

Rodino, Steliana; Butu, Alina; Butu, Marian

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# AN OVERVIEW ON ORGANIC AGRICULTURE OF ROMANIA IN THE CONTEXT OF THE CURRENT EUROPEAN DEVELOPMENT MODEL

STELIANA RODINO<sup>1</sup>, ALINA BUTU<sup>2</sup>, MARIAN BUTU<sup>3</sup>

**SUMMARY:** *This work stands as an overview on organic agriculture of Romania in the context of the current European development model, presenting relevant information on the organic sector, legislation in force and some data regarding the trade market, at national and European Level. Organic agriculture is a holistic system of production designed to maximize productivity of diverse communities within the agro-system, combining tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. The organic production sector is one of the most dynamic industrial sectors of EU, with significant increase every year for the last 10 years, in response to the growth in consumers demand. According to official numbers, the ecological agriculture in Romania has seen an upward trend in recent years, both in the vegetable and livestock production sector. Although ecological agriculture represents narrow segments in terms of both acreage and production, it is gaining increased attention due to its sustainable principles of ecological importance and to the economic opportunities it may offer.*

**Keywords:** *ecological agriculture, organic production, consumers awareness, natural balance*

**JEL Classification:** N40, N50, Q01, Q15

## INTRODUCTION

Pressure from society and from within the farming community itself has resulted in a movement towards a system of organic food production (Kijlstra *et al.*, 2008), that comprises all levels of plant and animal production, from the cultivation of land and growing of animals to the processing and distribution of organic foods and their control. The organic production is designed towards the respect of the natural balance of resources, aims a better treatment and welfare of the animals, at the same time producing goods that do not contain chemical residues

The organic sector is one of the most dynamic sectors of EU agriculture, with constant yearly growth as a response to the growth in consumers demand for food products obtained in processes respecting organic principles (EC data). The aim of the present study was to offer an overview on organic agriculture of Romania in the context of the current European development model, presenting general information on the organic sector, legislation in force and some data regarding the trade market, at national and European Level.

## MATERIALS AND METHODS

The study aims to highlight the main features of ecological agriculture at national and European Level. The data analyzed was extracted from on the wide range of statistical information provided by Eurostat database and MARD database. The research has a conceptual and a methodological dimension. The information was processed through analysis, evaluation, comparison of data originating from tables and charts that can lead to identification of current status and future trends, thus providing the necessary arguments for an objective conclusion, visualizing correlations between conceptual models.

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<sup>1</sup>CS III Dr. Steliana RODINO, National Institute of Research and Development for Biological Sciences, Bucharest, Romania, Splaiul Independentei 296, P.O. Box 17-16, 060031, Bucharest, Romania, Tel. / Fax. +4 021 220 0880

<sup>2</sup> CS I Dr. Alina BUTU, National Institute of Research and Development for Biological Sciences, Bucharest, Romania, Splaiul Independentei 296, P.O. Box 17-16, 060031, Bucharest, Romania, Tel. / Fax. +4 021 220 0880

<sup>3</sup>CS I Dr. Marian BUTU National Institute of Research and Development for Biological Sciences, Bucharest, Romania, Splaiul Independentei 296, P.O. Box 17-16, 060031, Bucharest, Romania, Tel. / Fax. +4 021 220 0880  
e-mail of corresponding author: marian\_butu@yahoo.com

Thus, we have analyzed the evolution of some indicators such as: total organic area in Romania and in Europe, number of economic agents involved in organic production sector, total organic surface within UAA, diversity and dynamics of crops cultivated.

### **Characteristics of organic production**

Organic agriculture is a holistic system of production designed to maximize productivity of diverse communities within the agro-system, including groundwater organisms, vegetation, livestock and human beings. It implies conservation of biodiversity and use of natural cycles adapted to local conditions, avoiding the prevention treatments and external inputs with high resilience and negative long term effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved (IFOAM, 2009; Paull J et al., 2011). The primary goal of organic agriculture is to develop productive enterprises that are sustainable and environmentally friendly (Kesavan *et al.*, 2008). Organic production is defined as a system that integrates cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity (Regulations of department of Agriculture, 2011).

Focused on sustainable management practices, the general principles of organic farming are chosen carefully in order to restore and then maintain the ecological stability of the area chosen. Soil fertility is maintained and enhanced by a system that favors the maximal biological activity in the soil as well as the soil conservation. Fighting against weeds, pests and diseases is achieved through integrated methods of biological control, cultural and mechanical methods, such as limitation for as much as possible of the land works, selection and crop rotation, recycling plant and animal residues, water management, the massive release of useful insects thus fostering the balance and between predatory victim and promote biological diversity (Wilson *et al.* 2016).

