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# Atlas of goat products

a wide international inventory of whatever things the goat can give us



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The International Goat Association (IGA) is an international organization of educators, scientists, veterinarians, technicians, producers, extensionists, project leaders and development experts involved in the advances of goat research, utilization and sales of products aimed at improving human nutrition, social welfare and sustainable development.

IGA has supported the project of Roberto Rubino and Lucia Sepe for the creation of an Atlas of Goat Product giving information on all goat products around the world. As often in the goat sector, only one type of product is commercialized, whatever the product: milk, cheese, hairs, etc... according each country. This Atlas of Goat Products is aimed at displaying various goat products so as to incite the diversification of goat products commercialized in each country so as to help the increase of farmers' revenues. This action is in compliance with IGA missions.

Here is the first stage of this work that, I hope, will be pursued in the coming years.

#### Pierre Morand-Fehr

President of IGA Paris, June 2004

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he Goat Products Project has been initiated further to discussions linked to communications presented during the 7th International Conference on Goats (Tours, 10-15 May 2000) within the Board of International Goat Association, namely: George Haenlein, Jean Boyazoglu, Roberto Rubino and Pierre Morand-Fehr.

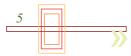
The wide range of goat products, cheese and other dairy products, meat and its various recipes, hair, skin, etc... appeared very rich.

In the meantime, conditions of production of some of these products appeared unsecured and their survival unlikely to be ensured in the future.

Accordingly, it seemed essential and urgent to get an objective knowledge on most of these goat products existing around the world: to describe them, where they are processed and by whom, what about their consumption and the facilities for their commercialisation.

The task appeared to be difficult to run since in the beginning it was not possible to evaluate the number of these goat products, which can be described around the world, the feasibility of an accurate description, the level of the information to be requested. Moreover and amazing enough, we had to raise the question: what is a goat product and even more which are the conditions essential to allow the "appellation" goat product in this very Atlas of Goat Products? Shall we have to consider crude products as highly processed products for which the part from goat is very limited? Shall we have to include in this Atlas only goat products likely to be commercialized or shall we have concern for subsistence goat products of interest? Shall we have to eliminate not well described and those showing characteristics likely to have a quick evolution? Shall we have to refuse goat products having a commercial label and accept only the ones defined by the geographic area where they are produced?

It appeared immediately that replying to such questions would create arbitrary choices. Their application with very different types of products and systems of pro-



duction would be very difficult. Moreover, the type of information provided is not sufficiently precise and accordingly doesn't allow answering objectively the abovementioned questions.

Finally, on a first stage, decision has been taken to accept all information on goat products provided by our colleagues without refereeing. Actually, it was a relevant strategy to use as tool International Goat Association with its Board officers, its 50 Country Representatives and its Members of various origins for capturing such a large range of goat products. The results risked being very heterogeneous, but afterwards it would be easier to come on a second stage to a more coherent publication.

This is within this frame that IGA had delegated to Roberto Rubino the coordination of this project by the beginning of 2001. It has been agreed that the first stage of this project would be achieved at the 8th International Conference of Goats (Pretoria, July 2004) where a reflection should lead to find the appropriate concretisation of this project.

Hereafter are the results on this first approach. A survey form has been forwarded to different experts of goat products. This survey included seven questions to be answered. The experts were also requested to send a photo of the product together with a geographic map indicating the zone of production.

Originally, 233 forms were received. Twenty-eight countries are represented but only 8 of them account for 70% of the whole product forms. This demonstrates that a lot of work got to be undertaken to capture information on goat products in some regions of Africa and Asia, where around 80% of goat heads are located. The goat products described show a high diversity.

Some of these forms are succinct and other ones quite complete. Some of these would require some more details but we still feel lucky enough to get this information on badly known products. None description has been altered, but sometimes the English drafting has been slightly improved.

Nevertheless, so as to facilitate the reading of this atlas, the names of the products have been homogenized by using the original name and mentioning the English translation whenever it is feasible.

Moreover, the categories: milk, cheese, meat, skin, fur, cooked meal, sweeties, tool, music instrument qualify each product. Four types have been constituted according to the following characteristics:

- crude product such as milk, carcass, fleece (C);
- little processed product just to facilitate consumption or utilization such as salted meat, ice-cream, yoghurt (M);



- treated products, their characteristics have largely modified due to the process, e.g. cheese, leather, sausage or cooked meat (T);
- high processed product and including other products such as medication, knife, goat cheese cake (P).

At the present stage, we would welcome the participation of each reader for helping to go further in this project. You will find at the end of this Atlas a survey sheet to be filled up, so as to complete the information already mentioned in the present first issue or to create a new form for a product not yet listed. We wish to express all our thanks for this help to all those willing to provide us with some input.

Roberto Rubino and his team, particularly Lucia Sepe who devoted some much time to this project, are very warmly thanked as well as the authors of these forms. We rely on them to go further in this project.

# Typical products and typicality of the small ruminant sector

by R. Rubino, P. Morand-Fehr

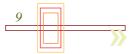
# From quality to typicality

Typicality is a recent way to understand the quality of a product. Until several years ago this term did not exist in French and English. It existed in Greek, Italian and Spanish and indicated a product made in a specific area with specific characteristics. This is a variation of the original Greek (typikos) and Latin term (typicus) that mean "symbolic". The modern meaning of "typicality" is a compendium of both meanings. The notion of "typic product" combines the characteristics of the product to its localisation and above all with its origin (geographic and historic). The symbolism is in the term "origin" itself, because it fills the word "typicality" not only of techniques, but also of contents.

The consumers of Southern Europe (France, Italy, Spain, Portugal, Greece) are giving more and more importance to typicality and, for this reason, the EU has produced a law ruling the products and the factors determining the typicality. The consumers are guaranteed that each product is made according to its production regulations, and more and more show to appreciate these products and this system. In the other countries the term typicality either is not utilised or assumes the same meaning of quality. In this last case the meaning of quality changes according with the culture and the customs of people. In this paper we will present the factors that are considered determinant for the typicality of cheese and meat and those to be successful in the world in the fibre production chain.

#### Diversification

The main important products of small ruminants are: milk, cheese, meat, fibre and



skin. Although there are understandable differences from country to country, in general, the producers have the problem of putting in the market their products at convenient prices. The market globalisation and the WTO (World Trade Organisation) policy is creating a price decrease and surplus in some specific area.

In Italy the ewe milk in Sardinia Isle, in France the ewe milk in Roquefort cheese area, in Asian countries the mohair and wool are subjected to a recurring crisis. The production diversification is indicated as one of the solutions. The consumer is free to choose from different proposals. In this way, a fidelity statement is established between consumer and product; this is considered by the cheese making industry to be the base for success.

One of the diversification systems being successful is typicality.

#### **CHEESE**

The concept of typicality, in this production chain, varies according to the culture and the tradition of each country: in Northern America it identifies above all with safety, in Southern America with the tradition, while in Europe the approach is more complex and presents different levels of deepening from country to country.

# Europe

In the EU countries, until a few years ago, there was a clear distinction between North and South: in the first area the consumer gave priority to the safety of the cheese, in the latter to different factors (tradition, technology, etc.) giving a specific flavour to a cheese.

In 1992, with the rules 2081 and 2082, the EU has enlarged to all countries the cultural approach of the South, defining the criteria for the identification and protection of these products. We will speak about the factors affecting the typicality and the scientific results produced in this field.

# Feeding system

The feeding system is one of the most important factors because the cheese flavour is influenced by milk composition.

In several production systems the pastures are an important component of the



diet. They are rich in dicotyledon plants and particularly in Labiate plants (Thymus, Mentha, Origanum, Salvia, etc.). These plant categories are known to be the richest in aromatic compounds (timol, mentol, limonene, etc.) and in other secondary metabolites (cumarines, fatty acids, phenols, etc.), that may be transferred to the milk.

According to Shipe et al. (1962), taste substances may be transferred into the blood and from there to the milk: through the fodder and digestive system; by direct absorption from the digestive tract; or via rumen gases to blood and milk. A hypothesis is based on the actions of lipoxygenase enzymes during mastication of grass resulting in the formation of flavour giving carbonyl compounds and corresponding alcohol from unsaturated fatty acids in the grass lipids (Keen and Wilson, 1992). Forss (1992) reported that desirable flavours have been associated with high levels of polyisoprene from pasture. The presence of certain terpenoides in milk fat appeared to be indicative of it having been produced from pasture-grazed animals (Wilson, 1992; Dumont et al., 1981; Moio et al., 1996). Bosset et al. (1994) reported that cheese produced in alpine pastures contained more terpene (a- and b-pinene) than those produced in the low-lands.

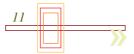
Reddy et al. (1967) demonstrated that when cows consume feeds such as lucerne the dimetylsulfide content in the milk increases.

In several grazing production systems concentrate supplements are given to the animals above all during late pregnancy and early lactation. The concentrate modifies the acetic/propionic acids ratio in the rumen which, probably, contribute to the different characteristic flavours in milk and cheese.

Urbach (1990) reported that diets inducing a propionate metabolism in the rumen cause the formation of the g-dodecanolactone, from dietary oleic acid, and g-dodec-cis-6-enolactone from dietary linoleic acid.

These lactones are characterised by a sweet odour reminiscent of artificial raspberry. Abnormal proportions of propionate or acetate in the rumen produce methyl or ethyl groups on aliphatic chain as propionyl or acetyl CoA as precursors. Grain diets promote methyl-branched fatty acids formation such as 4-methyloctanoic which contribute to the characteristic flavour of mutton. Such acids result from the incorporation of methylmalonyl-CoA arising from propionate metabolism in place of malonyl-CoA ng chain lengthening. The flavour of dairy products might therefore be more affected by grain diets (Forss, 1979).

Moreover the nature of the lipids of rumen microrganism is of great interest in relation to microbial and it is very important to determine the composition of the lipid component to the host animal in post ruminal digesta.



The relationship between feeding system and cheese flavour is so evident and accepted by consumers that, as for the wine sector, in France, researchers are trying to delimit the "crû" areas, homogeneous areas that can "mark" a cheese for its pedoclimatic and floristic conditions.

In general, a lot of cheese derives its specificity to the feeding system and more and more producers try to link the cheese to a particular feeding system.

In France a lot of Cheesemakers' Associations, to reliance the imagine through a reinforcement of the specificity factors, are trying to introduce, within the cheese production rules, the feeding system.

In Italy, an association (ANFOSC) has been created whose objective is to valorise cheese produced with milk of grazing animals (cheeses under the sky).

#### Breed

In the last years has been demonstrated the existence of a polymorphism in the casein fractions.

In milk goat the casein level changes according to the  $\alpha s_1$ -casein. Individual milks have been classified into three groups: those containing strong alleles, such as the A, B and C variant, associated with a high level of casein; the low alleles D and F variants, and the nulltype lacking  $\alpha s_1$ -CN, with low content of casein. Last, those with an intermediate content of casein.

The technological properties of milk change according with the casein variants. A higher fat content and cheese yield and a lesser dimension of casein micelle is associated with the strong alleles  $\alpha s_1$  -CN A, B and C.

On the contrary, the "goaty flavour" is less strong in cheese prepared with CN A milk type (Chianese et al., 1996; Leroux and Martin, 1995).

Research showed that the  $\alpha s_1$ -casein genetic variants of ewe milk is not abundant. King (1966) found the Welsh  $\alpha s_1$ -CN variant in the Clury Forest sheep breed and, more recently, different authors detected it in Sarda, Massese, Pinzirita and Appeninic breeds (Pirisi et al., 1996). Recently, the primary structure of the A, C and D  $\alpha s_1$ -casein variants has been determined. Moreover, it has been shown that some amino acids substitutions change the phosphorylation sites.

In this case also the polymorphism influences the technological milk characteristic. Bolla et al. (1989) have found that the "Welsh" variant is associated with lower fat and protein content. Piredda et al. (1993), in the same variant, have found a low casein content and bad lactodynamografic characteristics. Pirisi et al. (1996) have shown that milk



having  $\alpha s_1$ -casein CC is richer in total nitrogen and casein content and has better coagulation properties. In the cheesemaking process, milk with  $\alpha s_1$ -casein CC yields cheese with higher total nitrogen content and lower fat content than  $\alpha s_1$ -CN DD.

Thus, the casein polymorphism influences milk and cheese characteristics. The polymorphism varies either among animals or among populations.

Ramunno et al. (1994) and Chianese et al. (1996) showed that the allelic frequencies vary among breeds according to the genetic improvement of each breed. As a consequence a breed, because of its casein polymorphism, permits to mark a cheese, having specific organoleptic characteristics.

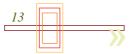
Several production rules oblige the use of a specific breed: Serena cheese (Spain) provided by the Merino sheep breed, Roquefort (France) by the Lacaune, Ossau-Iraty (France) by the Basco-Bearnais, Pecorino di Filiano (Italy) by the Merino.

#### Rennet

An important step of milk processing is the coagulation by rennet. Since ancient times this was done utilising extracts from the stomach of animals or from some vegetables. Rennet is a complex mixture of enzymes, whose composition varies according to the species (animal or vegetable) and to the age or to the animal feeding system. As a consequence, their proteolytic and lipolitic activity varies, which is determinant for the formation of cheese characteristics. In the manufacture of some cheese varieties it has been shown that a higher yield of cheese is obtained using animal rennet rather than vegetable ones. But the vegetable rennet determines a greater proteolytic activity. In Serena cheese, a POD Spanish cheese, Nuñez and Fernandez Del Pozo (1991) showed that the use of the vegetable rennet made from *Cinara cardunculus* resulted in a greater proteolysis and a more pleasant and pronounced flavour compared with animal rennet cheese. Consequently, Nuñez concluded that "regulations of a POD for Serena cheese should include as being compulsory the use of vegetable rennet for milk coagulation, in order to maintain its distinctive characteristics".

The rennet contains lipase, an enzyme responsible of triglycerid lypolisis with formation of free fatty acids determining the characteristic and flavour. Only paste rennet contains the lipase because in the liquid rennet these are disactivated by extraction process.

Thus the paste rennet could develop a flavour characterising each cheese. In Italy the use of paste rennet in Pecorino Romano and Pecorino di Filiano is obligated by regulations.



#### Natural cheese-cellar

Ripening is an important phase of the cheese's life. During this period an intense enzymatic process occurs towards fat, protein and sugar whose degradation contributes to the aromatic compound formation. These enzymes come from the environment, thus the ripening structure assumes a great importance. Very famous cheeses owe their typicality to the fact that they ripen in natural cheese-cellars, because of the optimal environmental condition. In France, air filtering through the rock lifts of the Roquefort area, determines the ideal conditions for *Penicillium roqueforti*, the mould characterising the homonymous cheese. In Italy an original way of typicality is the Formaggio di Fossa (Pit cheese). Pit cheese is a particular type of Caciotta cheese made either with cow or sheep's milk and ripened for about 100 days in pits dug in the tufa at the borders of Romagna and Marche regions. The ripening environment, anaerobic conditions, and constant temperature and humidity, give special characteristics to this cheese (Toppino et al., 1992).

# Other typicality factors

The consumers recognise as typicality factors, and are available to pay more: cheese from raw milk, cheeses produced in the farm and cheese moulded by spoon.

- Cheese from raw milk. In general, cheeses are produced utilising raw milk, thermised milk (60°C, 15") and pasteurised milk (60°C, 20'). The temperature treatment increases the safety threshold but destroy the microbic flora, that of which is responsible of cheese flavour. Cheeses made from not raw milk have a more flattened flavour. A lot of consumers don't like this type of cheese and they prefer cheeses from raw milk. Regulations of several POD cheeses provide the raw milk utilisation: Parmigiano Reggiano (Italy), Roquefort (France), Serena (Spain), etc.
- Cheese making in farm. A lot of farmers produce and sell directly the cheeses. This
  production of artisanal type permit to have cheeses less standardised, of good
  quality and with a characteristic flavour.
   In France this production is protected by law and cheeses are labelled fermier (farming).
- Cheese moulded by spoon. Curd could be moulded automatically or by hand utilising a spoon. The cheese quality is influenced by this operation. In France a lot of industrial cheesemakers prefer to utilise this artisanal technique even if more expensive, because this gives to the cheese more prestige.

#### North America

In Canada and in USA, typicality is related to the small scale farmstead cheese-making, because the development of dairy operations search the big scale forever. In this case the typic products are not related, like in Europe, with the animal breed or the geographic area of production. They are only related with the scale of operation.

The goat and sheep cheeses produced are of European recipes origin, and the names are similar, because the people involved are some kind of relation with original products.

Fifteen years ago, for example the book of Le Jaouen (1982), some people instead operate the little goats farms and make the cheeses at home.

Finally the sanitary regulations of cheesemaking in both countries obstruct the possibility of typicality because the regulations are very strong and it is impossible to make a cheese with raw milk and with natural rennet.

#### Latin America

In this geographic area, the typicality is possible for two reasons: the level of economic development and the traditional culture.

In general, the big scale of cheesemaking operations are very expensive and with the quantities of milk produced by small ruminants are uneconomic. Also, the regulations in that area are less strong and in the country it is possible to make a cheese with raw milk.

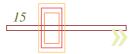
Secondly, the mixed people (Spanish x Indigenous) have a very important tradition for 400 years and these products are similar like in Europe.

The typical products are present in both characteristics symbolic and typic related with the origin.

For goat and sheep cheeses, some cases are very important and they are present almost in a geographic area. In Venezuela, Chile and Mexico there are typic products produced with goat milk.

The typicality is related with the origin and the breed of animals (ewe Lacha in Chiapas Mexico for example), with the use of raw milk and natural rennet direct from the "caillet", with the specific technology of cheesemaking and, some times, with the use of tools utilised.

The meanings of quality are difficult to explain, because for the urban people of



this region the products are symbols of low quality and dangerous for health (Brucelosis). But the reality is that we find very good products all with typical characteristics and this is the main problem for marketing and the development of those products in the area.

A big work is required to have better products with typical origin. For example in Chile, recently, Lescure-Bougon have installed a cheese factory and produce the typical Chilean cheese with a very nice packaging.

#### **MEAT**

### Carcass and meat quality

It is difficult to define quality because it is a mix of sanitary, nutritional, technological and organoleptic components. Moreover, the meaning of quality of carcasses changes in several world areas according to the local customs. As a matter of fact, the fat content preferred by the consumers is different according to geographical areas, culinary uses and social class; in fact in the less developed countries, or where the grilled meat is very popular, fat is liked (Gall, 1982).

In many countries (Africa, South America) mature animals are preferred. This tradition and liking come from the need to take advantage of the sheep whole growth potential.

The blackhead sheep, which is found in many African countries (Morocco, Algeria, Tunisia, Libya, Ethiopia, Kenya, Somalia), is slaughtered when it is around a year old (30-35 kg) and gives a low conformed, but very fat carcass. This product is also appreciated in Arabian countries. Also in South American countries (Peru, Argentina, Chile) lambs are slaughtered at nearly 30-50 kg of live weight.

In the more developed areas of the world carcass quality is evaluated by grids that give the price of the product. The quality indicated on many labels is made according to some grid evaluation.

In the USA (Boggs and Merkel, 1982), carcasses must be identified as to their sex or class and their maturity group or kind. The classes or sex group of sheep are ewe (female), wether (castrated male) and ram (male). The classes are then further subdivided by kind or maturity groups into lambs (up to 14 months of age), yearlings (12-15 months) and mutton (older than 24 months). Each of the kinds or maturity groups contains ewes, wethers and rams.

Lamb carcasses may be quality graded, yield graded or both. Quality grade is an



estimation of eating characteristics, i.e., tenderness, juiciness and flavour, while yield grade is an estimation of bonelessness, closely trimmed, retail cuts form the leg loin, rack and shoulder.

In New Zealand the current measurement used to define export lamb classes and carcass composition (meat and fat) is the GR (Kirton et al., 1992). It places lamb carcasses into one of 14 classification boxes based on weight and fatness classification. Eight of the boxes (A, YL, YM, YX, PL, PM, PX, PH) contain carcasses that can be exported; the remaining boxes (TL, TM, TH, FL, FM, FH) contain carcasses that should be cut and trimmed before export. The present subjective system also sorts carcasses into five fatness bands (A, Y, P, T, F).

In Europe there are different kinds of products in relation to location; in the central and northern parts the main product is the heavy lamb (over 13 kg carcass) called mutton (UK), mouton (France), ovino mayor (Spain) and agnello pesante (Italy). In the same countries, lamb (7-13 kg carcass) called agneau (France), cordero (Spain) and agnello leggero (Italy) is also produced. In the Mediterranean region (Spain, Italy, Greece. . .), because of the use of ewes' milk, the milk lamb (up to 7 kg carcass) is the favourite; this product is called agneau de lait (France), agnelet (Basque Countries), lechal (Spain) and agnello da latte (Italy).

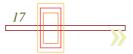
This variety in European production makes is necessary to evaluate different kinds of carcasses (EC Reg. 3013/89) according to weight. The SEUROP grid is used for heavy lambs; there are six classes of conformation (decreasing from S to P) and five classes of fat (increasing from 1 to 5).

The other carcasses are classified by "Mediterranean or bis grid" (EC Reg. 2137/92) according to meat colour (three classes) and fat quantity (four classes).

A strong commercial meaning is given to the colour of the meat that has to be as light as possible. This trait is experimentally measured by reflectometer and several studies are devoted to define the factors of its variability. Morbidini et al. (1995) studied the age effect and observed a light pink in 85% of 40-day lamb carcasses and in 50% of the 60-day lamb carcasses.

Borghi (1998) refers that the transport stress causes a more intensive colour of the carcass. Theriez et al. (1997) showed that diet can modify the meat colour; the restriction to  $600 \, \text{g}$  / day of concentrate in the diet produces a better meat brilliance, a lighter red is obtained by cereals instead of beet pulp in the ration, and the copper in the forage improves the red intensity.

In the fat, firmness is very important. Normand et al. (1997) observed that the firmness of the subcutaneous adipose tissues depends on feeding; 30-50% d.m. of beet pulp



in the diet improves it compared to cereals, because of its higher fibre content. When the beet pulp content rises up to 60-70% the firmness decreases, showing the necessity to have various feeds in the diet.

Selecting good carcasses or meat cuts to fulfil market demand is therefore becoming more and more important, so as much accuracy as possible must be given in choosing the best animals. Carcass weight and meat grading are no longer adequate to accurately evaluate products. At the present time research is concentrating on more sophisticated processing technology. A new practical idea is to bring together a set of measurements on the live animal to identify the best carcass or the best cuts on the carcass.

In recent years, research has found a new improved way in a major gene known as "Callipyge", that was detected for the first time in a Dorset flock in Oklahoma (Cockett et al., 1994). The presence of this gene indicates a higher amount of muscle development in the rear end and a larger muscle. The only problem is that the Callipyge gene also gives a tougher meat. Therefore the genetics of muscle development regarding eating quality and tenderness must also be looked at.

Flavour and odour are also quality parameters that vary together with the use and customs of the populations (Reid et al., 1992). In central and south-eastern Asia sheep meat is generally disliked because of its strong flavour and odour. In the Middle East and Northern Asia people consume a large quantity of sheep meat and apparently enjoy its flavour; fat tailed breeds are popular in these countries and the tail-fat is used in typical processed meat products.

In North America the strong flavour of the meat is the main handicap against its consumption.

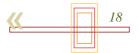
In Europe, although there is a traditional sheep meat cuisine, a product with a strong flavour is refused mainly by young people.

In Africa where, as described before, the consumption of adult animals is popular, sometimes from fat-tailed breeds, high levels of mutton fat are favourably accepted.

In Oceania, where lamb and mutton are a significant part of the diet, the strong flavour is not a negative characteristic.

According to these quality aspects, research is mainly working on identifying the chemical source of flavour. In this field several compounds such as branched chain fatty acids (BCFAs) and phenolic compounds have been studied.

Reid et al. (1993) report that the 4-methyl and 4-ethyl BCFAs occur in sheep meat as a result of incorporation of methylmalonyl-CoA (from propionate) and ethylmalonyl-CoA (from butyrate) into fatty acids. Ha and Lindsay (1990) suggest that propionate and butyrate are present in relatively high concentrations in the rumen of sheep



as a result of ingestion of certain feeds. The production of volatile BCFA is under genetic control. The genes controlling fatty acid biosynthesis have been cloned (Hildebrand, 1992), opening the way to future genetic manipulation.

Also feeds can contribute other objectionable flavour compounds to sheep meat, the so-called "grass feed" flavour. Bailey et al. (1988), found that the main difference between volatiles from the fat of lambs fed on forage and on grain was the high amounts of 2,3-octanedione, 3-hydroxy-2-octanone and diterpenoids in forage-fed samples. In a study of six pasture species *Phalaris tuberosa* was observed to produce an unacceptable flavour in sheep meat.

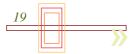
Considerable efforts are being made to study methods to deodorise the fat. In Japan there are patents for use of substances that are able to remove odours (Okamura, 1980; Shimuzaki et al., 1979). In New

Zealand (Reid et al., 1993) tallows suffer from a problem know in the trade as a "reversion". Muttony odours reappear some time after the tallow has been deodorised. Conventional deodorisation removes volatile free fatty acids, phenolics and feed-derived volatiles from fats but does not remove any BCFAs that are incorporated in triglycerides. The use of supercritical carbon dioxide (SCO<sub>2</sub>) extraction was investigated as a technique for deodorising mutton fat and tallow.

# Typicality, labels and brands

Despite these differences in favourite products, mainly connected with the age and the weight at slaughtering or with the ways of cooking, it is not easy to define typicality in sheep meat. Also in this meat, as in the milk products, as well as geographical origin, typicality should be mainly related to some special technological and managerial method in rearing the animals or processing the carcasses. From this point of view typicality in sheep meat is very difficult to define because, apart from the sanitary aspects, the technological factors that can affect the meat quality are less specific and clear-cut than those concerned with the dairy products. As a matter of fact the aromatic compounds in cheese can be very different due to the enzymes produced by specific micro-organisms; on the other hand meat flavour has a narrower range of variation and less technological control.

In spite of this, many countries have commercial labels that guarantee the quality of sheep meat according to several characteristics and therefore make it more valu-



able in the market in comparison with the common production (Boyazoglu, 1993).

From an overall point of view, quality labels are considered as a promotional strategy for the meat produced in some special areas and this is directed at satisfying the demand of a particular kind of customer (ISMEA, 1993; Sarti, 1994).

Sometimes the labels are just an aspect of a more general project directed at tourist promotion in a particular area; in some cases this strategy is also used to find a suitable commercial way to protect rare endangered breeds. Usually problems can arise in these situations mainly because the production of the final marketable product does not meet the seasonal demand of tourists; moreover the processing or marketing chains are poorly developed for making the products available, the modernisation and the centralisation of abattoirs and the organisation of the processing chains is an example of this problem (Waterhouse et al., 1993). Sometimes, as described by Gibon (1981, 1992) for the "lamb from Pyrenees" and for a specific regional lamb from Tarasconnaise sheep in Luchon (France), the change in the local market can make the operation profitable if the entire chain (production, processing, market) is ready to satisfy the increased demand.

In other cases the brand in sheep meat is considered as a sanitary guarantee. Vindevogel et al. (1996) point out the importance of an Integrated Quality Control also with the objective of obtaining certified marks and label names.

An ecological meaning is also attributed to the marks. Roulin (1993) proposes special quality labels for meat produced in alternative farming systems; in the same way a label certified by the ecological agriculture committee of Andalusia is concerned with the breed and with the lamb's health, namely brucellosis and tuberculosis. An American brand (Tongue River Farm), promoting Icelandic lambs, specifies that the product is naturally raised without hormones, pasture grown and clover finished, therefore giving the image of an ecological product, that can be highly valued on the market mainly in recent years when the BSE problems have reduced meat consumption mainly for lamb and beef.

In Holland, the Development of Region-Specific Products of Waterland wants to have its own quality cattle and sheep meat. The lambs must be born and raised in Waterland and be given half a year access to herb-rich grasslands; the management is completely natural and the use of growth enhances is taboo. Another very typical Dutch product is the Texelse Lamsham, that is raised on salty grassland close to the sea and that is usually smoked.

In other circumstances the brands are controlled by well-organised producing and marketing companies as is possible to verify in countries where sheep meat produc-



tion is a very strong economic factor. In New Zealand there are high quality sheep meat brands (Cavalier) managed by internationally known companies (Horizon), that have huge facilities such as abattoirs able to process more than 3000 lambs per day and that can offer a very wide range of products (lamb, mutton, cuts) on the same label both for home consumption and for export.

In Argentina special care is giving to the Patagonian lamb that is raised in the cooler southern part of the country that is suitable to the sheep industry, because of the climate and of the botanical composition of the pastures and therefore of the feeding value.

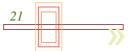
Also in India, where urbanisation and quality consciousness is increasing, the market for scientifically produced meat products is improving and some brands (Alkaber, Sibaco, Eatco) of chilled and frozen pro-ducts on the market are directed to exportation to neighbouring countries, mainly to the Middle East. In the EC many labels or brands are present primarily in the countries more involved in the sheep industry.

In the UK several livestock marketing groups are seeking to promote regionally branded quality lambs (Northumbrian Lamb). Usually these companies are related to producer co-operatives that define the quality of their products according to the results of surveys on lamb purchasing behaviour and consumption, aspects of quality in lamb and preference for regional brand names (Fearne and Kuznezof, 1994). Other examples are the Cheviot lamb, from Wales, typical for a lean and perfumed 20 kg carcass, the Welsh mountain lamb, the Soay lamb, the Ronaldsday lamb and the Reestit mutton from Scotland.

Also in France sheep meat brands are connected with producer co-operatives and special work has been done to define the quality parameters that can improve the economic value of the products. A functional basket of rules (carcass weight, grade and fatness condition, meat and fat colour, lamb age) defined by a group of experts have to be followed to obtain products that can be marked with the "label rouge" that is a very important mark of quality appreciation (Martinand, 1996); under this label there are commercial brands, related to breed or to geographical area.

Other regular brands are on the market without the red label. Some of these brands are related to a special breed such as Agneau d'Ile de France, slaughtered at 40 kg live weight; others to a region like Agneau de Pauillac (Aquitaine) or Agneau Fermier du Quercy, born and raised in the Lot county and milked by the mother at least for 60 days.

At the present time, all the French regions have the political ends to propose red labels, therefore there is the risk of overloading the consumers with soy labels that it



gets difficult to recognise their peculiarity.

Spain is the most important country for the sheep industry in the Mediterranean region, and several sheep meat brands are on the market. The quality of most of them, such as Basco, Ternasco de Aragon, is well controlled in all the production phases (farm management, breeding, slaughtering) (Asquiazu, 1997; Eurocarne, 1994).

In Italy at the present time there are only commercial brands (Agnello della Maremma, Agnello siciliano, Abbacchio romano, Agnello di Laticauda), but the Ministry of Agriculture is in the process of recognising an official label for the Sardinian lamb that is the most typical Italian product because of the very high number of the breed (more than 4 million head) and because of the particular typicality of the product that is obtained from very light lambs (around a month old and 12 kg live weight).

#### **FIBRE**

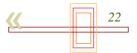
The concept of typicalness finds it hard to impose itself in the textile field. Within the industry, the only important concept is the quality of the product, meaning a whole of factors: fineness and its variability, colour and its homogeneity, length and its variability, presence of coloured fibres in totally white fleece, presence of dead fibres, of impurities, regular and homogeneous tops, touch and look (Vinella, 1994).

As for industry, in fact, quality can be said to be "the whole of properties and characteristics of a product or a service that make it able to satisfy pressed or implicit demands" (UNI ISO 4802).

That is the perfect adherence to the use (Bona 1992) in a clothing system completely depending on industry, both in advanced countries and in many developing countries, in which a real textile industry never was born. In animal species bred not only in advanced countries such as Australia, New Zealand, USA, but also Argentina and South Africa, the research of quality caused an almost complete standardisation of animal fibre production system; a clear example is the Australian and New Zealand sheep livestock or the Angora goat in the other three countries.

This standardisation concerned obviously also genetic improvement programme, strictly related to industrial criteria. The diversification between breeds was gradually growing weak and only exceptionally it represents an element of diversification.

The research of a more and more pushed quality of the product, as to diversify the production in respect to a medium qualitative value, but already very high both for sheep and Angora goats in the above mentioned countries, produced some spe-



cialisation such as "lambs wool", that is wool from very young animals, or "superfine wool", the groups of wool with diameter around 15 micron. Again, all this derived from a consideration on typicality of production. Superfine and lambs wool can come from several different genetic groups of sheep.

The standardisation by industrial quality saved cashmere production. It happened exclusively for incidental reasons and not for bad industrial will.

Cashmere, in fact, is produced by geographically very difficult countries, with policy (see Sovietic ex-republic, Afghanistan), often very inconsistent and characterised by a livestock completely extensive and family.

Besides, the term cashmere is absolutely genetic, because it is produced by a very high number of genetic kinds, living in mountain regions of Middle Asia; only in isolated cases (China, ex-USSR) cashmere population and production were subjected to proper genetic improvements programmes (Millar, 1986). Outside industrial dimension, there are man typical textile production that are characterised by textile quality and in according to historical-cultural tradition of a delimited area and to typical genetic groups.

Some typicalness situations survive in Europe, where textile production related to industrial needs disappeared. They are exclusively related to sheep, the only animal (together with silkworm) to be used for textile fibre. The more typical example is the British tweed, especially the finless fibre; in this case, the necessity to use bit fine fibre allowed to preserve some population otherwise disadvantaged for wool. The same examples can be found in Scandinavian and several East European countries. It is a question of ancient textile products, which maintained a cultural and practical value in the North Europe society, thanks also to climatic conditions of those areas. The production system can be considered intermediate between industrial and that old family made and the row material is often from the same place.

Signals of sagging, however, appear also for them, because many Mediterranean wools of low industrial value go just to Scottish industry of these clothes.

# Towards the typicality

The concept of typicalness for textile products, besides as results of traditions strongly attached to the past, is discovering a certain interest both in big producers of wool and western countries; in the first case it is connected to a home-made production system; in the second, instead, it is connected to the discovery of the "ecological" pro-



duction, that has more and more influenced the minds of European and North American people.

# The naturally coloured wool

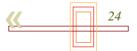
The peculiarity of big wool producers (Australia and New Zealand) is to be almost exclusively exporters. Their textile industry, in fact, is very weak. These countries, however, served an important craft transformation, related to animal production system and commercially developed in small scale and always internal. From this kind of production, the now inter- national experience of naturally coloured wool was born. They are wool coming from proper genetic lines become uniform for colour of fleece, using basically black and brown, besides grey (Dolling, 1989). In this case, an opposite industrial movement was born, for which the presence of sparse coloured fibre in uniformly white fleece represents a grave damage (Fleet, 1985).

The experience of naturally coloured, begun during the 1970s, is already well-established (Dolling, 1989; Lynch, 1989). There are several breeders associations in Australia, New Zealand and USA, working about the creation of an international quality trademark, and every five years an international congress is held, collecting all the experts in the field and the main breeders (Adelaide, South Australia, 1979; Lincoln, New Zealand, 1984; Eugine, Oregon, 1989; Kent, UK, 1994). Such experiences are appearing also in Europe (Renieri et al., 1991), in Italy the March Region founded a project (*Sopravvissana e derivate: fibre fini speciali naturalmente colorate*) within the Community founds of Objective 5B, based on the use of 10 New Zealand rams, six black and four brown, to use on white Italian Merinos sheep, to have black and brown lines; the product will be transformed manually in place.

# Ecological production

As mentioned above, Europe is living an important cultural movement related to the discovery of ecological production, respecting the consumer health, not polluting the environment. Born following food production, the ecological movement interests now the textile field (Larini, 1995). A great amount of cotton is already produced in this way, several ecological trade- marks already exist concerning both cotton and other fibre (Mst e Mut in Germany, Cigno bianco in Scandinavian Countries, Stichting Milieukeur in Holland, Oeko-tex e Eco.-tex in Italy); for cotton, an European label is going to be created, named Ecolabel (ECO, 1995). In this movement, a great rediscovery of naturally coloured cottons took place, with five varieties existing today.

The ecological production, also called "natural", is now interesting animals,



meaning both the few old sheep specialised breeds, saved from half-breeding for meat, and overall meaning the foreign breeds never reared in Europe. An example is the Angora goat in France (Allain, 1994), Denmark (Pedersen, 1994) and other countries, and the introduction of cashmere derived for a European project (Production of high quality cashmere from goats and its potential for agricultural diversification) in Scotland, Spain and Italy.

# Farming production

The peculiarity of this new system is to be related to new particular rural enterprises which are growing more and more frequently in Europe, such as farm-holidays and communities for social disadjusted rehabilitation (drug addicts, AIDS sick, etc.). These rural enterprises are often by new farmers, individuals not coming from countryside (very often they are citizens), who decide to dedicate themselves to this new job. In this context, the fibre animal needs few cares, linked up to a perfectly eco-compatible animal production system, allowing a homely manufacturing of fibre to sell directly in farm, and can be a wonderful pet.

# Natural parks

The eco-compatibility of fibre production system was seriously taken into account also by several national parks and protected areas, in which agriculture has a high value. Several programmes which would use the old merinised sheep groups in several European countries are going to start.

The rebirth of zootechnic interest on fibre brought several European non-governmental organisations to ask the European Commission to re-take into account wool and all special fibres not only as industrial products but also as agricultural ones. That seems to open to further growth of the system and to consolidation on craftmade basis and small industry for the production of typical handmade and niche product, sold out from big commercial distribution.

#### **Conclusions**

Throughout the world, farmers try to diversify the animal products to decrease the market difficulties. This process is easier in the case of the small ruminant production system because of its historic tradition and less industrialisation. In fact, a great part of product named and sold "typical" bases its image on some traditional factors: spe-

cific techniques, a cellar, a feeding system, etc. But the contact between consumers and producers must not only be commercial; the consumer must be always correctly and clearly informed despite the complexity of rules and regulations and get a message guaranteeing origin, trace- ability and authenticity of the product. For this reason, the typicality mean varies between different cultural areas and between production types; the historical and traditional values remain the common trait. This research gives the scientific motivations; a great part has to be researched. The future of a lot of small ruminant production systems could depend on the trend of research to develop this topic.

Reprinted from Small Ruminant Research, Vol. 34, R. Rubino, P. Morand-Fehr, C. Peranza, F.M. Sarti, "Typical products of the small ruminant sector and the factors affecting their quality", Pages 289-302, Copyright (1999), with permission from Elsevier.



his Atlas contains information sheets for 210 goat products from 28 countries around the world.

These are classed in the following categories:

- milk & by-products (yoghurt, ice-cream)
- cheese (and cheese cooking specialty)
- meat (carcass, processed, cooking specialties)
- dessert
- fibre, skin and fur
- others (music instruments, tools, medication, work of art)

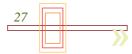
...and ordered by continent:

- Africa
- America
- Asia
- Europe
- Oceania

A coloured strip on the border of each page indicates the continent of origin:

- yellow: Africa
- orange: America
- red: Asia
- blue: Europe
- green: Oceania

Within each continent, the sheets are presented in alphabetical order (continent/country/product). For example, America/Brazil/Carne de cabrito enlatada, Doce de leite...



Each product is described in an individual form which comprises a photo of the product, a location map, and the following information:

Name of the product, in original language – with some detail of its origin **Type of Product** (product description, weight)

**Area of Production** (country, regions)

**Techniques and Scale of Production** (Techniques of production or/and processing; scale of production: small by craftsmen or industrial...)

**Trading of the Product** (way of trading, diffusion)

**Use(s) of the Product** (e.g. culinary: how to serve the product, clothes, other uses, common or original)

**Estimate of Production and Demand Trends** (Estimation of produced quantities, evolution of the demand, if possible).

On each sheet, there is a code indicating the type of product, based on the level of processing of the raw material:

- raw products, such as milk, carcass, fleece etc.(C)
- lightly processed product, just to facilitate consumption or utilization such as salted meat, ice-cream, yoghurt (M)
- treated products characteristics modified by processing, e.g. cheese, leather, sausage or cooked meat (T)
- highly processed product and including other products such as medication, knife, goat cheese cake, cooking specialties (P).

This is the full legend for milk products:

- MiC: Raw milk product
- MiM: Slightly modified milk product
- MiT: Treated milk product
- MiP: Highly processed milk product

The same method was used for:

- Meat (MeC, MeM, MeT, MeP),
- Hair (HaC, HaM, HaT, HaP),
- Skin (SkC, SkM, SkT, SkP),
- Other products (OPC, OPM, OPT, OPP).

At the end of the book, several indices are available:

- Index of contributors (authors of forms, by alphabetic order);
- Contents of products by alphabetic order, with information on kind of product, category, nationality, page of Atlas where finding the relative form;

• Index by kind of product – forms for each kind (milk, yoghurt, cheese, dessert, carcass, meat, cooking specialties, fibre, fur, skin, tools, medication...).

At the end of the Atlas, there is a *Survey Sheet*, to fill in, cut and send (by fax or Mail). Any reader, author or not, is invited to help Editors to improve the present Edition, and indicate any suggestion, correction to the present forms, or to propose further additions of products.

All Survey Sheets will be valued and used to prepare a future edition of the Atlas of Goat Products.

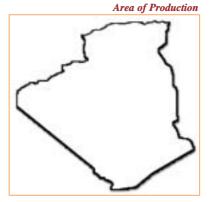
I wish you an enjoyable journey though the wonderful world of goat products!



 $m{A}lgeria$ 

**D**jben

by Amina Hellal





#### Origin

Little information is available about the Djben. We only know that it has been sold in local markets for a very long time. It is produced in rural areas and is often destined for family consumption.

Djben, Jben and Gibneh are the English renderings of the same Arabic words. Local languages spoken in the Middle East and North Africa differ from region to region. Some authors are hesitant to identify cheeses with a name that may mean something completely different in a neighbouring area.

# Type of Product

Djben is a fresh cheese obtained through enzymatic coagulation using animal rennet (lamb's stomach dried in the sun) or a vegetable rennet derived from the flower of wild thistle. It is a cheese without a specific shape, but it often is formed like a small grapefruit with a flat bottom.

# Area of production

The Djben is produced in Algeria from cow, goat or sheep's milk.

In the coastal regions the livestock feed on both wild bushes and forage.

# Techniques and Scale of Production

After draining, the curd can either be salted or not; sometimes rosemary or other herbs or spices are added. This covering prevents the cheese from drying out. For coagulation, wild thistle (locally called kherchouf-el-arab) is used during the summer in the northeastern part of the country because wild thistle is abundant there in the summer months. To produce the vegetable rennet, the fresh flower is ground in a wooden mortar with a small quantity of goat's milk. The resulting brown liquid is filtered with a cloth and then added to lukewarm, fresh milk. After stirring, the milk is placed in the sun to coagulate. In a cool place, the curd is left to drain in a cloth.

# Trading of the Product

The cheese is sold in local markets, without specifying the milk source. This cheese is made with goat, cow or sheep's milk. The most valued type is made with goat's milk.

#### Use(s) of the Product

The cheese is consumed fresh, not always salted and sometimes covered with thyme and rosemary. It is also eaten on barley or durum wheat crackers. In some regions, Djben is added to couscous at meal time.

# Estimate of Production and Demand Trends

No data is available

**E**gypt

# Dhani

by Salah Galal





# Trading of the Product

*Dhani* is marketed in local and village markets.

# Origin

Dhani Cheese

# Type of Product

*Dhani is* made from either pure goat milk or a mix of goat and sheep milk.

# Area of production

*Dhani* is produced in small towns and villages, in Egypt.

# Techniques and Scale of Production

*Dhani* is made on a small-scale as a cottage industry.

#### Use(s) of the Product

*Dhani* is consumed in homes and may be found seasonally in groceries in small towns.

# Estimate of Production and Demand Trends

No reliable statistics are available. In Egypt a new demand on goat milk cheese is developing either due to the increased tourism or to changing consumers' preference. The actual development of such market is handicapped due to either the humble production level of available does or lack of knowledge how of suitable procedures for goat milk processing.

**E**gypt

# Karish

by Kamal Assad Soryal





#### Origin

The cheese Karish had origin around 1000 years ago, in small Egyptian villages. Still today the breeders follow the traditional methods without the use of additives or modern technologies.

# Type of Product

Skimmed cheese.

# Area of production

Karish is produced in the rural areas of Egypt. The Bedouins use goat and camel milk for the production of this cheese that is consumed at local level. On the northwestern coast of the desert, camels and goats use, for their feeding, the natural pastures where around thousand species of annual and some perennial plants are present. The climate is Mediterranean type, cold of winter and hot in the summer; the ground is sandy and calcareous.

# Techniques and Scale of Production

The raw milk of goat or camel is let to rest for three days in a clean and warm place to allow the fermentation through the natural milk microflora.

After the coagulation, the upper layer of cream is removed and the curd spread on a wood dish in a form around 6 cm high; this operation, lasting around 3 days favourites the draining of some whey. When the curd reaches the right consistence, the break-up is made in small cubes of

around 7 cm of size. The salting is made by brine, which is distributed on the surface of the cheese (2-4%). **Karish** fat content varies from 2 to 5%.

