

## RESEARCH ON THE SHEEP BREEDING IN ORGANIC FARMING SYSTEM IN ROMANIA

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### Abstract

*Organic livestock has grown in Romania in recent years, especially after 2000, because animal breeding in organic farming system represent a niche activity for farmers. The purpose of this paper was to make a radiograph at national level as regards the sheep breeding in organic farming system. 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. The highest share is found in the sheep sector due to lower difficulties to convert to organic production. 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 life environment. Most of these organic sheep farms are situated in the hill and mountains areas, places where the prevalent breed is Tsurcana. The sheep livestock farmed organically in 2010 was 58,372 heads and in present 0.70% from the sheep livestock are reared organically. 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 168,593 heads.*

**Key words:** sheep breeding, organic farming, livestock, farms

### INTRODUCTION

Organic farming is an agricultural sector which increased steadily in recent years worldwide and especially in the EU [5, 2]. Also, our country has seen a continuous growth of this sector and especially after 2000.

In our country there are great opportunities for practicing organic farming, due to favourable natural conditions, such as: a large area occupied by pastures and natural meadows, use of a quantity of fertilizers and pesticides significantly lower than in other countries and a reduced pollution of water and soil compared to other countries [1].

Organic livestock has grown also in Romania in recent years because animal breeding in organic farming system represent a niche activity for farmers.

Animals are considered to be an essential component of organic farms because represents an efficient way to use organic

plant products, ensure the integration of plant production with animal production and provides natural fertilizer on plant culture.

Also the presence of animals in an organic farm provides stability, biodiversity and ecological sustainability for farm.

Romania has very favorable conditions for animal breeding in organic farming and a special perspective in European context for the development in this direction [2].

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.

Sheep breeding in ecological system has the main aim to produce milk and meat organic from which may result many dairy and meat products, with high demand both internally and especially externally and from this point of view our country can become a major supplier of organic products to cover the

growing demands of this market, which is satisfied in a very small proportion.

The purpose of this paper was to make a radiograph at national level as regards the sheep breeding in organic farming system.

## MATERIAL AND METHOD

The analyze of sheep breeding in organic farming system was made with special reference to organic sheep number at national and districts level, the number of organic sheep farms at districts level, the sheep breeds which are farmed organically, the land area exploited by the organic sheep farms, the organic conversion situation of animals and land areas, the organic certification bodies involved in organic certifying of sheep farms. To achieve these objectives we processed the official statistical data provided by different institutions (Eurostat, Ministry of Agriculture and Rural Development), we statistically processed the raw data received from responsables with organic agriculture from the county agricultural directions and we interpreted the obtained data.

## RESULTS AND DISCUSSIONS

The share of organic production within total production varies according to the different animal sectors in Romania.

Livestock farmed organically in 2010 were as follows: 12,761 heads of cattle, 58,372 heads of sheep, 2,320 heads of goats, 537 heads of pigs and 23,740 heads of poultry [8].

The statistic data showed that cattle and sheep (with a share of 0.51% and respectively 0.70% of total livestock) are the most popular species reared using organic production methods in our country (Table 1) [6, 7].

Not surprisingly it is for the pork sector that the sector has the lowest weight. This stems partly from the difficulties posed by the provision of organic animal feed (compound feed).

Table 1. Organic livestock 2010 in Romania ( heads)

Specification	Cattle	Sheep	Goats	Poultry	Pigs
Total livestock	2,512,300	8,386,000	917,300	93,343,000	5,783,400
Organic livestock	12,761	58,372	2,320	23,740	537
% of total livestock	0.51	0.70	0.25	0.03	0.01

The certified organic livestock is presented in Table 2 [6]. From these data we can remark also that cattle and sheep have the highest share of total certified organic animals.

Table 2. Dynamics of certified organic livestock (heads)

Specification	2006	2008	2010	% changes 2006-2010
Bovine	11,365	7,567	5,358	-52.8
Sheep	86,180	121,175	23,029	-73.3
Goat	117	4,296	1,093	834.2
Pigs	1,652	416	320	-80.6
Poultry	4,300	6,080	21,580	401.9

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).

The sheep livestock farmed organically in 2010 was 58,372 heads and in present 0.70% from the sheep livestock are reared organically (Table 3 and Figure 1) [6, 9].

From the data in Table 3 we can see that the total number of sheep increased by 10.2% in 2006-2010, and the number of sheep reared organically decreased by 32.3% in the same period.

Table 3. The evolution of sheep reared organically and their share from total sheep livestock (heads)

Specification	2006	2008	2010	% changes 2006-2010
Total sheep livestock	7,611,000	8,469,000	8,386,000	10.2
Sheep reared organically	86,180	121,175	58,372	-32.3
Share from total (%)	1.13	1.43	0.70	-38.1

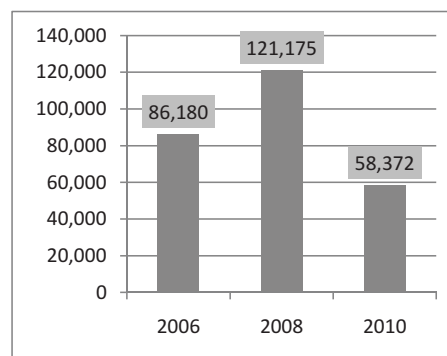


Fig. 1 Dynamics of organic sheep livestock (heads)

Romania recorded a large increase in the number of organically farmed sheep, especially in 2008 (1.43% share of total livestock), 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.

In Table 4 is presented the situation of sheep breeding in organic farming system at counties level [8].

