

## Fake pastorals: Where is the nature in cheese? A critical look at modern vertical pastoralism—alpine cheeses, mountain pastures, and cultural diversity—presenting two examples of best practice in Austria and Anatolia

Ursula Heinzlmann

We cherish the pictures of happy cows on luscious green mountain pastures. As informed ‘foodies’ we know about the better quality of pastured milk, and the artisanal cheese-making traditions at all those small summer mountain dairies, conveying its special character to each single wheel. But is that really what is happening? In most cases it isn’t. Why would it even be important? Presenting two examples of best practice, I hope to show why real alpine cheese matters and why it is important to ask the right questions.

The natural wine movement has been instrumental in raising our critical awareness of legitimate benchmarks and the urgent need to question methods and standards. I am aware that for certain groups, the mention of natural wine, and artisan cheese (or craft cheese), might move this discussion into the realm of ‘elitist’ and ‘hipster’. However, I am strongly convinced that looking at quality (in all senses of that notion) as a layered pyramid, it is adamant to push upwards at the top, constantly, as much as possible, because that top informs all the layers underneath. The very moment we, as a society, do not allow any ‘crazy’, ‘exclusive’, ‘fanatics’ to make and explore the very best possible, the rest of the pyramid starts to flatten.

What does this mean for cheese? Simply that the disappearance of cheeses made by farmers using the milk of their own animals, fed as naturally as possible, and with methods driven as much as possible by local conditions, will lead to the deterioration of industrially produced cheese. With the latter I mean the ones we pick from supermarket shelves, made in large plants using the collected milk from large dairy farms, industrial starter cultures and rennet—the lower part of the pyramid.

Natural wine and earlier on craft beer and real ale have shown how an initially small group of ‘crazy hipsters’ can implement change from the top down and inform a whole industry. It is essential to reconnect with the very basics from time to time, to readjust the pendulum between nature and culture, wilderness and technology. This is why I am presenting the following two cases. What are the questions we should ask regarding mountains and pastures?

First: Raw milk, versus pasteurization. We want natural cheese, but as a society pillory cheesemakers working with it—to a large degree because we don’t differentiate between ‘drinking’ milk intended for immediate consumption as such, and milk for cheese-making, which undergoes fermentation and is salted, both highly effective conservation methods which not only eliminate pathogens but depend on microbiological diversity (Donnelly, 2019, pp.13–22, Montel and Delbès, 2015, p.19).

Second: Commercial cultures—what is left of the local character, when a cheesemaker uses commercial cultures that come from a very small group of multinationals (Percival and Percival, 2017, p.212) even if those offer a vast selection?

Third: Standardized or even microbial rennet. Of course, I do realize how tricky it is to work not using all this. Still—remember when not adding any sulfites, and not filtering your wine was rejected with a sneer?

Fourth: Concentrate feed, particularly on mountain pastures. On the one hand there is the direct impact on the quality and taste of the milk, diluting the taste of that particular place, on the other the impact on the pastures and the original vegetation. Biodiversity can be as rich as 50 different species per square metre. Again: I realize concentrate feed is needed. But why, in which form, how much, when and where?

Fifth: Financial viability. Is the effort and time of striving for the ultimate individual quality, for instance moving animals and workers to those upper pastures and the usually more strenuous work conditions at altitude reflected in the prices? Is the pastoral ‘idyll’ financially sustainable in the long term? Do we, as a society, allow the pyramid to have a strong, inspiring top? Do we account for the cultural landscape this helps to maintain?

I’d like to present two examples, in Austria and Anatolia, which in my eyes are best practice: they don’t pasteurize the milk, they use their own cultures and rennet, add very little to no concentrate feed, and seem to be at least economically stable. These two cases not only show that it is possible, but also serve as a reminder of natural ecosystems.

### 1. *Alpkäse* from Austria: the Fuchs family at Alpe Loch, Bregenzerwald

We are in Vorarlberg, in the westernmost part of Austria, bordering southern Germany and Switzerland. This is alpine country: 41% of the surface is used as alpine pastures with a strong focus on dairy. In 2014, there were 530 alpine dairies with 9,000 dairy cows, most of them in Bregenzerwald, a high mountain valley at an average altitude of 700m (Moosbrugger, 2013, p.12).

The Fuchs family’s home is a farmstead in Lingenau, in the lower part of Bregenzerwald. They milk about 35 cows, with the milk collected by the village dairy, and additional income provided by trading cattle as well as selling milk-fed veal. Between mid- to late May and late

September they take the dairy cows up to their mountain dairy. Alpe Loch, which they have owned since the 1950s, is situated at about 1500m, a 20-minute drive away. Up there, they make their own cheese.

