

EVOLUTIONS AND PERSPECTIVES CONCERNING THE PRODUCTION AND CONSUMPTION OF SHEEP MEAT IN ROMANIA. FROM A DECLINING INDUSTRY TO A RISING STAR

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Abstract

Romania has a great natural potential as regards the development of livestock industry that would permit both the internal market development as well as an active export based industry. One of the most interesting aspects is the one related with the sheep meat industry in Romania which has a seasonal aspect back home and a constant trend worldwide. Having this in mind the sector became a priority of the Romanian Agricultural Ministry starting with 2017. The current paper thus realizes an up-to-date analysis of the worldwide and national situation of the sheep farming while presenting relevant data and actions taken by the national authorities in support of this industry. Romania has an honorable 4th place as a producer country in the European Union and this situation is about to get improve given the measures taken. More over this paper provides an accurate picture of industry status per each region of Romania providing both a grass root approach as well as a European perspective.

Key words: (maximum 6): sheet meet, production, Romania, European Union, potential

INTRODUCTION

Romania has a remarkable natural potential, favorable to the development of the zootechnical sector, which would allow to cover domestic demand for meat and milk and to obtain important benefits for Romanian farmers through exports. (Stanciu, S., 2014). This would allow for a substantial development of the zootechnical sector, especially the sheep breeding sector in a natural environment.

However, it is known that in the 21st century Romania, the consumption of sheep meat, especially lamb, is more seasonal, usually during the Easter holidays, being more of a tradition of consuming this type of meat. Romania being rather an exporter of sheep meat than a consumer. Worldwide, the situation of the sheep breeding sector is quite different, the sheep meat being constantly consumed throughout the year.

Concerning the sheep breeding, a significant aspect is represented by the fact that the sheep have the lowest risk of contamination with antibiotic residues. In the spring, sheep have the most tender and lowest fat meat.

Sheep meat contains a range of proteins that are easily absorbed by the body. In the spring, sheep have the most tender and lowest fat meat. Sheep meat contains a range of proteins that are easily absorbed by the body. (Soare, E., & Chiurciu, I. A. (2017)

In Romania, sheep breeding is a traditional activity, but its aim is usually the milk production and in a lesser extent the meat production. Sheep breeding represents a sustainable activity taking into the account the variety of the obtained products (milk, meat, wool) and the nature of the fodder used. The possibility of exporting sheep meat that could result in high incomes for the producers has to be also taken into account. (Niculae I. and Costaiche G. M. , 2015)

Even if it is not the most productive domestic animal, the sheep is undoubtedly the animal with the most goods produced (wool, meat, milk, leather etc.). Not all of these productions have a constant economic importance over time. Making production decisions therefore requires the knowledge of each production line to be as accurate as possible. (Drăgănescu, C., 1998) There are an estimated 1000 million sheep in the world. The major sheep farming areas are located within the latitudes 35–55-degree north in Europe and Asia and between 30 and 45 degree south in South America, Australia and New Zealand. The current world consumption of sheep meat stands at about 2.5 kg per person annually out of an annual meat consumption of 41.6 kg per person. There are three major management systems for sheep production that exist in the world, namely extensive production for wool and meat, intensive dairy production and traditional pastoralism. Generally, the different farming systems have the capacity to provide good welfare outcomes for the animals, provided adequate resources and husbandry (e.g. supplementary feed, labour veterinary care) are given when required.) (Stephen T. Morris,, 2017)

Since the end of 2017, sheep breeding has become in Romania a much more supported sector by MADR by promoting the increase and consumption of sheep meat, promotion campaigns “Choose sheep” has been advocated in many cities in the country with active involvement both from citizens, especially the authorities, the sheep being considered a "star" of the Romanian animal husbandry, untapped in the real value.

MATERIAL AND METHOD

The elaboration of the study was aimed at presenting the current situation of the production and consumption of sheep meat in our country, highlighting the developments that are expected in the context of supporting this sector by the Ministry of Agriculture and Rural Development through the highly promoted campaign "Choose sheep ".

