



The environmental friendly relations of goat milk product manufacturing

O. Szigeti, Z. Szakály

University of Kaposvár, Faculty of Animal Science, Institute of Economy and Organisation
Department of Agricultural Economics and Marketing, Kaposvár, H-7400 Guba Sándor u. 40., Hungary

ABSTRACT

The strategy of the Hungarian agriculture and rural development predicts a promising future to the breeding and raising of small ruminants (sheep, goat). Though, in the first half of the 1990s, the population of both breeds decreased dominantly, now their number is increasing. Goats can make perfect use of both those pasture areas that are not valuable for other animals and those ones that are not used for crop production any more because of their inefficient productivity. With a small amount of investment, a significant profit can be gained with a high quality management. Thus it can be an excellent source of income ever for the less capital-intensive entrepreneurs. 90% of the domestic stock can be found in groups of less than 25 animals at small-scale and family enterprises that is its role in human employment is also dominant. Due to the small dimensions of enterprises, they could have a dominant role in region maintenance, too. These characteristics are equal to the principles supported by the EU. Small ruminants produce organic products that are more and more demanded and will become parts of modern nutrition in the future. There is a good market for goat milk and for the products made from it, as there is an increasing demand for healthier eating habits. Two trends are developing nationally. One way of milk processing is the production of traditional goat dairy products (cheese, curd). These goods are considered as own products of Hungary, and can operate as Hungaricums. The other trend is represented by more complicated products produced by a developed technology. Products made from goat milk are more useful for the filling of a market niche than for the satisfying of heavy demands. As a consequence, basically the production of quality products should be preferred to mass production.

(Keywords: goat milk product, friendly relations, quality and ecological product, healthy eating)

GENERAL CONDITIONS OF THE GOAT BRANCH

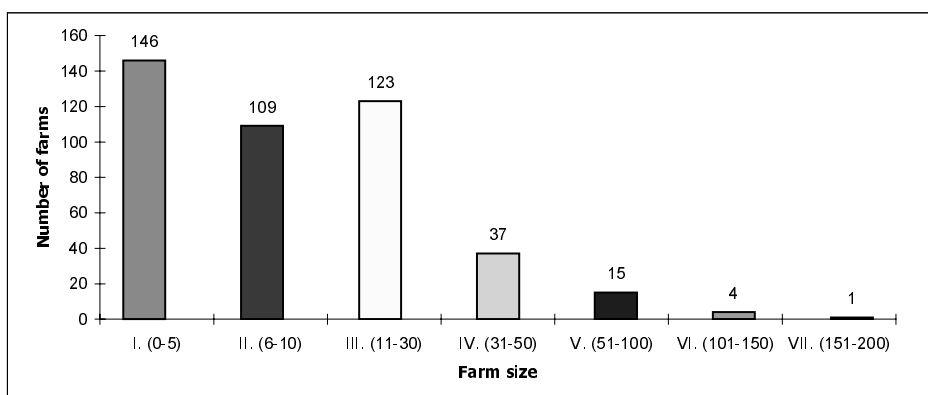
The strategy of Hungarian agriculture and rural development predicts a promising future to the breeding and keeping of small ruminants (sheep, goat). However, the number of both species decreased significantly in the first half of the 90s, nowadays their number shows an increasing tendency.

It is hard to determine the exact size of the goat branch. As regards estimations, there might be about 30,000 goats inland but the bigger proportion of this stock is not registered anywhere. Partly because breeders are in lack of information and they refuse (are afraid of) registration, and partly because they use a great proportion of goats for lamb breeding in flocks of sheep. The registration of the branch would become complete if it were worth getting into the system for those who are still standing apart because of the support of first-class goat milk.

