

Dairy Artisan Series

MAKING AND AGING MEDITERRANEAN CHEESES

April, 2007

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This study was conducted for the
Wisconsin Dairy Artisan Research Program
and funding was provided by
The Wisconsin Department of Agriculture, Trade and Consumer Protection
The Babcock Institute–University of Wisconsin Madison
The Food Science Department–University of Wisconsin-Madison
The Dairy Business Innovation Center

The Babcock Institute for International Dairy Research and Development
is a joint program of the
University of Wisconsin-Madison College of Agricultural and Life Sciences
University of Wisconsin-Madison School of Veterinary Medicine
University of Wisconsin Extension Cooperative Extension Division

ISBN 978-1-59215-111-6

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I received a travel grant through the Dairy Artisan Program to attend a workshop in Vermont offered by Peter Dixon. The workshop I chose was “Making and Aging Mediterranean Cheeses” with a focus on goat and sheep milk. I had attended other cheese making workshops before, but these courses used cow’s milk. I raise dairy goats and make farmstead cheese, and I felt it was time to experiment with some new cheeses.

The class was scheduled for mid-April 2007. This is a very busy time on our farm. Almost all of our goats have kidded, which means many kids to bottle-feed and mothers to milk. Our first CSA delivery was April 18. The Farmer’s Market began April 21. But I had details figured out with my family and they were ready to take over.



The great people who attended the workshop with Peter Dixon in the middle.

I flew into Albany, New York, rented a car and started the two-hour drive to Weston, Vermont. Earlier in the week, the class location had been changed due to inclement weather and building construction. I had not had a chance to make new arrangements for sleeping accommodations, so I kept my plans as previously made. I arrived at my destination around 8:00 p.m., set my alarm and settled in for the night. There was a lot of snow and downed trees. When morning came, I was prepared for the one-hour drive ahead of me and thought I was making good time. I got into my car and the clock read an hour ahead of what I thought. I learned that due to the weather, there was a power outage, my alarm clock was wrong and I was already an hour behind! I headed out with my directions and enjoyed the beautiful scenery with snow and ski hills (yes, they were open for business). An

hour late, I arrived at Consider Bardwell Farm. Moving quickly, I headed toward the barn/cheese plant hoping that I had not missed anything too important. I stepped in and there was a very casual atmosphere. Everyone was getting to know each other, enjoying tea, coffee and some of Consider Bardwell's cheeses. I was glad to be here.

At Consider Bardwell Farm, they raise Oberhasli goats. They were just beginning their kidding season with only a couple of does in milk. Because of that, we would make cheese from a neighboring cow dairy that raised Jerseys. Peter made sure he gave us any changes in cow vs. goat or sheep milk procedures and measurements for the various cheeses. There were some subtle and some major differences when working with the different species of milk.

The beautiful setting of Consider Bardwell Farm.



The barn houses the milking parlor, milk house, cheese processing rooms, coolers and aging caves.



■ Feta

We began the day by making a Greek-style Feta. Milk was brought directly from the Jersey Girls farm and poured into the vat. We were making a raw milk Feta, which ages for at least 60 days. The milk was brought up to a temperature of 85° and the starter culture was added. We continued to raise the temperature to 93° and held it there. After about 30 minutes, lipase was added to give the cheese a bit more of a piquant flavor. An hour from after adding the culture, the rennet was added. Now we learned a new term, “flocculation,” which Peter Dixon learned from a European cheese maker. Flocculation is the time it takes from adding the rennet until the milk has coagulated. To determine this, we placed a small bowl on top of the milk and spun it occasionally. When the bowl would cease spinning, we recorded that time as the flocculation time. For Feta, this time is multiplied by 4 and added to our rennet start time, at that time the curd can be cut. For example, rennet was added at 12:18 p.m., the flocculation time was 17 minutes, $17 \times 4 = 68$ minutes so around 1:26 p.m. the curd is cut. After cutting, the curds were left to rest for 5–10 minutes, maintaining a temperature of 93°. The curds were then gently stirred in the whey for about 30 minutes. The whey was drained to just above the curd and the curds were scooped into plastic basket molds. The whey was saved in buckets for making ricottone later in the day. We turned the wheels of Feta about every half hour to ensure a good drain.



Some of our beautiful basket Feta waiting to be brined.

