

Preliminary Results Regarding Organic Sheep Meat Consumption in Romania

Elena Ilisiu*¹, Vasile Rau¹, Dinu Gavojdian², Calin Vasile-Ilisiu³, Ioan Padeanu⁴

¹Romanian Academy for Agricultural and Forestry Sciences, Research and Development Institute for Sheep and Goat Palas- Constanta – Experimental Base Reghin, 545300 Reghin, Dedradului Street 11, Romania

²Romanian Academy for Agricultural and Forestry Sciences, Research and Development, Station for Sheep and Goats Caransebes, 325400 Caransebes, Resitei Street km 2, Romania

³Caprirom Nord Association, 545300 Reghin, Dedradului Street 11, Romania,

⁴Banat's University of Agricultural Sciences and Veterinary Medicine 'King Michael I of Romania', Faculty of Animal Science and Biotechnologies, 300645 Timisoara, Aradului Street 119, Romania

Abstract

With a national flock of 10.07 million sheep, Romania currently occupies the 3rd place in the EU (after the UK and Spain) in terms of the sheep numbers. However, only 0.85% (85.419 heads) are being reared in organic production systems. The development of sheep breeding in organic systems is very heavily influenced by the economic factors, but also by the consumer demand for organic products. An empirical study on consumer behavior towards sheep meat produced in organic system was developed in 2016. The aim of the study was to assess the possibility of developing sheep breeding sector in the organic system, in the terms of the consumer's behavior towards sheep meat obtained in organic system in order to develop strategies that will lead to sustainable development of the sector. The finding shown that 85% of consumers consider that sheep meat produced in organic farming system is more expensive compared to that produced in the conventional systems. However, 74% of respondents believe that higher prices are justified. The availability of the respondents to pay an additional price for organic sheep product is high, hovering around 77%. Current research highlights the potential production and marketing of sheep from Romania in organic system, which could have a positive impact on overall farm income and on animal welfare.

Keywords: meat, organic production, Romanian sheep

1. Introduction

About 20 % of the country's land areas and about 30 % of Romanian agricultural areas are covered by permanent pastures (about 5 million ha) [1]. This area, other marginal land and marginal agricultural products can feed between 12 to 16 million sheep.

Currently 10.07 million sheep are raised in Romania [2], having a self-sufficiency for sheep meat of 150 % and therefore exports are important at national level [3]. Between 1997 and 2013,

Romania has held first place in Europe in terms of live animals exported for slaughter. In 2004 the maximum number of animals exported exceeded two million [4]. The main destination of these exports are the West European countries (Italy, Spain), and Muslim countries (Saudi Arabia, Libya) [5].

With more than 95 % of sheep being reared under extensive low-input production systems, and the breed structure being dominated by indigenous, unimproved breeds (Turcana and Tsigai) [6].

Sheep and goat meat consumption comes on the 4th position after beef, pork and poultry meat, representing about 10 % of total meat consumed in Romania. The average sheep meat consumption in Romania is 1.9 kg in comparison with 2.9 kg/inhabitant at the EU level [7]. Sheep meat

* Corresponding author: Elena Ilisiu, 004 0747 297257, nuti.ilisiu2@yahoo.com

consumption in Romania is seasonal, being consumed especially during Easter and autumn period.

A study conducted in 2016 showed, that during 2009-2014, the average production of meat obtained from live sheep and goats had an oscillatory evolution a period to another, but in 2013 compared with 2009 it increased by 64.4%, registering a production of 171 000 tons in 2013 compared with 104 000 tons in 2009 [8]. The same study reveals that the average weight at slaughter increased from 17 kg/animal in 2009 to 24 kg/animal in 2013. The price to purchase live sheep meat is different from one region of to another and from one year to another, but at national level, the average price in 2014, hovering at around 8.98 Ron/kg live (2 EUR/kg live). The price calculation in euro has been made taking into account 1 Euro = 4.5 lei.

In this context, finding new niches to add more value to the sheep farms could be a good argument for sheep raising. Sheep farming in organic system to bring added value of sheep farms, may be such a niche.

Currently, the sheep number reared in organic system in Romania is very low, only 0.85% of the total number (85.419 heads) [2]. Ilisiu et al. (2013) [9] shown that the strongest motivation for practicing organic farming could be of economical nature, this meaning that the income from organic farming should be higher than what the breeders obtain in the present. For this, however, sheep breeders need consumers, those that reach the final product.

The aim of current study was to assess the possibility of developing sheep breeding sector in the organic system, in terms of consumer behavior towards the sheep meat obtained in the organic system.

