Dairy Australia

Cow body condition scoring handbook

2025

Delivering *for* Dairy

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Why body condition score your herd?

Assessing a cow's Body Condition Score (BCS) using a 1 to 8 scale provides a standardised measure of a cow's energy (and protein) reserves, and tells a lot about:

- Previous level of feeding
- Likely future productivity, and
- Future feed requirements.

Effective management of body condition and nutrition improves herd reproductive performance, milk production, feed conversion efficiency, and enhances cow health and welfare.

Cows that are too thin at calving are less fertile and produce less milk

- They take longer to recommence cycling, reducing submission rates and conception rates.
- They partition more feed energy to body condition gain versus milk production. This means cows fail to achieve their genetic peak milk yield and have lower lactation persistence.

Cows that are too fat at calving often have health problems

- They are more likely to have calving problems, metabolic disorders and other health problems, and have poorer appetites after calving than thinner cows.

Cows that lose excessive condition in early lactation are also less fertile

- They take longer to recommence cycling, reducing submission rates and conception rates. Poor expression of heat signs can also occur.

Measuring and managing body condition is all about managing your herd's nutrition program. Condition scoring your cows at critical times during their lactation cycle lets you know if you need to consider changing herd nutrition.

What is body condition scoring?

Body condition scoring is a visual assessment of the amount of fat and muscle covering the bones of a cow, regardless of body size. It is not affected by gut fill or pregnancy as liveweight is. It involves assessing specific locations on the cow to determine how thin or fat the cow is.

The one to eight body condition scale

Different systems are used to body condition score dairy cattle and beef cattle. In Australia, an 8–point scale is most commonly used for dairy cattle:

- A cow with a BCS of 1 is considered extremely thin, the result either of severe under-feeding or disease.
- A cow with a BCS of 8 is considered extremely fat and is at risk of several metabolic diseases after calving.

Body condition scoring using this 8 point scale provides a quick, easy, consistent way to assess body condition in dairy cattle. Only cows with a BCS of 3 to 6 are shown in this booklet as healthy, productive cows in commercial dairy herds should always be within this range. The scoring method is the same for all dairy breeds despite their differences.

Holstein-Friesians	Angular body shape, appear thinner, carry more body fat over ribs.
Cross-breds	More even distribution of fat over body.
Jerseys	Narrow body with prominent hip bones and higher set tail.

Note: Other dairy body condition scoring systems use different scales e.g. 5–point (US and Ireland), 10–point (New Zealand).

Body condition targets

A herd's range in body condition score (BCS) is as important as its average BCS. We need to know what proportion of cows are too thin and too fat, as these cows are likely to have reduced reproductive performance and milk production, and increased risk to their health and welfare.

Targets

At calving

- No more than 15 per cent of cows below BCS 4.5.
- No more than 15 per cent of cows above BCS 5.5.

At mating

- The decrease in average BCS of the herd since calving is no more than 0.6.
- No more than 15 per cent of cows lose more than one BCS since calving.
- Cows maintain or gain body condition from commencement of mating. (See page 34 for benefits from achieving BCS targets.)

At drying-off

- Cows in desired condition score at calving.
- Cows maintain or gain body condition during the dry period.

How to body condition score a cow

2-step 'hands-off' scoring method only takes seconds

Using the scoring method described in this booklet is simple and it only takes seconds to score each cow. You only need to make two observations to determine the BCS of any cow to the nearest half score.

- The first observation is made from the back of the cow, focusing on a location where it is easiest to see that she is starting to lay down fat.
- The first observation determines which part of the cow's body to focus on next. The second observation may be the area between the tail and pins, the backbone or the depression between the hip and pin.

This method is 'hands off'. It can be done from a distance. However, to get your eye in, it is a good idea to score some cows 'hands on' (see page 15).

Don't agonise over each cow's BCS. Make a quick assessment and move on to the next cow. If you score the recommended number of cows (see page 18), the cows you scored a little generously or harshly will balance each other and you will get a good indication of the herd's average BCS and the range of scores within the herd.

Key points to look at

1st observation

Look closely at area between tail and pins.

Is it deeply sunken, sunken, slightly sunken or filled in?

2nd observation

If area between tail and pins is deeply sunken.

Look at insides of pins. Are they hollow?

