

## THE EVOLUTION AND CURRENT SITUATION OF GOAT BREEDING IN ROMANIA

Ion RĂDUCUȚĂ, Ion CĂLIN, Șerban PURDOIU

University of Agronomic Sciences and Veterinary Medicine, Faculty of Animal Science, Street Marasti no. 59, district 1, 011464, Bucharest, Romania, Phone: +40 (21) 0722 645 104, Fax: +40 (21) 318 28 88, e-mail: raducion@yahoo.com; e-mail: icalin63@yahoo.com; e-mail: purdoius@yahoo.com

*Corresponding author email:* raducion@yahoo.com

### Abstract

*After the integration of our country within the EU have occurred major changes in many areas of activity and including in the goat breeding sector. The purpose of this paper is to investigate the evolution and situation of goat breeding sector in Romania in relation with the goat livestock, the number and size of goat exploitations and goat productions. To achieve these objectives we have studied the official statistical data, we calculated the percentage difference between the reference years and we interpreted data obtained. The results showed that the goat livestock has increasing with 135.6% in 2010 compared with 2002 and with 80.1% compared with 2006. In terms of number and size of goat exploitations, the results showed that in the year 2010 there were 176,353 exploitations of goat of which 88.6% are individual exploitations that have an average number of 2.4 heads goats per unit and which hold these animals exclusively for self-consumption of family and only 3% of total exploitations have more than 100 heads, as average size of goat farms existing in the western countries of EU. However, compared with the existing situation in 2002, the number of exploitations in the year 2010 decreased with about 25%, especially based by reducing of small exploitations, respectively those which are framed in class less than 10 heads.*

**Key words:** goat breeding, evolution, goat livestock, exploitations

### INTRODUCTION

Goat is an animal that uses very well the cheap feed such as grass, roughage and woody plants, with relatively low costs compared with other species, and which provide valuable foods for the human consumption.

Goat breeding is a traditional activity in our country because we have a large area of natural grassland, spread in all forms of relief, and which cannot be operated more efficiently than through the rearing of sheep and goats.

After the integration of our country within the EU have occurred major changes in many areas of activity and including in the goat breeding sector. The goats rearing sector has grown continuously in recent years against other ruminant species, sheep and cattle respectively [3].

Unlike cow's milk, goat milk has no quota limit required by the European Union because the demand is much higher than supply, so that the market is ensured both internally and especially externally. Goat milk and goat

cheese became popular both in Romania and abroad because of their nutritional and dietary quality [2].

For these reasons goat breeding represents an investment opportunity and a profitable business for Romanian market. The purpose of this paper is to investigate the evolution and situation of goat breeding sector in Romania after the integration in EU.

### MATERIAL AND METHOD

In order to characterize the evolution and current situation of goat breeding in Romania, the following indicators were used: number of goat stocks, the number and size of goat farms, the milk and meat production. The period analyzed in this study was 2002-2010. The data, collected from FAO and National Institute of Statistics, have been processed and interpreted.

### RESULTS AND DISCUSSIONS

Romania is one of the first five EU goat producing countries (Table 1) [4]. Thus, the first five goat producing countries of EU

(Figure 1) are Greece (33.6%), Spain (23.5%), France (10.8%), Italy (7.7%) and Romania (7.3%).

From the Table 1 data we can note that France and Romania recorded an increasing of the goat population in the period 2002-2010, while on the whole EU 27 and in the rest of other three major producing goat countries (Greece, Spain and Italy) the goat population has decreased.