2. Materials and methods

To collect information questionnaires and telephone interviews with consumers were made in four cities from Transylvania and Banat - Romania, and, namely Cluj-Napoca (46 ° 46'0 "N 23 ° 36'0" E), Tg. Mures (46 ° 32'59 "N 24 ° 33'35" E), Timisoara (45 ° 44'58 "N 21 ° 13'38" E) and Bistrita (47 ° 08'20 "N 24 ° 30'01 "E). The reasons behind the choice of the four cities to conduct interviews was represented by importance

at the national level of the counties where they are located, from point of view of sheep husbandry (the sheep flock raised in the counties were the cities are located represents 24% of the national sheep).

Data collection was conducted through telephone interviews. 216 consumers were interviewed, who responded to questionnaires on meat organic produced. Interviews were conducted between September-December 2016. The choice of respondents was done randomly, phone numbers of respondents were taken from the phone book of the counties in question, and the interviews were anonymous. The interview's duration was on average of 10-20 minutes. For the study was prepared a questionnaire, comprising a total of 23 questions. The basis of this survey was at a rate of 78% from the set of questions used by Klumpp et al. (2003) [10].

3. Results and discussion

The percentage of respondents in this survey was 73.61% women and 26.39% men. The age of the interviewed consumers has the lowest representation in the age group of 51-60 years (8.33%). Approximately 62.5% has the largest representation at the age group 20-29 years. For the group aged 30-39 years, the representation was 15.28%, while for the age group 40- 49 years, the representation was 13.89%. The average age is 33 years, the margin ranging between 24-58 years.

About one quarter of respondents (26.39%) eat meat once to twice a week. Three times a week eat meat 8.33% of respondents, four to six times a week consume about 47.22% of respondents, and daily consume about 15.28% of respondents. Only 2.7% of respondents eat meat less than once a week (Table 1). Regarding the frequency of charcuterie consumption, 44.44% of respondents consume charcuterie once to twice a week. Three times a week consume charcuterie 12.5% of respondents, four to six times a week consume 13.89% of respondents. Only 5.56% of respondents consume daily charcuterie.

The most consumed meat is poultry (chicken/turkey) (40.28%), followed by pork (36.11%), lamb (22.22%) and beef (8.34%). In contrast, 45.83% of respondents never eat beef; 9.72% do not eat poultry, and 8.33% do not eat pork. 38.89% of respondents regularly consume

lamb without any particular reason, while 61.11% consume it only on special occasions, like Easter.

Table 1: The frequency of meat and charcuterie consumption

Frequency	The share of meat consumers (n = 216)	The share of charcuterie consumers (n = 216)
< once/ week	2.78%	8.33%
once/week	9.72%	19.44%
twice/ week	16.67%	25.00%
3 times/ week	8.33%	12.50%
4 to 6 times/ week	47.22%	13.89%
daily	15.28%	5.56%

Two thirds of respondents (70%) agree that lamb is more expensive than other meats. Meanwhile, 47.22% of those interviewed believe that lamb is more complicated to prepare than other meats. In terms of the unusual taste of the lamb, half of respondents (51.39%) believe that it is necessary to get used to the taste of lamb meat. 94.44% of respondents never consumed imported lamb, while only 5.56% have eaten imported lamb. The reason that determined them to buy imported lamb was curiosity. Approximately one third of respondents consumed meat only from conventional sources. This contrasts with the 2.78%, which consume organic meat 100% (Figure 1).

When asked if they have ever purchased organic lamb, the answer was “yes” for 37.5% of respondents. 34.74% said that they did not consume organic lamb and 27.78% answered this question with "I don't know". Lamb organic product was mostly purchased directly from the farm (40.74%), store of agricultural holding (18.52%), organic stores/organic supermarket (14.81%). 11.11% of respondents have purchased organic lamb from the supermarket and in an equal share, 7.41% of respondents have purchased lamb meat from the butcher or the weekly market.

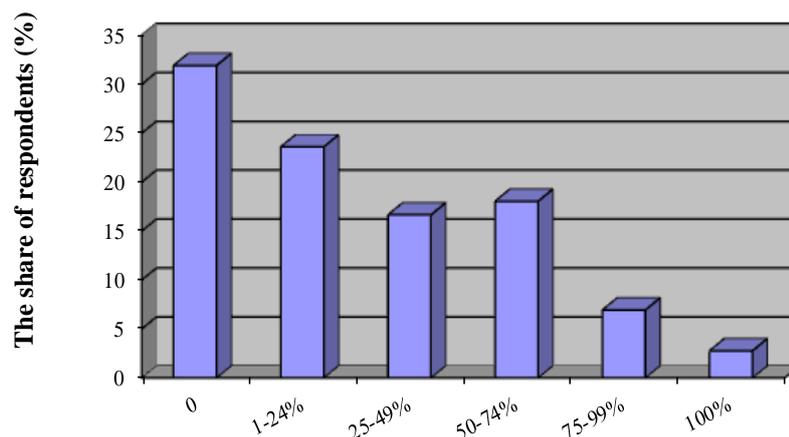


Figure 1. The share of organic meat consumption from the total meat consumption

Regarding the criteria influencing the decision to purchase lamb meat, 97.22% of respondents consider it very important and important criteria of taste, followed by freshness criteria (95.83%);

tenderness (93.05%); color (91.67%); commercial aspect (90.28%); warranty period (90.27%) (Figure 2).

