



Online Version ISSN: 1314-412X  
Volume 4, Number 3  
September 2012

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2012

An International Journal Published by Faculty of Agriculture,  
Trakia University, Stara Zagora, Bulgaria

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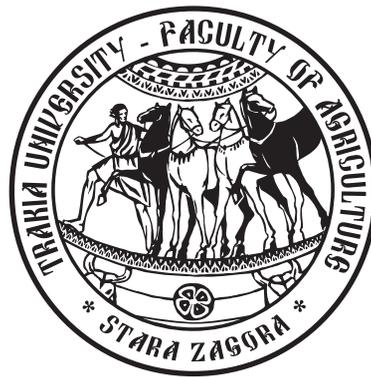
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Online Version ISSN: 1314-412X

Volume 4, Number 3  
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## The evolution and current situation of sheep breeding in Romania

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**Abstract.** After the integration of our country within the EU have occurred major changes in many areas of activity and including in the sheep breeding sector. The purpose of this paper is to investigate the evolution and situation of sheep breeding sector in Romania in relation with the sheep livestock, the number and size of sheep exploitations and sheep 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 sheep livestock has increasing with 15.9% in 2010 compared with 2002 and with 10.3% compared with 2006. In present 0.69% from the sheep livestock are reared organically. In terms of number and size of sheep exploitations, the results showed that in the year 2010 there were 271,266 exploitations of sheep of which 63.9% are individual exploitations that have an average number of 4.18 heads sheep per unit and which hold these animals exclusively for self-consumption of family and only 7.5% of total exploitations have more than 100 heads, as average size of sheep farms existing in the EU. However, compared with the existing situation in 2002, the number of exploitations is 2.4 times lower in the year 2010, especially based on decreasing of small exploitations respectively those which are framed in class less than 10 heads. The study shows also that meat production and milk production in particular have increased significantly over the period considered, while the wool production decreased slightly.

**Keywords:** sheep breeding, livestock, exploitations, productions

### Introduction

Sheep breeding has been since ancient times a basic occupation of the Romanian people. This work dates from the beginning of his training and then continued, under various extensive or intensive forms. The development of this sector was due in large part to the conditions of soil and climate of our country, Romania being from this point of view one of the countries with the most appropriate conditions for sheep breeding (Taftă et al., 1997).

Nowadays, the sheep livestock have decreased considerably compared to those existing in 1989, and the direction in sheep breeding is focused almost exclusively to milk production, as following to a better price for milk products obtained from sheep milk compared with wool and sheep meat. After the integration of our country within the EU have occurred major changes in many areas of activity and including in the sheep breeding sector (Răducuță et al., 2008; Răducuță and Ghiță, 2009). The purpose of this paper is to investigate the evolution and situation of sheep breeding sector in Romania in relation with the sheep livestock, sheep productions, sheep breed structure and the number and size of sheep exploitations.

### Material and methods

The analyze of sheep breeding evolution was made between the last two general agricultural census conducted in Romania, respectively in 2002 and 2010. To achieve the research objectives we have studied the official statistical data provided by different institutions (FAO, Eurostat, Ministry of Agriculture and Rural Development from Romania, National Institute of Statistics and National Agency for Improvement and Reproduction in Animal Science), we calculated the percentage difference between the

reference years and we interpreted data obtained.

### Results and discussion

In terms of size and structure of sheep exploitations in our country, the data provided by National Institute of Statistics showed that in the year 2010 (Table 1) there were 271266 exploitations of sheep of which 63.9% are individual exploitations that have an average size of 4.18 heads sheep per unit and which hold these animals exclusively for self-consumption of family and only 7.5% of total exploitations have more than 100 heads, as average size of sheep farms existing in the EU.

However, compared with the existing situation in 2002 (Table 2), the number of exploitations is with 2.4 times lower in the year 2010, especially based on decreasing of small exploitations, respectively those which are framed in class less than 10 heads.

As regards the sheep breed structure (Table 3 and Figure 1), there are six breed classes in Romania (year 2010), which hold, in order, the following percentages from the sheep livestock: Tsurcana (55.5%), Tsigai (22.1%), Merinos (10.9), Karakul (5.6%), Crossbreeds (5.7%) and Other breeds (0.2%). In the last class are breeds which were imported in the recent years for improving the morpho-productive parameters of our local breeds such as Lacaune, Friesian, Texel, Suffolk, Bluefaced Leicester, Ile de France, etc. From this situation it is pointed out that the Tsurcana has decreased from 65.0% (year 2002) to 55.5% (year 2010) of the total sheep number in Romania, the difference being taken mainly by the Crossbreeds which have a superior production compared with Tsurcana. From this point of view it is notable that the structure of sheep breed has changed in the right direction.

Organic livestock has grown in Romania in recent years, especially after 2000, because animal breeding in organic farming

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**Table 1.** The structure and size of sheep exploitations in Romania in the year 2010, (National Institute of Statistics, 2012)

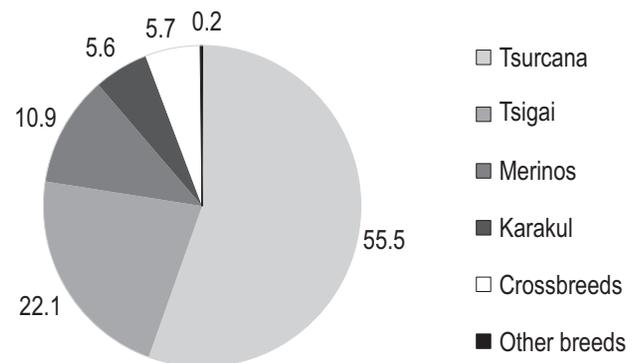
Specification (heads)	Number of exploitations	% from total	Livestock (heads)	% from total	Average number (heads/unit)
1–2	47214	17.4	83363	0.99	1.8
3–9	126091	46.5	641011	7.64	5.1
10–19	44027	16.2	538384	6.42	12.2
20–49	19115	7.1	527793	6.29	27.6
50–99	14383	5.3	961296	11.46	66.8
100–199	10800	3.9	1440774	17.18	133.4
200–499	7464	2.8	2186842	26.08	292.9
over 500	2172	0.8	2006296	23.93	923.7
Total	271266	100	8385749	100	30.9