According to the 1999 data of the *National Association of Hungarian Goat Keepers and Breeders*, processed as per farm size, it can be stated that *most of the producers (33.6%) keep less than 5 mother goats*. The 86.9 percent of the members has a stock smaller than 30 goats, and only the 8.5 percent of the producers – breeders owns such a big stock (31-50 mothers) that employs and keeps a whole family (2 adults). Unfortunately, the proportion of farms bigger than this is insignificant (4.5%). In this processing, the data relating to farm size of 435 out of the 562 members of the association were evaluated (*Figure 1*).

Figure 1

Formation of farm numbers per category
Total numbers of farms: 435

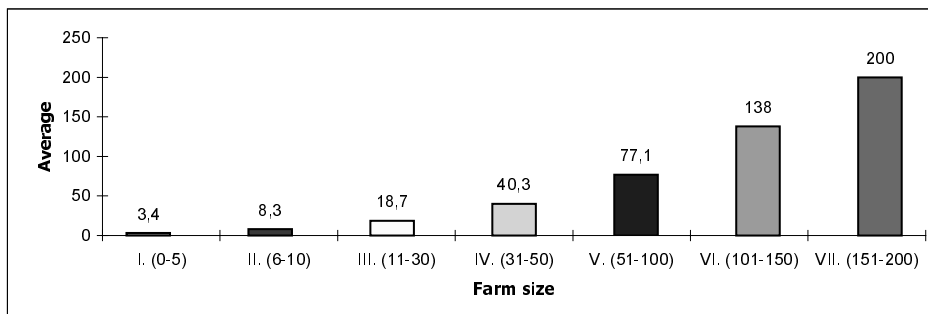


Source: *National of Hungarian Goat Keepers and Breeders*

The formation of the average number of mothers according to farm size showed an interesting picture (*Figure 2*).

Figure 2

Average number of mothers per farm category

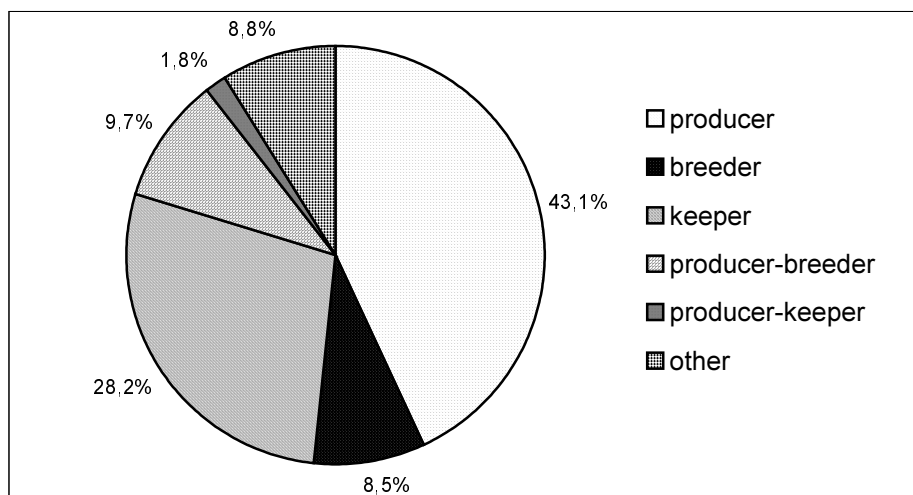


Source: *National of Hungarian Goat Keepers and Breeders*

The division of farms regarding the producing direction upon the evaluation of the association was not surprising at all (Figure 3). A significant proportion of those who want to live on the products of goats could be assigned to the categories of producers (product manufacturers) and keepers (just have goats). Slightly more than 18 percent of them formed an opinion that their activities equal the definition of breeding.

Figure 3

Division of farms according to producing direction



Source: National of Hungarian Goat Keepers and Breeders

THE ENVIRONMENT AND LAND PROTECTING ROLE OF GOATS

Sheep and goats as grazing animals select possibly; they like grazing grass full of full value with high quality nutritive value and high mineral and vitamin content. After feeding according to necessities and requirements, the small ruminants produce *ecological products* that are more and more popular and becoming the basic part of modern nutrition in the future.