If area between tail and pins is sunken.

Look at backbone. Is it flat or a bumpy sharp ridge?

If area between tail and pins is slightly sunken or filled in.

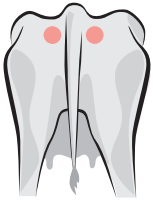
Look at depression between hip and pin. Is it U-shaped, shallow or flat?

How to body condition score a cow

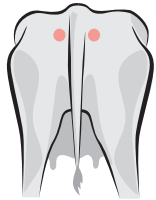
1st observation

How sunken is the area between the tail and pins?

Deeply sunken



Sunken



2nd observation

Are the insides of the pins hollow?

Yes

Condition score

3

No

Condition score

3.5

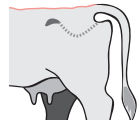
Is the backbone a bumpy sharp ridge?

Yes

Condition score

4

No

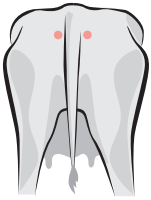


Condition score

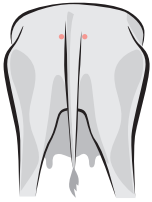
4.5

1st observation

Slightly sunken



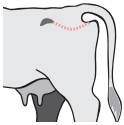
Filled in



2nd observation

The depression between the hip and pin is:

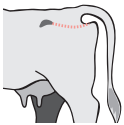
U-shaped



Condition score

5

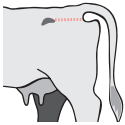
Shallow



Condition score

5.5

Flat



Condition score

6

3 Condition score

1st observation

Area between tail and pins is deeply sunken

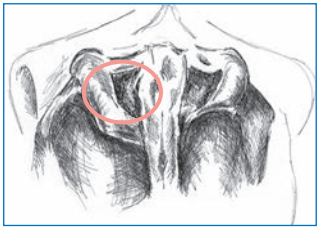


Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

2nd observation

Insides of pins are hollow

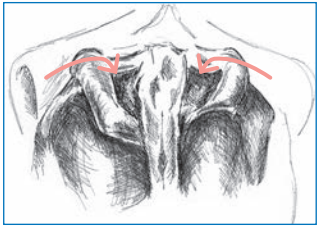


Image courtesy of DELWP (Vic)

Cows in this score also have:

- Very prominent hips.
- A backbone that is a very bumpy ridge.

1st observation

Area between tail and pins is deeply sunken

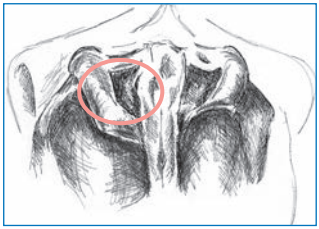


Image courtesy of DELWP (Vic)

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2nd observation

Insides of pins are not hollow

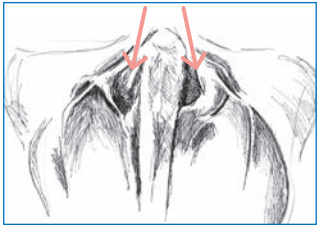

Image courtesy of DELWP (Vic)

Cows in this score also have:

- Prominent hips.
- A backbone that is a bumpy ridge.

4 Condition score

1st observation

Area between tail and pins is sunken

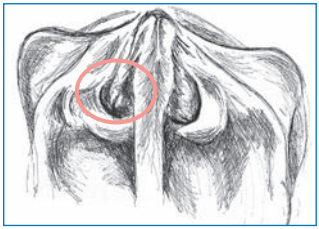

Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

2nd observation

Backbone is a bumpy, sharp ridge

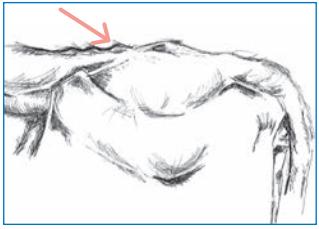

Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

1st observation

Area between tail and pins is sunken

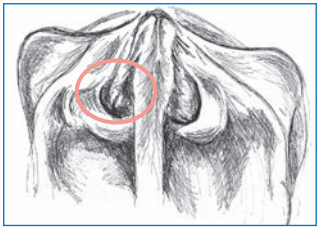

Image courtesy of DELWP (Vic)

