

## Technology Measures Mixes and Feeds These Cows

A TMR mixer mounted on a robotic feed pusher makes its way deliberately down the concrete feeding aisle of the new, but not yet full, 160-cow free-stall barn constructed next to the old tie-stall barn at Scherber's Morning Star Dairy near Corcoran. As it moves down one side, the Lely Vector pushes the TMR against the bunk where the milk cows can get at it. Simultaneously, it measures with lasers how much TMR is left and records the need to mix more. At the end of the aisle, it turns and comes back down the bunk in front of the dry cows and heifers. Again, it pushes feed up and scans the remainder.

After a complete circuit of the feeding aisle, a door opens automatically, and the Vector exits the free-stall barn. It lumbers down a concrete ramp, through another automatic door, and into the old barn. In space formerly occupied by the farm's TMR mixing equipment, the Vector backs into its power supply and begins mixing more TMR for the dairy animals.

Based on the needs of the various cows and the levels it scanned in the feed aisle, this remarkable automatic feeding system begins to "cook" the rations. Affectionately named Alice after the character who made all the meals on the 70s sitcom "The Brady Bunch," the mixer calls for haylage, high-moisture corn and silage from three Harvestore silos adjacent to the "kitchen."



**John, Quincy and Staci Scherber of Corcoran, Minnesota.**

These ingredients are transported from storage and into the mixer via conveyors shielded from visitors and inquiring little hands by a security fence. If needed, small hay bales are conveyed into the mixer from the barn's mow. Protein and mineral flow into the mixer from bulk bins outside the barn via PVC pipe. A spray of water from a pipe over the mixer completes the list of ingredients.

Alice mixes the ingredients for about 20 minutes. Then the automatic door opens again, and she lumbers back to the free-stall barn where she deposits the meal in front of the animals. Right now,

she keeps track of the rations for the 110 high producers and the dry cows and heifers. In the future, she may be called upon to make four different rations for the dairy's animals—and is, in fact, capable of storing and turning out many more recipes.

"Right now, this automatic feeding system is saving us about three hours of feeding time," said John and Staci Scherber, who refer to the Lely Vector as the first step in the transformation

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**With an iPad controller, John demonstrates a laser on the feed pusher that measures the TMR level in the feed aisle of the Scherbers' free-stall barn and determines if a new batch of feed needs to be mixed.**

Munson Lakes has been a partner of the Scherbers since the early 1900s when the Munson Feed Co. helped John's grandfather and grandmother, Gilbert and \_\_\_\_\_, raise turkeys for the Minneapolis market. Later, Munson fieldman Don Westphal pointed John's father and mother, Don and Ann, to a farmstead the Scherbers now affectionately refer to as "the home place." Most recently, Munson Lakes sales nutritionist Doug Sawatske assisted the family with the nutritional challenge of moving from two to three milkings.

"Doug analyzes our feed and shows us what we need to do to make it a good ration for the cows," says John, who adds that his MLN nutritionist has the ability, via computer, to watch how the cows are doing and change the ration if needed. *Note: Munson Lakes Nutrition also supplies feed products and consultation to the dairy at Thief River Falls with a Lely Vector.*

In addition to their children, the Scherbers have help from a good friend, Pete Eide, who comes over to milk three times a week. Despite the labor savings of automated feeding, the workload has been intense as the family expanded their herd from 50 to 110 cows, moved into their new free-stall barn, and switched to milking three times a day.

"We haven't seen any free time yet," smiles John, but he is hopeful. "I think I will enjoy managing the herd once the robots are installed." He and Staci think there may even be opportunities to use their new dairy set-up to educate the public on where their milk comes from.

"We hope to be here and part of the community for a long time to come," Staci adds. "Letting the next generation come in will be our next step." ●

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of the dairy, which will extend the couple's work life. It will also accommodate any of their ten children, ages 8 to 28, who want to join them. The next step will be installing two Lely Astronaut robotic milkers into space already allocated in the new barn.

"The grand plan is to make it feasible for us to stay here and milk into our 70s if we want to, but also for the next generation to move in," John continued. The automated milking and feeding system will extend the 53-year olds' ability to milk beyond what they could have with their tie-stall barn. At the same time, it should generate the income necessary for more than one family to be involved in Scherber's Morning Star Dairy.

Already interested is their daughter, Quincy, who is the fourth of their ten children. Quincy is a junior at the University of Wisconsin-River Falls and is majoring in dairy science with a management emphasis. This summer she is helping with the dairy's three daily milkings along with her brother, Caleb, who drives up to Corcoran from Bloomington. It's already a family affair with the younger of the Scherbers' children riding scooters in the free-stall barn. "Our youngest daughter brings books and reads to the cows," says Staci, adding that she draws pictures in the barn, too.

In this new endeavor, the Scherbers' have good partners. Leedstone, their Lely dealer from Melrose, helped the family get all their silos set up to work with the Vector, one of only three such units in the United States—there's one in Pennsylvania and another in Thief River Falls, Minnesota. "They (Leedstone) are the ones who put up the safety fence in front of the conveyors," says John, illustrating the dealer's concern with not only the process but with the well-being of the family.

**Doug Sawatski (left) and John Scherber stand in front of Alice as she calls for hay bales to be dropped from above.**

