



# Dairy Briefs

## The Latest Information on Dairy Cattle Nutrition



### Stabilizing Butterfat in Spring and Summer

Laura Martin, M.Sc

As the weather warms up, typically the butterfat goes down. This old adage affects most dairy farms in Ontario where, after the deep freeze of winter, comes the hot humidity of summer. There are two main reasons for this seasonal effect and very little can be done to change either cause. But there are some nutritional tools to help stabilize butterfat in spring and summer.



Butterfat drops this time of year for two key reasons. The more obvious one is that cows don't deal well with heat or humidity. They don't sweat very much, instead they pant to dissipate heat, which like waving a hand fan in front of your face, actually uses up

more energy and can make them hotter. Cows get picky when it's hot; they avoid the long fibre particles that help keep the rumen stable, and typically eat less feed. This can lead to acidosis and a drop in butterfat. Using kickSTART, a liquid feed supplement, can help the TMR stick together to prevent sorting, provides sugars as a source of energy and also can improve DMI by making the ration more palatable.

The second reason is that ensiled feeds have been fermenting for a long time now, and the more they ferment the more they are available to the cow. Think of it like a wrapped candy. When you first ensile these feeds the wrapper is still on the candy. Cows and their microbes can still access the candy but they have to work to get the wrapper off. The ensiling process unwraps the candy while it is still in the bunk so by springtime there is nothing left to slow the microbes down. This takes feeds that have been fed successfully all winter and turns them into fast-acting feeds that can increase the risk for acidosis and lead to a drop in butterfat.

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*Stabilizing Butterfat in Spring and Summer*

By: Laura Martin, M. Sc, Nutritionist



**Liquid feed supplement for livestock**



#### THE BENEFITS

kickSTART® may help:

- Enhance rumen fermentation in cattle
- Stimulate appetite, resulting in increased feed intake
- Improve palatability
- Encourage more consistent feed intake
- Reduce sorting when feeding a total mixed ration (TMR)
- Increase milk production
- Result in less weight loss in lactating animals
- Give faster return to estrus (on full feed) in breeding animals
- Show faster, more efficient gains in growing animals

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## summerSTART

**Specifically formulated to help prepare dairy animals to combat the effects of summer heat with the addition of key ingredients to the ration.**

Heat stress affects most dairy animals during the summer. Once the temperature reaches 26°C (80°F), dry matter intake, milk yield and reproductive performance can decline.

Studies have shown that ruminants require more sodium and potassium during hot weather. This may be partially due to the extra intake of water and greater urinary excretion. The increased requirements for potassium has been attributed to greater excretion of potassium in sweat.

