MEGALAC®
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Boosting dairy farm profits through body condition scoring

When to score, why it matters, how to interpret your results **– a complete guide**

VOLAC WILMAR
FEED INGREDIENTS

Introduction

Maximising your profits as a dairy farmer is a delicate balancing act. One way to tip the scales in your favour is to embrace the simple art of body condition scoring (BCS). Used regularly it will help you to improve the health, productivity and fertility of your herd. That means less diseases and more of the white stuff.

This short ebook explains how to measure body condition scores and reveals how regular scoring can increase profits on your dairy farm. We will also show you how body condition relates to disease prevention and reproductive health. Let's get started.

Inside this guide

Chapter 1:
What is body condition scoring and why does it matter?

You want your herd to be as productive and profitable as possible. But high yields require good health. Body condition is an effective barometer of each cow's health and wellbeing. In short: the body condition of your herd can have a big impact on your margins.

What is body condition scoring?

It's a quick, easy and consistent way to measure how much subcutaneous body fat each of your cows is carrying. For many years body condition scoring has been used as an effective barometer of each cow's health and wellbeing. It's even more accurate than weighing because body weight varies with feed and water intake as well as manuring and milking. Used regularly body condition scoring allows you to monitor changes in your herd that could impact health, productivity and profits.

Why does body condition scoring matter?

Optimising the body condition score of your herd is associated with several benefits - all of which spell good news for your bottom line.

Higher Yields

Improved Fertility

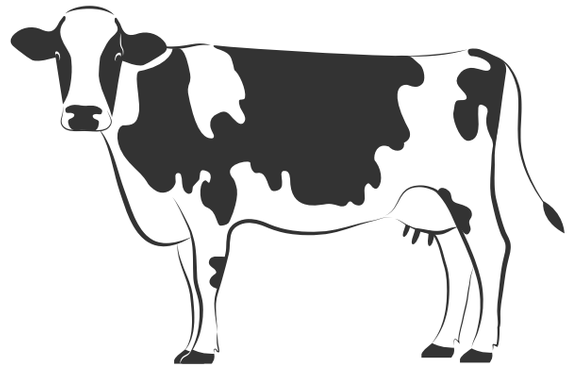
Disease Prevention

Precise Feeding

Early Warning System

A no-brainer for dairy farmers?

According to a recent survey carried out by Volac Wilmar, **fewer than 50% of dairy farmers** regularly score their cows, with 40% saying they never do so. It's time to change that.



Chapter 1: Summary

- Body condition scoring is an easy way to measure how much body fat each of your cows is carrying

- It provides an effective barometer of each cow's health and wellbeing, which is linked to higher milk yields, increased fertility and reduced risk of disease

- Despite the benefits, fewer than 50% of dairy farmers regularly score their herd five times per year

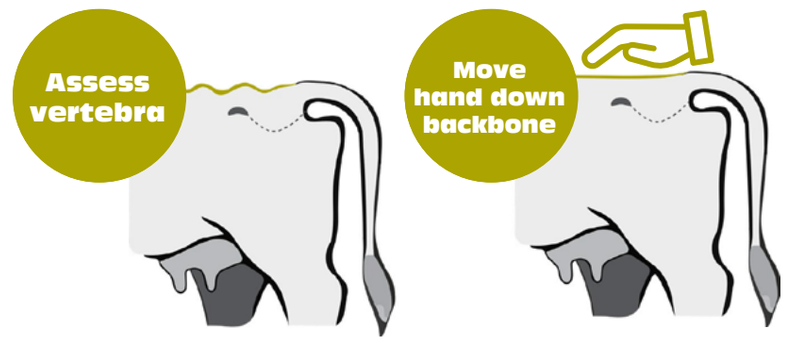
Chapter 2:
How do you measure body condition?

