

From Co-Op to Direct Sales

Maryland Dairying Family Makes the Switch

by LEIGH GLENN

Humans are an adaptable species, and farming practices can be, by extension, adapted to conform to new scenarios and possibilities. It's not easy to move away from systems whose continued existence seems assured, but when it's time to move on, it's good to know that other ways exist. And that is true for anyone who has distributed milk through conventional channels when moving into the realm of direct sales, as Nice Farms Creamery on Maryland's Eastern Shore has done.

Changes in family dynamics prompted dairy farmers Bob Miller, Sr., and Chase Tanner to leave Bordentown, New Jersey, and search for less expensive land in 1989 so that they could keep farming. They found a conventional dairy in Federalsburg, Maryland, and began to switch over to a grass-based paddock rotation not only because it was less expensive, but also because that system appealed to them.

For 20 years, they sold their grass-based milk through co-ops, including Atlantic Dairy Cooperative and Land O'Lakes, where it got mixed with milk from other farms raising cows in a total mixed ration system. The main issue with that system was the lack of control

over pricing and what they would get paid. The longer they stayed in the co-op system, the fewer choices they had. By 2008, when the economy imploded, Miller and Tanner were thinking of quitting the business. Milk prices were low and co-ops increasingly didn't want to deal with small farms.

But oldest son Bob, Jr., who served as an Army captain in Iraq, had other ideas. While on patrol around Kirkuk, he noticed that many of the local farmers sold what they raised directly to buyers, and he asked the Iraqi officers – many were farmers themselves – about it. Iraq had fewer regulations than the States concerning direct-to-consumer sales and it gave Miller the idea that he and his family should try to do that, but they would need to build an on-farm creamery.

Miller resigned his commission in January 2009 and invested his savings to build the creamery, with state regulatory authorities' input. The whole family pitched in with design and labor. Despite the infusion of savings, they still needed a loan – and it was not a good time to apply, as banks were tightening lending rules. What bank would lend money to build something as nonmainstream as an on-farm milk processing plant? He was turned down by four banks. Eventually, a bank his

parents had done business with approved his application.

Nice Farms Creamery opened in October 2009, giving the Miller-Tanner family the ability to bottle whole milk and make chocolate milk, eggnog and yogurt – plain and vanilla, plus fruit varieties. Nice Farms gets its name from Miller's grandfather, Leon Nice, whose farm in New Jersey bore the same name.

Today, Miller runs the creamery, including milking and processing, plus marketing and deliveries. Next-oldest son Lucas created the farm's logo and helps with processing, including making yogurt and eggnog. Third son Chase helps with milking, moving the cows and managing pastures, and youngest son Jacob assists with raising the calves and heifers. Bob Miller, Sr. and Chase Tanner help with milking and pasture management.

By 2013, they had saved enough to buy a new cream separator, but the journey was something of an odyssey. First, they purchased and repaired a 1930s cream separator from a farm in western Maryland only to learn from their inspector that the solder used back then was typically lead-based. She tested the solder, and sure enough, it had lead. By late 2013, with an all-new separator, they began offering skim milk and butter, which has been a hit with customers. It's also been two years since they sold milk to the co-op. The timing was right, because the next-closest dairy exited the business, so bulk pick-ups are no longer a viable option.

Today, Nice Farms is at capacity – both in terms of stocking rate and customer demand. So, any shift, such as last year's dry summer, shows how tight the tolerances are in such a system, but the family would have it no other way.

GRAIN & GRASS OR GRASS & FODDER?

A grass-based dairy needs a different kind of oversight and management than a conventional dairy. Both grain and grass systems are management-



PHOTOS COURTESY OF NICE FARMS CREAMERY

Holsteins and Jerseys dominate the Nice Farms dairy herd, but they also have cross-breeds, including Friesian, Milking Shorthorn and Lineback.



Bob Miller, Jr. sells milk and yogurt to a customer at the Anne Arundel County Farmers Market.

intensive, but one is more reactionary as it tracks the ebb and flow of grain prices and can require more farmer involvement if and when cows get sick. The other involves planned movement of cows from one paddock to another and allows for variables in how the product tastes, based on season, weather and the kinds of grasses the cows are eating.