An organic production system of livestock is complying a large number of rules directed towards a high status of animal welfare, care for the environment and restricted use of medical drugs (mainly antibiotics). This system of quality, composed of food and biological farming methods acceptable morally, helps to reduce stress levels and to prevent diseases thus fostering a good health of the livestock. Organic livestock production does not allow preventive medical treatments and there are set prolonged waiting times before delivery of products after medical treatments (Sutherland, 2013).

### **Legislation in organic systems**

Organic production is regulated throughout the EU by Council Regulation (EC) No. 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No. 2092/91 (EC) No. 834/2007). More detailed rules were issued by Commission Regulation (EC) No. 889/2008 of 5 September 2008 with detailed rules on production, labelling and control and Commission Regulation (EC) No. 1235/2008 of 8 December 2008 with detailed rules concerning import of organic products from third countries.

These regulations establish the legal framework for all levels of production, distribution, control and labelling of organic products that can be traded in the EU. They are setting out the principles, scope and rules of organic production and are describing the way the organic products must be labelled. All member states have to comply with these rules. Moreover, some countries have issued their own additional rules.

In our country, the EU legislation on organic farming and other regulations apply. The first national legislation on organic farming was issued in 2000 (Emergency Ordinance of the Government O.U.G no 34/2000). This was followed by Law 38/2001 in 2001. The legislation is up-to-date and follows EU Regulation (EC) No 834/2007.

Organic producers must be certified by one of the registered control bodies. There are 13 inspection and certification bodies for organic products accredited by MARD. This organizations also

takes care of certification and inform farmers and processors within the food chain about legislation. Certified producers are allowed to use the national logo for organic products, which is owned by the Ministry of Agriculture and Rural Development. It is legally protected and can only be used for products that comply with the Romanian Organic legislation.



Figure 1. Organic agriculture logo a) for Romania, b) for EU

Ecological farming („Agricultură ecologică”), represents a protected term attributed by U.E to Romania to define this system of agriculture (MARD). It is similar with the terms „organic farming” or „biological farming” used in other Member States as follows: organic (United Kingdom), biological (France, Italy, Belgium, Greece, Luxembourg, Hungary, Bulgaria) and ecological (Germany, Austria, Spain, Denmark, Netherlands, Portugal, Sweden, Finland).

### Current trends in European Policy

The first European Action Plan for Organic Food and Farming was published 10th of June 2004. It was only ten years after, that EC released the second action plan, on March 25, 2014. The ambition of the Action Plan is to support the growth of the sector, together with the forthcoming changes to the legislative framework in particular by exploring new medium and long term avenues for solutions to the challenges of supply and demand (Communication from the commission to the European parliament, Action Plan for the future of Organic Production in the EU, /\* COM/2014/0179 final \*/).

The action plan for the development of organic production that EC released in 2014 has three major lines of action:

- The development of the European organic sector (increasing awareness and synergies on new EU instruments; developing research and innovation to overcome challenges in organic rules; and also targeting consumer awareness of organic scheme including EU organic logo);
- Ensuring consumer confidence in the organic products (more research and innovation to overcome challenges in organic rules; increasing traceability of organic production by implantation of an electronic system of certification; development and implementation of an organic fraud prevention policy);
- Reinforce the external dimension of EU organic production (supporting cooperation with enterprises originating from developing countries; extending the worldwide co-operation on organic production by possible plurilateral agreements between the leading organic markets; collecting data on potential markets from the developing countries, as growing suppliers to the EU markets; design and development of an action plan for emerging sector, such as aquaculture and wine; internationally registration of the trade mark of the EU organic logo).

The rules to be followed in the organic production process, the control requirements and labelling guidelines were clearly established and can only be changed by the European Council of Agricultural Ministers. Those legislative proposals for a new Regulation adopted by the Commission are expected to take effect in 2017. The critics opinion is that the proposal contains stricter rules for the production and import of organic products and as a result, it will be more difficult for conventional

farmers to transit to organic agriculture practices, or even cause many organic producers to switch back to conventional farming.

### Evolution of organic sector in Europe

The organic sector is one of the most dynamic industrial sectors of EU, with significant increase every year for the last 10 years, in response to the growth in consumers demand. By 2014, some 5.9 % of EU farming area was certified as organic. The value of organic production has also increased constantly by 5 to 10 % a year over the last decade, reaching over EUR 24 billion in 2014 (European Commission, Agriculture and Rural Development, News, Organic production: authorisation 39 substances in line with principles of organic production, 03/05/2016, ).

