



INTERNATIONAL FARMLINK STUDY TOUR

REPORT

***Cheese Production
in Sardinia – October 2009***

***Organised by
A Taste of Sussex
Supported by
The South of England Agricultural Society
International Farmlink Committee***



Summary

The study tour included visits to a large Cooperative, artisan producers and also a major dairy production unit near the capital, Cagliari. These manufacturers and producers represented a very good cross section of cheese production in Sardinia and it was an invaluable trip for our two producers, High Weald Dairy and Bookham Fine Foods for several reasons.

- The realisation that the cooperatives were able to operate on a global scale due to the expertise in sales and export, something that would not be possible for individual businesses
- Understanding the guaranteed price structure throughout the year for the sheep milk.
- Understanding of the wide variations of pecorino products.
- Knowledge of the use of different rennet (goats, calf and sheep) to produce variations in characteristics.
- The possibility of mixing milk to create a new product.
- Knowledge of large scale mozzarella production/technology to make a commercially viable competitively priced product.
- Smoking cheese as an 'added value' option for mozzarella and ricotta
- Awareness of the premium market for hand-made, stretched curd artisan cheeses.
- Comparison of issues around organic pecorino production, which are common to Sussex and Sardinian producers.

The tour was a great success and it is now apparent to the Sussex producers that there are opportunities for producing a unique mixed milk cheese with individual characteristics. This would enable the extension of sheep's milk, which is often in short supply and more expensive than cow's milk. BBC Sussex interviewed both Mark Hardy and myself on a live breakfast broadcast during the visit.

We would particularly like to thank Stefano Olla of the Cagliari Convivium of the Slow Food movement who facilitated the visits and liaised on our behalf with the manufacturers and farmers.

The entire group would also like to thank the South of England Agricultural Society and in particular International Farmlink Committee for their support and making this study tour possible.

Hilary Knight, A Taste of Sussex

Study Tour – 1st 5th October 2009

Our tour began in Cagliari, in the south of the island and we travelled to various dairies on the south west side of the island, to just north of Oristano. Milking sheep and the making of sheep milk cheese has been carried out on Sardinia for thousands of years, and now we found that it has developed into a highly organised industry, and of great importance to the islands economy.

In the south of Sardinia, 3 main types of sheep milk Pecorino (Pecorino; derived from Pecora, the Italian name for Sheep) are made;

1. Pecorino Sardo; 1-4 kg cheeses, an uncooked curd, made as cylinders and eaten as a young cheese within 60 days of manufacture or as a mature cheese for up to 12 months, with a robust sweetness, nutty, herbaceous, and salty tang.
2. Pecorino Romano; Large 22 kg sheep milk cheeses, is a half cooked curd cheese, matured for 8-12 months, salty, fruity and robust
3. Fiore Sardo; 2 to 4 kg an uncooked curd, hard ridged natural rind, a sweet pecorino, hard and grainy with a wonderful rich flavour, and caramel sweetness, salty and fruity. Lamb rennet is used, normally unpasteurised milk, once formed, the cheese is scalded in hot water to seal the curds, often coated in olive oil to seal the cheese, matures in 3 to 6 months.

On the tour we saw all these cheeses being made apart from the Fiore Sardo, as well as Ricotta, and Provolone and Mozzarella stretched curd cheese being made in both a small way, and on a factory scale.

Most “proper” Pecorino’s are PDO cheeses, as such can only be made in certain areas and in a strictly controlled manner. However not all the dairies will be certified to make a PDO cheese, as it is more expensive to make and the sales price does not always justify the extra cost.

Caseificio L’Armentiza Moderna, at Guspini, a medium sized Co-Operative dairy.

This dairy is a large Co-op, which began in 1963, and has 165 farmer members supplying it with milk.

Co-operatives are very important in Sardinia, and are the only way that the farmers can survive. There are some 10 main co-op in Sardinia, and all are under one main co-op; The Cooperative Formaggi e Sardinia, grouping some 2500 producers.

The day of our visit, the dairy was not in production, (we did not visit the production area) as it is the dry season so no milk is being delivered. We had a discussion on the Dairy, and the market led by a member of the marketing team. It employs 12 full time staff and 7 seasonally, but for 3 months of the year cheese is not made at all.