The study is based on the information available on-line on the website of the Ministry of Agriculture and Rural Development, the national database - Tempo-Online of the National Institute of Statistics and the EUROSTAT Community Data Base, information that has been processed, thus using a methods of quantitative analysis.

At the same time, the specialized literature was analyzed, following the current stage of knowledge of the theme approached in the paper.

RESULTS AND DISCUSSION

In Romania, 10 years after joining the European structures, the production and consumption of sheep meat registered slight increases according to NIS data.

As shown in table no. 1, it is noticed that at the end of 2007, the number of sheep in the whole country dropped considerably compared to 1990, by about 5.6 million heads and by the end of 2017 by about 4.08 million heads, from where we can conclude that we have an increase in the number of sheep heads for the year 2017 compared to the year of Romania's accession to the EU, an increase of about 1, 5 mil heads and 17.2% respectively.

Table. 1

Evolution of sheep numbers in Romania in 1990 and after EU integration

1990	2007	2010	2015	2017	2017/ 1990	2017/ 2007	2017/ 2010	2017/ 2015
Number					%			
14.061.864	8.469.195	8.417.437	9.809.512	9.981.859	70,98532	117,8608	118,5855	101,7569

Sursa: Own calculation after NIS

At the level of Romania, sheep breeding is still at household level with a reduced number of heads, with a traditional increase in the use of sheep's milk and products made from it in rural weekly fairs, as well as in the marketing lambs especially during Easter, spring holidays. However, there are also a significant number of livestock farms that have the activity of raising sheep, and the sheep are usually out for export.

With regard to the total number of sheep in the whole country (Table 2) it is observed that at the level of 2017, it was increasing compared to the year of Romania's accession to the EU by 17,85%. The only 2 regions that have suffered slight declines in 2017 as compared to 2007 are the North - is 2.5%, respectively the South - West Oltenia region with a drop in sheep 0,4%. In 2017, the region with the largest herds of sheep is seen as the Center region, which holds about 30% of the total flock, followed by the Northwest region by 16.8%. For the year 2007, the leading region with a total of about 20% of the total was the whole of the Central Region,

followed by the northeastern region with a population of about 17% compared to 2017 where it held about 15% of the total population in the whole country .

Table 2.

Evolution of the number of sheep per country and development regions after Romania's accession to the EU

Development Regions	2007	2010	2011	2012	2013	2014	2015	2016	2017	2017	2007	2017/2007
	Number	Number	Number	Numar	Numar	Number	Number	Number	Number	%	%	%
TOTAL	8.469.195	8.417.437	8.533.434	8.833.830	9.135.678	9.518.225	9.809.512	9.875.483	9.981.859	100	100	117,86
North - WEST	1.198.889	1.335.270	1.330.825	1.372.997	1.406.954	1.610.376	1.649.303	1.668.922	1.679.514	16,83	14,16	140,09
Center	1.692.695	1.856.568	1.931.589	1.991.095	2.047.133	2.095.670	2.117.936	2.151.856	2.292.001	22,96	19,99	135,41
North-EAST	1.432.248	1.240.359	1.258.352	1.296.866	1.326.483	1.369.698	1.395.954	1.403.177	1.395.832	13,98	16,91	97,46
South East	1.490.524	1.296.159	1.302.978	1.357.539	1.401.181	1.439.291	1.508.528	1.485.098	1.494.162	14,97	17,60	100,24
South - Muntenia	822.973	788.836	812.676	832.858	864.870	884.112	935.565	933.987	959.886	9,62	9,72	116,64
Bucharest - ILFOV	23.983	29.445	25.352	27.869	29.043	30.707	30.341	31.214	30.283	0,30	0,28	126,27
South - West Oltenia	671.306	600.861	610.385	618.740	633.858	657.169	679.271	685.812	668.522	6,70	7,93	99,59
West	1.136.577	1.269.939	1.261.277	1.335.866	1.426.156	1.431.202	1.492.614	1.515.417	1.461.659	14,64	13,42	128,60

Sursa: Own calculation after NIS

After 1990, in our country the importance of research carried on with the aim of improving sheep performance using the crossbreeding with imported meat breeds, increased and it is expected to be continued in the future years (Pădeanu, 2008; Dărăban, 2008).

