Scientific Papers. Series D. Animal Science. Vol. LX, 2017
ISSN 2285-5750; ISSN CD-ROM 2285-5769; ISSN Online 2393-2260; ISSN-L 2285-5750

STUDY REGARDING ANIMAL ORGANIC FARMING IN ROMANIA – CURRENT STATUS AND TRENDS

Dana TAPALOAGA, Paul-Rodian TAPALOAGA

University of Agronomic Sciences and Veterinary Medicine of Bucharest,
59 Marasti Blvd, District 1, Bucharest, Romania

Corresponding author e-mail: drtapaloaga@yahoo.com

Abstract

Organic farming is a sector of great perspective for Romania, due to the fact that it benefits appropriate conditions for the development of such a system of agriculture in comparison with economically developed countries, where super intensive agricultural technologies are used extensively, based largely on chemical fertilizers and pesticides. In the present study, based on an analysis about organic animal production, performed for 2015-2016 there are apparent large possibilities of having profit from this type of agriculture in the enlarged European Community. Talking about economic purpose animals, the principal objective that organic farming has in view is their genetic foundation, improvement and preservation. At the same time, this system aims to improve the condition of life of the animals, by providing not only their physiological needs but also the principles of human care, excluding obviously excessive concentration and permanent indoor keeping (Ilie, 2016). In the past two years, in Romania, organically certified farms have seen a genuine territorial expansion in relation to the previous years and the conventional farms.

Key words*: animal, organic, farming, Romania, trends.*

INTRODUCTION

Human nutrition is the basis of its construction. Wellbeing, balance and health of each human being are in close touch with food. Developing appropriate feeding brings together with other correct behaviour items a healthier life for everyone. Although organic farming was considered forever the sole source for living food, man has been detached from the concept to the detriment of abundance and mostly profit. According to recent studies, Romania has made substantial progress with regard to cultivation in agricultural system, the number of agri-environmentalists operators, domestic agricultural products, but also in respect of the export of agricultural products and organic food (I.F.O.A.M, 2015).

This type of agriculture is a sector of great perspective for Romania, due to the fact that it enjoys appropriate conditions for the development of such a system of agriculture, fertile soils and low level of pollution of the countryside, by comparison with the economically developed countries, where super intensive agricultural technologies are used extensively, based largely on chemical fertilizers and pesticides (Ion, 2004; Ilie, 2013; Gonciarov, 2014). Animals used in organic animal farms must meet a number of features such as: being of indigenous breeds with high resistance to environmental factors, with robust constitution, able to be grown in extensively or semi intensively system, having very good reproductive indices, high fertility and fecundity (Tapaloaga, 2014; Ghimpeteanu, 2015).

MATERIALS AND METHODS

Organic agriculture is based on observing the laws of life which consists in not direct feed plants with soluble fertilizer, but with living beings in soil that develops and delivers all that plants need. (Aubert, 1970).

Most experts, relying on the provisions of Regulation EC 834/2007 of the Council and Regulation of the Commission of Agriculture 889/2008 argue that organic farming has the same definition with biological or organic farming (Alexandrescu, 2011; Chaoui, 2008). Also, some theorists believe agro ecology and agricultural ecology have the same meaning: agro ecology or agricultural ecology is the branch or discipline of ecology that deals with the multilateral study, particularly under a productive report of influences of environmental factors on plants and domestic animals (the so-called agricultural self ecology), as well as of structures and dynamics research on the of agro ecosystems (agricultural self ecology) (Bucata, 2004; Carvalho, 2006). In general, the objectives of organic agriculture are subject to the

sustainable development of agri-environmental systems (Davidson, 2005; Charlier, 2006; Cioruta, 2011).

When we relate to economic purpose animals, as the main objective on which organic farming has in view, it is the genetic fund, targeting respectively its improvement and preservation. At the same time, this system aims to improve the condition of life of the animals, by providing not only physiological needs but also the principles of human care, excluding obviously excessive concentration and permanent indoor keeping. In Romania, in the present study, based on a SWOT analysis about organic animal production, performed for the 2015-2016 period, there are apparently large possibilities of removing the profit from this type of agriculture in an enlarged European Community (CertRom, Time Foundation).