It does not make a DOP (Designated origin of production) cheese because of the high cost of doing so, and the fact that the market does not recognise higher value of a DOP cheese and will not pay more for it.

65 % of the farmers are considered medium to large, producing 300-400 litres per day of sheep milk during the milking season that begins in November and finishes in August.

The milk is collected from the farms by a third party milk haulier, although farm situated close by will deliver.

A sample is taken at the farm, and quality checked for payment, it must be in the region of pH 6.4 to pH 6.7. Temperature is also taken, however refrigeration is not mandatory, small farms will not have cooling facilities, however this is ok provided that the milk is delivered to the dairy within 2 hours of milking. The sheep are kept inside buildings for the milking period, to control their feed and protect from the heat, most of the farmers machine milk, although there are some that still milk by hand.

The dairy processes 5 million litres of sheep milk per year into Pecorino Romano, matured from 5 months to 12 months and 400,000 litres of goat milk, which is often mixed with the sheep milk for cheese making.



The milk price received appears to be similar to UK, at around 90 cents (almost 90 pence) per litre on average, with early produced sheep milk receiving less money (70 cents) and late lactation milk nearer 95cents. Quality is taken into account, especially Fat and protein. Also, if the co-op achieved a good price for the cheese at the end of the year was good, then a dividend could be passed back to the farmers.

The milk is thermised rather than pasteurised, although we did not get the time / temperature combination used. The dairy uses animal rennet for the cheese, either from the calf or lamb rennet, no vegetarian rennet is used (less than 2% of Italians are vegetarian) Great store is held on the type of rennet used and the flavour of the cheese, something UK cheese makers do not consider that important.

Marketing; 83 % of the cheese from this dairy, is sold to the USA, through a Collective Marketing group, covering many other Co-ops, and just 17 % is sold in Italy.

Freezing of sheep milk is not common due to the lack of facilities and the cost but is occasionally carried out by the large dairies, where it is frozen in slices as far as we could make out.

The Market has been difficult recently, not really expanding as competition is fierce, the world financial crisis has affected sales and payment in dollars is a problem. The dairy is looking for other products to make (currently about 17 % of production is non pecorino cheese, including Ricotta and are looking to expand this, but do find it difficult to offer new products.

Ferruccio Podda, Sestu.



A large industrial Mozzarella producer and DOP/PDO Pecorino manufacturer.

This is the 2nd largest cow milk dairy in Sardinia, using cow, goat, and sheep milk, (5 million litres per year) and in the past used buffalo milk, but this now goes to Italy.

Established in 1955, privately owned by a family, and processing some 14 million litres per year into a very wide range of products.

Cows milk is 70% and sheep / goat some 30 % of production. The milk is mainly from southern Sardinia, from the Campidano Plain.

Mozzaralla, provolone, sheep, goat and mixed milk pecorino, are produced.

The largest sheep milk supplier will deliver up to 2000 litres / day at peak, and the largest cow some 15,000 litres, but there few very larges suppliers.

Generally, a good average flock size is 600 ewes. Again, milk is quality checked at the farm and at the dairy, and paid accordingly.

Market; The bulk of cow milk cheese is sold locally and in Italy. However much of the Pecorino Romano is sold to Japan, Germany and Spain.

Milk is pasteurised at 74°C and held for 15 seconds.

We had a fascinating tour of the dairy, and saw the mozzarella production, made in a continuous fashion, on a long production line, with packing

Pecorino is also made semi automatically, with most staff required to remove the cheese moulds and move the cheeses into the large cheese stores. A strong cream cheese is also made here, using second quality cheese that does not meet the standard. It is heated up and creamed by a rotating blade, and filled into glass jars for retail, and was a popular product.

Azienda Cuscusa, Gonnosramatza.



An organic farm of some 500 acres, producing raw milk pecorino, with an Agriturismo side, with several holiday units and a very good restaurant where we had an excellent lunch where the courses consisted of the traditional dishes including pasta (several types), lamb, beef, pork (whey fed), grilled aubergines, tomatoes, courgettes and of course cheese.

Run by 4 brothers, originally started by their father who moved down from the north of the island. The farm carries some 1500 milking Sardo ewes. We saw some 500 housed in a large modern barn and assumed the remainder were in the fields.

