

## DAIRY SECTOR IN ALBANIA-CHALLENGES AND PERSPECTIVES

Ylli BIÇOKU<sup>1</sup>, Merita URUÇI<sup>2</sup>

<sup>1</sup>Agriculture and Environment Faculty, Agricultural University of Tirana, 1000, Tirana, Albania

<sup>2</sup>Albanian Dairy and Meat Association (ADAMA), Rruga Brigada VIII, 1001, Tirana, Albania

Corresponding author email: bicokuy@yahoo.com

### Abstract

*Agriculture still remains subsistence-oriented due to a very small average size of farms (1.26 ha per family) and 85,8% are mixed farms. Hence, only 30-40% of crop and livestock products are being sold. Generally, livestock production is seen as a backbone of Albania's agriculture. The objective of this analysis is to give a quantitative and qualitative description of the Albanian dairy sector, its challenges and perspective. About 75% of household incomes are contributed by sales of livestock products. The productivity and the economic efficiency are at low level. Evaluation of performance at dairy farm level is not possible because data are missing. The statistical yearbook of Ministry of Agriculture and Consumer Protection does not include information for each product at farm level. To improve the situation several economic and policy programs are needed to increase the productivity of the dairy sector, the quality of products, to implement the good livestock practices, good hygiene practices and animal welfare standards, as dairy sector provides 21.5% of the value of agricultural production.*

**Key words:** dairy sector, livestock products, subsistence, productivity, small sized farms.

### INTRODUCTION

Albania continues to be predominantly a rural economy with 20.4% of GDP (World Fact Book) generated by agriculture, while livestock provides 52% of the value of agricultural production (MAFCP, 2012). Presently, 50% of the population continues to live in rural areas and farming constitutes main employment option for people in these areas. Official employment data indicate some 750 thousand people are employed in the private agricultural sector (this accounting for 60% of employment in Albania). Food produced locally fulfills some 70% of the total food requirements of Albania. However value of processed and imported foodstuffs remains still very high.

Agriculture still remains subsistence-oriented due to a very small average size of farms (1.26 ha per family) and 85.8% of them are mixed farms. One farm family as average is managing 2.32 cattle, 31.8 sheep and 31 goats (1.67 cows 24.4 ewes and 23.7 milking goats).

More specifically, dairy activities have a long tradition in Albania due to the favorable natural resources for dairy production. In the plains, cattle production is dominant, while in the hills and mountains, sheep and goat production are more suitable. Traditional dairy products are

yogurt, butter, curd and different kinds of cheese from cow, sheep and goat milk.

Livestock occupies a very important place in the Albania's overall agricultural production. In 2011, it had a share of 52% of the overall agricultural production compared to 42% in 1992 and 35% in the 80ies (MAFCP, 2012).

The dairy sector of Albania is characterized by large number of small milk producers. There are over 210,000 agricultural holdings producing cow milk, the overwhelming part with less than 5 cows. Larger scales of dairy farms are in the western part of the country, where country's milk production is concentrated. 80,000 farms are rearing small ruminants, with 1.93 million milking sheep and goats. The milk production is in total 1,1 million tons and 86,8% of milk production is coming from cows. Most milk producers are semi-subsistence households. Only up to 46% of milk production is delivered to milk processors. The rest is used for self consumption, direct sale to consumer or for feeding of animals (Schroder et al, 2010). 3.370 dairy farms have more than 6 cows per farm and 11.800 farms have more than 50 sheep or goats per farm. The number of farms keeping more than 6 cows and more than 50 sheep or goats started to operate in the last 10 years and

the trend is to be increased. With the support of the Albanian Government funds and IPARD-Like program those farms can achieve further steps to come closer to good hygiene and management practices and standards.

Holstein, Jersey and their crossbred are largely extended as dairy cattle breeds in the farms of the country. The small ruminants are all local breeds. Artificial insemination is covering only 62% of the cows' population; while natural mating is used for the small ruminants.

The cow's milk yield is not increased significantly in Albania in the last 20 years (in the year 1990-the yield was 1403 liters milk/cow, whereas in the year 2011-2696 liters milk/cow), as except the problems are related with genetic improvement, and the feeding of animals is unsatisfactory. The farmers mainly use fresh fodder and hay, of a relatively low quality. Concentrated feed are used in insignificant quantities, which result from lack of tradition as well as from rather high price of concentrated feed.

As Albania is in the process of approximation to the European Union (EU), seeks potential to increase competitiveness and food standards to improve import/export relation with agriculture and food products. With regard to milk and dairy products Albania is almost self-sufficient (in the level of 99%).

In the last decade there is a tendency of establishment of farms for milk production with a capacity of 10-100 heads of milking cows.