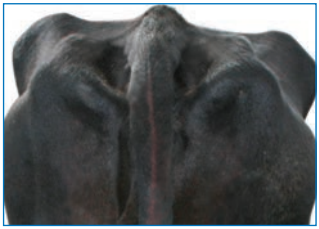

Image courtesy of DairyNZ

2nd observation

Backbone is not a bumpy, sharp ridge

Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

5 Condition score

1st observation

Area between tail and pins is slightly sunken

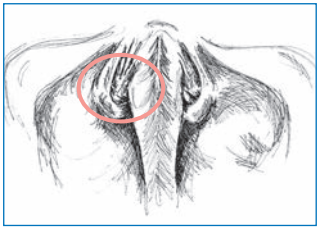

Image courtesy of DELWP (Vic)

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2nd observation

Depression between hip and pin is U-shaped

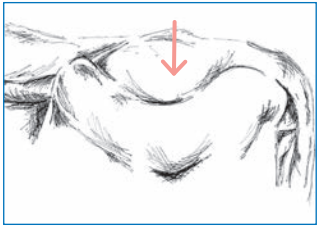
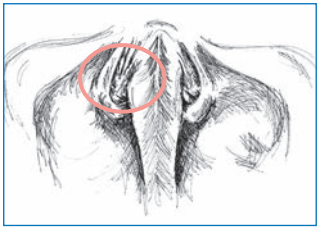


Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

1st observation

Area between tail and pins is slightly sunken to filled in



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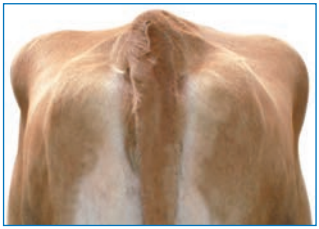


Image courtesy of DairyNZ

2nd observation

Depression between hip and pin is shallow

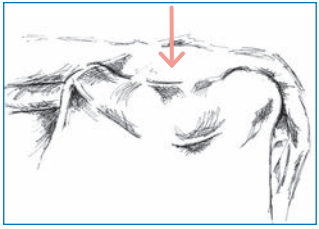


Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

6 Condition score

1st observation

Area between tail and pins is filled in

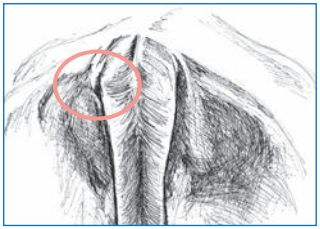


Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

2nd observation

Depression between hip and pin is flat

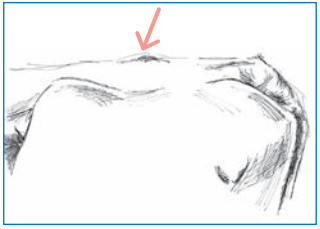


Image courtesy of DELWP (Vic)

Image courtesy of DairyNZ

Get your eye in first

Body condition scoring is easy. However, if you are not very experienced or are a little out of practice, it is a good idea to calibrate your eye first by condition scoring some cows 'hands on'. The ideal place to do this is an AI race.

- Line up 10 cows with a range of body condition.
- Put your hands on the key points of each cow — the area between the tail and pins, the backbone and the depression between hip and pin.
- Feel the amount of fat cover over these body points and the differences between the cows.
- Score each cow using the method described on pages eight and nine.

Now you are ready to condition score your herd using the 'hands off' method in the paddock or the dairy.

Body condition scoring your herd

When and why

Seasonal/split calving herds

When	Why
At 8–10 weeks before drying-off*	• To decide if the diet should be adjusted to increase BCS before cows dry off.
At drying-off	• To check if cows have achieved BCS profile desired at calving or not. • To decide if intended dry cow diet needs adjusting.
Just before calving*	• To check if cows have held their body condition through the dry period. • To decide if intended fresh cow/early lactation diet needs adjusting.
Two weeks before mating start date*	• To check if cows have lost excessive condition since calving. • To decide if intended diet during mating period needs adjusting.
Three weeks after mating start date	• To check if cows are gaining body condition. • To decide if diet being fed during mating period needs adjusting.

