

Lessons for late lactation

Monitor BCS and take time to prepare for the dry period

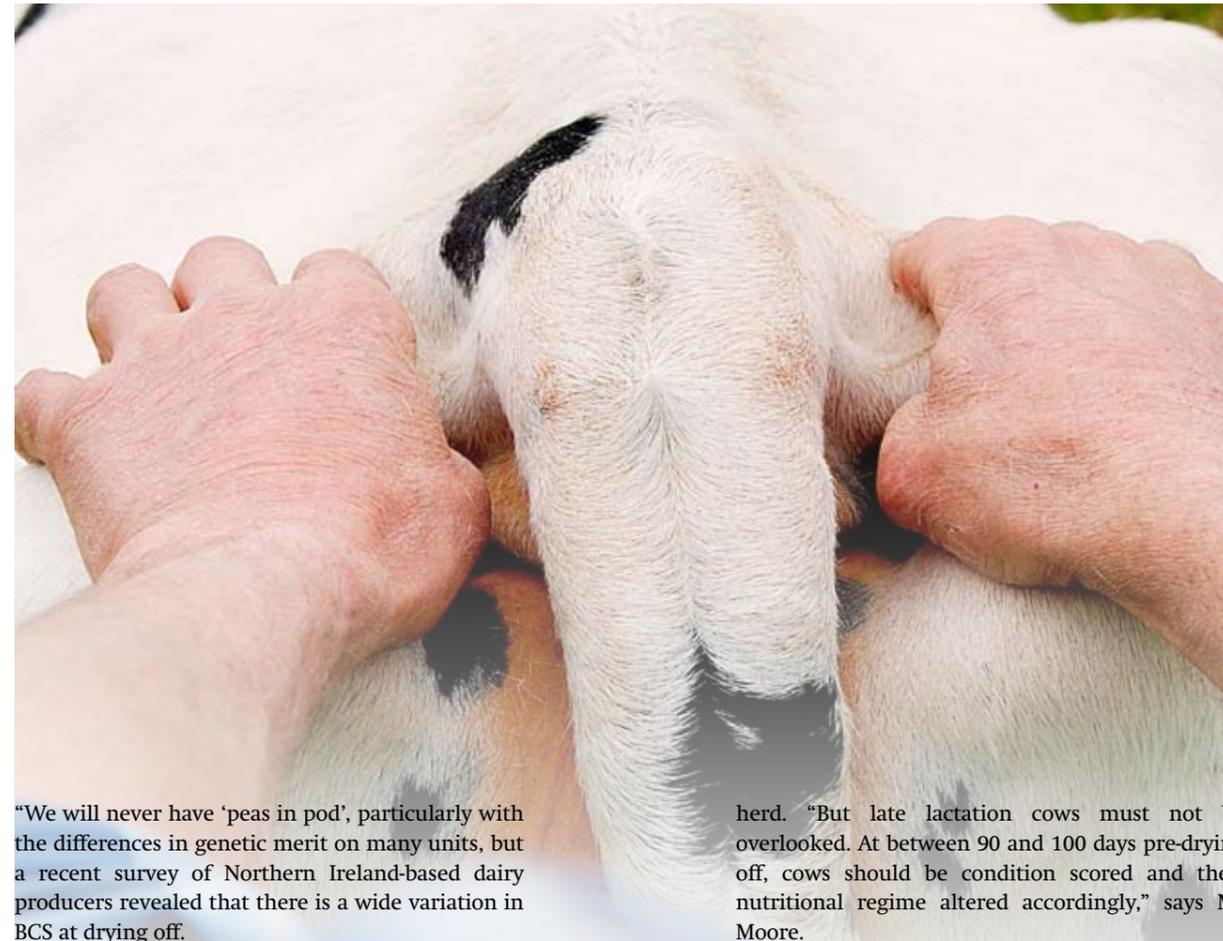
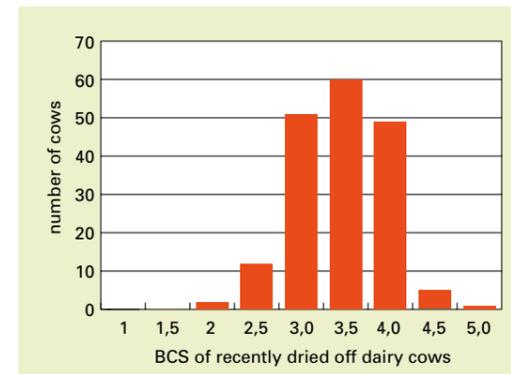
Sound management of late lactation cows is a key driver for productivity and, therefore, profitability. A leading nutritional adviser tells us why ideal body condition score in late lactation is key to good health and fertility.