## peakSTART

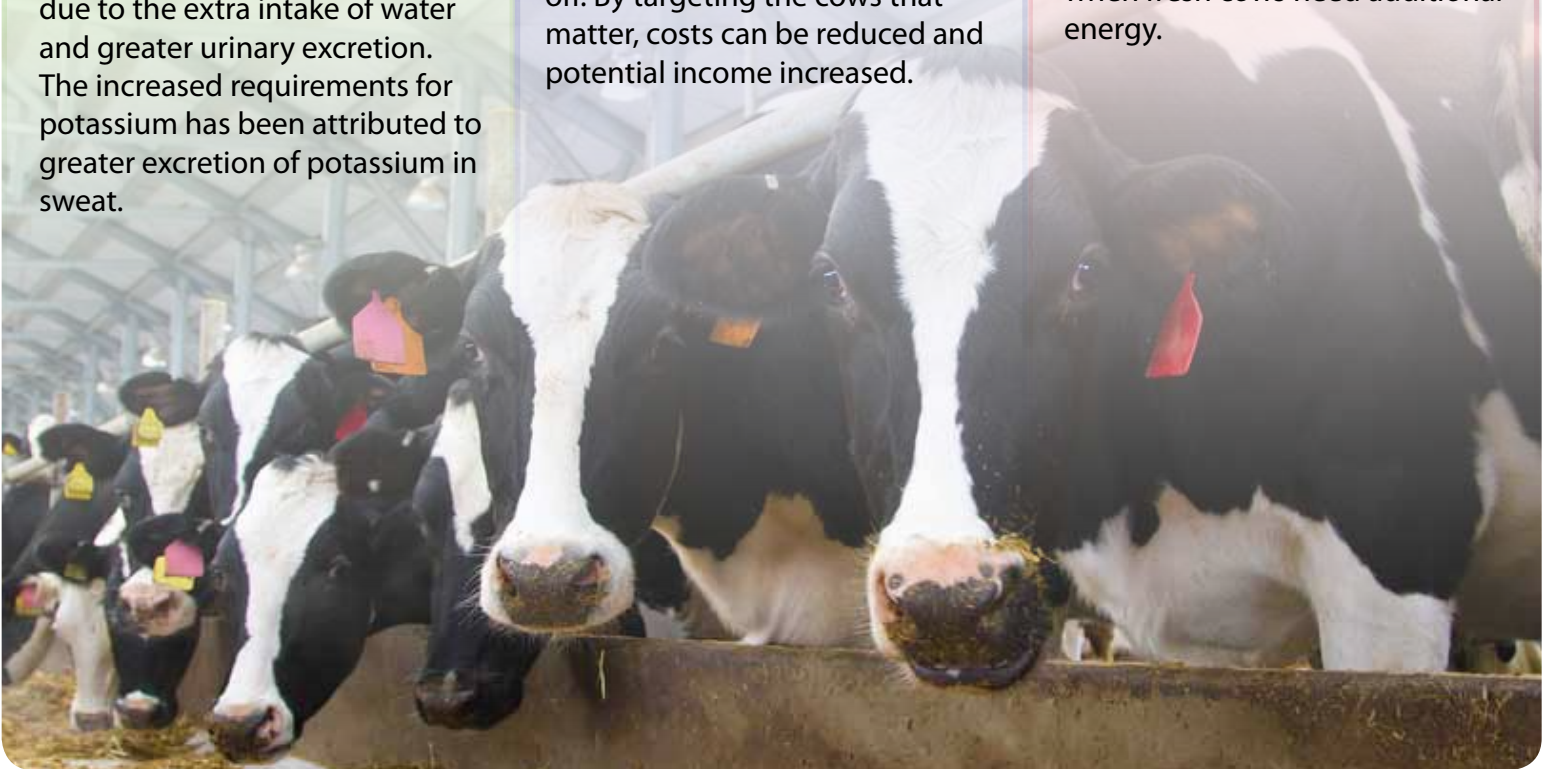
**Designed specifically to allow for greater feed intake, increased feed efficiency and improved milk production in fresh cows.**

peakSTART® is ideally suited for starting off high-producing dairy cows. More and more modern dairy farms are setting up fresh cow groups to adapt newly calved cows to the high group ration. The fresh cow group would be an ideal place to add peakSTART®. Getting fresh cows off to a good start in lactation will help maintain dry-off. By targeting the cows that matter, costs can be reduced and potential income increased.

## microbiSTART

**Gives fresh cows extra energy and the essential nutrients for a speedy recovery from calving.**

microbiSTART® is a unique product containing very high quality, palatable ingredients such as yeasts, sugars, calcium propionate, sodium bicarbonate, niacin, naturally-occurring microorganisms, potassium chloride, magnesium oxide and a natural flavouring agent. This product contains other essential nutrients and has been developed specifically for use when fresh cows need additional energy.



