

Why individually weigh broilers from 21-28 days onwards?

Birds should be weighed at least weekly from 21 days of age.

Routine accurate estimates of average body weight are:

- Essential in planning the appropriate ages for processing and for determining the coefficient of variation (CV%) to ensure that the maximum number of birds fall into the desired weight bands at depletion.



The procedure for individually weighing broilers from 21-28 days onwards

Bird Handling

Birds must be handled in a calm and correct way by people who have been appropriately trained. Bird welfare must be a priority at all times.

Equipment

1. A good set of electronic or manual / mechanical dial scales with 10 g (0.02 lb) increments, an accuracy of +/- 20 g (0.04 lb) and have a minimum capacity of 5 kg (11 lb).

Electronic scale (left) and mechanical dial scale (right) for taking individual bird weights.



2. A pen or pencil.
3. Weight recording charts.
4. Scientific calculator if weighing using manual / mechanical dial scales.

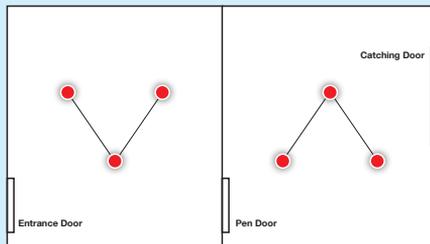
Note - All scales should be calibrated on a regular basis (at the beginning and end of every weighing) to ensure they are weighing accurately and correct body-weight management is maintained.

Procedure

Birds should be weighed on the same day each week.

Step 1 Suspend / situate scales in a secure, easily accessible place in the house or pen (if growing sexed broilers). Set scales to zero and have a secure shackle to hold birds in place before weighing begins.

Step 2 Catch and pen up a minimum of 100 birds or 1% of the population which ever is larger. If birds are sexed then a minimum of 100 birds or 1% of each sex should be weighed. Birds should be sampled from at least 3 points within each house (or sexed pen if growing sexes separately), away from doors and walls.



● Bird sample points

Step 3 Collecting one bird at a time, place its legs into the shackles, wait until the bird is calm and read the weight from the scale (to the nearest 20 g [0.04 lb] for mechanical scales).

Step 4 Record the weight obtained and gently release the weighed bird back into the main pen population.

Mechanical dial scales require manual data records to be kept and data calculations to be made for:

- Total number of birds weighed.
- Average weight per bird (Total weight of all birds ÷ Number of birds weighed).
- Weight range.
- Coefficient of Variation (CV%).



Step 1



Step 2

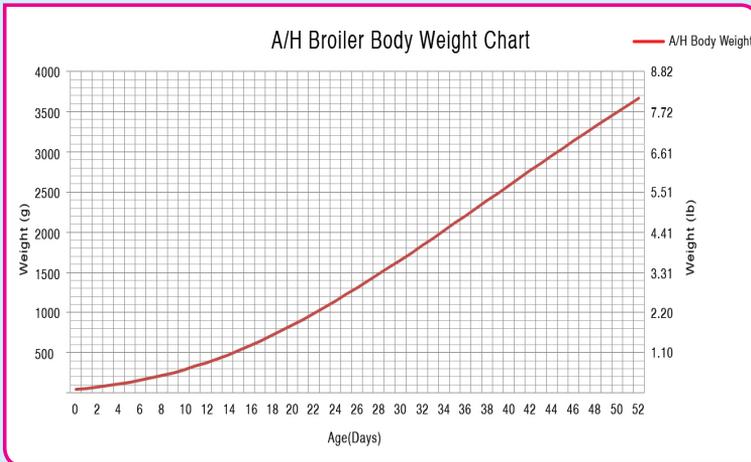


Step 3

Step 5 Repeat the weighing process until **ALL** birds in the catching pen have been weighed and the weights recorded. This will eliminate selective bias.

Step 6 Calculate average weight and the Coefficient of Variation (CV%). CV% is usually calculated automatically when using digital scales. If manual scales are used, it will be necessary to calculate the standard deviation using either a scientific calculator or a computer spreadsheet.

Step 7 Average body weight and CV% should be plotted on a body weight for age chart and compared to target. Variation from performance targets will help determine any management inputs needed and future processing requirements.



Example for calculation of CV%:

$$CV\% = \frac{\text{Standard Deviation}}{\text{Average Body Weight}} \times 100$$

For example:

Where standard deviation = 0.248 kg (0.547 lb) and average weight = 2.471 kg (5.448 lb)

$$CV\% = \frac{0.248 \text{ kg (0.547 lb)}}{2.471 \text{ kg (5.448 lb)}} \times 100 = 10.2$$

Interpreting results

A deviation from expected body weight may be due to an inaccurate weighing. If an inconsistent body weight is recorded, check that the scales are working correctly and then weigh a second sample of birds immediately as a check before making any changes to the birds' environment.

1. Live weight lower than target:
 - a. Check environmental conditions to ensure ventilation and house temperatures are being achieved.
 - b. Check lighting program is implemented correctly and light intensity is not too low.
 - c. Check feeder and drinker heights are correct for bird age and size.
 - d. Check birds per feeder and drinker are sufficient for stocking density.
 - e. Check feed and water intakes are as expected for flock age.
2. Live weight higher than target:
 - a. This may affect processing yield needs and anticipated targets. Flock depletion times may need to be altered to account for this.

More Information

- Broiler Management Handbook