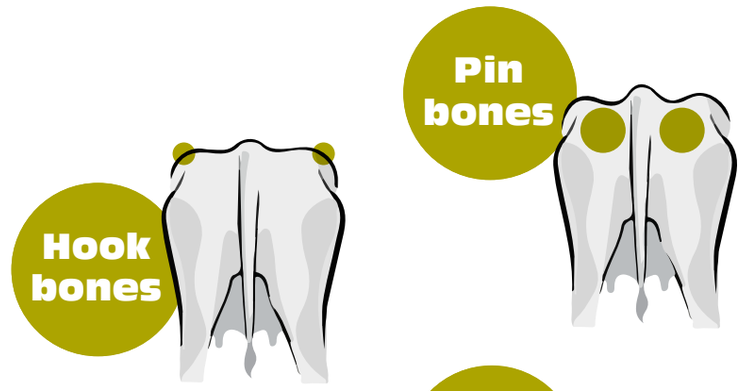
Body condition score is measured via a quick hands-on assessment of each cow. Alternatively there are technologies that can automate the process.

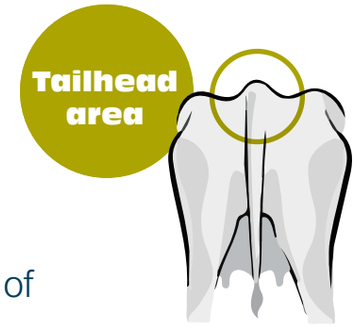
The traditional approach

Start by making sure your cow is relaxed and standing on a level surface where you have good light. And remember to use your eyes as well as your hands to judge the condition of your cows.

1. Begin by feeling the short rib area, noting how the flesh follows the rib bones
2. Run your hand along the ribs to the backbone
3. Move down the backbone, assessing the amount of fat between and around each vertebra. Run your hand away from the backbone, along the ligament to the hook bone
4. Assess the fat cover over the bone and follow over the thurl to the pin bone
5. Assess the level of 'dishing' between the hook and pin bones
6. Assess the tail area, moving your hand up to the tailhead to assess fat coverage
7. Observe and feel the flesh coverage either side of the tailhead and note the presence of any folds of skin.







The 'technology' approach

It's now possible to purchase technology that automatically monitors and records your herd's body condition scores. For example, automatic systems can analyse a 3D image of a cow's lower back as it passes under a camera, typically mounted on a sort gate or voluntary milking system. It allows you to reap all of the profit-related benefits of BCS without having to carry out physical assessments yourself.

Chapter 2:
How do you measure body condition?

When and how to measure the optimum body condition score (BCS)

The 'hands-on' approach

There are a number of quick examinations you can perform that will help you gauge each cow's body condition score.

What is the optimum body condition score?

Body condition score (BCS) is measured on a scale from **1** to **5**, normally in units of **0.25**. **1** is very thin, **5** is excessively fat. The optimum BCS for health, productivity and fertility is between **2.5** and **3.0**.

When should you measure BCS?

The benefits of body condition scoring are felt most keenly when you assess your herd regularly. Ideally each cow should be scored at five distinct stages of the milk production cycle:

- Late lactation (250 days in milk)
- Dry-off
- Calving
- Post-calving examination (21 days)
- Mid-lactation

The most crucial stage is late lactation.
This is the point at which body condition has the most significant influence on the subsequent production period.
A cow within the optimum BCS threshold at this stage is more likely to:

- Have fewer calving problems
- Attain peak yield and produce high quality milk
- Get back in calf efficiently

Chapter 2: Summary

- Body condition scoring is carried out by an assessment (hands-on and visual) of the amount of fat covering the loin, rump, and tailhead areas

- Alternatively it's possible to purchase technology that automatically monitors your herd's body condition scores via camera

- BCS is measured on a scale from 1 to 5, normally in units of 0.25: 1 is very thin, 5 is excessively fat. Optimum BCS is between 2.5 and 3 for health, productivity and fertility

- A key time to measure body condition score is late lactation, though ideally your herd should be measured at least five times per year

Chapter 3:
Can you score these cows?

Here's a selection of cows with various different body conditions.
Where would you place them on the scale of body condition scoring?

Click & hold to reveal these cows' true Body Condition Scale...

BCS is measured on a scale from **1** to **5**, normally in units of **0.25**.
1 is very thin, **5** is exceedingly fat. Where on the scales would you place these cows?