About 1/3 of the 200,000 litres of sheep milk produced is processed on the farm in a small but modern dairy into Pecorino cheese. The ewes lamb in December, but no milk production in Sept, Oct and Nov. The yield is 350 litres / ewe. Lambs are weaned off the ewes between 20 and 40 days. They are sold as milk lambs, and are

not carried over for fattening. The ewes all looked very well, the Sardo is the traditional breed, very hardy, naturally polled, quite a hairy sheep, and a similar build to a Friesland. Very few lame sheep, and they avoid feeding too high protein feed as this can compound any foot problems.. Originally the Sardo was a black breed, but this has been bred out over the years, although there were still a few black and white in the flock. When outside a sheep dog will remain with the flock as a protection against predators.

The sheep are milked in a fairly new Alpha Laval parlour, with a pit, 40/40, (40 ewes standing and 40 units) with automatic cluster removers, the first time I have seen ACRs on a dairy sheep parlour, attached to a modern style sagi hook, that lifts and divides the udder, allowing full milk removal. They appeared very pleased with the parlour, and it took 2 people 3 hours to milk the ewes, whether this was the full 1500, we were not sure.

Cheesemaking; Made daily in a round 1200 litre cheese vat from the raw milk. There is no starter added, instead whey from the previous days make is kept as the starter for the following days cheese making. Coagulation is carried out using lamb rennet.

Ricotta is also made from the whey, heating it to 85 ° C in the cheese vat, for precipitation to occur. We think that the farm had a 40% Grant to build the parlour and dairy.

We tasted a range of cheeses, both mature and young, and were very impressed. At the end of lactation, when the milk is high fat but low protein, they have gas production in the cheese causing blowing, which is a common problem, the cheese can still be sold but has a different flavour. Most of the cheese appeared to be sold through a marketing co- op. The cheese price achieved appeared to be in the region of £8.50 to £9.50 / kg. The sold Milk price was again around 90 p / litre, we did not think that there was much margin to cover cheese production.





Santulussurgiu.

We visited this small village of Santulussurgiu, and met Gabrialla, the owner of a traditional Bed and Breakfast hotel, built in 1837. This is a system that has been set up to save the traditional buildings (Albergo Diffuso) by using them in a commercial form in order to have sufficient income to preserve them for the future. This also goes with the Slow Food movement, which aims to preserve traditional methods of food production, using traditional methods and animal breeds, including cheese making. The key is long term sustainability of the program. In 2000, EU funds were obtained under the Leader Two program to set the system up.

With Gabrialla, we visited a small 100 acre dairy farm milking around 25 cows at any one time, of the traditional Sardo Bruna breed, making a stretched curd cheese, under the frame of the Slow Food Presidium program.



The slow food program means that the animals are always fed out side. The cheese is traditionally made by hand in small batches, essentially by women, although this is not always possible, and we saw a man making it, however we believe that he had instruction from women in how to make it. Women are believed to make the best cheese, they have more of a feel for the seasons, the milk, the weather and are able to put this into a great cheese. Whey is used as a starter, and calf rennet for coagulation. All the milk is made into a stretched curd cheese (called CACIOCAVALLO) by hand. The milk is not heat treated. Cheese is made every day of the year, and we met the cheese maker working his curd, stretching it as large balls over a small hot basin (60°C), by hand, and forming it into attractive 3 kg “tear drop” shaped balls of cheese, that mature for 60 days. A cord is tied around the top from where it hangs, and the cheese is generally placed in a net as well for support. At 3 months, it is sweet and supple, while after 12 – 18 months it is strong and can be grated.

He sells it for around £12.00 / kg, direct to shops.

The farm employed just one man to look after the cows and milk them, and the cheese was made 365 days of the year by the cheese maker. A hard life.



Conclusions/some thoughts –

Mark Hardy, High Weald Dairy

Sheep milk Pecorino is a delicious cheese, and by small changes in production methods producing a wide range of different cheeses, for different uses.

It is eaten from 3 weeks of age right up to 24 months.

The most is made from the sheep milk, once the main cheese is made, the whey is heated for Ricotta cheese as a second cheese, and any poor quality cheese is melted and sold as a strong cream / processed cheese. Whey is sent to the pig farms.

