

Body Condition Scoring Made Easy

The official field guide



DairyNZ 

Body Condition Scoring Made Easy

This booklet is a compilation of research results over a number of years, made possible by the investment of farmers in their industry through the DairyNZ levy as well as by other industry research and funding bodies.

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Body condition scoring in New Zealand

Assessment of a cow's body condition score (BCS) gives a visual estimate of her body fat reserves. This in turn provides useful information on the outcome of her previous feed levels, her current health status as well as her future feed requirements and productivity. The BCS method described in this guide provides a consistent way of assessing cow condition.

- A BCS scale of 1 to 10 is used in NZ
- If the BCS of any animal falls below 3 (on a scale of 1-10), urgent action must be taken to improve condition
- A cow with a BCS greater than 6.0 is considered obese
- 1 BCS unit change = 6.58% of cow liveweight (lwt)

Jersey (425 kg lwt):

1 BCS unit change = 28 kg lwt

Crossbred (475 kg lwt):

1 BCS unit change = 31 kg lwt

NZ Holstein-Friesian (500 kg lwt):

1 BCS unit change = 33 kg lwt

Overseas Holstein-Friesian (550 kg lwt):

1 BCS unit change = 36 kg lwt



The importance of cow condition

Body condition score targets at calving

- Mature cows: BCS of 5.0
- Heifers & rising 3 year olds: BCS of 5.5
- No more than 15% of animals below target.
- No more than 15% of animals above target.

Body condition score targets at mating

- The average decrease in BCS for the whole herd between calving and mating should not be more than 1.0 BCS unit.
- Mature cows should be a minimum of BCS 4.0 at planned start of mating (PSM).
- First and second calvers should be a minimum of BCS 4.5 at planned start of mating.

Body condition scoring is the same for all breeds but remember:

Jersey (smaller frame)

Narrow body with prominent hip bones

Crossbred (medium frame)

Even distribution of fat over body

NZ Holstein-Friesian (medium frame)

Even distribution of fat over body, blockier shape - shorter, rounder

Overseas Holstein-Friesian (large frame)

Angular body shape, appear thinner, carry more body fat over ribs



How to body condition score a cow using a “hands on” method

Body condition scoring is a simple process. However, it is important to calibrate the eye by first condition scoring cows “hands on”:

- Line up 15 cows with a range of BCS in a vet/AB race
- Put your hands on the eight body parts of the cow outlined below.
- Feel the amount of fat cover over the various body points and the difference between the cows. Note that gut fill can give a visual impression of condition over the ribs, therefore it is important to score on the right hand side of the cow and to feel the amount of fat cover.

The overall BCS of the cow will be the average of the scores for the eight body parts.

What to look for when you condition score cows

Backbone – is it flat or is there a ridge? Can you see or easily feel notches?

Long ribs – can you see or easily feel the ribs? If visible how many can you see?

Short ribs – can you see the short ribs? What do they feel like? Are the rib ends sharp or rounded?

Hip bones – are the hip bones rounded or angular?

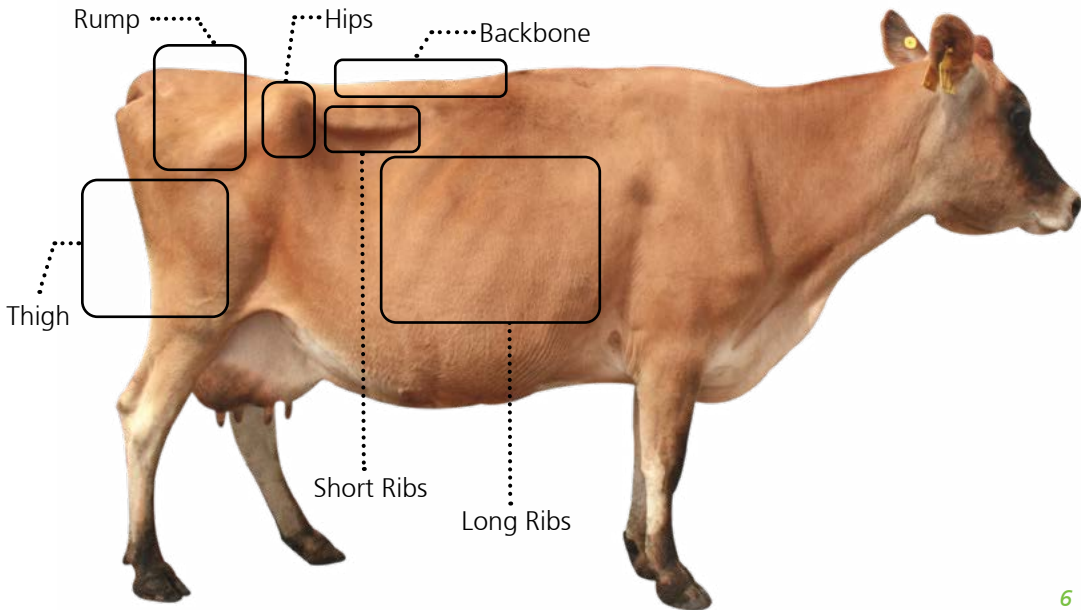
Rump – is the area between the pins and hip bones, flat, sunken or hollow?