## **MATERIALS AND METHODS**

The aim of this study is to describe and to estimate the state and performance of the dairy sector in Albania, to identify key constraints of the sector and to develop policy interventions to improve the competitive position of the sector. In this study are used agricultural statistical data published by Ministry of Agriculture, Food and Consumer Protection (MAFCP), desk studies, meetings and collection of detailed information of dairy farms managing cows and small ruminants (sheep and goats), as well several meetings with dairy sector specialists of public and private organizations. In order to complement information from the key informed

stakeholders, we also posed open-ended questions and had discussions to obtain insights on the relevant issues. Representatives of selected institutions and experts were interviewed and some field visits were conducted to identify the sector problems and get a thorough insight into the structure and performance of the sector. In addition opinions of stakeholders on policy intervention were collected during several focus group meetings.

## **RESULTS AND DISCUSSIONS**

Animal origin products represent a main source of food, and a high share of production still serves subsistence purposes. Dairy activities have a long tradition in Albania due to the favorable natural resource base for dairy production. In the lowland, cattle production is dominant, while in the hills and mountains, sheep and goats' production are more suitable.

The livestock development in general and milk production in particular, are closely related with several basic factors, which are:

- The Albanians' tradition, which have historically developed livestock.
- Need for livestock products.
- Daily income provided by milk sales.
- Milk as an improver of the protein diet.

Livestock is totally privatized and it was the first one started before the privatization of the land and finished in 1993.

Due to the significance of livestock and milk production, particularly in rural areas, MAFCP has selected the milk sector as a policy priority (MAFCP, 2007). The Albanian government and MAFCP are inclined to support primary production and one of the declared objectives is to improve the competitiveness of products in order to substitute for import.

### **a. Overview of milk production and structural features at primary level.**

Table 1, illustrate the small-scale structure and the subsistence orientation of dairy farms in Albania. In average are kept 2.32 heads of cattle/farm (only regarding farms that keep cattle at all), which includes calves, heifers and bulls, 31.8 sheep, 31.0 goats. Thus, the number of milking animals is even smaller (1.67 cows per farm in average, and/or 24.4 ewes, and/or 23.7 does).

Table 1. Data on milk farms and production

Description	1990			2000			2011		
	Cattle	Sheep	Goat	Cattle	Sheep	Goat	Cattle	Sheep	Goat
Farms with cattle, sheep or goat (thousands)	<i>All animals were under state sector (socialist system)</i>			315.2	109.9	51.6	212.4	5.3	24.4
Number of farms with more than 5 cows, or 50 sheep, or 50 goats	<i>All animals were under state sector (socialist system)</i>			1011	5569	2712	3372	8347	3506
% of farms more than 5 cows, or 50 sheep, or 50 goats	<i>All animals were under state sector (socialist system)</i>			0.3%	5.1%	5.25%	1.6%	15.1%	14.4%
Animals (thousands heads)	632.6	1646	1145	728	1939	1106	492	1758	759
Milk production per year (tons)	421	43.8	52.6	807	70	71	955	80	66
Average number of animals (heads/farm)	<i>All animals were under state sector (socialist system)</i>			2.31	17.64	21.4	2,32	31,8	31.0
Milking animals (heads)	300	1142	776	448	1448	800	354	1.349	580
Average number of milking animals (heads/milk producing farm)	<i>All animals were under state sector (socialist system)</i>			1.42	13.2	15.5	1,67	24.4	23.7
Milk yield per animal (liters/head/year)	1403	38.4	67.8	1801	48.5	88.5	2696	59.2	113.4

Source: Statistical Year Books-2000-2011, MAFCP

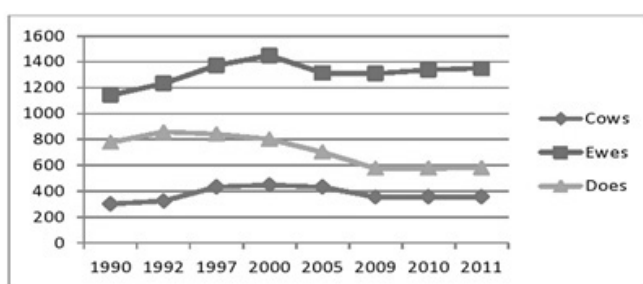


Figure 1: Number of milking animals for the period 1990-2011

Table 2. Amount of milk per cow, ewe and doe for the period 1990-2011 (kg)

Descriptions	1990	1992	1997	2000	2005	2009	2010	2011
Cows	1403	1500	1636	1800	2163	2581	2631	2696
Ewes	38.4	44.6	49.6	48.5	57.2	56.8	58.7	59.2
Does	67.8	81.7	88.1	88.5	101.3	105.4	110.3	113.4