There appeared to be big price pressures on the price of the cheese at the moment, driving down the dairies returns, especially from the USA as this is a major market for Pecorino.

Without the Co-operative dairies, the sheep milking industry would not survive in Sardinia.

Co-operation in marketing is also key to the sheep dairies, but as basically all the dairies are making a similar style of cheese, this is more easily possible than in the UK. Although this is a strength as it is just one type of product to market, it is also weakness, as there are very few other cheeses that can be made once the market is saturated with Pecorino.

Many Dairies can operate for just 9 months of the year, due the length of lactation of the sheep. This is not easily possible in the UK, still being fixed overheads and staff to pay.

Mixed milk cheeses are popular in Italy, with a mixture of Sheep/ cow, Goat/ Cow being most common, and this is an area that I think there would be an opportunity in the UK.

Going on what we saw and learnt, currently the dairies are struggling to sell all the production, consequently prices are low and very small margins are being made. There could well be EU / Government subsidies going into the Pecorino dairy industry at the moment.

Rob Bookham – Bookham Fine Foods

The visits to Sardinia were extremely useful and interesting. I was especially interested in the large scale production of ricotta and mozzarella. The smoked

variety lends itself as a very useful ingredient for pasta making and something that I will be investigating further.

The visits to the artisan producers were very inspiring and the use of mixed milk cheeses along with the use of different rennets were quite unusual for the UK again something that can be usefully introduced into the UK markets.

NEWS RELEASE

29th September 2009

PR: ATOS09/08

SUSSEX CHEESE MAKERS TO TOUR SARDINIA

**Two Sussex cheese-makers to attend Sardinian study tour –
from 1st – 5th October**

Two cheese producers from Sussex are about to embark on a fact finding mission to Sardinia and widen their knowledge of the cheese-making process from industry experts on the Mediterranean island. The owners of High Weald Dairy from Horsted Keynes in West Sussex and Bookham Fine Foods from Arlington in East Sussex were invited to join the trip by organisers A Taste of Sussex, the South of England Agricultural Society and International Farmlink. The visit takes place from the 1st – 5th October.

The four day trip will involve visits to 5 cheese producers in Sardinia including a large mozzarella producer and an organic pecorino producer. The owners of the two Sussex dairies are particularly interested in finding out more about making pecorino, ricotta and mozzarella to help improve their knowledge and potentially develop production of these chesses in Sussex.

Hilary Knight, Co-ordinator for A Taste of Sussex said, “Sardinia is renowned for its world class production of cheeses particularly pecorino, mozzarella and ricotta. Dairy sheep farming is currently on a very small scale in Sussex but there are huge opportunities to expand this and develop these cheeses locally. The trip to Sardinia will give our local cheese producers a valuable insight into producing this type of cheese as well as vital information about the commercial side of this successful industry and the benefits of working in partnership.”

Sarah Hardy from High Weald Dairy said, “We feel very honored to be given this fantastic opportunity to visit Sardinia, to spend time meeting and learning from some of the best cheese makers, especially of sheep cheese, in Europe and we hope to be able to adapt what we learn and to add value to the products we make in Sussex.”

The study tour has been funded by the International Farmlink Scheme, which facilitates educational visits abroad by South East land based businesses to help widen their knowledge and expertise and ultimately bring economic benefits back to the UK. A Taste of Sussex is a business support group for the local food and drink industry and helps its members improve their business techniques and meet new customers.

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Notes to Editors:

1. **Sussex Enterprise** is the largest organisation that supports and represents businesses in Sussex. Owned by and accountable to the business community, it exists to help Sussex business prosper and develop by providing expert business help and advice. Part of the British Chamber of Commerce movement, Sussex Enterprise is one of the leading new style chambers of commerce in the country. www.sussexenterprise.co.uk Sussex Enterprise currently has over 2,000 member businesses from across the county.
2. **A Taste of Sussex**, the food and drink division of Sussex Enterprise, was set up to provide business support to local food and drink produces. Any Sussex business within the industry can become a member of A Taste of Sussex and receive relevant information, business advice and valuable contacts to help them promote and sell their products.