RESULTS AND DISCUSSIONS

In Romania, organic farming covers approximately 450 thousand hectares, just over 3% of the total agricultural area of 14.7 million hectares. Over 70% of this area is covered by the cereal crops and industrial plants for processing, especially in flat areas from Satu Mare, Arad, Timiș and Dobrudja (CertRom, 2014, MARD, 2015).

Figure 1. Most used areas in cattle organic farming in Romania, conformingly CERTROM/2016 study

According to some statistics of the Ministry of Agriculture, much of the organic production, 80% is exported. Main trading partners of the ecologic sector are Germany, Austria, Italy, Netherlands, Switzerland and Denmark, which buy raw materials from Romania and then devolved to sell processed products.

The number of companies operating in this sector has risen to about 3800 units in 2007 to approximately 27000 in 2012, increasing by 7 times, but of these only 200 do marketing deals and only 100 process organic products.

According to some data from the Ministry of Agriculture and Rural Development, ecological products market in Romania is in the full process of development and diversification. The production of organic processed or semi-processed products was small and poorly diversified: 480 tons of sheep cheese, 268 tons of Schweitzer, 330 tons of yellow cheese, 600 tons of honey, 100 tons of canned vegetables and fruits. During 2007-2012, the organic cultivated land increased by 3.5 times, and the number of operators in the organic farming has grown from 3834 to 26736. In Romania, organic farming increases from year to year in a weighted average rate of 23 percent, according to the data from the Ministry of Agriculture and Rural Development.

If the area under cultivation in the 2010 eco-system does vastly exceeded 200 thousand hectares, in 2015, the area under cultivation in organic farming in exceed 290 hectares, and according to official data, in the past 5 years the area under cultivation in organic farming increased by 37%. Interestingly, Romania has come in a short span of time among the first 20 organic exporters worldwide. We export grains, mushrooms, berries, nuts with a value of 75 million euro in 2006 (Agricultural News Magazine, 2015).

Livestock production farms in Romania represents an activity connected with the land, in which animals must have access to the areas in the open air, and their number per unit area must be limited to ensure the integrated system between livestock production and crop production (Dobre, 2009; Ilie, 2011; Nitu, 2012). To avoid soil erosion and excessive grazing, the number of animals depending on the area available is determined. In organic farming, animals must be reared according to the rules laid down in the detailed rules. In choosing species and breeds of livestock production, it is taken into account their ability to adapt to local conditions, resistance to disease and vitality (Tapaloaga, 2014).

In the context of an organic farm, pasture/arable land ratio is very important, and represents the basis for ruminants management properly, also very important is the ratio legumes and grasses for proper fertilization, cows and sheep are the species to be exploited most, because through their metabolism returns nutrients in the soil. Poultries and pigs consume cereals and their ratio must have a high energy and protein concentration, so it is difficult for such a formulated ration based only fodder cultivation to be done, being necessary to add supplements.

According to CertRom, if in 2015 it was registered a number of 15627 heads of animals reared in organic farming or in conversion, year 2016 comes with a significant increase of this number with about 5620. This means that Romania is still booming on this programme.

Table 1. Organic certified and in conversion animals in 2015, conformingly CertRom

