

Before the arrival of Columbus in America, there were no cows, no sheep, no goats and no cheese. The pizza, the cheeseburger, even the nacho had yet to evolve. Life was difficult. The livestock that Columbus dropped off in the Caribbean were the first to arrive in this hemisphere. And soon after their arrival, the Spanish began using their milk to make cheese.

At the end of the 1600s, Dominican Friars set up a mission in Lower California. It was their first settlement on the California coast, and they stocked it with cattle brought from Mexico. During the middle of the 1700s, Franciscan missionaries moved part of the herd to northern California and used them to breed hundreds of thousands of cattle, which they used to supply hides and tallow for a large export business.

The first significant demand for dairy products came along with the prospectors who arrived in 1849. Many of the families who rushed West searching for gold traveled across the country with their family cows. When they reached California the men started prospecting, and the women started milking the cows and making butter and cheese. Finding gold was an iffy business—trading dairy products for gold was very reliable. Successful prospectors paid big bucks for fresh milk, butter and cheese. These early farmers became the nucleus of the California dairy industry.

Today California has the largest dairy industry in the United States, producing nearly four billion gallons of milk each year. And almost half of that milk goes into the making of cheese. Most of California's dairies are located near the cheesemakers. The milk that makes the cheese is usually less than 24 hours old, which gives many of these cheeses a fresh milk flavor. The state has about 65 cheesemakers—some are small artisan operations that hand-make only 50 pounds of cheese a day.

The Marin French Cheese Company opened in 1865, which makes it the oldest continually operated cheese company in the United States. It started by supplying cheese to bars. Bar cheese was given free to people when they ordered a drink—like pretzels or nuts today. These days Marin French is well known locally for its soft-ripened cheeses, like Brie and Camembert.

Other California cheesemakers have major facilities. Hilmar is the largest cheesemaking complex in the world. It was put together by twelve local dairy producers in 1984. The founders were simply trying to find a use for the milk they were

producing on their farms.

Hilmar makes Cheddar, Colby, Monterey Jack, Parmesan and Mozzarella—and they make one million pounds of cheese every day. One hundred and twenty-five thousand cows are presently devoting their careers to supplying Hilmar with nine million pounds of milk each day.

Cheese is one of the oldest of our foods. It probably came into existence as the result of an accident. The theory is that someone in Central Asia or the Near East was carrying milk in a bag made out of the stomach of a calf. The acid in the stomach, known as rennet, caused the milk to separate into liquid whey and solid curds. Drain the liquid away, press the curds together and you are in the cheese business.

Food historians tell us that cheese was already being made in 3000 B.C.—traces of it have been found in ancient Egyptian tombs. In terms of survival, the advantages of cheese over fresh milk are easy to see. It lasts longer than milk without spoiling, it's easy to carry around, and it takes up very little space—about one-tenth the volume of the milk from which it was made.

## NORTH COAST

The counties just north of San Francisco make up the oldest dairy district in the state, with an environment that is perfect for dairying. The cool ocean air and fog that come in off the Pacific Ocean give the region an even temperature throughout the year, the soil is ideal for the clovers and grasses that feed dairy cattle, and the long rainy season lengthens the time that the cattle can feed on natural pasture.



The mother of the California cheese industry was Clarissa Steele. Originally from New England, she came West with a family recipe for making cheddar.

The recipe had traveled across the Atlantic with her ancestors and was based on milk from easy-going English dairy cows. The cattle that surrounded Clarissa's farm, however, were descended from old Spanish herds that had come up from Mexico—herds that were not into being milked. An Indian

friend roped a cow for her and eventually she was able to milk it. The cheese Clarissa made inspired her husband and three cousins to go into the cheese business. During the 1850s, the “Steele Brothers” became the first commercially successful cheese producers in California.

I would never want to spread dissension, but if it was Clarissa’s recipe, if Clarissa caught the cow, milked it, made the cheese and then convinced her husband and her cousins to go into the cheese business—how did it end up as the Steele *Brothers* dairy? Just curious.

Cheese and butter makers along the coast had been sending their products to San Francisco by boat. But the unreliable schedules, temperature changes, salt air and shipboard moisture made the operation a tricky one. So most dairy products stayed in the neighborhoods where they were made.

The exception was the soft white cheese from an old Mission recipe that was made by David Jacks. During the 1870s, Jacks acquired over 60,000 acres of land in Monterey and Salinas Valley on the California coast, south of San Francisco. He also bought 14 dairy farms in Monterey and in nearby Big Sur. In partnership with Swiss and Portuguese dairymen, he dominated the dairy business throughout Monterey. Jacks was able to get his buddies in the railroad business to run a line from Monterey to San Francisco so that he could make regular cheese shipments by train.

“When David Jacks shipped the cheese, he marked the outside of his shipping crates ‘David Jacks from Monterey, California.’ During the 1880s, his cheese became so popular that it was asked for by name—usually as ‘Jacks’s cheese from Monterey.’ But it was easier to call it Monterey Jack. Some folks consider it to be the most important cheese created in the United States.”

