

Dairy queens

More than 2,000 dairies of various types and sizes supply milk to Costco's Kirkland Signature™ milk program. The dairies are run by passionate, hardworking, conscientious people who work tirelessly to deliver a consistent, quality product. Here's a look at how two farms in the program accomplish this goal.

by Will Fifield



Dairy cows at Costco supplier Pheasant Echo's Farm in Westminster, Maryland © ALH WORDANDIMAGE, LLC



"When I was young, my grandfather told me that we make milk for people's children."

STEVE SHEHADEY

Bar 20 Dairy Kerman, California

Visit Barney and Debbie Stambaugh's beautiful 300-acre dairy, Pheasant Echo's Farm, in Westminster, Maryland, and you won't want to leave. The Stambaughs work the farm, part of which entails milking 150 cows twice a day, with their two sons, Kenny and Bud; their two daughters, Crystal and Tanya; and two sons-in-law and a daughter-in-law. Their grandchildren aspire to be dairy farmers. The family bond and interdependence are evident when you talk to them about their operation. They've all become experts at running the various parts of the dairy.

On the other side of the country, Bar 20 Dairy in Kerman, California, near Fresno, shares many similarities in terms of a strong family bond. Bar 20 has been in operation since 1957, when it was established by Larry Shehadey. Today, the 5,000-acre operation, which milks 6,500 cows and produces 60,000 to 70,000 gallons of milk a day, is run by second- and third-generation family members. Steve Shehadey, Larry's grandson, runs the dairy operation, along with a closeknit staff of longtime dairy farmers. Scott Shehadey, president of the operation, and Richie Shehadey, director of marketing, work on the production and processing side of the business. They use their combined industry experience, as well as forward-thinking technology, to provide quality milk to Costco's Kirkland Signature™ milk program.

"When I was young, my grandfather told me that we make milk for people's children," says Steve Shehadey. "That has always stuck with us on the farm. We can't offer anything but our best for children and the families who buy our milk."

Barney Stambaugh shared similar sentiments about what motivates everyone at his farm. Both dairies constantly examine how they can improve their operations so they can continue to flourish for generations to come.

Animal welfare is key

Animal care is a huge priority for dairy farmers who supply milk to Costco. Both Pheasant Echo's Farm and Bar 20 house their cows in comfortable bedded pack barns—large pens with composted bedding that is soft and easy for them to rest and walk on—rather than concrete stalls.

Because it gets very hot for months at a time at Bar 20, its cows are cooled with fans and water mist when necessary. And, because it gets so cold in the winter at Pheasant Echo's Farm, calves, which are more sensitive to cold than the adults, get extra straw bedding during cold weather.



A Jersey calf at feeding time ILLUSTRATIONS: KEN BROMAN





the Stambaugh family of Pheasant Echo's Farm (from left)—Kenny, Barney, Crystal Stambaugh Edwards, Deborah, Bud and Tanya Stambaugh Miller PHOTOS: © ALH WORDANDIMAGE, LLC

The milking areas at both dairies have padded mats for the cows to stand on, for added comfort. The cows get their hooves trimmed twice a month by a professional hoof trimmer to maintain proper hoof health, and they all benefit from routine visits by a veterinarian, who administers a stringent vaccination program to keep the herd healthy.

Proper nutrition is also essential for a healthy herd. The Stambaughs meet with a nutritionist monthly to adjust their cows' feed rations. The nutritionist reviews the cows' milk production and components of the milk, and suggests adjustments to their diet to optimize herd health and milk production. The nutritionist also tests feed samples to determine the level of nutrients and suggests adding supplements and vitamins as needed. A similar routine takes place at Bar 20.

Milk processing timeline



Raw milk is picked up at dairy farms and kept at or below 45 F. Frequency varies from multiple times daily to every other day, depending on the region.



The raw milk from the dairies is delivered to the processing plant, where it is kept at or below 45 F.