**The most important times to body condition score cows in each calving group.*

Year-round calving herds

When	Why
At drying-off	• To check if cows have achieved BCS profile desired at calving or not. • To decide if intended dry cow diet needs adjusting.
Just before calving*	• To check if cows have held their body condition through the dry period. • To decide if intended fresh cow/early lactation diet needs adjusting.
40–60 days after calving (when eligible for insemination)	• To check if cows have lost excessive condition since calving. • To decide if intended diet during mating needs adjusting.

How many cows to score?

It is very important to score a representative selection of cows in your herd.

Seasonal/split calving herds

- Score 70 cows each time.
- Even in large herds, 70 cows is sufficient each time.
- It is not necessary to score the same cows each time.
- Record each score separately; record cow identity if you wish.
- With practice, scoring 70 cows should take no more than 30 minutes.

Year-round calving herds

- If you are milking fewer than 300 cows, you will need to score all cows at drying-off, just before calving and when they become eligible for insemination.
- At 450 cows, scoring two out of every three cows should be sufficient.
- At 600 cows, scoring every second cow should be sufficient.

Where to score cows?

Cows are most easily scored in the paddock or in the dairy at milking.

In the paddock

- Walk through the herd, scoring cows as you go.
- Position yourself within 20–30 metres of the cows.
- Score cows when they are standing with their tail, rump and back clearly visible.

In the dairy at milking

Rotary

- Look at cows from a position above and to the rear of them using a raised platform close to the cows.
- Ensure lighting is adequate.
- Select cows based strictly on where they are milked. For example: mark every 8th bail on the platform.
- Don't score the first or last 70 cows to be milked.

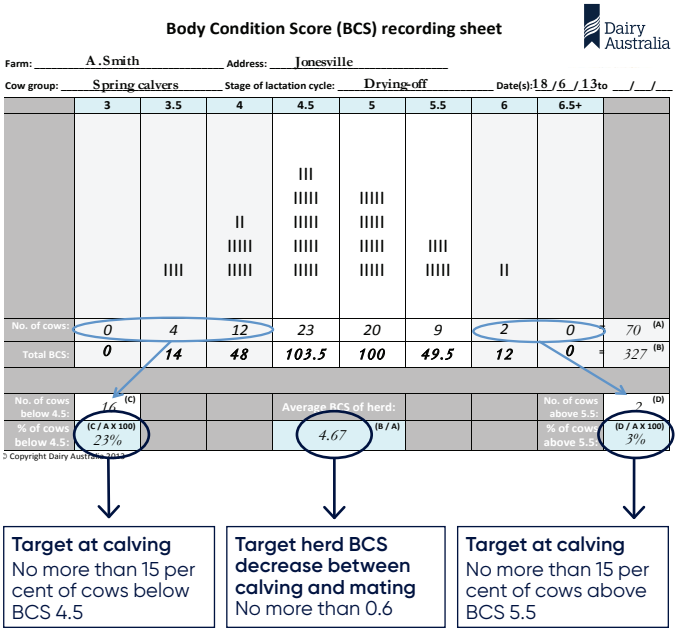
Herringbone

- It is not possible to score cows accurately from the pit.
- Step up to view selected cows from above and to the rear.
- Select cows based strictly on where they are milked. For example: mark every 4th set of cups and score cows in those positions only.
- Don't just score the first or last 70 cows to be milked, or the first or last cow in on each side to be milked.
- Alternatively, score cows in the exit race as they leave the dairy.

Recording body condition scores

Using recording sheets

Here is an example of a BCS recording sheet which enables you to calculate the average BCS of your herd and the all important percentages of thin and fat cows (i.e. those below 4.5 and above 5.5).



Body Condition Score (BCS) recording sheet

Dairy Australia

Farm: A.Smith Address: Jonesville

Cow group: Spring calvers Stage of lactation cycle: Drying-off Date(s): 18 / 6 / 13 to / /

	3	3.5	4	4.5	5	5.5	6	6.5+	
	IIII		II IIIII IIIII	III IIIII IIIII IIIII	IIIII IIIII IIIII IIIII	IIII IIIII	II		
No. of cows:	0	4	12	23	20	9	2	0	= 70 (A)
Total BCS:	0	14	48	103.5	100	49.5	12	0	= 327 (B)

No. of cows below 4.5:	16 (C)			Average BCS of herd:			No. of cows above 5.5:	2 (D)
% of cows below 4.5:	(C / A X 100) 23%			4.67 (B / A)			% of cows above 5.5:	(D / A X 100) 3%

Target at calving
No more than 15 per cent of cows below BCS 4.5

Target herd BCS decrease between calving and mating
No more than 0.6

Target at calving
No more than 15 per cent of cows above BCS 5.5

To download copies of recording sheets, visit **dairyaustralia.com.au**.