—Nancy Fletcher

During the First World War, Monterey Jack took on a second form. A San Francisco cheese wholesaler had left a surplus shipment of the cheese sitting in his warehouse. When he



opened the crates, he discovered that the cheese had aged quite nicely. It had lost most of its moisture and was as hard as Parmesan or Romano. It had also acquired a nutty

flavor—but that was just fine. The war had cut off his supply of cheese from Italy and the large Italian community in San Francisco needed a replacement. Dry Jack was quickly accepted by Italian-American cooks.

## CLASSIC CHEESEMAKING

The process of making cheese starts when the cheesemaker adds a starter culture. The culture causes the lactose sugar, which is found naturally in milk, to turn into lactic acid.

Rennet is added, which causes the proteins in the milk to clump together, forming curds. The solid curd mixture is cut up and the liquid whey is drained off. Larger curds usually produce a softer, moister cheese.

If the cheese being made is a cheddar-style cheese, the curds will be cheddared, which means that blocks of curd will be piled on top of one another and pressed together, then piled on top of one another again and pressed again. The cheddaring process releases the liquid whey. The result is a semi-firm, dry cheese with a fine texture.

To get a totally different type of cheese, the curds are cooked and stirred, which turns the clumps of protein molecules into strands. The texture of a string cheese or Mozzarella is the result of being cooked.

After cooking, the cheese is salted. Salt slows down the action of the starter bacteria and draws additional moisture out of the cheese. The net effect is to retard the aging process, which gives the cheese time to develop.



The curds are put into a form to give the cheese its shape. Some are pressed to take out more whey, which will give you a firmer cheese. Some are not pressed, which results in a softer cheese.

At this point, the cheese is ripened in a storage room where the temperature and the humidity can be controlled. The butterfat in cheese tends to sink to the bottom, so the cheeses are turned regularly to redistribute it.

Letting wine sit around in barrels is a form of ripening—of controlled aging. Letting cheese sit around in a ripening room is also just a form of controlled aging. I am also ripening, but with less control.

## THE DAIRY MAIDS

The traditional division of labor in dairying goes back for thousands of years. Men herded the sheep, goats and cows, while women did the milking and made the butter and cheese. In Colonial America, making cheese became a skill that was passed from mother to daughter, and selling their cheese gave farm women an independent source of income. Rural women also set up small factories to produce cheese for urban markets. The profits from these enterprises helped cheesemaking families educate their daughters.

After the Civil War, cheese factories expanded to produce cheese for the growing American cities. The factories required both capital and unskilled heavy labor, which meant that men rather than women went into the business. Ultimately, the small-scale producers couldn’t compete with inexpensive industrial cheesemakers.

In the last 30 years, however, American women have started small cheesemaking companies that offer a superior product,

in the process revitalizing the artisan cheesemaking tradition. And that tradition is taking hold in California. In 1997, Sue Conley and Peggy Smith started the Cowgirl Creamery in Point Reyes, just north of San Francisco.

There are two parts to their business. The first is Tomales Bay Foods, a retail shop offering locally-made products, such as jams, mustards, chutneys, and produce from nearby farms. They also age and sell cheese from small local cheesemakers.

One of the cheeses they offer is made by the Fiscalini family in California's Central Valley. They've been in the dairy business for almost 300 years and have over 1,200 Holstein cows. They make bandage-wrapped Cheddar and Parmesan cheeses.

The second part of the business is the Cowgirl Creamery. Cowgirl makes a selection of triple cream cheeses, from exotics washed in sweet wine and rolled in herbs to an intense triple cream—and the best cottage cheese I have ever tasted.

Conley realized that people coming in to shop would have a better understanding of what they were eating if they saw it being made, so she built the cheesemaking room behind a glass wall. Shoppers can see how fresh milk becomes cheese. All their cheeses are produced in the most traditional way.

In the same general area, north of San Francisco, is the Point Reyes Farmstead Cheese Company. Bob Giacomini wanted to reduce the size of his dairy herd. But he didn't want to reduce his income. He was also looking for a way to bring his daughters back to the family farm. He accomplished both objectives, and in the bargain he produced California's first blue cheese.

The herd is smaller now and his daughters, Karen, Lynn and Jill, are working at home again.

"We start with pumping our morning milk into our cheese plant. Into that we add our starter culture, our *penicillin roqueforti*, which is the blue mold, then the salt and the rennet, which is the coagulant that helps to separate the curds from the whey, the solids from the liquid matter. After that process is complete, the curds are separated from the whey, the curds go into cheese forms.

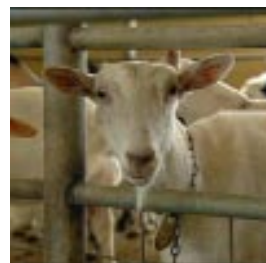
"The following day, we begin a salting process where we hand-salt the wheels three days in a row. Then we punch the wheels with needles to introduce oxygen into the body of the cheese. That's really where the magic happens. The oxygen mixing with the mold activates the blue-veining process that creates the beautiful blue color inside the wheels. Then, following the curing stage, we age the cheese for about six to eight months in our aging room."