Focused dry cow management is an essential prerequisite for a successful lactation in today's modern dairy cow. So says Thompsons' nutritionist Richard Moore. "Higher dry matter intakes in early lactation, reduced metabolic disease and improved fertility are at the core of the benefits to be had from good dry cow management, not to mention optimal performance throughout the subsequent lactation." A variety of different systems are in use, from increased energy density during the 'close up' phase through to the one-batch, low-energy, high-fibre type systems.

Crucial parameter

"One crucial parameter is consistent throughout them all – body condition score at drying off. Between 2.5 and 3.5 is the target range for BCS at drying off, with between 2.75 and 3.00 considered to be the optimum. The objective is to then maintain this throughout the dry period until calving. "Despite of this clear target, it is likely that right across the UK this first principle of successful dry cow management is the one target that we have greatest difficulty in achieving. Yet it is possibly of more importance than the actual regime adopted for the dry period itself," says Mr Moore.

Figure 1: BCS of Northern Ireland's dairy cows at drying off (2008)



"We will never have 'peas in pod', particularly with the differences in genetic merit on many units, but a recent survey of Northern Ireland-based dairy producers revealed that there is a wide variation in BCS at drying off.

"Most alarming is that the figures revealed that 63% of recently dried off cows in the survey were BCS 3.5 or more." (see Figure 1).

While there is significant debate about many areas of dry cow management, most would agree that a BCS in excess of 3.5 is detrimental to subsequent lactation performance. The key driver of this reduced performance is undoubtedly reduced dry matter intake in early lactation.

This together with the fact that over-fat cows at drying off are a clear sign that overfeeding has taken place during late lactation, makes for a real 'double whammy' in terms of efficiency, productivity and profitability.

All too often it is the fresh and peak lactation animals that receive the bulk of the attention from both herd staff and nutritionists in the milking

herd. "But late lactation cows must not be overlooked. At between 90 and 100 days pre-drying off, cows should be condition scored and their nutritional regime altered accordingly," says Mr Moore.

Concentrate allowance

"We need to identify animals at this stage that are either below 2.5 or above 3.5 BCS. To change BCS by 0.5 score requires a liveweight change of approximately 40kg in Holstein cows. Spread over a 100-day period this is equivalent to a liveweight change of plus or minus 0.4kg/day.

"Cows with a BCS below 2.5 will not gain any significant level of body condition in a conventional six-to-eight-week dry period. And as a result they will suffer from reduced fertility and production in the subsequent early lactation period. So it is imperative that they gain body reserves before drying off.

"It is also impossible on conventional diets to firstly dry off an animal producing a daily yield of 20 litres,

then allow for the fact that dry matter intake will be suppressed during the two weeks before calving and at the same time try to gain 40kg of body condition in an eight-week dry period," explains Mr Moore. He adds that cows needing to gain 0.4kg of liveweight/day will require an additional concentrate allowance of approximately 2kg/day above the requirements for production, allowing for the fact that they will generally divert 50% of this extra feed to additional milk. This is an additional cost of £36 during the 100 days, based on a concentrate cost of £180/tonne.

"However the benefits will far outweigh the costs," says Mr Moore. "Alternatively, or in tandem with an increased feed rate, milk production may be suppressed through reducing protein levels in the total diet. The approach requires a flexible approach to concentrate allocation, either through use of out-of-parlour feeders or by grouping animals in larger herds."

Condition scored

"Animals needing to lose 0.5 of a BCS – around 0.4kg of liveweight per day – can and should be asked to produce more from forage by reducing feed-rates by up to 0.75kg/day. This has a cost saving of £13.50 over a 100-day period, when the concentrate price is £180/tonne.

"Again protein manipulation of the diet may be an option, but this would very much be secondary to a reduction in concentrate feeding as a means of addressing the problem in a cost effective manner," says Mr Moore.

The debate over the ideal 'dry cow protocol' will continue, however the importance of drying off cows between BCS 2.75 and 3.00 and maintaining this throughout the dry period is well recognised. "Condition scoring cows that are between three and four months from their drying off date gives producers the opportunity to drive efficiency through more targeted feeding, as well as ensuring that there's still time to prepare cows for their next lactation," concludes Mr Moore.

Allison Matthews



Richard Moore: "BCS at drying off is key"