Empire Farm Days 2016 (Thursday, Aug. 11)

By Julie Berry

Capital investment of robotic milkers pays off for Seneca Castle, NY farm

In 2007 Dale Hemminger was faced with a decision on what to do about his 45-year-old parlor. The mixed vegetable and dairy farm had about 550 cows and were shipping 16 million pounds of milk. Labor was viewed as a long-term challenge.

"We had to do something," Hemminger said. "We never intended to be early adopters. We just knew we weren't going to be big enough to be a rotary."

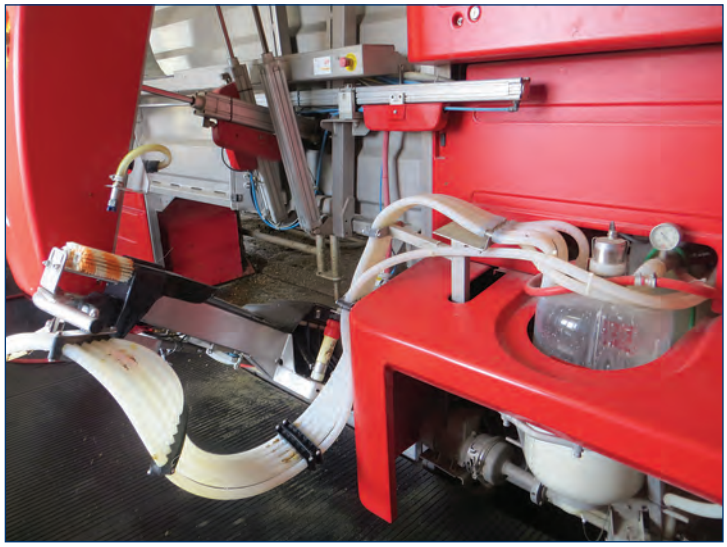
Hemdale Farms has become the US's second largest robotic milking system.

They initially installed four Lely robots in a separate trial barn and milk tank to train cows and staff. "If we didn't like it we would have torn it out," Hemminger said. "We left the parlor intact for an emergency, but it looked old fast when

there were no cows in it. We quickly realized we could push to 800 cows with robots."

By 2009 they had solely converted to robots and are now has the second largest robotic milking system in the nation. Capacity of their 19 robots is 1,000 cows, and the farm currently milks 970 cows. "There is a glass ceiling with robots," Hemminger said. "The capacity is not as flexible as a parlor that can be pushed." Two more robots are planned for installation in 2017, and he envisions having up to 1,300 cows.

Robots are a significant capital investment, but one that has paid off at Hemdale Farms and Greenhouses. "We prepaid labor, and scrutiny on labor is getting tougher," Hemminger said.



While robots are viable, a well-staffed existing parlor can harvest milk economically. But Hemdale had to start over, and Hemminger felt robots are potentially more sustainable. Maintenance of robots is a very significant issue, but he said they are pleased with where they are at with costs today.

"Internally we originally depreciated the cost over seven years, but are now using a 10-year model. Our original four robots are almost nine years old and maintenance and costs have become predictable. We see no reason not to run them 20 years. Our original robots are almost nine years old and maintenance and costs have become predictable," Hemminger said. "Our cost per hundredweight to harvest milk has gone down, and even more the last few years with expensive labor. If we had a parlor, labor cost going up would likely have increased our cost."

Farms do need to decide whether to make a capital investment to run a more labor efficient business, or to run a less capital-intense business that requires more labor.

"I'm a strong believer you need to sort that out. The first half of my career we were rather long on labor and less on capital," Hemminger said. "We came to realize that we needed to spend capital wisely for the future."

Investment in robots has helped the farm reduce more than 40 percent of labor per hundredweight shipped.

Since the 1990's, the farm has tracked milk shipped per hour worked in the dairy. In 2015 the farm shipped 2.3 million pounds per full-time employee for weekly dairy tasks, which has now increased to 2.5 million pounds per full-time employee.

"I feel the industry underestimates the true cost of labor," Hemminger said. At Hemdale, labor costs are carefully accounted. Time sheets are used and value is placed on vacation and time off. Housing, vehicle and management costs are charged. For every 6 to 8 workers, 20 percent of supervisor time is estimated.

The farm was initially focused as a vegetable operation and has provided seasonal housing since 1987. H2A workers have been employed for eight years with the vegetables, which Hemminger finds a cumbersome and bureaucratic process. Now the farm's focus is 2/3 dairy and 1/3 vegetables. They previously hired 55 employees, and now employ 35 to 40 employees, 12 H2A employees, and 6 half-time machinery employees. The barn is staffed 90 percent with Hispanic employees. Shifts are 8 to 10 hours a day. Skill set has shifted to be more skilled.

"It's harder to find people with good cow sense," Dairy Manager Pete Maslyn said. "Our main thing is to let the cows be themselves, and to not influence what they do so much. We need to look ahead. Everything we do in a pen affects the pen. Employees need critical thinking skills."

"We look for a good attitude. Someone who wants to learn. We prefer to teach them what we want to do," Hemminger said. "We have many long-term employees. It feels good to have grown together. It's very important to me that we enjoy our craft."

Cow comfort and body condition has increased by eliminating the stress of being in a holding area. The barns are designed to maximize comfort and well-being.

Data collected has also increased exponentially.

"I don't think the industry has put enough value on robots beyond milking," Hemminger said.

Use of rumination activity monitors assists with detection of heat and metabolic issues. Milk deviation and butterfat inversion on fresh cows are also monitored.

"In 2007 we had no interest in rumination monitors. Now we couldn't think of living without it," Maslyn said. "There is almost so much information it can be overwhelming. The challenge for us is to narrow the parameters to get close to the cows that we need to."❐

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