County	Species	C_1	C_2	C_3	Organic	No of animals/ farm
Botoșani	bovine				X	5 heads
Botoșani	bovine				X	6 heads
Buzău	bovine				X	9 heads
Buzău	sheep				X	62 heads
Caraș-Severin	bovine		X			128 heads
Caraș-Severin	bovine				X	54 heads
Caraș-Severin	bovine	X				179 heads
Caraș-Severin	bovine				X	588 heads
Caraș-Severin	bovine	X				1 head
Caraș-Severin	bovine				X	15 heads
Caraș-Severin	goats				X	43 heads
Caraș-Severin	sheep				X	5896 heads
Caraș-Severin	sheep			X		354 heads
Caraș-Severin	sheep		X			3142 heads
Caraș-Severin	sheep	X				4223 heads
Caraș-Severin	sheep	X			X	1870 heads
Caraș-Severin	sheep				X	112 heads
Cluj	goats				X	129 heads
Dolj	goats		X			160 heads
Dolj	sheep		X			190 heads
Gorj	bovine				X	4 heads
Hunedoara	bovine	X				2 heads
Hunedoara	bovine				X	41 heads
Hunedoara	sheep	X				10 heads
Iași	bovine				X	48 heads
Iași	goats				X	120 heads
Iași	sheep	X				6 heads
Iași	sheep				X	266 heads
Neamț	bovine				X	10 heads
Suceava	bovine	X				12 heads
Suceava	bovine				X	290 heads
Suceava	bovine		X			3 heads
Suceava	bovine				X	122 heads
Suceava	bovine		X			34 heads
Suceava	bovine	X				49 heads
Suceava	bovine	X				4 heads
Suceava	goats				X	155 heads
Suceava	sheep				X	49 heads
Suceava	sheep				X	148 heads
Suceava	sheep				X	126 heads

Table 2. Organic certified and in conversion animals in 2016, conformingly CertRom

County	Species	C_1	C_2	C_3	Organic	No of animals/ farm
Botoșani	bovine	X				1 head
Botoșani	bovine				X	2 heads
Botoșani	bovine				X	4 heads
Botoșani	sheep			X		351 heads
Botoșani	sheep				X	627 heads
Buzău	bovine				X	8 heads
Buzău	sheep				x	62 heads
Caraș-Severin	bovine	X				47 heads
Caraș-Severin	bovine				X	484 heads
Caraș-Severin	bovine				X	5 heads
Caraș-Severin	bovine	X				52 heads
Caraș-Severin	bovine				X	12 heads
Caraș-Severin	bovine	X				287 heads
Caraș-Severin	bovine	X				4 heads
Caraș-Severin	bovine				X	5 heads
Caraș-Severin	bovine				X	3 heads
Caraș-Severin	bovine	X				156 heads
Caraș-Severin	goats				X	37 heads
Caraș-Severin	goats				X	67 heads
Caraș-Severin	sheep	X				6166 heads
Caraș-Severin	sheep		X			1226 heads
Caraș-Severin	sheep			X		5132 heads
Caraș-Severin	sheep				X	3861 heads
Cluj	goats	X				20 heads
Cluj	goats				X	97 heads
Dolj	bovine		X			4 heads
Dolj	goats	X				106 heads
Dolj	sheep	X				88 heads
Hunedoara	bovine		X			41 heads
Hunedoara	bovine				X	5 heads
Iași	bovine				X	22 heads
Iași	bovine				X	31 heads
Iași	bovine				X	4 heads
Iași	goats	X				248 heads
Iași	goats				X	41 heads
Iași	sheep	X				46 heads
Iași	sheep		X			11 heads
Iași	sheep				X	110 heads
Neamț	bovine				X	10 heads
Vaslui	bovine	X				15 heads
Vaslui	goats	X				27 heads
Vaslui	sheep				X	223 heads
Vaslui	sheep	X				80 heads
Suceava	bovine		X			9 heads
Suceava	bovine	X				61 heads
Suceava	bovine				X	425 heads
Suceava	bovine	X				34 heads
Suceava	bovine				X	239 heads
Suceava	bovine		X			21 heads
Suceava	bovine				X	3 heads
Suceava	goats				X	161 heads
Suceava	sheep				X	218 heads
Suceava	sheep				X	230 heads
Suceava	sheep	X				18 heads

Table 3. Organic certified livestock, conformingly CertRom (Romania, 2015)

Nr. crt	Species	Number	UM
1	Bovine	1133	heads
2	Sheep	6533	heads
3	Goats	407	heads
	Total	8073	heads

