Understanding 600 Day Weight EBVs

Within the Australian commercial beef industry, the major determinant of the price received for an animal is live weight. Consequently, in most economic analyses, positive emphasis on increasing live weight is warranted, with higher live weights (or earlier age at turn off) leading to higher profitability.

BREEDPLAN currently calculates four EBVs related to live weight – 200 Day Growth, 400 Day Weight, 600 Day Weight and Mature Cow Weight. These EBVs provide a prediction of the animal's ability to grow to 6-7 months of age (ie. 200 Day Growth), 13-14 months of age (ie. 400 Day Weight), 20-22 months (600 Day Weight) and maturity (Mature Cow Weight).

Interpreting 600 Day Weight EBVs

600 Day Weight EBVs are estimates of the genetic differences between animals in live weight at 600 days of age. 600 Day Weight EBVs are expressed in kilograms (kg).

This EBV is an important trait for breeders targeting the production of animals suited for heavy weight grass or grain fed markets. Larger, more positive, 600 Day Weight EBVs are generally more favourable. For example, a bull with a 600 Day Wt EBV of +70 kg would be expected to produce heavier calves at 600 days of age (20-22 months) compared to a bull with a 600 Day Wt EBV of +40 kg.

Of course, it is important to consider that selection on increased growth alone may result in changes to other economically important traits that may indirectly affect profitability. For example, selection for animals with increased 600 Day Weight may result in an increase in birth weights and subsequently more calving difficulty, or alternatively an increase in 600 Day Weight may increase the mature weights of your female cow herd, resulting in higher feed costs.

Recording Information for the 600 Day Weight EBV

The 600 Day Weight EBVs are calculated from the live weight performance of animals when they are between 501 and 900 days of age.

While most stud producers will be reasonably comfortable with how to record the live weights of their animals, there are a number of important considerations that should be made in order to maximise the effectiveness of the live weights that are recorded.

- Weights should be recorded to the nearest kilogram.
- Calves do not need to be weighed when they are all exactly 600 days of age. Breeders should choose a weighing date that fits in with their management and is reasonably close to when the average age of the group of calves is approximately 600 days old. BREEDPLAN provides suggested weigh dates to assist you when making this decision.
BREEDPLAN can analyse up to two 600 day weights on each animal. Generally speaking, it is only necessary to record one weight, however in some circumstances, recording more than one weight will improve the accuracy of the 600 Day Weight EBVs.

A management group should be entered for any calf or group of calves that have either been treated differently or exposed to significant non-genetic influences since their last weighing. For example, calves given a supplement should be recorded in a different group to those without a supplement. Consideration should also be given to variations in pasture quality, stocking rates, water quality, animal health, injury etc. Note that blank is a unique management group.

To ensure the maximum number of calves are analysed in the same management group, you should try to weigh all the animals from one management group on the same day. BREEDPLAN will automatically split your management groups if you weigh on different days.

Ideally, calves should be weighed when they are in as large a group as possible. Consequently, try to weigh calves before any of the calves in the management group are treated differently.

Do not submit weights for heifers that are more than 3 to 4 months pregnant at weighing, unless they are at a similar stage of pregnancy and have been pregnancy tested. This is particularly relevant when submitting 600 day weights for heifers that are being calved down at 2 years of age.

If selling bulls at 18 months of age, consider taking an early 600 day weight before these bulls have been sold. Animals can be weighed for 600 Day Weight EBVs from to 500 days of age onwards (ie. 16-17 months).

Live weight information should be submitted directly to the BREEDPLAN office at ABRI.

The main method of submitting live weight information is by completing the BREEDPLAN “performance recording forms”. Performance recording forms will be sent to you shortly after you record your calves with your Breed Society or can be requested by contacting staff at BREEDPLAN.

Alternatively, live weight information can be submitted electronically via either:
- a BREEDPLAN compatible herd recording computer program
- the performance submission facility offered on some Breed Society websites
- the BREEDPLAN compatible Microsoft Excel template.

For more information regarding 600 Day Weight EBVs, please contact staff at BREEDPLAN.