Miller and Tanner have not bought in new cows in many years, so the herd of 65 is essentially closed, though they do use artificial insemination. At present, they have 32 milking cows, 10 to 15 dry and the rest younger. Holsteins and Jerseys dominate the herd, but they also have many crossbreeds, including Friesian, Milking Shorthorn and Lineback. On 120 acres of permanent pasture, they produce about 35 pounds of milk per day.

With a pastured system the cows get to move about and the overall health of the herd is better, including fewer foot problems, less need for hoof trimming and less ringworm, Miller says. The cows are out year-round and moved into a tie-stall barn if the weather is freezing or snowy, which, in an extreme winter for Maryland, could be up to three months of the year.

The pastures are a mixture of annuals and perennials and include ryegrass, clover and turnip in the spring, millet in the summer and oats and turnip and clover again in the fall. Perennials include orchardgrass, bromes and fescue – this last is maintained for

winter feeding – and they supplement with hay if the cows have to be inside in the winter or when it's very dry and the grasses haven't had enough moisture, such as last summer, to catch up. They've recently added cowpeas to the mix and found that this did well. Chicory, lamb's quarter, chickweed and plantain also grow in the pastures.

They do not irrigate and use a no-till drill for seeding. "That really saves us," said Miller. "Since we've gotten that, there is no need to break up the ground."

Even to the untrained eye, the pastures stay greener longer and hold water and nutrients better than row-cropped neighboring farms. Generally, organic content in the area is less than 1 percent and farmers are lucky if the soil measures 1.2 to 1.5 percent. The pastures at Nice Farms are at about 2 to 2.5 percent and Tanner wants to get that level up over 4 percent. She believes they can do that through grazing, manure droppings – worked over by dung beetles – and by using cover crops.

At milking, the cows are given a couple of pounds of grain per animal in an 18 percent protein blend. The grain comes from a small mill run by Mennonites outside nearby Chestertown.

When pastures are too young or there's been too little moisture, they supplement with barley fodder grown hydroponically in a room off the milking parlor. At 5 to 7 inches tall, it pro-

vides about 11 to 11.5 percent protein, says Tanner. To date, they've had no mold issues, but the system requires constant monitoring to ensure the seeds are moist enough to sprout, but not too moist.

TO MARKET, TO MARKET

Today, Nice Farms sells at five farmers' markets – two across the Chesapeake Bay in Annapolis, one in Salisbury, one on Kent Island where Miller's father-in-law and pastured poultry farmer John Wrang sells the dairy and one in Easton. Customers can also buy their milk and yogurt at retail stores: Graul's, a local grocery chain, in St. Michael's and Earth Origins Market in Easton. They sell all products through Chesapeake's Bounty, which has two locations, in St. Leonard's and North Beach on the Western Shore. Customers may also visit the creamery by calling ahead to make an appointment – this ensures that they have the products they're looking for in stock.

Customers who frequent Chesapeake's Bounty reportedly will wait for the dairy to arrive before coming in to make their purchases. And Miller says that people at farmers' markets often get upset when supplies are running low or they're sold out.

"It can be frustrating for our customers and for us, because we just can't control what the cows are going to put out, how fast the grass is going to grow. We could give big rations like others do. Will that be what you want to drink? No."

But that's the way it is with the grass-based system that supports only as many bovine mouths as it can without tipping the balance into problem-creation territory. And as the grasses change through the year, the taste of the milk also changes. Miller and his family do a lot of educating, especially for people new to milk from a mostly grass-based system, which he has found to be different from what stores carry labeled as grass-fed. Sometimes, people even bring back the milk and ask him taste it.

"You have to educate people – that's something you've got to be will-

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Nice Farms Creamery opened in October 2009, giving the Miller-Tanner family the ability to bottle whole milk and make chocolate milk, eggnog and yogurt.

ing to do – and to have a thick skin. They're going to think one thing, and it's not going to be what they expect."

One of the biggest promoters of Nice Farms' milk has been Rise Up Coffee, an Easton-based roastery that utilizes organic and fair-trade beans.

Noah Kegley, Rise Up Coffee's co-owner and Easton store manager, says the milk the stores used before switching to Nice Farms did not meet Rise Up's high standards. One day, they brought the whole staff to the farm so that everyone would understand what goes into the milk. It was important for them to see how the cows are treated, Kegley says. Even though Nice Farms does not have organic certification, the farm and the roastery are run on similar principles. So, despite the more involved logistics of getting the milk – Miller makes the deliveries. Kegley says, "To us, it's about taking the right path."