For the production of this cheese the Bedouins use another primitive method: raw fermented milk is employed after the process of churning in a knapsack of skin. (CHURNING: process of cream banging, for 40-60 minutes, that keeps away the fat with the consequent production of the butter - in the form of grains of the dimensions of grains of corn). The technology, therefore, doesn't call for the use of additives, just salt, used for salting. Sometimes the Karish is added to coagulated milk, salted with chloride of sodium at 15% (*Mish*) and ripened for some months. This typology is called "old cheese."

Estimate of Production and Demand

then seasoned with tomatoes and oil.

tomatoes and salad of vegetables. In the popular recipe, the cheese is crushed and

No available.

**Trends** 

## Trading of the Product

No available.

#### Use(s) of the Product

Karish can be eaten fresh accompanied by



Area of Production

## Origin

Nifa

### Type of Product

*Nifa* is broiled goat meat, often prepared on a charcoal grill. Young kid meat is used. *Nifa* can be made from any cut of the carcass.

### Area of production

Egypt. The name *Nifa* is used in Cairo. In other places, the meat is prepared in the same way, but it is not called *Nifa*.

Baldy breed



Techniques and Scale of Production

Prepared from marinated, young goat meat, *Nifa* is only available in local restaurants.

#### Trading of the Product

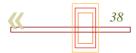
*Nifa* is not marketed as such, nor is goat meat readily available at butchers.

### Use(s) of the Product

*Nifa* is eaten alone, as a main dish or as a shish kebab mixed with lamb's meat.

# Estimate of Production and Demand Trends

No reliable statistics are available.



Egypt

## Rope and Yarn

by Salah Galal, Ihab Shaat



Area of Production





HaT

Techniques and Scale of Production

These products are produced mainly by

desert dwellers with simple equipment.

### Origin

Goat ropes and yarns

### Type of Product

Goat ropes and yarns are made from goat's hair. These products are used to make and set up tents, mainly in desert communities.

#### Trading of the Product

Goat ropes and yarn are usually homemade.

## Use(s) of the Product

These products are used domestically.

## Area of production

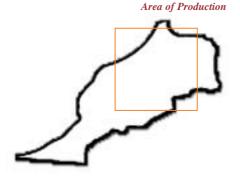
Goat ropes and yarn are produced in desert regions.

# Estimate of Production and Demand Trends

Goats produce an average of 799 tons of hair annually beside skins. Goats' hair is used locally for handicrafts in tents and the skin in leather industry. No reliable statistics are available.



by M. Bonaissa





## Type of Product

This fresh cheese is simply a salty curd that lasts just a few days.

## Origin

J'ben is a traditional Moroccan goat cheese that was consumed centuries before Christ. It is produced in mountainous and desert zones. Out of necessity, families that raised cows and/or goats transformed their excess milk to make cheese.

Djben, Jben and Gibneh are the English renderings of the same Arabic words. Local languages spoken in the Middle East and North Africa differ from region to region. Some authors are hesitant to identify cheeses with a name that may mean something completely different in a neighbouring area.

#### Area of production

Currently, the traditional J'ben is produced in the mountainous zones of Rif and Moyen Atlas in Morocco. In some parts of north-western Morocco, women used to sell their fresh cheeses (J'ben) on dwarf palm leaves (Doum) or dipped in brine and stored in containers of various shapes.

### Techniques and Scale of Production

The most common way of making this cheese is to store the milk in leather goat bags or in terra cotta jars. Spontaneous fermentation occurs at ambient tempera-

tures. The curd obtained is then poured in cloths that are then suspended to facilitate the draining of the whey.

The young cheese, locally called J'ben, can be consumed fresh or in a more aged form, after dry salting or brining and sun-drying.

To accelerate the process of coagulation and to develop a more consistent curd in this artisanal cheese, lukewarm milk is mixed with animal or vegetable rennet that is made with flowers or latex of different plants.

#### Trading of the Product

J'ben is sold locally.

The animal rennet is prepared by drying the stomach lining of a kid by salting and suspending it in the shade. The vegetable rennet is gotten by grinding dried thistle flowers and adding the powder to milk diluted with water. The sap of a fig tree is also used to coagulate small quantities of milk for immediate consumption.

#### Use(s) of the Product

J'ben belongs to the culinary tradition of the zones of production. It is usually eaten with sprouts, alone or seasoned with olive oil and accompanied by green mint tea.

# Estimate of Production and Demand Trends

No available data.



Area of Production

### Origin

(Afrikaans name) Red meat (English), Zulu name: Mbuzi

## Type of Product

Red meat and skins

### Area of production

KwaZulu-Natal, South African Republic.

#### Techniques and Scale of Production

Intensive system with the South African indigenous goat on cultivated pastures.

#### Trading of the Product

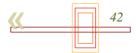
Research products are marketed on the open market (stock sales).

### Use(s) of the Product

Largely traditional use, according to Zulu and Indian customs.

# Estimate of Production and Demand Trends

KwaZulu-Natal imports Rand 30 million (US\$ 4 million) live goats into the province (state) annually from other provinces. KwaZulu-Natal has approximately 567,000 goats within the province, in addition to those that are purchased from outside the province.



# South Africa Cape Mohair

by Gretha M. A. Snyman





Cape Mohair (generic name for South African mohair).

Mohair is the technical name for the fleece produced by the Angora goat and it originates from the Arabian word "Mukhayyar", which means "best fleece".

## Type of Product

Mohair is an animal fibre produced by the Angora goat. It is a very versatile fibre with many outstanding features, including the following:

High tensile strength, durability and light weight, Unique lustre, Elasticity and resilience, Flame retardant, Easily dyed to rich and varied colours, Ability to ab-



sorb moisture better than most other fibres, Good crease resistance and recovery properties, Good abrasion resistance, draping and shaping properties, Resistance to soiling.

The first shearing of a kid produces the much sought-after summer kid mohair. The second clip is known as winter kids, while the third fleece a young Angora goat produces at 18 months of age, is known as young goat mohair. Mohair produced thereafter, is classified as adult mohair. Owing to the relatively high growth rate of mohair (± 2.5 cm per month), Angora goats in South Africa are shorn twice a year.

#### Area of production

In South Africa, Angora goat farming is practiced mainly in the Eastern Cape province within a 300 km radius of Port Elizabeth.

# South Africa Cape Mohair

#### Techniques and Scale of Production

After the mohair have been harvested from the Angora goat, the conversion of mohair fibre into an end product can be grouped into four stages:

Firstly, it is washed and combed Secondly, the fibre is converted into a yarn

Thirdly, it is converted into fabric The fourth and final stage involves converting the fabric into the end product. Quality remains the highest priority throughout the process of mohair production in South Africa. Fixed standards are also in place to ensure that quality consistency of the raw material can be guaranteed throughout the world.

#### Trading of the Product

Since 1994, Cape Mohair is traded in the free market, with no restrictions on any participant in the production or marketing chain.

### Use(s) of the Product

Owing to its versatility, leading designers worldwide recognize mohair as a luxury fibre. The most important application of

mohair is in the fashion world as designer ladies and men's wear and various hand and machine knitwear. Mohair has numerous other applications in the clothing industry, from socks to tracksuits, uniforms and raincoats. Today, mohair has also made its mark in non-fashion products and household textiles, of which mohair blankets and rugs, carpets and curtains are the most popular. Other mohair end products include automobile textiles and seat covers, lamp covers, paint rollers and brushes, saddle blankets, snow and ski gear, soft toys and tapestries. Production houses are able to diversify their products, while capitalizing on the fibres natural, unrivalled beauty, durability, silky texture and numerous other qualities.

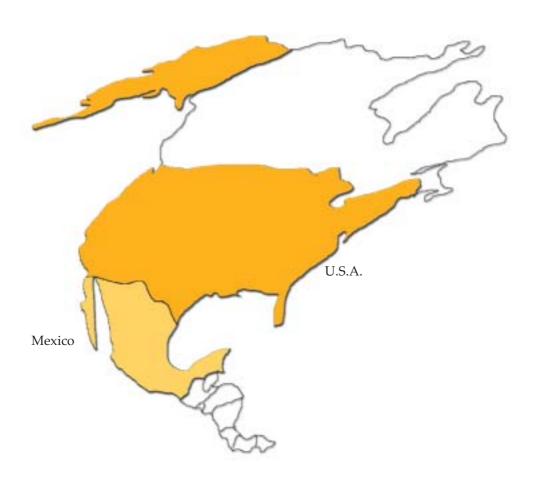
#### Estimate of Production and Demand **Trends**

South Africa produces 64% (4.2 million kg) of the mohair in the world (world production = 6.6 million kg in 2002).Average mohair production First shearing of kids: 0.8 kg Second shearing of kids: 1.4 kg Young goats: 2.4 kg

Adults: 3.6 - 4.0 kg per year







**M**exico

## Chito de cabra

by José Santos Hernandez Zepeda







## Origin

Dried goat meat (English)

## Type of Product

The Chito of goat is dehydrated meat. It has been prepared seasonally during October and November every year for centuries. Chito is packed in containers of 3 cm pieces and in large cases of about 100 kg.

### Area of production

Chito of goat is produced in southern Mexico in the provinces of Puebla, Oaxaca and Guerrero, with a concentration in Tehuacan, Puebla, Huajuapan de Leon and Oaxaca.

### Techniques and Scale of Production

This meat is produced seasonally on a medium-scale. The process takes three weeks during the months of October and November. Between 3,000-5000 animals are slaughtered. The animals used are between 1-2 years old and are of high quality because they've grazed on rich pasture. They are slaughtered, bled and skinned according to the ritual "Danza del Chivo". The muscles of the carcass are cut into 3-4 cm pieces, dehydrated with salt (sodium chloride) in palm bed rolls or "tule".

They are stored in this manner. Chito can be preserved up to two years. The average yield per animal is 3,5 kg or about 8% of body weight.

#### Trading of the Product

There are several types of consumers of Chito, though it is can command a high price. Primarily, it is eaten by inhabitants of the region of production. There is also a market for tourists in those zones. Distribution is sent to large cities like Puebla, Oaxaca and Mexico City (Distrito Federal). The meat is sold in packages and tins.

#### Use(s) of the Product

Chito can be eaten in many ways. It can be served as a main course stew, as a side dish or just by itself.

## Estimate of Production and Demand Trends

Precise production figures are not available. In 2003 (Tehuacan and Puebla), 3,000 goats were slaughtered to produce an average of 10.5 tons. The trend has been towards reduced production, since the number of goats slaughtered has decreased.

Mexico

## Queso fresco

by José Santos Hernandez Zepeda







#### Origin

Fresh cheese (English)

#### Type of Product

This totally white, spherical cheese is made with pure goat milk. It weighs between 200-300 g and measures 10 cm in diameter and 1-3 cm in thickness. The texture is compact and smooth.

## Area of production

This fresh cheese is made in the province of Puebla, Mexico. The production is confined to the centre and eastern parts of the province. The main production zones include Tepeaca, Puebla, Libres, Atlixco and Tecamachalco, among others.

## Techniques and Scale of Production

This cheese is produced on a small-scale, mostly by artisans. Most of its production coincides with the rainy season which creates greater forage availability (June-November). It is, however, possible to have production throughout the year, depending on mating patterns. This artisan cheese is made with freshly-gotten goat milk and calf rennet. The crumbly curd is pressed and drained in a cheesecloth.

## Queso fresco

Afterwards, it is shaped to its usual size and weight and sold.

## Trading of the Product

Organized, defined channels of distribution do not yet exist. Sales occur in the production zone. Excess amounts are sold through travelling markets ("Tianguis") such as Tianguis de Tepeaca, Tianguis de Huixcolotla and others. Queso fresco is distributed to cheese shops in major cities.

#### Use(s) of the Product

This cheese is eaten within 4-5 days of production. It can be eaten in a variety of ways, before, during and after meals.

# Estimate of Production and Demand Trends

Precise data on production amounts is not available.



Mexico

## Queso Fresco de Aro

by Esteban Muñoz Lara







Origin

The origin of the name is thought to be from the word "aro", the wooden ring used to give the rind its typical shape.

Type of Product

Soft goat cheese. The mean weight of a form of Aro cheese is 200-220 g.

### Area of production

It is produced in Mexico, in the zone of Miravalles, more precisely in the valley called Cuenca Libres Oriental, about 80 km north of Puebla. It is situated at an altitude

between 2,200 and 2,500 m. In winter the diet of the animals is primarily dry grasses, because at these latitudes, winter has very little rain. In spring and summer, however, abundant and frequent rains and elevated daytime temperatures create abundant, green pastures.

### Techniques and Scale of Production

It is a cheese exclusively produced with whole goat milk from two milkings, evening and morning. To coagulate in 15-20 minutes, the milk is heated to 60-65°C and mixed with kid's rennet. At setting, the curd is broken up by hand and immedi-

During periods of drought, the animals feed on Agave, the source of a very popular alcoholic beverage called Pulque. ately put in moulds with a wooden ring (aro) and rested on a wooden table. Both of these surfaces give the rind its characteristic striation. To press the cheese, another wooden striped disk is put on top of the cheese with a stone weight that helps to remove the whey. After 15-20 minutes, the cheese is removed from the mould and lightly dusted with sea salt.

chipotli peppers filled with Queso Fresco de Aro.

# Estimate of Production and Demand Trends

No data is available on the amount produced.

#### Trading of the Product

Directly on farm and small markets.

### Use(s) of the Product

This cheese is an integral part of the culinary tradition of the State of Puebla. It is mainly served with frijoles (Mexican beans), and it is also mixed with little pieces of pasta. Its most typical use is as an ingredient of a tortilla sandwich with guacamole (avocado) sauce and chilli pepper. It is also used in the soup (milpa), prepared with fresh wheat, corn, calabasa flowers, pumpkins and mushrooms. A classic dish of the local cuisine is chili

Mexico

by Carlos Peraza de

Ranchero de cabra de Queretaro

Area of Production





15-16 cm in diameter and 4-5 cm high.

## Origin

This goat cheese, considered a fundamental part of local culinary tradition, has been produced for a long time by the farmers of the State of Queretaro, using milk of native goats and from crosses between Nubio and Alpine goats. Although the existence of old rancheros (farms) is mostly a memory, it is thought that the name of this cheese refers to the fact that cheese used to be made on rancheros.

### Type of Product

This is a soft goat cheese with a slightly sour bite when fresh. Its taste is stronger when aged. This disk-shaped cheese measures

#### Area of production

Currently, Ranchero de Cabra de Queretaro is still produced throughout the State of Queretaro, situated in the north-eastern part of Mexico. Located at 1900 m above sea level, the land is very rough and arid. The territory is dotted with vegetation typical of a desert, such as bushes and cacti. The main farming activity is still goat breeding.

### Techniques and Scale of Production

This raw, whole, goat milk cheese is the pride of local gastronomic tradition. Milk from one or two milkings is mixed with kid's paste rennet. The ratio is 10 g rennet to 10 litres of milk. Coagulation occurs within 3-4 hours with milk at 35-36°C. At this

## Ranchero de cabra de Queretaro

point, the curd is vigorously broken down to the size of corn kernels. After a brief rest, the curd settles to the bottom of the vat, is gathered into a wooden form (aro) and hand-pressed to expel the whey. After salting, the cheese is aged for various periods, sometimes up to 6 months. During this curing, the cheese is periodically washed with whey from new cheesemaking processes.

#### Trading of the Product

Directly on farm and small markets.

The preparation of the rennet from scratch takes a long time because it involves the extraction of a 15-day old kid's stomach. The stomach is filled with fresh milk and left to rest in a dust-free place for 5-6 months, during which time it is carefully filled with milk at least three or four more times. The paste is scraped from the stomach lining.

#### Use(s) of the Product

Queso de Queretaro is used as an ingredient in the preparation of typical dishes of the region, such as corn tortillas, with chili peppers, with frijoles and chili, tamales with chili. The latter is a traditional dish prepared for parties and birthdays. It consists of corn husks filled with a type of corn polenta, grated cheese and pig fat.

# Estimate of Production and Demand Trends

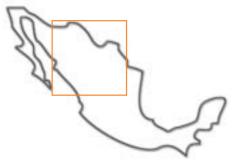
No available data.

Mexico

#### Ranchero molido

by Esteban Muñoz Lara







#### Origin

Ranchero Molido gets the Ranchero part of its name from the ancient tradition of transforming milk on the farm ("ranchero"). Molido refers to a step in the cheesemaking process. It involves grinding the curd with a small stone mill ("molido") into a molida.

## Type of Product

This rindless, white cheese is made with goat, cow or a mix of the two milks. It is rectangular with a compact and dry paste.

#### Area of production

It is produced throughout the north-central area of Mexico, but is concentrated in the states of Jalisco and Zacatecas. This is a mountainous zone with altitudes between 1,500 – 2,000 m, with a cold climate and an annual rainfall between 800-1000 mm during the period between May and September. Animals graze on pasture all year, although during the dry period of October through May, their natural feed is supplemented with corn, straw, beans, chickpeas and peas.

#### Techniques and Scale of Production

Ranchero Molido is produced with goat, cow or a mixture of both milks. Normally, since there are two milkings a day, the milk is not refrigerated, so the rennet is added to fresh, warm milk. If need be, the milk is heated to 34° – 36°C. Coagulation lasts from 30 - 45 minutes. The curd is then cut with a long knife to the size of corn kernels. After a rest of about 15 minutes, most of the whey is drained and the curd is put in cloth sacks (costal) in weights of a maximum of 10 kg. Traditionally, the curd is left to rest in the sacks for 5-6 hours, and then it is crumbled, hand-salted with sea salt and finally ground in a mill. After about 2-3 hours, the sacks are refrigerated and the curd is processed the next day. The process continues with further grinding of the paste to the size of hazelnuts. The curd is put in 0.5 kg forms and pressed for about one hour. At this point, they are refrigerated and ready for sale.

## Trading of the Product

Directly on farm and small markets.

#### Use(s) of the Product

Ranchero Molido is widely used in Mexican cuisine. Mostly, it is eaten as an appetizer, but the classical way to use it is as a filling for stuffed chili peppers. It is also used to make enchiladas, various soups, tacos and beans and cheese. It is always paired with either beer or tequila.

#### Estimate of Production and Demand Trends

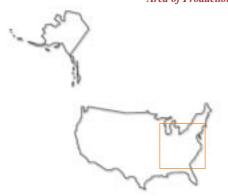
No available data.

**USA** 

## Chèvre logs

by Jeffrey P. Roberts







#### Origin

Chèvre log

#### Type of Product

Fresh cheese. Pure goat milk. Cylindrical shape, approximately 15-20 cm long and 5 cm wide. Generally snow-white, although flavoured types (herbed, peppered, or others) may be colored. Sometimes has exterior coating of herbs, pepper, or other flavourings. Generally compact, soft texture.

## Area of production

Various states of USA: Alabama, California, Colorado, Idaho, Indiana, Maine, Massachusetts, New York, Vermont, Virginia.

## Techniques and Scale of Production

Generally seasonal product from March through October. Although some large-scale production exists, most chèvre logs are made by hand. As a fresh cheese, it must be pasteurised according to federal regulations. Generally using microbial or vegetable rennets. After coagulation, curds are cut into very small pieces and drained. In some cases, flavourings are added at this stage, sometimes using a small electric mixer. Generally the curd is extruded by hand through small extruder. Coatings of herbs or pepper are added after extrusion.

#### Trading of the Product

Many small producers sell directly to consumers at local farmers markets. Some producers sell and distribute their products through large wholesalers. The cheese is available in limited quantities through specialty food retailers and cheese stores.

#### Use(s) of the Product

Product is used in various ways. In the house, consumers use the chèvre logs in

salads, on bread, or incorporate it into cooked dishes. Many restaurants use the product for a variety of menu items from appetizers to desserts.

# Estimate of Production and Demand Trends

Unable to estimate production quantities.

**USA** 

# Chocolate goat

by Jean-Marie Luginbuhl

cheese truffles







## Type of Product

Goat cheese sweets.

## Area of production

Randolph County of North Carolina (USA).

### Techniques and Scale of Production

4 ounces (113 grams) excellent quality bittersweet chocolate chips, 5 ounces (142 grams) fresh spreadable goat cheese (plain fromage), 1/4 teaspoon (1 ml) vanilla extract and unsweetened cocoa powder for coating truffles. Melt the chocolate chips in the top of a double boiler over simmering water, stirring until it is smooth and completely melted. Remove chocolate from heat and allow cooling slightly. Meanwhile lightly whip goat cheese and vanilla and chocolate until fluffy and light. Continue mixing until well combined. Chill mixture, covered, for 1 hour, or until firm. Form heaping teaspoons of the chilled mixture into balls (1 to 11/2 inches -2.5 to 3.8 cm in diameter). If the texture is too crumbly, allow it to warm at room temperature for a few minutes until it is workable. Chill balls and roll in cocoa powder to finish. Truffles should be kept chilled in an airtight container. Makes 15 truffles. All the production is artisanal.

# Chocolate goat cheese truffles



## Trading of the Product

Retail: sold at area Farmers' Markets in the Piedmont Triad Area of North Carolina (USA): Greensboro, High Point, Winston-Salem.

Wholesale: delivered to 20 area restaurants and four stores.

## Use(s) of the Product

With coffee at the end of a meal.

# Estimate of Production and Demand Trends

Approximately 180 kg per year.

USA

## Gray's Chapel

by Jean-Marie Luginbuhl







#### Origin

Grays Chapel is named after a small crossroad community located close by because it best captures the fresh flavours from our farm.

## Type of Product

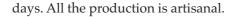
Semi-hard cheese with a tangerine colour, natural washed edible rind. Made in 1.1 kg wheel.

### Area of production

Randolph county of North Carolina (USA).

#### Techniques and Scale of Production

Gray's Chapel is made from raw goat milk heated to 88 F (31° C). Some starters are added with rennet and the curd ripens for 30 minutes. The curd is cut and stirred for 15 minutes without heat and then for 20 minutes while heating to 99 F (37.2° C). Whey is drained off the top of the curd and then 100 F (37.8° C) water is added for washing the curd for 10 minutes. The curd is ladled into moulds and pressed for 60 minutes during which time the cheese is flipped 3 times. Cheese is demoulded the next day, brined in a Kosher salt solution for 8 hours and then placed in a 57 F (13.9° C) "cave" at 85% humidity for 100



## Trading of the Product

Retail: sold at area Farmers' Markets in the Piedmont Triad Area of North Carolina (USA): Greensboro, High Point, Winston-Salem.

Wholesale: delivered to 20 area restaurants and four stores.

## Use(s) of the Product

A versatile cheese for slicing, grating or melting; it can be used in many ways and has a long shelf life.

# Estimate of Production and Demand Trends

Approximately 280 kilograms per year.





## Silk Hope

by Jean-Marie Luginbuhl







A locally produced farmstead cheese named after a nearby rural crossroads community.

### Type of Product

Very dry Mould ripened goat cheese made in 0.20-0.25 kilogram pyramid form.

### Area of production

Chatham county of North Carolina (USA)

## Techniques and Scale of Production

Silk Hope is artisan farmstead goat's milk cheese produced from pasteurised whole goat milk. Curd is set at 38° C with a



mesophilic culture, rennet, and white penicillium for 12 hours, then hand-ladled into pyramid moulds to drain for 12 hours. Fresh cheeses are hand-salted with a mixture of coarse salt and vegetable ash, and aged at 3-4° C for 45-60 days.

#### Trading of the Product

Cheese is sold to consumers directly by the farmstead cheesemakers at the farm and at farmers' markets.

## Use(s) of the Product

Younger cheeses are consumed as part of a cheese course. Older, drier cheeses are shaved as a garnish for soups, salads, and vegetable dishes.

#### Estimate of Production and Demand **Trends**

Total production of 150-200 kg per year.

**U**SA

## **Smokey Mountain Round**

by Jean-Marie Luginbuhl





#### Origin

This cheese won a national American Cheese Society award in 1998.

## Type of Product

Cheese. Creamy white on the inside and toasty brown on the outside. Made into 150 gram wheels.

### Area of production

Randolph county of North Carolina (USA)

#### Techniques and Scale of Production

The Smokey Mountain Round cheese is a fresh goat cheese made from pasteurised goat milk. Starters are added at 76 F ( $24.4^{\circ}$  C), curd is ladled after 16 hours and drained in a bag



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for 30 minutes, then ladled into moulds. The cheese is dried for 24 hours and then demoulded and hand salted. The rounds are dried at 38 F (3.3° C) in a cooler for 10 days, and then smoked over soaked pecan wood logs for approximately 30 minutes. All the production is artisanal.

#### Trading of the Product

Retail: sold at area Farmers' Markets in the Piedmont Triad Area of North Carolina (USA): Greensboro, High Point, Winston-Salem.

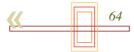
Wholesale: Delivered to 20 area restaurants and four stores.

## Use(s) of the Product

Great as a snack with crackers, grated over hot steamed vegetables or pasta, or alone at the end of a meal.

#### Estimate of Production and Demand Trends

Approximately 200 kilograms per year.





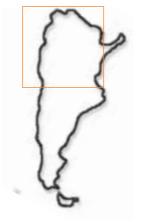


Argentina

## **Cabrito Mamon**

byPatricio Dayenoff







#### Origin

Suckling kid (English)

The kids are fed by natural suckling and are slaughtered before they begin to eat solid feed.

### Type of Product

Meat, 4.5-6 kg of carcass weight. Pink pale colour.

## Area of production

North and central west areas of Argentina. Most important production region: Santiago del Estero and Mendoza.

#### Techniques and Scale of Production

The suckling kid production system is developed in the arid and semiarid region of Argentina, with the use of free grazing natural pasture as unique element for goat feeding. There are two kidding periods (autumn and spring). Birth weight of kids is 2.7 kg, approx. They are fed by natural suckling twice a day, first, before the goat mothers graze (7:00-8:00 a.m.) and second, half an hour after the goats return to the corral (5:00-6:00 p.m.). Kids are slaughtered when live weight approaches 8-10 kg, with 50-55% of carcass output, between 30-

#### **Cabrito Mamon**

45 days old.

#### Trading of the Product

There are two marketing styles. First, direct sales from the farm (local slaughter) and second, using slaughterhouses and cold storage plants, sales to specialised shops in the cities. Price is higher than other meats eaten in Argentina (steer, pork or chicken). The highest demand for suckling kid meat is during December, coinciding with the end of year Christian holidays.

#### Use(s) of the Product

Suckling kids are cooked slowly as grilled meat and eaten roasted, with salads and red wine.

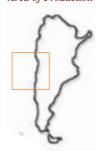
# Estimate of Production and Demand Trends

Approximately 1.2 million suckling kids/year. The demand when the suckling kids have a good proportion of meat-fat is high and normally the offer does not cover the demand.

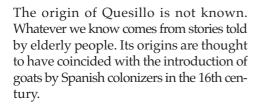




Area of Production



## Origin



### Type of Product

Fresh cheese; diameter of 10-12 cm and height of 8-10 cm.

## Area of production

Quesillo is produced in the semi-arid/dry zone of mid-western Argentina. The area has a temperate climate, with 100-600 mm annual rainfall in the spring and summer. Trees, bushes and perennial grasses characterize the vegetation.



## Techniques and Scale of Production

Quesillo is made exclusively from the milk of Criolla goats. The whey is heated to the boiling point, at which time fresh milk is added with either natural or industrial rennet. Coagulation occurs in about 45 minutes. The curd is cut and pressed manually to form disks with a diameter of 10-12 cm and a height of 8 – 10 cm. The rounds are dried in the open air.

### Trading of the Product

Quesillo is mainly eaten by the family of the producer. Only a small quantity is sold to tourists.

## Use(s) of the Product

It is consumed fresh, with bread and jam, or roasted together with kid's meat.



## Bombo

by Angelika Stemmer



## Origin

Bombo, origin of the name: Spanish. English: drum

## Type of Product

Animal skin and wood. Musical instrument, drum. About 50 cm high, diameter app. 40 cm. Weight app. 3 kg. The skin is put in with the hairy side outside.

### Area of production

Inter-Andean valleys and semi-arid plains of Bolivia, altitudes ranging from 500 to 2800 m a.s.l.

## Techniques and Scale of Production

Small-scale production by owners or craftsman.



SkP

#### Trading of the Product

Via local markets or handicraft and musical instrument markets in cities. Consumers are musicians and others.

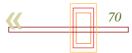
## Use(s) of the Product

Instrument used in Bolivian folk music and other music.

Much sought-after because the skin is resistant and thin at the same time.

# Estimate of Production and Demand Trends

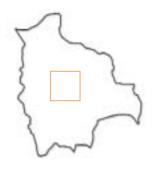
Produced quantities: Not known. Demand constant.





by Angelika Stemmer

Area of Production





#### Origin

Spanish: Carne. English: meat.

## Type of Product

Fresh Meat. Marketed as life animals, whole carcasses or cut into four quarters.

Cabrito = kid or young goat, carcass weight app. 5 to 10 kg.

Capon = castrated male goat, slaughtered at app. 1 to 2 years of age.

Cuttings of 2 to 3 kg, not deboned, from capons or cull goats.

#### Area of production

Inter-Andean valleys and semi-arid plains of Bolivia, altitudes ranging from 500 to 2800 m a.s.l.

## Techniques and Scale of Production

Small-scale production by owners for home consumption or sale of life animals to middlemen.

## Trading of the Product

Consumed in the households of goat owners during religious festivals and oth-

ers or marketed sometimes by the owner at local markets or street stalls.

Usually, middlemen buy at farm gate and sell either directly at local markets and in the cities or resale to women specialized in selling meat at markets. Very few goats are slaughtered in slaughterhouses in the cities.

Sometimes goat meat is consumed in restaurants.

Use(s) of the Product

Culinary as the main course. Cooked as a stew or baked in the oven or grilled over a charcoal fire or prepared as "pampaku": whole carcass without removing the skin over hot stones and charcoal covered with soil.

# Estimate of Production and Demand Trends

From an average flock of 35 goats some 2 cull goats are consumed per year by the owners, 1 capon is marketed, and some 7 surplus kids are produced, some 2 or 3 for

home consumption and the rest for sale. There are no reliable statistics about goat products in Bolivia, but as a rough estimate, the app. 1.4 million goats in the country might produce 80,000 cull goats per year, 40,000 capones and 280,000 kids; that would be about 4,000 tons of meat per year.



## Chullchu

by Angelika Stemmer







## Techniques and Scale of Production

Small-scale production by owners of goats or craftsman.

## Origin

Chullchu, origin of the name: Quechua (There is no Spanish name for it, nor is there an English name known to the authors).

## Type of Product

Musical instrument. Claws of goats are cut from the carcass and cleaned. Some 40 claws are then bundled together and used as a kind of rattle. App. weight 150g.

## Area of production

Inter-Andean valleys and semi-arid plains of Bolivia, altitudes ranging from 500 to 2800 m.a.s.l.

## Trading of the Product

Via local markets, shops, handicraft and musical instrument markets in cities; consumers are musicians and others.

## Use(s) of the Product

Instrument used in Bolivian folk music.

# Estimate of Production and Demand Trends

Produced quantities: Not known. Demand constant.



Area of Production



#### Origin

English: manure



Manure. Accumulated in night enclosures with very little or no vegetable matter, without straw or any other bedding.

## Area of production

Inter-Andean valleys and semi-arid plains of Bolivia, altitudes ranging from 500 to 2800 m a.s.l.

## Techniques and Scale of Production

By night enclosure. Used by the owner of the flock to fertilize mainly potato fields.



Trading of the Product

Usually all the manure produced is applied to the fields of the goat owner. A small quantity is sold or bartered locally.

#### Use(s) of the Product

Manure. Used as organic fertilizer mainly in the most important crop, the potato, but also for maize and vegetables.

# Estimate of Production and Demand Trends

Produced quantities: 300 to 600 g dry matter per goat per day, i.e. 420 to 840 tons/day produced by 1.4 million goats; of this, only about half is collected in the night enclosures (210 to 420 t/day). On a yearly basis, 76,650 to 153,300 tons are available as fertilizer. It seems that demand is greater than production.



Area of Production



#### Origin

Quesillo. Origin of the name: Spanish. English: soft cheese.

## Type of Product

Soft cheese. Formed by hand, about 2 cm high, diameter app. 15 to 20 cm, weight app. 300 to 400 g, made from app. one litre of pure goat's milk.

## Area of production

Inter-Andean valleys and semi-arid plains of Bolivia, altitudes ranging from 300 to 2800 m a.s.l.

#### Techniques and Scale of Production

Small-scale production by women. Only produced during the rainy season when forage is abundant and milk production exceeds needs of the kids; that is to say Quesillo is usually produced from December to March, for a period of up to 4 months.

Rennet from abomasums of kids is used.

## Trading of the Product

Consumed in the households of goat owners or marketed at local markets, at street sides, seldom at markets in the cities.

#### Use(s) of the Product

Culinary. For breakfast with bread and coffee, as a side dish in main course, as in-between-meal with cooked or fried maize.

# Estimate of Production and Demand Trends

From an average flock of 35 goats some 180 quesillos are produced during the rainy season, i.e. per year. There are no reliable statistics about goat products in Bolivia, but the app. 1.4 million goats in the country might (as a rough estimate) produce 7.2 million of quesillos per year, or 2,520 tons.

Carne de cabrito

by Théa M. Machado

enlatada





## Techniques and Scale of Production

Industrial production.

## Origin

Carne de cabrito enlatada (Portuguese) Canned goat meat (English) - since 2001.

## Type of Product

Gastronomic specialty based on ground and precooked meat in tomato sauce, and then canned.

## Area of production

In the state of Paraíba (Brazil).

#### Trading of the Product

Consumed mainly by the northeastern population and those who like exotic food. Sold in grocery stores, markets and supermarkets.

## Use(s) of the Product

Served with seasoned manioc flour, rice and salad.

# Estimate of Production and Demand Trends

No available data.

## Doce de leite pastoso

by Théa M. Machado







MiP

#### Origin

Doce de leite pastoso (Portuguese) It started to be produced when dairy goat breeding began in Brazil. Its production is smaller than the production of goat cheese

## Techniques and Scale of Production

Homemade and by some small industries specialized in goat's milk.

## Trading of the Product

Shops specialized in goat's products and home delivered.

## Type of Product

Creamy sweetened milk – similar to from sweetened creamy cow's milk. Sweet, 90g and 250g containers.

## Use(s) of the Product

Eaten as dessert usually with Minas Frescal cheese.

## Area of production

Nationwide, but mainly in the southeast region.

## Estimate of Production and Demand **Trends**



by Théa M. Machado





## Techniques and Scale of Production

Industrial production.

## Origin

Iogurte (Portuguese) Yoghurt (English) – marketed since 1995

## Type of Product

Natural or flavoured yoghurt. In 130g, 140g, 200g, 500g, 750g and 1000g bottles or tubs.

## Area of production

In several states of Brazil.

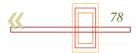
#### Trading of the Product

Distributed to grocery stores, markets, supermarkets, cafés, and in shops specialized in goat's products. It is also delivered to homes.

## Use(s) of the Product

Desserts, snacks or in recipes as a substitute for cow's milk yoghurt.

# Estimate of Production and Demand Trends





Area of Production





Leite pasteurizado e congelado (Portuguese)

Pasteurised frozen milk (English) - The first solution to preserve milk, which can be stored. The process was approved in some states in the 80s, and by federal legislation in 2000. There are several brands on the market, but it is often overshadowed by UHT or powdered milk.

Leite integral UHT (Portuguese)

Whole UHT milk (English) - marketed since 1998.

Leite light UHT (Portuguese)

Skim UHT milk (English) - marketed since 2004.

Leite integral em pó (Portuguese) Powdered whole milk (English) - this industry started in Brazil in 1994.



Type of Product

Half-litre or 1-litre plastic bags or tubs Milk enriched with vitamins and minerals, 1-litre Tetra Pak.

Skim milk enriched with acid folic; UHT; 1-litre Tetra Pack.

Milk enriched with acid folic and vitamins; 400g can, 200g and 250g boxes.

## Area of production

Throughout Brazil. Rio de Janeiro State – (RJ). Rio de Janeiro (RJ), Minas Gerais (MG) and Ceará (CE) states.

#### Leite

#### Techniques and Scale of Production

Small-scale by small firms. Industrial production. Industrial production.

#### Trading of the Product

The breeders process the product in small private industries, and also form cooperatives, which distribute and market the products. It is sold at bakeries, bars, cafés and supermarkets. It is also available at dairy shops specialized in goat products. Distributed by the producer to grocery stores, markets, supermarkets and drugstores.

Distributed to grocery stores, markets, supermarkets and drugstores.

## Use(s) of the Product

Goat's milk is widely consumed as a food supplement by children who suffer from dietary disorders or as a rich source of nutrients for newborn babies.

Goat's milk is widely consumed as a food supplement by children who suffer from dietary disorders or as a rich source of nutrients for newborn babies.



For breakfast or as a snack for those on special diets.

Consumed by those on special diets, mainly children.

# Estimate of Production and Demand Trends



## Licor de leite de cabra

by Théa M. Machado

Area of Production





Origin

Licor de leite de cabra (Portuguese) Goat's milk liqueur (English)

Type of Product

Liqueur

Area of production

In several states (Brazil).

Techniques and Scale of Production

Small-scale production by craftsmen.

Trading of the Product

Shipped from the state of Paraíba.

Use(s) of the Product

Digestive.

Estimate of Production and Demand Trends

No available data.

## Leite sabor chocolate

by Théa M. Machado



# Coprier

MiM

## Techniques and Scale of Production

Industrial production.

## Origin

Leite sabor chocolate (Portuguese) Chocolate-flavoured milk (English) – produced since 1999. Its slogan is: 'Our customers' mothers asked for it, and we made it'. 'Product developed from suggestions made to our Customer Services department'.

## Type of Product

Whole chocolate-flavoured milk enriched with vitamins and acid folic; UHT in 200 ml Tetra Pack.

## Area of production

Rio de Janeiro State – (RJ).

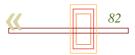
## Trading of the Product

Distributed by the manufacturers to grocery stores, markets, supermarkets and drugstores.

## Use(s) of the Product

Food supplement for children who suffer from dietary disorders. Manufacturers have a wide range of products for this type of consumer.

# Estimate of Production and Demand Trends



#### Productos de beleza

by Théa M. Machado





MiP

## Origin

Beauty products (English) – It started with soap in 1994, and today there is a line of products of different brands.

### Type of Product

Beauty products: 20g, 80g, 95g, 110g soap; hair moisturizer in 500g and 1000g bottles; shampoo in 250 ml, 320 ml, 350 ml, 400 ml bottles.

## Area of production

Southeast region: in São Paulo (SP), Espírito Santo (ES), Rio de Janeiro (RJ), Minas Gerais (MG).

## Techniques and Scale of Production

Industrial production.

#### Trading of the Product

Distributed to grocery stores, markets, supermarkets and drugstores. It's also via home delivery.

## Use(s) of the Product

Hygiene and beauty.

# Estimate of Production and Demand Trends



## Queijo fundido

by Théa M. Machado





#### Origin

Queijo fundido (Portuguese) Processed cheese (English) – adapted from the recipe for processed cow's cheese.

## Type of Product

Cheese: 150g containers.

## Area of production

In Rio de Janeiro State – (RJ).

## Techniques and Scale of Production

Industrial production.

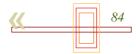
### Trading of the Product

Sold in shops where it is produced, and in the region, by distributors.

## Use(s) of the Product

Eaten on slices of bread or toast, accompanied by beer and wine; as a snack.

# Estimate of Production and Demand Trends



## Queijo Minas Frescal

by Théa M. Machado





#### Origin

Fresh soft cheese (English) – Adapted from cow's milk soft cheese that bears the same name. Cow's Frescal cheese is well known in the state of Minas Gerais where cattle breeding has been carried out since the eighteenth century. Goat's Frescal cheese has been marketed professionally in Brazil since the late 70s when dairy goat breeding started.

## Type of Product

Fresh soft curd cheese, 150g and 250g containers.

## Area of production

Nationwide, but mainly where milk production is large and cheese consumption is high, as in the south central region.

# Techniques and Scale of Production

Manufactured by several cheese industries specialized in goat's cheese.



#### Trading of the Product

Breeders produced cheese in small industries, also form cooperatives to distribute and market the products. Some industries buy milk from suppliers, and are also in charge of distributing the products. They are sold at delicatessens, supermarkets, restaurants, farm hotels and dairy shops specialized in goat products. It is also home delivered.

## Use(s) of the Product

Consumed mainly by those who do not like cured and matured cheeses. Furthermore by those on special diets or by those with a higher income level because goat's Frescal cheese is more expensive than cow's. Eaten as appetizers, snacks or to accompany desserts.

#### Estimate of Production and Demand Trends

## Queijo temperado

by Théa M. Machado



#### Origin

Seasoned cheese (English) Marketed professionally in Brazil since the late 70s when dairy goat breeding started.

## Type of Product

Creamy curd cheese seasoned with herbs, 70g, 80g and 90g containers.

## Area of production

Nationwide, but mainly where milk production is large and cheese consumption, high, as in the South Centre region.



Techniques and Scale of Production

Produced by several cheese industries specialised in goat's milk.

#### Trading of the Product

Consumed by those who like an intermediate cheese between the fresh and matured ones. Breeders produced cheese in small industries, also form cooperatives to distribute and market the products. Some industries buy milk from suppliers, and are also in charge of distributing the products. They are sold at delicatessens, supermarkets, restaurants, farm hotels and dairy shops specialized in goat products. It is also home delivered.

#### Use(s) of the Product

Eaten as appetizer on slices of bread or toast to accompany beer or wine.

#### Estimate of Production and Demand Trends



Peru

# Cabrito o Cabrito

by José Sarria Bardales, Jorge Vargas Morán de leche



#### Origin

The name derives from the young age of the animal (*cabrito* means kid in Spanish language).

#### Type of Product

Breeding carcass, nursling or recently weaned, without appendixes except tail; without viscera except kidneys and without skin; approximate weigh 3 to 4 kg.

## Area of production

In most of the agricultural valleys of Peru. Especially in the Peruvian north (departments of Lambayeque, Piura and Tumbes); in the periphery of the valleys along the Pacific coast, where the so called "cabreros rastrojeros" (goatherds using stubble) settle around the main cities (Markets).



#### Techniques and Scale of Production

Sale of primarily males, and very frequently on their feet (6 kg of live weight).

#### Trading of the Product

It is sold through a distributor.

#### Use(s) of the Product

Mostly cooked in seasoned dishes such as "Seco de cabrito" (*dry of kid*) (seasoned with coriander) accompanied with cooked beans and rice. Another one is "Cabrito with zapallo": the *zapallo* is the grated pumpkin, with rice and green *tamal* (cooked, seasoned milled yellow corn, wrapped in banana or in cob leaves).

#### Estimate of Production and Demand Trends

No precise figures are available. The seasonal reproduction, very marked by region, concentrates consumptions in certain periods.



Jorge Vargas Morán

Area of Production





The origin is derived from the term "nata". It refers to the cream of the fresh milk.

## Type of Product

Sweet dessert of concentrated milk, dark brown colour (for the *chancaca* - concentrate of raw sugar, honey and other ingredients), packed in circular pots of short height (wooden or plastic made), with an average capacity of 200 - 250 g.

## Area of production

Peru, especially in the north (departments of Lambayeque, Piura and Tumbes); in the periphery of valleys along the Pacific coast, where the called "goatherds rastrojeros" settle, around the main cities (Markets).



#### Techniques and Scale of Production

Natilla is made by concentration through heating a milk solution, sugar and *chancaca* (concentrated - by heat - cane juice) until partially evaporated and cooled to ambient temperature (concentration at 65 - 70° Brux). Production also exists at medium-scale using cow milk.

#### Trading of the Product

It is sold through a distributor.

#### Use(s) of the Product

As dessert, alone or combined with bakery products (filled biscuits).

#### Estimate of Production and Demand Trends

No precise figures are available.



Peru

## Quesillo or Requesón

by José Sarria Bardales, Jorge Vargas Morán







#### Origin

Quesillo or Curd. The name derives from the production of a cheese with high moisture.

#### Type of Product

This cheese is obtained by soft enzymatic clotting of fresh milk, without salting, modelled in a banana shape and weighing 450-500g.

#### Area of production

It is produced in the agricultural valleys of northern Peru, especially in the departments of Lambayeque, Piura and Tumbes, as well as on the outskirts of the valleys along the Pacific coast. This is where the goatherds or "rastrojeros" settle and sell their cheese near the main cities.

#### Techniques and Scale of Production

This raw milk cheese is produced on a small-scale, using the enzymes of a kid's stomach. It is unpressed. After a short curing period of 12-24 hours, the cheese is ready for sale.

#### Trading of the Product

It is sold through a distributor.

## Use(s) of the Product

It is eaten at breakfast or as a dessert with cane or bee honey.

#### Estimate of Production and Demand Trends

No precise figures are available, although the demand seems to be increasing. Serious problems associated with malt fever exist.

Peru

## Queso fresco

by José Sarria Bardales, Jorge Vargas Morán







Fresh cheese (English). This name refers to a fresh, high moisture cheese.

## Type of Product

This cheese is obtained by the enzymatic clotting of fresh milk. It is softer and drier than Quesillo, owing to a stronger pressing. It is usually salted.

#### Area of production

It is produced in most of the agricultural valleys of Peru, especially in the northern departments of Lambayeque, Piura and Tumbes, as well as on the outskirts of the valleys of the Pacific coast, where goatherds called "rastrojeros" sell their cheeses around the main cities.



