

AUTOMATION, A PROFITABLE TRANSITION FOR DAIRY FARMERS

# HARVESTORE



We're a mobile society and technology is improving the way we work. For example, businesses are capturing efficiencies by allowing people to work remotely. While that makes sense in an office setting, it can also apply on the dairy farm.

Farmers are ditching labor-intensive, time-consuming manual jobs in favor of automated processes and gaining time and cost savings, efficiency, improved feed quality and increased milk production.

"We thought moving to automation we would lose the personal touch, but now we know our cows much

Turn over to read the case study [➤](#)



**HARVESTORE®**

**CST  
STORAGE**



“Feeding with high-moisture corn can save \$16,000 to \$22,000 a year per robot in feed costs,”

better than we ever did,” says Welden Plett of Sunny Glade Farms near Blumenort, Manitoba.

Dairy farmers in Canada are seeing the benefits of switching to automated feeding and milking. Everyone’s experience is different; some are looking for improved storage, some want consistent feed quality and still others are looking for a solution for more efficient feeding. Regardless of the scenario the conclusion is the same: technology is the common denominator, with the ability to drive processes and give the farmer greater insight into the herd.

Farmers are finding technology can improve their bottom line because Harvestore, Hive and companies that specialize in robotic milking technology have developed innovative solutions. For example, Harvestore makes the storage solution and Hive provides the technology that manages the feed kitchen and delivery of the feed. The farmer can be as hands-on or hands-off as they desire, because everything they need to know is at their

fingertips: on a smartphone, tablet or computer.

### Three Recipes for Success

In May 2013 a fire destroyed the dairy barn at Sunny Glade Farms and father and son Welden and Jeremy Plett lost their herd of 100 cows. When they rebuilt they came back stronger than ever and doubled the size of their herd, which was made possible with automated feeding and milking.

The Pletts were determined to put the best quality feed into their system and they erected two Harvestore structures—one for haylage and one for high-moisture corn. They joined the growing ranks of farmers who prefer a better, more consistent feed and the cost savings it can bring.

“Feeding with high-moisture corn can save \$16,000 to \$22,000 a year per robot in feed costs,” says Curtis McLean, general sales manager at Ontario Harvestore, a distributor of Harvestore and partner in dairy automation.

Sunny Glade uses a Lely Vector for feeding and Lely robotic milkers. The Lely Vector collects freshly mixed feed from the kitchen and proceeds along a track parallel to the feed fence, where it continually monitors consumption and adjusts

servings so the cows get the right mix and quantity.

“It allows you to manage your farm more precisely, get your herd as healthy as it can be,” says Jeremy Plett of automated feeding. Jeremy is the face of dairy farming’s future—a generation that “wants data at their fingertips,” says Tim Wagler, VP of Hive, exclusive automation partner of Ontario Harvestore. Hive is a turnkey automation control system for agricultural feeding, and a reason more touchscreens and smartphones are showing up on the farm.

The Martin family, which owns Creek Edge Farms in Elora, Ontario got the idea to automate while building a new barn in the summer of 2015 and their electrician suggested automatic feeding.

“Instead of having to rewire the feed room again we decided it made sense to do everything at once,” says Javan Martin.

Martin and his father, Oscar Martin, took the leap into precision feeding by converting to automated feed preparation and putting in a system anchored by Harvestore storage and driven by Hive automation.

Martin has owned Harvestores since 1992 and believes in their integrity and reliability.

“Farmers are taking control of their own feed supply rather than being locked into what they get from the traditional feed mill,”

Harvestores are made of glass fused to steel and provide an oxygen limited environment for the feed through a breather bag system. Haylage and silage maintains its freshness and nutritional value, and Harvestores are space-efficient: for example, two 28’ x 110’ towers provide 3,000 tons of storage annually while occupying only 1,231 square feet. The Martin operation has a total of four Harvestores of varying sizes.

