines on page 3.

Example of crop fill recording sheet.

Hours after placement	8
Category	Number of chicks in category
1. Full, soft and rounded	
2. Full but hard with original feed texture	
3. Empty	
Total Recorded	35

Example calculation:

$$\begin{aligned}
 \% \text{ chicks in category 1 (full, soft, and rounded)} &= \frac{\text{Number of chicks in category 1}}{\text{Total number of chicks assessed}} \times 100 \\
 &= \frac{30}{35} \times 100
 \end{aligned}$$

Chicks in category 1 = 86% measured at 8 hours after placement.

Target crop fill assessment guidelines.

Time of Crop Fill Check After Placement	Target Crop Fill (% of Chicks with Full Crops)
2 Hours	75
8 Hours	>80
12 Hours	>85
24 Hours	>95
48 Hours	100

Interpreting results

Crop fill on or above target guidelines.

No action required

Crop fill 5% below target guidelines (e.g. 75% or lower at 8 hrs after placement).

Action required
Further investigation of brooding practices required

Areas to consider:

Environment

- Ensure that houses are pre-heated prior to chick arrival.
- Ensure chick comfort is optimum by monitoring and adjusting if needed:
 - Air temperature at chick height
 - Litter temperature
 - Relative humidity
- 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 at least 80% of the floor area is covered in paper with feed on.
- Replenish feed on paper in small amounts given frequently.
- Ensure supplementary (mini) drinkers are used.