Table 1. Total organic area and utilized agricultural area (UAA) by country, 2013

Nr.crt	Country	Organic area (1000 ha) 2013	UAA (1000 ha) 2013	% Organic vs UAA by country	% UAA by country Vs UAA EU 28
0	<b>EU 28</b>	<b>10,084.9</b>	<b>174,606.6</b>	<b>5.8</b>	100.0
1	Spain	1,610.1	23,300.2	6.9	13.3
2	Italy	1,317.2	12,098.9	10.9	6.9
3	France	1,060.8	27,739.4	3.8	15.9
4	Germany	1,008.9	16,699.6	6.0	9.6
5	Poland	669.9	14,409.9	4.6	8.3
6	UK	558.7	17,327.0	3.2	9.9
7	Austria	526.7	2,726.9	19.3	1.6
8	Sweden	501.0	3,028.6	16.5	1.7
9	Czech republic	474.2	3,491.5	13.6	2.0
10	Greece	383.6	4,856.8	7.9	2.8
11	<b>Romania</b>	<b>301.1</b>	<b>13,055.9</b>	<b>2.3</b>	<b>7.5</b>
12	Finland	204.8	2,284.4	9.0	1.3
13	Portugal	197.3	3,641.6	5.4	2.1
14	Latvia	185.8	1,877.7	9.9	1.1
15	Denmark	169.3	2,619.3	6.5	1.5
16	Lithuania	165.9	2,861.3	5.8	1.6
17	Slovakia	157.8	1,901.6	8.3	1.1
18	Estonia	151.2	957.5	15.8	0.5
19	Hungary	131.0	4,656.5	2.8	2.7
20	Belgium	62.5	1,307.9	4.8	0.7
21	Bulgaria	56.3	4,650.9	1.2	2.7
22	Ireland	53.8	4,959.4	1.1	2.8
23	Netherlands	48.9	1,847.6	2.6	1.1
24	Croatia	40.7	1,571.2	2.6	0.9
25	Slovenia	38.7	485.8	8.0	0.3
26	Luxembourg	4.4	131.0	3.4	0.1
27	Cyprus	4.3	109.3	3.9	0.1
28	Malta	0.007	10.9	0.1	0.0

Data processed based on information from Eurostat

As seen from the table, Romania, is situated in the first half of the group countries (2.3 % of its own UAA) when counting the total organic area cultivated (around 300,000 hectares), although the total UAA accounts for a 7.5 % of the Total EU 28 UAA (Table 1).

Table 2: Total organic area (fully converted and under conversion), by country, 2013 and 2014

Nr.crt	Country	Organic area (ha)		Change 2013-2014 (%)
		2013	2014	
1	Spain	1,610,129	1,710,475	6.2
2	Italy	1,317,177	1,387,913	5.4
3	France	1,060,756	1,118,845	5.5
4	Germany	1,008,926	1,033,807	2.5
5	Poland	669,863	657,902	-1.8
6	United Kingdom	558,718	521,475	-6.7
7	Austria	526,689	525,521	-0.2
8	Sweedeen	500,996	501,831	0.2
9	Czech republic	474,231	472,663	-0.3
10	Greece	383,606	362,826	-5.4
<b>11</b>	<b>Romania</b>	<b>301,148</b>	<b>289,252</b>	<b>-4.0</b>
12	Finland	204,810	210,649	2.9
13	Portugal	197,295	212,346	7.6
14	Latvia	185,752	203,443	9.5
15	Denmark	169,298	165,773	-2.1

Data Source: Eurostat

In 2014, it can be observed an overall trend of slow decrease of the cultivated area in the organic system for most the countries that were in the first ten positions, while for Finland, Portugal and Latvia (positions 12-14 in 2013), the situation looked much better, with an increase of almost 10 % for Latvia, 7.6% for Portugal and 2.9 % for Finland. Croatia accounted for a 23% increase of the acreage while Bulgaria accounted for the highest decrease (14%). In our country, the acreage decreased, too, and this trend followed in 2015, as will be seen explained in the following paragraphs.

