

# February 2016: New BW trait – Body condition score

Breeding Worth (BW) is an economic index that allows farmers to objectively rank animals according to their ability to generate profitable replacements.

The body condition score (BCS) trait has been found to have an economic value of \$98.40 per BCS point, and therefore it is important that we incorporate it into BW.

Incorporating BCS into BW will allow farmers to make more accurate selection decisions, which will better drive the profitability of their herd.

## BCS: A genetic trait with economic value

- Cows need to be at BCS 5 at the start of calving, as cows that calve down too light are compromised in their next mating season
- If a cow is light toward the end of her lactation, the farmer must take action to ensure she regains condition before calving

### Option 1: Dry her off early

– Decreased production = lost profit

### Option 2: Feed her more during the autumn/winter to ensure condition gain

– Increased demand on expensive winter feed = lost profit

- A cow that maintains condition into late lactation generates more profit for the farmer.

**\$98.40/BCS**



**HIGH BCS BV\***

Able to maintain good BCS over the season and into late lactation

Farmer can continue to milk her into late lactation

Requires only maintenance feed rations over most of the winter



**LOW BCS BV\***

Loses BCS over the season

Farmer forced to dry her off early – to ensure she gains condition before her next calving

Requires increased feed rations over autumn/winter, to increase BCS



**BCS 5 AT CALVING**

\*BV: Breeding Value

**DairyNZ**

To learn more about this change visit: [dairynz/BCS.co.nz](http://dairynz/BCS.co.nz)

## How will this change impact on the BW of bulls and cows?

### Bulls:

- The majority of bulls will shift \$15 BW or less
- A few bulls will have large shifts of around \$30 BW points

### Cows:

- Similar to the bulls it is expected that most herds will experience minimal (\$0-\$15) shifts in BW

Body condition score will be implemented into BW in Feb 2016 – the impact will be visible following the Feb AE run.

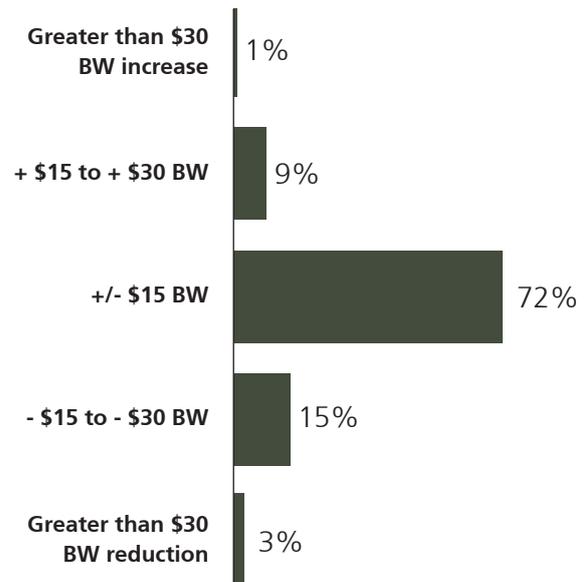
### NEED MORE INFORMATION?

To learn more about this change visit: [dairynz/BCS.co.nz](http://dairynz/BCS.co.nz)

This webpage contains the following:

- Details around how the Breeding Value for BCS is calculated
- A personalised tool which allows farmers to calculate the predicted shift in their herd BW

### Impact of BCS inclusion on the Breeding Worth (BW) of Animal Evaluation enrolled bulls



## Will breeding for cows that hold body condition better mean that we inadvertently create 'lazy' producers?

No. Breeding Worth (BW) is a selection index which allows farmers to achieve balanced genetic gain across a range of economically important traits.

Traits which have relatively high economic values, such as fat and protein production, receive a stronger emphasis in Breeding Worth. This means that animals with high genetic merit for BCS alone will not gain a high BW.

## How is the breeding value calculated?

The body condition score breeding value is calculated using records collected on two year old heifers. These records are collected in early lactation, and the majority of them come from CRV and LIC progeny test herds.

Raw scores are converted into a day 60 lactation equivalent, and then enter the AE model.

The breeding value for body condition score is 'breed neutral'; this is because on average, there is little difference between the breeds in late lactation body condition score.

## Should we include traits like Body Condition Score in Breeding Worth, when ultimately it is a cow's production that makes money for a farmer?

There are currently eight traits that have been identified as economically important to farmers. These are fat, protein, liveweight, milk litres, fertility, SCC, residual survival and BCS.

Of these traits, milk production is certainly the most visible economically, but it is important not to disregard the others as they all contribute to the profitability of a farm business.

The BCS trait improves farm profitability as animals that carry body condition over their lactation are able to be milked longer into late lactation, and do not require large amounts of expensive feed through the winter.

## I have never had my herd body condition scored, so how can my cows have a breeding value (BV) for this trait?

Recorded animals will have breeding values for all of the 27 calculated traits, including BCS. If a cow has never been scored for a trait, the Animal Evaluation system will calculate a 'parent average' breeding value. A parent average is calculated using half of the Mother's BV and half of the Father's BV.