- - -

Techniques and Scale of Production

This raw milk cheese is produced on a small-scale. It is made with kid's rennet. Queso fresco is pressed and salted. It matures 12 – 24 hours before sale.

#### Trading of the Product

Producers sell through distributors and directly to restaurants.

#### Use(s) of the Product

It is eaten mainly at breakfast, accompanied by wheat or barley bread. It is an ingredient in lunch dishes, served with grains and in soups. As an appetizer, it accompanies cooked corn, potatoes and/or eggs.

#### Estimate of Production and Demand Trends

Although no exact figures are available, demand seems to be growing. Serious problems associated with fever malt exist.



## Arte en piel

by Liseth A. Rojas, Fidel Pariacote





#### Origin

Work of Art on coloured Goat Skin.

#### Type of Product

Landscape obtained on coloured goat skin. The art consists on simulating a landscape combining the wide varieties of tonalities of goat skin colours, without modifying them. Varied dimensions. The standard size is  $40 \times 50 \, \text{cm}$ , with approximate weight of  $200 \, \text{g}$ .

#### Area of production

Paraguaná Peninsula in Falcon State, Venezuela.

## Techniques and Scale of Production

The diversity of tonalities of goat skin colours that is a characteristic of the goat population of this geographical area, due to



the frequently crossing with other breeds, is the primary source of artist inspiration. In this art mostly the arid landscape is portrayed. The skins are selected by their colour from the local slaughterhouse and pseudo weather-beaten. The landscape is elaborated with the technique of the collage. The parts with the combination of the different tonalities of colours that make up the landscape are mounted to a wooden base or another material. The landscape is created from the combination of colours in the skin.

## Trading of the Product

The product is sold directly by the artist, or through tourist outlets. The production is completely handmade.

## Use(s) of the Product

Decorative.

#### Estimate of Production and Demand Trends

No available data.

Venezuela

## Artesania en piel

by Liseth A. Rojas, Fidel Pariacote



## Type of Product

Craftsmanship in skin.

#### Area of production

Paraguaná Peninsula in Falcon State, Venezuela.

## Techniques and Scale of Production

Skin Product, such as goatskin beer holder, 20 x 5 cm; Key chains; Thermal mug covered with goatskin, 15 x 3 cm.

## Trading of the Product

For bottle and mug: Pseudo weatherbeaten skin wrapped around a thermic in-



sulating material, with a porous base, and moulded to the container with a rim of braided leather. A label in leather is added for advertising purposes.

The key chains shows two faces, one with hair and the another one without hair, padded with synthetic material, and joint together with leather braids; a metallic chain and a rind complete the article.

The product is sold directly from artist on order.

## Use(s) of the Product

The product is sold at local markets, usually as a form of advertising.

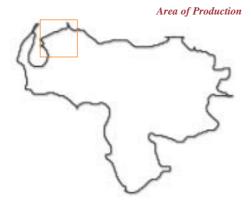
# Estimate of Production and Demand Trends

Various means of commercial advertising.



## Carne salada

by Linnet Sánchez, Fidel Pariacote





Traditional Salty Goat Meat (preserved with salt). It is presented in cut of 1 kg.

## Area of production

The states of Lara and Falcon, Venezuela.

## Techniques and Scale of Production

The preservation of meat with salt is an old technique, due to the absence of refrigerators. This food is part of the tradition of consuming salted meat. The meat is butchered, placed in brine by 24 hours, dried, seasoned with oregano, refrigerated, and marketed. The presentation of the



product is uniform with adequate quality control.

#### Trading of the Product

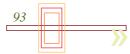
The product is sold directly at the local market.

## Use(s) of the Product

The consumption of goat meat is common in the region, particularly in rural areas. It is used to prepare typical meals.

#### Estimate of Production and Demand Trends

It keeps up with the demand.





by Linnet Sánchez, Fidel Pariacote



The term "Celse" is not a Spanish word. It comes probably from the Netherlands through Caribbean islands, according to information given to us by Dr. Hernández Prado. The origin refers to making the most efficient use of edible parts of slaughter animals.

## Type of Product

Ribbons of meat from the head and paw cartilages, seasoned with paprika, onion, and pepper and preserved in vinegar. Presented in bottles of 0.5 - 3 kg. The product has a uniform presentation and maintains adequate quality control.

## Area of production

The states of Lara and Falcon, Venezuela.



## Techniques and Scale of Production

The head and the paws are parboiled. The meat and cartilage are cut in fine ribbons and placed in vinaigrette with slices of paprika and onion. Some pepper is added and bottling follows.

## Trading of the Product

The product is sold at the local market.

## Use(s) of the Product

Cocktail canapé, light meal.

# Estimate of Production and Demand Trends

It keeps up with the demand.





## Dulces de leite

by Leyberth E. Ruiz and PROSALAFA



## Origin

#### Sweet of Goat Milk

Due to a non-existent dairy industry, most goat farmers transform their milk into a variety of products. Goat sweets are the most abundant and well-known goat milk product in the region.

## Type of Product

Traditional sweet of goat milk. It is presented in wide variety of presentation. Often in boxes of 300 g with 12 units of sweet in clover or half moon form.

## Area of production

States of Falcon and Lara, Venezuela.



## Techniques and Scale of Production

The milk is boiled with sugar, being stirring constantly until it is ready. The mass sets and is stretched, moulded, particular flavours such as cinnamon, lemon, mandarin, vanilla, pineapple, or any others are added, and then packed. The quality varies among producers. Some may even be mixed with cow milk.

## Trading of the Product

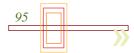
The product can be found at farmer, regional or national stores scope.

## Use(s) of the Product

Candy and desserts.

# Estimate of Production and Demand Trends

No data available.









## Origin

Goat Manure

## Type of Product

Compost of goat manure.

## Area of production

Falcón and Lara states, Venezuela.

## Techniques and Scale of Production

Once the corral is cleaned, the manure is aired and purified. The corrals are cleaned approximately once a month.

## Trading of the Product

The product is sold to a middleman who carries it to farmers.

## Use(s) of the Product

As a Good fertilizer for farmers of vegetables and flowers, particularly of the Andes Region.

# Estimate of Production and Demand Trends

No data available.



## Jamón de cabra

by Linnet Sánchez, Fidel Pariacote





## Origin

Goat Meat "ham" This product was developed to offer diverse goat meat. The product has been on market for 10 years.

## Type of Product

Cooked goat meat processed like ham, without preservatives or dyes. It comes in 4 kg moulds. The product is well presented with adequate quality control.

## Area of production

Falcon State, Venezuela.

## Techniques and Scale of Production

The meat is acquired at the local market, butchered, weighed, cooked, seasoned and pressed. The entire process is by hand.

## Trading of the Product

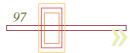
The product is sold directly at the local market.

## Use(s) of the Product

Light meal.

# Estimate of Production and Demand Trends

It has a growing demand.





by Xiomara Pimentel, Fidel Pariacote







## Type of Product

Good quality pasteurised goat milk.

## Area of production

States of Falcon and Lara, Venezuela.

## Techniques and Scale of Production

The milk is pasteurised by the producing farmer. The production is small-scale.

#### Trading of the Product

The product is sold directly at the local market. High demand out of the state.

## Use(s) of the Product

Directly consumed by medical prescription, in particular by infants with allergic problems.

#### Estimate of Production and Demand Trends

High demand, in particular for medical prescriptions to infant nutrition.







## Type of Product

Sausage of goat meat. Processed goat meat preserved in natural gut. Sausages 17 cm long. The Longaniza from goat meat are common and its preparations differ by region. The product is well presented with adequate quality control.

## Area of production

Falcon State, Venezuela. Goat breeding is traditional in the region and it is an important source of meat proteins for the population.

## Techniques and Scale of Production

The meat is acquired at the local market,

butchered, milled thick, seasoned, kneaded, milled again, and stuffed in natural gut. The Longaniza is dried outdoors for three days.

#### Trading of the Product

The product is directly sold at the local market.

## Use(s) of the Product

Usually as part of a grilled course; also as a light meal.

# Estimate of Production and Demand Trends

It has an ascending demand.



## Pergamino

by Liseth A. Rojas



## Type of Product

Special Calligraphic parchment.



Paraguaná Peninsula in Falcon State, Venezuela.

## Techniques and Scale of Production

The skin, once pseudo weather-beaten, is shaved of skin.

## Trading of the Product

The product is sold directly from artist on order.

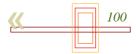


## Use(s) of the Product

Awards, university titles, etc.

## Estimate of Production and Demand **Trends**

No available data.





## Queso blanco

by Xiomara Pimentel and PROSALAFA





#### Origin

White cheese (English)

## Type of Product

Typical white cheese from raw milk.

#### Area of production

Falcon and Lara states, Venezuela. More than 80% of the total goat population is concentrated in these states. Most production systems are extensive, where the goat is bred basically for meat. Milking herds are more frequently found at the base of mountains and in the mountainous areas, due to better pastures.

## Techniques and Scale of Production

Hand made cheese from raw goat milk. The production scale is low and seasonal. Goat breeding is a common small-scale activity in the region. There are no industrial operations.





The milk is transformed by hand into a wide variety of products. Little dairies began making cheese more than 40 years ago with techniques similar to those used to make bovine cheese. For the past 10 years they've marketed aged cheeses with thick rinds. They have improved the presentation and quality of traditional white cheese. They instituted strict controls of the process, from milking of the animals to the cheese making. The seasonal production is on a small scale.

#### Trading of the Product

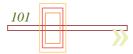
The cheese is sold directly at local markets and to the retailers by the producer. In some case, a middleman sells to retailers. The network is regional in scope.

## Use(s) of the Product

A complement at meals, canapé cocktails, usually as grated cheese, and consumed as it is.

## Estimate of Production and Demand Trends

The demand is undeveloped.





by Linnet Sánchez







Goat Meat Sausage

## Type of Product

Processed goat meat preserved in natural gut without preservatives or dyes. The size of the sausages varies from 3 to 10 cm. It represents a diverse way of goat meat.

## Area of production

Falcon state, Venezuela.



Techniques and Scale of Production

The meat is acquired at the local market, butchered, milled, seasoned and kneaded, milled again and stuffed in natural gut. Some sausages are smoked.

## Trading of the Product

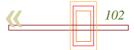
Directly at the local market.

## Use(s) of the Product

Usually, this is either an appetizer or part of a grilled meat course.

# Estimate of Production and Demand Trends

No available data.





## Suero salado de leche

by PROSALAFA





## Type of Product

Goat milk whey.

## Area of production

States of Falcon and Lara, Venezuela.

## Techniques and Scale of Production

The milk is filtered and heated to 60° C. Once it cools down, the cream is extracted, salt is added and then liquefied.

## Trading of the Product

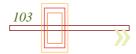
The product is sold directly at the local market.

## Use(s) of the Product

Directly consumed.

# Estimate of Production and Demand Trends

High demand out of the state.









## Type of Product

Natural solid yoghurt from goat milk.

## Area of production

States of Lara, Venezuela.

## Techniques and Scale of Production

Natural yoghurt from goat milk to which some sweet fruits are added. Production is small-scale.

## Trading of the Product

The product is sold directly at the local market.

## Use(s) of the Product

Directly consumed.

# Estimate of Production and Demand Trends

High demand, and add value to milk.



China

## Cashmere fibre

by Peng Bin







Area of production



#### Origin

#### Cashmere fibre

Inner Mongolia Cashmere Goat breed originated in the western part of Inner Mongolia, where the altitude is over 1,500m, winter lasts long with the extreme temperature of –33° C. Average temperature is 3.1°C. There has been a long history of goat raising in this area for meat, milk, wool and cashmere. People living here pay special attention to the selection of the colour of wool, quality of cashmere, body weight, etc, in the farming activity. Inner Mongolia Cashmere Goats are actually a breed of Mongolia Goat after improvement and selection under desert or semi-desert climate conditions.

#### Origin

# Techniques and Scale of Production

Production techniques – no available.

Inner Mongolia province in China (IM).

#### Trading of the Product

Trade and consumption networks – no available.

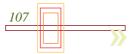
## Use(s) of the Product

Mainly exported. Recently there was an increase in export of processed fibre, as dresses.

## Type of Product

Down fibre. Cashmere *fibre* is silky, stretchy, with a high yield, ranging from 50% to 70%.

# Estimate of Production and Demand Trends





## Guard hair

by Peng Bin





#### Origin

The Yangtze Delta White (YDW) originated near the East China Sea in the Yangtze Delta region's subtropical climate. This humid area has a developed agriculture, rich in fodders and grasses. Farmers in this region have improved the value of the land over the years. Through carefully-selected mating and improved socio-economic conditions, the YDW goat's hair, meat and hid have developed qualitatively.

## Type of Product

Wool/hair on the nape is the best. It is long, straight, coarse and stretchy. Due to the wool's special values, the breed protection zone has been set and selected mating standard has been instituted, in order to ensure the quality of the hair.

## Area of production

China, provinces of Jiangshu (JS), Shanghai (SH) and Zhejiang (ZJ).



### Techniques and Scale of Production

The hair is from uncastrated bucks less than one year old and weighing about 14 kg. After slaughter, the goat is put in hot water at 70°C for a few minutes to enable removal of the wool and scarfskin. The wool with scarfskin is processed into brushes.

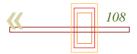
## Trading of the Product

The hair has been popular in Japan and Southeast Asia.

## Use(s) of the Product

The YDW goat's hair is used for Chinese brush pens, paintbrushes and precision brushes.

# Estimate of Production and Demand Trends

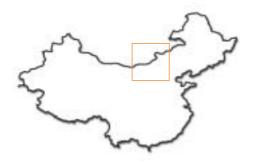


China

# Jining Qing Fur

by Peng Bin







#### Origin

In the early 20th century, in southwestern Shandong Province, China, there were three types of small goats. One had green, one had white, and the other had black fur. At that time, all three were exported from China. The black one was the most popular on the international market. In 1927, foreign merchants discovered that green fur was composed of black and white fibres and was difficult to dye. The white and black furs were easily dyed. In 1940, green fur accounted for 94% of exported furs. After 1950, the Jining goat, which produced black and white fur, started to disappear.

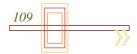
# Type of Product

# JiNingQingGoat

Three types of small goats: white, black and green. The green fur is lustrous, bright, soft and with a mixed colouring. The quality of Jining Qing goat fur depends on the weight of kid, luster, hardness of hide, etc. Usually in summer and fall in China, abundance of feed resources makes pregnant goats healthy and leave enough nutrients to the fetus, so that the kids born in nowadays have high-quality furs.

# Area of production

China, Shandong Province (SD)



#### Techniques and Scale of Production

Before 1949, most green furs came from goat foetuses a couple of days prior to their birth. However, this method affected the quantity and quality of the goat. Since the early 1950s, the method changed and used the kid within three days of its birth. Selective mating has resulted in higher quality goats. As a result, the quality of the Jining Qing goat's green fur has improved.

### Trading of the Product

Used in nationwide Chine and also it is exported.

#### Use(s) of the Product

The Jining Qing Fur is mainly used for decoration of coat, collar, cap, mattress, etc.

# Estimate of Production and Demand Trends

No available.

Korea

# **Goat extract**

by Hai-Bun Song







duction is mostly done by a small-scale pri-

#### Origin

Heukyumso Jeung-tang (Korean)

#### Type of Product

Medication, liquid form, in polyethylene film bag, 100ml.

# Area of production

South Korea.

#### Techniques and Scale of Production

Goat carcass is used; several kinds of medicinal herbs are added and boiled in an extractor under 110° C for 12 hours, pressured through filter and fat is skimmed after cooling. The extracts are packed in polyethylene film bags and sterilized under 100° C for over 30 minutes. The pro-

### Trading of the Product

vate company.

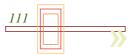
It is sold directly by the private company which manufactured it or in health food stores.

### Use(s) of the Product

The product is believed to prevent geriatric diseases, osteoporosis and retarding senility. It is also considered to be a treatment for both pregnant and post-partum women, recently-released patients and old, feeble men. It is thought to assist male potency.

#### Estimate of Production and Demand **Trends**

Approximately 500,000 goat heads are consumed every year in Korea (100 polyethylene bags/head).







# Origin

Darfyieh cheese has been for years according to traditional techniques. Darfyieh seems to be derived from *darrif*, which refers to the goat skin that was used in the past as a container to age cheese to be consumed in the following winter.

# Type of Product

This cheese is characterised by an exceptional organoleptic quality. Its production requires breeders to have animals from a flock of *baladi* goats.



### Area of production

Currently, Darfyieh is still produced in various areas in northern Lebann, such as Ehden, Bcharré, Inata, etc. Its zone of production is a mountainous, Mediterranean area from 1.100 to 1.800 m above sea level characterised by dry summers (more than 6 months without rain) and cold winters. The vegetation is typical of Mediterranean countries, with sources of available fresh water.

# Techniques and Scale of Production

Raw milk from the local *baladi* breed of goat is used. The milk from one or two milkings and from one or more flocks is first filtered to eliminate impurities. Depending on the season, the milk acidifies from 24-48 hours to activate natural starter cultures. After this, rennet is added and coagulation

occurs at 30-35°C. The breaking of the curd follows the coagulation. The curd is manually put into baskets and salted. The residual whey is heated to extract a solid curd, *Arichi*. Layers of cheese and *Arichi* are placed alternatively in the pouch of goat skin or *darrif*. *The cheese* is then washed and salted on its exterior and sealed inside the goat skin. Salt is sprinkled inside and outside the pouch and moved to a damp, natural cave for one to six months. During this time, the position of the goat skin pouch is turned in various positions.

# Trading of the Product

Darfyieh is much appreciated by consumers in northern Lebanon. It is sold directly by the producers and is rarely found in cities. To develop this product, the René Moawad Foundation has organized research to establish the precise techniques of the producers and to insure safe methods of production in northern Lebanon.

#### Use(s) of the Product

It is consumed on special occasions as a delicacy.

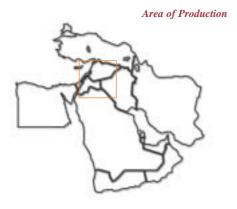
#### Estimate of Production and Demand Trends

No available data.

#### Middle-East

# **Djamid** or Jameed

by Paulina Couenberg, Jean Claude Lambert





#### Origin

This is a hard, cooked, pressed, low-moisture, unripened, spherically-shaped cheese with a rind encrusted with salt crystals.

# Type of Product

This cheese is commonly produced in Jordan and Syria.

# Area of production

This product is manually-processed with traditional techniques principally by sheep herders and to a lesser extent by goat herders. Around large cities, this cheese is produced in small-scale dairies. The cheesemaking process is not standardized, changing from producer to producer. Milk is curdled through natural acidification within 24 hours, at 20-30°C and churned for the production of butter. The remaining liquid, after the extraction of the butter, with a 1-2% fat content, is used to make Djamid. This liquid is heated to 40-60°C and curdled without a starter within 10-30 minutes. The curd is cooked and mixed, then transferred to warmed cheesecloth and pressed. The mass is formed into a spherical shape. A dry salting follows. Natural colours (saffron) and officinal herbs (curcuma, halba, handagough) are mixed with the curd. Balls of cheese are dried in the sun in the

# **Djamid or Jameed**

open air. The cheese is stored at ambient temperatures (10-40°C in very dry air at a relative humidity from 30-80°C) from six to twelve months.

#### Techniques and Scale of Production

Dairy plants sell directly to food shops and markets. Shepherds sell to retailers who then sell in urban areas.

#### Trading of the Product

Dairy plants sell directly to food shops and markets. Shepherds sell to retailers who then sell in urban areas.

# Use(s) of the Product

This food product is reconstituted by soaking in water as a key ingredient to prepare a sauce for the national lamb dish called *Menssef*. This is served with rice and bread slices called *chrak*, or with couscous, meat and vegetables.

# Estimate of Production and Demand Trends

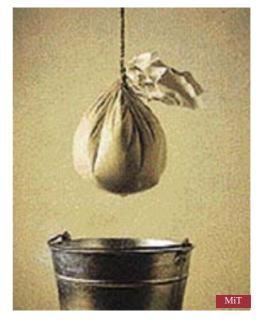
No official data is available, but in 1998 it was estimated that about 20% of Jordan's goat and sheep milk production was used to process Djamid.



# Labaneh

by Jean-Paul Dubeuf





#### Origin

Labaneh is the principal cheese of the nomadic, goat raising, Bedouin populations. It is eaten universally.

# Type of Product

This is either a fresh or aged cheese in several shapes. It has a particular sour taste.

# Area of production

Labaneh is a traditional Middle-eastern cheese. Though some differences exist from zone to zone, it is traditionally produced and appreciated in Egypt, Lebanon, Syria, Palestine and Jordan. The goats graze in the semi-arid, pebbly highlands of those countries.

# Techniques and Scale of Production

This fresh cheese is produced on a small-scale. It starts out as drained, whole yoghurt. Industrial Labaneh is manufactured with cow milk, but consumers prefer the type made from goat and sheep milk. The latter is preferred.

Draining is done in cloth bags over 24-30 hours in a ventilated place. The drained

mass is salted (1-2%). Thirty-five kilos of Labaneh require about 100 litres of milk. The cheese is packed in 20 l tins that are refrigerated in basins of ice water. Plastic cases of 200g, 500 g and 1 kg slabs are refrigerated conventionally. More traditionally, cylinder pastes are put in 1 kg glass jars filled with olive oil. Bedouins dry the Labaneh in the sun after a heavy salting to create a desiccated cheese. This is a way of obtaining *kichik* flakes of salty milk that can be preserved for quite a few months.

#### Trading of the Product

Shops serve as informal markets where cheese is sold directly by the producers.

# Use(s) of the Product

It is consumed unflavoured or with olive oil and in salads. It is often flavoured with mint. It is used in the preparation of traditional desserts. Labaneh is found in most Middle-eastern and Lebanese restaurants.

#### Estimate of Production and Demand Trends

Demand is high. Goat Labaneh is sold at a price 30% above that of cow or sheep varieties.



HaM

Area of Production



### Origin

Origin of the name: Angora mohair goat.

# Type of Product

Animal fibre. Thickness: 26-37 microns, length: 18-22 centimetres, colour: white.

# Area of production

Southern Russia: Siberia (Tuva), Caucasus.

### Techniques and Scale of Production

Approximately 65 % of Russian mohair is produced by farmers.

#### Trading of the Product

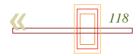
The consumers: Textile factories in the European part of Russia. It is not exported.

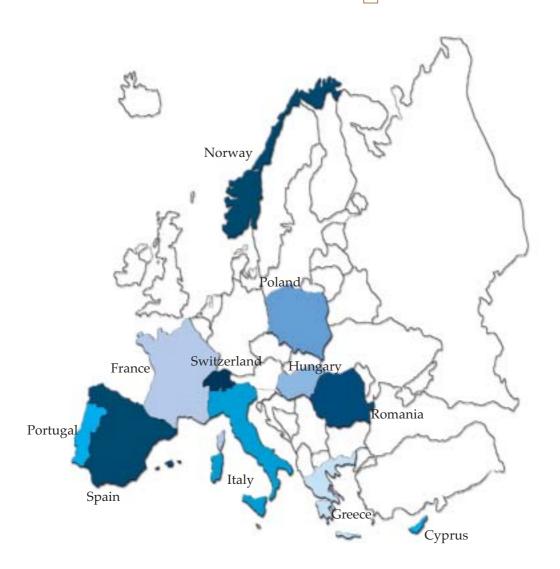
### Use(s) of the Product

Clothes: fabrics, carpets, tippets, scarves, sweaters, half-hose.

# Estimate of Production and Demand Trends

Produced quantity of «Russian mohair» in Russia in 1992 was 290 tons, in 1995 was 250 tons, in 1997 was 247.5 tons. Estimate for 2005: 260 tons.

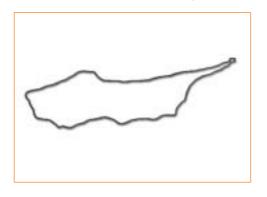






by Jean-Paul Dubeuf

Area of Production





#### Origin

The Halloumi is a traditional cheese of Cyprus, initially produced with milk of local goats or Damask breed and of Chios' sheep that grazed on the buttresses of the Trodos Mountains. Traditional Halloumi, for which the POD has been requested, is produced only in Cyprus.

# Type of Product

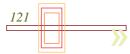
It is a semi-hard cheese. Its weight is around 300 g with a fat content of about 43%.

#### Area of production

This cheese is produced throughout Cyprus, largely occupied by mountains whose altitudes reach 1,900 m. It is situated in the southeast area of the Mediterranean and is characterized by scarce rainfall. Goats and sheep feed on the dry pastures on the island, mainly cereals, alfalfa and hay.

#### Techniques and Scale of Production

In Cyprus about 50% of cheese are made with goat milk.



Halloumi is produced with raw or pasteurised milk, and coagulated with kid's or lamb rennet at 36-38°C. Stirred for 30 minutes after the addition of the rennet, the curd is cut in little cubes of 2-4 cm and manually moved to the traditional straw moulds (currently plastic). After a pressing for about 12 minutes, the forms of curd are horizontally cut with of the tables that remain inserted in the paste, and they act as separators among the various blocks that are formed.

Finally, after the production of the ricotta (*anari*), the forms are dipped in the warm whey (95-100°C) for about 40 minutes, cooled and then moved to brine. At the end of the salting, leaves of fresh mint are added to the cheese.

#### Trading of the Product

It is sold in local markets and also exported in Middle East.

#### Use(s) of the Product

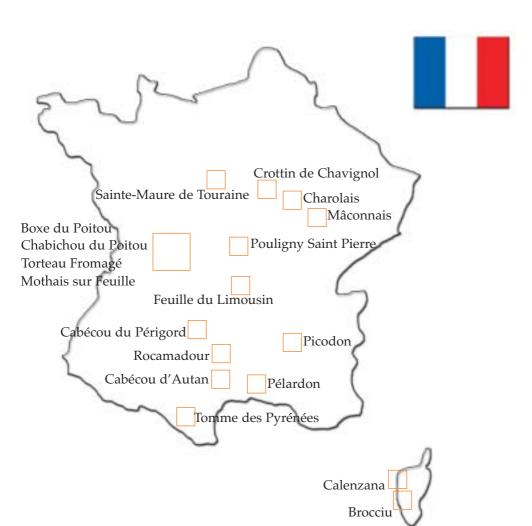
Halloumi is eaten fresh, fried, roasted or

also grated. It is used as an ingredient in the preparation of numerous dishes of the Cypriot traditional kitchen.

#### Estimate of Production and Demand Trends

For the increasing demand, this cheese is more often made with cow milk, but only traditional Halloumi will receive the POD recognition.





Boxe goat cheese from Poitou

by Gilbert Toussaint





MiT

# Origin

In 1906, the first dairy cooperative to process goat milk was founded at Bougon in the Deux Sèvres district in Poitou in the mid-west of France. Since then, the Poitou region has become the most important area of French industrial, goat cheese making. In the 1930s, an original cheese called the Boxe Goat was created, using the "camembert format". The "Syndicat de Défense" (support committee) for the Box Goat of Poitou was formed on 12 March 2002. The committee petitioned for an A.O.C. designation in June 2002.

#### Type of Product

The Boxe Goat from Poitou is round shaped, its diameter can vary from 101 to 108 mm and its thickness from 23 to 28 mm. Its packed net weight is 180 gr. After eight days of aging, the cheese is covered with a white to mottled rind. It has a fruity taste. The white to slightly ivory coloured paste is soft and creamy. It is sold in a round, wooden box.

# Area of production

The production area of the Goat Boxe from Poitou covers a limited zone including only goat cheese industrial cooperatives. This area is constituted by the Deux Sevres district, from the Vienne to the North Charentes, **France**.

#### Techniques and Scale of Production

The Boxe Goat from Poitou is made with fresh, whole, creamy goat milk. After 30 – 50 minutes of renneting, the curdled milk is poured mechanically into moulds. After removal from the moulds and salting, the Box Goat from Poitou is aged for 8 days.

Milk production, cheese making and curing must take place in the geographical area defined by the A.O.C.

This process is mainly industrial.

#### Trading of the Product

The Boxe Goat from Poitou is sold by dairy retailers, supermarkets, hypermarkets (70%) and to restaurants by distributors.

#### Use(s) of the Product

The Boxe Goat from Poitou may be consumed at different stages of maturation. It develops stronger flavours with aging. It is appreciated especially at the end of the meal, when it can be served with wines of different origins. It may as well be consumed at the appetizer or with the salads, cut in small pieces.

# Estimate of Production and Demand Trends

The Box Goat national production was 4, 268 metric tons in 2001. This accounted for 6.6% of French national goat cheese production. The Boxe Goat production is increasing slightly. Four private diary firms or cooperatives maintain the current level of production.



by Gilbert Toussaint





#### Origin

Brocciu is a Corsican cheese made from either goat or ewe's milk.

It is also called Broccio. Brocciu was given A.O.C. status by the Interprofessional Committee of Defence and Promotion of the Brocciu A.O.C. in 1998.

For further information, one may contact the Association Casgiu Casanu, Plaine de Peril LD Frustellu, 20167 Mezzvia.

# Type of Product

Brocciu is a goat and/or ewe whey cheese in compliance with the local uses and the decree dated June  $3^{\rm rd}$ , 1998.

#### Area of production

Brocciu is produced throughout Corsica.

# Techniques and Scale of Production

Brocciu is made from goat and/or ewe whey. The proteins' flocculation is obtained by direct contact with a heat source. The serum is heated until 40°C, then salt is added. The salt comprises from 0.5 to 1% of the total volume. Then, fresh milk in the amount of 25% of the volume of serum is added.

During the process, additional water, up to 15% of the volume of lactoserum, can be mixed in.

Heating continues to 80°C, at which point

# **Brocciu**

flocculation starts. Then, one scoops the curd into either moulds or wicker baskets for draining.

Brocciu is made at goat farms or in dairy plants.



#### Trading of the Product

Brocciu appeals to a large market. It is sold in groceries, at markets and supermarkets. It is marketed in Provence, the Alps, the French Riviera and can be found in fine shops in Paris.

# Use(s) of the Product

Traditionally, Brocciu is paired with Brandy and a dusting of sugar. Brocciu is used to make fritters and tarts. It may also be served before dessert.

# Estimate of Production and Demand Trends

Precise production figures for Brocciu are not available.

# Cabécou d'Autan

by Gilbert Toussaint



Area of Production



MiT

# Origin

This cheese is from the regions of Quercy and Rouergue (west centre in France). The word Cabécou comes from Cabrecon in Occitan language, the root of this word being Cabra that means Goat. A trade association dedicated to the Defence and Promotion of the Cabécou d'Autan was founded in 1994 and registered the collective name "Cabécou d'Autan". This association has endeavoured to obtain the prestigious "label rouge" (red label). Its address is: Association de Défense et de Promotion du Cabécou en Quercy-Rouergue, Chambre d'Agriculture, 130, avenue Marcel Unal, 82017 Montauban Cedex.

#### Type of Product

Cabécou d'Autan is shingle-shaped with round edges, a diameter from 56 to 58 mm, and a height from 26 to 28 mm. After 10 days of aging this cheese weighs between 65 - 75 g. The skin is fine and a light colour. Its paste is smooth and fine, without eyes. When semi-seasoned, its soft, creamy texture easily melts in the mouth.

# Area of production

The production area includes the Causses of Quercy, Rouergue and some valleys along the Garonne, particularly the districts of Tarn, Tarn et Garonne, a part of Aveyron, Lot, Lot et Garonne and the Haute Garonne.

#### Techniques and Scale of Production

The Cabécou d'Autan is processed from fresh, whole, creamy goat milk, directly in moulds. After 24 hours, the curdling creates a lactic paste. After the cheese is removed from moulds to be salted and dried, Cabécou d'Autan develops full flavours during aging.

This cheese is processed by about 20 "fer-mier" cheesemakers, 2 small-scale dairies and a dairy cooperative.

#### Trading of the Product

The Cabécou d'Autan is sold directly from farm, specialty cheese retailers, restaurants and local markets. It is also marketed by wholesalers, supermarkets and hypermarkets. A portion of production is exported.

# Use(s) of the Product

The Cabécou d'Autan is eaten at the end of the meal on a cheese board. It may be used for cooking as well: crumbled in salads, roasted on a slice of bread with nut oil or melted on roasted lamb cutlets.

# Estimate of Production and Demand Trends

Currently, 40 to 60 metric tons of Cabécou d'Autan. Increases are predicted for the future.



# Cabécou du Perigord

by Gilbert Toussaint





#### Origin

This goat cheese belongs to the large family of Cabecous. "Cabécou" means "small goat" in Occitan. Since the 12th century, there have been records of chèvres (cream cheeses). Cabécou du Périgord is protected by a collective brand by INPI. A support committee is responsible for its protection and promotion, the Chambre d'Agriculture, in Perigueux.

#### Type of Product

Cabécou du Périgord is a cheese with a creamy, fine texture and a smooth, light yellow rind. Its diameter after ripening ranges from 50 – 70 mm, with sharp angles. Its weight is from 35 – 40g.

# Area of production

The area of production "Périgord" includes

the whole district of the Dordogne and all neighbouring counties, France.

#### Techniques and Scale of Production

Cabécou du Perigord is made and ripened exclusively in Périgord with goat milk produced in Périgord. The form is made with pre-drained, lactic curd. Aging must not last less than 7 days.

The cheese is made by farmstead cheesemakers and dairy cooperatives.

#### Trading of the Product

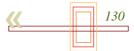
Cabécou du Périgord is sold through a traditional network, as well as in supermarkets and hypermarkets. Little is exported.

#### Use(s) of the Product

Cabécou du Périgord may be eaten as an appetizer with honey, morel and nuts covered with crystallized sugar. It is served as part of cheese course at the end of a meal. It may also be cooked and served warm on a warm slice of bread and garlic with a salad, with slice of duck "magret".

#### Estimate of Production and Demand Trends

Annual production has reached several hundred metric tons and has increased considerably over the past few years.



#### Calenzana

by Jean-Paul Dubeut



Area of Production



#### Origin

This original cheese has been well known outside the Corsica although it is not yet strictly defined.

Its history is related to the winter transhumance (or migration?) of highland shepherds (from Niolu region) in the northern lowlands of Balagne. The shepherds were selling the 8 days cheeses to "affineurs" (ripeners) of the Calinzana village after transportation in wooden cases where cheeses were ripened in natural caves. In the past the ripeners could buy white cheeses in the all island.

The cheeses were then sold throughout Corsica and abroad.

# Type of Product

Traditional soft goat or sheep cheese ripened in salting wooden cases.

# Area of production

North–western and central Corsica; ripening in caves of north-western Corsica.

#### Techniques and Scale of Production

The cheeses can be made with sheep or goat milk. The animals are from the local Corsican breed.

The milk is added with rennet at ambient temperature (milk can be warmed to 24 -

27°C if necessary). The curd is mixed to obtain corn kernel sized grains.

They are moulded in 1 kg draining pots and laid in moulding cases where they are lightly salted over 2 to 5 days. Then there are 3 types of processing:

The old cheese (casgiu vecchju, 10 to 12 months) is saturated in salting cases for 3 weeks with weekly manipulation 8 months in aging cases;

The spring cheese (*casgiu primaticciu*, 4 months) is intensely salted for 10 to 15 days in salting cases and weekly manipulated for 4 months in aging cases. It could be stored in cold room for 10 to 15 days, then washed, kept in old mines for 15 days before storage in cold rooms; The *fresh cheese* is consumed immediate-

# Trading of the Product

ly.

Today, there are only 2 ripeners and 15 Calinzana cheese producers. The number of produced cheeses is not well known but it is very low and the cheese is now very rare.

#### Use(s) of the Product

The cheese has a very strong taste and is generally consumed at the end of the meal.

#### Estimate of Production and Demand Trends

No data avalaible

### Chabichou du

by Gilbert Toussaint

Poitou

Area of Production



# Origin

Legend has it that Chabichou from Poitou was created in the 8th century; an ancestor of Chabichou was made by the Arabs at the time of the large invasions. The Chabichou from Poitou was designated as *Appellation d'origine contrôlée* (AOC) in 1990: an Appellation d'origine protégée (AOP) has been obtained in 1996. The protection and the promotion of Chabichou from Poitou are handled by the Syndicat de Défense (Committee of support) de Chabichou du Poitou AOC – BP 191 – 86005 Poitiers Cedex.

# Type of Product

Chabichou from Poitou is shaped like a 6



cm height cone trunk. Its weight is from 150 to 160 g when 10 days old, and is covered by a white fine skin, and sometimes grey-blue spots. The white bodied cheese is firm, with a natural softness. Its soft and creamy paste provides a delicious taste on the palate. The taste intensifies after several weeks.

# Area of production

The production area of the Chabichou from Poitou covers a very limited zone concerning the chalky Haut-Poitou: that is to say the 2 districts of Deux-Sèvres and Vienne and the north of Charente district, in France.

# Techniques and Scale of Production

Chabichou from Poitou is made with



fresh, whole, creamy goat milk. The fresh curdled milk is poured in moulds perfectly conically designed which bottom includes CdP mark (Chabichou du Poitou). After removal from the mould and salting, the Chabichou from Poitou is aged 10 days minimum. The milk production, the processing and the cheese maturation must take place in the geographical area of the A.O.C. Nowadays, the Chabichou from Poitou is made by 8 dairy firms either private or cooperative, which use 2% of the goat milk produced in Poitou-Charentes, first French goat region. Despite their small number, the two cheese maturing units and the six cheese producers "fermier" contribute to the reputation of the Chabichou from Poitou.

# Trading of the Product

Chabichou from Poitou is sold in hypermarkets, supermarkets, dairy retailers and at local markets.

In the network of distribution, the hyper and supermarkets account for 70%, the dealers 15%, the selling in farms, the retailers and the restaurants 15%.

France consumes 98%, the remaining 2% is exported.

#### Use(s) of the Product

Chabichou from Poitou is very far from remaining at the end of meals since can be consumed for numerous opportunities. Chabichou from Poitou cheese paste has a fine and soft taste when few ripened; it takes more stronger flavours after a longer maturation. In that way, it can meet the demand of a large range of consumers. An Haut-Poitou wine pairs well with it because both from the same territory. As appetizers, fine slices of well cured Chabichou from Poitou match well with a cool Pineau des Charentes wine.

Chabichou from Poitou is an ingredient in numerous recipes: warm Chabichou salad, fillets of sole with Chabichou, rib of beef sauce Chabichou, Chabichou from Poitou ripened in Cognac...

# Estimate of Production and Demand Trends

Since its designation as A.O.C., the Chabichou from Poitou has significantly increased its production in 10 years. It reached 500 metric tons in 2000.





Area of Production

#### Origin

This is a goat cheese from Charolle region. The request for Appellation d'Origine Contrôlée (A.O.C.) is in process and it is handled by the Syndicat de Défense du Fromage Charolais, Chambre d'Agriculture, Macon.

#### Type of Product

The Charolais is a soft paste cheese in a cylinder shape. Its height is greater than its width. The diameter is 6.5 cm and its height is 8 cm. The weight can vary from 250 – 310 g, after 15 days of aging. It is covered with a natural mouldy rind, which often turns blue.

# Area of production

The area of production of the Charolais covers the valleys of the district of Saone and Loire, and the edges of the districts of Rhone and of Loire, France.

Charolais is made mainly by farmers and by three industrial dairies.

#### Techniques and Scale of Production

Charolais is made with fresh, whole creamy goat milk. The milk is curdled with lactic culture for 24 hours. It is scooped into moulds, in high cheese drainers. Draining lasts from 2 to 3 days, salting is with dry salt. After two weeks ripening, it develops own characteristics.

Charolais is processed mainly by farmers and by 3 industrial dairies.

#### Trading of the Product

Charolais is sold at local markets and in small shops. Its high level of quality is appreciated by the specialty shops at the national level, but less in supermarkets and hypermarkets.

# Use(s) of the Product

Charolais is mainly eaten in sandwiches or at the end of meals. It is on the cheese menu of prestigious restaurants. It may be eaten warm.

# Estimate of Production and Demand Trends

Currently, annual production may be estimated in 200 metric tons and there are potentialities for a 500 metric tons production.

# Crottin de Chavignol

by Gilbert Toussaint





# Origin

Crottin de Chavignol is a goat cheese from the Sancerre region. Its name might have originated from the word Berry ("crot") which refers to a small oil lamp of terra cotta. It was designated Appellation d'Origine Contrôlée (Protected appellation of origin) in 1976. Its protection is administered by the producer association of Crottin de Chavignol, Sancerre.

# Type of Product

Crottin de Chavignol is a small, smooth goat cheese with a cylinder shape. Its skin is delicate and mouldy, with some white and blue moulds. Its paste is white or ivory, smooth, firm and consistent. It melts in the mouth. After 10 days of aging, it will develop various aromas, depending upon its age. The curd develops mold and is turned several times. After removing the mold and salting, aging can start. Its appearance, texture of the paste and aromatic intensity depend on the amount of ripening time.

# Area of production

In the centre of France, between the Loire, the hills of Pays Fort and plains of Berry, the zone of Appellation of Crottin de Chavignol includes most of the district of Cher and the adiacent Nievre and Loiret.

# Crottin de Chavignol

#### Techniques and Scale of Production

Crottin de Chavignol is processed exclusively from crude full creamy goat milk. Shortly after milking, milk is slightly added with rennet. Curdling lasts around two days, which intensifies lactic paste's characteristics. The quality of the curdling and the first draining in cloth give to the Crottin de Chavignol its characteristic paste. The curd is then moulded and turned several times. After removing from the mould and salting, the aging can start. Its external aspect, the texture of the paste and the intensity of aromas depend on the ripening time.

Crottin de Chavignol is produced half by farmers and half by dairy firms.

#### Trading of the Product

One can find the Crottin de Chavignol by the farmers, on market, but also in dairy shops, supermarkets and hypermarkets. It is also exported to numerous countries.

#### Use(s) of the Product

Crottin de Chavignol is eaten at the end of the meal, as an appetizer, as a snack and is used in numerous recipes.

It is usually served with a wine from the valley of Loire and especially the Sancerre, but also the Reuilly, the Quincy, the Meneton Salon, the Pouilly Fumé and the Coteaux du Giennois.

# Estimate of Production and Demand Trends

Its annual production is 1,500 metric tons and is obtained from milk supplied by more than 300 farmers. This amount has been constant for some years.

#### La Feuille du Limusine

by Gilbert Toussaint





# Origin

The Leaf of Limusine. This goat cheese from the Limousin region is mainly produced on goat farms. It benefits from an official recognition of its mark and type, thanks to the support of the Association of Goat Farmers in Corrèze. Its support and defence are handled by the farm Commission of this association.

# Type of Product

The Feuille du Limousin is shaped like a chestnut tree leaf. Upon removal from the mold after 10 days of ripening, it weighs from 130 g to 140 g. Its paste is

fine, white and soft. The delicate rind has a white, yellow or blue mold with a wavy surface. The Feuille du Limousin is sold with a chestnut leaf-shaped label.

# Area of production

The production area of the Feuille du Limousin is the Limousin region, namely the areas ("departements") of Corrèze, Creuse and Haute Vienne, France.

### Techniques and Scale of Production

The Feuille du Limousin is made exclusively from fresh, raw, whole, creamy

#### La Feuille du Limusine

goat milk. The acid curd results from a lactic fermentation. It is formed in chestnut leaf-shaped moulds. After removal from the moulds and salting, the cheese is ripened for different times, according to the state of maturation requested by commercial markets.

#### Trading of the Product

Each farmer sells his cheese individually or together with other products. The Feuille du Limousin is sold fresh, medium-aged and fully-ripened. It is sold through commercial networks – local markets, dairy dealers, retailers, supermarkets and hypermarkets in various areas, including Limousin, Paris, Toulouse and abroad.

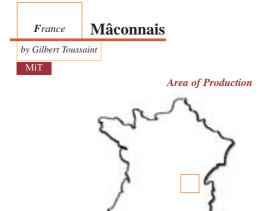
#### Use(s) of the Product

The Feuille de Limousin is a farm produced goat cheese appreciated at the end of the

meal, but which can also be used incorporated in a cooked dish.

# Estimate of Production and Demand Trends

Currently, twelve farmers produce "La Feuille du Limousin". Annual production is approximately 460,000 litres of goat milk processed and 98 000 cheeses. Nowadays, the production is increasing rapidly.



#### Origin

The Macon region, rich in roman monuments, is located in South Burgundy (France). The vine-growers have always also herds or flocks. The utilization of grasslands between the vineyards could allow goat breeding. The Maconnais is covered by vineyards on hillsides, covered by box-trees and a few grasslands of limited quality on mid-hills, thick forests on the tops.

# Type of Product

Maconnais is traditionally a small cheese; its weight is from 50 to 55 grams. It is moulded in truncated shaped cheese

drainers. Its paste is white, smooth and firm. The cheese must be at least covered by *Geotrichum* mould and some blue spots may appear on the skin during ripening. Its fine texture when half ripened becomes softer after ripening. Its slightly salted taste, showing a large scale of flavours, depends on the amount of ripening time.

#### Area of production

The production area of Maconnais cheese is very closely linked with location of vineyards and covers the zone of production of vines with the appellation "Macon".

