

Managing Body Condition Score in Dairy Cows

- **Keeping cows in the correct body condition will allow good productivity and reduced health and welfare problems.**
- **The optimum body condition score varies through the lactation cycle.**
- **The mid-lactation to drying off period allows the most opportunity to adjust the condition of any cows falling outwith the target range.**

Dairy cows, like most other animals, mobilise bodyfat during early lactation to meet the substantial energy demands of milk production. This is especially characteristic of modern dairy cows. By keeping cows in the correct body condition, good productivity can be achieved and health and welfare problems reduced.

Body Condition Scoring

This is a management technique that can be used routinely by farmers and stockmen to assess the body reserves of individual cows. The fat cover is assessed by handling and observation in two areas – over the loin and around the tail head – and scored on a scale of 1 to 5 between very thin and extremely fat.

There is not a precise relationship between the body condition score and the liveweight of a cow, though the information from a number of trials would suggest that a change of 1 unit of body condition score broadly equates to a change of around 50kg liveweight.

Target Condition Scores

The ideal body condition score of a cow varies throughout its lactation cycle as illustrated in Table 1.

Table 1

	Body Condition Score
Drying Off	3.0
Calving	3.0 – 3.5
1 st Service	2.0 – 2.5 ↑
Mid Lactation	2.5 – 3.0

To achieve best conception rates at first service, cows should have started regaining body condition after the losses during very early lactation.

Manipulating Body Condition

Whilst suitably formulated rations, appropriate feeding systems and good management will allow cows to be maintained at their ideal body condition throughout the lactation cycle, occasional problems can arise that require corrective action. To be effective and not create other problems, such corrective action must be taken with care.

Mid-lactation – Drying Off

It is within this stage of the lactation cycle, and when cows are on winter rations, that there is most opportunity to manipulate body condition. If the cow is too thin then an extra 1.5 kg of cereal or concentrate fed for three months would provide sufficient energy for a weight gain of 0.3 kg/day or approximately ½ a unit of body condition score. If the cow is too fat then concentrates must be reduced or removed, and if silage is of high quality even it may have to be restricted or diluted with some straw. For autumn calvers, at least some of this period will fall when cows are at grass. The required manipulation of body condition should be taken into account when setting stocking rates and assessing supplementation requirements in accordance with the Crichton Star System.

Early Dry Period

Once dried off, a cow will naturally recover some body condition. This may still be manipulated in the early part of the dry period with appropriate adjustment of the diet. If the cow is still below optimal

condition, an extra 1.5kg of concentrate will allow an additional liveweight gain of 0.4 kg/day feeding or around ¼ unit of condition score in 3 to 4 weeks. If the cow is in too high a condition, the diet must be restricted to avoid excessive fat being deposited that will firstly give rise to calving difficulties and subsequently predispose the cow to metabolic problems in early lactation.

Late Dry Period

The potential to impact on body condition in the late dry period is fairly limited. For cows that are still thin, excessive feed levels should be avoided otherwise the unborn calf may get too large resulting in calving difficulties. For the over-fat cow, feed should remain restricted, but not excessively so that calf or udder development are not adversely affected.

Early Lactation

In this stage of the lactation cycle, cows will lose weight and condition by mobilising body reserves to support milk production. The aim should be for this not to be too excessive (no more than 1 unit of body condition score) by providing a diet that has a high energy density and is suitably balanced for protein and other nutrients. If cows calve down

thin and lose further condition, milk yield and constituent quality may suffer, the cow may be more susceptible to other health and metabolic disorders and most certainly, fertility will be adversely affected until the cow recovers to a fit condition to breed. Cows that are excessively fat in early lactation will have a low appetite drive and mobilise body reserves too rapidly to adequately utilise them. As a result they will be much more prone to metabolic disorders such as ketosis and fatty liver, and fertility may be adversely affected.

Using Condition Score as a Management Tool

Individual Cows – ideally all cows should be assessed for body condition score at the key points in the lactation cycle such as at service and at drying off to determine whether they are already at the optimum level or whether any corrective action is required.

Groups - Where it is not possible to manipulate the diets for individual animals, regular condition scoring is still a useful tool to use across a herd or groups within a herd to get a general indication of condition and how it is changing over time.

Author:

Derek Kennedy

Dairy Consultant
SAC

Dairy Services Unit
Midpark House
Bankend Road
Dumfries
DG1 4SZ

Phone 01387 263961

derek.kennedy@sac.co.uk