Table 1. The evolution of the goat livestock in the first five countries of the EU goat producing during 2002-2010 (thousand heads)

| Specification | 2002   | 2010   | % changes 2002-2010 |
|---------------|--------|--------|---------------------|
| Greece        | 5,180  | 4,200  | -18.9               |
| Spain         | 3,047  | 2,934  | -3.7                |
| France        | 1,232  | 1,349  | 9.5                 |
| Italy         | 1,025  | 961    | -6.7                |
| Romania       | 525    | 917    | 74.7                |
| EU 27         | 13,636 | 12,488 | -8.4                |

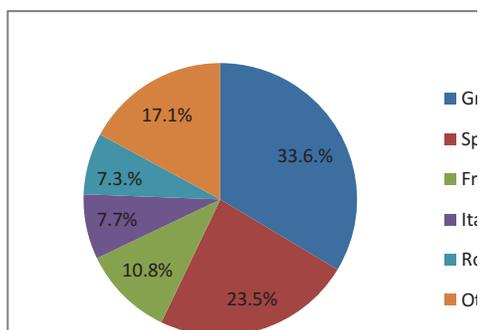


Fig. 1 Distribution of the goat population in the EU in 2010

According to the statistical data provided by FAO, the goat livestock in Romania was situated in 2010 at 917,300 heads (Table 2) [4].

Unlike data provided from FAO, the data provided by National Institute of Statistics (NIS) from the General Agricultural Census conducted in 2010 show that the goat livestock was situated in 2010 to 1,237,000 heads (Table 3) [5].

The difference between the two provided data is very significantly, respectively nearly to 35% or 320,000 heads, which affect the data interpretation.

We believe that this difference is inadmissible and there are necessary corrective measures which must be taken by the Romanian

authorities responsible for transmitting statistical data to FAO.

Table 2. The evolution of the goat livestock in Romania during 2002-2010 (heads)

| Specification  | 2002    | 2010    | % changes 2002-2010 |
|----------------|---------|---------|---------------------|
| Goat livestock | 525,100 | 917,300 | 74.7                |

Table 3. The evolution of the goat livestock in Romania during 2002-2010 (thousand heads)

| Specification | 2002   | 2010   | % changes 2002-2010 |
|---------------|--------|--------|---------------------|
| Cattle        | 2,871  | 1,985  | -30.9               |
| Sheep         | 7,238  | 8,386  | 15.9                |
| Goats         | 744    | 1,237  | 66.3                |
| Pigs          | 8,260  | 5,387  | -34.8               |
| Poultry       | 82,407 | 78,867 | -4.3                |

Regarding the evolution of the goat livestock in the period 2002-2010, the data presented in Tables 2 and 3 show that this had a significant increase, regardless of data source.

According to data provided by FAO the goat livestock registered an increasing with 74.7% in the analyzed period 2002-2010 and according to the statistical data provided by NIS an increasing with about 66.3% during the same period.

As shown by statistical data, the increasing of the goat livestock is very significant in the analyzed period, fact which shows that the interest of breeders for this species is very high.

The same conclusion follows from the data of Table 3, where we can see that compared to other species goats had the highest increase in livestock in the analyzed period, especially that the cattle, pigs and birds have declined regarding the livestock number.

According to data from the National Institute of Statistics the number of goats and sheep per 100 hectares of agricultural land in 2010 increased by 27% compared to 2002, respectively from 59 heads in 2002 to 75 heads in 2010 (Table 4) [5].

Table 4. The evolution of the sheep and goat number at 100 ha agricultural land during 2002-2010 (heads)

| Specification  | 2002 | 2010 | % changes 2002-2010 |
|----------------|------|------|---------------------|
| Sheep and goat | 59   | 75   | 27.1                |

In terms of size and structure of goat farms in our country, the data provided by National Institute of Statistics show that in the year

2002 there were 234,705 of goat farms of which 95.56% are holdings that have under 10 heads per unit which hold these animals exclusively for self-consumption of family and only 0.50% of total holdings had more than 50 heads, as average size of goat holdings existing in the western countries of EU. (Table 5) [1].