#### Techniques and Scale of Production

Maconnais is processed from fresh and full creamy goat milk. The curdled milk is moulded in small-truncated drainers type "maconnais". It is put on hurdle, then salted, dried and ripened. The cheese is ready for consumption after 12 ripening days.

This cheese is mainly produced on farm.

#### Trading of the Product

This cheese is mainly sold directly by farmers and on local markets. Actually two third of the production is sold by this



way at regional level. It is essential to stress that consumption of goat cheese has always been very high in this region, this cheese being traditionally part of the meals in Burgundy. The sales through ripening firms account for 10% of the production. These ripeners are 5, purchase fresh unmoulded cheeses, and then they proceed with drying, salting and ripening. One can buy Maconnais from dairy dealers, dairy groceries, but also in supermarkets and hypermarkets, restaurants, ...

Some large scale farms commercialise their production at a national scale, partially to Rungis National Market near Paris, supermarkets and hypermarkets, and cheese groceries.

# Use(s) of the Product

This cheese was historically dedicated to sandwich pauses in the vineyard. It can be tasted also as a snack, an appetizer... Each connoisseur looks for the stage of drying and ripening suited to owns taste. One will choose the Maconnais by different ways:

at sight: fine skin or slightly flowered: colour ivory or steely blue

- by touching: fresh and fine paste or softer
- by smelling: moderate and strong goat flavour
- by tasting: slightly salted taste showing a large scale of flavours in accordance with the stage of ripening.

This cheese may be tasted with different vines from Maconnais region: a white Chardonnay for the half ripened, when consumed as appetizers; a red Macon or Beaujolais for less ripened cheese.

# Estimate of Production and Demand Trends

In 2003, 13 farmers, 1 dairy and 1 ripener produced the whole amount of Maconnais; namely 677,500 Maconnais cheeses accounting for 338,750 litres of milk.

#### Molthais sur Feuille

by Gilbert Toussaint







# Origin

This goat cheese is produced mainly on farms. From 1840, one notes that this cheese "on a leaf" was sold widely in small markets located west of Poitou. At that time, it was called Mothais or Mothais on a leaf. It originated in La mothe Saint Héray, a village in the Deux-Sèvres district. Due to the effort of the Association des Producteurs de Mothais (Association of Producers of Mothais), the Syndicat de Défense du Mothais sur feuille (support committee) was founded in 2002. It is expected that a petition for an A.O.C. (Appellation de Origine Contrôlée) will be drawn up by this committee.

#### Type of Product

The Mothais on a leaf is round, with a diameter of 12 - 15 cm and a thickness of about 3 cm. Its weight is 180 g after 10 days of maturation. Its fine, white, soft paste has certain firmness. Its rind is yellow-ochre and develops small, grey-blue spots during aging. The rind is rather thick, with some wavy markings on its surface. Mothais is displayed on a chestnut tree and plane leaf. This contributes to a subtle woody flavour and also helps to keep the paste creamy.

# Area of production

The production area of the Mothais on

#### **Molthais sur Feuille**

Leave covers a very limited zone including only the chalky part of West Poitou, France. This area is constituted by the South Deux Sèvres district, from the Vienne to the North Charentes.

#### Techniques and Scale of Production

The Mothais on a Leaf is made with fresh, whole, creamy goat milk. The milk must be curdled slowly and then poured into moulds of 12 – 15 cm diameter and 5-6 cm height. After removal from the moulds and salting, the cheese is set on a chestnut leaf, collected just before its fall from the branch. These leaves facilitate the drying of the cheese. The moisture left between the cheese and the tannin of the leaf creates the characteristic taste of this cheese. The Mothais on a leaf is currently produced on farms.

# Trading of the Product

Mothais on a leaf is mainly sold at local markets, as well as by dairy retailers, supermarkets and hypermarkets. Due to the originality of its production process, the Mothais on a Leaf is greatly appreciated by connoisseurs of the Poitou-Charentes region.

#### Use(s) of the Product

The Mothais on a Leaf is usually eaten at the end of the meal together with an earthly wine. Its fresh, creamy paste can be paired with a sugary marmalade or honey or with salty, peppery foods. In its more ripened stage, it can be eaten as an appetizer with Pineau de Charentes. It is used as an ingredient of numerous recipes: salads, a spread on toasted bread, a part of a roasted meat sauce, cheesecakes and the cheese round loaf of Poitou.

# Estimate of Production and Demand Trends

Currently, production is very limited – approximately 50 metric tons per year. When the expected A.O.C. is given, production is likely to increase substantially because the cheese makers and industrial processors are interested in promoting this earthy cheese. This is a cheese that continues to use traditional cheesemaking techniques.



# **Pelardon**

by Gilbert Toussaint





# Origin

This cheese is produced in the Languedoc-Roussillon region of southern France. It was designated Appelation d'Origine Controlée (A.O.C.) on August 25, 2000. The protection of Pélardon A.O.C. is handled by the Association of Pélardon Defense (Committee of Pélardon Support), address: Maison des Agriculteurs B, Mas de Saporta, 34875 LATTES Cedex.

# Type of Product

The Pélardon is cylinder shaped with round edges, its diameter ranges from 60 to 70 cm and its height of 22 to 27 mm. Its weight is of 60 g after 10 days of ripen-

ing. Its body cheese is fine and white. The smooth rind is lightly yellow, blond or blue coloured.

# Area of production

The production area of the Pélardon covers the Cévennes region and the hillocks of Gard, Lozère, Hérauld districts ("departements"), Black Mountain and the Corbières Hills of Aude, in France.

# Techniques and Scale of Production

Pélardon is a soft-bodied cheese obtained by a slow lactic fermentation and



by spontaneous use of fresh, whole, creamy goat milk. It is fermented with milk whey. Curdling lasts 24 hours. Curds are scooped into moulds. Ripening lasts a maximum of 11 days from the time rennet is added. It is forbidden to use frozen curd to make this cheese.

Pélardon is mainly produced on farms (80%).

#### Trading of the Product

Pélardon is sold by all kinds of networks mainly in Languedoc-Roussillon (60%) and in France (40%). This is a high quality product.

#### Use(s) of the Product

Traditionally, it was served at the end of the meal. Over the last few years, Pélardon has been eaten as a starter. Now, it is rolled in bread crumbs or heated in the oven with olive oil. This last use combines well with a traditional green salad. Pélardon may be

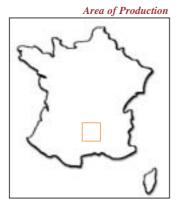
found as well in sauces for beef or lamb from Languedoc. Pélardon cheese is used in many recipes.

# Estimate of Production and Demand Trends

Annual production of P Pélardon A.O.C. is around 180 metric tons, but it is growing due to marketing outside its production area.



by Gilbert Toussaint





#### Origin

This cheese was given an Appelation d'Origine Controlée in 1983. This includes two types: Picodon A.O.C. and Picodon Affiné Méthode Dieulefit. The second type is aged using the Dieulefit process. The latter is found in the districts of Drome and Ardèche. The name Picodon means spicy and small. Its protection is administered by the Syndicat du Picodon, 25, rue Frédéric Chopin, 26000 Valence.

# Type of Product

Picodon is a soft paste goat cheese that uses a lactic fermentation process.

It measures 1.8 - 2.5 cm in height, with a diameter of 5-7 cm. After 14 days of drying and aging, its weight is 60 gr.

## Area of production

The production area of Picodon includes the districts of Drome and Ardèche, the counties of Barjac in the Gard district, as well as Valréas in the Vaucluse - France.

#### Techniques and Scale of Production

Picodon is made using lactic fermentation, obtained by the addition of rennet and whey at 20°C over a 24 hour period. Draining continues in cheese drainers for

24 hours. Drying lasts at least two days. Aging at from 12–18°C lasts for at least 8 days. The cheese is recognized as Picodon 14 days after renneting. The Dieulefit process involves aging for at least one month, including washings with pure water. With aging in a moist cellar, this process enables the traditional flavours of Picodon to develop.

In 2002, Picodon was processed by: by 80 farmers selling their cheeses directly

- by 41 producers supplying their cheeses to *affineurs*
- by 5 private firms or cooperatives using the milk of 228 goat farmers.

#### Trading of the Product

Picodon is sold in dairy shops, supermarkets and hypermarkets.

#### Use(s) of the Product

Picodon is appreciated in sandwiches and on a cheese board at the end of the meal. It is tasted preferably with white or red wines from the same region. It may be steeped in olive oil or used as a grating cheese when in its very dry form.

# Estimate of Production and Demand Trends

Picodon annual production was 186 metric tons in 1993. In 2002, it was 443 metric tons. For 2004-2005, it is estimated to reach up to 600 metric tons.

France Pouligny Saint
by Gilbert Toussaint Pierre





# Origin

In 1972, Pouligny Saint Pierre goat cheese was designated with an Appellation d'Origine Contrôlée (A.O.C.). In 1996, on the European level, it received a new status – Appellation d'Origine Protégée (A.O.P.). A trade association of its producers, "Fromages de Chèvre AOC Pouligny Saint Pierre" handles its protection and promotion. It is based at: 65, avenue Gambetta, 36300 LE BLANC.

## Type of Product

Pouligny Saint Pierre is a soft paste, pyramid-shaped cheese. There are two sizes based on weight: 150 g and 250 g. It is ivory

coloured, blue or mottled with veins. The paste is firm on the outside, smoother on the inside. Its flavour is milky and fermented. Its taste is balanced and slightly salty. Its creamy texture tends to melt in the mouth. Its aroma includes goat, butter and mushroom components.

#### Area of production

The Production area includes 22 villages of the area of Le Blanc in the southwest of the Indre area (départment de l'Indre in the centre of France, south of the Loire River). The production is well-established in the regional park of Brenne.

# Pouligny Saint Pierre

#### Techniques and Scale of Production

Pouligny Saint Pierre is processed from fresh, whole, creamy goat milk. The milk production is in compliance with the specifications and regulations governing the three dairy goat breeds: Alpine, Saanen and Poitevine. The rules stipulate the content of their diets: 60% forage (hay and grass), excluding silage, 15% cereals and protein feed produced in the area, and concentrate feeds produced outside the area not to exceed 25%.

Curdling is achieved slowly with animal rennet. Cheeses are formed by scooping the curd into moulds. This cheese is surface salted. After salting, every cheese is aged for a minimum of 7 days.

#### Trading of the Product

60% of the milk collection and cheese-making occurs at cooperatives or at individual farms. About 30% of the farmstead cheesemakers sell to affineurs; 10% of Pouligny Saint Pierre is made and cured by farmstead cheesemakers.

Pouligny Saint Pierre is sold by dairy re-

tailers, supermarkets and hypermarkets. Its distribution covers the regions of Centre, Poitou-Charentes, Paris and Ile de France, Rhône-Alpes and Midi-Pyrénées. The consumers are mainly over 45 years old and come from high middle class. Exports are sold to the European Union, Japan, Australia and China.

#### Use(s) of the Product

In France, Pouligny Saint Pierre is eaten at the end of the meal on a cheese board, where it is tasted with a white wine from Burgundy or the Loire Valley. It may also be cut into small cubes as an appetizer. For starters, thin slices are served with a tomato salad dressed with olive oil or served warm on toast.

As a main dish, it is served as a pizza topping or with fish, such as dorado.

# Estimate of Production and Demand Trends

In 1994, the annual national production of Pouligny Saint Pierre was 250 metric tons. In 1997, it was 315 metric tons. It reached 440 metric tons in 2001. This broke down into 182 metric tons of farmstead processing and 258 metric tons made at dairy cooperatives.

France

## Rocamadour

by Gilbert Toussaint





# Origin

Rocamadour cheese has been appointed as Appellation d'Origine Contrôlée (AOC). A group of Rocamadour cheesemakers manages protection and its promotion, address: Maison de l'Agriculture du Lot, 430, avenue Jean Jaurès, BP 199, 46004 Cahors Cedex.

## Type of Product

Rocamadour cheese is manufactured from whole, creamy goat milk. It is very little full wheel shaped with a 6 cm diameter, 1-1.5 cm high, and 35 g weight. Its rind is grooved skin, slightly soft as velvet. Its paste melts soft in the mouth, releasing keen

tastes of cream and butter with a slight goat flavour.

# Area of production

The production area of the Rocamadour covers the regions of Causses (districts of Lot and neighbouring ones) - France.

## Techniques and Scale of Production

Rocamadour is made with 24 hours old curdled milk, milked within 24 hours. It is manually moulded, put in cellar at constant temperature and humidity. Its tasty qualities appear fully only after six days at least of ripening.

#### Rocamadour

Collection and processing of milk are done by handcraft firms (limited sized networks) (44%) and farms (56%).

#### Trading of the Product

Rocamadour is commercialised: 15% on markets (farm or local market); 25% by retailers (dairy retailers, restaurants, groceries); supermarkets, hypermarkets and dealers 60%.

Its distribution is throughout France (Paris and its outskirts, and regions of Poitou-Charentes, Rhône-Alpes, south-west and Mediterranean area). Little is exported.

#### Use(s) of the Product

Rocamadour can be tasted in its creamy state, but this is a matter of personal taste; it may be tasted dry, revealing then strong flavours. Warm or cold, it may be consumed with salads or on toast.

#### Estimate of Production and Demand Trends

Annual production of Rocamadour was 640 tons in 2001.



# Sainte-Maure de

by Gilbert Toussaint

Touraine





Origin

Legend tells that on the heights of Sainte Maure after the defeat of the Saracens, their wives learned to process long log shaped cheeses with goat milk. The Sainte-Maure de Touraine has obtained its A.O.C. by decree of June 29th 1990, modified in 1998. Its promotion and its defence are handled by the Committee Inter-professional of Sainte-Maure de Touraine, located at the Chambre d'Agriculture, 38, rue Augustin Fresnel, BP 139, 37171 Chambray les Tours.

and raw goat milk cheese, with soft paste. It is a truncated long log shaped, 16 - 17 centimetres long and diameter from 4.5 to 5.5 cm. Its weight is around 250 g.

## Area of production

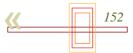
The production area of the A.O.C. covers approximately the province of Touraine - France. It covers the whole district of Indre et Loire, as well as some fringe villages of the districts of Vienne, Indre and of Loir et Cher.

# Type of Product

Sainte-Maure de Touraine is whole, creamy

# Techniques and Scale of Production

Sainte-Maure de Touraine is a soft paste



# Sainte-Maure de

#### Touraine

cheese characterized by slow curdling, moulded in truncated cheese drainers. The removal from drainers is made after 24 to 48 hours. At this stage, the pyroengraved rye straw is introduced enabling both the consolidation of the cheese and to ensure a perfect traceability of the product. The cheese is then salted with ashy salt and displayed on wicker where the draining will end, before being placed in a drying-room to be ripened for at least 11 days.

Farmstead production is 500 metric tons, meanwhile dairies manufacture 720 metric tons.

# Trading of the Product

The farmstead producers sell Sainte-Maure de Touraine ripened in all commercial networks: farm, local markets, dairy groceries and supermarkets.

30% of them sell it fresh to firms that age and market the Sainte-Maure de Touraine outside the district to dealers or dairy groceries.

Sainte-Maure de Touraine processed by dairy manufactures is supplied mainly to

supermarkets and hypermarkets, as well as traditional local markets.

#### Use(s) of the Product

The fresh, semi-dry or dry Sainte-Maure de Touraine is consumed at the end of the meal. It is also appreciated as appetizer in fine slices. It may be used in cooking and be tasted warm. It may be paired with Touraine wines: Vouvray, Montlouis, Chinon, Bourgueil or Champigny.

# Estimate of Production and Demand Trends

Sainte-Maure de Touraine ranks second in sales for goat cheeses A.O.C. with 1,220 metric tons produced in 2002. Since 1991, its production has quadrupled.

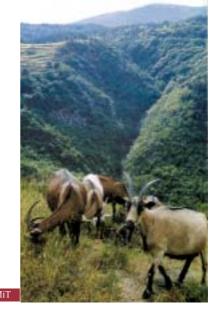
France

# Tomme des Pyrénées

by Gilbert Toussaint







#### Origin

It is in process of consideration for designation as Indication Géographique Protégée (IGP)(Protected Geographic Indication) of the Tomme des Pyrénées has been transmitted by the Fédération Tomme des Pyrénées, address: 20, place du Foirail, 65917 TARBES Cedex 9.

## Type of Product

Tomme des Pyrénées is a pressed uncooked cheese processed from whole goat milk. It is cylinder shaped with 2 plane parallel faces with round edges. The average weight is from 2 to 3 kg for the large size, and from 600 to 800 g for the small size. The paste is uniformly white.

## Area of production

The area of production of the Tomme des Pyrénées covers the mountainous zone of the Massif des Pyrénées in the districts of Pyrénées Atlantiques, Hautes Pyrénées, Haute Garonne, Ariège, Aude and Pyrénées Orientales - France.

# Tomme des Pyrénées

#### Techniques and Scale of Production

Tomme des Pyrénées is a cheese processed from raw, whole, creamy goat milk, conserved at an approximate temperature of 15°C for 12 hours maximum enabling the milk maturing. After adding lactic ferments, the rennet is added within 36 hours for farm production and within 66 hours for the cooperatives. The curdling lasts 60 minutes maximum and the "uncurdling"10 minutes. Further to a mixing and heating, the moulding is made manually. Pressing is optional. Different operations follow: the cheese turnings, draining, moulding followed by salting. Aging lasts 30 days for the small sizes and 60 days for the large sizes.

Collection and processing of the milk are done by dairies and farmers.

# Trading of the Product

Tomme des Pyrénées is sold either at the farm and on local markets, or by commercial agents to dealers, supermarkets and hypermarkets or exported.

Its distribution is throughout France.

#### Use(s) of the Product

Tomme des Pyrénées is consumed at the end of the meal on a cheese board.

# Estimate of Production and Demand Trends

Annual production of Tomme des Pyrénées is approximately 215 tons, processed from milk coming from the region of des Pyrénées mountains.

France

# Torteau fromagé

by Gilbert Toussaint





#### Origin

"Goat cheese cake"

This is a pastry which was produced with fresh goat milk in most of farms having a bread oven. The appellation "tourteau" coming from the word "tourte", has been used since the 12th century. The promotion of the tourteau fromagé is handled by the Confrérie du Tourteau Fromagé, (Fellow-member society of the cheese "tourteau") 79120 LEZAY.

## Type of Product

The "tourteau" is a traditional cake round shaped, 15 cm of diameter and high 8 cm. The bottom is moulded in a cup and

the top is shaped like a dome. The top is burnt. The paste is a yellow coloured with a soft and light texture which provides in the mouth a feeling of freshness.

## Area of production

The tourteau fromagé is produced in Poitou-Charentes Region (France) and is originated from the south of the Deux-Sèvres district.

#### Techniques and Scale of Production

The tourteau from agé is cooked in a mould with 2 mm thickness of paste. In a pot (or terrine) a mixture with the fresh goat

# Torteau fromagé

cheese, sugar and milk is made to obtain a homogenous paste. Firstly the egg yellow, then whisked egg whites are added successively. This mixture is put in the mould and let flatting during two hours in the tempered room. Then it is cooked in an oven at 200°C for 45 minutes. It is taken from the mould still warm.

The cheese "tourteau" is produced at farm by goat milk producers, by bakers, handcrafters, or dairies.

#### Trading of the Product

The tourteau from agé is sold in bakeries, farms open to tourists, markets and restaurants, supermarkets and hypermarkets.

#### Use(s) of the Product

The tourteau fromagé is tasted cold, at breakfast or during the day as an aperitif with white wine; also as dessert with ice cream or not.

# Estimate of Production and Demand Trends

Its very handcrafted production makes uneasy to estimate the volume produced.



Distribution of the main Greek goat cheeses



Krassotiri - 3 Ladotiri - 2

Manoura - 1, 2, 3

Manouri - 12, 14, 15

Mizithra - all regions except 4

Sfela - 5

Trahanas - all over Greece

Xinohontros - 4

Xinomyzithra - 4

Xinotiri - 1, 2, 3



Area of Production



#### Origin

The origin of this name is unknown.

#### Type of Product

It is a P.D.O. cheese with soft texture, a slightly sour and salty taste and a pleasant aroma. It is sold in plastic containers of 250 g, 1 or 2 Kg, under modified atmosphere.

## Area of production

Exclusively in the region of western Macedonia (municipalities of Grevena and Kozani) - Greece.

# Techniques and Scale of Production

Whole raw goat's milk from local breeds is left at  $20^{\circ}$ C to sour. Traditional or commercial rennet is added at pH 6.2 and coagula-



tion takes place within 24 hours. Then, the curd is cut and transferred to cloth bags to drain for another 24 hours. After draining, salt is added and the curd is thoroughly mixed and put in containers of different sizes. Cheese is then transferred to cold rooms until sold. Lately the cheese is packed in plastic bags under modified atmosphere.

## Trading of the Product

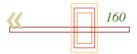
It is made in small farms by shepherds and in dairies. It is sold to the local and national market. During the last years it is exported.

# Use(s) of the Product

It is consumed as a table cheese, an appetizer paired with wine and ouzo and in cheese pies.

#### Estimate of Production and Demand Trends

The estimated amount is 100 tons.



Greece

# **Anthotiros**

by Emmanuel M. Anifantakis







MiT

#### Origin

#### **Anthotiros**

It is a composite Greek word made from "anthos" = flower and "tiros" = cheese

## Type of Product

This is a fresh or dried cheese from goat's milk whey, is considered as the best raw material for Anthotiros. It is also made from sheep's milk whey or a mix of both. The cheese has a truncated shape and a weight around 1500g. The texture is compact with a typical mild pleasant flavour.

#### Area of production

It is produced in the region of Kriti Island - Greece.

#### Techniques and Scale of Production

Anthotiros is a whey cheese, traditionally produced on the Island of Kriti using exclusively whey of goat's and sheep's milk from the production of Kefalotiri and Graviera cheese. This whey has a high fat content of more than 1.5%, which results in a cheese rich in fat content, more than 15%. It is therefore very delicious. It is produced by heating whey to 88-92°C for 15 min with or without addition of about 10% milk. The denaturised whey proteins af-

#### **Anthotiros**



terwards float to the surface of the whey and are carefully collected and put in moulds. The next day, the cheeses with or without salting are delivered to the market. When dried Anthotiros is produced, the whey is heated longer at a higher temperature and more salt is added.

# Trading of the Product

It is made in farms by shepherds and in dairies. It is sold at local markets as well as in Greek supermarkets. It is also exported.

# Use(s) of the Product

Anthotiros is produced either fresh or dried. When fresh, it is cut in segments and served during or at the end of the meal. When dried, it is grated.

# Estimate of Production and Demand Trends

The estimate production is 120 tons.

Greece

# Armirotiri

by Emmanuel M. Anifantakis



#### Origin

#### Armirotiri

Composite Greek word. There are two interpretations: a) armira = brine, tiri = cheese, armirotiri = cheese preserved in brine, b) armiros = salty, tiri = cheese, armirotiri = salty cheese

## Type of Product

Armirotiri is a very hard, very salty cheese with a strong flavour. Its shape is usually cylindrical. The texture is compact with many eyes. It is considered to be the forerunner of Kefalotiri cheese.

## Area of production

It is produced on all the Greek islands except Kriti.

# Techniques and Scale of Production

Raw goat's milk is coagulated at 36 – 38oC using traditional or commercial rennet. The curd is cut after 30 min. to rice grain size. It is scalded up to 45°C,



put in small straw moulds and pressed by hand for draining. The cheese is then surface dried, salted and aged at rooms temperature for about one month. Then they are put in a brine solution of 18-20% NaCl, where they remain till consumption.

#### Trading of the Product

Armirotiri is made on farms by shepherds for self consumption. It is also sold at local markets.

## Use(s) of the Product

It is used as an appetizer with wine and ouzo, grated and with bread as a snack.

# Estimate of Production and Demand Trends

30 tons. As this cheese is very salty, its production is expected to decrease.



Greece

#### Chlorotiri

by Emmanuel M. Anifantakis





# Origin

#### Chlorotiri

It is a composite name made of two Greek words: chloros = fresh, tiri = cheese; chlorotiri = cheese which is consumed fresh.

# Type of Product

Semi-soft cheese made of goat, ewe and cow's milk or mixtures. It has a mild taste and flavour; it comes in different shapes, usually cylindrical of various sizes. Its texture is compact without holes if made from pasteurised milk. It has with many holes if it made from raw milk.

#### Area of production

Throughout Greece. It is also sold under other names, e.g. Malaka, fresh cheese, Mastelo.

## Techniques and Scale of Production

Chlorotiri is made from raw or pasteurised whole milk. Coagulation takes place at 34 - 36°C using traditional or commercial rennet. Coagulation time 40 minutes. Cutting to grains of 2 cm size and scalding up to 48°C for 40 min. Then the curd is transferred to moulds of different sizes and shapes, pressed by hand and salted in brine. After that the cheese is cleaned,



# Chlorotiri

surface dried, put in cold storage until delivery to the consumer, without aging.



#### Trading of the Product

It is made on farms by shepherds and small dairies and sold at market and mini markets.

# Use(s) of the Product

Cholotiri is consumed as a table cheese and fried. It is also used in manufacture pizza and pies.

# Estimate of Production and Demand Trends

60 tons. The production of Chlorotiri to expected to increase.

Greece

**Feta** 

by Emmanuel M. Anifantakis



# Origin

The word "feta" has a specific meaning in the Greek language, apart from the one of the famous traditional Greek cheese. It is a small segment, a serving of food - in this case of Feta cheese. It is synonymous of the words "slice" in English, "Tranche" in French, "pezzo" in Italian and "Schnitt" in German.

# Type of Product

It is a traditional Greek cheese with Protected Designations of Origin (P.D.O.), according to E.U. Regulation 1829/2002. It is a soft cheese with a salty, slightly acid taste, natural white colour and quite pleasant organoleptic characteristics,



ripened and kept in brine. Feta is produced from ewe's milk, or a mixture of ewe's and goat's milk.

# Area of production

Feta is exclusively produced in Greece according to E.U. Regulation 1829/2002 and specifically within the territory of mainland Greece and the island of Lesvos.

## Techniques and Scale of Production

Feta is produced in Greece since ancient times. The best quality is made from ewe's milk, although a mixture of ewe's with goat's milk (up to 30%) can also be used. The coagulation of the milk is made using either traditional or classical rennet. A mesophilic mixed culture is usually used as starter. When coagulation is completed, the curd is cut into cubes of 2-3 cm edge, left for about 5-10 minutes to drain part of its whey and then it is transferred gradually to perforated moulds for drainage, without any pressure. After 2-3 hours the moulds are turned upside-down and left motionless to complete draining. The day after, the drained curd is cut into slices -Feta - and dry salted. This is repeated every 12 hours (4 times in total) and then the cheese is left at about 16ÆC until becomes quite acid (pH 4.4-4.6). Afterward, it is placed in cold storage under 3°-4ÆC, where it remains at least two months. During that time, complicated biochemical changes take place, leading to the unrepeated organoleptic characteristics of Feta cheese globally recognized and protected within the E.U.

Trading of the Product

It is produced by Greek dairy industries and Greek local dairies and sold throughout Greece through retail shops and supermarkets. Consumption of Feta cheese is heavily concentrated in Greece. It is estimated that more than 12 Kg of Feta cheese is consumed per citizen, on an annual basis.

#### Use(s) of the Product

It is consumed as table cheese, in the famous Greek salad, in cheese-pies and quite often as "saganaki", that is fried cheese.

# Estimate of Production and Demand Trends

Production of Feta cheese has now reached around 140,000 tons per year, covering mainly internal needs and some exports. The demand is expected to rise in the future.

# Formaella Arachovas

by Emmanuel M. Anifantakis | Parnassou







#### Origin

The origin of the name is unknown.

# Type of Product

Hard cheese with strong and piquant taste and rich flavour, produced in small cylinders of 400g weight. It is a P.D.O. cheese, made from goat's milk, or sheep's milk, or mix of both.

# Area of production

It is produced in the region of Arachova at the foot of Parnassos Mountain - Greece.

#### Techniques and Scale of Production

Coagulation of raw goat's milk takes place at 36-38°C by using traditional rennet in such a quantity as to have the curd ready for cutting after 40 minutes. The curd is cut into pieces the size of which are kernels corn, then stirred slowly and scalded at 42-44°C, the curd settles down at the bottom of a cheese vat and is pressed by hand to create a solid mass. Most of the whey is removed and the curd is cut into small pieces, each one weighing enough to make a Formaella. Each piece is transferred to a mould called "tirovoli" and pressed by hand to expel whey and avoid air pockets in the cheese mass. The cheese is turned over twice in the moulds to ob-

# Formaella Arachovas

#### Parnassou

tain their form and salted with fine grained salt. Next morning, the moulds are removed and cheeses are transferred to caves for ripening for at least 3 months.

#### Trading of the Product

Most of the cheese production is sold directly to the local market and especially to tourists visiting the ski resort at Mount Parnassos.

#### Use(s) of the Product

It is mainly consumed as fried cheese. *Estimate of Production and Demand Trends* 

The estimated amount is approximately 20 tons. As the ski resort is expanding and Formaella is very popular among the visitors, the production of this cheese is expected to increase.

Greece

Gala

by J.Papadimitriou & G. Kalantzopoulos



#### Origin

Fresh goat milk

#### Type of Product

Fresh Goat's Milk Pasteurised & Homogenized. Packed in PURE-PAK cartons of 0.5 & 1 litre

## Area of production

Goat's milk is bottled by CRETALAT-KRI-ARAS SA in Heraklion-Crete/GREECE

#### Techniques and Scale of Production

Milk producers place their Fresh Goat's milk into refrigerated tanks (which are located all over Crete) twice a day. Road tankers collect the milk directly from the refrigerated tanks once every day. Finally, milk is transported directly to dairy plants where it is processed (filtration, fat content standardisation, deodorization, pasteuri-



sation and homogenisation) and packed in gable top cartons of 0.5 and 1 litre. There are two versions of the product, one with 4% fat content and another with 1.5% fat content (light product).

#### Trading of the Product

The company owns a fully-integrated distribution network on the Island of Crete (refrigerated trucks, drivers, salesmen). A similar network is developing in Athens. The main commercial channel is supermarkets and small regional stores. Additionally, the product is marketed to people who shop at stores with traditional or organic products and search for wholesome food.

## Use(s) of the Product

Alone, at breakfast, during the day instead of a light meal, in coffee or as a cold beverage.

#### Estimate of Production and Demand Trends

For 2003, 703,360 kg were produced. A 300% increase in demand is expected over the next three years.

Greece

# Galomizithra

by Emmanuel M. Anifantakis





#### Origin

The origin of its name is from the Greek words "gala" = milk and 'Mizithra' = whey cheese

#### Type of Product

Traditional fresh soft cheese, packaged in 0.4, 1, 5, 10 and in 10-kg containers. Soft and creamy texture with white colour. It is produced from pure Cretan goat milk. Unique mild and sourish taste and flavour.

## Area of production

It is produced in the region of the Island of Kriti, Greece.

## Techniques and Scale of Production

It is a product made completely from of goat's milk. The raw milk is filtered and pasteurised. Afterwards, rennet is added at a tem-



perature of approximately 32°C. After 24 hours the curd is cut and drains from "filtering" bags. It remains until cheese moisture has dropped to the appropriate level. Then, it is carefully mixed with salt and packed in plastic bags.

#### Trading of the Product

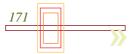
Galomizithra is made on small farms and dairies. It is sold mainly at local markets, but efforts have been made for exports abroad and to the Greek mainland.

# Use(s) of the Product

This cheese is served plain with bread or in salads. In Crete there is a traditional plate called "Dakos" which consists of a piece of rye rusk with smashed tomato, olive oil, oregano and Pichtogalo on top of it.

#### Estimate of Production and Demand Trends

Over 40 tons of the product have been produced in 2003. Demand is expected to increase in the coming years.





Area of Production



#### Origin

Galotiri is a composite Greek word made from "gala" (milk) and "tiri" (cheese).

#### Type of Product

Galotiri is one of the oldest traditional cheeses in Greece. It is a P.D.O. cheese, with soft and spreadable texture. Its taste is sour and brackish. It is produced mainly from goat's milk, or a mixture of goat and ewe's milk.

## Area of production

It is produced in the regions of Epirus and Macedonia, Greece.

## Techniques and Scale of Production

Techniques of production or/and process (small scale production by craftsmen or industrial...) (10 lines maximum)
Goat's milk is boiled, placed in small vats and



left for 24 hours. Salt is added, mixed thoroughly and left for two more days during which it is stirred from time to time. Then, it is transferred into a skin bag. The same happens for the next milkings until the skin bag is filled, sealed and placed on a board. After some time whey is expelled through the pores of the skin bag. Galotiri is ready for consumption approximately after 3 months. Many cheesemakers are using wooden barrels instead of skin bags.

#### Trading of the Product

Galotiri is produced by small farms and dairies, intended mainly for self-consumption. A small quantity is sold at the local market.

## Use(s) of the Product

It is served at the start of the meal, preferably with warm hand-made bread and red wine and as an appetizer with ouzo.

#### Estimate of Production and Demand Trends

The estimated amount is approximately 50 tons.



Area of Production



# Origin

The origin of its name is unknown.

## Type of Product

Traditional Greek cheese mainly made from goats milk. Ewe's milk or a mixture with goat milk can also be used. It can be consumed either as fresh, with or without salting, or after ripening and preserving in brine. The shape of fresh cheese is spherical with many folds on the surface because of using cheesecloth to drain the curd. Ripe Kathoura is a rather hard cheese in the form of thick slices.

#### Area of production

It is produced on the Island of Ikaria, Greece.

## Techniques and Scale of Production

Raw whole goat milk is coagulated at 32 – 34°C using traditional rennet. The curd is get broken and heated to 38°C and left to settle. Then it is collected using cheese-cloth and drained without pressing. The next day it is either consumed, with or without salting –fresh Kathoura-, or it is cut into thick slices, salted and kept at room temperature for about two weeks. Then it is put in barrels or tin boxes, covered with

brine 8-10% NaCl and kept for at least 2 months to mature

# Trading of the Product

It is produced only on farms by shepherds and sold in local market to the local people, especially to those returning to visit home. It is also offered to tourists.

#### Use(s) of the Product

It is consumed as a table cheese as an appetizer with wine and ouzo, and as a snack.

# Estimate of Production and Demand Trends

The estimated amount is about 25 tons.







#### Area of Production

## Origin

The origin of its name is unknown.

# Type of Product

Fresh soft cheese with sour, brackish taste.

# Area of production

It is produced in Greece, in the region of Sterea and especially in Domokos municipality (Katiki Domokou-P.D.O).

## Techniques and Scale of Production

High pasteurised goat's milk of indigenous breeds is inoculated at 25°C with a mesophilic starter. When a pH of 6.0-6.2 is reached, rennet is added. After 24 hours the



curd is transferred to cloth bags for draining. When moisture of strained cheese is around 72%, salt is added, mixed to be homogeneous, packaged and stored at  $4^{\circ}$ C.

#### Trading of the Product

Katiki is made on small farms and dairies and sold by wholesalers, retailers and mini markets.

## Use(s) of the Product

It is consumed as an appetizer with wine, ouzo and in cheese pies.

# Estimate of Production and Demand Trends

The estimated amount is 50 tons. The demand is increasing due to informative promotional programs.



by Emmanuel M. Anifantakis





#### Origin

It is a composite Greek word made of "kefali" (head) and "tiri" (cheese). It is thought to have acquired its name either from its shape as a human head, or from the word 'Kefalos' which is a Greek for hat.

## Type of Product

Traditional Greek cheese made from goat's or sheep's milk or a mixture of both. It has a salty, piquant taste and a unique rich aroma which develops after at least 3 months of aging. Kefalotiri made from goat's milk is also traded under the name "Katsikisio" or "Gidino Kefalotiri".

# Area of production

There are many types of Kefalotiri which are traded using the name of the region where they are manufactured. It is produced in the regions of Macedonia, Sterea, Peloponissos, Thessalia, Kriti island, Epirus, Ionian islands and Cyclades islands, Greece.

# Techniques and Scale of Production

Raw or pasteurised goat's milk is used. Coagulation takes place at 34-36°C using traditional or commercial rennet in such a quantity as to produce a curd ready for cutting within 30 minutes. After cutting curd to corn kernel pieces, it is heated

# Kefalotiri



up to  $45^{\circ}$ C and left to settle for some minutes. Then it is put in moulds and pressed. After pressing, the cheeses are salted either at brine dairies or dry salting farms and left in ripening rooms at  $14\text{-}16^{\circ}$ C, for at least 3 months.

Estimate of Production and Demand

a table cheese or for grating.

cheese and use it in a large-scale either as

# Trading of the Product

It is produced in farms and dairies and is marketed by wholesalers, retailers and mini markets all over Greece.

# Estimate of Production and Demand Trends

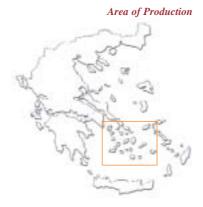
The assessed amount is 500 tons.

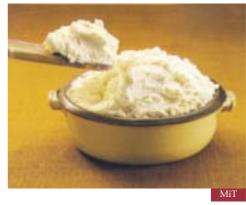
#### Use(s) of the Product

Greek consumers favour this kind of



by Emmanuel M. Anifantakis





# Origin

The origin of its name is unknown.

# Type of Product

It is a Greek P.D.O. goat milk cheese. It is also made with cow or sheep milk, or mix of them. The main characteristics are the intense salty and piquant taste, the soft and spready texture and the rich flavour.

## Area of production

It is produced in the region of the Cyclades islands, Greece. There are different types of Kopanisti. The most known are Mykonos and Tinos, the names of the islands where they are produced.

#### Techniques and Scale of Production

Raw milk is heated at 28 – 30°C and curdling takes place at 28-30°C with rennet. The curd is ready to cut within 90-120 minutes. After cutting, the curd is transferred to bags for draining. To facilitate draining, the curd is pressed by putting twice it weight on the draining bags. The drained curd is transferred into a cheese vat where it is carefully mixed with sodium chloride, then put in basins and transferred to the ripening room. After a week, a light-coloured layer of moulds becomes visible. At this stage, the curd is kneaded again and left in the basins until the moulds become again apparent. This process is repeated 3-4 times and cheese is carefully put into plastic barrels or clay vessels and pressed by hand. The surface is covered with a water-proof paper and cheese is transferred into cold storage where it is kept until its delivery to the market.

#### Trading of the Product

It is produced by small dairies in the Cyclades islands and sold at the local market and all over Greece in small shops and supermarkets.

# Use(s) of the Product

It is consumed as a table cheese, in cheesepies and as an excellent snack with wine and ouzo.

#### Estimate of Production and Demand Trends

The assessed amount is approximately 20 tons.





Area of Production





#### Origin

It is a composite Greek word made of "krasi" (wine) and "tiri" (cheese). In fact Krassotiri is a Greek cheese which is preserved in wine.

## Type of Product

Semi hard to hard cheese made from pure goat's milk. Sheep milk as well as a blend with goat milk are also used to make this cheese. Cylindrical shape with a diameter 4-6 cm, high 15-20 cm. Colour and flavour varies according to the quality of wine used during production. Krassotiri has compact texture with some eyes.

#### Area of production

It is produced on the Island of Dodecanissos, Greece.

## Techniques and Scale of Production

Seasonal product made on farms by shepherds from March to June. Raw milk from two successive milkings is used. That from the afternoon milking is boiled and put in pots where it rests up to the next morning. Then the cream is removed and the boiled milk is mixed with the fresh milk from the morning milk and coagulated at



#### Krassotiri

34°C using traditional or commercial rennet. After 60 minutes the curd is cut in small pieces, transferred to moulds - (tirovolia) - for draining and shaping. After draining the cheese is salted, set in tins and transferred to a cool place. Two days later, whey is drained from the cheese and the brine sediment covers it. The cheese remains under these conditions for 20-30 days for ripening, then is removed from the brine, set on shelves to dry and put in pots. Wine sediment (*possia*) or red wine is added to cover the cheeses.



Sales are directly from farms. It is sold to local people and especially to those coming back home for summer holidays.

# Use(s) of the Product

It is consumed as a table cheese or as an appetizer with tomatoes and ouzo.

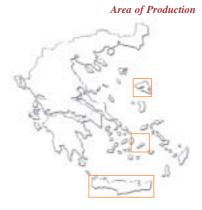


Estimate of Production and Demand Trends

The assessed amount is 5 tons.



by Emmanuel M. Anifantakis





#### Origin

Ladotiri is a composite Greek word made from the word Ladi (olive oil) and tiri (cheese). Ladotiri is a cheese which is preserved in olive oil.

# Type of Product

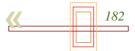
Hard cheese made from goat and sheep milk or mixtures of both. It is cylindrical shape and weight 1-2 kg, with a compact texture and a few eyes. The main characteristic of this cheese is it is rubbed with olive oil. Ladotiri has a strong typical flavour affected by olive oil and a salty taste.

# Area of production

The Greek islands have many types of Ladotiri. The most known are that of Mitylene, which is a PDO, Naxos, Zakinthos and Criti.

#### Techniques and Scale of Production

Raw whole or pasteurised goat's milk is used. Coagulation takes place at 34-36°C,



#### Ladotiri



usually using traditional rennet. Curd is cut in particles of rice grains and scalded to 45°C. Then, it is left to settle for some minutes, put in mould, pressed, salted and placed in ripening rooms 14-16°C for at least 3 months. During that time the cheeses could either periodically coated with olive oil or olive oil sediment or put in olive oil where they remain till their delivery to the consumers.

# Trading of the Product

Ladotiri is a traditional cheese produced mainly on farms by shepherds for self-consumption and in dairies. It is sold in local markets and supermarkets to the local people, especially to these coming back to their origin place as tourist.

#### Use(s) of the Product

Ladotiri is mainly used as a table cheese, as an appetizer with wine and ouzo and as a grating cheese. In the past, farmers consumed it with bread as a snack.

#### Estimate of Production and Demand Trends

The estimated amount is 60 tons.



by Emmanuei M. Anijaniakis



# Origin

Its name comes from the ancient Greek word "manos" which means cheese.

# Type of Product

Hard cheese made from goat's milk, with a flat cylindrical shape and weight around 500 gr. Its texture is compact with a few holes. Its flavour is pleasant, greatly affected by the wine must, in which it ripens.

# Area of production

It is produced in the Aegean Islands, Greece.



#### Techniques and Scale of Production

Raw, whole, goat's milk of indigenous breeds is used. Coagulation takes place at 35-36°C using traditional or commercial rennet. As the curd is formed, usually after 30 minutes, it is broken, scalded at 45°C and transferred to small moulds for draining. When draining is completed, cheeses are salted and ripened for 20-30 days. Then, they are placed in wine must until their delivery to the market.

# Trading of the Product

Shepherds make Manoura only in small farms. It is sold mainly to local consumers and tourists, although effort is made to deliver it to wholesalers and retailers all over Greece.

# Manoura



Manoura is usually served at the end of the meal. It can also be used as an appetizer with wine and ouzo. In the past it was mainly consumed by shepherds with bread during breakfast.



# Estimate of Production and Demand Trends

The assessed amount is 5 tons. Due to its unique taste, its production is expected to increase.



Area of Production



### Origin

The origin of its name in unknown.

#### Type of Product

It is an exceptional, traditional Greek whey cheese. It is a P.D.O. cheese, produced from whey derived from goat's or sheep milk or mixtures of both, and milk and/or cream. It has a cylinder shape, is 10-12 cm in diameter and 20-30 cm high, with a unique taste and flavour.

# Area of production

It is exclusively produced in the regions

of Thessalia, central & western Macedonia, Greece.

### Techniques and Scale of Production

According to the usual practice, the coagulation of milk takes place at low temperatures and the cutting of curd is carried out soon and in very small particles. As a consequence, whey obtained by this method is especially rich in fat content, over 2%. Best quality is obtained from whey with a fat content more than 2.5%. To produce Manouri, the whey must be heated to 90–92°C for 30minutes. At this temperature, the whey proteins are denatured and give a curd which is concentrated on its surface. The drainage of Manouri



# Manouri

takes place in cotton bags which give the cheese its characteristic shape and size.

# Trading of the Product

It is mainly produced in dairies, sold to small shops and supermarkets all over Greece. There is also some exportation.

# Use(s) of the Product

Consumed as a table cheese.

# Estimate of Production and Demand Trends

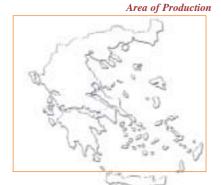
The estimated amount is around 500 tons.



Greece

# Manouromizithra

by Emmanuel M. Anifantakis





### Origin

Composite Greek word made from Manouri, a whey cheese rich in fat content >35%, and Mizithra, whey cheese with low fat content. Manouromizithra is a cheese with a fat content between that of Manouri and Mizithra.

slightly salted; it is consumed few hours or days after its manufacture and b) Dried Manouromizithram which is more salty and dried. Its shape is usually spherical or a truncated cone and weights about 1,500g. The texture is compact, with a typical, mild, pleasant flavour.

# Type of Product

Traditional Greek cheese made from goat or sheep milk whey or mixtures of both, derived from the production of hard cheeses. These are two types: a) Fresh

# Area of production

All over Greece, except the Island of Crete, where a similar product named Anthotiros is made.