What if results are off target?

Seasonal/split calving herds

At 8–10 weeks before drying-off

	Actions to consider
BCS results	Immediately
More than 15 per cent of cows are **below BCS 4.5**	If possible, increase feed inputs to increase body condition in late lactation. Target all cows or just cows below score 4.5 if you can preferentially feed. Do a cost/benefit analysis before considering these options: • Early dry-off for cows below score 4.5 in late lactation. • Once-a-day milking in mid-late lactation. Then, feed to maintain or increase condition during dry period.
More than 15 per cent of cows are **above BCS 5.5**	Feed to maintain condition during dry period. Don't allow over-conditioned cows to lose condition when dry.

At 8–10 weeks before drying-off

To prevent it happening again

Seek help from an adviser to:

- Examine the costs and benefits of increasing feed inputs during mid-late lactation.
- Determine if reducing stocking rate is appropriate.
- Check that all cows have equal access to feed.
- If most thin cows are first calvers, then review management of heifers.

Seek help from an adviser to:

- Check diet fed throughout lactation if most fat cows have been calved less than 10–12 months.
- Determine if cows are being overfed in mid-late lactation.
- If most fat cows are carryover cows, then improvements to herd reproductive performance will reduce this problem in the future.

Seasonal/split calving herds

At drying-off

	Actions to consider
BCS results	**Immediately**
More than 15 per cent of cows are **below BCS 4.5**	If possible increase feed inputs during the dry period. Target all cows or just cows below score 4.5 if you can preferentially feed.
More than 15 per cent of cows are **above BCS 5.5**	Feed to maintain condition during dry period. Don't allow over-conditioned cows to lose condition when dry.

At drying-off

To prevent it happening again

Seek help from an adviser to:

- Examine the costs and benefits of increasing feed inputs during late lactation.
- Determine if reducing stocking rate is appropriate.

Check that all cows have equal access to feed.
If most thin cows are first calvers, then review management of heifers.

Seek help from an adviser to:

- Check diet fed throughout lactation if most fat cows have been calved less than 10–12 months.
- Determine if cows are being overfed in late lactation.

If most fat cows are carryover cows, then improvements to herd reproductive performance will reduce this problem in the future.

Seasonal/split calving herds

Just before calving

	Actions to consider
BCS results	Immediately
More than 15 per cent of cows are **below BCS 4.5**	If possible, separate thin cows into a group before and for several weeks after calving and preferentially feed.
More than 15 per cent of cows are **above BCS 5.5**	Monitor fat cows closely for health problems, especially in first week after calving. If possible, separate fat cows into a group for several weeks after calving and preferentially feed to reduce the risk of excessive body condition loss in early lactation due to reduced appetite.

Just before calving

To prevent it happening again

Increase body condition in late lactation.

Maintain condition during dry period.

See actions above for when there are too many thin cows at drying-off.

If less than 15 per cent of cows were above BCS 5.5 at drying-off, then cows have been overfed during the dry period. Reduce the amount fed to dry cows in the future.

If most fat cows are carryover cows, then improvements to herd reproductive performance will reduce this problem in the future.

Seasonal/split calving herds

Two weeks before mating start date

	Actions to consider
BCS results	**Immediately**
Average herd BCS has decreased by **more than 0.6** since calving	Seek help from an adviser to examine the costs and benefits of increasing feed inputs to prevent any further losses in body condition.

Three weeks after mating start date

	Actions to consider
BCS results	**Immediately**
Average herd BCS has **decreased further** since recorded at two weeks before mating start date	Seek help from an adviser to examine the costs and benefits of increasing feed inputs to prevent any further losses in body condition.

For more details on strategies to achieve BCS targets visit **dairyaustralia.com.au**.

Two weeks before mating start date

To prevent it happening again

Review pre-calving transition feeding program with help from an adviser.

Consider increasing feed intakes to minimise body condition loss in early lactation.

