

# STANDARD REFERENCE WEIGHT CALCULATOR

Standard reference weight is the liveweight of a fully grown, bare-shorn, non-pregnant sheep in condition score three (CS3) with no gut fill (i.e. empty). Determining the standard reference weight (SRW) of your flock provides a useful comparison across a range of animals of varying liveweights and condition scores in order to make decisions about meeting their nutritional requirements for maintenance or growth.

To determine the SRW, use scales to weigh a representative sample of your adult ewe base. The best way to do this is to let a few ewes run through the race at the start whose liveweight is not included (as the bigger ewes are generally at the front of the yard), then weigh a group of ewes (at least 50, depending on your flock size and the consistency of your ewe base). After you have determined your flock average liveweight on that day, adjust it based on the following factors:

- Deduct five per cent from the average liveweight if ewes have not emptied out to account for gut fill. If sheep have been yarded for four hours off feed and water you will not have to adjust for this.

- Add or subtract 19% from the average liveweight to account for any variation away from an average of CS3 (e.g. if average CS of the mob is CS2, and the average liveweight is 50kg, add 9.5kg, however, if the average CS of the mob is CS4 and the average liveweight is 50kg, subtract 9.5kg from the average liveweight).
- Make an allowance for fleece weight if ewes are not bare shorn (e.g. for full wool deduct your average adult fleece weight, for six months' wool deduct half your average adult fleece weight).

**NOTE: When calculating SRW, accounting for the weight of a foetus and placenta at different stages of pregnancy is complicated. The most accurate results will be achieved with non-pregnant (dry) sheep.**

## WORKED EXAMPLE:

### STEP 1: AVERAGE LIVELWEIGHT (KG) (A)

To determine the average liveweight (LW) for your flock:

- multiply each LW value by the number of crosses in that column and record the value beneath the LW score in the 'Total' row
- add all the figures in the 'Total' row and divide by the number of animals weighed.

$$= 90 + 95 + 200 + 210 + 550 + 460 + 480 + 250 + 325 + 135 + 70$$

$$= 2865 / 50$$

$$= 57.3 \text{ (rounded to 57 kg)}$$

### STEP 2: CONDITION SCORE (B)

Add or subtract 19% per CS to account for variation away from CS3. Average CS of flock is CS2:

$$= \text{CS2} - \text{CS3}$$

$$= \text{Difference of one CS}$$

$$= 0.19 \times 57$$

$$= 10.8 \text{ (rounded to 11kg)}$$

### STEP 3: GUT FILL (C)

Ewes straight off feed, so need to account for gut fill. Subtract 5% of average LW:

$$= 0.05 \times 57$$

$$= 2.85 \text{ kg (rounded to 3 kg)}$$

### STEP 4: FLEECE WEIGHT (D)

Average annual fleece weight is 6 kg, and ewes have 6 months' wool. Subtract weight of wool growth:

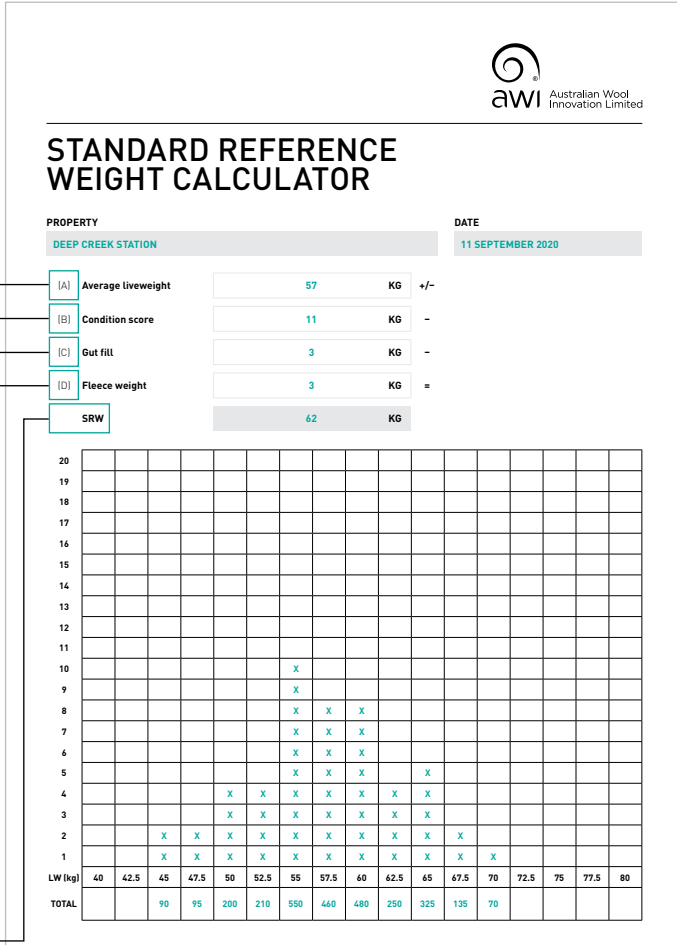
$$= 6 \times 0.5$$

$$= 3 \text{ kg}$$

$$\text{SRW} = A \pm B - C - D$$

$$= 57 + 11 - 3 - 3$$

$$= 62 \text{ kg}$$



The screenshot shows the 'STANDARD REFERENCE WEIGHT CALCULATOR' interface. It includes a header with the AWI logo and the text 'Australian Wool Innovation Limited'. Below the header, there are fields for 'PROPERTY' (DEEP CREEK STATION) and 'DATE' (11 SEPTEMBER 2020). The main input area contains a table with the following data:

[A] Average liveweight	57	KG	+/-
[B] Condition score	11	KG	-
[C] Gut fill	3	KG	-
[D] Fleece weight	3	KG	=
SRW	62	KG	

Below the input fields is a large grid for data entry. The grid has 20 rows (labeled 1 to 20) and 15 columns (labeled 40 to 80). The 'TOTAL' row at the bottom contains the following values: 40, 42.5, 45, 47.5, 50, 52.5, 55, 57.5, 60, 62.5, 65, 67.5, 70, 72.5, 75, 77.5, 80. The grid contains 'X' marks in various cells, representing the data points used in the worked example.