# Manouromizithra

#### Techniques and Scale of Production

Whey from the production of hard Greek cheeses, mainly Kefalotiri and Graviera, is poured into cheese vats where it is heated while being stirred continuously until small curd particles appear. At this stage, heating increases up till the whey reaches a temperature of 90-92°C and stirring is greatly reduced and finally stopped. A thin layer of curd is formed on the surface of the whey; this is gradually transferred to cheesecloths or moulds to drain. After drainage the cheese is salted and transferred to cold store; the next day it is put in vacuum-packed plastic bags, and delivered to the consumers. When dried, Manouromizithra uses whey heated to higher temperatures and the cheese is salted more. Goat's milk is sometimes added to the whey at 70 °C.

# Trading of the Product

Manouromizithra is produced in small farms by shepherds and dairies. It is sold at the local market and all over Greece at

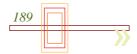
small shops and supermarkets. There are also some exports.

#### Use(s) of the Product

Fresh Manouromizithra is consumed as a table cheese, while the dried cheese is used for grating. It is also used in pies and different specialties.

# Estimate of Production and Demand Trends

The estimated amount is 300 tons. Its production is expected to increase.





Area of Production



# Origin

The origin of its name is unknown.

# Type of Product

Traditional cheese made from whey of goat's or sheep milk or mixtures of both, derived from the production mainly of Feta cheese and other white, brined cheeses. It is considered the ancestor of all Greek whey cheeses. There are two types: a) Fresh Mizithra which is unsalted or slightly salted and consumed a few hours or days after its manufacture and b) Dried Mizithra which is more intensely salted, dried and consumed as grated cheese.

### Area of production

It is produced all over Greece, exception the Island of Kriti, where a similar product named Anthotiros is produced.

# Techniques and Scale of Production

The whey for Mizithra production is poured into circular cheese vats with a capacity of 500 l, where it is heated while being continuously stirred, until small curd particles appear. At this stage, heating is speeded up until the whey reaches a temperature of 88-92°C, and stirring is slowed and finally stopped. A thin layer of curd is formed on the surface of the whey,

which is gradually transferred to cheese cloths or moulds to drain. The drainage is completed within 3-5 hours and the cheese is transferred to cold store; the next day it is delivered to market. Mizithra is sometimes sold in vacuum –packed plastic bags. For the production of dried Mizithra, the whey is heated to higher temperature and the cheese is salted in greater quantity.

#### Trading of the Product

It is produced on small farms and dairies, sold to wholesalers, retailers and mini-markets and delivered to consumers all over Greece. There are also some exports.

# Use(s) of the Product

Fresh Mizithra is consumed as a table cheese and dried Mizithra is grated.

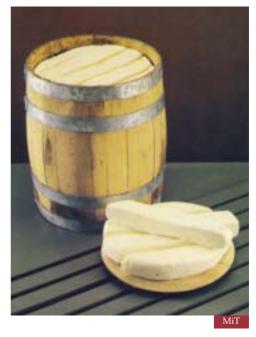
#### Estimate of Production and Demand Trends

The estimated amount is 200 tons.



by Emmanuel M. Anifantakis





#### Origin

Sfela (P.O.D.) Cheese. Its name has different derivations, but the most common one comes from the fact that during processing the curd is cut into *sfelides* (slices). Hence, the name Sfela.

# Type of Product

Sfela is a semi-hard, white, brined cheese with a strong flavour, produced from goat or sheep milk or mixtures of both. It is stored and ripened in brine in wooden or plastic barrels of 60 kg or tin cans of 16 kg, similar to those used for Feta cheese

#### Area of production

Sfela is produced in South Peloponissos, especially in Messinia and Lakonia, Greece.

# Techniques and Scale of Production

This cheese is made with raw, whole goat's milk from local breeds.

Coagulation takes place at 30-32°C, using traditional or commercial rennet. The curd is cut into rice-sized particles and while stirred continuously is heated slowly to 38°C. Then, it is left to settle at the bottom of the vat and carefully pres-

sed manually to form a solid, elastic mass. The pressed mass is cut into 4-6 kg pieces, drained using a cheese cloth and hung on hooks for about one hour to release its whey. The drained curd is transferred to a work table where heavy boards on placed on top of the curd as weights. Gradually, additional boards are added to press down on the curd. Pressing lasts for 40 -60 minutes and then the curd is sliced (sfelides), salted and packed in barrels. Brine of 18-20 Be is added and left at ambient temperatures for about 2 weeks. Then, the brine is replaced by a new batch (8-10% NaCl). The cheese is kept for some a few days at ambient temperatures and then at 4-6°C for at least two months of aging.

# Trading of the Product

Sfela is produced by local dairies and sold throughout Greece in retail shops and supermarkets.

#### Use(s) of the Product

Sfela is served as a table cheese, fried or grated.

#### Estimate of Production and Demand Trends

The estimated production is 25 tons.



# Stakovutiro

by Emmanuel M. Anifantakis



### Origin

It is a composite Greek word made of "staka" (product made of sour cream and flour) and "vutiro" (butter) Stakovutiro is butter oil obtained from the production of staka.

# Type of Product

Type of butter oil, traditionally made from sour cream from goat's milk and flour. It is also made from sheep's milk cream as well as a mixture of them. It has a strong, typical flavour, due to the goat's milk fat composition.



#### Area of production

It is produced in the region of Kriti Island. Greece.

# Techniques and Scale of Production

Raw or boiled goat's milk is placed in shallow basins and left for 24 hours to create a cream. The cream is collected and put in pottery vessels. The same is done for the next successive milkings. Some salt is added and the cream is left

# Stakovutiro

for some days to increase its acidity. Then it is boiled, the milk fat is separated, and finally collected in bottles of 500 g or 1 kg.

#### Trading of the Product

It is made on farms by shepherds, mainly for self-consumption. It is also sold at the local market in bottles.

# Use(s) of the Product

It is a butter substitute.

# Estimate of Production and Demand Trends

The assessed amount is 3 tons. Its production is declining year by year.



Area of Production



# Origin

The origin of its name is unknown.

# Type of Product

White, soft to semi-soft cheese, similar to Feta, which is ripened and kept in brine until it is delivered to the consumers. It is produced from goat's, cow's or sheep milk or mixtures of them. It has a salty, slightly acid taste and pleasant organoleptic properties. Telemes from goat's milk is marketed under the name "Katsikisio" or "Gidino Cheese in Brine".

### Area of production

It is produced mainly in the regions of Thrace and Macedonia, Greece.

#### Techniques and Scale of Production

It is a cheese similar to Feta. For its production, raw or pasteurized whole goat's milk is used. Active commercial starter is added and renneting takes place at 32-34°C. After 50-55 minutes, the curd is cut carefully into 1-2 cm cubes and left undisturbed for 10-15 min. Part of the whey is removed and the curd is transferred to the

#### **Telemes**

moulds lined with cheese-cloth. Then the curd is pressed, the cheese-cloth is removed and the pressed curd is cut to pieces which are introduced in 18° Be brine at room temperature for 12 hours. Then, the cheese is removed from brine and placed into tins, salted with granular salt and transferred to the ripening rooms at 16-18°C where it remains until the pH reduces less than 4.8. After that, the cheese pieces are placed in other tins, covered with brine of 7-8% NaCl, sealed and transferred to cold store to complete at least 2 months of ripening.



It is produced in small farms and dairies, sold by wholesalers, retailers and mini-markets. It is delivered to customers all over Greece.

# Use(s) of the Product

It is served as a table cheese, an appetizer with wine and ouzo, and in salads.



# Estimate of Production and Demand Trends

The estimated amount is 500 tons.



by Emmanuel M. Anifantakis



#### Origin

Trahanas, a goat milk and grain preparation.

#### Type of Product

Trahanas is a Greek traditional, dried culinary product made from the mixture of about 3 kg of goat, ewe or cow milk, or a blend of milks with 1 kg of crushed wheat or flour. Sometimes, eggs, tomatoes and carrot juice are part of the mixture.

# Area of production

It is produced throughout Greece, except for the Island of Kriti, where a similar product named Xinohontros is made.

# Techniques and Scale of Production

Raw goat milk, with or without acidification,

is heated to 95-100°C. Then, crushed wheat grains or flour is added gradually to form a paste-like product. This is left to rest until the next morning, when it is shaped into very small balls and dried in a special oven or in the sun. It is solid, pressed or unpressed. Sometimes,



eggs, tomatoes and carrot juice are added to the milk before the crushed grains or flour are added.

#### Trading of the Product

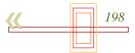
It is produced on farms and many plants in Greece and sold at retail shops and supermarkets throughout Greece. It is also exported.

# Use(s) of the Product

Trahanas is not consumed as is. Usually, it is used to make soup, pies and other specialities.

#### Estimate of Production and Demand Trends

Estimated production is 120 tons. Production and consumption are expected to increase yearly, as it is considered a healthy, traditional food.



Greece Xinohontros

by Amina Hellal





# Origin

#### Xinohontros

Composite Greek word made of "xino" (sour, acid) and "hontros" (crushed grains of wheat); Xinohontros is a product made from sour milk and *hontros*.

# Type of Product

Cooking. A dried traditional product made from a mixture of about 3 Kg of goat or ewe milk and 1 kg of *hontros*. It is considered as one of the most ancient foods of Kriti. It has an acidic taste and characteristic flavour.

# Area of production

It is produced in the region of Kriti Island, Greece.

### Techniques and Scale of Production

Raw goat's milk from successive milkings is placed in small containers and left at room temperature for about a week. Some salt is added, and milk is stirred time to time. When it obtains the right acidity and flavour is heated up to 95 – 100°C being stirred continuously. Hontros is gradually added till a paste like product is formed. Next day, this paste is cut in

small pieces and is dried at the sun. This dried product is called Xinohontros.

#### Trading of the Product

By tradition, Xinohontros, is used to be made by all the farmers of Kriti for selfconsumption, during winder time. Nowadays the number of the farmers has decreased, while the urban population has increased. Small enterprises have

been established to meet the needs of customers who live in other parts of Greece and abroad. It is sold to the local people, and especially to those living outside of Kriti, at the local market and supermarkets.

#### Use(s) of the Product

It is consumed fresh. After drying it is used for soup preparation. It is also an ingredient in many traditional local foods.

# Estimate of Production and Demand Trends

60 tons. Since it is considered a very popular traditional food, its production is expected to increase.





Greece

# **Xinomizithra Kritis**

by Emmanuel M. Anifantakis





#### Origin

It is a composite Greek word made of "xino" (sour, acid) and "mizithra" (type of whey cheese)

# Type of Product

It is a P.D.O. whey cheese, traditionally manufactured on the Island of Kriti, from goat or sheep milk or mixtures of two. Its colour is white with a soft, spreadable texture and strong flavour.

#### Area of production

It is produced in the region of Kriti Island, Greece.

#### Techniques and Scale of Production

For the production of Xynomyzithra, Myzithra whey cheese is first made. However longer cooking and drainage must take place to remove as much whey as possible from the curd. After drainage, some salt is added to Myzithra. This is followed by a careful mixing in order to obtain a uniform salting and homogenous

#### **Xinomizithra Kritis**

composition. Then the curd is placed in bags and pressed for about one week. During pressing, Myzithra losses whey and at the same time its acidity increases. After pressing, the already acidified Myzithra is salted once again and mixed in order to obtain uniformity. Then it is placed in barrels. The placing of Myzithra in barrels is carried out very carefully in order not to leave any air bubble in the mass of the cheese. For this, the filling procedure is carried out gradually while the cured cheese is pressed by hand. The barrels, filled with cheese, are transferred to a room of 5-10°C where they remain turned upside-down for a period of two months.

# Trading of the Product

It is produced mainly by large dairy plants, which have replaced small ones. It is sold at the local market through wholesalers, retailers and mini-markets.

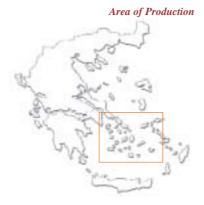
#### Use(s) of the Product

It is consumed as a table cheese or in cheese pies.

# Estimate of Production and Demand Trends

The estimated amount is approximately 40 tons. There is a seasonal growth in demand, due to the increase of tourism during summer months.







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#### Origin

It is a composite Greek word consisting of "xino" (sour, acid) and "tiri" (cheese). Xinotiri means a cheese with sourish taste.

# Type of Product

Fresh, soft cheese made from goat's milk, with an acid taste and pleasant organoleptic properties. After dehydration of the acidic curd, a hard cheese of cylindrical shape is obtained, with a compact texture and "eyes" in its paste.

### Area of production

It is produced in the Aegean Islands, mainly on Cyclades and the Island of Naxos, Greece.

# Techniques and Scale of Production

Seasonal product manufactured mainly in May, June and July. Raw or boiled whole goat's milk is used, from one or more milkings, which is filtered and put in small vessels at room temperature. Traditional or commercial rennet is then added. After 2 hours, curd is formed

which is left at same temperature for 24 hours to obtain a pH 4.5-4.6. Then, it is cut in big pieces and put in bags to drain for 24 hours. The drained curd is salted and mixed to become homogeneous and the next day is ready for consumption. When overproduction takes place, the acid curd is salted again and put in small, cylindrical moulds to dehydrate.

when aged, it serves as a grating cheese.

#### Estimate of Production and Demand Trends

The production is gradually increasing, since the cheese is appreciated by tourists during summer time. The estimate amount is 20 tons.

# Trading of the Product

Xinotiri is made and sold directly by shepherds and small dairies. It is sold to local consumers and tourists in traditional restaurants.

# Use(s) of the Product

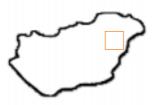
It is consumed as a table cheese, in cheese pies, as an appetizer with wine and ouzo;



# Berettyo Kecske Sajt

by Sándor Kukovics

Area of Production



#### Origin

The name of the cheese comes from the name of a little town called Berettyoujfalu and from the small river Berettyo, which passes through the town.

#### Type of Product

Full-fat, semi-hard goat cheese in natural form and also with red and green Hungarian condiments.

Shape: square

Packaging: 200-250 g, vacuum-packed.

Shelf life: 60 days.

Storage temperature: 4°C-6°C

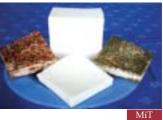
# Area of production

This cheese was originally made in the Bihar region of eastern Hungary.

At present, this kind of cheese is manufactured in a factory in a town named Berettyoujfalu, in the centre of the Bihar region. The town is 20 km southwest of the Hungarian-Romanian corner.

# Techniques and Scale of Production

Both rennet and cultures are added to pasteurised



goat milk to make this cheese.

The curd is heated to 32 -35°C. After setting, the curd is pressed and then the cheese is salted in brine. The cheeses ripen in vacuum-sealed bags for two months at 4-8°C. After curing, the cheeses are covered with condiments.

#### Trading of the Product

Cheeses with different flavourings are sold in small shops and in big chains. Several wholesalers also put them into circulation.

#### Use(s) of the Product

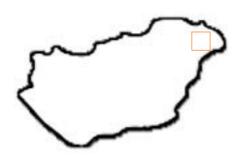
This cheese is added to different salads and to various ready-made foods. It can also be grilled alone. It is eaten as a first course and at the end of meals.

#### Estimate of Production and Demand Trends

Annual production is approximately 60,000 kg.



Area of Production





#### Origin

The name comes from the name of Borsod-Abaùj-Zemplén County of Hungary.

# Type of Product

Whole milk goat cottage cheese made from full-fat goat milk.

Hemispherical shape. 1.5 kg, vacuum bag. Shelf life of 30 days.

Storage temperature:  $4-6^{\circ}$  C

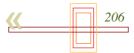
#### Area of production

This cheese is made in the north-eastern corner of Hungary in Borsod-Abauj-Zemplen County, very close to the Slovakian and Ukrainian borders.

This cottage cheese is manufactured in cheese factories in the village of Hídvégardó. The name of the producer is Milkfirst Ltd.

### Techniques and Scale of Production

Pasteurised goat milk is used to make this cottage cheese following an old



recipe. Both rennet and butter cultures are used in its production. The renneting temperature is 32°C – 35°C. The curd is cut into 4/4 cm pieces after 35 – 45 minutes of coagulation. After a pressing, the curd is further broken into pea-sized bits and then heated again. Upon attaining the necessary consistency, the curd is separated from the whey, put into cheese cloth and drained for 8 – 10 hours. After salting in brine, the chesses are dried for 24 hours on wooden racks. Finally, the cheeses are packed in vacuum bags and stored at 8°C-10°C until shipment.



Estimate of Production and Demand Trends

Approximately 4,000 kg.

# Trading of the Product

Cheeses are sold directly from the factory or marketed in small or large shops.

# Use(s) of the Product

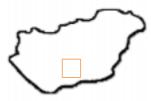
Cheeses can be eaten alone or in sandwiches.

"Csongrádi"

by Sándor Kukovics

Bio Kecske Sajt

Area of Production



#### Origin

The name Csongradi comes from the name of the town Csongrad, on the banks of the Tisza River in Csongrad County.

#### Type of Product

Full-fat, soft goat cheese made plain or with seasonings.

Form: Round or cylindrical.

Packaging: 300-3,000 g vacuum bag Optimum shelf life: 30 days Storage temperature: 4-6°C.

# Area of production

Made in a small, artisan cheese making facility in Csongrad in the southern part of Hungary.

#### Techniques and Scale of Production

The culture is added to pasteurised goat



milk at 38°C. After setting for one hour, rennet is added to the milk. After resting for 60 – 90 minutes, the curd is cut into pea-sized pieces. After the separation of the whey, salt and different seasonings are added to the curd. The cheese is formed and turned. After from 2 - 3 days of curing, the cheeses are packed in vacuum bags and are read for market. Basil, dill, garlic and chives are used as seasonings. A part of the production is smoked.

# Trading of the Product

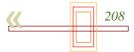
Flavoured cheeses are sold in Eco-markets and Bio shops.

# Use(s) of the Product

Cheeses are very good in salads and sandwiches. They are also eaten at the end of meals.

#### Estimate of Production and Demand Trends

Annual production is approximately 3,500 kg.



Hungary "Gida" Ecsedar
by Sándor Kukovics Kecske Sajt





#### Origin

The name Gida cheese comes from the word for a young goat ("gida" means "kid"). A line of goat cheeses are made and using this name. "Ecsedar" relates to the *cheddaring* method.

#### Type of Product

Semi-hard, smoked cheddar-style goat cheese of a cylindrical shape, packed in vacuum bags of from 250-300g. Shelf life is 120 days. Storage temperature ranges from 4–6°C.

#### Area of production

This, and related cheeses, are made by a cooperative cheese factory near the village of Ullo, 30 km south of Budapest in Pest County.

# Techniques and Scale of Production

Un-skimmed pasteurised goat milk is used



to made this cheese. Both rennet and culture are used for coagulation.

The renneting temperature is 30-32 °C. After 40 minutes of coagulation, the curd is cut into bean-pea sized pieces and after the removal it is moulded and formed. After the cheddaring, the cheeses are smoked and vacuum packed. The ripening of the cheeses go on in vacuum bag for two months at 4-8 °C.

#### Trading of the Product

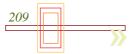
Cheeses are sold in small shops and in big chains.

# Use(s) of the Product

Cheeses could be consumed as the first and as the main course. They are also good for different kinds of pastries, or salads. Cheeses are even offered as dessert.

#### Estimate of Production and Demand Trends

Annual production is approximately 12,000 kg.

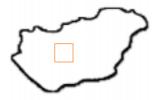


"Gida"

by Sándor Kukovics

Fanfár Kecske Sajt

Area of Production





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#### Origin

"Gida" Fanfár Goat Cheese (English)
The name Gida cheese comes from the word
for a young goat ("gida" means "kid").
Fanfar is part of the Gida line of cheeses.
Fanfar comes from the phase for "fantasy
land."

# Type of Product

Semi-hard, smoked, ripened goat cheeses with fermentation holes.

It is shaped like a braided leg and packed in 800-1,150 g vacuum bags. Shelf life is 120 days. Storage temperature ranges from 4-6°C.

# Area of production

This, and related cheeses, are made near the village of Ullo, 30 km south of Budapest in Pest County, Hungary, by a cooperative cheese factory.

#### Techniques and Scale of Production

Whole pasteurised goat milk is used to make this cheese. Rennet and culture are used for coagulation. The renneting temperature is 30–32°C. After 40 minutes of coagulation, the curd is cut, formed and dried. Salting is in brine. Following the trussing, the cheeses are smoked and aged for at least two months. After ripening, the cheeses are vacuum-packed.

#### Trading of the Product

Cheeses are sold in small shops and in big chains.

#### Use(s) of the Product

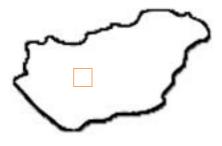
This cheese can be eaten as a first course. It can be grilled or served as a dessert.

#### Estimate of Production and Demand Trends

Annual production is approximately 15 tons.



Area of Production



#### Origin

Gida Semi-Hard Goat Cheese. The name Gida cheese comes from the word for a young goat ("gida" means kid) A line of cheeses is sold under this name.

# Type of Product

Semi-hard goat cheese comes in a cylindrical shape in vacuum packages weighing 1,000 – 1,250 g. They have a shelf life of 60 days and are stored between 4–6°C.

#### Area of production

This, and related cheeses, are made by a cooperative cheese factory near the village of Ullo, 30 km south of Budapest in Pest County.



#### Techniques and Scale of Production

Whole, pasteurised milk is used to make this cheese. Rennet and culture are used for coagulation. The renneting temperature is  $30-32^{\circ}$ C. After 40 minutes of coagulation, the curd is cut into pea-sized bits. After the whey is separated, the curd is formed and pressed. Salting is in brine. Ripening takes place in a vacuum bag for at least six weeks at  $4-8^{\circ}$ C.

#### Trading of the Product

Cheeses are sold in small shops and in big chains.

# Use(s) of the Product

This cheese can be eaten as an appetizer or main course. It is also used in salads and in pastries. It is also grilled or fried in bread crumbs.

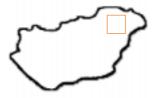
#### Estimate of Production and Demand Trends

Annual production is approximately 12 tons.

# **Kecske Gomolya**

by Sándor Kukovics

Area of Production



#### Origin

Borsodi Goat Cottage Cheese. The name of this cheese (Borsodi) comes from the name of the Borsod-Abaúj-Zemplén County of Hungary.

#### Type of Product

Full-fat goat cottage cheese made from whole fat goat milk. Shape is hemispherical; packaging: 1.5 kg vacuum bag. Shelf life is 30 days. Storage temperature: 4-6 °C.

# Area of production

This cheese is made in the northeast corner of Hungary in Borsod-Abaúj-Zemplén County, very close to the Slovakian and Ukrainian borders.

This goat, cottage cheese is manufactured in a cheese factory in the village of Hídvégardó.

# Techniques and Scale of Production

Pasteurised goat milk is used to make this cot-



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tage cheese following an old recipe. Both rennet and butter culture are used in its production. The renneting temperature is 32-35 °C. After 35-45 minutes of coagulation, the curd is cut to 4x4 cm clods. Following the previous pressing, the curd is cut into pea-sized pieces and it is heated again. Reaching the necessary firmness, the curd is removed from the whey and put into cheese clothes and drained for 8-10 hours. After salting in brine the cheeses dry for 24 hours on wooden racks. Finally, the cheeses are packed in vacuum bags and stored at 8-10 °C until shipment.

#### Trading of the Product

Cheeses are sold directly from the cheese factory or marketed in large or small shops.

# Use(s) of the Product

Cheeses can be eaten alone, or in sandwiches.

#### Estimate of Production and Demand Trends

Nowadays, annual production is approximately 4 tons.

Origin

# Laci Kecske Trappista Sajt

by Sándor Kukovics

Area of Production







Laci Trappist Goat Cheese (English). This cheese is named after the cheese master's first name. Laci is the nickname for

Type of Product

Laszlo, Laslie or Ladislaw.

Semi-hard goat cheese in a cylindrical shape weighing 300 g. It is packed either in a vacuum bag or in a wooden box. The shelf life is 90 days and it's stored at 4-6 °C.

Area of production

This cheese is made in Tolna County, southeastern part of Hungary, by a small cheesemaking factory in a town named Ozora.

Techniques and Scale of Production

Pasteurised goat milk is used to make this cheese. At about 30°C, the starter is mixed into the milk. After a 30 minutes rest, the

rennet is added. Coagulation takes about 40 minutes. The curd is cut into wheatsized pieces and then is pressed and heated. Salting is in brine. After about 20 days of curing, the cheeses are packed in a vacuum bag. Production is on an artisanal scale.

Trading of the Product

Trappist goat cheese is sold in small shops and in big chains. Several wholesalers are involved in selling.

Use(s) of the Product

This cheese is recommended for sandwiches and cold dishes, as an ingredient and as an after-dinner dish.

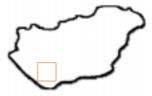
Estimate of Production and Demand Trends

Annual production is approximately 500 kg.

# Laci Lagy Kecske Sajt

by Sándor Kukovics

Area of Production



#### Origin

Laci Soft Goat Cheese (English). The name Laci comes from the first name of the cheese master. Laci is the nickname for Lazlo, Laslie and Ladislaw.

#### Type of Product

Soft goat cheese in a brick shape, packed in a vacuum bag weighing from 100 - 200 g. It has a shelf life of 60 days and is stored at  $4-6^{\circ}$ C.

# Area of production

This cheese is made in Tolna County in the southwestern part of Hungary. It is manufactured by a small cheesemaking cooperative in the town of Ozora.

# Techniques and Scale of Production

This cheese is made with pasteurised goat milk. At about 30°C, the culture is mixed into the milk. The rennet is added after 30



minutes of resting time. Coagulation takes about 40 minutes. The curd is cut into half pea-sized bits, pressed and then heated. The curd is separated from the whey, salted, mixed with different flavourings, formed and pressed. After about a week of ripening, the cheeses are packed into vacuum bags. The entire production is on an artisan scale. Garlic, hot paprika, chives, dill, caraway seeds and smoked ham are used as seasonings.

### Trading of the Product

Cheeses with different flavourings are sold in small shops and in big chains. Several wholesalers are involved.

#### Use(s) of the Product

This cheese is recommended for cold dishes and sandwiches.

#### Estimate of Production and Demand Trends

Annual production is approximately 2 tons.

# Ménfoi Kecskesajt

by Sándor Kukovics

Area of Production



#### Origin

Menfoi Goat Cheese. The name of this cheese, Menfoi, comes from the name of a little village, Gyormenfocsanak, in the north-western corner of the country, near the Austrian border.

#### Type of Product

Semi-hard goat cheese with different flavourings.

Shape: brick - Packaging: 2 kg-25 kg blocks, slices in vacuum packs. - Shelf life: 60 days - Storage temperature: 4–6°C

# Area of production

This kind of cheese is manufactured by a cheese factory in a town named "Gyòr", the capital town of Gyòr-Moson-Sopron County. The factory is near the Budapest-Vienna high way. The manufacturing company is "TEBIKE"

# Techniques and Scale of Production

Pasteurised, whole goat milk, along with



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rennet and culture, is used to make this cheese. After 40 minutes of coagulation, the curd is cut into pea-sized bits, heated and pressed and then formed. Dill seeds are added to the curd before forming. The cheese is salted in brine. After salting and drying, some of the cheeses are smoked. These cheeses are cured in a vacuum bag for two months at 4 -8°C.

#### Trading of the Product

The plain, smoked, dill and smoked dill cheeses are sold in both small shops and big chain stores. Several wholesalers are involved in the marketing process.

# Use(s) of the Product

Cheeses could be consumed as a first course, and also at the end of meal. They are also very good for different salads, or for various ready-made foods.

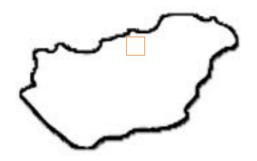
#### Estimate of Production and Demand Trends

The annual production at present: approximately 20,000 kg.

# Soma's Kecskesajt

by Sándor Kukovics

Area of Production





#### Origin

Soma's Goat Cheese. The name of this cheese is taken from the first name of the owner of the cheese factory.

# Type of Product

Part-skim, soft, goat cheese. Either plain or seasoned. This plump, round, white-yellow cheese bears the print of the cheese basket. The inside is sometimes moist to the touch, with holes. The rind is thin, dry and slightly crumbly. It comes in 1.8 – 2.5 kg rounds or packages, from 150-350 g, of sliced cheese. Shelf life is 60 days. Storage temperature is from 4–6 °C.

#### Area of production

The goat milk for making cheese comes from the north-eastern corner of Hungary, in Szaboles-Szatmar-Bereg County. The cheese itself is made in a factory, Soma's Trade, on the outskirts of Budapest.

# Techniques and Scale of Production

This cheese is made according to the traditional, peasant method in a small-scale factory. The milk is pasteurised at 72°C for 40 seconds. After cooling, rennet is added at 34°C, at which time butter culture is also added. The curd coagulates for 30 minutes. The curd is cut and then sets for another 30 minutes before the curd is separated from the whey. At that point, salt and seasonings are added. Plastic forms are

# Soma's Kecskesajt

used and the pressing is done with weights for 6 hours. After pressing, cheeses are aged for 4-5 days at 18°C. Finally, the cheeses are packed in vacuum bags.



Cheeses are sold to small shops and to supermarkets. The largest volume of sales occurs at the hypermarkets.

### Use(s) of the Product

These cheeses can be eaten as a first course, as a warm or cool snack and at the end of a meal.

### Estimate of Production and Demand Trends

Annual production is about 10,000 kg.



Distribution of the main Italian goat cheeses



# Agrino delle Orobie

by Giuseppe Giovannoni





### Origin

This cheese has been made for a long time from the milk of the Orobica goat breed during brief periods in spring and autumn when the milk is not used to make Bitto cheese. The name "agrino" probably refers to its strong taste; it is produced in the *malga* (simple shelter/dairies in the mountains) at average altitudes, before and after summer pasturing.

### Type of Product

These little, cylindrically-shaped cheeses weigh 100-150 g. They are very creamy and strong tasting when fresh. When aged, the texture looks like *Grana* but is always

chewy, and often covered by natural mould.

### Area of production

This mountain cheese is made in the Orobic area, including the low Valtellina (Sondrio), the Valsassina (Lecco) and the

Orobica goat is a rustic and spectacular breed known for its lush mantle, long hair and long, twisted horns. They graze among chestnut trees, firs, locust trees, heathers and ferns. Each day they pasture on slopes at around 400 - 500 m and return to their stalls for a good ration of mountain hay before their evening milking.

# Agrino delle Orobie



upper Val Brembana and Val Seriana (Bergamo) in the Lombardy region of Italy.

## Techniques and Scale of Production

A drop of rennet and a glass of whey from the previous milking is added to small quantities of fresh raw milk in 10-12 l. buckets. The coagulated milk rests for about 24 hours; thereafter, the curd is ladled onto a very thin cheesecloth and allowed to drain for 12-18 hours in a warm environment (18-20°C). About a kilo and a half of cheese is obtained, then salted and put into forms of 100 or 150 g. After a couple of days, the cheese can be eaten, but it can also be aged for some months.

aged, Agrino assumes a grainy, chewy consistency. Agrino is ideal with polenta, although its taste softens with this use.

### Use(s) of the Product

Fresh Agrino delle Orobie has a creaminess that makes it easy to be smeared on the bread, typically rye bread. It is also used in cooking for various fillings. When

# Biscotti "I Caprotti"

by Antonella Recchini, Maria A. Luciani, Maurizio Sperati





### Origin

I Caprotti shortbread.

### Type of Product

Goat milk shortbread biscuits made without cow milk, eggs or egg yolks as an alternative for those who are allergic to cow milk and eggs. Half-kilo packages.

### Area of production

Town of Teramo (TE) in the Abruzzo region, in the mid-eastern part of Italy.

### Techniques and Scale of Production

Process: ingredients are mixed in three phases at 22-25°C; dough is pressed into shapes, baked, cooled, packaged, stored and shipped.



### Trading of the Product

Amalattea, the Italian firm, specialises in the production and marketing of goat's milk products (milk, cheeses, yoghurts, ice creams, biscuits). Caprotti shortbreads are advertised in a pharmaceutical publication which is distributed throughout Italy.

### Use(s) of the Product

These biscuits are marketed for their nutritional and taste values. The use of goat milk makes this product especially suitable for those who cannot tolerate cow's milk and who have to control cholesterol levels. Both children and adults can eat Caprotti shortbreads as a high-energy breakfast, snack or dessert.

# Estimate of Production and Demand Trends

Estimated production for 2004: 250,000 boxes.

### **Blu Grater**

by Marco Buzzi





### Origin

Grater Blu. This farmstead blue cheese is named after a hill on the farm where the goats graze. "Blu" in Italian is the word for the colour blue and of the *Penicillium Roqueforti* mould that grows in this cheese.

### Type of Product

This is a cylindrical, blue cheese with a creamy, soft texture. The taste is lightly spicy and mouldy. It is aged from 60-90 days and comes in forms weighing about 3 kg.

### Area of production

For the most part, this cheese is produced in the Schizzola Valley in Oltrepò Pavese, part of the Province of Pavia, Italy. There are several dairies in Italy that produce blue goat cheeses using similar techniques.

### Techniques and Scale of Production

Raw goat milk is used, exclusively from goats raised on the farm. Starters are added at 35 - 36°C; after a rest of 20 - 40 minutes, the curd is ready. It is cut into nut-sized pieces, left to rest for a short time and then transferred to moulds.

The cheese is dry-salted. After a week, it is perforated to allow moulds to grow. Curing lasts 60 – 90 days in a cheese cellar. Production is artisan.

### Trading of the Product

It is sold directly from the farm or to local markets by the cheesemaker.

### Use(s) of the Product

Grater Blu is a soft, creamy, balanced, lightly spicy cheese. It is melted over corn *polenta* and eaten at the end of the meal, either alone or as part of a cheese course. It is served with chestnut honey or a fig *mostarda* (sweet, pickled fruit). It pairs well with *passito* (dessert) wines.

# Estimate of Production and Demand Trends

No data available for Italian production. From I Grater Farm, approximately 320,000 kg/year.







### Origin

The name of this goat cheese probably has a Provençal origin. Southern Piedmont has historical relationship with Provence.

### Type of Product

This cheese is a combination of goat milk and goat cheese. It has a soft, creamy, spreadable consistency. It has a milk white or creamy colour. It has a very intense aroma and taste.

### Area of production

It is produced in the Stura Valley of Demonte, in the Province of Cuneo, which in the Piedmont region of Italy.

### Techniques and Scale of Production

The process consists of mixing left-over



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cheese and fresh goat milk in glass or terra cotta containers. This cheese ferments quickly and requires continuous remixing. It is seasoned with a distillate of juniper or an infusion based on leeks. The ripening occurs in the mixing containers and can take from a few days to several weeks. With time it becomes stronger. It is similar to Piedmont's traditional "Brus," but has a more balanced taste profile.

### Trading of the Product

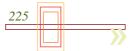
It is produced on a few farms that market this cheese directly or through distributors to selected speciality shops.

### Use(s) of the Product

Cachat is often eaten at the end of a meal and at the end of a cheese tasting. It can be served on bread and paired with grappas.

# Estimate of Production and Demand Trends

The production is about 200 kg per year.



### Cacioricotta

by Virginia Aloi





### Origin

Cacioricotta, from *cacio* – cheese and *ricotta* – ricotta cheese, is made from half cheese protein and half whey protein. The processing temperature of the milk is characteristic of both ricotta and cheese.

### Type of Product

This cheese has a cylindrical shape, white colour, no rind when fresh, but with a straw-like surface when mature. It is firm, compact, eyeless. The weight varies from 400-600 g.

### Area of production

Upper Jonio Cosentino in the Calabria region of southern Italy.

This cheese is produced throughout Southern Italy, with little changes in technology and shape, both artisan and medium production scale.

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# Techniques and Scale of Production





90°C and then cooled to 38°C, at which point a paste of kidskin or lamb is added. Upon coagulation, the curd is broken with a wooden stick to create granules the size of rice grains. After this, the curd is gathered and the bottom of the vat and then put in small wicker baskets. A dry salting follows.

### Trading of the Product

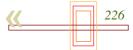
Sale is directly from the farm or from local markets.

### Use(s) of the Product

The fresh, young cheese is used as a table cheese, in salads or on a cheese board. The aged form is grated on hand-made pasta dishes and other traditional recipes.

# Estimate of Production and Demand Trends

No data available.



# Caciotta caprina del

by Patrizia Nappa

Matese

Area of Production





### Origin

Goat Caciotta of the Matese (English) Caciotta Caprina del Matese is produced in the rough terrain of the Matese mountains in the Province of Caserta where, since time immemorial, few goat breeders exploited the most inaccessible pastures. The goats themselves graze where they choose.

### Type of Product

Caciotta caprina of Matese has a cylindrical shape 6-7 cm high, 15-20 cm in diameter and a weight of 1 kg or a bit more. The rind is white-yellow and the

paste is ivory-white with a compact structure. The aroma is delicate and pleasant. The taste is sour and strong.

### Area of production

Goat caciotta is produced in the raw, inaccessible area of the Matese mountains in the Province of Caserta in southern Italy.

### Techniques and Scale of Production

It is made with whole, raw goat milk. The evening milk, mixed with the morning milk, is filtered and heated to 3839°C. Coagulation occurs with the addition of kid rennet produced artisanally on the farm. The curd is manually broken into 1 cm diameter granules, set in perforated containers (fuscelle) and set to drain on a tilted wooden table (timpagno) for one to two days. Salt is rubbed on the cheese once a day for three days, accompanying by daily turning. After 7 days, the forms are dipped in fresh water for 24 hours, dried and put to age on wooden tables. After 1-2 months of aging, they are washed again and rubbed with a mix of olive oil and white vinegar.

### Trading of the Product

The Caciotta Caprina of the Matese is most often sold directly from the farms that produce it. It is especially appreciated in the zone of production and by consumers who search for hard-to-find flavours of traditional cheeses.

### Use(s) of the Product

It is mostly consumed in slices, generally not more than 2 cm thick, accompanied by strong, aromatic, red wines, typical of the area.

# Estimate of Production and Demand Trends

Caciotta Caprina is just a few quintals because its production is limited by small number of goats in the area.

# Caglio in pasta di capretto

by Virginia Aloi







### Origin

Caglio in pasta di capretto (Italian) Kid's Rennet (English)

### Type of Product

This substance is a soft, mustard-coloured paste that is packaged in glass, earthenware or plastic containers.

### Area of production

Produced throughout Calabria and other regions of southern Italy.

### Techniques and Scale of Production

This is made from the dried stomach linings of suckling kids that have been fed exclusively with milk. Sometimes

the paste is smoked. Once dried, the abomasum is carefully cleaned, cut in little strips, transformed into a mash with the addition of a small quantity of salt. The paste is packaged, sealed and ready for use.

### Trading of the Product

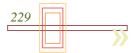
Direct sales from the farm.

### Use(s) of the Product

This rennet is used in cheese making. The quantities used vary in relation to a number of factors (quantity of milk, milk type, acidity of the milk, temperature of coagulation). Doses are empirically established. Before use, the rennet is dissolved in lukewarm water and carefully filtered.

### Estimate of Production and Demand **Trends**

No existing data on production quantities.



# Canestrato d'Aspromonte

by Girolamo Grisafi, Ruth Militano



### Origin

Canestrato d'Aspromonte. The name "canestrato" derives from the rush basket moulds that shape this cheese. "Aspromonte" refers to the mountainous zone in the Piedmont region called the Massif of Aspromonte.

### Type of Product

This cheese is processed with pure goat milk, pure sheep milk or a mixture of the two milks. Its weigh varies between 1.5 – 4 kg. The diameter is ca. 15 cm and the height is ca. 5 cm. The yellow rind has the impression left by the basket as well as light covering of white mould. The paste is white or ivory colour.

## Area of production

The mountainous Aspromonte Massif in Piedmont and the Jonic and Tirrenic slopes in Calabria, south Italy.



Techniques and Scale of Production

The cheese is produced by small dairies which use raw, whole milk. The milk is coagulated between 26-30°C. The dairies produce their own liquid rennet. The curd is sliced thinly for a few minutes with a wooden knife from the wild pear tree. The granules of curd are collected from the bottom of the vat and put in rush baskets. The press is lengthy and precise. After a dry salting, the cheeses are aged from 2-3 months.

### Trading of the Product

This cheese is sold from the dairy.

### Use(s) of the Product

It is eaten as an appetizer or first course.

### Estimate of Production and Demand Trends

Production is several quintals.



# Caprino a pasta cruda

by Antonio Pirisi





### Origin

It is a cheese exclusively produced with goat milk. The name refers to the technology of production, similar to the Fiore Sardo, sheep cheese of the dairy tradition of Sardinia. So, we can say that this cheese has in Sardinia ancient roots.

### Type of Product

It generally has a "back of mule" form, with convex high or cylindrical.

The weight varies from 1.5-3.5 Kg. The rind is hard, yellow colour, that dark browns with the progress of seasoning. The paste is white with diffused and small eyes.

The taste, spicy and aromatic, is characterized by the classical goat taste.

# Area of production

Throughout Sardinia (Italy). Particularly important are the hilly and mountainous areas of Gallura, Ogliastra, Sarrabus and Sulcis.

### Techniques and Scale of Production

The handicraft production foresees the use of whole raw milk of goat coming from a sole flock. Milk, filtered, is brought to the temperature of 30-35°C and added

with paste kid rennet. The coagulation lasts 30 minutes around. The cutting consists in getting granules of the rice grain size. The curd, allowed to deposit on the bottom of the vat, is extracted, cut and transferred into the forms, where it is slightly pressed. The forms are then burnt for immersion in «scotta» at the temperature of 60-70°C. The salting is made in saturated brine for 24-48 hours. After the salting, the forms are filled with smoke for 10-15 days. During the seasoning, made to environmental temperature in basement locals for 6-8 months, the cheese is washed with vinegar and salt, dried and brushed with oil of olive.

### Trading of the Product

The product is directly sold in farm by the shepherd-cheesemaker or in the specialized shops. A limited industrial production, that allows this cheese to reach

greater markets than local, also exists. The typical consumer is interested in taking traditional and healthy products.

### Use(s) of the Product

Caprino a pasta cruda cheese doesn't represent anymore, as in the past, the principal food, accompanied to the bread, of the rural population tied up to the goat breeding, but it finds however frequently place on the table of Sardinians. The uncooked Caprino is a cheese that shows strong personality for his accented goat taste. According to the degree of maturation it can be consumed both as table cheese and from grater. In the first case it is used as appetizer, accompanied to salted meats and bread, or at the end of the meal. In the second case it is used as principal ingredient or for the flavouring of pasta.

### Estimate of Production and Demand Trends

Few data are available for produced amount. The request is increasing for the renewed interest by the modern consumer toward the products derived from goat milk, considered dietetic and with healthy properties.

# Caprino della Carnia Formadjele di cjavre

by Roberto Vallusso, Edi Piasentier





### Origin

**Caprino della Carnia -**Other names are possible depending on the place of production, for example: Formadiele, Formaele, Formaele, Formaele, Formadeut di cjavre - Jama classico.

### Type of Product

Soft cheese – cylindrical shaped, height 6-8 cm, diameter around 12-15 cm, weight 800-1,200g.

### Area of production

Whole territory of Friuli-Venezia Giulia Region, north Italy.

### Techniques and Scale of Production

This cheese is obtained from raw or heat-treated (not pasteurised) goat milk with the addition of ferments, preferably farm selected, or by adding «lattoinnesto» (milk from cheesemaking of previous process). The curd is obtained in 30-40 minutes at 34-35°C; the clot



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is first cut in pieces of 5-10 cm width and, after a rest of ten minutes, broken into pieces the dimension of a hazelnut; to obtain a more aged product, a slow warming to 42-43°C frequently is done. The curd is then placed in moulds; cheeses in mould are turned from time to time; cheeses are salted by manual sprinkling or in brine. Cheeses are ready for eating after 2 or 3 week of seasoning.

### Trading of the Product

There are three main commercial channels: direct sail to consumers; direct utilization on farms in the agro-tourism sector. A few specialised farms supply restaurants or markets.

### Use(s) of the Product

Culinary

### Estimate of Production and Demand Trends

The estimated amount of production is around 82 tons.

# Caprino della Val Vigezzo

by Enrico Surra





### Origin

Caprino della Val Vigezzo, the goat cheese from the Vigezzo Valley in the Province of Verbania, is sometimes called Caprino Ossolano. This product is registered in the list of the Prodotti Agroalimentari Tradizionali (Traditional Agri-food products) of the Piedmont region (D.lgs 173/98 and DM 350/99).

### Type of Product

It is generally made with goat milk or a mix of goat and cow milk. Cheeses of this type are called "tomini" of goat or "formaggini" (little cheeses). The rind is thin, cream white or strawy-yellow coloured, depending on the season. The paste is soft, compact and creamy white. The taste is delicate, with animal "notes."

### Area of production

This cheese is produced in the Vigezzo Valley in the Province of Verbania, particularly in the communes of Domodossola and Varzo in the Piedmont region of Italy.