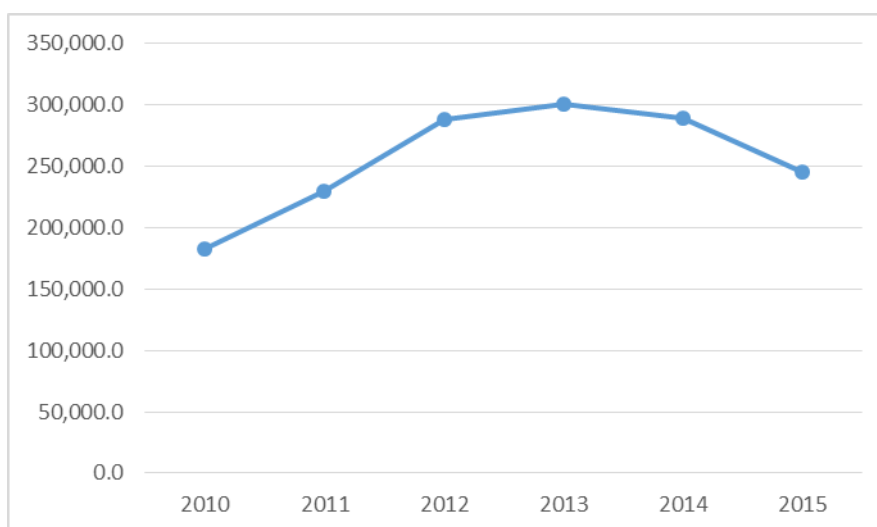
### Prospects of the national market

The national market of organic food, relatively well established if counting the number of economical agents existing (around 1200 certified entities), is still in the process of development. Although the certified number of economic agents is relatively high, there are many uncertified small producers, located in small villages across the country. Most of the organic production from Romania goes to the export market. Because the internal market is underdeveloped, cost of distribution are high and the existing data on consumer demand is scarce, many producers (especially medium companies) found the export to be a better solution for their production and being more profitable than sale on national market.

The main distribution channels in national market are direct sale (especially for the small producers), which may be in specialized shops or in the on-line environment.

Unfortunately, the consumers awareness towards organic food is low. However more and more consumers are looking for high quality food, produced in clean environment and respecting the natural balance. Nevertheless, with society education and organic food promotion campaigns there is a growing potential regarding the development of organic food sector

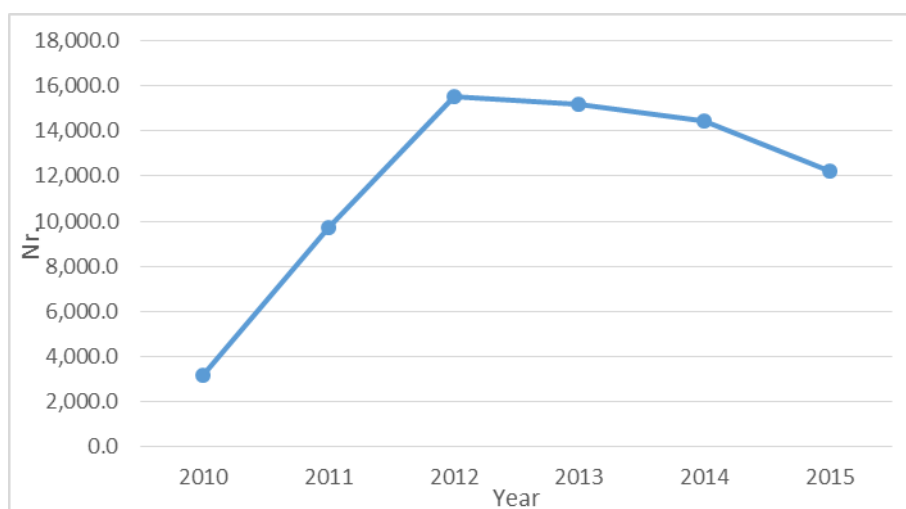
According to MARD, organic farming is a dynamic sector in Romania which has seen an upward trend in recent years (Figure 2), both in the vegetable and livestock production sector.



Source: Data processed based on information MARD, 2015

Figure 2. Total surface cultivated in organic system in Romania

In 2013, In Romania, there were over 15,000 certified farms, providing organic production (Figure 3). They represented 2,3 % of the utilized agricultural area (UAA), around 300,000 hectares. This was the highest peak of organic production in the last five years. The cultivated area decreased in 2014 and 2015.