Between 12 and 72 hours from when the milk is received, it is pasteurized at high heat for a short time (methods vary from 167 F for 20 seconds to 161 F for 15 seconds, depending on the plant) to kill harmful bacteria, then quickly cooled to below 40 F. It is also homogenized (pressurized so the fat and cream don't separate), then bottled, stored and shipped. At each step in the process (except for the brief pasteurization process), it is kept at or below 45 F.



The processed milk is delivered to Costco locations in refrigerated trailers.—*WF*

Taking care of the farm

Conservation is also an important part of modern dairy farming. Good land management benefits the environment, ensures the longevity of farmers' soil and is good for the local community. Pheasant Echo's Farm and Bar 20 are exemplary operations, but in very different ways because of regional climate differences.

In the east, the Stambaughs practice no-till farming and plant cover crops to keep their soil rich and productive, which is vital to their operation since they grow all the feed for their cows. These farming techniques reduce nutrient runoff into local waterways and continually build the soil's health and its ability to hold moisture.

The farm's no-till method uses a customized piece of equipment to drill into the soil to plant crops without disturbing it.

"We plant crops in rotation," explains Bud Stambaugh, who oversees the nutrient-management side of the farm. "In one field, for example, we will plant corn in May, right after we have harvested our winter wheat that had been growing there. The stubble in the field makes a perfect bed for us to drill into to plant our corn."

He says the root structure of the previous crop is still intact and prevents erosion, and better absorbs the fertilizer (composted from their own herd) they spread after the winter wheat crop is harvested. The family grows wheat, winter wheat, corn, barley, alfalfa and snap beans. About 80% of the crops go to feed their herd; the rest is sold.

Out west, Bar 20's conservation efforts include two one-megawatt solar panel arrays that stretch out for a total of about 12 acres.



Brian Visser looks over a special mix of dairy-cow feed



Costco buyer Mark Klauber (left) and local co-op vice president Lindsay Reames at a dairy in Maryland.
WILL FIFIELD



solar panels at Bar 20 Dairy



Morgan Ryan (left) and Sarah Dean feed formula to a calf PHOTOS COURTESY OF PRODUCERS

"Between the solar panels and the digester, we will generate more than enough electricity to run our entire operation."

RICHIE SHEHADEY

Bar 20 Dairy Kerman, California

The dairy is also nearing completion of its 25-million-gallon methane gas digester (also called an anaerobic digester), which will convert the manure from its cows into electricity via a fuel cell. This system will reduce odor from the farm, improve air quality in the area, protect local water quality and mitigate the farm's greenhouse gas emissions.

The digester is a massive plastic-sealed lagoon (410 feet wide by 515 feet long by 32 feet deep), with a leak detection system. It captures biogas, primarily consisting of methane, released from the decomposition of the dairy's cattle manure. About 900,000 gallons of dairy waste goes into the digester each day.

The biogas is then converted to renewable electricity in an energy server through an electrochemical process. "Between the solar panels and the digester, we will generate more than enough electricity to run our entire operation," says Richie Shehadey. "The surplus electricity will be sold back to Pacific Gas and Electric [the local utility]. Nothing is wasted in the process. At the end of the process, the solids are used as fertilizer and bedding, and the liquids are used to fertilize the fields that we grow crops on."

Where tradition meets innovation

"The continual efforts of our milk suppliers are essential to making our Kirkland Signature™ milk program a success," says Costco buyer Mark Klauber. "There are no holidays in this industry, and I am still amazed that our dairy partners' hard work was able to produce over 163 million gallons of Kirkland Signature milk last year. There is also a great passion and vision for future generations of dairy farming."

The dairies mentioned in this story are not anomalies. Klauber says that many positive sustainability initiatives are being implemented at dairies that supply Costco's Kirkland Signature milk across the country.

It helps that Costco works with dairy farmers who are passionate about what they do. Klauber says he sees a beautiful mix of old-school farmwork traditions alongside innovative approaches at many of Costco's dairy partners nationwide.