Given the fact that sheep farming has become a very sustained activity by the Ministry of Agriculture and Rural Development through its programs, it is important to take a series of measures to increase the sheep meat production.

Sheep may use feed from permanent meadows, sometimes inaccessible to other farm animal species, agricultural by-products and other occasional sources less than 9,2% being concentrated fodder, which may reach 27,9% for cows and 97, 2% in the feeding of birds. Pastures provide 75-85% of the sheep's feed requirement. (Alhorani I., 2009)

There are many alternatives to intensify sheep production. These include feeding pads, feedlots and housing. Intensive systems require additional skills of stockmanship and management. The environment, including surfaces and flooring, high stock density and the provision of concentrated feeds can create challenges to animal health and welfare, which may compromise animals or amplify the effect of any existing problem. While semi-intensive and intensive farming conditions can ensure that some of the animals' needs are more easily or more efficiently met (e.g. sheep are generally preserved from hunger and thirst, and could be sheltered from climatic extremes), and animals live in a very predictable and less motivating environment. (Sevi et al., 2009)

Sheep production systems vary considerably across the world, and reflect the different local environmental conditions, which determine, to a

large extent, breeds, housing, intensification level, management practices, environmental issues, and animal feeding systems used. The components of the production systems are considered to be most important ones in determining quality in animal production (Sepúlveda et al., 2011, F. Montossi et al., 2013) For this reason, lamb meat has different sensory characteristics depending on its origin, being a product strongly country-dependent. Thus, lamb sensory evaluation by consumers from different origins can produce differences in their acceptability. (F. Montossi et al., 2013).

Romania ranks fourth in the EU's largest sheep and goat breeders, after the United Kingdom, Spain and Greece, with a stock of 11.5 million heads in 2017, of which about 10 million are sheep. Business with sheep is predominantly based on exports because Romanians are not used to eating sheep meat regularly. In 2017, Romania exported live sheep and goats of 180.5 million and sheep and goat meat over 35 million euros (Florescu G., 2018)

With regard to sheep breeding, Romania stood at the third position at the EU level after the UK (over 23 million heads) and Spain (15.9 million heads) at the end of 2017 with a nearly 10 million head, as presented by EUROSTAT. For Romania, there is a slight increase in the number of sheep at the end of 2017 compared to the end of 2016. For the United Kingdom, there is a slight decrease in the number of sheep at the end of 2017 compared to 2016. (Figure 1)

