



## LIVESTOCK: BREEDING STOCK



# Too heavy, too light, getting weight just right

Photo: Fleur Müller

**Christian  
Duff**

SOUTHERN BEEF  
TECHNOLOGY SERVICES

Producers need to balance the gains of running heavy cows with the cost of sustaining their herds weight. Depending on the season, feed availability and market prices it may be more profitable to run breeding cows at moderate or light weights.

**Thinking for the future:** *Farmers need to be forward thinking when making breeding decisions and find a balance between short-term profitability and long-term sustainability. There are a number of tools available to farmers to help them achieve this balance.*

## At a glance

- The weight of breeding cows can directly impact on the profitability of a beef enterprise.
- Farmers need to consider the impact the weight of their cows is having on feed input costs, returns from the cull cows, fertility and weaning weight.
- Factors determining the ideal weight of breeding cows, will include the season, market forces and feed availability.
- There are a number of tools available to help farmers decide whether to breed cows that are heavy, moderate or light weight.
- Choosing bulls with the appropriate mature cow weight estimated breeding values will, in the long-term, help farmers achieve their herds goal weight.
- Mature cow weight estimated breeding values are estimates of the genetic differences between cows in live weight at five years of age.

**Beef producers can** improve their profits and cut costs by tailoring the weight of their breeding cows to suit seasonal conditions and market trends.

To determine the impact the weight of their breeding cows is having on the overall profitability of their business farmers need to understand how mature cow weight influences costs and returns of production.

### Factors influencing the impact of weight

In general lighter cows will tend to eat less, have lower feed requirements and be more cost efficient to maintain compared to heavier 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 farmers need to consider the cost of maintaining heavy cows.

There is evidence to suggest that 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 for cull cows and the advantage of having more or heavier weaners.

### Change to suit the season

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.

This is the situation facing the majority of Australian beef producers with the drought limiting feed and the rising Australian dollar leading to a fall in cull cow values.

But 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.

**In general lighter cows will tend to eat less, have lower feed requirements and be more cost efficient to maintain compared to heavier cows.**

### Tools to help make 'weighty' decisions

The decision to breed moderate, lighter or heavier cows needs to take into account the factors above. There are a number of tools available that can help farmers make the most profitable breeding decision such as BreedObject ([www.breedobject.com](http://www.breedobject.com)) or Breedcow Dynamia ([www.dpi.qld.gov.au/breedcowdynamia](http://www.dpi.qld.gov.au/breedcowdynamia)).

Farmers need to remember they are breeding for tomorrow and will need to make some assumptions about the future. This can be viewed as long-term sustainability versus short-term profit.

### How to achieve your weight goals

When producers have made the decision to reduce, moderate or increase the average mature cow weight of their breeders they



Photo: Toni Nugent

**Genetics:** *Mature cow weight estimated breeding values (EBV) are estimates of the genetic differences between cows in live weight at five years of age. A bull with high mature cow weight EBVs can be expected to produce heavier daughters than a bull with low mature cow weight EBVs.*

need to identify a means to meet their goal. This can be achieved through bull selection using effective information.

**Bull selection crucial**

Bulls bought for breeding in a self-replacing herd will influence the average mature cow weight. This occurs via 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 estimated breeding value (EBV).

**Understanding mature cow weight EBVs**

Mature cow weight EBVs are estimates of the genetic differences between cows in live weight at five years of age and are expressed in kilograms.

A bull with higher, more positive mature cow weight EBVs is expected to produce daughters with, on average, heavier mature cow weights than bulls with lower mature cow weight EBVs.

**Bulls bought for breeding in a self-replacing herd will influence the average mature cow weight.**

Mature cow weight EBVs are generated from the live weights of mature cows that are recorded within two weeks of the weaning weight (200 day weight) of their calves, with up to four 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 such as dam, grand dams, half sisters and daughters as well as from relationships with other traits such as 600 day growth.

**EBVs allow farmers to take action**

Using EBVs in bull selection has the added benefit of allowing producers to identify bulls that are “curve benders” for post birth growth such as 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 breeding technique can be used to breed moderate, fertile cows but not to the detriment of the growth rates of slaughter progeny such as steers.

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

**CONTACT** ▶ Southern Beef Technology Services  
 ☎ (02) 6773 2472  
 🌐 <http://sbts.une.edu.au>

**HALF PAGE  
ADVERT**