



Mature Cow Weight – The balancing act!

A question worth asking yourself is “what impact is the weight of the cows in my breeding herd having on the overall profitability of my business?”

To answer this you need to understand how the weights of mature cows influence costs and returns of production. Primarily, mature cow weight will affect:

1. **Costs through feed requirements:** In general, lighter cows will tend to eat less, have lower feed requirements and be more cost efficient to maintain compared to heavier cows.
2. **Returns from cull cows:** The returns from cull cows can make up a significant proportion of the total income of a beef breeding business. In most situations heavier weight cows will return more per head than lighter weight cows. But at what cost?
3. **Fertility vs. weaning weight:** There is some evidence to suggest that, generally, heavier cows produce heavier weight weaners, BUT the number of calves produced per cow joined tends to decrease with increasing cow weight.

In a commercial situation in which the objective is to maximize profit, the more desired cow weight (light, moderate or heavy) will depend on the cost of feed, the current value (c/kg) for cull cows and the advantage of having more or heavier weaners.

In a situation of limited feed (high cost of available feed) and a fall in cull cow value, a breeding objective of moderating or reducing average cow weight is most likely to be more profitable. In times of abundant, low cost feed and high cull cow values the most profitable breeding objective may be to breed for heavier weight cows.

So, the weight of your breeding cows will impact on your profitability and the decision to breed moderate, lighter or heavier cows needs to take into account several key factors. There are a number of tools available that can assist you make the most profitable breeding decision such as BreedObject (www.breedobject.com) or Breedcow Dynama (www.dpi.qld.gov.au/breedcowdynama). *In this decision making process remember you are breeding for tomorrow so will need to make some assumptions about the future. This can be viewed as long term sustainability verses short term profit.*

Once you have made the decision to reduce, moderate or increase the average mature cow weight of your breeders you must identify a means to meet this goal. This can be achieved through bull selection using effective information.

Bulls selected (purchased) for breeding in a self replacing herd will influence the average mature cow weight. This occurs through the genes they pass on to their heifer calves that are subsequently retained for breeding. A useful source of information that indicates genetic differences between bulls for mature cow weight is the Mature Cow Weight EBV.



Mature Cow Weight EBVs are estimates of the genetic differences between cows in live weight at 5 years of age and are expressed in kilograms (kg). A Bull with higher, more positive Mature Cow Weight EBV is expected to produce daughters with, on average, heavier mature cow weights than bulls with a lower mature cow weight EBV.

Mature Cow Weight EBVs are generated from the Shorthorn GROUP BREEDPLAN analysis from the live weights of cows that are recorded at the same time (within 2 weeks) of the weaning weight (200 day weight) of their calves, with up to 4 weights analysed per cow. Weights are not analysed from cows that do not have a calf weighed at weaning.

Bulls have mature cow weight EBVs generated from the mature cow weight performance of all known female relatives (dam, grand dams, half sisters, daughters etc) and from relationships with other traits such as 600 day growth.

Using EBVs in bull selection has the added benefit of allowing you to identify bulls that are “curve benders” for post birth growth (e.g 600 day) and mature cow weight. That is, they produce calves that have genetics for above average post-birth growth but moderate mature cow weight genetics in the retained daughters. This is a breeding technique that can be utilised to avoid effect 3 (fertility vs. weaning weight) noted above.

To identify bulls that bend the curve seedstock herds must performance record both post birth (200, 400 and 600 day) and mature cow weights and submit to Shorthorn BREEDPLAN for analysis.

Further information on recording mature cow weight or interpreting mature cow weight EBVs can be accessed at the SBTS website (<http://sbts.une.edu.au>) or by contacting Christian Duff, SBTS Technical Officer Ph: (02) 6773 2472.