■ Caciocavallo

As the Feta was resting in the molds, we went on to make Caciocavallo, which translates as “cheese on a horse.” Historically, this cheese was made at the farms, then carried by horse up the mountains to be placed in caves for aging. In Macedonia, this type of cheese is called Kashkaval.

This batch of cheese started with 230 pounds of Jersey milk. The milk was heated to 92°, then the starter cultures, which consist of TA060 and LB340, were added along with lipase powder. After 30 minutes, the rennet was added. The flocculation time was about 15 minutes, and multiplied by 4 to obtain our cutting time. So an hour later the curd was cut into particles about the size of corn kernels and allowed to rest for 5 minutes.

While stirring the curds and whey, the heat was gradually increased to 104° over a 20-minute time span. We pulled a sample of whey and tested the titratable acidity and the pH. The curds were allowed to settle under the whey for 5-10 minutes. Then the curd was raked to the back of the vat and the whey was drained off. This whey was also saved for ricottone. The pack of curds was sliced into cakes, gathered in cheesecloth and left in the vat overnight.



Pack of curds gathered in cheesecloth and left in the vat overnight.



Caciocavallo curds.

■ Ricottone

Now we took the whey that was saved from the Feta and Caciocavallo and poured it into a large stainless steel pot that was set on a gas burner. We are going to make ricottone! Ricottone is made exclusively from whey, while ricotta is made from whey with the addition of milk. The whey is heated to 160° without stirring in order to destroy the rennet enzyme and prevent early coagulation of the proteins, then slowly heated to 170°. Two teaspoons of salt per gallon of liquid is added and mixed in quickly. The whey continues to heat without agitation to 185°. Citric acid is added quickly to the center of the vat and stirred in rapidly for 5–10 seconds. The curd should begin to precipitate into small grains and blooms of larger curd masses should appear. If too much acid is added, the curds will begin to sink to the bottom and the cheese will not be sweet. You should see a clear separation of white curds and green whey. Work the curds together from the outside of the vat to the center until the precipitation is complete. Let the curds rest for 10-15 minutes. After resting, the curds are



Ricottone draining.

gently ladled into draining forms and drained for 15–30 minutes, then moved to the cooler to set. This was the end of our first day.

The next morning we were all ready to continue learning. We shared coffee, tea, Consider Bardwell cheese and goat yogurt while Peter shared lots of information with us, recommended books and gave us lists of contacts.

We proceeded to the cheese make room to continue with the Caciocavallo. A gallon of water was heated to 170° and put into a stainless steel bowl. The curd packs were removed from the cheesecloth, cut into small pieces and a large handful of curd was put into the hot water to soften for a few minutes. With wooden spoons, the curd was pushed together into a mass and lightly salted, then stretched and formed into different shapes. Typically the caciocavallo is formed into a pear shape. It is placed in cold water to retain its shape. After it has cooled, the cheese is

placed in a 20–24% brine solution at a rate of 4 hours per pound.

■ Fresh Mozzarella

The last cheese we made in the class was fresh mozzarella. Pasteurized milk was cooled to about 98°, then starter was added and allowed to set for 20 minutes before lipase was added. The vat was left to set for about two hours to reach a pH of 6.40–6.50 at which time the rennet was added. The flocculation time was 10 minutes, this was multiplied by 3 for mozzarella. The total time from rennet addition to cut was 30 minutes. The curd was cut to hazelnut-sized pieces then allowed to rest for 10 minutes. The curd was stirred for 5–10 minutes to firm it slightly, then allowed to settle under the whey for 30–60 minutes to a desired pH of around 5.95. The whey was drained off and the pack of curds was cut into cakes. The cakes were allowed to set until the pH reached 5.4 to 5.28. We had water heated to 160° and placed some into a stainless steel bowl. The curd was cut into thin strips and placed in the hot water along with salt. With wooden spoons the curd was worked into a mass, kneaded into a smooth dough and braided or made into various shapes. These shapes were placed in cold water to firm up. The cheese was ready to enjoy or package for later use.

I fully enjoyed this two-day workshop, made many new friends and built confidence in my cheese making abilities. I am thankful to the Dairy Artisan Program and the many people involved in choosing me as a recipient of this travel grant. It was truly meant to be!



Making fresh Mozzarella.