Why weigh eggs?

- When used in conjunction with body-weight trends, daily egg weight measurements allow accurate management of bird feed allocation during production.
- Daily egg weight is a sensitive indicator of the adequacy of bird total nutrient intake. Inadequate nutrient intake will lead to a decrease in egg weight and excessive nutrient intake to an increase in egg weight.

The procedure for weighing eggs

Equipment

1. A digital or dial type platform scale with a weighing accuracy of +/- 10 g (0.02 lb) and a capacity of 10 kg (22 lb).
2. Pen or pencil.
3. Calculator.

***Note** - All scales should be calibrated on a regular basis (at the beginning and end of every weighing) to ensure they are weighing accurately and that correct egg weight management is maintained.*

Procedure

Egg weight should be recorded daily from 10% hen day production. A sample of 120-150 eggs should be bulk weighed each day.

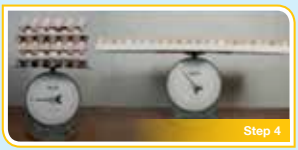
Step 1 Eggs to be weighed should be collected at second collection (to avoid using eggs laid the previous day). All small, double-yolk, cracked, and abnormal eggs should be removed before weighing.

Step 2 Place platform scales on a flat level surface.

Step 3 Zero the scales and weigh an empty egg tray or carton.

Step 4 Remove empty tray(s) from the scales and replace with tray(s) filled with eggs.

Step 5 Record the total weight of eggs and tray(s).



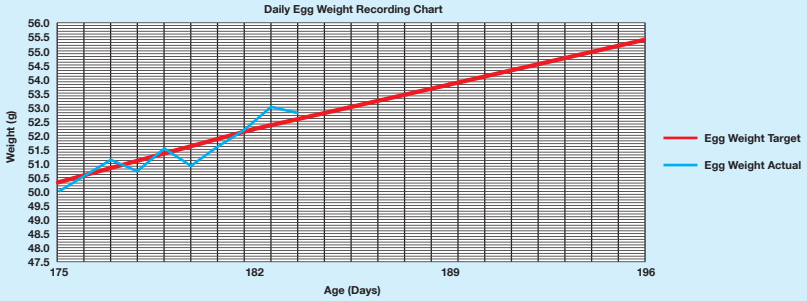
Step 6 Calculate the average egg weight. Record egg weight on standard egg weight chart. The scale of the graph on the chart should be large enough (1 g or 0.002 lb / 0.03 oz increments) to clearly show daily variation in egg weight.

Example Calculation:

$$\text{Average daily egg weight (g / lb)} = \frac{\text{Total weight for all eggs weighed – total weight of egg tray(s)}}{\text{Number of eggs weighed}}$$

$$\text{Average daily egg weight} = \frac{(7800\text{ g } [17.2\text{ lb}] - 300\text{ g } [0.66\text{ lb}])}{150} = 50\text{ g } (0.11\text{ lb})$$

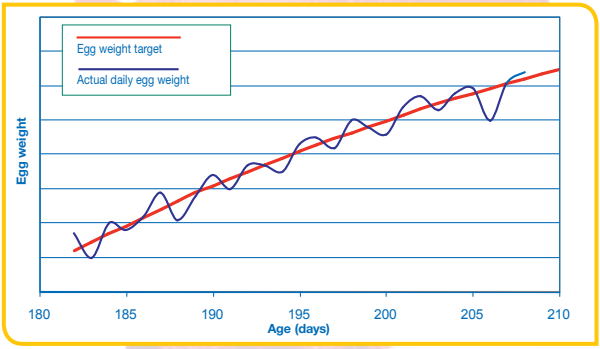
Example of daily egg weight recording chart:



Interpreting results

Normal pattern of daily egg weight

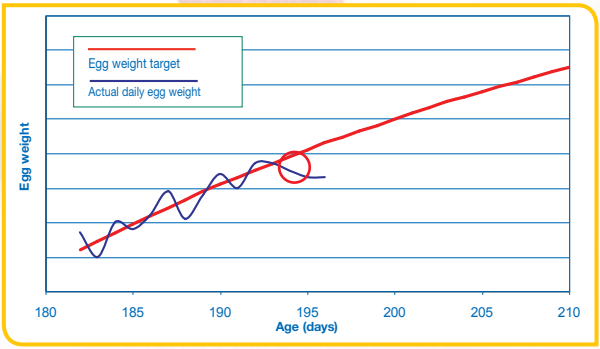
In a flock receiving the correct quantity of feed, egg weight will normally follow the target profile. Some variation around that target should be expected due to sampling variation and environmental influences.



No action is required in this case.

Egg weight trends at peak or prior to peak feed allocation

1. Reducing or static egg weight over a 3-4 day period.



Action required

Flock is underfed; feed increases should be brought forward if the birds have not reached peak feed yet, or feed should be increased further if peak feed levels have been reached.

2. Egg weight trend increasing above target over a 3-4 day period as birds are coming into peak production.

No action required

Slowing down or reducing feed increases as birds are coming into peak will have a negative impact on flock egg production levels and should be implemented with extreme care.

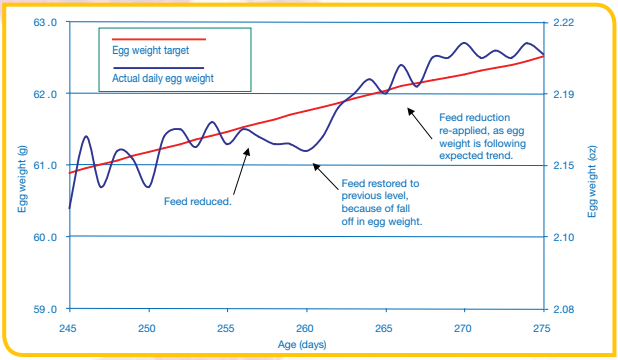
However, a review of feeding practices should be completed before the next flock.

Egg weight trends post peak

1. Egg weight trend falling away from the expected target over a 3-4 day period.

Action required
Increase feed allocation. A falling egg weight trend may be more obvious where feed has been withdrawn too quickly post peak.

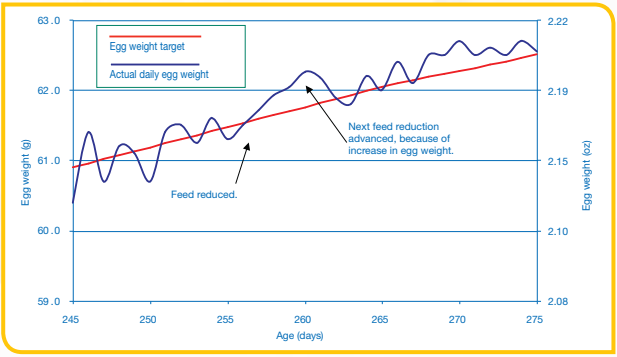
Example of re-assessment of feed removal when daily egg weight decreases in a consistent and continuous way by more than expected and feed levels need to be increased again.



2. Egg weight trend higher than expected over a 3-4 day period.

Action required
Advance next feed reduction.

Example of re-assessment of feed removal when daily egg weight increases in a consistent and continuous way by more than expected and feed levels need to be reduced again.



It is important to remember that daily egg weight measurements must be used in conjunction with body-weight trends to allow accurate management of bird feed allocation during production.