People ask Rise Up staff about the milk all the time, because it makes better coffee drinks, such as lattes. "We feel they're getting the healthiest cup of coffee and the healthiest latte they can," Kegley says.

Nice Farms also makes ice cream on a seasonal basis. The ice cream is a hit wherever they go – whether they're at a gathering of steam-engine enthusiasts, a carnival or at the farmers' markets.

Nice Farms has no plans to seek organic certification. Miller says certi-

fication makes sense in farm systems with a national or large regional reach, where perhaps people cannot visit the farm to see for themselves how the farmer does things and to be able to ask questions based on their observations. Nice Farms' "certification" is the constant contact they have with customers, the ongoing relationships they develop, which create trust and lend further heft to the responsibility the family shares for producing the most nutritious, best-tasting milk and value-added products they can. Miller wants his products to be available to people of middle incomes and their families. Nice Farms has raised milk prices by only \$.25 to \$7 per gallon and \$4 per half-gallon since they shifted to direct sales in 2009.

"I want our milk to be an everyman milk ... and that's what my family wants – we want kids to drink it."

THE UNSEENS IN THE SYSTEM

In any system in which human activities are embedded, what's not seen or goes unobserved can often make or break the health of the system. At Nice Farms, a point of health is the presence of dung beetles throughout the pastures. By one researcher's calculations, based on 2013 data, Nice Farms had nine species of dung beetles. In 2015, researcher Mallory Hagadorn counted 11, perhaps because of seasonal variations or other factors.

Hagadorn is a Master's student in applied biology at Salisbury State University. Although she grew up in Federalsburg, she did not know of Nice Farms until she began looking for farms to include in a dung beetle research project for which she has received three years of funding for \$132,000 from the National Science Foundation Graduate Research Fellowship Program to collect and analyze data.

The metadata project looks at beef and dairy farms throughout Maryland to gauge the impacts on dung beetles on farms where insecticides or antiparasitics or a combo of both are used as well as those farms that don't use biocides. Hagadorn has two years of sampling, 2013 and 2015, on nine farms using biocides for both years and six nonbiocide-using farms in 2013 and eight in 2015 (two of the non-biocide farms no longer had cattle in 2015, but four others were added).

To maintain objectivity, Hagadorn set up "standardized baited pitfall" transects, the standard used by dung beetle researchers. On each farm, there was a 200-meter transect – outside fences so they would not be disturbed by cows – with bait pitfalls at 50-meter intervals. The pitfalls were baited once a month using only dung from the specific farm being sampled and samples were collected once a month from each farm.

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Hagadorn is not looking at specific chemicals or different types of grass-based management or which specific grasses might draw one type of beetle versus another, but rather simply at the effects chemicals have on population numbers and species diversity. Research partner and Hagadorn committee member Anne Estes, Ph.D., of the University of Maryland School of Medicine Institute for Genome Sciences is researching the microbiome of *Onthophagus taurus*, the bull-headed dung beetle.

The “applied ecological component” of the research derives from literature about dung beetles, Hagadorn says, and she hypothesizes to see a “higher abundance” of beetles on farms that eschew biocides. The second part of the research involves the bull-headed dung beetle found throughout Maryland and one found on all the farms being sampled. For that portion of the project, Hagadorn wants to determine if there is a “core set of gut bacteria retained” throughout all of the *O. taurus* populations, regardless of the type of farm.

Hagadorn, who has submitted the research for publication, hopes other researchers may be able to utilize the metadata to further applied ecology research by looking at other variables involved, including how bull-headed dung beetles utilize dung as a resource, effects of grass-management methods and, perhaps, dung beetle-fungal interactions.

HARD WORK

Miller, who moved to the Federalsburg farm when he was just 8 years old, is accustomed to hard work and lots of it, but he’s never worked harder than he has since opening the creamery, he says.

“In many aspects the Army was a very predictable and very secure lifestyle – IEDs and small arms fire aside – for me. The creamery for me is like a trapeze artist performing without a net – it is exhilarating and wonderful, until you slip.”