Click here to return to Chapter 2: 'How to measure BCS'

A

2.0 ○ 2.5 ○ 3.0 ○

B

1.0 ○ 1.5 ○ 2.0 ○

C

4.0 ○ 4.5 ○ 5.0 ○

How well did you know your herds?

Chapter 3: Answers

How did your BCS knowledge match up?

The answers in detail:

A. 3.0 – This cow has an optimum BCS and will reap all the benefits.
B. 1.5 – This cow is too thin, see **Chapter 5** for more details
C. 4.5 – This cow is too fat, see **Chapter 6** for more details

1/3: Check the previous pages and brush up on your BCS knowledge

2/3: So close!

3/3: BCS Master – your herd is in capable hands

So how did you do?

Chapter 4:
The implications of different scores

What do the different scores mean for your herd and what can you do about it?

1.0 - 2.0

- Cow is dangerously thin and has no body reserves to draw on
- Milk production and milk fat will be low due to insufficient protein and energy reserves
- Thin cows do not show heat until they begin to regain weight
- Increased risk of metritis and other diseases

2.0

- Cow lacks reserves - reproduction and milk production may suffer

2.5 - 3.0

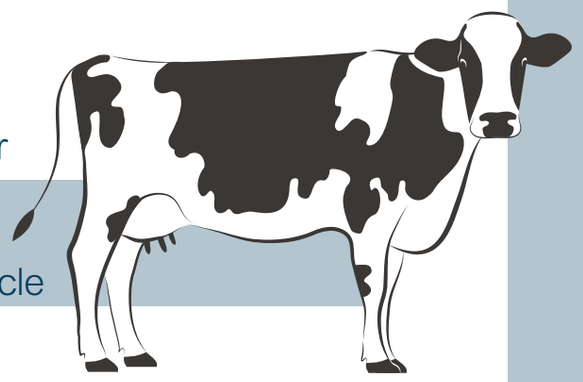
- This is the ideal body condition for most stages of the lactation cycle

3.5 – 4.0

- Cow is at the higher end of the ideal and slightly to moderately overweight
- Excess condition may interfere with reproduction and depress appetite leading to increased negative energy balance during early lactation

4.5 - .5.0

- Cow is excessively fat and more prone to metabolic problems and infections as well as lameness and reproductive difficulties before and after calving



Expect BCS fluctuation during the lactation cycle

It's important to note that most cows' BCS will fluctuate naturally at different points in the lactation cycle.

For example, a slight drop in BCS is common during early lactation, where high yielding cows can lose 45 to 67 kilograms of bodyweight during the first 60 to 80 days of milking. Your aim is to limit changes in BCS to no greater than 1.00. Dramatic changes to BCS can have negative impacts on health and productivity.

Chapter 5: What should you do if your BCS's scores are low?

Reduced milk production, milk fat levels and fertility – not to mention the increased risk of disease! So what can you do about your low score?

Health implications of low BCS

A low BCS spells trouble for your bottom line. Underconditioned cows do not milk to their full genetic potential. Their milk has a lower fat content too. Thin cows also tend to experience reproductive problems, frequently failing to show heat until they begin to regain weight. Low body condition scores are also associated with increased disease risk.

Feed implications for cows with low BCS

Dairy cow nutrition is a precise science at the best of times. That's especially true when you are trying to restore under-conditioned cows to an optimum BCS.

Dairy cows require around 60 litres of water per day. High-yielders may guzzle as much as 100 litres. Ensure troughs are well-maintained and spread generously around your fields, dairy and feed areas.

Forage should account for at least 45% of a cow's total dry matter consumption. Evaluate the protein, energy, mineral and vitamin levels in rations. Also check for levels of bypass and soluble protein as well as starch, fats, smell and pH of silages and wet commodity feeds.

Feeding supplementary fat to under-conditioned cows is a great way to restore body condition. However, too much rumen-available fat can lead to serious digestive problems, so rumen-protected fats should be used to make up short falls.

Chapter 5: What should you do if your BCS's scores are low?

Reduced milk production, milk/fat levels and fertility – not to mention the increased risk of disease! So what can you do about your low score?

A few words about Megalac

Megalac is a rumen-protected fat supplement that combines natural plant oil with calcium. It's this calcium that protects the fat from breaking down in the rumen, preventing the negative consequences to rumen function.