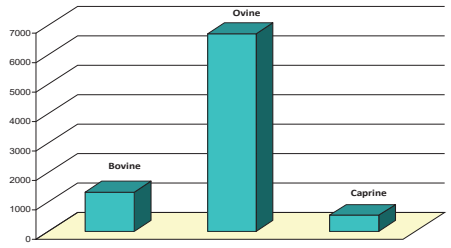

Chart 1. Organic certified livestock, conformingly CertRom (Romania, 2015)

Table 4. Organic certified livestock, conformingly CertRom (Romania, 2016)

Nr. crt	Species	Number	UM
1	Bovine	1334	heads
2	Sheep	6715	heads
3	Goats	543	heads
	Total	8592	heads

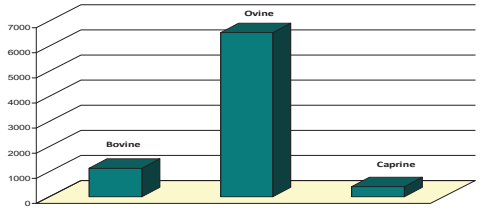

Chart 2. Organic certified livestock, conformingly CertRom (Romania, 2016)

If between 2001 and 2010 the products obtained from animals reared in organic agriculture shared less than 1% Romanian people preferring traditional products because of the low prices in comparison with those of organic products, in recent years it has highlighted the emergence of increasingly more frequent small self-sustaining organic type farm (Development strategy for agriculture, food industry and forestry in the medium and long term, 2001-2005 and 2005-2010 (MARD).

Also, in regards to the animal sector, whether in 2005 a significant increase of certified organic livestock, especially sheep and goats, about 13 times more than in the previous years was registered, in the sector of processed products it was found out a significant increase, too, even doubling the organic honey production.

According to CertRom, Romania, in the past two years organically certified farms have seen a genuine territorial expansion in relation to the previous years and from conventional farms. In 2015, a total of 8261 heads animals raised in ecological system has registered (Table 5).

Table 5. Total number of animals reared in organic farming in 2015

No.	County	Number	UM
1	Botoşani	6	heads
2	Buzău	71	heads
3	Buzău	62	heads
4	Caraş-Severin	6654	heads
9	Cluj	129	heads
10	Gorj	4	heads
11	Hunedoara	41	heads
12	Iaşi	434	heads
15	Neamţ	10	heads
16	Suceava	850	heads
	Total	8261	heads

In 2016 it is noticed an increasing of the total number of animals reared in organic farming conformingly the table below (Table 6).

Table 6. Total number of animals reared in organic farming in 2016

No.	County	Number	UM
1	Botoşani	631	heads
2	Buzău	70	heads
3	Caraş-Severin	5742	heads
4	Cluj	97	heads
5	Hunedoara	41	heads
6	Iaşi	461	heads
7	Neamţ	10	heads
8	Suceava	1273	heads
9	Vaslui	223	heads
	Total	8548	heads

CONCLUSIONS

1. Although in Romania still exists legislative and institutional concerns for the expansion of organic production and the formation of an internal market, we believe that we have a country that has the most of all the natural conditions of organic farming beneficial purposes, what is missing being the financial support but also the farmers encouragement through incentive measures so that they will think more increasingly to conversion.

2. Unfortunately, although relatively large quantities of organic products are produced compared to other countries, the Romanian consumer is a little more informed and interested in green products. In addition, an organic product is 20% more expensive than a conventional product, and consumers like the idea of buying cheaper or simply does not allow buying these products.
3. Among the socio-economic benefits generated by the organic farming can fit: development of multifunctional agricultural systems, decreasing to a level as low as negative impact of agriculture on the environment, diversification of production, reducing the consumption of non-renewable resources and improving the effectiveness of labour and the quality of life of farmers and as geographical area, in Romania, due to the varied and rich terrain, many species of animals could be reared.

REFERENCES

Alexandrescu D., Ioniță G., Simion E., |Toncea A., Toncea I., 2011. Manual de agricultură ecologică, București.

Aubert C, 1970. L'Agriculture biologique, Paris, J. Agric, Vol V.

Bucată I., Diaconescu S., Ion V., Gierraths J., Weller W., 2004. Agricultură Ecologică, Ed. Departamentul pentru învățământ la distanță U.S.A.M.V., București, pag 52-58.

