



Story by Nancy Humphrey Case
Photos by Orah Moore



VERMONT FARMS

Shelburne Farms Dairy

Modeling a quality of life



Children from Burlington's Sustainability Academy meet one of Shelburne Farm's Brown Swiss dairy cows. The dairy farm supplies milk for the farm's cheesemaking business and is visited by some 150,000 people per year.

Delaware stands in a portable stanchion at one end of Shelburne Farms' dairy barn, open to the fresh spring air coming off Lake Champlain, as a cluster of first-graders buzz around her. Jed Norris, an early childhood educator, stands at the cow's rear and takes her tail in his hand. "If you see this tail coming up—with poop or pee coming out—watch out. It splatters," he says. He passes around a bucket of plastic curry combs and the children brush Delaware's already-clean coat. The whine of a skidsteer engine hauling

winter bedding out of the barn blends with the pungent smell of manure destined for compost. A large boy with a mohawk pats the cow's face. "I want to milk you," he says. A few minutes later a little girl with carrot-red ringlets and striped leggings squeezes a stream of milk into a stainless steel pail. "It felt warm," she says, grinning.

Sam Dixon, Shelburne Farms' dairy manager since 1996, appears in the doorway in coveralls. He watches quietly for a moment, smiling. Like other dairy farmers, he is con-



Jed Norris, the farm's Early Childhood Program Coordinator, explains the milking process to a group of young visitors. The dairy operation is an integral part of both the farm's sustainability and its multifaceted educational mission.

cerned with day-to-day operations and the well-being of the herd. Unlike others, he is operating under the mandate of a nonprofit whose whole focus is education. Originally part of the model farm instituted by Lila Vanderbilt Webb and Dr. William Seward Webb on their Gilded Age estate, the dairy farm today is an integral piece of Shelburne Farms, a nonprofit organization educating people near and far for a sustainable future. Its campus is a 1,400-acre farm, forest, and National Historic Landmark in Shelburne.

"The biggest difference (between this dairy farm and others) is what you see when you drive up," Sam says, referring to the pristine landscape. "We have 150,000 visitors each year, and this public visibility puts us under a lot of scrutiny." In keeping with Shelburne Farms' ethic, the dairy operation is managed for water quality and wildlife, not just for maximizing milk production. Still, it is a viable operation making a substantial contribution to Shelburne Farms by supplying milk for its cheesemaking business.

WHY BROWN COWS?

After Delaware is relieved of her duties, we lead her over the hill to join the herd in the pasture. With the blue water of the lake in the distance and lush fields on either side, I feel again the reason this place has not only endeared itself to thousands of people, but inspired them to take action toward protecting the health of the planet in general.

"The herd was started by Derrick (Webb, grandson of Lila and Seward). He always had some Brown Swiss but went to

100 percent Swiss in 1963," Sam explains. "They're known for their hardiness, temperament, longevity, and quality of milk." While Holsteins are well suited to fluid milk production, the milk of these Brown Swiss is rich in both butterfat (4.7 percent) and protein (3.6 percent), which makes it excellent for cheesemaking. "The Swiss are slower growing, later maturing than other breeds, but they're becoming more popular. There are quite a few now in Addison and Franklin counties," Sam says. "They also have great feet and legs."

A group of children from Burlington's Sustainability Academy join us, squealing and shouting. One girl sings a song that traces the steps involved in making hay. "On Sunday, Marshall (Webb) had 22 photographers out here, doing a workshop," Sam continues, showing another of the many ways Shelburne Farms' programs connect people to the land.

As we near the herd, the cows run toward the gate to greet Delaware. Shelburne Farms was one of the first in Vermont to practice grass-based dairy farming, including emphasis on improving soil health to improve the quality of forage. Currently, about 50 percent of the cows' diet from May to October is from pasture. "We're not an organic dairy farm but we believe in the principles of organic farming," Sam says. The dairy is Certified Humane, which means the cows are allowed more natural behaviors and are less stressed. They must be given adequate space in the barn and at the feed bunk, fresh water, and proper ventilation. They also must be given anesthetics when being dehorned or castrated. "We didn't have to change any of our practices to qualify," Sam states. Shelburne Farms feeds

the calves whole milk, including the colostrum that cows produce in the first few hours after giving birth. “It’s loaded with antibiotics and is a super nutritional boost,” Sam adds.

Shelburne Farms raises all their own Heifers to replenish the herd of 110 milkers and sells a few bulls for breeding. They cross their Heifers with Red Angus to produce 25 or so beef cattle per year. The farm also raises 100 to 120 lambs per year. The meat is served in the Inn at Shelburne Farms and sold at the Visitors Center and Farm Store. “We used to produce pasture-raised veal, too,” Sam says. “The chef (at the Inn) loved it. But it was so much work! We’d put several calves out with one cow. You’d be out haying the back 40 and you’d come back and they’d be out.” A few bull calves are also raised and sold as teams of oxen. “They grow big and have gentle temperaments,” Sam says, so they are well suited to that job.

WORKING CLOSELY WITH CHEESEMAKERS

During the cheesemaking season—late winter to late fall—Sam and his crew communicate on a daily basis with the artisans making cheddar in the Farm Barn. “There’s a rigorous testing protocol,” Sam explains, “and they want to know what the cows ate that day—whether they went out to pasture or not. It might determine how long they age that cheese.” A visit to the cheesemaking facility in the Farm Barn confirms this. After donning a white shirt, hairnet, and crocs, and stepping into a shallow tub of water and washing my hands, I am allowed into the “make room.” Kate Turcotte, head cheesemaker, is testing milk samples for total acid and pH. “The market wants a consistent product,” she says. “So we’re in here trying our best, making small adjustments.” After testing the milk, she will change the amount of starter culture, length of time allowed for acidification, and/or the amount of salt. “When the cows have been out to pasture, the milk has more flavor but it’s not as consistent. She calls Derrick Webb’s decision to breed Brown Swiss cows “a happy coincidence” because of its high protein-to-butterfat ratio.

