

Cain Robotic Dairy Operation

Port Authority staff recently visited the Cain Dairy Farm to see their robotic milking system. The farm, south of Bethesda, is owned and operated by Larry Cain and his son, Devin. Visiting the farm along with Larry Merry and Sherri Butler were Tim Derickson, Senior Director – Food and Agribusiness at JobsOhio and Bill Arnett of OhioSE.

Almost two years ago, they purchased and began installation of the robotic milking system, which includes a robotic feed system and manure extraction system. The system went into operation in January 2020 for their 70-cow dairy operation.

The cows enter one of two stanchions on their own to be milked. The system washes the cow's udder, attaches the milker, and detaches when the milk stops flowing, while the cow is being fed. The cows have learned to leave the stanchion when the milker detaches, and the next cow enters to be milked. Each cow has an electronic collar on their neck that identifies them and tracks their milk production and how often they are milked. The cow's production record controls how much grain she is fed while being milked. The Cains say that each cow is milked about 3-5 times per day, at any time of day or night. Milk production has increased by about 30% with the robotic system.

The feeding process is also robotic. Portions of the forage/feed product are placed into a large mixer then distributed to the cows by the robotic mixer/dispenser unit. At timed intervals, the dispenser unit travels down the feed row, using lasers to determine how much feedstock remains for the cows. If rations are low, feed is dispensed but if not, it will simply return in less than an hour to check the feed levels.

Manure removal from the barn is automatic too. A manure vacuum, of sorts, travels slowing around the concrete floor of the barn. When the unit is full, it travels to a receptacle on the wall to discharge what it has gathered. The waste then goes into a manure pit outside the barn, where the tractor and spreader can gather it for spreading on the fields.

Tim Derickson said "I was very impressed with the level of technology being utilized on the farm and beyond pleased to hear how this technology has positively impacted the quality of life for both Larry and Devin and their families."