*Loch* means hole, and it is indeed a bit of a dark, rocky corner, with Richard Fuchs mentioning that it had often been suggested to him to blast away some of those rocks to get more pasture, but he's strongly against this.

Theirs is a mixed herd, mostly sturdy animals with horns, well adapted and prepared for the summer. They no longer trot up the mountain themselves, but that is mostly due to traffic. They are not too heavy and happy to climb up and down the slopes. Their milk yields tend to be lower while up in the mountains, but their health is not negatively affected by the leaner pastures. Richard insists on not feeding them any concentrate in the summer, as this would completely alter the larger cycle of pasture and milk, introducing more nutrients and changing the vegetation. These are natural pastures, true terroir.

He also uses mostly wooden tools, made from local spruce and cleaned with hot, fermented whey and dried in the sun. The wood acts like a database for the indigenous lactic bacteria cultures, engrained together with the lactose in the wood's porous texture. Milking is twice a day, with the evening milk kept overnight in shallow round containers called *Gepsen*, in a cool corner, but not refrigerated (lower temperatures affect the microbial landscape as much as high ones). After a light skimming, it is added to the morning milk in the copper-clad vat and brought back to a low body temperature. Starter cultures are added in the form of fermented whey from the previous day, to accelerate acidification, the base of all cheese-making.

After about an hour rennet is added, to make the casein protein molecules coagulate and turn liquid into solid. Rennet is a combination of two enzymes that are produced in the lining of milk-fed young ruminants' abomasum. (1) At best, cheesemakers today buy this readily prepared, in dried sheets, but mostly it comes in standardized liquid form, made from New Zealand calves. And even more generally, it's been superseded by cheaper, so-called vegetarian microbial rennet, made in the lab with the help of fungi. In short term this has the same effect on the milk, but in the long term tends to produce bitter notes in the cheeses during ageing. Lambs', kids' and calves' rennet all behave slightly differently, and it seems logical that there should be differences according to the animal and its provenance. In the spring, Emma Fuchs has seven to eight male calves slaughtered by the local butcher who makes sure to return their abomasums to her. She cleans and dries them, cuts them open, flattens them out and rolls them up to a kind of sausage. Thus the enzymes, in the lining, are more or less evenly spread when a slice of this is macerated in fermented whey every week or so.

Using ladles and a harp, a metal frame with wires, the coagulated milk is gently cut into small curds before slowly being heated to above 50 °C to help expel the whey.

Temperature is measured, but the exact point when Richard starts to draw the curd from the whey depends entirely on his intuitional judgment and accumulated experience, as every day the milk is as slightly different as the conditions under which it emerges and is processed. Half a degree Celsius can make all the difference between a great cheese and a slightly disappointing, dull one.

Of the whey that's left in the vat some is left to allow the fat to rise and be skimmed or centrifuged for butter making, while the rest is heated to over 82 °C when the remaining albumin protein coagulates, the white cloudy mass (a ricotta relative) is eaten for lunch and the remaining 'cheese-water' used for cleaning the wooden tools.

The two embryonic cheese wheels, each weighing between 30 and 35 kg, are pressed until the next morning, while being turned frequently, before being brined for about 48 hours and transferred to the cave, where they are washed regularly to form an even rind with the help of *Brevibacterium linens*. In large dairies, robots are the norm for this task, but Emma says, rightly, that every wheel is different and needs to be looked after accordingly. She keeps them as dry as possible, not to overwhelm the milk-based aromas with the more uniform aroma of the brevi cultures. The cave up on the mountain as well as the one in Lingenau are on the cool side, and the Alpe Loch wheels are slow to mature and turn from just solid milk, sweet, sour, and salty, to real cheese with aromas that can remind one of fresh tobacco and dried yellow fruit. All the small details add up to real character.

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## 2. *Deri Tulum Peynir* from Erzincan: the Gün family in Anatolia

The Gün family practices a modern form of pastoralism in and around Erzincan, a small city in eastern Anatolia, where the Anatolian highlands meet the last foothills of the Ararat and the Black Sea mountains. Here *tulum peynir*, the bagged cheese, has preserved its nomadic roots while being transformed into a modern, sustainable business model. Cheese shops are numerous in Erzincan, and cheese is a given at any meal, together with honey, yogurt, tea and flatbread.

Mustafa Gün, the current head of the family, calls it the 'factory without smoke': the sheep in combination with the mountains and their rich, diverse flora, the water, the local salt used—all together this makes up not only the base of their life, but its centre and meaning. The resulting cheese, until the mid-twentieth century mainly consumed by themselves and their village neighbours, has developed into an important commodity. It must be good to guarantee the survival of the factory and therewith the family.

