

# Herd health approach to the transition period

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## Summary

- Preventative herd health monitoring is an efficient method of achieving high standards of dairy cow health and performance.
- Herd body condition score, negative energy balance and calcium status are three key areas for monitoring transition cow health.
- It's important that herd health targets are set and if the incidence of herd health problems is greater than the targets, professional help should be obtained.

## Introduction

In order to effectively improve the health and performance of dairy cows, dairy herd managers need to adopt a preventative herd health approach to managing cow health, rather than the traditional way of treating individual cows as they get sick. The transition period from calving into lactation is the most important period in terms of the health of a dairy herd. During this time, cows suffer production diseases such as ketosis, milk fever, fatty liver, retained placenta and displaced abomasum. These diseases can have huge effects on the subsequent performance of the cow for the rest of the lactation.

## Preventative and monitoring approach

Three key areas should be considered in the herd health approach to transition cow management:

- Body condition score management (BCS).
- Negative energy balance (NEB).
- Calcium status (clinical and subclinical milk fever).

For each health problem area, performance targets should be set, and a monitoring plan put in place. Table 1 shows a checklist for transition herd health problems used in Australia (<https://www.dairyaustralia.com.au/>).

Health Problem	Target	Seek help if
Milk fever	<1% (old cows >8yrs; <2%)	>3%
Clinical ketosis	<1%	>2%
Abomasal displacements	<1%	>2%
Clinical mastitis	<5 cases/100 cows first 30 days	>5 cases/100 cows/ first 30 days
Lameness	<2% with mobility score >2 out of 5	>4% with mobility score >2 out of 5
Retained foetal membranes	<4%	>6%
Vaginal discharge after 14 days	<3%	>10%
Assisted calving	<2%	>3%

Table 1 demonstrates target incidence rates for important production diseases, and when to seek help from your veterinary practitioner. Data gathered from monitoring each area must be recorded, so that shortfalls in performance can be recognised promptly and actions taken.

## BCS

Maintaining an appropriate BCS is the most important aspect of transition cow health. A cow that is over-conditioned at calving is more likely to suffer from excessive negative energy balance, milk fever, ketosis, fatty liver and retained placenta. Optimal BCS for each stage of the lactation cycle are outlined in Table 2. Cows should be body condition scored at dry off, at calving and at breeding at a minimum. Changes to the diet can then be made for the herd, or for groups of cows that fall outside the target BCS.

BCS at drying off	2.75–3.0
BCS at calving	3.0–3.25
BCS at breeding	2.75 minimum

## Negative energy balance

Negative energy balance (NEB) is a problem affecting early lactation cows, when feed intake is insufficient to meet the energy demands of milk production. Almost all cows will have a degree of NEB in early lactation, but excessive or prolonged periods of NEB can lead to conditions such as ketosis, fatty liver, and displaced abomasum.

To monitor NEB in the herd, indicators to be monitored are:

- Less than 15% of early lactation cows with milk protein <3.05%.
- Less than 15% of cows with a milk fat: protein ratio >1.4.
- <25% of cows with >0.5 units of BCS loss in early lactation.

## Milk Fever

Clinical and subclinical milk fever are related to increased incidence of mastitis, slow calving, retained placenta, ketosis, and displaced abomasum. Key targets for monitoring are:

- Clinical milk fever cases of 0–2%.
- Retained placenta cases of <4%.
- Dietary Mg concentration of 0.4% of dry matter.

Where there is an increase in milk fever or retained placenta cases, further investigation can be carried out during the calving season by way of blood testing dry cows and fresh cows. Where dietary Mg is below 0.4% dry matter, steps can be taken well before the start of calving to increase Mg concentration in the diet.

## Conclusions

The transition period is a challenging time for dairy cows, and poor herd health management at this stage can have significant consequences for the rest of the lactation. Focussing on prevention and monitoring health performance means farmers can reduce losses, improve animal health and welfare, and increase profits.