Table 5. The structure and size of goat holdings in Romania in the year 2002

| Specification  | Number of exploitations | % from total | Agricultural individual exploitations | Commercial societies |
|----------------|-------------------------|--------------|---------------------------------------|----------------------|
| 1-2 heads      | 169,615                 | 72.77        | 169,589                               | 26                   |
| 3-9 heads      | 53,496                  | 22.79        | 53,465                                | 31                   |
| 10-19 heads    | 7,034                   | 3.00         | 7,010                                 | 24                   |
| 20-49 heads    | 3,384                   | 1.44         | 3,358                                 | 26                   |
| 50-99 heads    | 858                     | 0.37         | 843                                   | 15                   |
| 100-199 heads  | 282                     | 0.12         | 274                                   | 8                    |
| 200-499 heads  | 32                      | 0.01         | 32                                    | -                    |
| over 500 heads | 4                       | 0.001        | 2                                     | 2                    |
| Total          | 234,705                 | 100          | 234,573                               | 132                  |

Unlike the situation in 2002, the number of goat holdings fell in 2010, reaching to 176,353 holdings, respectively a reduction of about 25% (Table 6) [5].

Table 6. The structure and size of goat holdings in Romania in the year 2010

| Specification  | Number of exploitations | % from total | Stocks -heads- | % from total | Average no. per holding |
|----------------|-------------------------|--------------|----------------|--------------|-------------------------|
| 1-2 heads      | 106,407                 | 60.3         | 159,294        | 12.9         | 1.5                     |
| 3-9 heads      | 49,840                  | 28.3         | 216,489        | 17.5         | 4.3                     |
| 10-19 heads    | 7,975                   | 4.5          | 97,958         | 7.9          | 12.3                    |
| 20-49 heads    | 6,874                   | 3.9          | 206,595        | 16.7         | 30.1                    |
| 50-99 heads    | 3,325                   | 1.9          | 215,636        | 17.4         | 64.8                    |
| 100-199 heads  | 1,454                   | 0.8          | 185,574        | 15.0         | 127.6                   |
| 200-499 heads  | 425                     | 0.25         | 112,091        | 9.1          | 263.7                   |
| over 500 heads | 53                      | 0.03         | 43,340         | 3.5          | 817.7                   |
| Total          | 176,353                 | 100          | 1,236,947      | 100          | 7.0                     |

Compared with the situation in the year 2002, the number of goat holdings decreased with about 25% in the year 2010, especially based on decreasing of individual holdings, respectively farms framed under 10 heads class (156,247 in 2010 versus 223,111 in 2002).

From the data presented in Table 6 we can see that the average number of animals per farm was 7 heads in 2010, which represents an increase of 2.33 times compared to the

situation existing in 2002 (7 heads/farm in 2010 versus 3 heads/farm in 2002).

Also, from the data presented in Table 6 we can see that the percentage of farms which hold more than 50 heads reached almost 3% of total holdings, against 0.5% as represented in 2002.

This is encouraging for the future of goat breeding sector in our country. Thus in 2010 there were 5,257 of goat holdings which have the size over 50 heads, compared to 1,176 as were of that size in 2002. The 5,257 holdings have 556,641 heads of goats, which represents about 45% of the total number of goats in the country. It is also worth noting that in 2010 in our country were 53 of big farms which have over 500 heads of goats per holding, compared with 4 farms were of this size in 2002.

Concentration of a greater number of animals per farm and the increasing of average production per animal are the tendencies which are in attention of countries with a tradition in goat breeding, especially in countries which were in the European Union before the first wave of accession in 2004 (15 countries) [1].

Regarding the goat milk production, from data presented in Table 7 it can be noted that at the whole EU level this remained relatively stable in the analyzed period (a small increasing of 2.7%).

Romania has a good goat milk production (161 thousand tonnes) being classed at fourth place in EU from this point of view (8.1% from EU goat milk production) and registered the greatest increasing in the analyzed period (75.0%) [4].

Table 7. Evolution of goat milk production in the top five largest EU producer countries in the period 2002-2010 (thousand tonnes)

| Specification | 2002  | 2010  | % changes 2002-2010 |
|---------------|-------|-------|---------------------|
| France        | 536   | 645   | 20.3                |
| Spain         | 513   | 602   | 17.4                |
| Greece        | 523   | 470   | -10.1               |
| Romania       | 92    | 161   | 75.0                |
| Bulgaria      | 105   | 61    | -41.9               |
| EU 27         | 1,935 | 1,987 | 2.7                 |

The highest production of goat milk in EU (Fig. 2) is produced in France (32.5), followed by Spain (30.3%) and Greece

(23.7%). It is noteworthy that in these three countries is produced about 86.5% of goat milk production from the EU 27.