—Jill Giacomini Basch



The tradition of pioneering women cheesemakers has continued. Laura Chenel loves goats and goats love Laura Chenel. So, during the 1970s, they combined their mutual affection into a goat cheese business.

She spent three months in France learning how to make goat cheese properly and then returned to a nation that had no interest in goat cheese and no facilities for manufacturing it. Fortunately, both goats and goat lovers tend to stubbornness. Laura taught stainless-steel fabricators to make the equipment she needed; then she taught Americans to appreciate goat cheese. She became a pioneer for today's artisan cheesemakers.



"What I really wanted was to live the way I lived in France. To be with my goats, that was my goal—to keep them in my life. When I first started experimenting with cheese, I had about 20 goats, and now I have close to 500. This went way beyond anything I would have thought. There's a goat cheese industry now."

—Laura Chenel

But before you make the assumption that California artisan cheesemaking is only practiced by women, allow me to introduce you to Liam Callahan of Bellwether Farms.

In 1986, Liam's mother Cindy, who was a lawyer, and his father Ed, a doctor, bought some land in Sonoma, north of the Bay Area, so they could retire from their work in San Francisco and spend time in a more rural environment. Surrounded by green hills of pastureland and stands of eucalyptus trees, it seemed like the perfect spot for a restful life.

One thing they noticed soon after moving in was that the grass grew fast and tall and running a lawn mower over 35 acres didn't seem appropriate. A friend suggested getting a herd of sheep that would mow the lawn on a continuous basis—and quietly too. It sounded like a good idea.

Another friend suggested that the family use the sheep's milk to make cheese. (Where would we be without our friends?) So Liam and his mother learned to make cheese and became California's first sheep dairy. But sheep don't produce much milk, and once you learn to make cheese you really get into it and you always want more and better milk.

So, Cindy and Liam and Liam's brother, Bret, started making cow's milk cheeses. They make ten different cheeses including "Crescenza," a soft cheese that seems to have melted before it was heated, a ricotta that is prized by local chefs, and "Carmody," a table cheese named after the road that runs by their home.

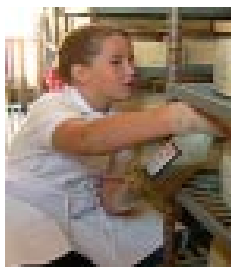
## THE CENTRAL VALLEY

California's great valley region runs between the foothills of the Sierra Nevada to the east and the Coastal Range to the west. It's about 400 miles long and 40 to 60 miles wide. During the 1870s, William Chapman, one of the largest

landowners in the state, sold 80,000 acres of the Central Valley to a group of German settlers and encouraged them to grow alfalfa. The crop was so successful that it became the primary feed for the dairy industry in central and southern California. By 1910, the Central Valley had become the state's principal dairy region.

During the early 1990s, in a surprise upset, California took the title of top milk producing area in the U.S. In previous years, that honor had gone to Wisconsin, traditionally known as the "Dairy State." Dairywomen and dairymen flocked to California to take advantage of inexpensive land and a year-round temperate climate. To boost the area's economy, cheesemakers started making high-end products. Their goal is to end up being to cheese what Napa Valley is to wine.

A good example of a small farmstead producer is Three Sisters Farmstead Cheese. The sisters are Marisa, Lindsay and Hannah Hilarides. Marisa and her father Rob decided that they needed to do more with the milk from their herd



and started attending classes at California Polytechnic State University. With their formal training completed, they began production. Within a year, their Serena Cheese, which is a cross between Parmesan and aged Gouda, won a Silver Medal at the World Cheese Awards.

"It's really neat to be able to see the end process when people are actually tasting the cheese and we're getting compliments on it. It really makes you feel like your work is worth something—it's paid off."

—Marisa Hilarides

## THE SOUTHERN COAST

The southern California coastal region starts in Los Angeles, runs south to San Diego and has a couple dozen cheesemakers. Here, for several decades, Jules Wesselink has been a successful dairy farmer with a herd of Holsteins.

In 1996, he decided to begin making cheese from his herds' milk. He is of Dutch descent and went back to Holland to learn the traditional Dutch techniques for making Gouda cheese. When he returned, he convinced his daughter and her husband to become cheesemakers. They produce a farmhouse Gouda that is offered at several stages of ripeness, as well as Goudas flavored with cumin, jalapeño peppers, or herbs.

The cattle that Columbus brought to the Caribbean introduced the idea of dairying to the Americas. Today, the United States is producing cheeses that are up to the quality of the great cheeses of Europe. But, perhaps more important, without Columbus' cattle and the development of the dairy industry, we might never have had the cheeseburger and I, for one, would feel the loss.

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