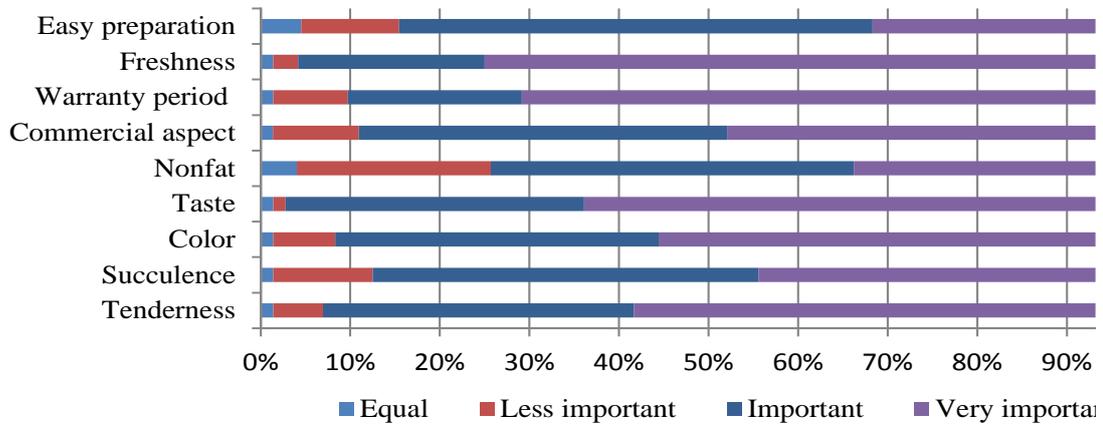


Figure 2. The importance of the various features by buying lamb meat

Meanwhile, in terms of lamb produced ecologically compared to that produced conventionally, respondents estimated as being good and much better the criteria: tenderness (77.77%), succulence (72.23%), taste (68.05%) and the commercial appearance (66.67%) (Figure

3). In terms of other criteria, namely, color, nonfat, warranty period, freshness, easy preparation, 40.28% to 43.06% of respondents believe there is no difference between lamb produced in an organic way and the one produced conventionally.

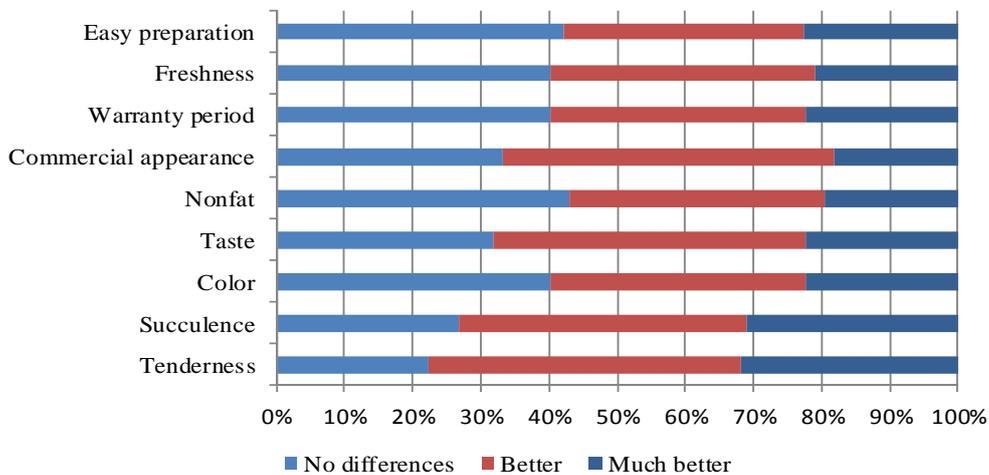


Figure 3. The assessment of lamb meat produced ecologically comparing with the one produced conventionally, based on the criteria mentioned in the figure

Also, in terms of products made from lamb (charcuterie, pastrami), respondents consider as very important and important the criteria that relates to taste and warranty period (95.84%), freshness and color (94.44%), commercial aspect

(90.28%). From the consumer's perspective, one third of respondents believe that, in general, products made from lamb produced ecologically meets the same criteria as conventional produced lamb. However, they are seen as much better and

better the criteria for fat, color and appearance (62.5%), freshness and warranty period (61.11%), easy preparation (58.33%). It should be noted that the criterion of taste of the organic products made from lamb is last one in the hierarchy with 54.16%.