Grazing is the most profitable way of utilisation of lands of poor quality and pastures of sodic soil.

The complete territory of pastureland in Hungary is 1,140,000 ha; out of which 170,000 ha consists of national parks and nature conservation areas. The 60 percent of the total pastureland is productive and the 40 percent of it is soil protective and unconditional grass. *The 55 percent of total pasture can be utilised only with sheep and goats.* The rational usage of pasture is mainly hindered by ownership, as several owners do not even care for leasing his land as a pasture to be able to save the costs of cutting (Mucsi et al., 1999).

The goat branch has such possibilities in store, potentially, which are worth mentioning from the point of view of *land farming*. Goats can utilise pasturelands perfectly, which can not be utilised by other animals and lands that were removed from agricultural production because of their poor productivity. Due to oversizing, its

environment burdening effect can be felt, which can be controlled with a number adjusted to the environment. This is the reason for the development of the co-ordinated, scheduled sectoral system. As compared to cattle, with an equal investment, a prominently *bigger profit can be made* with a high quality management. This way it can be an excellent source of income even for less profitable entrepreneurs. The 90 percent of the domestic stock can be found in groups of less than 25 animals. These are such small-scale or family enterprises that do not amount to the large-scale size. This is the reason for the development of the goat branch, since *its role in human employment is also determining*, as human work demanding technologies are applicable. Due to the small-scale number control, it would have a significant role in *nature conservation* as well. These characteristics equal the principals which, in one hand, are defined in land farming, in the other hand, are supported by the EU.

According to the strategy of the Hungarian agriculture and rural development, animal husbandry has to be developed in support of *three goals* – firstly, the supply of native population, secondly, its role in employment, thirdly, the increase of export income. Basically, *the manufacturing of high quality products* should be placed into prominence instead of mass production.

The small ruminants provide economical product manufacturing only with the technology of pasture raising. This way our pasturelands will become reusable. Both sheep and goats can have major roles in the progress of rural development.

THE MARKET OF GOAT MILK PRODUCTS

Goats serve as a staple source of food to the east of Hungary and at the Balkans. However, in Western Europe, products made from goat milk were put on the market as luxury consumer product and an increasing demand can be seen for them. Due to its component values, goat milk has become a possible ingredient of healthy eating. These articles of food are only available for a certain social stratum, mainly not as staple food but as luxury goods.

In Hungary, goat keeping has fallen into the background so far, so we fell behind the neighbouring countries. Neither the quality of the breeding stock nor the breeding technology fulfils the quality requirements. In the last few years, in Hungary, a demand has emerged for the so-called alternative products, which meet the demands of healthy eating among other things. In the case of articles of goat milk basis, demand is supplied with foreign products. The *domestic* goat stock and *products* made from goat milk have not been able to compete with foreign products, yet, as *neither the quantity nor the quality parameters meet the requirements of the market.*

On the side of demand, an increasing demand is emerging for the alternative products and this way for the food of goat milk basis, too. This demand could be supplied from the domestic product manufacturing if the backgrounds of infrastructure, co-ordination and logistics were available. This requires a national level programming that helps to operate and develop the whole branch in harmony (*Marticsek et al., 1999*).

GOAT MILK PROCESSING

A small proportion of produced milk is processed industrially because the conditions of the branch still have not been regulated. It is due to the fact that small- and medium sized enterprises that produce articles from goat milk started to prosper in the last 1 – 1.5 year and *the organised procurement of goat milk started only in certain parts of the country*

in 1999. The enlargement and generalisation of this can be expected from 2000. From the purpose of learning and controlling the quality characteristics of the milk produced, a series of examinations were carried out in different parts of the country. Relying upon the results, a detailed proposal relating to the basic parameters of *first-class goat milk* was made. *The enlargement this to a standard is in progress.*

Because of their narrow range, the appearance of dairy products of goat milk basis on the market was also hindered.

The scattered character of the territories requires a new method - based on pre-processing - in organising procurement. The collected semi-prepared products are the basis of the manufacturing of new products.