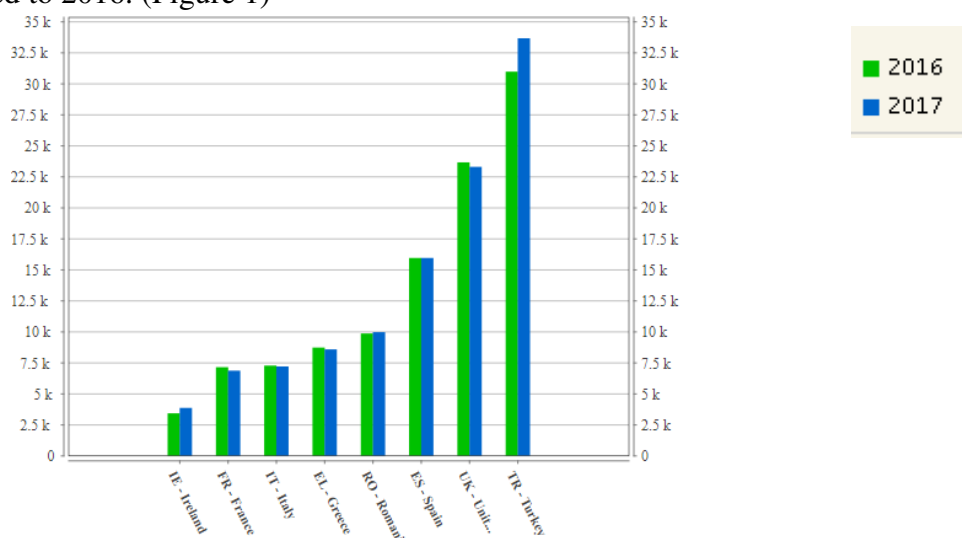


Figure 1 Number of sheep in the end of 2016 and 2017 for producer countries in the EU and for Turkey ; Source: EUROSTAT

Turkey is one of the largest producers but also sheep meat consumers, with a sheep headquaters of about 33.67 million sheep at the end of 2017. (Eurostat)

The consumption of sheep meat in Romania in the year 2016 averaged 2.6 kg / inhabitant, slightly increasing compared to 2015 when consumption of 2.3 kg / inhabitant was registered, but significantly higher compared to the year 2014 when it was only 0.7 kg / inhabitant per year. The largest consumption of sheep and lamb meat is during Easter, when the need is largely covered by domestic production. (Agrobiznes, 2018)

Regarding the consumption of sheep meat in Romania, it is known that this is a seasonal one, but it is mentioned by MADR that the program "Choose the sheep" raised the consumption of sheep meat among the Romanians at 37 tons per month, which means that 1,500 sheep, a full stall, are cut and delivered to the chain stores. (Ro.aliment, 2018)

In Greece, the annual consumption of sheep meat (30 kg / inhabitant) is ten times higher compared to Romania (2.5-3 kg / inhabitant / year), also a Balkan country. One of the greatest achievements of Romanian agriculture is the development of the sheep and goat breeding sector, which places Romania on the first places in milk (I), livestock (III) and meat exports (II). Meat production in Romania has gained a well-preserved prestige, recognized in the country and abroad, with a clear positive economic impact, with an essential contribution to the achievement of important export revenues of 300-400 million euro / year. Moreover, Romania has a very important chance to become the EU's main exporter of sheep meat, after the United Kingdom is likely to leave the EU (Ferrari Magazine No. 2/207, edition 1-14 February 2018).

Table 3

Obtaining and capitalizing on sheep meat production - 30 June 2017

DEVELOPMENT REGIONS	TOTAL	FAMILY CONSUMPTIO N	FREQUENC Y MARKING TOTAL	FROM WHICH :		REGION /Total %	FREQUENC Y MARKING TOTAL/ FROM Total %
				DIRECT	INDIVIDUAL OR PRIVATE INDIVIDUAL UNITS		
TOTAL	4.335.650	1.462.031	2.873.619	2.393.352	480.267	100	66
North - WEST	911.520	248.299	663.221	574.001	89.220	21	73
Center	609.312	287.835	321.477	293.968	27.509	14	53
North-EAST	495.267	218.580	276.687	220.021	56.666	11	56
South East	656.155	220.832	435.323	382.644	52.679	15	66
South - Muntenia	655.091	233.504	421.587	312.481	109.106	15	64
Bucharest - ILFOV	19.281	6.431	12.850	12.850	0	0,44	67
South - West Oltenia	140.287	90.875	103.782	103.782	0	3	74
West	848.737	204.030	644.707	505.168	139.539	20	76

Sursa: Own calculation after MADR

Regarding the obtaining and valorisation of the sheep meat production on June 30, 2017, it can be seen in Table no. 3 that a total of about 4, 34 mil. Sheep heads were slaughtered, of which 1.46 mil. For the family consumption, the difference 66% being valued directly in the market. Most animals were harvested for meat production in the North West region, 21% of all animals, followed by the West region by 20%. The largest quantity of sheep meat was delivered directly to the market, with a percentage of over 60%, except for the Centru and North East regions, where 53% and 56% respectively were delivered to the market, the rest being for family consumption.