Megan Holt has been turning over slabs of curds in the bottom of a huge oblong vat to keep them warm. Now she puts on a rubber apron and Kate puts the slabs into the curd mill. The motor roars and curds fly from the mill like sawdust from a saw. At the far end of the room, children peer through the large viewing window from the public side of the building. Megan throws handfuls of salt onto the curds. After resting, they will be scooped into “hoops” and pressed overnight. Depending on how promising the batch, the cheddar may be aged as little as three months or up to three years. The sale of the cheese will help sustain Shelburne Farms and its multifaceted educational programs here and in partnerships around the world.

DON’T MOW THOSE CHICKS!

Of the 1,100 acres that constitute the farm portion of Shelburne Farms, 250 are managed for wildlife. A big part of that relates to protecting the nesting sites of grassland songbirds. In 2002, Noah Perlut began studying grassland birds at Shelburne Farms as part of his PhD research, and continued research has shown that haying early and frequently through the summer conflicts with grassland birds’ nesting cycle. Based on data collected, Noah and his colleagues recommend cutting earlier than otherwise, then waiting 65 days before mowing again. Shelburne Farms has adopted this practice on a significant portion of their hayland, and continued research



A variety of Shelburne Farms cheddars await the buyer—cheeses ranging in age from 6 to 9 months up to 3 years.



Megan Holt watches over the cheese curds being processed in the curd mill.



Head cheesemaker Kate Turcotte tests milk samples before making adjustments to the batch.



Sam Dixon has been the farm's dairy manager since 1996 and knows the virtues of the Brown Swiss cows that are part of the farm's heritage: "They're known for their hardiness, temperament, longevity, and quality of milk," he says.



The farm's dairy herd was started by Derrick Webb (grandson of founders William Seward and Lila Webb) and became 100 percent Brown Swiss in 1963.

confirms that nesting success on this land is nearly equal to that of fields left unmowed throughout the entire breeding season. "Sam Dixon has been incredibly dedicated to finding the balance between agricultural and grassland bird needs," Noah says. His Bobolink Project uses contributions to pay farmers to alter their practices and so reverse the decline of these birds.

Even with this altered haying schedule, Shelburne Farms supplies all the forage and hay its herds need and sells hay to its neighbors. Last year they made 3,900 round bales and 3,000 square bales of hay. Sam credits the well-drained soils and season-extending influence of the lake. As more and more agricultural land is eaten up by Chittenden County's suburban sprawl, Sam sees Shelburne Farms as a "green gem" that is more prominent and more important than it was 20 years ago.

A HOUSE FIT FOR A FARMER

A few years ago, a storm severely damaged the roof of the house beside the dairy barns given to Sam and his family to use as part of his compensation. The way Shelburne Farms responded to this problem indicates the value placed on farmers here. With funding from Lee Bickford and two other donors, they built an entirely new, energy-efficient home on the same footprint as the old, with two apartments—one for the dairy manager and one for the herdsman. The cedar-shingled, 2,600-square-foot house has a porch at the back overlooking Lake Champlain and is heated by a wood furnace. "We haven't burned a drop of fossil fuel since we moved in," Sam comments.



Children tag along as the cows are brought in from the pasture, where the herd gets 50 percent of its forage between the months of May and October; the farm was one of Vermont's first to practice grass-based dairy farming.

"Farming is a profession that everybody depends on," says Alec Webb, president of Shelburne Farms. "The rural character of Vermont comes not just from the landscape, but from the character of people working close to the land. They are important to society. They give meaning and substance to our communities. It's important that we not lose that."

Henry Cammack would agree. He first visited Shelburne Farms as a teenager from Baltimore, studied pasture management at UVM, and is thrilled to be working full time for Sam. "My friends were all business majors, but I was the first one to get a full-time job with a salary," he says, adding that he loves the cows. "I live and work in the most beautiful place in the world."

Around 3 o'clock he walks up the hill to bring "the girls" in from the pasture. They thread their way down the road, trotting and jostling each other. Henry brings them in for milking. "Come on up, girls," he calls, prodding the rumps of the first ones as they enter the New Zealand double-12 swing parlor. Red-haired Renee LaCoss, herdsman, looks on, checking the cows' health. "The Brown Swiss are really sweet cows," she says. "They're treated well, and they're happy." The milking machines start hissing their toe-tapping rhythm, the butterfat-and-protein-rich milk streams into the tank, and life is good. **F**

Nancy Humphrey Case lives and works in Hyde Park, VT. Orah Moore works out of her store, Haymaker Card & Gift Gallery, in Morrisville and has published her first book, *Stowe: A Vermont Town for All Seasons*.

JUST THE FACTS



Shelburne Farms

1611 Harbor Road
Shelburne, VT 05482

Call (802) 985-8686, visit shelburnefarms.org,
or email info@shelburnefarms.org.

Open daily, year-round, except Thanksgiving
Day and Christmas Day

9:00–5:30 mid-May to mid-October;
10:00–5:00 mid-October to mid-May

Check out the walking trails, children's farmyard, tours, and wagon rides! Farm Cart is open for picnic lunch 11:00–3:00, May 9 to October 18 (admission required).

Dairy Day Open House

May 3, 2015, 1:00–4:00 p.m.

Enjoy wagon rides, tours, hand milking, calf feeding, and a cow parade.

Visit shelburnefarms.org/calendar/event/dairy-day-at-the-farm.

To order Shelburne Farms' raw-milk farmstead cheddar, visit store.shelburnefarms.org.