# Caprino della Val Vigezzo

### Techniques and Scale of Production

The goat or mixed milk is heated to 35°C, starters and then rennet, usually powdered rennet are added. Coagulation takes around 45 minutes; then, the curd is broken up and the whey is drained. The curd is put in plastic shapes to drain for 24 hours, followed by a dry-salting. Cheeses are eaten fresh or slightly aged.

### Trading of the Product

The Caprino of the Vigezzo Valley is a farmstead product, mainly consumed in the zone of production. The chief common characteristic of all the producers, some natives of the zone and others from Lombardy, is that each of them is breeder, cheesemaker and seller.

### Use(s) of the Product

This is a table cheese, fresh or aged, mainly consumed at the end of meal. The freshest cheeses are also spreadable and used for the preparation of some spicy, creamy appetizers with onion, garlic or leek ("furmagit").

# Estimate of Production and Demand Trends

The production is estimated at 50 annual tons annually. Production is growing.

# Caprino semicotto

by Antonio Pirisi







MiT

### Origin

This Caprino semicotto uses a newer production technique, when compared to a similar uncooked caprino in Sardinia.

### Type of Product

This cheese has a cylindrical shape, with a height of 12-15 cm, a diameter of 20 cm and a weight of about 3 kg. The rind is white when the cheese is fresh and yellow when aged. In the young cheese, the paste is white, compact and pleasantly fresh tasting. The paste is a more or less dark yellow, with a more intense taste in the aged product.

### Area of production

It is produced throughout Sardinia, Italy, particularly in goat breeding areas.

### Techniques and Scale of Production

The handcraft technique used to make this cheese is similar to that of the uncooked Caprino, with the following differences: the use of liquid calf rennet and the partial cooking of the curd to 40 – 42°C. On the other hand, industrial production heats whole goat milk to a coagulation temperature of about 38°C and mixes in both natural "scotta" star-

ter and liquid calf rennet. Coagulation and setting of the curd occurs in about 30 minutes. The curd is cut to the size of a corn kernel. Constantly stirred, the curd is heated to  $42-46^{\circ}$ C. After this phase, the curd is transferred to forms and warmed. The cheese is brine-salted for 48 hours. Aging ranges from 3-12 months at  $12-15^{\circ}$ C.

### Trading of the Product

The handmade cheese is sold from the farm by the cheesemaker or in specialised shops. The industrial product is marketed in large distribution channels with other Sardinian cheeses. Increasingly, consumers interested in healthy, traditional products recognize the value of goat milk foods.

### Use(s) of the Product

The semi-cooked Caprino, depending on its age, is used as a table or grating cheese. Apart from being eaten as an appetizer, with bread, meat and olives, it is served as a dessert with honey. It is also used as a principal ingredient for first courses.

### Estimate of Production and Demand Trends

Increasingly, consumers associate goat products with dietetic and health properties. Although there are no specific figures, there is a steady growth in both production and interest in goat cheeses.

# Caprino Valsesiano

by Enrico Surra





MiT

### Origin

Caprino Valsesiano cheese takes it name from the Val Sesia (Province of Vercelli) where it originated. Some call this cheese Caprino of Rimella because most of its production is concentrated in this town of the Val Sesia.

This cheese is listed in the list of Prodotti Agroalimentari Tradizionali (Traditional Agri-food Products) of the Piedmont region.

### Type of Product

It is a young, full-fat cheese with natural acidity and rapid maturation. It is shaped like a tall cylinder and weighs between 100-300 g. The paste is soft or

semi-firm, white, slightly goaty with a strong and spicy taste that intensifies with aging. With prolonged aging, the rind becomes yellow or brown and smooth and even.

### Area of production

The Sesia Valley in the Province of Vercelli in the Piedmont region of Italy, particularly the town of Rimella.

### Techniques and Scale of Production

It is made with raw goat milk, sometimes mixed with small quantities of cow or sheep milk. The raw milk is warmed to about 18-20°C and mixed with liquid

lamb or calf's rennet. It coagulates for about an hour. The curd is broken into hazelnut-sized granules and then heated to 30-35°C. It rests for 5 minutes and is put into small forms. After 24 hours it is turned only once. Afterwards the shapes are taken out of their forms and put on shelves for 3-4 days. A dry salting follows. Young cheeses mature for 15 days and others age from 50-60 days.

### Trading of the Product

The Caprino Valsesiano is a handcrafted cheese that is mainly consumed in the area of production. It is found in small shops in the Piedmont region and in neighbouring Lombardy. It is served in well-respected restaurants.

### Use(s) of the Product

It is a table cheese, either young or aged, mainly consumed at the end of the meal. The younger cheese are used as a spread on toasted bread.

# Estimate of Production and Demand Trends

Annual production is estimated at 40 tons.



by Giuseppe Ippolito





MiT

### Origin

The origin is not known for the cheese named *Casieddu*.

### Type of Product

This a fresh, pure goat milk cheese. Its shape is spherical, with a diameter of  $8-10\,\mathrm{cm}$  and a weight of  $400\,\mathrm{g}$ . It is snow white with a compact, soft, strong taste with a flavour of Nepeta, a mint-like herb. Minute eyes rarely are present.

# Area of production

It is made in four communes (Castel

Saraceno, Grumento, Lauria, Moliterno) in the Basilicata region of south central Italy

### Techniques and Scale of Production

Casieddu is a seasonal product, made only from July-September when the sheep are dry (non-lactating) and goat milk is used to make the cheese. Raw milk from one or two milkings is filtered with fern leaves and seasoned for a few minutes with a little bag of Nepeta leaves. The milk is heated to 90°C, cooled to 38°C and mixed with kid's rennet. After 40 minutes, the curd is ready and it broken vigorously to rice-

sized grains. The curd is stirred continuously until a mass settles at the bottom of the vat. It is then scooped out and shaped patiently by hand to form orange-sized balls. Each ball is enveloped with fern leaves and covered with hay.

### Trading of the Product

Casieddu is made artisanally by shepherd-cheesemakers and small dairies. Sales are directly from the farm or dairy. It is sold at local markets, especially to people from the area who return to visit for summer holidays.

## Use(s) of the Product

Cut into segments, Casieddu is served at the end of meals with just a little bread, because the mint flavour is too pronounced for other pairings.

# Estimate of Production and Demand Trends

The estimated production is 1.5 tons.

#### Nepeta plant



### Caso conzato

by Leandro La Manna





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### Origin

Caso conzato in dialect, or Conciato Romano means "treated cheese" and derives from the particular technique of washing and tanning the forms. The origin of the term Romano is not clear, but it probably relates to the cheeses produced in antiquity in the Lazio region, which borders the Province of Caserta.

### Type of Product

It is a cylindrical form, concave, irregularly shaped and weighing about 200 g. It has a thin, mouldy, hazel-coloured

rind. The texture is compact, soft and pale yellow or ochre. The odour is rich in complexity, penetrating, with a pungent, but pleasant mould

## Area of production

It is produced in Communes within the territory of Maggiore Mountain, north of Caserta in southern Italy. The terrain is a hilly, mountainous landscape of average altitude and spontaneous vegetation typical of the Mediterranean.

### Techniques and Scale of Production

It is made with raw goat and sheep milk, coagulated at an ambient temperature with natural kid's rennet. The curd is broken by hand to rice grain size. Always by hand, after 10 minutes, the curd is picked, pressed and put into moulds (fuscella). Each form of cheese is turned 2-3 times to facilitate the draining of the whey. It is dry salted. After about 12 hours, the forms are removed from the moulds and placed carefully on a traditional wooden structure called a casale, set outside in the shape to dry completely. Afterwards, the forms are washed with cooking water of the pettola, the traditional, handcrafted pasta. It is then dried and rubbed with olive oil, white vinegar, wild thyme and local red chili peppers. The forms are then placed in clay containers for 6-24 months. Periodically, they are taken out of the containers, washed and rubbed once again with the oil, vinegar, thyme and chili peppers

#### Trading of the Product

It is sold principally at local markets, by the farmstead producers, at agro-tourism farms and at restaurants of the production area. Customers from cities constitute another sector of the market through their requests direct from the producers for special orders of seasoned Caso conzato

### Use(s) of the Product

The particular taste and marked aroma of this cheese make it a cheese to be appreciated on its own or accompanied by a lettuce salad and a glass of strong, aromatic wine. It is also used with pasta courses.

# Estimate of Production and Demand Trends

Production is currently just a few quintals per year, but the increasing interest on the part of consumers and restaurants may lead to greater production.

# Caso peruto (Marzolina)

by Leandro La Manna





### Origin

Caso Peruto is also called Marzolina or Marzellina. Its name means "mouldy cheese" and derives from the prickly, but pleasant smell of the mould that tends to develop on the surface.

### Type of Product

The shape is cylindrical, uniform, small with a weight from 200-250 g. If the cheese is longer it is called Marzolina or Marzellina. Its smooth rind is coated with thyme leaves. Initially the colour is clear white, but it

darkens with age. The paste is white, smooth, almost spreadable. It has a prickly, aromatic perfume, with a mould. Its taste is strong, balanced and slightly spicy.

### Area of production

In the Province of Caserta in southern Italy, including the inland towns of the Commune of Sessa Aurunca up to the slopes of the Volcano of Roccamonfina and the territory of Teanese and the Mount Maggiore.

### Techniques and Scale of Production

This is a raw goat milk cheese coagulated at room temperature with vegetable rennet made from thistle flowers (Cynara cardunculus ). At the end of coagulation, the curd is broken into 2-3 cm granules, scooped up and pressed by hand in wide wooden forms 10 cm long and 2 cm high. Dry salting follows. The forms of cheese drain while in their moulds on a tilted wooden table for 1-2 weeks. After this period, each form is washed under running water, dried, seasoned with white vinegar and olive oil, covered with aromatic, wild thyme leaves from the same pasture that the goats feed on. Aging lasts for at least one year, during which time the cheeses are rubbed with oil and vinegar to protect them from moulds.

### Trading of the Product

Predominately, the cheese is sold at local markets by the producers who are jealous custodians of traditional cheesemaking techniques. It is also sold from the farm and to customers who come from cities. It is served at agro-tourism farms in the production zone. It is popular among vegetarians because the cheese is made with vegetable rennet.

#### Use(s) of the Product

Because of its particular taste, it is eaten by itself or paired with good, home-made bread or with vegetables. It is served as an appetizer or as main dish. It pairs with D.O.C. wines from the same area, such as Falerno del Massico and Galluccio.

#### Estimate of Production and Demand Trends

Currently, production is very low, just a few quintals per year. There is, however, growing interest on the part of consumers and restaurants.

### Cevrin di Coazze

by Enrico Surra





Origin

Its name means "goat's little cheese" in dialect, while Coazze is the name of the town where production is mostly representative.

It is a product included in the list of the Prodotti Agroalimentari Tradizionali (Traditional Agro-food products) of the Piedmont region (D.lgs 173/98 and DM 350/99).

### Type of Product

It is a **cheese** made in summer by raw goat milk or a mix of cow and goat

milk. The shapes, with weights between 0.2 and 1 kg (7 oz. to 2.2 lb), have a thin reddish rind, a creamy paste, elastic, of white or straw yellow colour.

The taste is fragrant, intense and fresh. It is a cheese with good potentialities.

### Area of production

The valley of Sangone river in the province of Turin (Piedmont region, Italy), particularly the towns of Coazze, Cumiana, Forno and Giaveno.



### Techniques and Scale of Production

The early-morning milk is added to the previous evening's milk. The liquid rennet is added at low temperatures, after the curd is broken up generally with a "spino" (Italian name for a particular tool, of wood or stainlessteel, which breaks the curd in little pieces. The shapes are different depending to the region of production and the kind of cheese); the size of the curd is like a rice grain. After cutting, the curd is set in the special mould with cloth or in cloths for the draining. The dry salting is done in two different days. The product is ripened in wine cellars, possibly on rye straw; the aging varies from 2-3 days to 3 months.

# Trading of the Product

The Cevrin of Coazze has a fair commercial distribution in the territory around Turin, above all near *affineurs* and specialty food groceries and cheeseshops in the main town or in shops in the zone of production. Lately the pro-

duct has emerged as one of the important cheeses produced in the province of Turin.

### Use(s) of the Product

The aroma and freshness of Cevrin of Coazze make it a good choice for either a table cheese or at the end of the meal.

# Estimate of Production and Demand Trends

The production is assessed in around 50 annual tons, but significant increases of the production can be foreseen, especially if high production standards are maintained.

### Crotonese

by Virginia Aloi





### Origin

This cheese is called Crotonese because it comes from the Marchesato of Crotone, the area of origin in Calabria.

# Type of Product

A seed-shaped, raw milk cheese with brief to long aging periods is made with both sheep and goat's milk. Goat milk constitutes no more than 20%. The shape is cylindrical (16-20 cm diameter; 7-11 cm high) with a rind that ranges from yellow-ochre to dark brown. The wrinkly rind is due to the impression of

the rush basket moulds. Traditionally, the weight is 2.5 kg, but today the cheese vary from 1.2-2 kg.

### Area of production

The production zone includes a very large area that embraces the entire Province of Crotone, a large part of Catanzaro and a section of the Province of Cosenza, all in the Calabria region of southern Italy.

### Techniques and Scale of Production

Raw sheep milk, with or without a percentage of goat's milk, is filtered through cloths, introduced into a vat

and heated to a coagulation point at 36-38°C. Kid's rennet paste is mixed in to ensure a coagulation within one hour. At this point, the well-hardened curd is broken up using the "miscu," a wooden stick from the fig tree. After the curd is completely broken, it is semi-cooked to 40-44°C. The granules of curd settle to the bottom of the vat and are then picked up as a mass. This is divided into several rush basket moulds. The cheese is then pressed and squeezed energetically ("frugatura"). The moulds are then dipped into warm whey ("lacciata") at 50°C for a few minutes, followed by a dry-salting.

### Trading of the Product

Historically, Crotonese cheese was sold from the farm. Another portion is distributed by wholesalers who purchase, salt and age cheeses based on seasonal contracts with the producers. Even though the production is modest, a portion of the cheese is exported out of the region.

### Use(s) of the Product

Crotonese is consumed as a table cheese or as a grating cheese. Fresh and partially-aged cheeses combined with salted meats and raw broad beans.

The cheese pairs well with young, fragrant wines such as DOC Cirò, Melissa, S. Anna and the IGT Val di Neto. A full-bodied, fruity wine Greco di Bianco is considered an especially harmonious pairing because the prickly, savoury flavours of the cheese are complemented by the complex bouquet and sweet notes of this wine. If grated, the cheese is a base ingredient in dishes prepared with vegetables and kid's meat ("tiana").

### Estimate of Production and Demand Trends

It is difficult to assess the amount of Crotonese cheese currently made with goat's milk, considering the decrease of production as a result of the Italian DPR 54/97. Up to about 10 years ago, quantities approached 100 tons.





### Origin

Fatulì in the local Italian dialect means "little piece".

#### Type of Product

This cylindrically-shaped cheese weighs about 300 g, has a maximum diameter of 15-20 cm and is 3 cm thick. The rind has characteristic furrows after being grilled before being smoked.

### Area of production

This is made in the Italian region of Lombardy in the Province of Brescia in the Camonica Valley.

### Techniques and Scale of Production

This cheese is made on a small-scale at dairy farms with a maximum of 30 animals strict-

ly from the local breed of Bionda dell'Adamello goat. Milk coagulation starts at 37°C with the addition of animal rennet.



After a rest of 30

minutes, curd is cut into pieces smaller than a pea. The curd is warmed for 10 minutes at 40 °C. Then, the curd is mixed, followed by a rest of 10 minutes. The curd is pressed, dry-salted and then smoked in a juniper wood fire. Aging lasts about 30 days, but it can be extended for 180 days.

#### Trading of the Product

Fatulì is only marketed locally. Consumers can buy directly from dairy farms or a few specialised shops.

### Use(s) of the Product

The young form of this cheese is eaten at the beginning or end of the meal, depending on personal taste. The more aged cheese is usually grated over vegetable soups or pasta.

### Estimate of Production and Demand Trends

Approximately 10,000 kilogram/year. It is a much-requested cheese, but every year its production falls, due to the diminishing number of local dairy farmers.

### **Felciata**

by Virginia Aloi





### Origin

Felciata is a young, aromatic cheese. Nobles who sought out this cheese called the "bread of Angels." Its name derives from its wrapping of ferns which give it an extraordinary aroma.

### Type of Product

This is a soft, young, white cheese with weights which vary with the amount of fern wrappings.

### Area of production

Highlands of Mont Pollino in the northern part of Calabria in southern Italy.

### Techniques and Scale of Production

The milk comes exclusively from pasture-



fed goats. The milk is filtered with fresh fern leaves, curdled for 40-45 minutes at 34°C with rennet paste from kidskin or lamb. The cheesemaker selects the best green fern leaves and lines a mulberry or walnut mould and scoops the curd with the "cucchiara," a perforated maple wood ladle in layers separated by fern leaves.

### Trading of the Product

Sales are directly from the farmstead or to local markets.

### Use(s) of the Product

It is used as a table cheese, served with appetizers.

#### Estimate of Production and Demand Trends

No production figures are available.

# Formaggella del Luinese

by Paolo Clarà





### Type of Product

This is a whole, raw goat milk cheese with a soft paste. It is aged for at least 20 days at a maximum of 15°C and humidity of 90-95%, or in natural cave. Coagulation is presamic. Weight: 700-900 g. Cylindrical shape. Diameter: 13-15 cm; Thickness: 4-6 cm. Natural rind.

# Area of production

Only the following Comunes of Varese province:

Agra, Arcisate, Azzio, Bedero Valcuvia, Besano, Bisuschio, Brenta, Brezzo di

Bedero, Brinzio, Brissago Valtravaglia, Brusimpiano, Cadegliano Viconago, Cantello, Casalzuigno, Cassano Valcuvia, Castello Cabiaglio, Castelveccana, Cittiglio, Clivio, Cocquio Trevisago, Cremenaga, Cuasso al Monte, Cugliate Fabiasco, Cunardo, Curiglia con Monteviasco, Cuveglio, Cuvio, Dumenza, Duno, Ferrera di Varese, Gavirate, Gemonio, Germignaga, Grantola, Induno Olona, Lavena Ponte Tresa, Laveno Mombello, Luino, Maccagno, Marchirolo, Marzio, Masciago Primo, Mesenzana, Montegrino Valtravaglia, Orino, Pino sulla Sponda del Lago Maggiore, Porto Ceresio, Porto Valtravaglia, Rancio Valcuvia, Saltrio, Tronzano Lago Maggiore, Valganna, Veddasca, Viggiù;

# Formaggella del Luinese

Barasso, Comerio, Luvinate, Varese, Bardello, Besozzo, Brebbia, Bregano, Biandronno, Caravate, Casciago, Leggiuno, Malgesso, Monvalle, Sangiano, Travedona-Monate.

#### Techniques and Scale of Production

Small-scale production by artisans. Whole raw goat milk is used. Natural or selected starters are added to the milk and heated to 32-34°C. After the addition of natural rennet, coagulation occurs in 30-40 minutes. The curd is cut to corn kernel-sized pieces. Then, the curd is mixed for 15 minutes and, after a rest of another 15 minutes, it's ready to separate from the whey. It is moved to cylindrical shapes; it can be warmed for 3-6 hours in locales at 25-30°C. Then, the cheese rests at ambient temperatures for 1-2 days before being salted. After drying at ambient temperatures, the cheese is aged for at least 20 days at 15°C maximum with humidity of 90-95%, or in natural cellars. All production is artisanal, in small dairies.

### Trading of the Product

It is sold directly from dairy farms or in authorized shops.

#### Use(s) of the Product

Used to prepare first or second courses and accompanies grilled slices of yellow or integral corn polenta. It is also used as an ingredient in rice-based dishes or as a delicate table cheese.

# Estimate of Production and Demand Trends

Approximately 30,000 kilograms/year (around 37,500 pieces/year), with demand growing steadily.

**I**talv

# Formaggio a pasta molle

by Piero Ballauri della Valle d'Aosta

Area of Production





Type of Product

Soft, washed rind goat cheese.

#### Area of production

This cheese is produced throughout the whole territory of the Autonomous Region

# Origin

Soft goat cheese from Valle d'Aosta region Traditionally, rural families of the Valle d'Aosta region raised herds of goats in addition to cattle, which constituted the principal source of income. In the summer, the arpians (men) led the cows to mountain pastures. The goats were kept near the family as a source of milk and cheese. The goats grazed on grasses not used for hay. Medium-aged goat cheeses made in the summer were eaten during the period when the cows were on mountain pastures (alpeggio).

# A bit of history

Goats have always been used "to reclaim" zones rich in bushes where the cutting of hay was impossible. These areas represent a danger to nearby villages in the case of brush fires. In many villages, goat herding is entrusted to the children of local families. Each day, a child gathers all the village goats into one flock after the morning milking, leads the animals to graze on common pastures for the day and returns them to their owners for the evening milking.

# Formaggio a pasta molle della Valle d'Aosta

Valley of Aosta from stalled animals of the lower valleys during the winter, from the *mayens* (mountain chalets at moderate altitudes) and from the mountain pastures. This cheese is included in the list of the traditional products registered by the Office of the Agricultural Politics with the legislative decree n° 173 of April 30th 1998.

### Techniques and Scale of Production

Milk is processed immediately after milking or in the morning after the evening milk has cooled. In the case of processing immediately after milking, coagulation is done without heating. Otherwise, the milk is heated to 36-37°C.

Currently, both powdered or liquid rennet is used. Previously, cheesemakers prepared rennet from calf or kid stomachs. Coagulation time varies between 30 - 40 minutes. Upon setting, the curd is cut with a "lira" or lyre. This tool resembles the musical instrument of the same name. The curd is broken to corn-sized kernels. After 10 - 15 minutes of draining, without further heating, the mass of curd is trans-



ferred to wooden moulds and pressed by hand and turned 3 - 4 times. Traditionally, salting is dry, rarely brinesalted. Aging lasts for at least 20-25 days in ventilated, damp caves. Cheeses are turned every 3 - 4 days and the rind washed with salty water.

# Use(s) of the Product

This cheese is paired with red D.O.C. wines of the Valle d'Aosta, eaten during meals or melted to flavour rich vegetable or barley soups.

#### Gelato

by Antonella Recchini, Maria A. Luciani, Maurizio Sperati

#### Area of Production



#### Origin

Gelato di latte di capra (Italian) Goat milk ice cream (English).

#### Type of Product

This ice cream is partially-handmade with powdered goat milk. It is an alternate for those who want to avoid cow's milk, eggs and egg yolks. Half-kilo containers are available in five flavours: milk, milk with chocolate syrup, strawberry, caramel and hazelnut with chocolate syrup.

# Area of production

Latina, a town near Rome, Italy.

# Techniques and Scale of Production

Process: ingredients are mixed, pasteurised, cured at 4°C from 8-72 hours, stirred

at freezing temperatures, packed, deep frozen to -20°C, stored and shipped.



#### Trading of the Product

Amalattea, the Italian firm, specialises in the production and marketing of goat's milk products (milk, cheeses, yoghurts, ice creams, biscuits). These ice creams are distributed through large marketing channels.

#### Use(s) of the Product

The nutritional value of goat ice cream includes high-value proteins, and substantial amounts of essential amino acids, which are easy to digest and assimilate. The use of goat milk makes this product suitable for those who are intolerant to cow's milk. It is also recommended for people who are allergic to gluten. It is rich in Vitamin A, B Vitamins and mineral salts. Both children and adults can eat it as a snack or dessert. Sports' enthusiasts can use it as an energy booster. It nutritional value is balanced, containing about 200 calories per 100 grams. It is a light dessert or snack.

#### Estimate of Production and Demand Trends

Estimated production for 2004: 150,000 boxes.

Jama

by Roberto Vallusso, Edi Piasentier



#### Origin

Formaggio caprino a pasta morbida Soft goat cheese

Other names are possible depending on the place of production, such as Jama morbido, and Kozji zmiteka (along the border with Slovenija, in the Karst region).

### Type of Product

This elongated, cylindrically-shaped cheese has a diameter of 4-5 cm and a length 10-12 cm. It is produced in cylinders of plain paste or with paste mixed with aromatic herbs.

# Area of production

Whole territory of Friuli-Venezia Giulia Region of northern Italy.

# Techniques and Scale of Production

Made from raw or heat-treated (usually

MiT



not pasteurised) goat milk with selected cultures. After a slow coagulation (24 hours) at 20°C, the curd is put in fabric bags where it remains for about 24 hours. The paste is then kneaded and salted.

#### Trading of the Product

There are three main commercial channels:

- a.) direct sale to consumers by producers.
- b.) use by agritourism establishments.
- c.) at markets and restaurants.

### Use(s) of the Product

Frequently served as an appetizer. Depending on one's taste, this cheese may be eaten as is, or mixed with such herbs and spices as chili pepper, chives or pepper and served on toasted bread.

### Estimate of Production and Demand Trends

Estimated annual production is around 26 tons.

**I**talv

# Juncata calabrese

by Virginia Aloi





#### Origin

Juncata Calabrese cheese is named after the rush baskets which form the product. It comes from Calabrian dialect – "juncu" or "junciu." According to others, it originates from the names of rush mats on which the cheese was smoked and dried.

# Type of Product

This is a raw paste cheese, briefly aged, and obtained from whole goat's milk, pure sheep's milk or a mixture of the two. The cheese has a cylindrical shape, an average diameter of 15-20 cm and a

height of 3-4 cm. The average weight is 500 g. The fresh cheese is rindless, with a milk-white surface and impressions of the baskets. When smoked, the rind is grey-yellow.

# Area of production

All the communes of the Province of Crotone and parts of the Provinces of Catanzaro and Cosenza in the Calabria region of southern Italy.

### Techniques and Scale of Production

Filtered goat's milk is added to a vat, heated to the coagulation point of 36-37°C and then mixed with kid's rennet.

Coagulation sets in about 50 minutes. The curd is broken up by hand or with a fig stick ("miscu") into coarse, uneven granules. The curd is then put into rush baskets to drain for about an hour. They are then turned and sometimes dry-salted. Juncata is sold on the day of production or at least within a few days of making. It is also marked after being smoked on rush mats or on "cannizzi," reed mats.

# Trading of the Product

Sales are from the farm and from local markets.

### Use(s) of the Product

In Calabrian, fresh Juncata traditionally was consumed at the end of a meal. The aged cheese was grated. Today, it is increasingly used in the preparation of cold dishes, accompanied by tomatoes or salad, seasoned with extra virgin olive oil. Sweet, young, fragrant white wines are paired with the fresh cheese.

Fuller-bodied red wines go well with the smoked type.

# Estimate of Production and Demand Trends

No existing data on production quantities.

# Latte alimentare

by Antonella Recchini, Maria Antonietta Luciani, Maurizio Sperati

#### Area of Production



#### Origin

Goat milk (English).

#### Type of Product

This UHT, whole goat milk beverage is an alternative for those people who are allergic to cow's milk. It has an optimal calcium/phosphorus ratio as well as an efficient fat/protein relationship. It is a product for children and those suffering from irritable bowel syndrome or those pseudo-allergic to lactose. It is not suitable for those allergic to gluten. Two sizes are available: 0.5 and 1 litre containers.

### Area of production

Italy.

### Techniques and Scale of Production

Process: Raw goat's milk is delivered to the plant, stored in tanks, pasteurised, standardised, homogenised, sterilised, packed, decanted (seven days of monito-



ring protein denaturing), stored and shipped.

### Trading of the Product

MiC

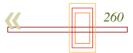
Amalattea, the Italian firm specialised in the production and marketing of goat's milk products (milk, cheeses, yoghurts, ice creams, biscuits), sells this milk throughout Italy via a large-scale network.

# Use(s) of the Product

Goat's milk is suitable for those who may have a negative reaction to cow's milk. This includes those who are intolerant to cow milk proteins or pseudo-tolerance among lactose-affected individuals. It is recommended for non-breast-fed babies.

#### Estimate of Production and Demand Trends

Estimated production in 2004: 1,200,000 litres.



# Lujanie di cjavre

by Roberto Vallusso, Edi Piasentier

#### Area of Production





### Type of Product

Meat, goat thin sausage.

### Area of production

Throughout the whole area of Friuli-Venezia Giulia Region in Italy.

# Techniques and Scale of Production

Small-scale production.

This product uses skinned goat meat of 2<sup>nd</sup> quality cuts, pig back fat and pig belly. The following proportions are commonly used: Meat 55-56%. Pig back fat 10-12%. Pig belly 32-35%.

Ground by a 4.5-6 mm  $\varnothing$  holes plate. Total amount of salt 1.8-2.0%, pepper 0.3%.

Ovine bowel-bagged Ø 35mm. Proportions vary according to craftsmen's experience and recipes.

#### Trading of the Product

Directly marketed by the producers. No high-volume sales via specialty markets.

### Use(s) of the Product

Consumed grilled or stewed. As a main dish, it is often served with *polenta*.

# Estimate of Production and Demand Trends

No figures are available, due to small production levels.



by Roberto Vallusso, Edi Piasentier

#### Area of Production





used. Minced using a 6mm hole disk. Amount of salt is 2.7%, and pepper 0.3%. Bovine bowel-bagged with a diameter of 45-65 mm.

# Origin

Muset

### Type of Product

Salted meat (large sausage)

# Area of production

Whole territory of Friuli-Venezia Giulia Region, Italy.

### Techniques and Scale of Production

Small-scale production.

For the production of Muset, remains of goat carcass jointing, tendinous ends of muscles and pigskin (at least 50%) are

# Trading of the Product

Directly marketed by the producers. No remarkable sales via usual markets.

# Use(s) of the Product

Culinary. Consumed fresh: stewed. As second dish, usually with bruade.

#### Estimate of Production and Demand Trends

No estimation is possible, due to the extra small production.



# Musulupu

by Antonio Minicucci, Domenico Musolino







The word "Musulupu" is thought to derive from the local dialect with Latin or Greek origins. It may also come from the Arabic phrase meaning, "wolf's bite." Today, shepherds create this cheese from a small portion of curd and give it to guests as a sign of welcome.

# Type of Product

This cheese has a soft, uniform texture and pearly white colour. Rindless, it takes like just-gotten, sweet milk. It is produced in a particular mould, the *Musulupara* which is often made of mulberry wood. It has various forms, from a hemispherical cup representing a



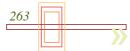
woman's breast, to a miniature profile of a female figure. These cheeses are richly sculpted with motifs of crosses and flowers from the Orthodox Church.

### Area of production

The area of production is bordered by the communes of the Province of Reggio Calabria, Jonic slope, the centres of the Grecanical area, such as Condofuri, Bova, Roghudi, Roccaforte del Greco, Palizzi and of the Locride, such as S. Luca, Africo, Stilo, **Italy**.

### Techniques and Scale of Production

Musulupu is made from goat and sheep



milk, from animals that graze principally on pasture. Raw, whole milk is used without starters. The milk of two milkings and either liquid or paste rennet is used, added to milk from 26-30°C. Coagulation occurs in about an hour. Afterwards, the curd is broken up to rice-sized grains. When the curd settles to the bottom of the vat, the curd (tuma) is placed in moulds, pressed and drained. After scorching the curd in warm whey, the tomes are put in wooden moulds called Musulupare. Some cheesemakers skip the scorching phase and directly place the curds in moulds, giving a light pressing to ensure draining through the lateral grooves of the moulds.

### Trading of the Product

Up to a few years ago, shepherds produced the Musulupu at Easter time as gifts to their masters ('gnuri), to friends and relatives as a sign of respect. Shepherds produce this cheese a few times a year for family consumption

#### Use(s) of the Product

This cheese can be preserved at ambient temperatures or in the refrigerator for just a few days. It is unsalted and unseasoned. It can be consumed fresh 2-3 days after production. After about a week, it is sliced and friend with eggs and eaten with bread.

# Estimate of Production and Demand Trends

No available data.



#### Ricotta

by Girolamo Grisafi, Ruth Militano





# Origin

Goat ricotta (fresh and smoked) uses the residual whey that remains after cheesemaking. The whey is heated a second time (ricotta means "re-cooked") until particles of sero-proteins rise to the top for collection.

# Type of Product

Goat ricotta is derived from the whey of goat and sheep milk. This is a fresh, rindless cheese with a compact, smooth, white or white-ivory paste. When smoked, the outside is brown with the impression left by the *fiscelle* (moulds).

# Area of production

In the Calabria region in southern Italy. In Calabria, this cheese is made by adding some fresh goat milk to the whey before heating.

# Techniques and Scale of Production

To make this cheese, the residual whey from cheesemaking is filtered once and then heated. In Calabria, the whey is brought to 65°C and then mixed with

some fresh goat milk (not over 20%). The heating lasts until the remaining proteins in the whey coagulate into particles. The clotting on the surface of the whey is gently skimmed with a "spannarola" and deposited in special fiscelle (baskets made of plastic or rush).

Trading of the Product

The product is sold from the farm and in open markets.

### Use(s) of the Product

Goat ricotta is eaten as an appetizer, a second course or in the preparation of both main dishes (melted over *lupara*, added to *cavatelli* sauce or as a stuffing) and as a dessert ingredient (sweetened ricotta fillings for cannoli, in Easter *pastiera*).

# Estimate of Production and Demand Trends

Production is estimated at a few hundred tons.

# Robiola del Bec

by Enrico Surra





#### Origin

Robiola del Bec is a goat cheese that takes it name from the traditional production process that happens in September and October, when the goats go into heat. "Bec" is the buck or male goat in Piedmontese dialect. The process of making this cheese derives from that of Robiola of Roccaverano.

# Type of Product

This cheese has a compact texture and is usually aged. The light brown rind is wrinkled. The paste is white in the centre

and slightly amber just below the rind. The taste is very strong, slightly spicy, intense, with evident goaty notes. The weight ranges from 300-600 g.

# Area of production

The cheese is made throughout the same production zone as Robiola of Roccaverano, D.O.P. in Piedmont, Italy.

## Techniques and Scale of Production

Partially-skimmed, raw goat milk from two daily milkings is heated to room temperature. At that point a few drops of calf's rennet is added. The curd forms using a acid coagulation very slowly for at least 24 hours. The curd is put in special moulds for a day. Later, more curd is added to create a heavier cheese. This is followed by a dry salting.

## Trading of the Product

Authentic Robiola del Bec is eaten mainly in the zone of production. It is difficult to find it in normal distribution channels, partly because of a shortage of product. The producers' group of Robiola of Roccaverano stocks a limited amount of this cheese during the production season.

# Use(s) of the Product

Robiola del Bec is exclusively eaten at the end of a meal because its intense flavour is appropriate at that point. As with Robiola of Roccaverano, Robiola del Bec is sometimes stored in glass jars for a certain number of months.

# Estimate of Production and Demand Trends

The annual production is a few thousand forms, but it is important because it is made seasonally.

by Enrico Surra

Robiola di Roccaverano

Area of Production





# Origin

This goat cheese is called robiola because its rind develops a rosy colour after a certain age. Roccaverano is the town of origin. It is the only Italian goat cheese with a DOP.

# Type of Product

This is a young, fatty cheese made with pure goat milk and is considered a "classic". Similar cheeses use 85% cow milk and a mix of goat and/or sheep milk or 15% of whole goat's milk. The forms weigh 250-400 g and have a very thin rind. The paste

is white, young and compact, with a distinctive aroma.

# Area of production

Ten communes in the Province of Asti (Community Montana Langa Astigiana Val Bormida) and nine communes in the province of Alessandria, Italy.

# Techniques and Scale of Production

The milk is gathered from two daily milkings, partially-skimmed, heated to 18-20°C, mixed with some calf rennet and left

to set using an acid-rennet coagulation) for about 18-24 hours, based on the temperature of the curd. The curd is put in special moulds for one to two days and dry salted. The typical maturation occurs after storing the cheese at 15-20°C for three consecutive days.

#### Trading of the Product

Robiola of Roccaverano is mainly consumed in Piedmont, its zone of origin, but one can find it in speciality shops in the principal Italian cities. Some producers organize its distribution through a marketing centre that cures the cheese, prints labels with the producer's name and sells the product.

### Use(s) of the Product

Robiola of Roccaverano is eaten as an appetizer or a table cheese. It is sometimes dressed with a drizzle of olive oil and pepper. It can be eaten at the end of a meal or used as an ingredient to make stuffed appetizers or sauces. Some pro-

ducers stored the ripened robioles in glass jars for months. In this way, the cheese develop a strong, spicy and extremely pleasant character.

# Estimate of Production and Demand Trends

Annual production is over 100 tons. The producers registered with the Consortium number 30% of all processors. This is 40% more than 15 years ago.

**I**talv

# Salamp Caprin

by Roberto Vallusso, Edi Piasentier









#### Origin

Salamp Caprin

#### Type of Product

salted meat (dried sausage)

# Area of production

Whole territory of Friuli-Venezia Giulia Region, Italy.

### Techniques and Scale of Production

Small-scale production. For the production of Salamp caprin, goat skimmed meat (pulp: choice parts of muscles without tendinous ends) and pig back fat and belly are used. The following proportions are commonly used: Meat 55-60%; pig back fat 15%; belly 25-30%. All minced using a 8 mm hole disk. Total amount of salt 2.2%; pepper 0.3%.

wine is used; in the south, red wine is used, directly splashed on with pounded garlic. Bovine bowel-bagged (diameter 65 mm), variable length usually 20-30cm. Salamp is dried for 2-15 days depending on the wether conditions, then is seasoned for at least 1 month.

In order to wet the paste, in the northern part

of the Region, an infusion of garlic in white

### Trading of the Product

Directly marketed by the producers. No remarkable sales via usual markets.

# Use(s) of the Product

Culinary. Mainly used for sandwiches and entrées.

### Estimate of Production and Demand Trends

No estimation is possible, due to the extra small production.



#### Scuete

by Roberto Vallusso, Edi Piasentier





# Origin

RICOTTA DI CAPRA, traditionally named in Friûl: SCUETE; along the border with Slovenija, in the Karst region: SKUTA. It traditionally exists in two different types: fresh and smoked one (in this case named Scuete fumade), aged for one month.

# Type of Product

Whey Cheese.

Ricotta fresca: truncated, cone-shaped, height about 8/10 cm and base diameter around 15 cm.

Ricotta affumicata (smoked ricotta): squeezed egg-shape.

# Area of production

Whole territory of Friuli-Venezia Giulia Region, north Italy.

# Techniques and Scale of Production

Obtained from the coagulation of lactalbumins and lactoglobulins of goat milk whey, warmed to 85°C; some producers add 5 to 8% whole milk; it is possible to use citric acid to help coagulation.

When ricotta surfaces, it is ladled into moulds and allowed to drain. The type to be smoked is packed in fabric bags and

### Italy Scuete

pressed to rid it of water; when at the required consistency, it is cured by smoke produced by burning wood of native plants (preferably beech and hazel-tree, branches of juniper, fir and other aromatic essences). Smoking lasts about 48 hours.

## Trading of the Product

There are three main commercial channels: direct sail to consumers; direct utilization on farms with agro-

tourism activity.

A few specialised farms supply restaurants or markets.

### Use(s) of the Product

Culinary

# Estimate of Production and Demand Trends

The estimated amount of production is around 7 tons. About 15% is smoked.



# Susiccia d'Crava

by Enrico Surra





#### Origin

Salame or Salamino di Capra (Italian) Goat Dry sausage (English)

This is a dry goat sausage which is registered in the list of Traditional Agrofood Products (Prodotti Agroalimentari Tradizionali – PAT) in the Piedmont region. It is the name from the local dialect. In Italian, it translates as Salamino di Capra or goat sausage.

# Type of Product

This sausage derives its tenderness with aging. Generally, the production occurs in

spring and in autumn. Small quantities of pig's bacon are added to the goat's meat in order to create a tender texture after aging. In Val Vigezzo, the salamino has the classic size of a cacciatorino sausage (8-10 cm).

# Area of production

The product is made throughout the Piedmontese alpine zone and in the alpine valleys, especially in the Mountain Community Valli of Lanzo (Turin), in the Verbano Cusio Ossola (Verbania) and in the areas of the Valsesia (Vercelli) in the north of Italy.

#### Techniques and Scale of Production

A similar process of production occurs in all of the areas. The phases include the selection of the meat; the mixing of the various ingredients (salt and natural flavourings, according to the particular recipe); the grinding and casing of salamis of 15-20 cm, tied with strings. The seasoning phase includes: heating and drying in a particular cellar called "paiola". This phase last about a week. Longer aging lasts from 20-30 days in caves or wine cellars at 10-12°C, with 70-89% relative humidity. The meat can also be eaten fresh after 15 days.

### Trading of the Product

The product is locally-distributed. It is available in the zones of production in small shops, butchers, delicatessens and speciality shops.

### Use(s) of the Product

As with other salted meats, it is con-

sumed raw, sliced and as an appetizer.

#### Estimate of Production and Demand Trends

No information is available.

# **Tambureddu**

by Lucia Sepe, Romeo Leone

#### Area of Production



# Origin

Tambureddu, origin of the name: southern Italy dialect.
Tambourine (English)

### Type of Product

Musical instrument, little drum, made with goat skin and wood. About 15 cm high, while the most common diameter is app. 30 cm. The skin is put in with the hairy side down.

# Area of production

It is fashioned throughout Calabria in southern Italy in the province of Reggio Calabria (Roghudi, Grecanic area), Cosenza and Catanzaro (Cetraro area).

# Techniques and Scale of Production

This instrument is an artisan product made by only a few masters who pass their



technique to young people. The skin is sheared and then the hairy side is on the inside. Beech comprises the woody part, while the metal part is made with little disks

#### Trading of the Product

SkP

of tin.

Via local markets or handicraft and musical instrument markets in cities. Musicians and others are the customer base.

# Use(s) of the Product

The Tambureddu is used in Calabrian folk music as well as in other musical genres. It can be heard in local popular and religious festivals.

# Estimate of Production and Demand Trends

Production figures are not available. Demand is unchanged.



# Tomino di Talucco

by Enrico Surra





### Origin

Tomino means "little cheese" in local dialect language, while Talucco is the name of the commune where it is most produced. It is a product included in the list of the Prodotti Agroalimentari Tradizionali (PAT – *Traditional Agrofood Products*) of the Piedmont region (D.lgs 173/98 and DM 350/99)

# Type of Product

Cheese made with goat milk or a mix of cow and goat milk; fresh or aged. The

weight of each form is 50-100 g. The rind is nonexistent if the tomino is fresh, thin and hard if seasoned, with a reddish colour. Paste is elegant, soft and moist, chalk white. The taste is delicate and lactic for the fresh tominos; more intense and goaty in the aged forms.

# Area of production

The slopes of Pinerolese, in the Province of Turin, particularly Talucco (disctrict of Pinerolo) and St. Pietro Val Lemina, Piedmont region, northern Italy.

#### Techniques and Scale of Production

Whole milk is heated to 90°C, and then cooled to 30-40 °C. Liquid rennet is added in a measure of 10 ml per 100 litres of milk. After a rest of 10-15 minutes, the break-up of the curd is made with the skimmer. Then, there is another brief rest of 5-10 minutes and the curd is moved to the moulds. The tomino is then turned and salted. The product so gotten is consumed within one or two days. A typology of seasoned Tomino di Talucco also exists. The forms, removed by the moulds, are settled on rye straw and subsequently salted. The brief aging lasts one or two weeks, during which cheeses are turned often. Sometimes at the end of seasoning pepper or the serpillo thyme (typical thyme growing in this region, flavour like-lemon) is added.

# Trading of the Product

The Tomino of Talucco is available near the best cheese *affineurs* and cheesemongers in Turin, or is directly commercialised by the producers. Normally the produc-

ers of this cheese are both sheperds and cheesemakers.

#### Use(s) of the Product

The Tomino di Talucco is a good fresh cheese to be consumed as appetizer or at the beginning of a cheese course. Once, in the tradition, the forms flavoured with pepper or with thyme were seasoned in vases ("ule") of terracotta, that conferred the cheese a great intensity of aroma and taste.

# Estimate of Production and Demand Trends

The annual production of Tominos di Talucco is limited to a quantity varying between the 50 and the 100 tons.



# Vecjo di cjavre

by Roberto Vallusso, Edi Piasentier





#### Origin

Caprino stagionato Other names are possible depending on the production area.

# Type of Product

Hard/semi-hard goat cheese. Cylindrical shape, height 6-8-10 cm and diameter from 15 to 20-25cm. Depending on the producer, it is seasoned for 2-3 months or up to 8 months (slightly different production techniques are applied in the second case).

#### Area of production

Whole territory of Friuli-Venezia Giulia Region, north Italy.

# Techniques and Scale of Production

This cheese is obtained from raw or heat treated (not pasteurised) goat milk with the addition of ferments, preferably farm selected, or adding "lattoinnesto". Lactic bacteria (ferments) are added to milk at 38-39°C and are allowed to work for at least 30 minutes; at 38°C (best after reaching a pH around 6.5) liquid rennet, or kid rennet paste is added.

Clotting is obtained after about 30-40 minutes; the curd is broken into pieces of the dimension of corn kernels or smaller (rice sized grains - for longer aging); after a slow warming up to 42-43°C, curd is put into moulds; cheeses in mould are turned a few times in the first days, most frequently in the first hour after removal from moulds. Cheeses are salted by manual sprinkling or in brine.

# Trading of the Product

There are three main commercial channels: direct sale to consumers;

direct utilization on farms in the agrotourism sector.