CONCLUSIONS

The paper provides a hopeful glimpse of a brighter future for the industry of the sheep meat. Starting from a less than advantageous situation due to the seasonal sheep meat consumption the measures taken at the national level, especially since 2017 have provided a boost for the local sheep farming industry. Romania is now on the third place in the European Union. Given the Brexit process our chances of becoming the number one meat exporter of the European Union are looking pretty good. At the end of the day this positive trend can be maintain and a successful chapter in the wider sector of the Romanian agricultural can thus be cited.

REFERENCES

1. Dărăban, S. (2008). Study concerning some carcass traits in young sheep fattened in different systems. Bulletin USAMV-CN, Animal Sciences and Biotechnologies, Ed. AcademicPres Cluj– Napoca, 65 (1–2): 161–166
2. Drăgănescu, C. (1998). Producția ovinelor în România la răscrucea tranziției-dileme și strategii
3. Florescu, G., 2018, Importurile de carne de oaie au depășit anul trecut 3,5 milioane de euro, disponibil online la <http://agroromania.manager.ro/articole/diverse/importurile-de-carne-de-oaie-au-depasit-anul-trecut-35-milioane-de-euro-25947.html>
4. Imad Alhorani, (2009), Teza de Doctorat - Stimularea activității microsimbionților ruminanți prin factori alimentari la rumegătoare mici
5. Montossi F., Font-i-Furnols M., M. del Campo , R. San Julián , G. Brito , C. Sañudo (2013) Sustainable sheep production and consumer preference trends: Compatibilities, contradictions, and unresolved dilemmas , Meat Science Volume 9, 772–789
6. Niculae I and Costaiche GM, (2015) / Agriculture and Agricultural Science Procedia 6 ,682 – 689

7. Pădeanu, I., S. Voia, S. Dărăban, Maria Sauer, Gh. Hrincă, M. Groza (2008). Research regarding the growing speed of crossbreed suckling lambs Charollaise x Merinos de Transilvania, in Banat area. *Lucrări Stiințifice Zootehnie și Biotehnologii*, Ed. Agroprint Timisoara, 41 (2): 768–722.
8. Sepúlveda, W. S., Maza, M. T., & Pardos, L. (2011). Aspects of quality related to the consumption and production of lamb meat. Consumers versus producers. *Meat Science*, 87, 366–372
9. Sevi, A., Casamassima, D., Pulina, G., & Pazzona, A. (2009). Factors of welfare reduction in dairy sheep and goats. Review article. *Italian Journal of Animal Science*, 8(Suppl. 1), 81–101
10. Soare, E., & Chiurciu, I. A. (2017). Research on the lamb and mutton market in the European Union. *Scientific Papers: Management, Economic Engineering in Agriculture & Rural Development*, 17(3).
11. Stanciu, S. (2014). Piața cărnii de ovine din România. Conference: *Perspectivile Agriculturii și Dezvoltării Rurale prin prisma noii Politici Agricole Comune 2014-2020.*, At Bucharest, Romania, Volume: 1
12. Stephen T. Morris, (2017) 2 - Overview of sheep production systems, Editor(s): Drewe M. Ferguson, Caroline Lee, Andrew Fisher, In *Herd and Flock Welfare, Advances in Sheep Welfare*, Woodhead Publishing, Pages 19-35
13. *** EUROSTAT, <https://ec.europa.eu/eurostat>
14. *** INS, Tempo Online, www.statistici.insse.ro
15. *** România, pe locul trei în Uniunea Europeană după numărul de ovine <https://agrobiznes.md/romania-pe-locul-trei-in-uniunea-europeana-dupa-numarul-de-ovine.html>;
16. *** Programul “Alege oaia” a ridicat consumul de carne de oaie în rândul romanilor la 37 de tone luna, *Ro.aliment*, 2018;
17. *** Revista Ferma nr. 2/207, editia 1-14 februarie 2018, *Fruntași-la-productie-codăși-la-consum*;
18. *** MADR, www.madr.ro