

# Fielding a new farm system: The KBS pasture-based dairy

This summer, at the Kellogg Biological Station (KBS), an MSU research facility and one of 15 Michigan Agricultural Experiment Stations sites (see page 32), dairy herd will hoof it to a new pasture-based dairy facility.

Construction on the new facility began last fall and will be completed this summer. The pasture dairy will consist of two pastures: a larger, 160-acre pasture for lactating animals and a smaller, 35-acre pasture for heifers and dry cows. A free-stall barn with a milking parlor will be located in the middle of the larger pasture. At full capacity, the facility will house 120 cows.

"Although the conventional dairy operation at KBS has been very successful over the years, we felt there was a need to establish a dairy research and education facility that would complement other sustainable agricultural research programs at KBS," said Mat Haan, KBS pasture dairy project coordinator. "We see transition-

ing to a pasture-based system as a niche market for us because it's something that's not being done in many places. We also want to develop a system that better addresses the needs of small- and medium-sized dairy farmers."

"The new pasture-based dairy facility will provide an excellent venue for education and outreach activities," said Kay Gross, KBS director. "Facility programs will demonstrate how ecological, social and economic principles can be evaluated in the establishment of a smaller-scale dairy management system that is an alternative to the large, more conventional farm model. If you're going to be working with dairy producers in the community, some of them will use a pasture-based system, some will be certified organic and some will use conventional freestall facilities. It's important to be knowledgeable about the whole spectrum of options available to dairy farmers."

Perhaps the most novel aspect of the new dairy is the two robotic milking systems installed in the dairy's parlor.

Robotic milking systems were developed in Europe and became commercially available in the early 1990s. They spread throughout Europe before reaching Canada in the late 1990s and the United States about eight years ago.

"There are a number of robotic dairies in New York and Minnesota and states bordering them," Haan said. "The first robotic unit in Michigan started up this spring in a conventional dairy operation in the Port Huron area."

Using robotic milkers has several advantages, Haan said.

"In a traditional milking parlor, the farmer brings all of the cows into the holding area at the same time and then routes them through the parlor in groups," he said. "This is opposed to the robotic milking system, which is voluntary; a cow chooses when and how often she wants to be milked. The robot has sensors that collect a lot of data on every cow," he said. "For example, it will measure the cow's body weight, total milk yield and milk quality. So every time a cow is milked, the farmer gets a lot of information that might not be available from a conventional milking system."

Another benefit of a robotic system is that the farmer doesn't have to be present for scheduled milkings.

"Currently, in a conventional dairy operation, someone has to be there to milk at 5 a.m., again at noon or so, and then at 5 p.m. or 6 p.m. in the evening -- three times a day, 365 days a year. With the robots, if a dairy farmer wants to go to a son's soccer game or a local PTA meeting, the flexibility is there. It's a win-win for the animals, the farmers and the communities in which they live."



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**A grand opening and open house for the dairy will be held 1- 4:30 p.m. Aug. 19. The event is open to the public and will include a tour of the new pasture dairy.**