Megalac has the highest independently-measured net energy value of any feedstuff, increasing the energy density of rations. Best of all, numerous studies have proven that Megalac has a beneficial effect on milk production, progesterone levels, egg quality and pregnancy rates while reducing number of days open.

Rumen-protected (bypass) fats such as Megalac are typically added of 1.5 to 3.0% of diet DM.

Increase feed at the right time

The best time to feed extra energy to under-conditioned cows is during early lactation to offset negative energy balance. And in terms of energy per kg, the best nutrient to feed is fat. It's a nutritional powerhouse and perfect for early lactation when your cows' milk yield is increasing but appetite is low.

Fats can also be considered during mid-late lactation, where the nutritional objective is to begin replenishing lost body reserves. If cows have a BCS of less than 3.00 it's vital to increase energy intakes. Failure to replenish energy reserves will limit milk production during the next lactation. During the dry period the aim is to maintain body condition, betweem 2.5 and 3.0.

Chapter 5: Summary

- Reduced milk production, reduced milk fat levels and reduced fertility are all associated with low BCS
- Ensure your herd has access to plenty of water - each cow needs between 60 and 100 litres per day
- Assess the nutritional makeup of your dry matter - evaluating protein, energy, mineral and vitamin levels
- If applicable check the protein and pH of silages and wet commodity feeds
- Consider a rumen-protected fat supplement to restore body condition without risking damage to the rumen

Chapter 6: What should you do if your BCS's score is too high?

Overweight cows are more susceptible to metabolic problems, infections and difficulties during calving. So what can you do about it?

Health implications of high BCS

It may sound counterintuitive, but cows carrying excess condition before calving have a greater risk for low feed intake around the time of calving. This can lead to loss of body condition and deepen the negative energy balance cows experience after calving. That in turn dampens milk production and can contribute to ketosis, displaced abomasums and other metabolic issues.

Published studies indicate that cows with the highest BCS at calving lost the most body condition in the first few weeks of lactation. These cows subsequently had a longer interval to first ovulation, a higher number of days to first heat and the lowest first-service conception rates.

Feed implications for cows with high BCS

Over-conditioning usually begins during the last three-four months of lactation, when milk production has decreased, but intake of dietary energy has not been reduced accordingly. If BCS exceeds 3.5, energy intakes should be reduced to avoid excessive fattening.

Another common cause of high BCS in dairy cows is overfeeding during the dry period, when energy demands are low. Feed a low energy ration with adequate protein, minerals and vitamins to maintain rather than reduce BCS. The best way to tackle the problem of cows that consistently have a high BCS at dry-off is to reduce energy intake during late lactation.

Chapter 6: Summary

- Over-conditioned cows tend to have deeper negative energy balances post-calving - leading to reduced milk production
- Cows with a high BCS are also more prone to metabolic, fertility and calving problems
- To prevent over-conditioning, begin to reduce energy intake during mid-late lactation

Chapter 7: Comments from our dairy experts

Peter Hynes
@Peterhynes15

"Measuring a cows body condition is always a priority for us. Particularly during calving, to ensure she is ready for breeding season and on an upward plane of nutrition."

Judith Roberts,
Zoetis National Veterinary Manager

"BCS is related to energy reserves in milking cattle. Through regularly monitoring BCS in groups of cows an understanding is built up about feed intake and loss of condition which can have a negative impact of a cow's fertility. BCS is an important tool in overall herd health monitoring and should be carried out regularly across all stages of lactation and the dry period."

Neil Birkett,
Volac International Ltd.
@NeilBirkett1

"Body condition changes in the fresh cow have the biggest single overriding impact on fertility: too big a loss of body condition in this critical period will override all the other products and management practises aimed at boosting fertility. This is why you must monitor and measure, so you can manage it."

Want to know more?

Volac Wilmar is a leading voice in dairy nutrition. If you would like to know more about how our range of fat supplements can improve both your profits as well as the health of your herd, please visit **megalac.com**.

Our website also has a free fat calculator that you can use to help gauge the optimum amount of fat to add to your dairy herd's diet.

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