Corn silage quality was so poor in 2013 that this normal drop in butterfat during spring and summer didn't happen to the extent it normally does. If fermentation opens the wrapper but there isn't any candy inside, then the cows ration stays more consistent and the risk for acidosis doesn't increase. The 2014 harvest, while it didn't look promising, has actually turned out much better than 2013's harvest. The harvest was late and the weather



cooled down quickly right after, this slowed down fermentation and made most nutritionists and producers think that this year's crop was no better than last year's. However, now that the weather is warm, ensiled crops have become more available and have led to butterfat dropping on most farms. Even though a 3.80% butterfat is more normal for this time of year, it sure seems low compared to a steady 4.20% all winter.

It is hard to make it cooler outside so that the cows don't have to cope with the heat, sure there are environmental management tricks like sprinklers and fans, and you could always pack up and move somewhere cooler, but the initial problem of the heat and humidity is just something we have to live with in Ontario. And the whole goal of ensiling feeds is to get them to ferment and provide more energy than they would straight out of the field, unfortunately there is no stop button on the bunk when the feed is perfect. There are some nutrition strategies that help the cows through the heat and to deal with fast-acting feeds.

Feeding the herd a properly balanced ration is probably the most important strategy in terms of supporting butterfat. Cows can't produce butterfat out of thin air! The key to supporting butterfat is to keep the rumen healthy. Feeding diets that have plenty of fibre or "scratch factor" stimulates chewing and helps buffer the rumen naturally. The rumen microbes produce fatty acids that are used to form butterfat. Keeping the rumen healthy ensures that these microbes are producing enough of the right kinds of fatty acids. Rations with good quality fibre sources are essential.

Feeding high levels of fast-acting carbohydrates can cause the pH of the rumen to drop, which in turn lowers butterfat. Balancing the diet to have enough energy to support milk production but low enough levels of these carbohydrates can be tricky, especially over the spring and summer. Those rapidly digestible fermented crops are just the thing to drop the pH of the rumen. Replacing some of the corn silage or high moisture fermented corn with dry corn or other slower-acting energy sources may help with the problem.

## **WE TAKE BIOSECURITY SERIOUSLY**

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- **We wash our trucks everyday in our onsite washbay, which was built in 2001.**
- **Drivers wear clean disposable boots whenever appropriate.**



Fast-acting carbohydrates can overwhelm the natural buffering capacity of the rumen, and this contributes to the drop in butterfat. By supplementing the diet with additional buffers, like sodium bicarbonate, the rumen is more stable and better able to handle this challenge. Adding bypass fat to the diet may be another strategy. This provides the cow itself, rather than her microbes, with energy and a direct source of fatty acids. The key is in the bypass; too much unprotected fat, or fat sources high in unsaturated fatty acids, can actually lower butterfat as these fatty acids can harm the rumen microbes at high levels. Incorporating whole cottonseed into the diet can also help boost butterfat. Cottonseed is a rather unusual feed in that it is a good source of energy, fibre and protein.



Cows lose water, and therefore minerals, through increased breathing, urination and sweat. It is important to keep the minerals balanced in hot weather, especially potassium, sodium and magnesium. Increasing the concentration of these minerals, by using summerSTART in the ration will help compensate for the higher losses from the body seen in hot weather. Increasing potassium levels in the diet to 1.5% can increase milk production in heat stressed cows. summerSTART uses potassium carbonate to meet this additional potassium level which will assist in keeping the chloride levels down and the DCAD balance positive. Providing sodium at 0.5-0.6% and magnesium at 0.3-0.4% will also help heat stressed cows dissipate heat and have been shown in some research to increase milk production. The buffers and yeast found in summerSTART also help keep the rumen stable and healthy which helps maintain butterfat in the hot weather.

As the weather gets warmer and the feeds get more available, producers may need to make a few adjustments to their rations to keep that rumen stable and keep the butterfat levels up. It is much easier to keep the rumen stable rather than to re-stabilize it after a crash. The Farmer's Almanac predicts a hot one this year so it's best to be prepared, talk to your sales rep today about using kickSTART and summerSTART in your dairy rations!



**WE APPRECIATE YOUR BUSINESS**

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