During the course of the year, the family moves between three places: There is a bungalow in the small village of Oguz, at an altitude of 1500m, a long hour's drive southwest of Erzincan towards the Munzur mountains—that's the family's original winter site, where Mustafa's

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parents still live and the sheep spend the winter in a simple stable, first pregnant, then feeding their young ones, being looked after by two herdsman. Then there is the camp set up at the higher mountain pastures, at about 2500m, to which almost the entire family relocates during the summer. And for the past generation, there is a modern flat in the city of Erzincan, where Mustafa, his wife Söngül and their three children aged 4, 12, and 15 live from mid-September on, for the children to attend school.

This makes for a drastic cut in lifestyle from mid-May on. For the milking season the Güns partner with six other families to live at about 2500m, spreading out over several camps, according to the animals' needs. Human rhythm is dictated by the animals and their power to transform pastures into milk. It is only up here that cheese is made, and the cool mountain air is as important as the water and the biodiversity, with each plateau conveying a slightly different character to the milk and therefore the cheese. Those four months represent the factory's base.

The men hand-milk the animals twice a day, carrying the warm, foamy milk over to a tent where the women use homemade rennet to turn it into thick fresh curd. The yield is very high due to the high concentration of the milk, and the small amount of rich whey is fed to the shepherd dogs. The rennet is prepared about a month in advance using the abomasum of some of their own male lambs, cleaned with salt, then fermented with herbs, bread, maize or chickpeas. Mustafa points out that commercial liquid calf rennet is widely available and used. However, cheesemakers like themselves who still go up to the plateaus—which is by no means the norm—would never use it. But it is commonly used by those who also add cow's milk to the sheep's milk, and that, he emphasises, might result in cheese, but certainly not in true Erzincan tulum.

Every morning at sunrise the fresh cheese is collected from all the camps in a central dairy tent. The small bags are emptied into larger sacks which are then stacked for a week, at which point the dry curds are salted and pressed back into the sacks. Salt is our main disinfectant, says Mustafa, who uses only salt from the local mine in Kemah.

Until about WWII cheese making was for self-supply and bartering with neighbours for honey, walnuts and apricots. Back then the cheese would start to mature up in the mountain air until the family took it down with them in the fall, to the village, on donkeys. However, in 1938 Erzincan was connected to the rail network, opening new markets in Ankara and Istanbul, and that marked the beginnings of modern times. Cheese became a commodity. Today merchants, such as Mustafa's cousin Süleyman, collect the cheese sacks at regular intervals and do the further processing in small plants in Erzincan. Pressed into *tulum*, bags, the cheese needs to mature for four months just above zero degrees—which reflects the original, natural winter conditions, adapted for modern times.

Everybody involved in the factory without smoke is keenly aware that the cheese, presenting their cultural

heritage, needs to be good business to guarantee survival. This is one of the reasons why part of it is not stuffed into traditional goatskin (which is sturdier than lambskin) but plastic bidons—that's the everyday Erzincan tulum so to say, and it is very good too, although the Deri tulum matured in skin—the larger the better—tastes more complex and sells at higher prices, as it should. They are also busy building up their brand and protecting it, urging the government to finally implement a certification dating back to 2002.

Mustafa runs his own shop in Erzincan near the market. This is unusual, as historically the tasks have been clearly divided between makers and distributors. I think city life made him even more aware of the complex interplay between animals, nature and humans, and the cheese as its expression and culmination. He is open to change, as long as it is driven by the needs of the 'factory'. Perhaps this adaptability is due to their nomadic origins—like many other cheesemakers the Gün family call themselves Şavak, half-nomads with Turkmen roots. Their religion is Alevism, strong in spirituality and shamanist elements, being part of nature and responsible for it.

Mustafa knows that his children need to navigate the balancing act between urban, westernised modernity on one hand and nature and tradition on the other. He is eager for them to leave, to be able to recognise the true value of their own culture, and hopefully also go to university, but he is also confident that they will return, and take over the factory, making cheese.

And with that I invite you to taste those two cheeses, made by 'crazy' idealists, who are certainly not hipsters, but visionary traditionalists—and providers of hope: the Fuchs family's Alpkäse from Alpe Loch in western Austria, aged 24 months, and the Gün family's Deri Tulum Peynir from Erzincan in eastern Anatolia, aged 10 months.

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## Notes

1. Abomasum is the last of ruminants' complex system of four stomach chambers that allows these herbivores to digest even low grade plant material. In young, nursing animals an enzyme mix mostly composed of chymosin is produced in the abomasum that ensures their ability to digest milk, as it makes the milk curdle.

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