Carvalho F.P., 2006. Agriculture, pesticides, food security and food safety. Environmental Science & Policy 9.

Chaoui H.I., Sorensen C., 2008. Review of Technological Advances and Technological Needs in Ecological Agriculture (Organic Farming). ASABE Annual International Meeting, Rhode Island.

Charlier L., Razec I., Rotar I., Vidican R., 2006. Manualul sistemelor de producție ecologică, Editura Risoprint, Cluj.

Cioruță B., Coman M., 2011. Principii referitoare la agricultura ecologică, Baia Mare.

Davidson K., 2005. Will the Concept of „Sustainable Development" provide any Solutions for the 21C, The Social Change in the 21st Century Conference, Queensland University.

Dobre T., 2009. Revista Lumea satului nr. 5.

Ghimpețeanu O.,M. et.al., 2015. Assessment of Some Quality Parameters in Romanian Traditional Meat Products - Preliminary Results, Agriculture and Agricultural Science Procedia, Volume 6, 332-335.

Gonciarov M., Neagu I, Tăpăloagă D., 2014. Principles and standards of organic agriculture, Journal of Biotechnology, vol.185:S76.

Ilie L.I. et al., 2016. The influence of microclimate conditions on the quality and safety of raw milk, Journal of Biotechnology, Volume 231, Supplement, Page S47.

Ilie L.I, 2013. Hazard assessment of sodium nitrite high level in some meat products. Current Opinion in Biotechnology, 24(1):S89.

Ilie L.I. et al., 2011. Relationship of somatic cell count with milk yield and composition in Holstein and Romanian Spotted cow crossbreed population, Current Opinion in Biotechnology, 22(1):S96.

Ion V., Bucată I., Diaconescu S., Gierraths J., Weller W., 2004. Agricultură Ecologică. Ed. Departamentul pentru învățământ la distanță U.S.A.M.V. București, p. 67, 110.

I.F.O.A.M., 2015. The world of organic agriculture, Statistics & emerging trends.

Nițu I., Simion G., Toncea I, 2012. Manual de agricultură ecologică, București.

Tapaloaga D., 2014. Tehnologii de obtinere a laptelui si a carnii, Ed. Granada, Bucuresti.

Toncea I., 2002. Ghid practic de agricultură ecologică, Editura Academicpres, Cluj Napoca,

https://www.fibl.org/fileadmin/documents/shop/1663-organic-world-2015.pdf

http://www.paginadeagricultura.ro/avantajele-agriculturii-ecologice/

http://www.e-scoala.ro/comunicare/importanta_ agricultura _ecologica.html

Regulament (CE) nr. 834/2007, 28 iunie 2007 privind producția ecologică și etichetarea produselor ecologice, precum și de abrogare a Regulamentului (CEE) nr. 2092/91.

Regulament (CE) nr. 889/2008 AL COMISIEI din 5 septembrie 2008 de stabilire a normelor de aplicare a Regulamentului (CE) nr. 834/2007 al Consiliului în ceea ce privește producția ecologică, etichetarea și controlul.

http://www.ecoterra-online.ro/files/1321371498.pdf

Fundația TIME Ecoproiecte, 2008. Ghid practic de agricultură ecologică. Publicație tematică, nr.4, anul II, Agricultură ecologică, M.A.D.R.

http://www.gazetadeagricultura.info/eco-bio/614-agricultura-ecologica/17596-stadiul-agriculturii-ecologice-in-romania.html

http://documents.tips/documents/cresterea-ecologica-a-animalelorwin97.html

http://www.financiarul.ro/2013/07/08/agricultura-ecologica-modalitati-alternative-de-a-creste-animale/

http://www.certrom.ro/pdf/valabile/CertRom_PSQ_09.05_Regulament%20pentru%20certificarea...SM.pdf

http://www.green-report.ro/agricultura-ecologica-creste-in-romania-cu-23-pe-an/

http://www.agriculturae.ro/index.php/agricultura-ecologica/produse ecologice/512