In the year 2010 we can note that from the total of 58,372 heads of organic sheep 35,343 heads were in conversion and 23,029 heads were ecological certified.

Table 4. The situation of sheep breeding in organic farming system in 2010 at counties level (heads)

No.	District	Conversion	Certified	Total
1	ALBA	152	406	558
2	ARAD	22,473	-	22,473
3	ARGES	-	-	-
4	BACAU	-	-	-
5	BIHOR	-	50	50
6	BISTRITA N.	6,088	760	6,848
7	BOTOSANI	-	-	-
8	BRASOV	-	-	-
9	BRAILA	-	-	-
10	BUZAU	-	-	-
11	CARAS S.	170	-	170
12	CALARASI	-	-	-
13	CLUJ	1,389	467	1,856
14	CONSTANTA	-	115	115
15	COVASNA	18	-	18
16	DAMBOVITA	-	-	-
17	DOLJ	-	-	-
18	GALATI	-	-	-
19	GIURGIU	-	-	-
20	GORJ	-	-	-
21	HARGHITA	25	77	102
22	HUNEDOARA	1,337	-	1,337
23	IALOMITA	-	207	207
24	IASI	-	-	-
25	MARAMURES	-	37	37
26	MEHEDINTI	-	-	-
27	MURES	1,523	354	1,877
28	NEAMT	-	-	-
29	OLT	-	-	-
30	PRAHOVA	-	-	-
31	SATU MARE	498	-	498
32	SALAJ	228	-	228
33	SIBIU	-	19,904	19,904
34	SUCEAVA	413	411	824
35	TELEORMAN	-	-	-
36	TIMIS	265	241	506
37	TULCEA	-	-	-
38	VASLUI	-	-	-
39	VALCEA	750	-	750
40	VRANCEA	-	-	-
41	ILFOV	-	-	-
42	BUCURESTI	14	-	14
<b>TOTAL</b>		<b>35,343</b>	<b>23,029</b>	<b>58,372</b>

The number of organic sheep farms at national level is very low. Unfortunately, their

exact number it is unknown, but from the data provided by the responsables with organic farming at the county level seems it is up to 100 such farms.

The counties with the most holdings and thus with the largest number of sheep exploited in organic system in 2010 (Figure 2) were Arad (22,473 heads), Sibiu (19,904 heads) and Bistrita Nasaud (6,848 heads).

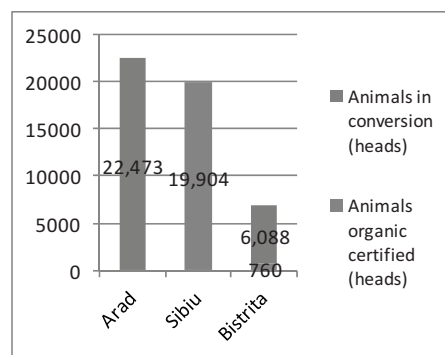


Fig. 2 Distribution of organic sheep livestock in the main counties with the largest number of organic sheep (heads)

Also we can remark that there are 19 counties where doesn't exist organic sheep. Conversely, in Sibiu county the total sheep livestock registered in organic farming system are organic certified and represent nearly 86% of total organic certified sheep number in Romania [3].

As regards the size of organic sheep exploitations this study revealed that it is different from a county to another and range from 8 heads/farm and 1750 heads/farm. In Sibiu County the size of organic sheep farms is higher compared with other counties, respectively the lowest size is 122 heads/farm, and the highest is 1750 heads/farm. Conversely, in Suceava County, the size of organic sheep farms is very small (the lowest is 8 heads/farm and the biggest 65 heads/farm).

The land surface per organic sheep farm is also different from a county to another and range from 3.4 ha/farm and 350.0 ha/farm. In Sibiu County the agricultural land area exploited by the organic sheep farms is higher compared with other counties, respectively

the lowest is 60 ha/farm, and the highest is 350 ha/farm. Conversely, in Suceava County, the agricultural land exploited by organic sheep farms is very small (the lowest is 4.9 ha/farm and the biggest 17.5 ha/farm).

Regarding the legal status of farmers that have organic sheep farms, this study highlights the fact that most of them are individuals, a small part are authorized individuals and just few are companies with legal personality.

Of the 14 certification bodies working in organic farming in Romania and are accredited by Ministry of Agriculture and Rural Development, in the organic sheep breeding sector are involved only 7. By far the largest number of sheep organic farms at national level is inspected by SC Ecoinspect SRL.

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

Most of Romanian organic sheep farms are situated in the hill and mountains areas, places where the prevalent breed is Tsurcana [4].

The present study reveal that in all counties where there are organic sheep farms (with one exception, respectively in Ialomita County the breed raised organically is Tsigai breed) the breed which is exploited in organic farming 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 168,593 heads.

## CONCLUSIONS

The sheep livestock farmed organically in 2010 was 58,372 heads, from which 35,343 heads were in conversion and 23,029 heads were ecological certified.

In present 0.70% from the total sheep livestock are reared organically in Romania.

The size of organic sheep exploitations is different from a county to another and range from 8 heads/farm and 1750 heads/farm.

The counties with the most holdings and thus with the largest number of sheep exploited in organic system in 2010 were Arad (22,473 heads), Sibiu (19,904 heads) and Bistrita Nasaud (6,848 heads).

Organic sheep breeding in Romania is based on native breeds. Most of Romanian organic sheep farms are situated in the hill and mountains areas, places where the prevalent breed is Tsurcana.

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