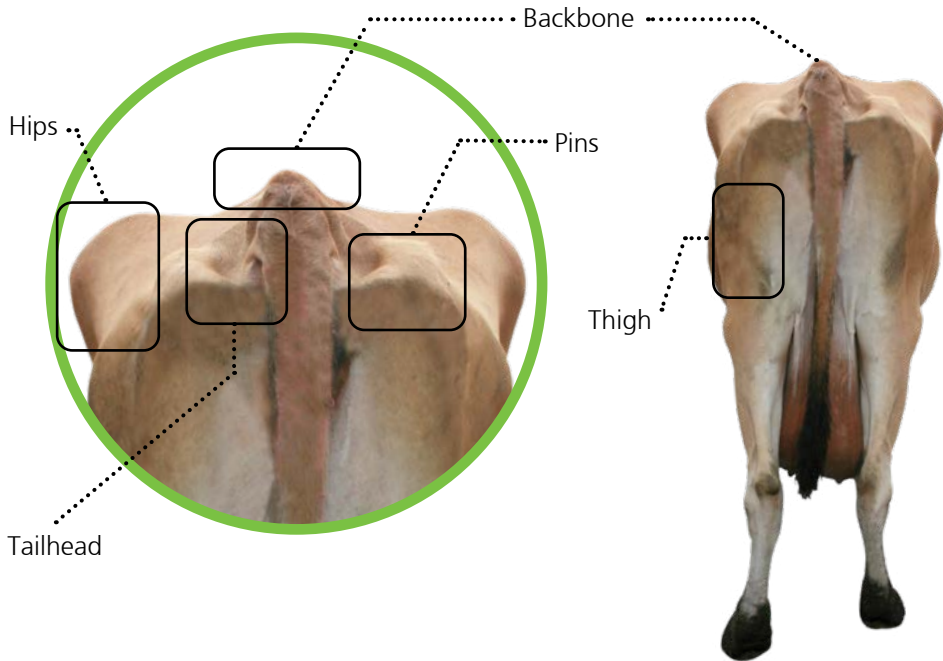
Pin bones – are they pointed, “tap” like or rounded?

Tailhead – is there a hollow between the tail head and pin bones? Is it a deep V or shallow U shape?














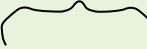
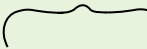
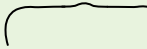
Thigh – is the area indented, flat or rounded? Is the muscle structure defined?


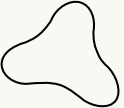


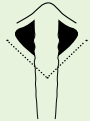


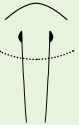




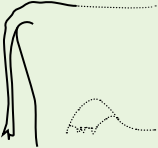
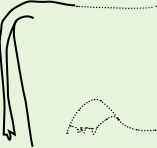
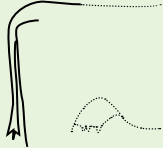
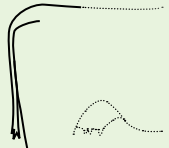
Critical points for body condition scoring





Critical points for body condition scoring

BCS	3.0	4.0	5.0	6.0
Backbone Rear view Side profile				
Long Ribs				
Short Ribs				
Hips				

BCS	3.0	4.0	5.0	6.0
Pins				
Tailhead				
Rump				
Thigh				

BCS, animal welfare, and transportation:

As the person in charge of looking after animals, it is your legal obligation to ensure that any animal under your care meets the minimum standards outlined in the relevant codes of welfare, published by the New Zealand Ministry for Primary Industries. The information provided below outlines your obligation with regard to BCS.