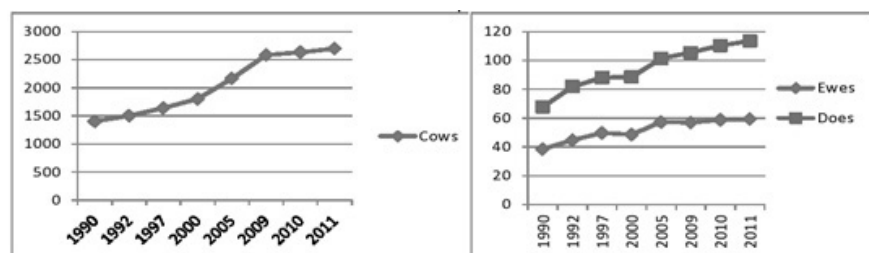


Figure 2: Milk yield per milking animal for the period 1990-2011 (kg)

The privatization of land and livestock started in Albania on August 1991. As farmers in the

last 10 years, before the privatization, were not allowed to manage livestock in the first decade

after privatization were eager to increase the number of animals and did not pay too much attention to the productivity. While, after the year 2000 the number of animals is decreased and the yield is increased as farmers are more aware on the productivity of the animals. However the average milk yield per cow/year in Albania is 2,696 liters currently very low in comparison with the average of the EU-27 which is more than 6,000 liters per cow/year. Also sheep and goat milk production is organized based mainly as capital extensive production system (based in natural pasture grazing) and milk yield per ewe with about 59 liters/year and per doe (milking goat) with about 113 liters are also very low.

Even today the number of dairy farms is high (Table 1) and most of cattle/cows farms (63%) are concentrated in the western part of the country (lowlands).

Considering the share of subsistence farms, it is very likely that the primary dairy sector in Albania will face structural changes when the status of "candidate member" will be granted to the country.

**Breeding:** Another factor that has its negative impact in the milk yield is the genetic improvement and the breeds that are managed in the country. Currently, crossbreeds of 'Black and White' and "Jersey" breeds makeup 80% of the cows' population, and the rest are dual purpose crossbreeds (Simmental, Brown Swiss, Norwegian Red, and Tarentaise). While in the small ruminants predominantly are local breeds, because no new breeds have been introduced and the continuation of the natural mating. Few heads of Alpine breed (goat) from France were introduced by the end of the 80ies and continued to be imported during 90ies in southeast of the country as a result of a donation from French Government.

**Feeding system and input supply:** During summer fresh forage, mainly alfalfa and grasses, and grazing in the plots free of crops, are used to feed the cows. During winter hay and corn or wheat bran are used. Corn or grass silage is used in the ration to feed the animals only by the medium and large dairy farms (10-100 cows). In summer sheep and goats graze in meadows. During winter hay and a limited quantity of wheat bran is provided to animals for the lambing/kidding and lactation period.

For feeding the animals are used the permanent pasture that are around 440 000 ha and also about 204 000 ha are planted with forage crops. However the average yield of forage crops is still low in the level of 26-28 Tons/ha (MAFCP, 2012), where are faced problems with the use of high quality seeds, limited amount of fertilizers applied for the forage crops. All inputs are traded by private dealers but a lack of credit on the farmers' side inhibits an expansion of their use. Veterinary services are provided by private veterinarians.

**Price of Animal Feed:** Animal feed prices are very high and this is an obstacle to the increase of productivity, especially in cows. Thus, a kilogram of compound feed for cows is 50% higher than 1 kg of milk.

**Milk quality issues:** The system for the control of milk quality is still weak and not functioning very well. A part of the milk continues to be sold on the road or directly to the home door what makes difficult the quality control. The control agencies laboratories are not efficient and the farmers have to pay for the analysis, therefore they neglect to analyze samples which might be dangerous in regard to public health. Closed cooling chains from producer to consumer exist only for the producers that are managing more than 10 cows. EU quality and food safety standards are not yet implemented however through the financial support of EU through IPARD-Like and Albanian Government programs is expected to start the improvement of situation especially for the farms managing more than 6 cows.

**Health situation:** In general the animal health situation is under control due to the state-run veterinary service available all over the country. However, there are few problems with Brucellosis and Anthrax (in Southern and Northern part of the country) in sheep and goats that render it impossible to export milk, lambs and kids, which in other regions are as organic products.

As a result of all the above mention issues the low capital intensity of production, in all the milking animals, is resulting in low yield, relatively high production costs and low profitability; many dairy farms managing less than five cows have negative balance from milk production however as a farm activity they are profitable as a result of calves' sales.