A few specialised farms supply restaurants or markets.

### Use(s) of the Product

Culinary.

# Estimate of Production and Demand Trends

The estimated amount of production is around 5 tons.



**I**talv

# Violino di capra

by Carlo Gianoncelli



# Origin

Violino di capra translates as "goat violin". This salt-cured meat resembles a musical instrument, the violin. The traditional slicing technique includes putting the meat on one's shoulder as a violin and using the cutting knife as a violin bow.

# Type of Product

Violino di capra is similar to a dry-cured prosciutto ham, except that goat meat is used. The cut is from the whole thigh of the rear limbs, even though it can also be from the anterior limb or shoulder; in the latter, the cut is called "a spaleta". The weight varies from 2 - 3 kg (4.4 - 6.6 lb.) for the thigh and from 1.5 - 2 kg (3.3 - 4.4 lb.) for the shoul-



der. Male or female goats of no particular breed are used. They must weigh at least 35 kg (77 lbs.).

# Area of production

This meat is produced in Valchiavenna (Province of Sondrio) in the Lombardy region of Italy. The animals are raised in the Province of Sondrio.

### Techniques and Scale of Production

The artisanal production is limited to the end of autumn and early winter. The meat is obtained from animals fed for at least one month of "finishing". Butchering takes place after the animals enter their

"dry", non-lactating period. After butchering, the nerves are removed from the thighs and shoulders. At this point, the cuts are dried and salted manually in steel tanks for 8-15 days. Juniper berries, clove buds, coriander seeds, peppercorns, bay leaves and garlic are used to cure violino di capra. The removal of the nerves and the salting are accompanied by a massage of the meat. The smoking phase of about 24 hours sometimes follows, where the violins are hung in a warm, closed fireplace and exposed to the smoke of pine and/or fir sawdust. Not all producers, however, smoke their meat. After smoking, the meat is once again massaged and additional nerves are removed before drying in warm, ventilated locales or cellars for 30-70 hours. At this point, the real aging begins in clean, ventilated wine cellars. Shoulders are aged for at least 1 month and thighs for 2 months. Some gorgeous violins are aged for more than one year.

# Trading of the Product

Violino di capra is sold at some butchers in Valchiavenna. It is served at good wineries and restaurants that purchase the product at a few local markets.

#### Use(s) of the Product

It is served as a salty appetizer in social settings where the meat is cut by turns. This style of snacking assures a fresh cut that emphasizes the violino di capra's notable bouquet of aromas and tastes.

# Estimate of Production and Demand Trends

Production is estimated at around 6,000 pieces, two-thirds of which are marketed and the rest eaten by the breeders themselves. The demand is in strong because a few years ago violino di capra became a Slow Food selection. However, the current number of animals and small territory of production limit the growth possibilities of this product.

by Antonella Recchini, Maria Antonietta Luciani, Maurizio Sperati





#### Origin

Goat milk yoghurt.

# Type of Product

This yoghurt is made with 100% pasteurised, whole goat's milk. It is fermented with Streptococcus thermophilus and Lactobacillus delbrueckii sub. Bulgaricus and enriched with probiotics- Lactobacillus acidophilus, Lactobacillus rhamnosus and Lactobacillus casei. It comes in three flavors: natural, apricot (shaken) and strawberry (shaken). It comes in a twin-

pack of two 125 ml containers.

# Area of production

The quality of this yoghurt can be attributed to the high-value pastures of the native-breed of goats that feed on the slopes of Vulture Mountain near Potenza in Basilicata, Italy. This guarantees a richly-flavored milk.

## Techniques and Scale of Production

Process: Freshly-milked, raw goat milk is delivered to the plant, pasteurised at 60°C and mixed with culture. A second pasteurisation at 90°C follows with a 15 minutes rest in a vat which is then cooled to 40°C and mixed with yeasts. Fermentation at 40°C lasts for 16 hours. The curd is broken and fruit flavours are added. To create a low-calorie product, fructose, instead of saccharose, is used. The yoghurt is set and packaged.

#### Trading of the Product

Amalattea, the Italian firm, specialises in the production and marketing of goat's milk products (milk, cheeses, yoghurts, ice creams, biscuits). This yoghurt is marketed through large-scale channels.

### Use(s) of the Product

This yoghurt, enriched with probiotics, is recognized as having daily nutritional value. Probiotics, microorganisms that predigest lactose (milk sugar) and strengthen the activity of bacterial flora, are promoted as improving digestion and immune system defence. It is

recommended for those who are sensitive to cow's milk or suffer from gastrointestinal diseases. It is also marketed to elderly consumers who need protection from osteoporosis.

# Estimate of Production and Demand Trends

Estimated production in 2004: 120,000 twin-packs of two 125 ml containers.

by Lucia Sepe, Romeo Leone





### Origin

A Zampogna is a musical instrument. It is called "ceramedda" in Calabrian dialect and a "bagpipe" in English.

# Type of Product

This bagpipe has three notes. It is made from an uncut, whole goat skin and a woody section. It has decorative sections made of cow horns. When inflated, it is 70 cm high, 40 cm in diameter and weighs 1 kg.

# Area of production

It is fashioned throughout Calabria in southern Italy in the province of Reggio Calabria (Roghudi, Grecanic area), Cosenza and Catanzaro (Cetraro area). The town of Mammola produces a special bagpipe called "Ciaramedda Mammolita."

### Techniques and Scale of Production

This instrument is an artisan product made by only a few master who pass their technique to pupils. The entire goat skin is used except for the head

# Zampogna

and legs. The skin is sheared and then the hairy side is on the inside.

Branches of apricot and heather comprise the woody parts, as well as the occasional use of ebony or medlar (plum). The pipes are made from dry reeds that grow in sandy areas. The decorative sections come from the horns of Podolica cows, an indigenous breed. Waxed air holes modulate the sound.

### Trading of the Product

Via local markets and those specialising in handicrafts and musical instruments. Musicians and others are the customer base.

# Use(s) of the Product

The Zampogna is used in Calabrian folk music as well as in other musical genres. It can be heard in local popular and religious festivals.

# Estimate of Production and Demand Trends

Production figures are not available. Demand is unchanged.

Ciaramedda mammolita pipe



Norway

#### **Ekte Geitost**

by L.O. Eik, K.W Ahlsén, B. Brennskag and I. Haug





#### Origin

Pure Norwegian Whey Goat Cheese. Ekte Geitost has long traditions and is considered as a real speciality of Norway. Goat whey cheese is strongly linked to Norwegian culture and traditional way of life.

### Type of Product

The cheese is soft, but solid. Colour is light or darker brown depending of the variety of cheese. The taste is acidulous and sweet with a distinct goat flavour.

# Area of production

Norway.

# Techniques and Scale of Production

Ekte Geitost is made from goat whey, goat cream and goat milk. Production of Ekte

MiT



Geitost is located to dairies in the important goat districts. During the grazing period, the cheese is also made on farms.

#### Trading of the Product

The cheese is sold in all groceries or direct sale to the consumers. Small groups of farmers also organize sale of Ekte Geitost from their valley, i.e. Undredal – or Roeldal cheeses.

# Use(s) of the Product

It can be sliced and put on bread using a cheese slicer but may also be used as a cooking ingredient. Product is strongly linked to traditional Norwegian way of life and culture. Consumption has declined in recent years due to changes in eating habits.

### Estimate of Production and Demand Trends

About 985 tons are produced on dairies by TINE and six tons by on farm producers. Consumption is decreasing due to changing eating habits.

Norway

### Gudbrandsdalsost

by L.O. Eik, K.W Ahlsén, B. Brennskag and I. Haug





# Type of Product

Norwegian Whey Cheese based on mixture of cows- and goats milk. Gudbrandsdalsost is the single most important product from Norwegian goat husbandry. The cheese relates to traditional values and pasture based production systems.

### Area of production

Norway.

### Techniques and Scale of Production

Gudbrandsdalsost was first produced in the valley of Gudbrandsdalen 150 years ago and the technique soon spread to other regions. The cheese is made from goat and cow whey, cream and milk and the colour is light or darker brown depending on the variety. The cheese is soft, but solid, and can be sliced and put on bread using a cheese MiT

slicer. The taste is sweet with a light, but distinct goat flavour. TINE is the



main producer, in addition to numerous onfarm producers.

#### Trading of the Product

Similar to Ekte Geitost, Gudbrandsdalsost is located near dairies in the important goat districts and the cheese is sold in all groceries. Product is strongly linked to traditional Norwegian way of life and culture.

#### Use(s) of the Product

The cheese is normally put on slices of bread but may also be used as a cooking ingredient.

# Estimate of Production and Demand Trends

TINE, the farmers' cooperative and a smaller company called Snnove Finden produce this cheese at different locations in Norway. Annually, 6 – 7 tons are produced, primarily for the domestic market, with some exports to customers of Norwegian origin in the US.

#### Norway

## **Kvit Geitost**

by L.O. Eik, K.W Ahlsén, B. Brennskag and I. Haug

#### Area of Production

#### Origin

Goat Cheese.

Traditionally white goat cheeses were produced as by-products from the more famous whey cheeses and

often utilised in farm households. In addition to the more famous Norwegian whey cheeses, standard goat cheeses based on milk protein are also produced.

#### Type of Product

The white cheeses are normally soft, but solid.

## Area of production

Norway, north and south, into the important goat districts.

## Techniques and Scale of Production

Production of cheeses might be based on goat's milk only, or mixed with cows' milk. Goat's milk is efficiently utilised when whey cheese is made primarily from the lactose in milk and white goat cheese from the surplus milk protein. Substantial development work takes place both by local artisans and TINE (Norwegian Dairy) in order to develop brand



of white cheeses from certain regions. Production is located in dairies in the important goat districts. During the grazing period, the cheese is also made on farms.

#### Trading of the Product

The cheese made in the dairies in the important goat districts is sold in some groceries. During the grazing period is directly sold to the consumers. Small groups of farmers also organize sale of white cheeses from their valley, i.e. Undredal cheeses.

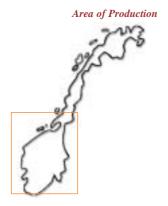
#### Use(s) of the Product

The cheese is sliced and put on bread using a cheese slicer.

#### Estimate of Production and Demand Trends

TINE Norske Meierier produces about 80 tons of white cheeses. Local artisans are producing additional small quantities. Consumption is expected to increase due to changing eating habits.







## Origin

Meat from goats is gaining popularity. Meat from suckling kids is most preferred. The production system is pasture based with milk, landscaping and cashmere fibre as other potential outputs.

## Type of Product

Pasture-based environmentally-friendly production systems create lean meat. Problems are associated with difficulty in getting sustainable supply of uniform quality. Also some quality problems due to diseases are present, especially on larger carcasses.

### Area of production

Most of the goats are located on farms in the northern, western and eastern mountainous part of the country. The farms have limited areas of cultivated land, whereas undeveloped mountain pasture is available in abundance during the grazing period.

## Techniques and Scale of Production

Traditionally surplus kids were slaughtered shortly after birth and hence culled animals were the only source of meat. Goat meat has now become more popular and more kids are raised for meat production. New production systems, which include suckling, pasturing and production of meat and cashmere, are developing.

#### Meat

## Trading of the Product

Due to strict sanitary regulations, all goats intended for sale are sent to commercial slaughterhouses, mainly the farmer's cooperatives. Small-scale producers buy carcasses back for making local products. Meat from young kids is used for special high priced dishes in restaurants. Traditional salted and smoked ribs and legs are popular and prepared both industrially and in small-scale from meat from older kids and young goats. Lately a promising market has also been developed among Norwegians, from Asian and African countries. Meat from older animals fetches a low price when used for industrial purposes. Many local craftsmen, however, use this meat for production of local types of dried sausages.

## Use(s) of the Product

Product use linked to ethnicity (traditional Norwegian dishes) and religion in which the goats are slaughtered according to Islamic rules (Halal – meat).

## Estimate of Production and Demand Trends

Norwegian Land Race, kept for milk pro-

duction is the dominant breed with a total of 60,000 milking goats. In addition, small numbers of cashmere, angora and feral goats are also found.

#### **Goat Standard Carcass Definition**

The EUROP grading system applies to all the fresh meat trading in Norway and special meat qualities receive bonus price if delivered on contract basis.

#### GOAT BASIC CATEGORY

#### GOAT

Any caprine animal

#### GOAT ALTERNATIVE CATEGORIES

#### YOUNG KID

Female or male caprine that:

- is suckling or artificial milk reared until slaughtering
- has carcass weight between 3.5-7.0 kg
- has carcass grading of minimum P+

#### OLDER KID

Female or castrated male caprine that:

- is below 1 year
- has carcass weight above 7.0 kg
- has carcass grading of minimum P+

#### YOUNG GOAT

Female or castrated male caprine that:

- is between 1-2 years
- has carcass grading of minimum P+



## Melk

by L.O. Eik, K.W Ahlsén, B. Brennskag and I. Haug



Area of Production



## Trading of the Product

Groceries and markets.

# Type of Product

Goat's milk with fat content of 3.3 %.

# Area of production

Norway.

## Techniques and Scale of Production

This milk, which is ultra pasteurised and homogenised with a shelf life of four months and butter fat content of 3,3 %, is produced and marketed by TINE, the farmers co-operative.

## Use(s) of the Product

People who may have an allergy to cows' milk drink this stronger flavoured goat's milk.

# Estimate of Production and Demand Trends

TINE produces about 56 tons of this milk. The health aspects of goat milk are a positive sales point, although the type of pasteurisation may account for low sales.



## Snøfrisk

by L.O. Eik, K.W Ahlsén, B. Brennskag and I. Haug

#### Area of Production

## Origin

Snowfresh (English) A new cheese based on goat's and cow's milk.



## Type of Product

Snøfrisk is a white, fresh, spreadable cheese. The taste is fresh and acid with a slight but distinct goat flavour. Different varieties, such as Snoefrisk with flavour of smoked salmon, juniper or mushroom are on the market. in 20 g, 125 g or 1 kg packages.

## Area of production

Snøfrisk is produced in Sunnmoere on the Western Coast of Norway, famous for the fjords with its beautiful scenery. This image is an important part of the marketing strategy of the cheese.

## Techniques and Scale of Production

This cheese is newly developed by The





Norwegian Dairy (TINE) and has become successfully introduced both in Norway and on some export markets. It is made from goat's milk (80%) and cow's cream (20%).

## Trading of the Product

The cheese is found in most Norwegian groceries.

## Use(s) of the Product

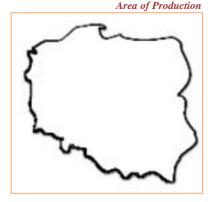
The cheese is used for making cakes, dips, various creams and to spread on biscuits.

# Estimate of Production and Demand Trends

TINE Norske Meierier produces about 365 tons of Snoefrisk. Sale is expected to increase both in Norway and on the export markets.

## Blekitna Kraina

by Tadeusz Dalkowski, Emilia Bagnicka



## Origin

Azure Land (English)

## Type of Product

Cheese, triangle shape, with moulds, 100 g.

## Area of production

Poland.

## Techniques and Scale of Production

Pasteurised goat milk is used; starters are added at 32°C. It is cut into small pieces. The curd is warmed at 40°C, and



then pressed for 3-4 hours. The cheese is salted in brine. The *Penicillium roqueforti* is added. The ripening lasts 3 weeks, with high humidity. All the production is in industrial dairies.

## Trading of the Product

It is sold through a wholesale system to specialised shops or supermarkets.

## Use(s) of the Product

Alone at the end of the meal; in sand-wiches, breakfast, supper.

# Estimate of Production and Demand Trends

No available data.

# Camembert z mleka koziego

by Tadeusz Dalkowski, Emilia Bagnicka



Area of Production

# Origin

Camembert-like from Goat milk

# Type of Product

Cheese, cylindrical shape; 200 g (7.05 oz.).

## Area of production

Poland.

## Techniques and Scale of Production

Pasteurised goat milk is used; starters are added at 32°C. The curd is cut into small



pieces. Then it is warmed at 40°C, and put into forms and pressed or 3-4 hours. The cheese is salted in brine. The *Penicillium candidum* is added on the surface.

All the production is in industrial dairies.

## Trading of the Product

It is sold through a wholesale system to specialised shops or supermarkets.

## Use(s) of the Product

Alone at the end of the meal, for breakfast in sandwiches, or supper.

# Estimate of Production and Demand Trends

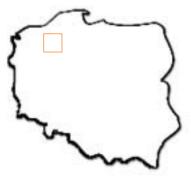
No available data.



## Czarnuszka

by Katarzyna Żerdzicka Jasionek, Emilia Bagnicka







## Origin

Black Cheese (English)

## Type of Product

Cheese, cuboid shape; white with dark rind, weight is 500 g.

## Area of production

Poland.

## Techniques and Scale of Production

Pasteurised goat milk is used; bacteria culture and rennet are added at 30°C. The curd is warmed at 34°C. After 1 hour the curd is cut into small pieces and then gently pressed in forms. The cheese is salted in brine. The ripening lasts 4 weeks; the rind is covered by herbs. The production is artisanal, on small dairies.

### Trading of the Product

It is sold directly from the dairy-farms and in specialised shops.

## Use(s) of the Product

It is used into the sandwiches.

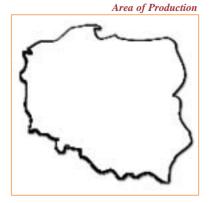
## Estimate of Production and Demand **Trends**

No data available.



# Kozie mleczko

by Tadeusz Dałkowski, Emilia Bagnicka





Origin

Goat Milk Candy (Polish)

Type of Product

Sweet candies, box of 400 g.

Area of production

Poland.

Techniques and Scale of Production

Ingredients: goat milk, sugar, margarine, farinaceous syrup, egg's albumen, agar to condenser, citric acid, vanilla flavouring.

Ingredients of chocolate glaze: sugar, cocoa mash, cocoa butter, lecithin, vanilla. All the production is in industrial dairies.

Trading of the Product

It is sold through a wholesale system to specialised shops or supermarkets.

Use(s) of the Product

Dessert.

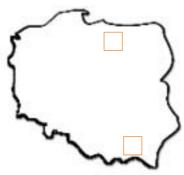
Estimate of Production and Demand Trends

No data available.

## Mleko

by Adrzej Dulian, Helena Wróblewska, Emilia Bagnicka





#### Origin

Mleko kozie pasteryzowane (Polish) Pasteurised goat milk (English) Mleko kozie UHT (Polish) UHT Goat Milk (English)

## Type of Product

Milk – liquid, bottle of 0.4 - 0.75 litre. Milk – liquid, carton of 0.5 litre

## Area of production

Poland.

## Techniques and Scale of Production

The whole goat milk, soon after milking



is pasteurised (in temp. 72° C for 15 seconds), bottled and cooled. The production is artisanal, on little dairy or on the farm. The milk, directly after milking is pasteurised and homogenised. Next step is sterilisation in temperature above 130°C. Just after cooling, the milk is packed in cartons. All production is in industrial dairies.

## Trading of the Product

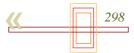
It is sold on dairy-farm, through the cheesemaker himself, or through wholesale firm system in specialised shops. It is sold through a wholesale system to specialised shops or supermarkets.

## Use(s) of the Product

To drink at breakfast, specially for children, old people and convalescents.

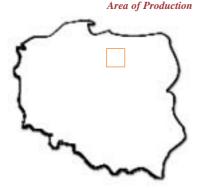
# Estimate of Production and Demand Trends

Approximately 15,000 litre/year.



# Ser kozi pełnotłusty

by Helena Wróblewska, Emilia Bagnicka





Ric goat cheese

## Type of Product

Cheese, block about 2-3 kg or lumps of 100-300 g.

## Area of production

Poland

## Techniques and Scale of Production

Pasteurised goat milk is used; ferment (starters) and rennet are added at 30°C.





After a rest of half an hour, the curd is ready. It is cut into small pieces and mixed. Then, the curd is put into the self-pressed forms. The forms are turned several times. The day-after the cheese is dry-salted. After 24 hours, the cheese is washed and packaged. The ripening lasts 2 weeks at 12-14 °C, with 80-85% humidity. The production is artisanal, on small dairy.

## Trading of the Product

It is sold through a wholesale system to specialised shops.

## Use(s) of the Product

It is common to use it in salads or in sandwiches.

## Estimate of Production and Demand **Trends**

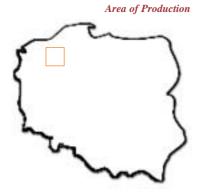
Approximately 5,000 kilogram/year.





# Ser Kozi Świeży

by Katarzyna Żerdzicka Jasionek, Emilia Bagnicka





# Origin

Fresh goat cheese (Polish)

# Type of Product

Cheese, truncated cone shape; six different tastes: natural, with herbs, fenugreek, garlic, horse-radish, chive; 200 g.

## Techniques and Scale of Production

Pasteurised goat milk is used; bacteria culture and rennet are added at 26° C. The curd is put into the moulds and drain for almost 20 h. The seasonings are added just before packaging.

The production is artisanal, in small dairies.

## Trading of the Product

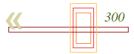
It is sold directly at dairy-farm and in specialised shops.

## Use(s) of the Product

It is use in salads or in sandwiches.

# Estimate of Production and Demand Trends

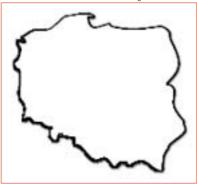
No data available.



by Irena Grotman, Emilia Bagnicka

# Ser podpuszczkowy dojrzewajacy







Ripened rennet cheese

# Type of Product

Cheese, cylindrical shape – 200 g.

## Area of production

Poland.

## Techniques and Scale of Production

Unpasteurised, whole goat milk is used; rennet is added at 38 C. After a rest of 60



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minutes, the curd is ready. The curd is cut into small pieces and mixed. Then the curd is put into the forms and left to drain for 24 hours. The cheese is salted in brine – 24 h and then after drying it ripens for 6 weeks. The production is artisanal, on ecology farm.

## Trading of the Product

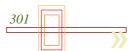
It is sold on the farm.

## Use(s) of the Product

At the end of meals and as a snack.

# Estimate of Production and Demand Trends

Approximately 200 kg/year.

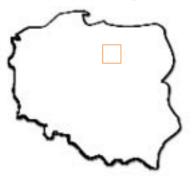




# Ser Typu Feta

byIrena Grotman, Emilia Bagnicka







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## Origin

Feta - like

## Type of Product

Cheese, cylindrical shape -100 - 200 g.

# Techniques and Scale of Production

Unpasteurised whole goat milk is used; rennet is added at 38 C. After a rest of 60 minutes, the curd is ready. The curd is cut into small pieces and mixed. Then the curd is put into the forms and left to drained for 24 hours. The cheese is salted in brine – 24 h. The production is artisanal, on organic farm.

## Trading of the Product

It is sold from the farm.

# Use(s) of the Product

Salads, snacks or fried.

# Estimate of Production and Demand Trends

Approximately 200 kilogram/year

# Ser typu feta w oleju

by Tadeusz Dalkowski, Emilia Bagnicka





## Origin

Feta-like in pickling oil

## Type of Product

Cheese, lumps of cheese in the oil pickle with seasonings, in the pot.

# Area of production

Poland.

## Techniques and Scale of Production

Pasteurised goat milk is used; starters are added at 38° C. it is cut into small



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pieces and the whey is moved. The curd is warmed at  $40^{\circ}$ C ( $104^{\circ}$ F), and then the forms are pressed for 3-4 hours. The cheese is salted in brine and ripens at 12-14°. Then it is cut into small cubes. The seasonings are added and lumps are put into pots with pickling oil.

All the production is in industrial dairies.

## Trading of the Product

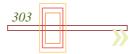
It is sold through a wholesale system to specialised shops or superma ets.

## Use(s) of the Product

Alone, at the end o the meal; in salads.

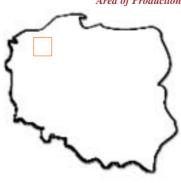
## Estimate of Production and Demand Trends

No data available.



# Ser zółty

by Katarzyna Żerdzicka Jasionek, Emilia Bagnicka



## Area of Production



## Origin

Yellow Cheese

## Type of Product

Cheese, cylindrical shape; cream-coloured rind; 500 g.

## Area of production

Poland.

## Techniques and Scale of Production

Pasteurised goat milk is used; bacteria culture and rennet are added at 30°C.

## the curd is cut into small pieces and then gently pressed in moulds. The cheese is salted in brine. The ripening lasts 3 months; cultivated rind. The production is artisanal, in small dairies.

The curd is warmed at 34°C. After 1 hour

## Trading of the Product

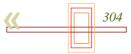
It is sold directly at dairy-farm and in specialised shops.

## Use(s) of the Product

It is used in sandwiches.

## Estimate of Production and Demand **Trends**

No data available.



## Soczewka

by Katarzyna Żerdzicka Jasionek, Emilia Bagnicka







## Origin

Lenticular Cheese (English)

# Trading of the Product

weeks.

dairy.

Ripened cheese, lens shape; white colour, weight about 150 g.

It is sold directly from the dairy-farm and in specialised shops.

culture (starter) and rennet are added at 30° C. After 1 hour the curd is cut into small pieces. The curd is warmed at 32° C. Then it is put into the form and drained. The cheese matures in brine for about 4

The production is artisanal, in a small

## Area of production

Type of Product

Poland.

# Use(s) of the Product

It is used in salads or for sandwiches.

## Techniques and Scale of Production

Pasteurised goat milk is used; bacteria

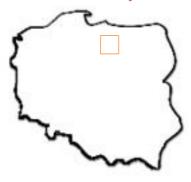
# Estimate of Production and Demand Trends

No available data.

## Twarozek z mleka

by Helena Wróblewska, koziego Emilia Bagnicka

Area of Production





## Origin

Cottage Goat Cheese

# Type of Product

Cheese, block (c. 2-3 kg) or lump (c. 100-300 g).

## Area of production

Poland.

## Techniques and Scale of Production

Pasteurised, cooled goat milk is used; bacteria's culture is added. The curd is warmed and then poured in cheese-making bag and left to partially dry. The production is artisanal, on small dairies.

## Trading of the Product

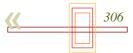
It is sold by wholesale distribution to specialty shops.

## Use(s) of the Product

Alone at breakfast or supper with bread, to make cake or dessert.

## Estimate of Production and Demand **Trends**

Approximately 4,000 kilogram/year.





## **Algarve**

by João Casinello, Paula Quintas





#### Origin

This goat cheese is from the milk of a pasture-fed, local breed called Algarve, in the mountainous area of Serra de Caldeirão. This animal is raised for meat, milk and fresh cheeses.

#### Type of Product

This cheese has a disk shape, a diameter of 10-12 cm, a height from 4-6 cm and a weight of 200-250 g. It has snow white and rindless when fresh. It develops a thin rind and ivory colour after a brief aging. Vegetable rennet imparts a characteristic flavour that combines with the fresh, grassy taste typical of pasture-fed animals.

## Area of production

This cheese is produced in the north central part of the Algarve where the Serra do Caldeirao mountains rises to 500 meters, and is characterised by shrubby pastures, lavender, heather, cyst, broom and acorn oaks. This

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area is the home of the local, goat breed.



### Techniques and Scale of Production

The fresh milk of the Algarve goat is traditionally heated. After being soaked in water for a few hours, thistle rennet is added to a vat of milk at 35-40°C. When the curd coagulates and assumes a smooth aspect and the desired consistency, the curd is broken up and then shaped. The cheese is ready to be consumed fresh, and can be refrigerated for a maximum of 5 days. The cheese can also be aged. For the most part, this is an artisanal cheese.

## Trading of the Product

No information given about marketing.

## Use(s) of the Product

This is a typical food of the Algarve. It is consumed fresh, especially as an appetizer, but also as a dessert. It marries well with the local honey.

### Estimate of Production and Demand Trends

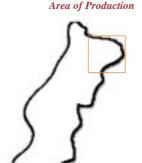
No production data is available.



**P**ortugal

## Cabra Transmontano

by Manuel Maia





### Origin

Cabra Transmontano is a traditional cheese from the Tras-os-Montes, in the Bragança and Vila Real region. It is not known when this cheese was first made. Cabra Transmontano has been a DOP cheese since 1996.

## Type of Product

Characteristics: diameter is 12-19 cm; height is 3-6 cm; weight is 0.6-0.9 kg; the paste is firm, slightly unctuous, with a few eyes. It is a mild, persistent flavour. The fat content ranges from 35-40%.

## Area of production

This cheese from Tras-os Montes is produced and cured in one of the most remote areas of Europe in the northeast of Portugal. This rustic region has a particular climate and topography. In this mountainous area, goat breeding is intertwined with the climatic cycle and the life-style of the goat breeders. For centuries there was nearly no contact with outside influences. The ubiquitous Serrana goat is the breed of choice. There are 160 breeders and a goat population of 13,000 heads. Medium daily production is about 1 litre of milk.

### Cabra Transmontano

## Techniques and Scale of Production

This is a filtered, raw goat milk cheese. It is coagulated with animal rennet at about 30°C. Average coagulation time is 60 minutes. The curd is thoroughly cut to obtain granules smaller than a grain of millet. After the curd settles to the bottom of the vat, it is transferred to moulds and pressed. The cheese is salted after 24 hours and left to dry in a curing room at 9-10°C at 84% relative humidity for 8-10 days. In a second room, cheeses ripen for over 50 days at 9°C and 75% relative humidity. The cheeses are regularly washed and turned during the ripening / affinage stage.

## Trading of the Product

Sale through retailers.

## Use(s) of the Product

Cabra Trasmontano DOP can be eaten as a spread on bread, in salads and as a dessert with jam. It pairs well with red wine.

# Estimate of Production and Demand Trends

No data is available on amount of production.

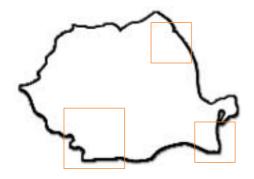




## Branza telemea

by Stela Zamfirescu







# Area of production

Different areas of Romania:

- Oltenia (South of Romania), counties: Dolj (70,000 head), Olt (50,000 head), Arges (35,000 head), Valcea (30,000 head);
- Dobrogea (South-East of Romania), county: Constanta (20,000 head);
- Moldova (East of Romania), counties: Braila (30,000 head), Buzau (45,000 head), Vrancea (30,000 head).

# Origin

Cottage cheese - Goat (goat&sheep, goat&cow) cheese (Engl.)

# Type of Product

Cottage cheese: white color; the paste is compact, with few and small eyes; the consistence is buttery and tears into pieces very easily; it has a pleasant scent and is acidulous, salty, easily distinguished from other cheeses; the water content is not more than 52%; DN about 48 % and max. 4.5 % salt.

## Techniques and Scale of Production

Cottage cheese processing: it is almost solely processed in artisan production; for 100 litres warmed sheep and goat milk (at 35-37°C) is necessary 40 ml rennet; coagulation time is about 45-60 minutes; the curd is pulled from vat in wide, thick slices of 2-3 cm; they are placed one above

#### Branza telemea

the other until the frame is filled. Special herbs or seeds can be added to obtain a special flavour (*Nigellia sativa* seeds, or other). *Nigellia sativa* has preservation properties. For whey drainage, the cheese must be pressed and pickled with 20 % salt for 15-18 minutes. The slices are placed in casks, cylinders, or special plastic boxes. For 1 kg cottage cheese it is necessary 3.5-3.8 litre goat and sheep milk.

## Trading of the Product

Cottage cheese is marketed directly on the open market by the producers; around big cities there are cheese distributors; they have cool storage facilities and marketing system for supermarkets.

## Use(s) of the Product

Cottage cheese is served like an appetizer with smoke-dried salt meat (pastrami) and black or green olives, with plum brandy (Palinka), or cooked for patisserie, pies and salt cookies.

There is a wide range of possibilities in

cooking this cheese, which differs from area to area in Romania: one of the most traditionally dish is polenta (boiled corn flour) with cottage cheese and milk cream; in the Dobrogea area, there is the famous Dobrogean cheese pie; or pancakes with cottage cheese and dill in Moldova, etc.

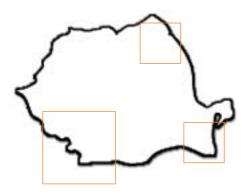
# Estimate of Production and Demand Trends

The medium milk goat production in Romania is about 12,000 tons, in more than 200 days of lactation. Almost all goat milk production is for cheese processing.





Area of Production





## Origin

Kid meat

## Type of Product

For fresh meat, kids are slaughter at 4 months old, for 14-16 kg weight in average. The carcass weight is about 7 kg (meat / bones: 5 / 2 kg). Mother's milk and grazing represent kids feeding for the first 11-12 weeks. For the last 30 days before slaughter (finishing stage), supplement forages as Corn, Lucerne flour, Soy grist, mineral supplements, could be added.

## Area of production

Various areas of Romania:

- Oltenia (South of Romania), counties: Dolj (70,000 head), Olt (50,000 head), Arges (35,000 head), Valcea (30,000 head);
- Dobrogea (south-east of Romania), county: Constanta (20,000 heads);
- Moldova (East of Romania), counties: Braila (30,000 head), Buzau (45,000 head), Vrancea (30,000 head);
- Banat (South-West Romania): Timis (18,000 head), Caras-Severin (27,000 head), Bihor (20,000 head).

### Techniques and Scale of Production

The kid meat at this age contains a low percentage of water, immature protein and cartilage. It has an excellent flavour, somewhat similar to beef and venison. It has less fat than chicken or any of the red meats. Slaughtering is nearly almost an artisan processing.

## Trading of the Product

At this stage goat products are marketed with similar sheep products in green markets. Kid meat demand on the market is related with religious celebrations (Christmas, Easter, etc.)

## Use(s) of the Product

Kid meat has an excellent ratio of polyunsaturated to saturated fats making it a very healthy choice of meat. Because of its low fat content, kid meat can lose moisture and toughen quickly if cooked at high temperatures and under dry conditions. It is usually cooked slowly to moderately and is often marinated first or cooked in sauce. One easy marinade is to soak the meat in white dry wine, lemon slices and black pepper beans.

# Estimate of Production and Demand Trends

The fresh kid meat is consumed in certain periods of the year, especially Easter, Christmas,





Leather / goats skins

### Type of Product

Origin

Raw goats skins: thickness 1.7-2.37 mm; skin surface from 30 dm<sup>2</sup> (2-3 months kid) to 70-90 dm<sup>2</sup> (adults). Goats skins have a better quality than sheep skin, because of its lower fat content in the skin structure and a higher number of collagen fibers.

## Area of production

different areas of Romania:

- Oltenia (South of Romania), counties: Dolj (70,000 head), Olt (50,000 head), Arges (35,000 head), Valcea (30,000 head);
- Moldova (East of Romania), counties: Buzau (45,000 head), Bacau (43,000 head), Vrancea (30,000 head);
- Dobrogea (south-east of Romania), county: Constanta (20,000 head).



## Techniques and Scale of Production

We process the cover skin (sorting, washing, sawdust rubbing, hair cutting, brushing, pressing) and the derma (chemical and mechanic processing).

#### Trading of the Product

After skinning, goats skins are salted three to five times with approx. 5 % of theirs weight. Goat skins are collected in collecting points in production areas. After sorting, by size and qualities the skins are delivered to the tanneries.

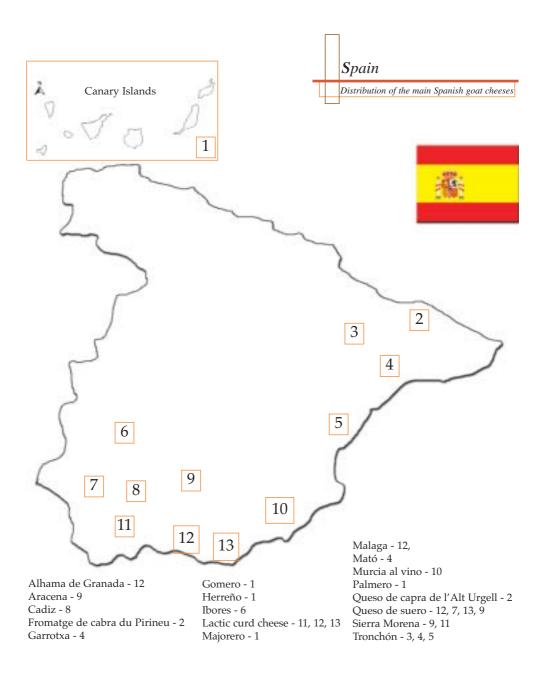
## Use(s) of the Product

Processing cover skin we can manufacture imitation deer or "exotic" skin for, fur caps and coats; processing derma, we obtain "Chevro", used at coats, gloves, handbags, etc.

### Estimate of Production and Demand Trends

No data.





Spain

# Queso Alhama de Granada

by Jose Luis Ares Cea, Ana Maria Rey Gomez





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## Origin

Alhama de Granada is a traditional cheese. Its name corresponds to the homonymous municipality of Granada county. This area has the largest number of goat farms which made this variety by hand. It is also known as ALHAMA or LOJA cheese.

## Type of Product

This aged, goat cheese is made with either half or full fat, using an enzymatic coagulation. It is uncooked, pressed and compact. Its shape is cylindrical with faces and lateral planes that show the impression of the tools used to made the cheese. The weight varies between  $1.5-2~{\rm Kg}$ .

## Area of production

The area of production is in the mountainous areas of Loja, Media, Zafarraya, Jayena, Dona and Justiga in Granada county in eastern Andalusia.

## Techniques and Scale of Production

Whole, raw goat milk of recently-mil-

king animals is poured in terra cotta containers (*orzas*) that have glazed interiors. At 28-30°C, animal rennet, generally from suckling kids. It takes about 2 hours to completely set. The curd is cut with a fig stick and beaten for about 10 minutes until the curd is the size of a grain of rice. It then rests for 30-60 minutes. The moist curd settles in vats of esparto and is then squeezed and pressed lightly by hand.

Both faces are rubbed with dry salt and each side is allowed to absorb the salt for 12 hours each. Cheeses are ripen in a fresh, ventilated space on straw mats for 45-70 days. During the first weeks of aging, the cheeses are turned once or twice a day.

## Trading of the Product

Traditionally, this cheese was made for consumption by the producers' families and sold to other goat farmers in the area, to local markets and fairs. Today, a number of small dairies make this cheese by hand in larger quantities for sale outside the production zone.

## Use(s) of the Product

This cheese has a compact, hard rind with markings and a dark, yellow colour. The paste has a compact, firm texture, sometimes with eyeholes and a white to pale yellow colour. The flavour is strong, well-developed, lightly slated, spicy and very buttery. It is commonly eaten as an appetizer and with strongly-flavoured food and is accompanied by high-alcohol grade white or red wines. Younger cheese are served as an appetizer, with light, first course and salads. These are paired with rose and red wines with a low-alcohol level.

# Estimate of Production and Demand Trends

Farmhouse cheese production on goat farms is decreasing, but processing at small-scale dairies in the area of production reaches about 100,000 kg per year.



# Queso Aracena

by José Luis Ares, Ana Maria Rey Gomez





Origin

Aracena is a traditional cheese.

The name Aracena corresponds to a homonymous municipality in Huelva County. The cheese is also known by other geographical names: Sierra de Huelva or Andevalo Queso Alhama. It's characteristics relate to Sudado, Picon and Anejo de Cabra.

## Type of Product

It is a full-fat, aged cheese made with enzymatic coagulation. Only goat milk is used to make this cheese. It has a pressed and compact paste, is uncooked and has a semi-soft rind, frequently with *morga*. It has a somewhat irregular, cylindrical shape. Its weight varies between 0.8 to 1.2 kg.

## Area of production

In Spain, in the mountainous areas in northern Granada County, located in western Andalusia where goat farms are plentiful, principally in meadows with cork and holm oak forests.

## Techniques and Scale of Production

Raw, whole milk from just-milked goats is used to make this cheese. At approxi-

mately 30°C, animal rennet (usually from suckling kids) is added for a 1 – 2 hour coagulation. The curd is crumbled to the size of a grain of rice and then allowed to rest 10 – 15 minutes. The humid curd is scooped into traditional moulds ("aros") made of tin or fig bark. The curd is pressed and squeezed by hand for 20 – 30 minutes. Salt is sprinkled on one surface and left for a day. The cheeses are then turned and salted on the unsalted surface. Cheeses are placed in a ventilated, humid space to age on pine and chestnut slats for 60 – 90 days.

The cheeses are turned frequently and also kneaded by hand, so that they cheeses release moisture. Sometimes, the cheeses are preserved in olive oil for one to two years.

## Trading of the Product

Formerly, most production was for consumption by the families of the cheesemakers, for sale to neighbouring farms, to local markets and fairs. Today, some small batch dairies make larger quantities to sell outside the production area for direct sale to commercial channels for distribution in big cities.

### Use(s) of the Product

The cheese has a culinary use. It has a soft, sticky, moist rind, due to the surface covering of *morga* formed during maturation. The rind's colour is orange/ochre. It is soft inside and lightly compact with an open texture, with numerous eyeholes with a pale to brown-yellow paste. It has a strong, mouldy, intensely-developed aroma with an intense flavour that tastes salty, spicy, buttery. The texture is a fatty sensation on the palate. This is due to the autochthonous breed of goats that pasture feed extensively on naturally-aromatic grasses.

This strong, aged cheese is served as an appetizer that accompanies other strong foods and fragrant white and red wines. This cheese can be preserved in olive oil. It then develops an intense, spicy flavour.

# Estimate of Production and Demand Trends

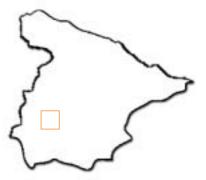
Although cheese production on goat farms is actually decreasing, some farmers continue to make hand-crafted cheeses. However, cheese making is increasing in among small-batch producers in this area. Production is approximately 200,000 Kg. per year.

Spain

## Queso Cadiz

by Jose Luis Ares Cea, Ana Maria Rey Gomez







although smaller cheeses are also made.

## Origin

Traditional variety: Cadiz This name corresponds to the homonymous county. It is also known as Serranias de Cadiz cheese.

## Type of Product

It is a semi- to full- fat cheese in both fresh and aged types. It is made using goat milk exclusively and an enzymatic coagulation process. It is a compact, uncooked, pressed cheese with a cylindrical shape. The surface has engravings and impressions of cheese making utensils. The weight varies between 1.5 and 2.5 Kg,

### Area of production

Spain: The mountainous areas and spurs from Cadiz County in western Andalusia, mainly in the Sierra de Grazalema y Parque Natural de Los Alcornocoales. The production zone reaches some towns on the coast that have meadows with many goat farms.

## Techniques and Scale of Production

Raw, whole milk of recently milked goats is stored in terra cotta recipients (usually called "orza") that have a glazed interior. When the temperature of the milk is 32°C to 34°C, the animal rennet (generally from suckling kids) is added. It sets for 45-60 minutes. The curd is cut with a thorn

wooden spatula and stirred until it breaks down to the size of a chickpea grain. It rests for 10 – 15 minutes. The moist curd settles into the *pleitas* of esparto on wood slats and is squeezed and lightly hand-pressed simultaneously. Dry salt is rubbed on both surfaces of the cheese and left for 24 hours. Cheese without moulds are taken into a fresh, ventilated space until consumption day.

### Trading of the Product

Formerly, most of the cheese production was either for self-consumption, sale to neighbouring farmers, local markets and fairs. Today, some small artisanal dairies are producing larger quantities for sale outside the production area to markets in other counties. The cheese is sold directly or through distributors.

## Use(s) of the Product

The cheese has a compact, grooved, soft or semi-soft rind, with the very graphic drawings and a brilliant white colour. The interior of the cheese is compact, closely textured, sometimes with irregular eyeholes. It has a moist, buttery and compact, white paste. The aroma and flavour are characterized by lactic acidity, sweetness and a slight saltiness typical of goat milk. The fresh cheeses go well with first courses, salads and desserts, accompanied by fragrant white and red wines of low alcoholic gradation. Mediumaged varieties go well for breakfast, snacks and appetizers.

# Estimate of Production and Demand Trends

For the present, some farmers continue producing this cheese according to traditional recipes in several *cortijos*, most production is in small dairies that process approximately 400,000 Kg per year.

## **Cuchillo Canario**

by Raúl Rodríguez Marcos

#### Area of Production



### Origin

Naife (Spanish) Canarian knife (English)

#### Type of Product

The knife has two parts: the end (male goat horn, metal and wood) and the leaf (stainless steel, alpaca, silver or gold).

## Area of production

Gran Canaria. Canary Islands, Spain.

## Techniques and Scale of Production

It has two parts. The leaf takes 5 hours to make and the end 1 to 2 days. For the leaf, the metal is heated up and hammered several times to obtain a uniform levelling. It is heated in the forge and moulded. To create the end, the horn piece is cut, heated with

a blowpipe until is malleable. An orifice in the centre is made on each part. Later, all the pieces of the



same diameter are left, with a hammer metal pieces become engraved in the horn and all the pieces in the end are introduced. In order to finalize, the end polishes, it is decorated with geometric designs and is carefully polished so that it becomes smooth and brilliant.

#### Trading of the Product

It is sold directly by artisan blacksmiths or in specialty shops.

## Use(s) of the Product

In the past farmers and cattle dealers of the island used it as a working tool. Nowadays, in addition to rural uses, it has been intended as gift, for decoration, such as letter opener, etc. It is a symbol of the island.

