



Dairy Briefs

The Latest Information on Dairy Cattle Nutrition



The Cost of Feeding Robots

Laura Martin, M.Sc

As more and more farms change from conventional milking to automatic milking systems some important nutrition decisions also need to be made. Adjustments need to be made to the TMR at the bunk and a quality robot pellet needs to be fed while the cows are being milked. Many producers are concerned that these nutrition changes will increase feed costs and consider them to be a serious drawback to robotic milking; but does it actually cost more to feed these herds?

Robot Pellets Taste Great!



With free flow robot traffic, which is used by the majority of robot farms in Ontario, changes need to be made at the bunk so that cows have more motivation to go into the robot. Since this mix is no longer the total ration for the cows the new term is **PMR**, or **partially mixed ration**. The general rule is to balance the nutrition in this PMR for about 5 - 7 litres less production than

the herd's average production. So if the herd is averaging 35 L then the PMR will be balanced for 28 - 30 L. By reducing the production expectation of the PMR the dry matter intake, energy and total protein of the mix is lowered. This prompts the cows to go looking for more, which they will find in the robot. Forage moistures in the PMR need to be closely monitored. If the forages get drier then the PMR will contain more dry matter and may reduce robot visits. The fibre in the PMR also needs to be high enough to support butterfat production in the high producing cows that are receiving a lot of robot pellet. This robot pellet contains the missing nutrition from the PMR and is designed to be fed at different feeding rates depending on production.

The robot pellet is vital to the nutrition program for a robot farm. It not only has to replace the nutrition that has been removed from the PMR it needs to entice the cows to enter the robot. Kenpal Farm Products Inc. has a good

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Getting More Out of Your Cows
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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quality pellet that can make all the difference when it comes to not having to fetch cows. Palatable ingredients are important. Cows have a sweet tooth so sweet ingredients like molasses and flavours can attract cows to the robot and keep them coming back for more. Kenpal's gemSTART Dairy Robot Pellet contains a blend of herbs and spices that the cows just love as well as the sweetness from molasses. Unpalatable ingredients like minerals should be kept to a minimum. Providing readily available sources of starch are important. Cows will be looking for the energy they are missing in the PMR so it is important to provide it in the robot pellet. By providing energy in the pellet, cows can be fed to production with higher producing cows getting more pellets and therefore more nutrition to support that production. Kenpal's gemSTART Dairy Robot Pellet is a combination of grains and protein and other goodies to support different levels of milk production. The pellet itself needs to be quite hard. Kenpal's gemSTART Dairy Robot Pellet arrives in the robot feeder with minimal fines so that the cows can eat it as they milk.

A good quality robot pellet comes with a price though, as the ingredients need to make it can be costly. But it is worth spending a little bit more on a good pellet and get those cows into the robot on their own rather than having to fetch them. Many producers are concerned that feed costs will be a lot higher in a robotic milking herd compared to a conventional herd. At first glance it might seem that it is more expensive. Table 1 shows a comparison between a typical conventional vs. a typical robotic feeding program. They have been balanced so that an average pellet intake of 3 kg results in similar protein, energy and fibre to make the comparison fair. More off-farm feed has to be bought in and on an average cost per head per day feeding a robotic milking herd is more expensive than conventional. With an average of 3 kg of pellet it's almost \$0.75 more per head per day which can add up quickly! However, cows are milked more often on a robot than with conventional milking and can produce more milk; according to some sources at least 10- 15% more milk. With the quota system in Ontario this production increase translates into selling cows so that milk is not being produced over quota.



Kenpal Robot Pellets

Draw cows in the free traffic system and produce minimal fines

Joe and Barb Terpstra, along with the help of children Chelsey, Alison, Emily and Cole own and operate Cranbrook Farms, a 300 herd milk cow operation in Brussels, ON. They have been customers of Larry Merner and Kenpal since 2003.



Front Row: Joe & Barb Terpstra, Larry Merner
Back Row: Emily, Cole, Alison & Chelsey Terpstra

This past July, the Terpstas incorporated 6 Robotic Milking Systems into their operation. "It was a smooth transition and our Sales Rep was there," says Joe. Each day they average 2.9 visits to the robots, per cow and have a minimal fetch rate of less than 5%. "If they're not going in the robots, then there's something wrong with the pellets," says Barb, crediting Kenpal's Robot Pellets as contributing to some of their success with the robots.

Since starting the Robotic Milking Systems with Kenpal's Robot Pellets, Joe and Barb have noticed a significant increase in their cows' production. They are anticipating an even greater increase in the months to come.

Having just filled their quota and recent incentives, the Terpstra family is looking forward to next year's incentive days with Kenpal by their side.

On a 60 cow herd an increase of 15% in milk allows for 8 cows to be sold to keep the same amount of litres in the tank. With only 52 cows needing to be fed rather than 60 cows the savings add up to almost \$10 a day or over \$3,000 a year on feed costs for the herd. Of course if you don't get an increase in milk on the robots then the feed is going to cost more.

Table 1: Typical Conventional TMR vs. Robot Feeding Program

	Typical Conventional Ration	Typical Robot Ration
Straw (kg)	0.25	0.25
Haylage (kg)	15.51	16.20
Corn Silage (kg)	15.51	16.20
Dry Corn (kg)	5.96	4.46
Soybean Meal (kg)	1.50	1.16
DDGS (kg)	1.13	0.87
Canola Meal (kg)	1.13	0.87
Vitamin/Mineral Premix (kg)	0.671	0.671
Robot Pellet	--	3.00
Dry Matter Intake	22.52	23.70
Crude Protein (% DM)	17.00	17.00
NDF (% DM)	32.10	32.40
ADF (% DM)	19.60	19.50
Starch (% DM)	24.50	24.00
NE Lactation (Mcal/kg)	1.64	1.63
Milk Production (L)	30	34.5
Feed Cost per Head per Day	\$5.92	\$6.65
Cows to Fill Quota	60	52
Feed Cost per Day	\$355	\$346
Savings per Year		\$3,430

*** Costs derived from OMAFRA Weekly Hog Market Facts (Mar 30, 2015), Furst-McNess Daily Market Report (March 27, 2015), Corn Silage \$50/T; Haylage \$120/T; Straw \$220/T; Robot Pellet \$420/T; assumes a 15% increase in milk production with the robot.**

More than just the milking routine needs to change with robots, there are big changes to the nutrition program as well. Changes are required at the feed bunk that help reduce diet costs and increase visits to the robot. Quality robot pellets, like Kenpal's gemSTART Dairy Robot Pellet, are worth the cost if they encourage the cows to return to the robot and support the increased production. So while it may seem like a feeding program for a robotic milking herd may cost more, if you get more milk and can sell cows and therefore feed less cows that can more than make up for the added expense.



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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WE APPRECIATE YOUR BUSINESS

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