

## Sam Frank's Vision

Winner of the 2016 Daphne Zepos Teaching Award

Since the Industrial Revolution, the United States has focused on the mass production of commodity products in all of its industries. This was no different for dairy, which had come to be dominated by the Holstein cow, bred for production of high volumes of milk based on a heavily rationed and predetermined diet of purchased, processed grains and grasses. Once the artisan cheesemaking industry began to flourish, the Jersey cow also became highly prized for her milk's high butterfat content, leading to greater yields in cheese production. These two breeds have been responsible for the vast majority of artisan cows milk cheeses produced in the US.

Thomas Perry gave his landmark presentation at the 2016 American Cheese Society Conference in Des Moines about the use of native cultures as the primary fermenters and ripeners in cheesemaking. This set a precedent for the notion of real American terroir, which inspired me to look closer at who was making all this cheese-milk: the cows. I knew of heritage dairy cow breeds native to North America such as the American Milking Devon, Canadienne, Randall Lineback, and Milking Shorthorn. They played an important role in the development of the American agricultural landscape prior to the twentieth century due to their ability to produce high quality milk on low quality available, local forage. When I was awarded the DZTA in 2016, these breeds were all listed as critically endangered by the Livestock Conservancy, the only organization in the US devoted to genetic conservation and promotion of North American heritage breed animals.

I went to Europe to see how they continue to utilize heritage breeds for traditional cheesemaking. I first traveled to Normandy, where Normande cattle have been used in the production of Camembert and Pont l'Évêque and other soft cheeses of the region. I learned about their exceptional protein to fat ratio, rivaling that of Jerseys, which is what has made their milk so exceptional for soft cheese manufacture for centuries. I then went to the Auvergne and visited farmstead cheesemakers of Salers cheese and St. Nectaire. Both producers milked the Salers breed, an ancient, incredibly rustic and almost feral breed that actually has to first be suckled by her calf before letting her milk down. From there, I traveled into the Alps of the Savoie to learn about the Tarentaise, a hardy mountain breed that is very genetically unique due to their centuries of isolation in the mountains. They are ideally suited to making milk from the rocky and rough terrain of the French Alps.

From France, I moved on to Italy to look at the Vache Rosse of Emilia-Romagna. This was the traditional "Red Cow" breed for Parmigiano Reggiano production, but they had long been replaced by the Holstein to meet export demands. I met

with the Consorzio Vacche Rosse, a consortium of academics, dairy farmers, and cheese producers that had saved this breed from what nearly was extinction. They built a brand of “Red Cow” Parmigiano-Reggiano, which helped to raise awareness of this ancient breed and rebuild its population.

I concluded my trip in Ragusa, where the Modicana cow has been bred for centuries to thrive in the arid and inhospitable climate of Sicily. I visited with the Consorzio Ricerca Filiera Lattiero-Casearia, or CoRFiLaC, an academic organization of Catania University, whose research focused specifically on the production of Ragusano, an ancient pasta filata-style cheese that is still made using old, traditional practices and equipment. Their research highlighted the importance of milk produced from the Modicana cow in the production of Ragusano because only this cow could produce the volume and quality of milk necessary for cheesemaking from the low quality available forage.

What I took back from my travels was a priority for tradition, biodiversity, and above all, quality over quantity. These dairy farmers, cheese producers, and academics alike took pride in their local tradition and history and saw this as the ultimate expression of their culture and landscape. That is why they worked so hard to keep it alive rather than maximize volume and yields for greater profits, a notion that the United States has never been so keen on.

When I returned to the States, I reached out to producers making cheese from American heritage breeds. I spoke with North Branch Farm in Monroe Maine, who milk Canadiennes and American Milking Devon, with Sweet Rowan Farmstead in West Glover, VT, who milk Randall Lineback, and with Samish Bay Cheese in Bow, WA, who milk Milking Shorthorns. I wanted to better understand the benefits and challenges they faced by choosing to milk these animals to make cheese over higher-volume producers. They conveyed to me what I saw in Europe - a passion for quality, heritage, and expressing their landscape in the truest way possible.

When I presented at the 2017 American Cheese Society Conference in Denver about what I had discovered, most attendees had never given much thought to heritage breed animals or were even aware of their existence. There was skepticism among cheesemakers and dairy farmers that were intrigued, but not sold, because what I was suggesting would mean a major long term shift in their operation and they therefore sought out further information from the American producers I had highlighted. This sparked open dialogue among producers that eventually led to a gradual introduction of old world genetics into herds. As time wore on, these producers were surprised and impressed by the quality of milk production they were seeing from more of a forage-based diet, and they were especially happy to see the unique flavors in their cheeses and the cut in costs for purchased feed and vet bills. Over the next ten years, it caught on more

among not just dairy farmers and cheesemakers raising cows but those raising sheep and goats, as well. Responding to this trend in the industry, academic institutions funded more research into genetic diversity and forage-based diets of ruminants all over the country, making reliable information more readily available to dairy farmers, cheesemakers, retailers, and enthusiasts nation-wide. Through selective breeding in the decades to follow, the United States not only saved the critically endangered breeds native to their land, bringing their populations from dangerously low to thriving, but new breeds never before seen began to emerge that were developed from the North American landscape. And their cheeses were as much of an expression of their land and heritage as they were.

Importers and retailers played a critical role in this transition, as well. Over time, they used their purchasing power to prioritize true terroir by choosing to buy and sell cheeses made from traditional breeds not just in the United States but abroad, as well. Sales for traditional European cheeses such as Ragusano, which at one time was in as much danger of extinction as its corresponding breed, increased to such an extent that young people were finally returning to the craft of their forefathers in order to continue the tradition for generations to come. Consumers even caught on, as well, not just for the nuance of flavor but especially once it became common knowledge that milk and dairy products from heritage breeds raised on forage was much more digestible than the conventional alternative. Together, American producers, importers, retailers, and consumers were able to conserve and enhance genetic biodiversity the world over and rescue traditional farming and cheesemaking practices. And most importantly, everyone got to enjoy some damn good cheese.