Dairy Cattle Code of Welfare 2019 Minimum Standard No. 2 (b) When the body condition score of any animal falls below 3 (on a scale of 1-10), urgent remedial action must be taken.

Urgent remedial action may include:

- Providing additional feed
- Seeking veterinary advice
- On-farm slaughter

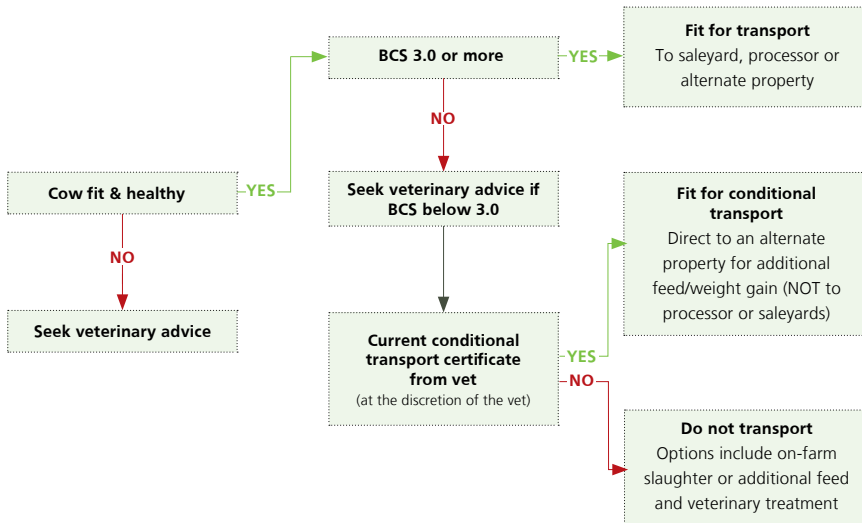
Animals below a BCS of 3:

- Cannot be transported to a processor or saleyards.
- Can only be transported to an alternative property for additional feed with a current conditional transport certificate from a veterinarian.

Further information on your obligations for pre-transport selection can be found at dairynz.co.nz/transport or the Dairy Cattle Code of Welfare 2019.






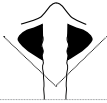


Note: The flow chart below provides a guide about transport restrictions; it does not guarantee acceptance of livestock for transport or processing.

Transport restrictions based on BCS:



Take urgent remedial action **BCS 2.5**











BACKBONE	Very prominent, with visible notches that can easily be counted.	
LONG RIB	The long ribs may be visible as far down as the top of the udder.	
SHORT RIB	Clearly visible and easily counted. The short ribs will have very sharp edges.	
HIP	Deep depressions on the side of the hip bone.	
PINS	Very clear, three pronged tap formation.	
TAILHEAD	Very prominent and angular, with a very deep "V" shape.	
RUMP	Severely depressed (hollow).	
THIGH	No visible fat and very little muscle.	











Take urgent remedial action **BCS 2.5**



BACKBONE	Prominent ridge. "Roofing-iron" corrugations.	
LONG RIB	4 to 5 ribs easily seen.	
SHORT RIB	Prominent with edges sharp to the touch.	
HIP	Angular, sharp edges. Depressions on sides appearing.	
PINS	Tap-like appearance. Sharp edges.	
TAILHEAD	Deep "V" shape depression. Tailhead prominent, bumpy profile.	
RUMP	Deeply dished.	
THIGH	Indented. No visible fat. Muscle structure defined.	













BACKBONE	Ridge raised. Ridgeline, uneven and bumpy to the touch.	
LONG RIB	2 to 3 ribs visible but rounded. Ribs easily felt.	
SHORT RIB	Individual ribs can be seen. Rounded at the ends.	
HIP	No sharp edges (smooth). Flattened top.	
PINS	Tap-like appearance. Rounded edges.	
TAILHEAD	Shallow "U" shape. Tail smooth. Base around tailhead is sunken.	
RUMP	Slightly depressed. Dished.	
THIGH	Slight depression.	