Three weeks after mating start date

To prevent it happening again

Review pre-calving transition feeding program with help from an adviser.

Consider increasing feed intakes to minimise body condition loss in early lactation.

What if results are off target?

Year-round calving herds

At 8–10 weeks before drying-off

	Actions to consider
BCS results	**Immediately**
More than 15 per cent of cows are **below BCS 4.5**	If possible, increase feed inputs during the dry period. Target all cows or just cows below score 4.5 if you can preferentially feed.
More than 15 per cent of cows are **above BCS 5.5**	Feed to maintain condition during dry period. Don't allow over-conditioned cows to lose condition when dry.

At 8–10 weeks before drying-off

To prevent it happening again

Seek help from an adviser to:

- Examine the costs and benefits of increasing feed inputs during late lactation.
- Determine if reducing stocking rate is appropriate.

Check that all cows have equal access to feed. If most thin cows are first calvers, then review management of heifers.

Seek help from an adviser to:

- Check diet fed throughout lactation if most fat cows have been calved less than 10–12 months.
- Determine if cows are being overfed in late lactation.

Year-round calving herds

Just before calving

	Actions to consider
BCS results	**Immediately**
More than 15 per cent of cows are **below BCS 4.5**	If possible, separate thin cows into a group before and for several weeks after calving and preferentially feed.
More than 15 per cent of cows are **above 5.5 BCS**	Monitor fat cows closely for health problems, especially in first week after calving. If possible, separate fat cows into a group for several weeks after calving and preferentially feed to reduce the risk of excessive body condition loss in early lactation due to reduced appetite.

40–60 days after calving (when eligible for insemination)

	Actions to consider
BCS results	**Immediately**
Average herd BCS has decreased by **more than 0.6** since calving	Seek help from an adviser to examine the costs and benefits of increasing feed inputs to prevent any further losses in body condition.

Just before calving

To prevent it happening again

Increase body condition in late lactation.

Maintain condition during dry period.

See actions above for when there are too many thin cows at drying-off.

If less than 15 per cent of cows were above BCS 5.5 at drying-off, then cows have been overfed during the dry period. Reduce the amount fed to dry cows in the future.

40–60 days after calving (when eligible for insemination)

To prevent it happening again

Review pre-calving transition feeding program with help from an adviser.

Consider increasing feed intakes to minimise body condition loss in early lactation.

Benefits from achieving BCS targets

Reproductive performance

Cows that calve in the BCS range 4.5–5.5 have 6–week or 100-day in-calf rates at least 12 per cent higher than if they had calved at a BCS below 4.5.

- If you actually had 35 per cent of cows in your herd below BCS 4.5 and 20 per cent above BCS 5.5, the impact on 6–week/100-day in-calf rate would be about 5 per cent. If you achieved a more desirable profile with 10 per cent of cows in the herd below BCS 4.5 and 5 per cent above BCS 5.5, the herd's potential improvement in 6–week/100-day in-calf rate would be 4 per cent.
- Cows that lose less than one condition score between calving and mating have higher in-calf rates compared to cows with greater losses.
- A reduction from a 0.75–1.0 to a 0.45–0.6 average herd BCS change in early lactation is likely to have the following beneficial effects:
  - 3 per cent higher 6–week/100–day in-calf rate
  - 2 per cent lower not-in-calf rate.

Milk production

Cows that calve in higher body condition score have more body fat (and protein) reserves which they can mobilise in early lactation to support milk yield. However they tend to have reduced appetites, and take longer following peak milk yield to reach maximum feed intake than thinner cows.

Research studies indicate that when a herd is offered ad lib feed of high quality, thinner cows can take advantage of their increased appetites in early lactation, and produce as much or even more milk as their fatter herd mates. However, if feed quality is sub-optimal and/or access to feed is restricted (as it often is in pasture-based systems) then thinner cows will produce less milk than their fatter herd mates.

If you still have questions about measuring and managing your herd's body condition, here's where to go for further information and support dairyaustralia.com.au.

This website contains a number of resources related to herd body condition and nutrition, including:

- BCS recording sheets.
- More information on aspects of managing body condition and nutrition.

An adviser can assist you with evaluating your herd's performance and help develop strategies for your situation.

For more details on strategies to achieve BCS targets visit **dairyaustralia.com.au**.

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