

Dry Cow Management...What's New?

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Dry cow management is one of the most challenging aspects of dairy farming. High yielding cows can dry off at more than 30 litres, considered a good peak yield thirty years ago. They need time to rest and to repair their digestive and mammary systems. It is also a time when feet and mobility issues can be addressed. Finally, cows need to be prepared for the rigours of calving and the huge hormonal, mineral and nutritional changes that occur at calving.

Getting the dry period right will help toward easier calvings, stronger calves, minimise weight loss in early lactation, improve peak yields and persistency and can even influence fertility. Getting it wrong can lead to many health issues such as milk fevers, DA's, metritis etc. All of these things will affect profitability and can eat into dairy farming's most limiting factors, YOUR TIME.

I find that farmers are now putting a lot of effort into this period in recognition of how important it is. Observing the animals regularly and a clean calving area are basic essentials for success.

The following areas are very topical right now and deserve to be looked at.

Body condition

A large study in Ireland showed how the body condition of cows at calving and how much weight they lose from calving to conception can have a huge effect on fertility. Cows that were too thin and cows that lost a lot of weight after calving had conception rates to first service of under 20%.

Over-fat cows should also be avoided. These cows have more difficulty calving. They also have reduced appetites in the critical two weeks before calving. This can lead to fatty liver syndrome and subsequent health and production problems.

The goal is to maintain a body condition score near 3.5. Cows either side of this can be adjusted slightly but it is too late to make large adjustments in body score in the dry period.

Cows that are just dried off have an appetite of 15 - 16 kg of dry matter and can put on weight very quickly. In the final two weeks before calving, intakes fall to 10 – 12 kg and diets low in energy can lead to problems.

Grouping

The large drop in feed intakes at the end of the dry period present some challenges. Having a group for the far-off dry cows and another for the pre-calving group can help fine-tune the diets. Extra by-pass protein, energy and fortification can all be targeted at the pre-calvers.

Many people cannot group because of building problems. In these cases management is more difficult. A single group forces us to strike a balance to avoid over-feeding the far-off cows and under-feeding the pre-calvers.

Agri-King has developed a new concept called PCI, which helps design combination and single diets for these situations.

Days dry

There is a lot of interest in shortening the dry period. A large study in America looked at the milk records of over 340,000 Holsteins and showed some interesting results. A sixty day dry period seemed to be optimal. This period maximised production in the following lactation.

A 45 day dry period reduced milk yield in the following lactation by roughly 250 litres. At only 30 days dry, milk yield was reduced by almost 1000 litres. Butterfat and protein percentages were increased slightly with shorter dry periods but this was probably a result of the lower yields.

Fertility was actually slightly better with shorter dry periods, but it is thought that this could also be due to the lower milk yields. However, Somatic Cell Counts increased as the dry period got shorter.

Shortening the dry period had a larger impact on certain groups. Young heifers, higher yielding cows and high SCC animals were all more affected by the length of the dry period. Therefore think carefully before reducing the dry period by more than a few days.

Anionic salts

Feeding anionic salts such as chlorides and sulphates in the pre-calving period can help reduce milk fevers. Typical UK diets are high in potassium, (a cation or positively charged ion).

Calcium and magnesium, both essential for strong muscle contractions, are also cations. Their uptake and utilisation can be affected by high potassium. This is very like grass staggers where high levels of potassium reduce magnesium uptake on lush pasture.

Great care must be taken with these diets as improperly adjusted diets can actually lead to problems. Diet ingredients must be analysed regularly and testing urine pH can assess the effect of the diet on the animal.

The benefits of this technique can be dramatic but feed management must be excellent.

Straw in diets

One of the most hotly debated ideas at the moment is the inclusion of straw in dry cow diets. Research at the University of Illinois showed that cows fed a high energy diet in the far-off dry period had lower dry matter intakes, more negative energy balance and were more prone to ketosis, fatty liver and other health problems after calving.

Chopped straw added to the diet was used to control the energy content of the diets in this study. However the researchers did not call for a blanket use of straw.

Interestingly, over-feeding energy, rather than body condition, led to problems. This shows that trying to put weight on thin cows in the dry period can be very dangerous. The study found that the 'best results' were obtained with cows fed a low energy diet in the far-off period followed by access to a close-up diet.

As a reference point, the high energy diet was equivalent to a 35 litre milking ration.

The 'low' energy diet was more typical of a normal UK dry cow diet.

Their recommendation was to 'provide a low energy, well balanced diet that provides adequate metabolisable protein, minerals and vitamins but that does not over supply excessive energy'.

Work with your advisors when looking at diets for your herd. Blanket inclusion of straw right through the dry period cannot be recommended in most situations.

Conclusion

Think of the dry period as the start of the next lactation. Use it to help cows recover and to prepare for the following lactation.

Observe intakes closely, put together balanced rations and the benefits in time and performance will be well worth the effort.