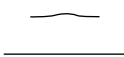











BACKBONE	Ridge easily visible but rounded and smooth.	
LONG RIB	Not visible but rounded to the touch.	
SHORT RIB	Rounded, individual ribs not visible but can be felt.	
HIP	Rounded. Curved in profile.	
PINS	Rounded.	
TAILHEAD	Tail rounded. Depression under tail filled. Even, no sharp edges.	
RUMP	Flat even cover.	
THIGH	Smooth and flat.	













BACKBONE	Ridge forms a bump. Starting to round across the loin.	
LONG RIB	Well-rounded with fat cover felt.	
SHORT RIB	Rounded with fat cover felt.	
HIP	Rounded with fat cover starting to appear.	
PINS	Well-rounded. Fat cover starting to appear.	
TAILHEAD	Fat cover starting to bulge.	
RUMP	Starting to round.	
THIGH	Starting to round.	













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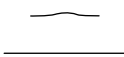











BACKBONE	Ridge easily visible but rounded and smooth.	
LONG RIB	Not visible but rounded to the touch.	
SHORT RIB	Rounded, individual ribs not visible but can be felt.	
HIP	Rounded. Curved in profile.	
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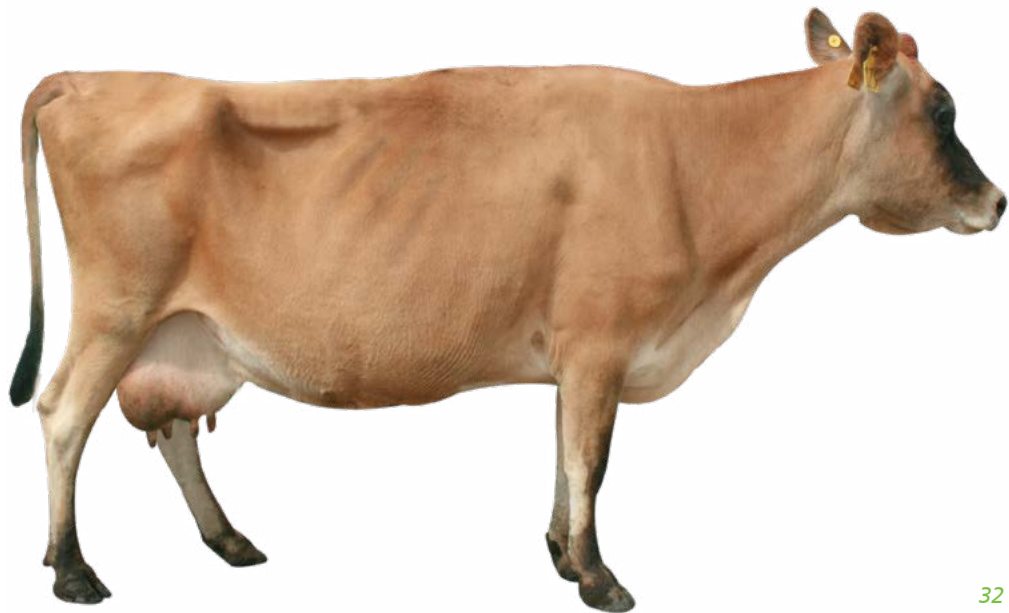
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




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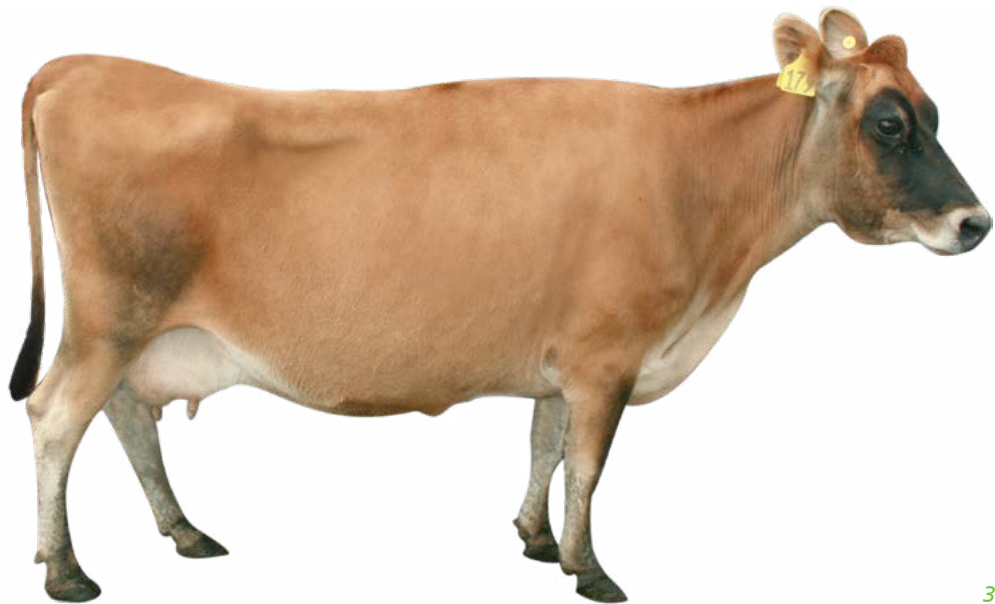
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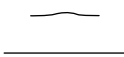