Regarding the production and the selling of meat and meat products from sheep, consumers

appreciate as being important and very important the production without antibiotics and the reliability labeling (94.44%), animal welfare (91.67%) and the own feed production (84.72%) (Figure 4). These criteria can be achieved by respecting the principles corresponding to organic farming.

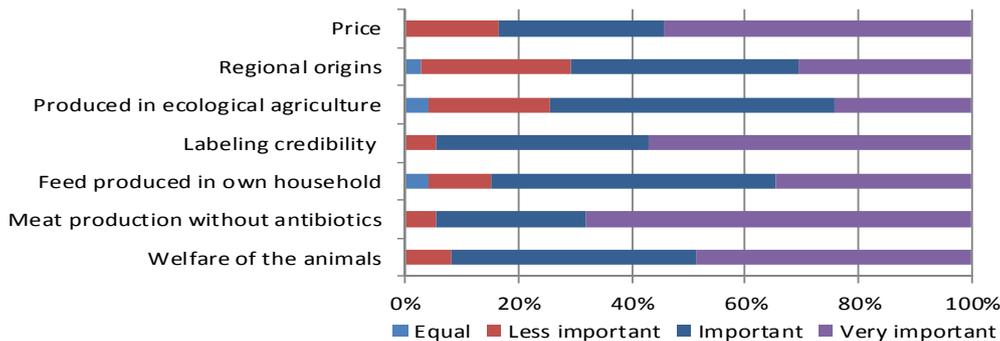


Figure 4. Importance of the various features for the production and selling sheep products

Meat lamb produced organically is considered to be more expensive by 84.72% of the respondents. Also, 73.61% believe that higher prices are justified.

The willingness to pay extra price for organically sheep meat is very different. Around 11% of respondents are not prepared to pay extra price for organically produced lamb meat. However, a very significant share of respondents, about 41.67%, are willing to pay extra price up to 10% and 34.72% of respondents are willing to pay a extra price between 10% and 20% of the price for sheep meat produced in the conventional way.

4. Conclusions

The high percentage of consumers' willingness to pay an additional price for sheep meat produced organically compared with the one produced conventionally highlights the potential of producing and marketing of sheep meat in Romania, which could have a positive impact on the overall farm incomes and animal welfare.

References

1. Marusca, T., 2011. O noua lege a pajistilor. Home page address: <http://www.revista-ferma.ro/autori-teodor-maru-ca/o-noua-lege-a-pajistilor.html>.
2. Eurostat, 2017. Home page address: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tag00017&plugin=1>.
3. DG-AGRI, 2013. Study on mandatory origin labelling for pig, poultry and sheep & goat meat, AGRI-2012-EVAL-01. Home page address: http://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2013/origin-labelling/fulltext_en.pdf.
4. Ilisiu, E., Daraban, S., Neacsu, M. G., Ilisiu, V. C., and Rahmann, G., Improvement of lamb production in Romania by crossbreeding of local Tsigai breed with high performance breeds, *Landbauforschung Applied Agricultural and Forestry Research*, 2010, 60(4), 259-265.
5. Food and Agriculture Organization of the United Nations, 2010. Home page address: <http://www.fao.org/faostat/en/#home>.
6. Gavojdian, D., Padeanu, I., Sauer, M., Dragomir, N., Ilisiu, E., Kusza, S., Rahmann, G., Effects of using indigenous heritage sheep breeds in organic and low-input production systems on production efficiency and animal welfare, *Landbauforschung Applied Agricultural and Forestry Research*, 2016, 66(4), 290-297.

7. Pirvutoiu, I., Agatha, P., Considerations on Trends in the Romanian Sheep and Goat Meat Market, 1990-2010, *Scientific Papers: Animal Science and Biotechnologies*, 2013, 46 (2), 412-417.
8. Elena, S., Study on sheep and goat meat market in Romania, *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, 2016, 16 (1), 505-510.
9. Ilisiu, E., Daraban, S., Radu, R., Padeanu, I., Ilisiu V. C., Pascal, C., Rahmann, G, (2013). The Romanian Tsigai sheep breed, their potential and the challenges for research, *Landbauforschung Agriculture and Forestry Research*, 63(2), 161-170
10. Klumpp, C., Häring, A. M., Boos, S., Die Entwicklungspotenziale der Ökologischen Schafhaltung in Deutschland, 2003. Home page address: <http://www.orgprints.org/5275/>