But he encourages others to thoroughly explore a shift before making

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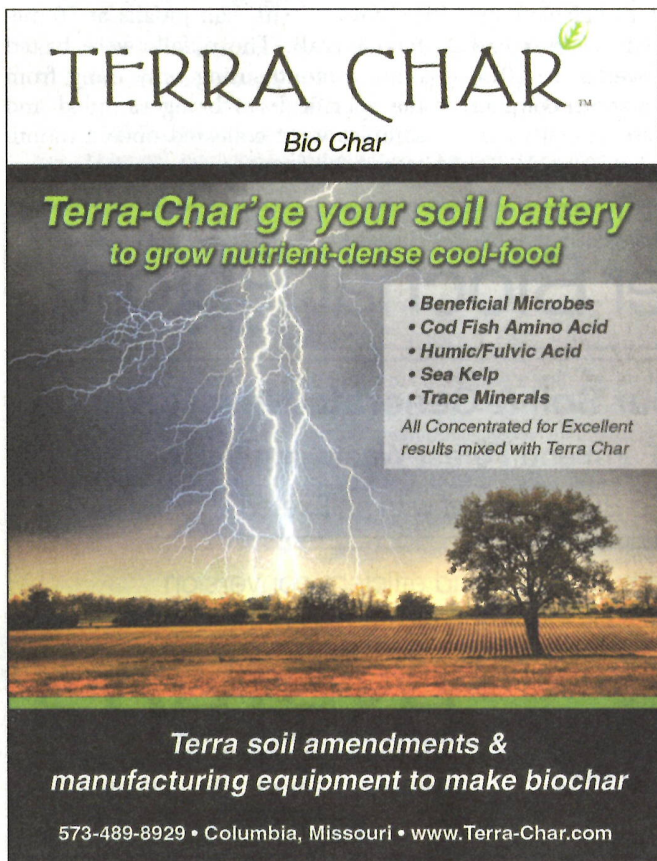
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it, either from more conventional forms of dairies that sell via co-ops to grass-based and direct sales or for people who are thinking about starting from scratch. For those already dairying, he advises ensuring they have enough land

“You need 2 to 3 acres of land per cow,” and that’s in the Mid-Atlantic; in other regions, you may need more, he says. Also, “It’s infinitely easier to sell to a cooperative. Direct-marketing your product, dealing with customers, unpredictable sales – oh, and manufacturing the product along with managing your dairy herd – is not for the faint of heart.”

Likewise for those who have no dairy experience, Miller suggests finding an operation like Nice Farms and inquiring about interning.

“I imagine that most places like ours could always use an extra hand. It would be a win-win for both the creamery family and the interested individual.”



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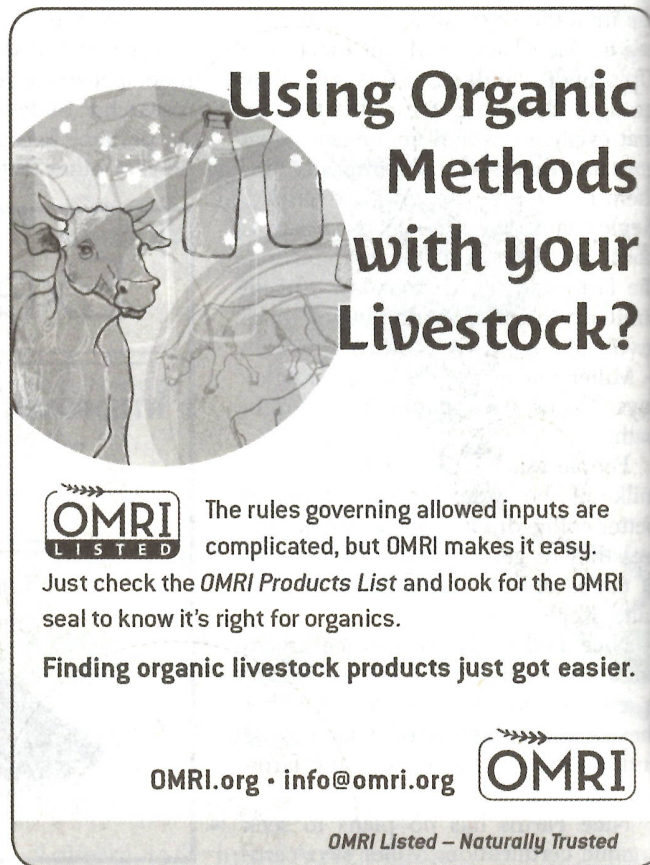
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