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PINS	Well-rounded. Fat cover starting to appear.	
TAILHEAD	Fat cover starting to bulge.	
RUMP	Starting to round.	
THIGH	Starting to round.	





BACKBONE	Rounded and smooth.	
LONG RIB	Covered.	
SHORT RIB	Rounded, cannot be felt.	
HIP	Rounded.	
PINS	Rounded.	
TAILHEAD	Fat cover appearing.	
RUMP	Flat even cover.	
THIGH	Smooth and flat.	



Visual body condition scoring for herd management

Who should Body Condition Score?

- Farmers and rural professionals can score cows. But while body condition scoring is a simple process, it requires training, practice and regular calibration to ensure accuracy and consistency.
- The best way to ensure independent, accurate and consistent body condition scoring using the DairyNZ method is to use a Certified BCS Assessor.
- Potential BCS assessors attend a training workshop and then complete an assessment. If successful, assessors are certified for 12 months. To remain certified, assessors must attend a formal calibration event every 12 months.

When to BCS?

- The most important time to body condition score cows is during **summer and autumn**. This allows individual groups of cows to be managed differently.
- A **pre-Christmas assessment** determines if cows have gained BCS since planned start of mating and a management plan for the autumn can be set up.
- Assessing cows in **mid-February to mid-March** determines if the management plan is working or whether some cows should be dried off early, milked once-a-day (OAD) or preferentially fed.
- Assessing BCS **pre-calving** (in springer mob) determines if the autumn management plan achieved the calving BCS targets and whether there is a need to re-assess management practices for next autumn.
- An assessment of BCS at **planned start of mating** helps determine how much BCS cows lost between calving and mating.

How many cows should I score visually?

- For much of the year an average BCS (and range) of the herd may be appropriate. The greater the percentage of animals assessed, the more accurate the result. However, for groups greater than 100 cows, a minimum of 70 cows should be scored when determining a herd average.
- These cows should be selected at random.
- Scoring all cows in the herd allows individual management and is most important during summer and autumn.

How to record Body Condition Scores?

BCS Tracker app

The BCS Tracker app allows you to score cows on your smartphone and have ready access to the results. It also takes the hassle out of recording BCS data on paper and then transferring it to a computer.

It also allows you to:

- Calculate the average score for the herd, and store and review over time.
- Score multiple herds and create a report.
- Flag an individual cow and record her tag for later reference.
- Access the *DairyNZ Body Condition Scoring Made Easy* field guide, when off-line.

For more information, visit dairynz.co.nz/bcs-app

BCS recording chart

This herd size =		126 cows									Date: 04-06-2011	
Condition score	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0		
Number of cows		13	27	33	27	14	8	4			Totals	
											126	A
Total BCS		39	94.5	132	121.5	70	44	24			525	B
% of sample (Number of cows in BCS group ÷ Total Cows (A))		10.3%	21.4%	26.2%	21.4%	11.1%	6.4%	3.2%				
Average Condition Score:	Total CS		Divide by		Total Number of cows		=		Average BCS			
	B	525	÷	A	126	=	4.2					

You can find this recording chart at dairynz.co.nz/howto-bcs



For further information on body condition scoring cows contact DairyNZ on 0800 4 DAIRYNZ (0800 4 324 7969) or your local DairyNZ Consulting Officer.

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