



# Dairy Briefs

## The Latest Information on Dairy Cattle Nutrition



### Sweet Feed Can Sweeten Your Profits

Laura Martin, M.Sc

With the challenges producers are having getting milk out of their forage this year we are really having to push grain to the cows. To keep the rumen healthy and to get more milk out of the cows it might be a good idea to replace some of the starchy grain with a source of sugar, like kickSTART®. Cows, and their microbes, have a "sweet tooth" and supplementing lactation diets with sugar can increase gut health and increase production.

Dry forages, like hay, can have variable levels of sugars depending on variety and harvest timing. The plants make sugar all day and then use it up at night, so hay harvested in the afternoon should have more sugar than hay harvested in the morning. Fermented feeds contribute very little sugar to the ration as the sugars are used up in the fermentation process. Mature grains have very little sugar as by the time of harvest the sugar has been changed into starch. So typical dairy rations, with fermented forages and mature grains, only contain low levels of sugar, about 2 – 4% DM. However, the ideal sugar level in a lactation ration is 4 – 6% DM. Supplementing diets with a sugar source, like kickSTART®, boosts the total level of sugar into the ideal range. Research has shown that the optimal feeding rate for added sugar is 2.5 - 5% of the diet's dry matter. Adding sugar works especially well in high corn silage rations and rations that have low fibre digestibility.

Both whey and molasses have high concentrations of sugar and are often used in combination in commercial liquid feed supplements. These two



ingredients have different sugar profiles, with molasses having mostly sucrose and whey containing mostly lactose. This combination of sugars works well together in the rumen to provide energy. kickSTART® can help stick the ration com-

Cont. >>

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*Sweet Feed Can Sweeten Your Profits*

By: Laura Martin, M. Sc, Nutritionist



### LIQUID MINERAL SUPPLEMENT FOR DAIRY COWS

## ADD kickSTART® NOT WATER

**Adding water to TMR rations may make the ration unpalatable . . . add kickSTART® instead!**



**Molasses is high in sugar, resulting in a tasty source of energy for cows**

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ponents together to help reduce sorting, which can improve milk production, components and general animal health. Bakery waste can be a good partial replacement for corn. It is actually higher in energy than corn and very palatable; however the sugar levels can be quite variable depending on the mixture of bakery products used.

Fibre is digested slowly in the rumen and can take over a day to degrade. Starch is digested faster than fibre but it still takes several hours to degrade which helps provide a steady source of energy over the day. Sugars are fermented within the hour. Even though sugars ferment more rapidly than starches they don't pose the same risk for acidosis and reduced butterfat. When sugars are broken down in the rumen they tend to increase the levels of butyrate, and this plays a big role in how sugars benefit the cow.

Butyrate produced in the rumen is used as a fuel for the cells that make up the rumen lining. Butyrate has also been shown to be more effective at increasing the development of rumen papillae (the microscopic projections from the lining of the rumen) than the other volatile fatty acids created during fermentation. This implies that by increasing the levels of butyrate, by feeding sugar, the absorptive surface of the rumen can be increased. Cows with higher levels of butyrate may also be more resistant to subacute rumen acidosis. Multiple studies have shown that feeding sugar at moderate levels does not lower the pH of the rumen. The breakdown of sugar does not contribute to the production of trans fatty acids that are linked to decreasing milk fat levels. Actually sugars may help reduce the build up of these fatty acids. This combined with the stable pH contribute to the higher butterfat levels associated with feeding sugars.

Feeding sugars can also increase feed intake in milk cows. One obvious reason is that it sweetens the feed and every producer knows that cows have a sweet tooth. kickSTART® contains molasses which has been shown to boost appetite, resulting in higher dry matter intakes. Another reason that cows may eat more is that by increasing butyrate, and lowering propionate, the cows don't feel full as fast. High levels of propionate are responsible for "telling" the cow that she is full, which is why some diets with high starch levels can reduce intakes because the cows are being told they need to stop eating.

What sugars really do is feed the rumen microbes. Sugars are used up by the microbes so that the microbes can turn the fibre in the diet into energy for the cow. Adding sugar to the diet changes the population of microbes and can increase the production of microbial protein. This microbial protein is then used by the cow and is an excellent source of amino acids that are used to produce milk. When feeding supplemental sugars it is important to ensure that the ration provides enough rumen degradable protein to support the growth of the microbes. If there isn't enough protein for the microbes to use, the extra energy doesn't have as big of an impact. This increase in microbes and the potential for increased surface area in the rumen contributes to the increase in fibre digestion that is seen when feeding extra sugar. The increase in fibre digestion, along with the increased intakes and improved gut health explain why feeding sugars increases milk production and milk fat.



Replacing some of the extra grain with kickSTART® may help increase milk production, especially this year with the potentially lower fibre digestibility in the forages. Talk to your Kenpal sales rep about adding kickSTART® to your ration to get more milk out of your cows.



# Kenpal Robot Pellets & kickSTART®

## Cows love robot feed and have increased visits to the feeder with kickSTART®



Mike, Ben, Rose, Jeff Van Miltenburg & Larry Merner

Ben and Rose VanMiltenburg, along with their sons Mike and Jeff, own and operate Miltenview Holsteins Ltd. in Seaforth, ON. They have been dealing with Kenpal and their salesman Larry Merner for the last 23 years.

Once they installed the milking robot they started to feed Kenpal's Robot Pellet. The pellets contain Kenpal's Herbageum Condiment flavouring agent. Ben and Rose said "the Herbageum Condiment makes a huge difference! The cows love it and we won't order feed without it."

Then they decided to add Kenpal's kickSTART®; a molasses based liquid feed

supplement. It wasn't long after when they started to see results. One of the main benefits they saw was the cows increased number of visits to the robot. They are now getting an average of 2.6 visits/cow/day. Their production also went up, currently at 34.7 litres/cow/day, and as high as 36 litres/cow/day.

The VanMiltenburg's like working with Larry and Kenpal and haven't switched since they started feeding with Kenpal 23 years ago. Ben adds "If there is something better out there, we haven't found it yet."

Ben, Rose, Mike and Jeff Van Miltenburg  
Miltenview Holsteins Ltd.  
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## GILLETTE FARMS INC. HOME OF SUPER-COW GILLETTE E SMURF



**WE USE SILO GUARD®II TO PRESERVE MORE OF WHAT WE WORKED SO HARD TO PRODUCE. BECAUSE QUALITY SILAGE IS VALUABLE, SILO GUARD®II IS A VERY WORTHWHILE INVESTMENT.**

Gillette Farms Inc. is located in Embrun, Ontario. They have a 450 head milking herd and a total of 1100 animals. They have also had the great achievement of raising and working with the new World Record lifetime milk producer Gillette E Smurf. Mathieu Patenaude of Gillette Farms had some great things to say about Silo Guard®II forage additive for Alfalfa, Corn Silages and Baled Hay:

*"At Gillette Farms we pride ourselves in raising cattle that have great conformation so that they are well equipped to have a productive life. But this is only part of the equation. To get great production we need to feed top quality ingredients on a consistent basis.*



*This is why we put a high importance on our silage production. We have found that Silo Guard®II is the best product to help us achieve superior silages. With Silo Guard®II, the benefits are readily visible. Better preservation of the silage both on top of the bunk and in the mass. Reduced heating at the silage face and at feed out and sweeter smelling silage.*

*We use Silo Guard®II to preserve more of what we worked so hard to produce. Because quality silage is valuable, Silo Guard®II is a very worthwhile investment. Try it today!"*

**CALL YOUR KENPAL SALES REP TODAY FOR MORE INFORMATION!**

Published By:



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