

For the Lemke family, the art of cheesemaking is down to a science, and the results are delicious. By Tracey Kelley

Janelle and Daniel Lemke own Sunny Road cheese, an artisan cheese and ice cream company in Cokato, Minnesota. Their tasty treats are winning awards and drawing the attention of large retailers. f you've ever baked with a cake mix, you're familiar with the work of Daniel Lemke. A chemist, he created the emulsifier, or stabilizer, that makes that mix foolproof. He also has patents for emulsifiers in snacks, bio diesel in low-grade fats, and antistatic agents in dryer sheets.

But for a long time, he couldn't make cheese. "I understood the chemistry, but I had tried cheese and couldn't do it," he says. "Cheese is like wine. People are really particular about it. So cheesemaking became a personal challenge for me, a way to play with the proteins to change the mouth feel and the texture, and to find methods to enhance flavor."

The first step to cheesemaking was finding the right property. Daniel and his wife, Janelle, moved with their three children from Pennsylvania to Minnesota to be closer to family. "I was driving the real estate broker nuts," Daniel says. "I told him, 'I want a lot of land, I want a big barn, but I couldn't care less about the house. I can always put up a house.' "The family settled at Morning Star Farm in Cokato,



with 50 acres perfect for their horses, cows, and goats. They installed 5 miles of new fence and restored the barn.

Daniel worked as a chemist for Cargill while researching cheese. "I read dozens of books and took a class at the University of Wisconsin on industrial cheesemaking. I wrote down all the equipment, and I starting working the financials." He visited cheesemakers, reviewing technique and evaluating cattle breeds. He settled on a herd of 75% Brown Swiss and 25% Holstein. Cheesemakers value milk from Brown Swiss for its flavor-enhancing properties and fat-to-protein ratio. Holstein milk proteins allow curd to shed whey better.

Daniel visited farms throughout the Midwest to choose his herd of 50 cows. Ever the scientist, he experimented with nutrition to increase milk yield. The cows eat a special feed mixture and graze on 36 paddocks. The resulting cheese has a slight yellow color, hinting at the beta carotene from the cows' partial grass diet. The color varies by the time of year, based on how long the animals are on pasture.

Starting the business

Daniel designed the cheesemaking facility with two rooms holding 70,000 pounds of cheese. Cheesemaking on this level isn't for the faint of heart or light of wallet. It costs about \$700 a day to operate the facility. "Most people don't understand how much money farmers put up front to run their businesses," he says. The family didn't take any government grants or stipends.

In 2008, the Lemkes started the Sunny Road cheese business, a trademarked name and logo inspired by the hymn, "Stepping in the Light: How beautiful to walk in the steps of the Savior." Sunny Road is a family enterprise. Janelle handles much of the facility management. One son, Benjamin, and a daughter-in-law, Kendra, work there full time. Daughter Rose works part time. Additional help is hired during heavy-production periods.

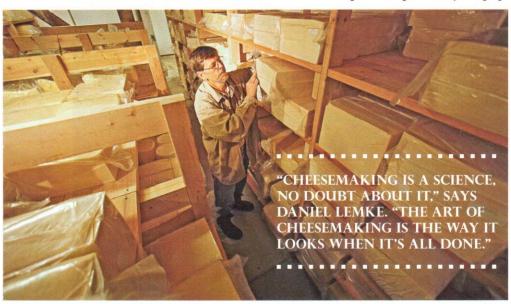
top: The Lemke family takes this custom trailer to festivals and

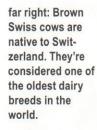
special events to sell cheese and ice cream.

above: The Lemkes' proprietary combination of casein and lactoglobulin proteins makes it easier for people with lactose intolerance to enjoy their cheese.

right: Kendra Lemke weighs and labels Sunny Road cheese.

below: Cooling rooms house cheese wheels and blocks. To maintain the right form, smaller blocks are cut from the larger units right before packaging.





Inside the facility, a laboratory full of charts, graphs, burners, and beakers demonstrates Daniel's analysis of the cheese proteins casein and lactoglobulin, milk pasteurization, flavor and moisture balance, and fat content. "Cheesemaking is a science, no doubt about it," he says. "The art of cheesemaking is the way it looks when it's all done."

Attention to detail makes a quality product. Sunny Road cheese won first place for its Parmesan at the 2011 Minnesota State Fair and received a Champion Cheese Maker of the Year award from the Upper Midwest Dairy Industries Association. "I was really proud of that," says Daniel. "They told us we were the first small company/artisan cheese manufacturer in the history of the contest to receive this award."

Sunny Road cheese is available in 50 Minnesota stores and online at www.sunnyroadcheese.com. There are 13 varieties, including Parmesan, Juusto, Muenster, Edam, Cheddar, and Gruyere. Top sellers are Havarti and Gouda, including a smoked Gouda. The family produces two batches of cheese a week and ages some cheeses up to 24 months. The Lemkes also produce gourmet ice cream.

Daniel laughs about the mistakes along the way, such as spoiled cultures that tainted the whey and ruined cheeses smoked with applewood. But the desire to craft "an addictive artisan cheese that truly gives people pleasure," he says, inspires the family to move forward.

Learn More

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Micro Dairies

onsumers have a growing desire for local, fresh products, and that has prompted an expansion of micro dairies. According to the American Micro Dairy organization, a micro dairy milks 10 or fewer cows, goats, sheep, or water buffalo, and sells products directly from the farm. Many of these dairies create specialty milk, cheese, yogurt, butter, and ice cream; others distribute raw milk to people who make these products. Many micro dairies don't produce enough income to support a family, so developing efficiencies is important. For example, a micro-dairy farmer might only milk once a day if the cows are still nursing. Scaled-down mechanical parlors can reduce milking time for small farmers who otherwise would be milking by hand. Some micro dairies import European mobile milking units that can be used in the pasture.

Starting a micro dairy is tricky.
States have different regulations, but almost all govern micros the same as large commercial dairies, which affects everything from start-up costs and inspections to marketing products. Large operations have to follow strict federal and state guidelines for varied reasons. Proponents of micros argue that regulations should be modified for small farmers because they have more control over the animals and the product, and intend to sell locally, not across state lines.

Small advances in raw milk sales vary by state, including exemption from the FDA's Pasteurized Milk Ordinance. However, a number of microdairy owners prefer to obtain full regulations for a creamery and bypass raw milk issues altogether.

Suggested websites

- American Micro Dairies: www.americanmicrodairies.com
- Bechard Family Farm, Conway, M0: www.bechardfarm.com
- Marisposa Creamery, Altadena, CA: www.mariposacreamery.com
- Turkey Hill Farm, Randolph Center, VT: www.turkeyhillfarmvt.com