## Estimate of Production and Demand Trends

It is quite difficult to know the production but it is easy to find a place where you can buy it in Gran Canaria. Spain

# Fromatge de cabra de Pirineu

by Roser Romero del Castillo





MiT

## Origin

Formatge de cabra del Pirineu. Goat cheese of the Pyrenees (English). Generic name of several kinds of cheeses (Catalan) or "Queso de cabra del Pirineo".

## Type of Product

Cheeses of small size, with surface moulds.

## Area of production

The Pyrenean of Lleida (Catalonian), Spain.

## Techniques and Scale of Production

Only craft production. Raw milk, lactic coagulation for 24 hours, very slow drainage, 24 hours of drying in a 60 % HR and 2 months ripening.

## Trading of the Product

Directly in the site of production, or in the specialised shops in Barcelona and La Seu d'Urgell (by distributor agent).

## Use(s) of the Product

At the end of the meal or as a dessert.

### Estimate of Production and Demand Trends

Unknown.



Spain

## **Oueso Garrotxa**

by Roser Romero del Castillo







## Origin

Garrotxa Cheese (English) FORMATGE GARROTXA (Catalan)

## Type of Product

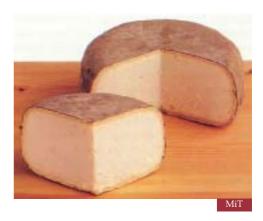
Cylindrical shape, rind with moulds, weighs 1 kg.

## Area of production

All of Catalonia

## Techniques and Scale of Production

Pasteurised goat milk. Starters add at 26°C-30°C. After a rest of 1 – 2 hours, the curd is ready. It is cut into pea-sized pieces. Then, the curd is heated to 32°C-34°C and then cooled and gently pres-



sed for 1 hour. The cheese is salted in brine. Curing for three weeks in a space with high humidity aids the development of the proper mold. All production is artisanal in small dairies.

## Trading of the Product

The cheese is sold directly from the farm or in specialty shops.

## Use(s) of the Product

Garrotxa is eaten at the end of the meal and it is also commonly used in salads.

## Estimate of Production and Demand **Trends**

Approximately 90,000 kg per year.

# Queso Gomero

by Marìa Fresno







slightly acid, a bit salty, with the aftertaste of kid's rennet and a hint of smoke. The aged cheese (3-6 months) has a beech bark-coloured rind and an intense, smoky aroma.

# Origin

The name Queso Gomero is given to all cheese produced throughout the island of La Gomera in the Canary Islands, Spain. Locally, different cheeses are identified, such as Chiude, Ayamosna, Cercado, etc. The origin of Queso Gomero is dated before the conquest of the Canary Islands by the Spaniards (XV century). Indigenous populations raised both goats and sheep, whose milk was transformed into cheese. Reports of this cheese is found in historical documents.

# Type of Product

Fresh Queso Gomero (less than 7 days old) has a characteristic, light lactic taste,

# Area of production

The entire island of La Gomera, situated in the Canary Island archipelago, Spain. The climate of the island, characterised by very little rain, strongly influences the composition of the pastures, which are rich with wild grasses and autochthonous fodder species. In drier zones, animals feed on plants such as Agave, Opunzia and Rumex.

## Techniques and Scale of Production

The tradition in the Canary Islands is to

milk the animals once a day and, at the end of the milking, to coagulate the milk with kid's rennet before its natural temperature (34-36°C) decreases. The first salting is done by adding salt directly to the milk during filtering. When the curd reaches the desired consistency, it is broken up to the rice-sized grains. After the curd settles to the bottom of the vat, it is picked up, put in moulds and pressed vigorously by hand. At the end of this process, the second salting takes place, sprinkling salt on the surface of the cheese. The cheese is turned about 6 hours after salting. After the salting, the forms are dried for a day and smoked over burning branches of arboreal heather and cistus ladaniferus. There is a light smoking of young, fresh cheeses and a more intense smoking of aged cheeses. The cheeses meant to be aged three to six months are periodically rubbed with olive oil.

variety is used, together with red chilli pepper, garlic and oil, to prepare a cream called *almogrote*. It is ideal to eat with roasted potatoes or cooked with potato peels (*papas arrugadas*), or with toasted bread. In addition, it is used in the preparation of traditional recipes, such as curd cake. Red wines from the island, with strong tannins and intensely fruity aroma, combine well with this cheese.

# Use(s) of the Product

This cheese is served as an appetizer or as a second course, accompanied by local white wines. It is also paired with honey of palm as a delicious dessert. The aged



#### Helado

by Jean-Paul Dubeuf







# Techniques and Scale of Production

Based on goat milk yoghurt and classic icecream technology. Other ingredients are added, such as Cactus and palm honey. Artisan production.

# Origin

Ice cream.

# Type of Product

Sweet dessert. An original valorisation of local tropical product. Goats cannot pasture any more in the zone to protect vegetation.

## Area of production

Spain, Tenerife Island; Western part, once a traditional rangeland for goats and now a famous tropical tourist zone famous for hiking.

# Trading of the Product

This specialty is sold in local café and restaurants to promote Canarian culture.

## Use(s) of the Product

A dessert.

# Estimate of Production and Demand Trends

No data available.



by Roser Romero del Castillo

#### Area of Production



The name Queso Herreño refers to its place of production on the island of El Hierro. Its origin is dated from the time of the ancient people Bimbaches. They were experienced shepherds who populated the island and knew the techniques of milk preservation. Their knowledge, together with the technology brought by the Spaniards in the XV century, created the technique of making this cheese.

# Type of Product

This is a mixed milk (goat, sheep, cow) cheese in dish form, with noticeable, irregular eyes. It is fresh, sweet and fatty. A smoking treatment confers its characteristic coloration of alternating yellow and dark areas.

# Area of production

Queso Herreño is produced throughout El Hierro island, the western-most of the Canary Island archipelago, Spain.



Techniques and Scale of Production

Queso Herreño is a mixed milk cheese (goat, sheep, cow) obtained through the coagulation of milk from one milking, mixed with liquid or paste rennet before the fresh milk's temperature of 32-36°C drops. After 30-40 minutes, the curd is coarsely broken and moved to metallic forms called *cendajas*. The curd is pressed and shaped by hand, and when it is sufficiently compact, it is sprinkled with coarse salt. After about 24 hours, the cheeses are removed from their moulds. Once dried, they are smoked, using sprigs of *Euphorbia, Pinus canariensis* and arboreal heather.

# Use(s) of the Product

This cheese is served as an appetizer or as a second course. It combines well with DOC red wines of the island. It is used as an ingredient in the preparation of two traditional recipes of the island: one salty, the *mojo* of queso herreño and the other one sweet, *quesadillas* of El Hierro.

# **Queso Ibores**

by Ana Garcia





#### Origin

Queso Ibores (Spanish)

#### Type of Product

Cylindrical. Natural rind, rubbed with pimentón (Spanish smoked paprika) from La Vera or with olive oil.

## Area of production

Norheast of Cáceres, Extremadura in the South-western part of Spain. It is a low altitude plateau with abundant pastures and oak woods surrounded by tall, rugged mountains.

## Techniques and Scale of Production

Queso Ibores is made with unpasteurised milk from the Serrana, Verata and Retinta goat breeds, using mixed coagulation (lactic and enzymatic) techniques. It has a semi-soft paste





of medium aging. The aging period is at least two months; therefore it is classified as a semi-cured cheese.

Weight from 22.97 oz to 2.66 Ib.

Fat content in dry matter: minimun 45%. All the production is artisanal; in all there are 6 dairies.

#### Trading of the Product

Supermarkets, specialty Shops, directly from the dairy-farm. It is present in international markets, such as Germany and the USA among others.

# Use(s) of the Product

Flavour: direct, creamy and very buttery on the tongue with aromas of raw milk. Very tasty in salads and perfect for desserts.

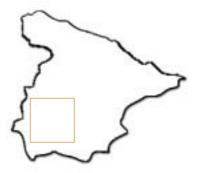
## Estimate of Production and Demand Trends

Production during 2002 was 337,065 kg.

# **Lactic curd Cheese**

by José Luis Ares, Ana Maria Rey Gomez







Origin

Lactic curd cheese made with goat milk is not a traditional variety in Andalusia, however it production in small dairies in this region has been increasing in recent years.

# Type of Product

This is a semi-fat or full-fat cheese characterised by lactic fermentation made exclusively with goat milk. It has a consistent, soft paste with a white colour. Its oblong cylindrical shape has a weight that ranges between 1 and 1.3

kg. There are also small pieces weighing between 60 and 80 g, with a diameter of 4-6 cm and a height between 3-5 cm. It has a smooth, dry consistency.

# Area of production

Spain. This recently-introduced variety of cheese is made in various parts of Andalusia has been influenced by French pastes. It is found in cheese dairies in Cordoba, Malaga, Jaen and Granada.

## Techniques and Scale of Production

This cheese is made with pasteurised goat milk using a lactic fermentation using a slow coagulation of 18-24 hours

at 20-22°C. Once set, the curd is soft and loose enough to be ladled into perforated moulds. After the whey drains for a few hours, the cheese is turned and salted on one face. After 24 hours, the other face is salted. The pieces of cheese are placed on plastic slats and begin to form a rind between 2-3 days. The cheese cures for 2-3 weeks on shelves where they are turned daily and aged between 10-12°C and a relative humidity of 85-90%.

# Trading of the Product

Small cheese dairies made this cheese and distribute it to other areas through speciality food channels principally to hotels, restaurants and speciality food shops.

# Use(s) of the Product

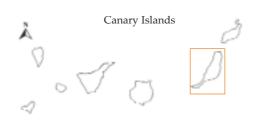
This culinary product has a flat, semisoft rind and a layer of white mould. The white paste is soft and moist with a slightly-acid aroma. It can be covered with charcoal, herbs or pepper. The small cylindrical shape has a golden yellow surface; it can sometimes have surface moulds. When young, the cheese is soft and creamy. With age, the cheese develops a balanced, strong flavour. It can be processed with oil, herbs and spices. As a dessert, it is accompanied by rose wines and fruity, white wines. Lovers of this cheese usually eat the rind which contains a rich, characteristic flavour. Aged forms can be grated for gratins or eaten with a salad. Highalcohol grade red wines pair well with the aged form.

# Estimate of Production and Demand Trends

Approximate production: 200,000 kg per year. Demand has been increasing steadily.



Area of Production





## Origin

Queso Majorero owes its name to the island of Fuerteventura in the Canary Islands, Spain. Before being conquered by the Spaniards in the XV century, Fuerteventura Island was dominated by the ancient people, the Maxoratas. This cheese has very ancient origins. Ancient documents testify to the extraordinary quality of this goat cheese.

# Type of Product

Made solely from goat milk from the Majorera breed, Queso Majorero is shaped like a dish. The rind shows areas of mould which follow the impressions of woven palm leaves. The paste is white and compact. It is a fresh cheese with a sweet, delicate taste and aroma. The aged and semi-aged versions are slightly acid and spicy.

## Area of production

Queso Majorero cheese is produced exclusively on Fuerteventura Island in the Canary Islands archipelago, Spain. Its name is the same as the goat breed that inspired the first name of the isle's capital, "Puerto de cabras" and other places, like Rio de cabras (Goat River), Capraia (Goatherd), etc.

The proximity of the island to the African coast is a cause of its dry climate and scare, irregular rainfall to which the Majorera goat breed is perfectly adapted. The goats feed on vegetation in ecosystems characterized by salty soil.

## Techniques and Scale of Production

Queso Majorero, POD since 1996, is produced during the whole year with raw or pasteurised milk solely from the Majorera breed. A small quantity of Canaria sheep milk is allowed in the processing of aged forms.

The process involves mixing filtered milk of 37°C with animal rennet. After 60 minutes, the curd is broken to rice-sized granules. Then, the curd is put in moulds and hand-pressed. The surface of the cheese is dry-salted for about 24 hours. Cheeses are then transferred to aging cellars and processed differently according the desired maturation time:

tiernos/8-20 days; semicurados 20-60 days; curados over 60 days.

# Use(s) of the Product

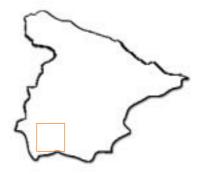
The fresh form is ideal for breakfast,

snacks, as an ingredient in salads and for desserts accompanied by honey, dried fruit, almonds, etc. The aged and semi-aged form is eaten as an appetizer accompanied by a local wine. It is also used in the preparation of typical Canarian dishes, such as vegetable soup, meats, potatoes "arrugada" (potatoes cooked in their skins with abundant salt. In addition, it is often used in the preparation of traditional recipes such as roasted cheese or cheese soup, which accompany fish and potatoes arrugadas

# Queso Malaga

by Jose Luis Ares Cea, Ana Maria Rey Gomez







# Origin

Traditional variety: Malaga Cheese This geographical name corresponds to the homonymous county. It is also known as Las Serranias de Malaga or Los Montes de Malaga Cheese.

# Type of Product

It is a semi-fat, soft, fresh cheese or an aged type. Both use enzymatic coagulation that uses goat milk exclusively. It has a pressed and compact paste and is uncooked. Its shape is cylindrical. Its surface shows the impression of utensils used in cheesemaking. The weight varies between 1 and 2 Kg, with some made up to 3 Kg.

## Area of production

Spain: in several areas of Malaga County of eastern Andalusia. It is characterized by slopes and ridges where goat farms are plentiful, principally in meadows with natural grasses that are a key resource for pasture feeding.

# Techniques and Scale of Production

Raw, whole milk of recently milked goats is put into a terra cotta recipient (usually called "orza") with an interior glaze. When the temperature of the milk is 28°C to 32°C, animal rennet from suckling kids is added and allowed to set from 30 – 60 minutes. The curd is cut with an oak stick and

then is stirred intensely for 5 minutes until the curd breaks to the size of a grain of rice. It is then allowed to rest for 10-15 minutes. The moist curd settles into the *pleitas* of esparto on the wooden shelves. The curd is squeezed and lightly hand-pressed simultaneously. Dry salt is sprinkled on both sides. The cheeses are left to salt for 24 hours. Afterwards, fresh cheeses are place in a fresh, ventilated space until consumption or aged in a cellar from 30-60 days, being turned twice or three times daily during the first weeks of ripening.

# Trading of the Product

Traditionally, most of the production was destined for the families of the cheese-makers or sold to local goat farmers in the area, as well as to local markets and fairs. Today, a few small-batch, artisanal dairies are making larger quantities to sell out of the production area by means of direct sale or through distributors.

# Use(s) of the Product

This cheese has culinary uses. It has a compact, soft rind, with clear markings and a white colour when fresh and soft. The rind is whitish-yellow or brown-yellow in the harder, aged type. The interior of the cheese is compact with a tight texture and a white colour in the fresh, soft cheeses and a white yellowish or brown yellow in the harder, aged type. It sometimes has irregular eyeholes, but is characterized by a firm consistency, short to medium paste and a white colour in the fresh and a pale yellow colour in the aged type. The aroma and flavour of both fresh and aged forms is intense, very developed, somewhat acid, lightly salted and buttery.

The fresh cheeses usually go well as a first course, in a salad and as a dessert. These are paired with rosé and red wines of low alcohol content. The ripened type pairs with rich, strong-flavoured foods and is matched with full-bodied white and red wines of higher alcohol grades.

# Estimate of Production and Demand Trends

The farmhouse cheese production on goat farms is actually decreasing. But, there is an increase in the small-batch, artisanal sector. Annual production reaches about 600,000 Kg.



# Queso Matò

by Roser Romero del Castillo







# Origin

Mató Cheese. Mató in both Catalan and Spanish.

# Type of Product

Soft, sweet cheese with various shapes and weights.

# Area of production

Produced throughout Catalonia, Spain.

## Techniques and Scale of Production

This cheese is made with pasteurised goat milk heated to about 80°C and then cooled to 35°C-36°C. Both animal and vegetal rennet are used, but most producers used animal rennet. The curd is cut to pea-sized pieces. It is stirred and co-



agulation sets after 2 hours. It is poured into containers and is ready for consumption. The production is both artisanal and industrial.

#### Trading of the Product

It is sold directly from the cheesemaking facilities on holidays and is also marketed through existing commercial channels. Mató is found widely in shops and supermarkets.

# Use(s) of the Product

One eats this cheese as a dessert with honey, with marmalade, jams and dried fruit. There is also a pie made with this cheese.

#### Estimate of Production and Demand **Trends**

Industrial production is 2,200 metric tons per year. Artisanal is 391 metric tons per year.

# Queso Murcia al vino

by Ana Garcia

Area of Production



Murcia in wine



#### Type of Product

Cylindrical shape with a smooth reddish purple rind, gotten from bathing in red wine. During the ripening, the cheeses are bathed twice in Jumilla Wine, giving the rind its characteristic colour and strong floral bouquet aroma.

# Area of production

Region de Murcia. Southeastern Spain, birthplace of the Murciano-Granadina, the best milk-goat breed in Spain.

# Techniques and Scale of Production

Murcia al Vino is a cheese of pressed paste, washed and uncooked, of intense white colour, creamy and elastic texture, that is sold 45 days after processing in big pieces (2.22 lb. and 4.44 lb.) and 30 days



after processing in small pieces (14.13 oz.)

Fat content in dry matter: minimun 45% There are 7 dairies.

## Trading of the Product

Supermarkets and specialised shops, directly from the dairy-farm.

Present in international markets, especially in the USA.

# Use(s) of the Product

Flavour: mild aroma, agreeably acid and a little salty.

Very tasty in salads and desserts. Also nice grated over warm vegetables.

# Estimate of Production and Demand Trends

Production year 2002 was 207,028 kg.



Area of Production





#### Origin

No actual information is available about the history of this cheese, but its origins are found in legends that tell about the conquest of the island of La Palma in the Canary Islands by the Spaniards in the XV century. The stories tell about the ancient Benahoritas who lived on La Palma. They were expert shepherds who offered their products to the gods. Their valued gifts to the gods were goat milk and goat cheese.

# Type of Product

Queso Palmero is made from pure goat milk. Its POD was recognised in 1997.

The rind shows the signs of the smoking treatment and sometimes the red colour of the paprika which is rubbed on its rind.

# Area of production

It is produced throughout the island of Las Palmas, from which it derives its name. Las Palmas is the most humid of the Canary Island archipelago. Various autochthonous goat breeds live on the island. The most prominent type, the Palmera goat, is perfectly suited for the island's climatic conditions. The traditional breeding system of the Palmera goat is extensive. It utilizes the shrubby pastures, rich in leguminose

and grasses, as well as a semi-intensive system that supplements pasture with cereals and fodder.

## Techniques and Scale of Production

This cheese is produced solely with the milk of the Palmera breed. It is filtered, heated to 37°C and mixed with kid's paste rennet. Average coagulation time is 45 minutes. A vigorous breaking of the curd that results in small-sized grains. When the curd is gathered from the bottom of the vat, it is transferred to moulds, drained with strong pressure and cured with sea salt from local salt pans. After 24 hours, the excessive salt is washed off and the cheese is left to dry.

Some cheeses are smoked using a combination of *Prunus dulcis* bark, *Pinus canariensis*, twigs and branches from Opuntia ficus indica or a mixture of Mirca faya and arboreal heather. Afterwards, the cheeses transferred to a cave or maturation room. Aging lasts 7-15 days for the fresh cheese (*tierno*); 15-60 days for the semi-aged one (*semicurado*); over 60 days for the aged

cheese (curado).

Queso Palmero is either rubbed with paprika, which gives it a particular colour and taste; or, it is rubbed with a mix of different cereals (*gofio*) that give it a very particular taste.

#### Use(s) of the Product

Queso Palmero is often on the menu on La Palma Island. Traditionally, it is eaten as an appetizer, accompanied by a local DOC (Controlled Origin Denomination), such as Vino de la Palma. Fresh cheese is eaten for dessert, if paired with the local honey or honey-based sweets; the aged form is used to accompany dishes of the traditional cuisine of the island.

# Queso de cabra

by Roser Romero del Castillo

de l'Alt Urgell

Area of Production



#### Origin

Queso de Cabra de l'Alt Urgell is a goat cheese from the Alt Urgell region in Spain. Thanks to young people from Barcelona who came to live and make goat and sheep cheeses in this mountainous area between the last 1970s and the early 1980s, the tradition of producing this cheese was kept alive. Cheesemaking using goat and sheep milk nearly disappeared in this area when cows were introduced.

# Type of Product

This is a sour, soft, fatty, white goat cheese, seasoned with olive oil and aromatic herbs.

# Area of production

Spain. The area of production includes Bar and Ossera, situated in the region of L'Alt Urgell (Lleida) and Mùsser, in the province of Lleida in the Cerdanya region. The pastures are typical of the high Pyrénées mountains (above 1,000 m).





Techniques and Scale of Production

Many of the new cheesemakers were trained in France, where they learned the techniques of making French *fermier* cheeses. It is made using an acid coagulation with milk from two or more milkings, heated to 20-26°C, depending on the season. It is mixed with a small quantity of rennet to give it the curd a correct consistency and then allowed to rest for 12-24 hours. At this point, without breaking the curd, the mass is gently picked up and left to drain for a while. When drained, it is put by hand into moulds to age for about 2 months. It is rubbed with olive oil and aromatic herbs.

# Trading of the Product

Young people make goat and sheep cheeses in this mountainous in little farms.

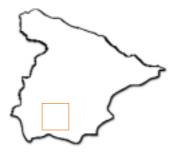
## Use(s) of the Product

When fresh, it can be as a dessert spread on bread with jam, or in salads. It expresses itself best when grated on toasted bread drizzled with olive oil.

# Queso de suero

by J.L.Ares, A.M.Rey

Area of Production





# Origin

Whey cheese is a traditional product made in all parts of Andalusia.

# Type of Product

It is a milk product using the whey leftover after cheese making. It is rich in protein, especially soluble proteins, and low in fat. This is a soft, rindless, unpressed curd cheese with a pure white colour. It has a granulated texture, occasional eyes and moist consistency. Its shape varies according to the type of mould: baskets, cloth, layettes. The weight ranges from 250 g to more than 1 kg.

# Area of production

This cheese is produced in Spain, throughout Andalusia, principally in areas with large goat populations; Malaga, Sevilla, Cordoba and Granada.

## Techniques and Scale of Production

This cheese is made from the leftover whey of various goat cheese types In the handmade process, the whey is gotten from a cheese making facility and poured into an open metal vat and warmed to 90-95°C. After from 15-30 minutes of rest, sol-

id bits of curd appear on the surface of the whey. Using strainers, cloth, ladles and skimmers, the curd is scooped from the liquid and poured into moulds. They drain for 30-60 minutes, according to the size of the container. Once drained, they are placed in storage at from 3-4°C until packing for consumption.

## Trading of the Product

Traditionally, this product was consumed by the families of the producers. Currently, this cheese is made in small-scale dairies that produce products by hand. Since whey cheese has a brief shelf life, it is sold directly from the dairies or distributed through local markets in the area of production or as a raw material to pastry makers.

# Use(s) of the Product

This culinary product is slightly salty and sweet with a pinch of acidity. It has a characteristic goat flavour. It is served mainly as a dessert, alone or with honey, marmalade or quince. It can accompany first courses, such as pastas and empanadas. It pairs with rose and white wines, and with red wines of a low alcohol grade.

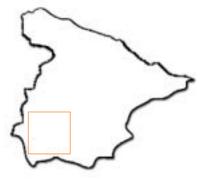
#### Estimate of Production and Demand Trends

Its annual production is between 100,000 – 150,000 kg. The production varies according to production at the cheese dairies and seasonal demand which includes the usual summer decrease.

# Queso Sierra Morena

by Jose Luis Ares Cea, Ana Maria Rey Gomez







varies between 0.7 and 1.5 kg, with an average weight of 1 kg.

# Origin

Sierra Morena is a traditional variety. This name corresponds to the homonymous mountainous area. This cheese also goes by the name of Sierra Norte de Sevilla, which is in larger area of production.

# Type of Product

Sierra Morena is either a fresh or aged, semi-fat cheese made with an enzymatic coagulation. Only goat milk is used to make this uncooked cheese. It has a pressed and compact paste. Its shape is cylindrical. Its surface shows the impression of utensils used in cheesemaking. The weight

#### Area of production

Spain: in several parts of the Sierra Morena in Jaen County of eastern Andalusia, extending to Huelva County, including Cordoba and Sevilla Counties. It is also made in western Andalusia, where goat farming is plentiful.

# Techniques and Scale of Production

Raw, whole milk of recently milked goats is put into a terra cotta recipient (usually called "orza") with interior glazing. When the milk reaches 30°C, the animal rennet (usually from suckling kids) is added. It is set for 45 – 60 minutes until the curd is set. The curd is cut with a fig stick for about

15 minutes until the curd is the size of a bean. Then, the curd rests for another 15 minutes before being the moist curd is placed into forms – pleitas of esparto or aros of tin or the entremiso of wood. The curd is squeezed and lightly hand-pressed simultaneously. Salt is sprinkled on both surfaces and left for 24 hours. The salt is a dry, coarse type. Cheeses are cured in a fresh, ventilated space, where they remain until needed for market. Other cheeses are aged in a cellar from 45 – 60 days, being turned twice daily for the first week of ripening.

# Trading of the Product

Traditionally, most of the production was dedicated for the producing families. A less part was sold to other goat farmers in the area, to local markets and fairs. Today, a few small-batch, artisanal cheesemakers produce for markets outside their area. Cheese is sold to distributors and directly sold by the producers.

# Use(s) of the Product

The fresher cheeses have compact, soft

rinds, with drawings on the surface and a white colour, while the aged cheeses are harder with a white-yellowish to brownyellow rind. The interior of the cheese is compact, with a tight texture with occasional eyeholes. The fresh type has a white paste and the aged form is a pale yellow colour. Their aroma and flavour are both intense and very developed, slightly acidy and salty. The aged cheeses have a slightly spicy bite. The fresh type is good for salads, appetizers and desserts and are accompanied by rosy and red wines of a low alcoholic content. The ripened cheeses pair well with stronger flavoured foods and go well with red wines of a higher alcohol grade.

# Estimate of Production and Demand Trends

The farmhouse cheese production on the goat farms is presently on the wane. But, more cheeses are being made in small and medium-batch dairies in several towns of the Sierra Morena. This totals about 400,000 kg per year.

# Queso Tronchón

by Roser Romero del Castillo







#### Origin

"Formatge Tronxon" in the Catalan language.

"Queso Tronchon" in Spanish.

#### Type of Product

The characteristic shape of Tronchón is a volcano-like cylinder. There are designs on the rind. The weight varies between  $0.5\ kg-1\ kg$ .

# Area of production

Produced in the Maestrazgo region between Aragon, Catalonia and Valencia, Spain.

## Techniques and Scale of Production

This is a goat milk cheese that also be mixed with sheep milk. It coagulates between  $32^{\circ}\text{C}-35^{\circ}\text{C}$  using an animal rennet. This takes between 30-60 minutes. The curd is curd to the size of a grain of rice. It is then hea-

ted to 36°C 0 38°C. The curd is packed manually into moulds. The curd is pressed and squeezed by hand and then salted. The cheese is consumed fresh or aged for up to two months. The production takes place in small dairy cooperatives.

#### Trading of the Product

Tronchón is sold directly or through commercial distributors. It is relatively well known throughout Spain, especially in its area of production.

# Use(s) of the Product

It is eaten as an appetizer or at the end of the meal. It is also consumed as a snack or at breakfast.

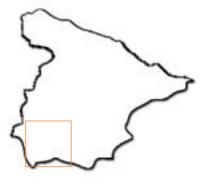
#### Estimate of Production and Demand Trends

No production figures are available.

# **Yoghurt**

by Jose Luis Ares Cea, Ana Maria Rey Gomez





# Origin

Yoghurt is a food with a long tradition, but in our region yoghurt made with goat's milk is a relatively new product.

# Type of Product

This product is made from goat's milk using acid starter cultures that produce a strong lactic fermentation. There are natural, whole and skimmed yoghurts, with varying ranges of consistency and creaminess. They are packed in glass containers available in 250 g, 500 g and 4 kg for restaurants and hotels.



## Area of production

Goat's yoghurt is made using a handmade process in cheese dairies in several parts of Andalusia, such as Cordoba, Jaen and Malaga.

# Techniques and Scale of Production

This yoghurt uses either whole or skimmed whole goat milk that is pasteurised at about 80°C for 30 minutes. It is cooled down to 45°C and specific lactic cultures are added to ferment for 4-5 hours until the desired acidity is reached. This process ensures a balance of elements which produces the appropriate consistency, acidity and aroma. Once the product has reached a stability and appropriate acidity, it should be cooled to arrest the fermentation and prevent a toughening of the curd. The yoghurt is

packed, sealed thermally and stored at 4°C until consumption.

#### Trading of the Product

Currently, this yoghurt is made in small cheese dairies that use manual techniques. It is marketed by means of direct sale, within the production areas, at fairs and to hotels and speciality stores through distributors.

# Use(s) of the Product

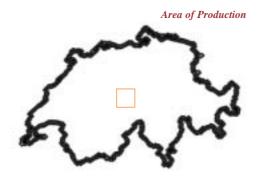
This is an easily digestible culinary product with great nutritional value. It can be eaten at any time of the day, as a dessert or as an accompaniment to other foods. It can be mixed with honey, marmalades, fruit and chocolate. It is also to make salad dressing and is an important ingredient in many meat dishes, pasta sauces and fish marinades.

# Estimate of Production and Demand Trends

Estimated annual production is 150,000 kg. Demand is increasing for this relatively new product.

## Dallenwiler Geisschäse

by E. und H. Odermatt



#### Origin

Goatcheese from Dallenwil Fromage de chèvre Dallenwil Formaggio di capra Dallenwil

# Type of Product

Cheese, cylindrical shape, rind with moulds, 500 gr. See Attached JPEG Picture "Dallenwiler Geisschaes 3.jpg"

# Area of production

See Attached JPEG Picture "Käserei Oberau.JPG" the location is marked with the red dot.



#### Techniques and Scale of Production

Pasteurised goat milk is used. Starters are added at 28 - 32°C, after a rest of 35 - 40 Min. it is cut until the pieces have a size of a cherry. The curd is warmed up with water up to 33°C and then is taken off and gently pressed. The cheese is salted in brine. The right curing lasts 2 weeks with high humidity to aid the development of the mould. All the production is made in a small dairy.

## Trading of the Product

It is sold directly to a cheesemonger.

# Use(s) of the Product

For breakfast, on little cheese plats, at the end of the meal.

## Estimate of Production and Demand Trends

35000 kg per year.

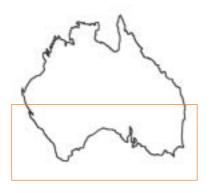




# Cashmere fibre

by Barrie J. Restall







# Origin

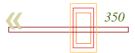
Australian Cashmere is produced by domesticated feral goats selected for fine fibre production. Most feral goats produce a fine undercoat of varying quantity and quality during the late-summer-autumn and since 1980 selected feral animals have been used to breed goats that produce 150-300 grams of cashmere in the 15-17 micron diameter range, considered to be coarser than fine Chinese cashmere but finer than Iranian cashmere.

# Type of Product

It is noted for length and strength of the fibre and the general production of 150-300 grams per head compares favourably

with other cashmere goats. The Australian Cashmere Marketing Corporation undertakes quality evaluation and description of the cashmere goat fibre received from producers and has developed the a set of 18 grades based on fibre diameter, length, colour and contamination. In March 2001 the 1999 cashmere clip was sold for the following prices:

Sale line	Descripion	Price: cents/kg
Cashmere		
WO	White Cashmere <16.0 micron	17,471
W1	White cashmere <16.7 micron	16,936
W2	White Cashmere 16.7-18.5 micron	15,411
G1	Grey cashmere <16.7 micron	15,370
G2	Grey Cashmere 16.7-18.5 micron	14,286
B2	Brown cashmere 16.7-18.5 micron	14,286
<b>Cashgora</b> WCG	White cashgora down	6,000



# Cashmere fibre

## Area of production

Southwest and southeast of Australia.

#### Techniques and Scale of Production

Australian cashmere goats are farmed in extensive pasture-based husbandry systems, often in association with sheep and cattle. Husbandry includes parasite control (internal and external), controlled matings (autumn joining), provision of natural or artificial shelters and protection from predation. They are shorn once per year in the late winter-early spring and the combined guard hair/cashmere fleece is sent for dehairing and then sale.

## Trading of the Product

Australian cashmere is sold by tender based on the objective measurement of the fibre. Australian cashmere producers are well organised and own the Australian Cashmere Marketing Corporation which receives fibre from producers and prepares pooled lots for measurement and sale. All sale lots are objectively measured by the Australian Wool Testing Authority. In the past, cashmere has been sold to processors in the United Kingdom, USA, China and Italy.

#### Use(s) of the Product

Besides export, there is a small domestic processing component producing knitwear for the Australian market. This sector also uses coarse fibre (greater than 18.5 microns), termed cashgora, to produce knitwear.

# Estimate of Production and Demand Trends

Production has varied and currently about 12 tons of fibre is marketed, down from a peak production of in excess of 20 tons.

Apart from a small breeding sector, the production of cashmere is viewed as a byproduct of diversification in mixed grazing enterprises. The cashmere goats often serve a dual purpose in controlling woody weeds and other pasture invaders, and producing fibre and meat. The Australian Cashmere Growers Association, formed to assist, promote and develop cashmere production in Australia has 13 regionally based groups.

**A**ustralia

Meat

by Peter Holst





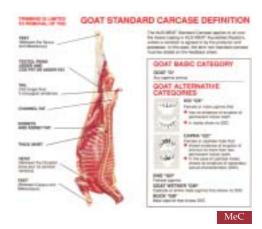
## Origin

The bush goat is often free ranging and is known as the feral goat. It has neither breed nor type because it is the result of infusion of all the dairy and fibre breeds introduced to Australia. It has a down undercoat of cashmere fibre.

Selected bush goats have been upgraded to cashmere goats and to Angora goats whilst others have been crossed with the Boer breed for meat production.

# Type of Product

Chemical-free, disease-free, generally lean, reproductive organs mostly intact. Problems are associated with difficulty in getting uniform weights, fat depth and age



to suit specifications. Expect some incidence of stress from transport and lairage, with resultant effect on meat quality

Consumer	Product description*
Taiwan	Skin-on, lean, 14-16 kg carcass
Nth America	Skin-on, lean, 8-16 kg carcass
	Skin-off, lean, 18-23 kg carcass
Malaysia	Skin-off, lean, <10 kg carcass
,	Skin-off, lean, 20 kg carcass
	Bone-less lean meat
Singapore	Skin-off, lean, >22 kg carcass
Middle East	Skin-off, lean, 8-14 kg carcass
Europe	Kid, skin-off, lean, 5-12 kg carcass
Domestic	Skin-off, lean, kid; and 8-16 kg carcass

from Murray 2000

# Area of production

In Australia it is produced in the states Western Australia, Queensland, New South Wales and Victoria. *Feral* goats are to be found in the semi-arid pastoral areas of Australia.

## Techniques and Scale of Production

Feral goats receive minimal husbandry, are chemical-free and essentially disease free except for ectoparasites. They are yarded and suitable animals (on health, size) trucked long distances to slaughterhouses, of which there are about 30 with export licences. Essentially all the goat meat is exported and each market has different specifications. For example, nearly 40% of the carcasses are exported dehaired, skinon and this necessitates special facilities. All carcasses conform to the Aus-Meat, standard definition of a goat carcass.

The cashmere, Angora, meat and crossbred goats are located in the farmed, temperate areas and are associated with sheep and cattle farming.

# Trading of the Product

The goats are trucked to the slaughterhouse where they are purchased by the operator who has export/domestic markets. Importers usually deal directly with these operators. Farmed goats are often preferred for the small domestic market in the

cities. The carcasses are then sold to wholesalers who supply the many retail shop outlets.

Major export markets are the USA, Taiwan, Caribbean and Canada with lesser amounts going to a diversity of markets such as United Kingdom, Switzerland, Japan, South Korea, Singapore, Mexico, Saudi Arabia and Mauritius.

About 15,700 tons of goat meat are exported of which 68% are frozen carcasses, 31% bone-in cuts and 1% boneless cuts. Transport is usually by refrigerated container ships.

Another 133,000 live goats were shipped (principally UAE for the Haj festivities) in 2002. This export is limited by the availability of the goats and the need for these goats to be in good health to tolerate the 20-25 days voyage to the Middle East.

# Use(s) of the Product

Product use linked to religion, ethnicity, and tradition of the importing country.

# Estimate of Production and Demand Trends

Feral goats number approximately 4 million. cashmere, Angora, meat and crossbred goats number approximately 0.25 million.

Australia

# Milk and by-products

by P. Greenwood



## Origin

Seventeenth century mariners are believed to have first introduced goats into Australia. Goats supplied milk for sailors and settlers on voyages to Australia, and spread throughout the country with railway gangs and miners, providing meat as well as milk. Improved milking goats (Saanen) were first brought to Australia in 1919 by the New South Wales Department of Agriculture who continued to import Saanen and also Toggenburg goats prior to 1963. Private breeders have also imported smaller numbers of Saanen, Toggenburg, Anglo Nubian and British Alpine goats. Commercially-oriented goat milk production started to gain momentum in the late 1950s and early 1960s, and the industry has continued to grow slowly.



Type of Product

Pasteurised and, in some states, unpasteurised whole milk. Dairy Authorities and/or State Departments of Health monitor microbiological quality in conjunction with producers and at retail to ensure microbiological standards and storage and transportation temperature standards are maintained, and labelling requirements are met. Additional production and microbiological standards exist for the sale of unpasteurised goat milk through retail outlets in New South Wales where the industry has established an accreditation scheme. In this regard, there are no records of Brucella melitensis or tuberculosis in Australian goats. Quality, quantity and consistency of supply, and high production costs have limited efforts to establish a commercial-scale industry. However, goat milk products in Australia are gaining a reputation for quality. This applies par-

# Milk and by-products

ticularly to goat cheeses, some of which have won major awards.

#### Area of production

Australia. Dairies supplying whole milk are located close to major population centres in all states. Producers who supply milk to processors for cheese production or produce cheese on-farm are increasingly being located in regions where high quality feed can be grown such as those used for cow dairying in south-eastern Australia. Volume of supply to processors has been limited by the widespread location of commercial-scale producers and seasonal variation in production. Small goat milk industries have been established in each state with Victoria and New South Wales having the most producers.

## Techniques and Scale of Production

Production systems range from pasturefed to fully-housed operations and may be year-round, or seasonal for cheese production. Some producers combine goat and

sheep milk production. Commercial milking herds range up to about 300 head. The Saanen breed represents approximately 67% of the Australian dairy goat population, which is estimated at about 10,000 milking does. Australian dairy goats are of high quality and have set world milk production records, however, yields within commercial dairies are often modest with typical herd averages of 300 to 600 litres per lactation. Cow dairy herd improvement programs are available but are not widely utilised by commercial producers due to cost. An award system for milk production is operated by the Dairy Goat Society of Australia but is used primarily by smaller-scale breeders. Use of sire-evaluation has been limited, and organised cooperative breeding programs have not been established. Multiple ovulation and embryo transfer is used to obtain offspring from highly valued animals, and only limited use has been made of artificial insemination. About 40% or less of production occurs in autumn/winter. Hormonal methods, altered lighting, and the use of the "buck effect" to induce oestrus prior to the normal breeding season are practised to increase production during autumn/winter. Among commercial producers, milk is harvested by machine into refrigerated bulk vats or storage vessels kept in refrigerated cool rooms prior to processing, packaging and/or transport.

# Trading of the Product

Commercial-scale dairies with 60 or more lactating does probably number less than 50 Australia-wide. Cottage-scale producers have represented the majority (about 75%) of herds in Australia.

Distribution ranges from producers packaging and transporting refrigerated whole milk direct to processors, retailers or consumers, or from processors to retail through established distribution networks. Goat milk products are primarily sold in health food outlets, supermarkets and, particularly among immigrant communities, through delicatessens and smaller supermarkets. Two-thirds of specialty cheese is distributed by wholesalers. Cottage-scale dairies also supply products to consumers from the farm-gate.

# Use(s) of the Product

Interest in goat dairying has increased since the 1970s with the advent of the health food industry, including increasing use of goat milk by allergy sufferers, and demand for processed goat milk products among Australia's diverse array of immigrant communities. This ethnic influence also impacts on more-traditional Australian consumers whose culinary tastes are broadening.

Yoghurt, an increasing variety of cheeses, and ice cream are produced. Small quantities of goat milk powder, soap and cosmetics are also produced.

# Estimate of Production and Demand Trends

Total production of goat milk Australia-wide is estimated at 2 to 3 million litres per annum with a farm-gate value of about US\$ 1.4M. About 20 processors of goat cheese produce up to 165 tonnes valued at about US\$ 1.9M per annum including soft, fresh cheeses, mould varieties typical of French-styles, and Mediterranean-styles such as feta.

Australia

# Mohair

by P. Greenwood



#### Origin

Angora goats were first imported into Australia in the 1860s with only sporadic interest in commercial production until the 1950s. The survivors of the original imports had low fleece weights, fine fibre and a high incidence of cryptorchidism. Backcrossing using feral dams allowed expansion of the industry such that Australian mohair has been sold internationally for the past 30 years. Recent importations of Texan and South African Angora genotypes are being used in upgrading programs to improve the quality and quantity of mohair production.

# Type of Product

There has been a concerted effort in recent



years to raise the quantity and quality of Australian mohair through the use of improved, imported genotypes, better management and feeding and improved clip preparation and classing. Emphasis in breeding is on maintaining fibre fineness, reducing kemp and increasing fleece weights. Clip preparation has concentrated on separation of fleeces on fineness, style and reducing contamination. The fibre is sold in six grades according to fineness as described below:

Туре
Fine Kid
Kid
Strong Kid
Young Goat
Fine/Fine Hair
Fine Hair
Hair

Micron Range
Under 25
25-27
27-29.5
29.5-32
32-34
34-36
36+

#### Area of production

Southwest and central-southeast of Australia.

## Techniques and Scale of Production

Angora goats are farmed on pasturebased systems, often in conjunction with other livestock. There is a small, but vigorous breeding sector heavily involved in the use of imported genotypes. Angora goats are shorn twice each year, generally in the late autumn and late spring when the fibre is at least 10 cm in length. The fibre diameter of mohair is influenced by nutrition and the feeding and management of kids and adults is important in maximising the harvest of valuable fine mohair. The harvested mohair is carefully graded and sent to marketing organisations for sale by auction. Most is exported, as greasy mohair but there is some limited domestic processing and garment production.

In some Angora enterprises, older does with low value; coarse fleeces may be kept and mated to Boer goat sires for meat production.

The Angora breeding sector uses a sophisticated performance recording/pedigree system to enhance selection procedures.

#### Trading of the Product

Australian mohair is sold by auction by 3 main brokers, with some private buying by processor agents. The main brokers undertake classing and measurement of the pooled clip before sale.

## Use(s) of the Product

Textile industry.

# Estimate of Production and Demand Trends

Currently Australia produces around 300,000 tons of mohair annually with a value of approx. \$1.5 million.

Angora breeders and mohair producers have formed several organisations for promotion and development of the Angora/mohair industry that operate on a national basis.

 $\boldsymbol{A}$ ustralia

#### Salted skin

by Peter Holst



# Origin

The bush goat or feral goat is the most numerous. It has neither breed nor type because it is the result of infusion of all the breeds introduced to Australia. It has a down undercoat of cashmere fibre. Selected bush goats have been upgraded to cashmere goats and to Angora goats whilst other have been crossed with the Boer breed for meat production.

# Type of Product

Salted skins



#### Area of production

The skins are a by-product of the goat meat trade in Australia. *Feral* goats are to be found in the semi arid pastoral areas. The cashmere, Angora, meat and crossbred goats are located in the farmed, temperate areas and are associated with sheep and cattle farming.

# Techniques and Scale of Production

Removed at slaughterhouse with mechanised skin puller and occasionally with knives. Graded only on skin area into 3 simple classes, then trimmed, drum salted and stored folded on wooden pallets for shipping.

Product suffers from inconsistent grading at the slaughterhouse so that skins can be from any sex, age, fibre type, and fatness. Salt curing is effective. Potential for harvesting cashmere at some times of the year.

# Trading of the Product

The skins are the product of the 1.4 million goats slaughtered each year; not all are processed.

Skin usually exported in salted condition. Exporter distributes for goat meat operator, and organises sale, transport and shipping. Exports of 1,200 tons mostly to Italy, Spain, India, Turkey, China and France. Small amounts of semi-processed skins exported to Italy and China.

# Use(s) of the Product

All exported.

# Estimate of Production and Demand Trends

The cashmere, Angora, meat and crossbred goats number approximately 0.25 million.

Feral goats receive minimal husbandry, are chemical free and essentially disease free except for ectoparasites. They number approximately 4 million.



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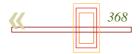
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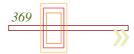
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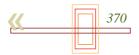
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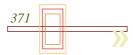
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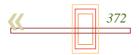
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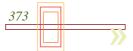
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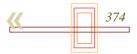
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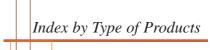


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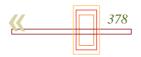
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