Martin’s Hive system operates the Harvestores structures, supplement bins and two conveyers that move the feed from the Harvestore to the mixer. From a touchscreen or smartphone, Javan can monitor the entire feed preparation process from start to finish. Using Hive’s AgriCHEF system he manages feed quality—controlling everything from recipes to batching to delivery. The Hive system also allows the Martins to send high moisture corn to their two De’Laval robots, saving them thousands of dollars a year in feed costs. “Farmers are taking control of their own feed supply rather than being locked into what they get from the traditional feed mill,” says Hive’s Wagler. “They can now decide on the most efficient recipe for each feed and monitor and adjust from AgriCHEF’s user friendly controls.” The only time Martin has to be

hands-on is when he’s driving 3-4 loads of feed into the barn each day.

“In the old barn we had a mixing cart and had to make five batches a day, which took me two hours—an hour in the morning and an hour at night,” says Martin. “Now it only takes me 15-20 minutes a day because I don’t have to mix the feed.”

Martin says adding automation to feeding allows him to spend more time taking care of his 90 head of cattle and doing more field work. And that means a lot for this family operation that consists of Javan and his dad, brother Terry and a hired hand. Mark Tibben and his family have converted everything to automation and never looked back. Tibben Farms of Brinston, Ontario recently put fully automated feeding online after long hours of installation and testing over the winter. Their robot feeder made its first run on December 22, a day Tibben will never forget.

“Starting three days before Christmas was a bold move but we had set a deadline and were determined to see it through,” says Tibben. “The performance of the robot and the automation has been flawless. From the time we plugged him in and started him up, we’ve only had to make two phone calls to the



technician.”

Tibben employs four Harvestore structures, Hive AgriCHEF automation that operates his unloader and feed kitchen, and a Lely Vector robot which does the feeding. Like many dairy farmers, Tibben didn’t launch into automated feeding and robotic milking all at once. Instead, he says, one improvement follows the other.

“When we built our milking barn the designer told us not to make the alleys so wide because we’d soon have a robot and wouldn’t need as much room,” says Tibben. “We didn’t believe him at first, but sure enough here we are with a robot.”

Tibben says automation has greatly reduced time spent



“It gives us the flexibility to enjoy time together as a family and not compromise the quality of what’s going on in the barn.”



overseeing feeding and milking—from 2-3 hours a day to 20 minutes a day. The increased efficiency meant Mark’s brother was able to take a vacation, leaving Mark and his father to manage the 180-cow dairy with no problem. He also has more time to spend on his cash crop operation and doesn’t have to hire custom operators to do the field work.

### **Integration and Monitoring Yields Quality**

Automated feeding has taken the Canadian dairy market by storm, and Harvestore and Hive lead the way as the only providers of the technology. Hive has developed a smart monitoring system for Harvestore structures, which monitors feed and oxygen levels. It also monitors arm pressure and controls automatic lubrication of the unloader and issues service alerts and maintenance reports.

A farmer can set their feeding schedule in advance and feed is transported from Harvestore to the feed kitchen, with AgriCHEF maintaining the precise volumes of haylage, silage and high-moisture corn to the recipe’s specifications. When supplies start to run low AgriCHEF automatically reopens the Harvestore silo and refills the box. The AgriCHEF also mixes multiple recipes if it’s necessary feed milking cows or dry cows and heifers, making sure each feed is specific to the group. The dairy operator gets real-time reports on feed quantity and quality, which he can monitor and even adjust from his smartphone.

Hive’s Wagler says it takes about a week to install and activate Hive automation.

“An electrical contractor can install the automation panels and connect them

to equipment in a couple of days,” he says. “Then our technicians log onto the controller remotely and commission the system with assistance from someone at the site, usually the electrician.”

A day or two are spent with the commissioning and operator training, until the farmer is comfortable on his own.

Harvestore and Hive are helping more dairy farmers join the ranks of automation and achieve higher quality feed and milk, greater efficiency and savings. Mark Tibben says there’s something else that’s too precious to be measured.

“It gives us the flexibility to enjoy time together as a family and not compromise the quality of what’s going on in the barn.”



**HARVESTORE®**

CST Storage | 345 Harvestore Dr. | DeKalb, IL 60115

Ph: 815.756.1551 | [www.harvestore.com](http://www.harvestore.com)

© 2017. CST Industries, Inc.

Harvestore is a registered trademark of CST Industries, Inc.