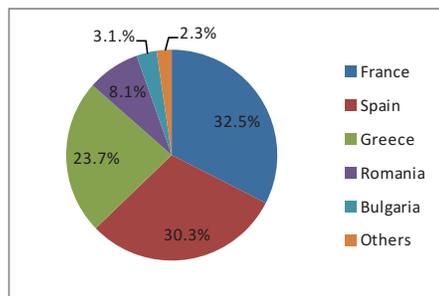


Fig. 2 Distribution of the goat milk production in the EU in 2010

Concerning the goat meat production, from data presented in Table 8 it can be noted that at the whole EU level this remained relatively stable in the analyzed period (a small increasing of 1.8%) [4].

Table 8. Evolution of goat meat production in the top five largest EU producer countries in the period 2002-2010 (tonnes)

| Specification | 2002   | 2010   | % changes 2002-2010 |
|---------------|--------|--------|---------------------|
| Greece        | 44,890 | 53,700 | 19.6                |
| France        | 6,700  | 12,053 | 79.9                |
| Spain         | 15,072 | 9,000  | -40.3               |
| Romania       | 3,454  | 7,355  | 112.9               |
| Bulgaria      | 5,358  | 3,699  | -31.0               |
| EU 27         | 92,608 | 94,291 | 1.8                 |

Romania has a good goat meat production (7,355 tonnes) being classed at fourth place in EU from this point of view (7.8% from EU goat meat production) and registered the greatest increasing in the analyzed period (112.9%).

The highest production of goat meat in EU (Fig. 3) is produced in Greece, which produces more than half of goat meat production in the EU (56.9%), being followed by France (12.8%) and Spain (9.5%).

It is noteworthy that in Bulgaria and especially in Spain the goat meat production decreased very significantly in the analyzed period (31.9% and respectively 40.3%).

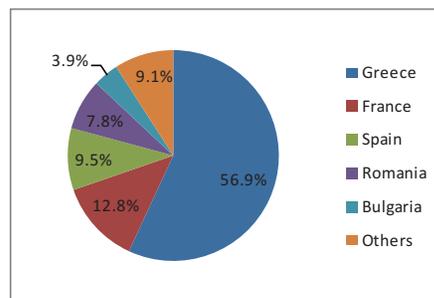


Fig. 3 Distribution of the goat meat production in the EU in 2010

## CONCLUSIONS

The goat livestock in Romania was situated in 2010 at 917,300 heads, recording an increase of 74.7% in the period 2002-2010.

Compared with the situation in the year 2002, the number of goat holdings decreased with about 25% in the year 2010, especially based on decreasing of individual holdings, respectively farms framed under 10 heads class.

Romania has good productions of goat milk and goat meat, our country being classed on fourth place in EU for both productions. However, the potential of our country is much higher and especially regarding the goat milk production.

## REFERENCES

- [1] Răducuță, I., Marmandiu, A., Stanciu Mirela, Cristian, C., 2007, *The evolution of livestock, milk and goat cheese production in the European countries*, Acta Universitatis Cibiniensis, Agricultural Sciences, Vol. 1, no. 1 (7), p. 127-134
- [2] Taftă V., 2002. *Production and reproduction of goats*, Ceres Publishing House, Bucharest, p. 73-98
- [3] Zamfirescu Stela, 2004, Development of goats sector in the country and world, Goat Bulletin No. 2, p. 2-3
- [4] Food and Agriculture Organization of the United Nations, FAOSTAT-Agriculture ([www.fao.org](http://www.fao.org))
- [5] National Institute for Statistics, *Statistical Yearbook*, 2011