### b. Milk flow and Milk value.

The dairy industry in Albania is not vertically integrated. As it mentioned above the majority of milk producer are semi-subsistence farms. The milk market (mainly cow milk) is characterized by the existence of informal (direct selling from farmers to the processors and markets) and formal market channels (collection & distribution by dairies). According to national statistics only up to 46 per cent of the milk production is being

delivered for processing. The chain linkage is typically weak in Albania. From the graph below it is clear than a significant share of the milk produced is consumed on the farm, for own consumption (16%) or for animal feed (14%), or processed in the farm (cheese, butter, curd for the family consumption and market). Farmers, still, are selling milk and milk products directly to consumers on street markets.

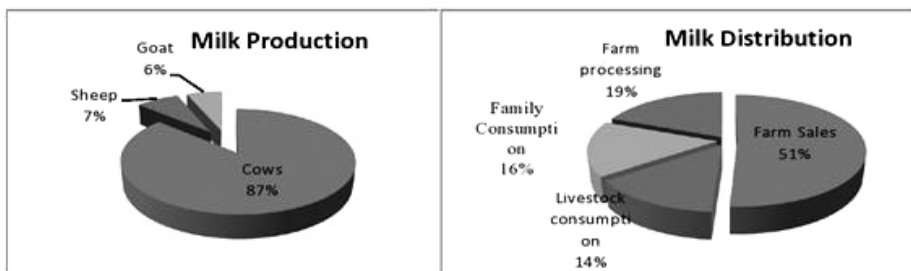


Figure 3. Milk production and milk distribution

The high level of farm usage and direct selling is a consequence of several factors, including the small-scale structure of production, a consequential lack of commercial orientation amongst many producers, an underdeveloped milk collection system, attractive street market prices compared to the price offered by processors, and the unreliability of milk payments made

by some processors (Berkum, 2009). A major challenge for the development of dairy sector in Albania is to increase the supply of good quality raw milk to the processing sector in a cost effective manner. The majority of subsistence farms (less than 5 cows) lack the necessary capital to improve the situation according to EU standards. According to literature review, farm visits and interviews with farmers and field experts only the farms with more than five cows or 50 sheep/goats and a part of the farms managing 3-5 cows will be able to make the necessary investments for operational improvements in order to comply with increasing quality and product safety requirements.

Table 3. Share of milk production in Agriculture and Animal Production Value (Gross Agriculture Output in million EURO-prices of 2006)

Description	Years				
	2000	2005	2009	2010	2011
Agricultural Production	901	1016	1136	1227	1267
Animal production	510	602	627	641	656
Milk production	274	315	315	321	330
Increase rate of milk production value (%)	--	14.96	0	1.9	2.8
Share of milk in aggregate animal production output (%)	53.7	52.3	50.2	50.0	50.3

**Source:** MAFCP Statistics Yearbook of Albania for 2000-2011 and authors' calculation

The value of milk production is increased with 1-2% in the last years and the share of milk in animal production is reduced from 53.7% to 50.36% in the last 10 years.

### CONCLUSIONS

The sector needs are related to the development and implementation of specific strategies at national level, the access to updated technology to improve competitiveness of the local businesses, the reinforcing quality standards in

terms of their effective application, the access to financing opportunities especially the EU funds.

According to the SWOT – Analysis, interviews and the discussion with farmers, experts and businessmen *some of the factors that limit milk production are:*

- Unfavorable entity structures in production,
- High level of land fragmentation,
- Low competitiveness and efficiency of production,
- Insufficient knowledge on modern production techniques/technologies and standards,
- Difficult access to financial resources for investments,
- Insufficient professional advisory service,
- Insufficient attainment of national and/or EU standards,
- Non appropriate VAT system,
- Insufficient of enforcement of national legislation (e.g. food safety),
- Lack of rural infrastructure, markets, collection points, as well as lack of information on prices, markets, etc,
- Lack of credits for investments in livestock farms and milk processing factories,
- Insufficient managerial skills both in fields of technology and economy of production,
- Weak vertical integration of farmers and processors.

There are no incentives and motivation for the extension services and veterinary and food inspectorates to help farmers in livestock husbandry, animal welfare, milk hygiene, etc.

The future development of the sector will be directly determined by the country's economic and social development. Along with the growth of the economy and the improvements in living standards, the consumer changing habits will generate further opportunities on the food processing market, in terms of both volumes and quality standards. The increase of high income population will refine the demand and generate the drive for a higher diversification of the offer.

The Government and Ministry of Agriculture needs to find the mechanism to raise consumers demand for the high quality products, increasing technology standards, environmental demands, technological innovation, and increasing scale of production and networks of farms and companies.

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