The amount of the estimated workable goat milk available is 3-6 million litres. Out of this, The goat milk processed industrially amounts to 500,000 litres. It is utilised by 2 bigger and 3-4 smaller dairy plants. *The bigger proportion of the produced goat milk is used for feeding animals and for domestic use at the moment.* At least one third of goat milk products on the market are homemade (without authorisation).

The positive nutrition-physiological effects of goat milk are rather well known. However, the current *supply of goat milk products is poor* and it is particularly constricted to two groups of products nationally. Different flavoured and non-flavoured pieces of goat cottage cheese and soft cheese – non-flavoured or matured with mildew – represent the choice of goods. Apart from some initiatives, long lasting, semi-hard and hard cheese, processed cheese, goat milk based dairy drinks, sauerkraut products and desserts (puddings) are absolutely absent from the range.

Out of the numerous obstacles of the increase of industrial processing there are *three* very important ones:

- territories of production are totally scattered;
- a unified qualifying system and set minimum prices fixed to the quality are missing;
- the organised production development necessary for the industrial processing was not set up.

Becoming aware of the situation, in 1998, the American *ACDI/VOCA* non-profit, consultant organisation and the *National Association of Hungarian Goat Keepers and Breeders* launched a sectoral development programme. Currently, this work is being done by the *Alternative Agricultural Enterprises Developing Public Company* and the Association in question.

The *Alternative Agricultural Enterprises Developing Public Co.* was established in the May of 1998, as a professional successor of the American *ACDI/VOCA* organisation. The organisation is engaged in managing alternative branches. They start from product development then, through quality control and expert advisement; they put the product on the market. The purpose in every case is to market the product and to stabilise its position there. According to their interpretation, alternative branches are: different from the traditional, classical ones in material, processing technology and appearance, and they are performed mainly by small- and medium sized enterprises with the aim of making money.

PROSPECTS OF PROGRESS

The strategy aiming at the development of the branch can be defined as follows:

- the complete notoriety of the branch shall be established (farm- and goat number);
- it is necessary to improve and stabilise market relations, domestic market demands and consumption shall be increased with making meet and dairy products known;

- testing and market introduction of new products shall be hastened;
- quality control systems shall be introduced in meat and dairy manufacturing with the purpose of better quality and bigger selling safety of products;
- goat breeding shall be made one of the basic means of environment and land protection and of upholding the population and of regional development (*Kukovics, 1999*).

As far as we try to supply consumer demands for goat milk products according to EU standards, we have to create the proper conditions, too.

There is an opportunity for *manufacturing quality proven products* with co-ordination according to a programme. Due to *market research* the chance of overproduction decreases, furthermore, overproduction can be prognosticated. What is more, products are made to meet the demands of the market, and they follow flexibly the emerging fluctuation and changes in quality.

If the sectoral system will developed successfully with co-ordinated work, such a logistical process could rise that will make the creation of the connection possible between the producers and processors. This way such products *can come into the market* that meet the requirements established in the EU. As a result, we can manage to make domestic goods get into the shops, and goat keepers will have a safe job. This does not simply involve the development of a single branch but it also has a *positive effect on the whole agriculture* because of the development of one element of the complex rural integration.

Nearly 100% of sheep and goat products has possibility of export. Income from goat milk is indispensable to the profitability of both goat keeping and enterprises. The development of the branch is not restricted by the EU, as products made from goat milk do not depend on EU quota that is their production is not limited by quantity but quality. This means that the increase of production is not limited.

As a consequence, we can state that goat milk processing can be a dynamically growing branch not only from the point of view of Hungarian dairy industry but that of rural development, as well.

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Corresponding author:

Orsolya Szigeti

University of Kaposvár, Faculty of Animal Science
H-7401 Kaposvár, P.O.Box 16., Hungary
Tel.: 36 82 314 155, Fax: 36 82 320 175
e-mail: porsi@mail.atk.u-kaposvar.hu