**Table 2.** The structure and size of sheep exploitations in Romania in the year 2002, (National Institute of Statistics, 2003)

Specification (heads)	Number of exploitations	% from total	Agricultural individual exploitations	Commercial societies with juridical personality
1–2	167982	26.24	167949	33
3–9	330697	51.67	330624	73
10–19	86445	13.51	86346	99
20–49	32557	5.09	32444	113
50–99	11263	1.76	11160	103
100–199	6596	1.03	6492	104
200–499	3694	0.58	3583	111
over 500	777	0.12	677	100
Total	640011	100	639275	736

**Table 3.** The sheep breed structure in Romania, (National Agency for Improvement and Reproduction in Animal Science, 2012)

Breed	Year			
	1990 %	2002 %	2008 %	2010 %
Tsurcana	38.0	65.0	52.4	55.5
Tsigai	20.0	25.5	24.3	22.1
Merinos breeds	38.0	6.5	9.0	10.9
Karakul and other breeds	4.0	3.0	5.4	5.6
Crossbreeds	-	-	8.5	5.7
Other breeds (imported)	-	-	0.4	0.2

**Figure 1.** The sheep breed structure in 2010

system represent a niche activity for farmers. The share of organic production within total production varies according to the different animal sectors. The statistic data showed that cattle and sheep are the most popular species reared using organic production methods (Răducuță, 2011). The highest share is found in the sheep sector due to lower difficulties to convert to organic production (well identified products, feed based mainly on grass and hay). Indeed the productive system of sheep farming in the hill and mountainous areas of Romania is considered to be very close to that of organic sheep farming and this fact, gives a competitive advantage to the Romanian sheep farmers.

Organic sheep breeding in Romania is based on native breeds, which are well adapted to their environment (like Tsurcana

breed). The choice of breeds and breeding strategies used in the organic sheep livestock sector needs to ensure farm profitability, safeguard animal health and welfare, focus on conserving genetic diversity and promote human health. The sheep livestock farmed organically in 2010 was 57678 heads and in present 0.69% from the sheep livestock are reared organically (Table 4). Romania recorded a large increase in the number of organically farmed sheep, especially in 2008, respectively after the integration of our country in the EU, but after this year their number decreased and mainly the number of organic certified livestock.

A study at national level (made in 2012 but unpublished yet), which searched among other subjects what breed is reared in the organic sheep farms, showed that the breed Tsurcana is almost the

**Table 4.** The number of sheep reared organically and their share from total sheep livestock (FAO Statistics, 2012; Ministry of Agriculture and Rural Development, 2012)

Specification	2006	2007	2008	2009	2010
Total sheep livestock (heads)	7611000	7678000	8469000	8882000	8386000
Sheep reared organically (heads)	86180	59580	121175	51470	57678
Share from total (%)	1.13	0.78	1.43	0.58	0.69

**Table 5.** The Romanian share in Europe in sheep livestock and their production in the year 2010 (FAO Statistics, 2012)

Specification	UM	Europe	Romania	Share (%)
Sheep livestock	thousand heads	130710	8386	6.4
Meat production	thousand tonnes	1167	63	5.4
Wool production	thousand tonnes	260	18	6.9
Milk production	thousand tonnes	3378	651	19.3

only breed preferred by farmers due its characteristics of resistance, adaptability and productivity. As regards the size of organic sheep exploitations the same study revealed that it is different from a county to another and range from 98 heads/farm and 1144 heads/farm. Also the land surface per organic sheep farm is different from a county to another and range from 6.5 ha/farm and 290 ha/farm. Most of these organic sheep farms are situated in the hill and mountains areas, places where the prevalent breed is Tsurcana. Sheep breeding into organic farming system has a strong growing tendency in our country in the future and this is confirmed by the fact that in 2011 the number of sheep and goats farmed organically reached to 168593 heads (Ministry of Agriculture and Rural Developments, 2012).

In Table 5 is presented the Romanian share in Europe in sheep livestock and their production in the year 2010. The data shows that the Romanian share in sheep livestock, sheep meat and wool have a small percentage (6.4%, 5.4% and respectively 6.9%), while milk production is about one fifth of production in Europe.

## Conclusion

Data from the National Institute of Statistics on general agricultural census conducted in 2002 and 2010, show that the number of sheep exploitations is 2.4 times lower in the year 2010, especially based on decreasing of small exploitations and the sheep breed structure has changed in a right direction. Sheep breeding in organic farming system had a strong development in recent years in our country and it is considered by breeders as a prospective activity for sheep sector due to the favorable conditions existing especially in the hill and mountains areas. Given the potential for mixt exploitation of local sheep breeds in Romania, the geo-climatic favorable conditions for sheep breeding and the available fodder resources,

we believe that the current share of livestock and productions at this species in the European context are far from the real possibilities, except milk production, fact who require a new strategy of sheep breeding sector adapted to the market economy requirements.

## Acknowledgements

This work was co financed from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/63258 "Postdoctoral school for zootechnical biodiversity and food biotechnology based on the eco-economy and the bio-economy required by eco-san-genesis".

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# AGRICULTURAL SCIENCE AND TECHNOLOGY

Volume 4, Number 3  
September 2012



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