A decline in butterfat percentages can be common during spring months, when cows are grazing lush grass that is low in fibre and high in oil and sugars, but this issue can continue into the summer for some herds. Farmers should be aware of fluctuations in milk solids (MS) and what the causes are. Keeping cows above 2kg MS/day for as long as possible is a target that farmers should aim for, and this can be achieved in many ways. Milk production should not fall more than 1–2% per week post-peak.

Factors contributing to a decline in butterfat

It is believed that a key factor for the occurrence of butterfat depression is an elevated intake of unsaturated fats from young, leafy grass. Unsaturated fats are toxic to rumen bacteria, and for them to survive, they carry out a process called "biohydrogenation." This, in turn, creates by-products that, in effect, stop the mammary gland from producing butterfat, leading to butterfat depression. Data has shown that as little as two grams of these by-products from the rumen can reduce butterfat production by as much as 20%.

This effect can be exacerbated in the presence of a low rumen pH or if rumen health is poor. This fresh, lush grass can cause a drop in rumen pH, which leads to sub-acute rumen acidosis. If the pH is below 6, bacteria will not work as effectively. This can harm both feed intake and digestion, leading to depressed milk production, decreased fertility and other health problems.

Improving butterfat levels

If butterfat drops during the second and third rounds of grazing, each unique case and farm must be individually assessed:

1. What is the grass quality?

Achieving grass yields in the range of 1,300–1,500 kilograms of dry matter (DM) per hectare, especially in the second and third rounds, is the grazing target we should try to reach. Doing so will help increase your protein percentages and milk and butterfat yield. Be wary, however, as higher leaf will mean more energy and sugar, but will be low in fibre and higher in fat, which could adversely impact butterfat percentage.

2. What level of concentrate is being fed per milking, and what is the make-up of this concentrate?

Do not overfeed concentrate at milking time (>2/3 kg/milking) and make sure that the concentrate contains an adequate level of digestible fibre compared to the sugar and starch content. An example of a good digestible fibre source would be beet pulp. The use of a forage- or straw-based supplementary feed can be used to make up for shortfalls in intake, supply adequate fibre levels and spread the volume of concentrate over more feeds, if possible.

3. Does your diet include a live yeast such as Actisaf?

Avoiding conditions that can lead to SARA (Sub-Acute Ruminal Acidosis) and improving rumen pH are central to ensuring that the rumen is working at its best. The bacteria in the rumen will be working more efficiently, optimising the breakdown of grazed grass and concentrates, as well as improving nutrient availability. Live yeasts have been used quite successfully to achieve these prime conditions.

Conclusion

Many factors can cause butterfat drop during the grazing season. While some of these issues are unavoidable as we focus cows on eating large quantities of high-quality grass, what we do know is that these butterfat depressions are exacerbated if we do not have good rumen health. Improving rumen pH and overall function and increasing fibre digestion are critical to overcoming this challenge.