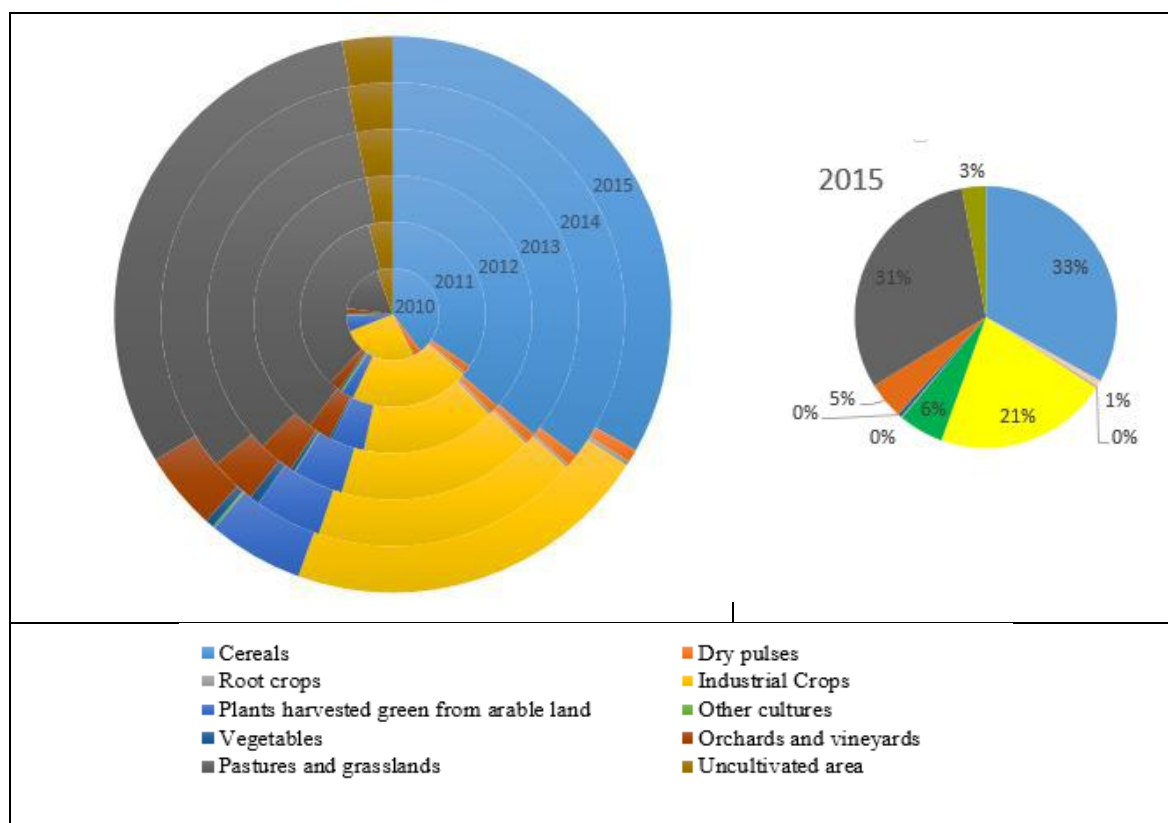
Source: Data processed based on information MARD, 2015

Figure 3. Number of certified agents in ecological farming in Romania

Although ecological agriculture represents narrow segments in terms of both acreage and production, it is gaining increased attention due to its sustainable principles of ecological importance and to the economic opportunities it may offer. Moreover, there is growing interests from several industrial and economic sectors at different levels for the promotion and development of organic sector. The common practices issued by the organic producers are basic integrated management practices such as crop rotation, natural pest management and using bio-fertilizers and organic manures mainly vermi-compost and green manure in soil fertility management. At this moment, the current research in organic agriculture are targeted in the design and development of new alternatives for the synthetic chemical treatments or optimisation of the traditional knowledge regarding

biological control of pests and diseases, both for plant protection and veterinary use (Cordeau et al., 2016, Xiao et al., 2016).

As to respect to the diversity of the ecological production, in 2015 the scenario followed the typical development of the past 5 years, meaning, nearly one third (33%) of the organic farming production in Romania was represented by cereals, 31% was permanent grassland and / or forage crops, 21% industrial crops, followed by other cultures which account for less than 10 % each, such as dry pulses, root crops, plants harvested green from arable land, vegetables, and orchards and vineyards (Figure 4).



Source: Data processed based on information MARD, 2015

Figure 4. The diversity of organic production during 2010-2015 in Romania

### Future development

Through its comprehensive approach to the protection of natural balance, organic farming is a promising response to the fight against globalization and natural resources depletion. It is supported by consumers and the government, which is encouraging and essential for producers.

Trying to develop alternative strategies to the use of synthetic chemicals, thus reducing the disease resistance and the environmental pollution, organic farmers will continue to innovate. The techniques will evolve further with qualitative and quantitative results, like for example the use of plant extracts and other natural substances, a technique that is developed by researchers to naturally prevent plant diseases.

Probably various models will be followed when speaking about the trade markets, some farmers preferring to develop direct contacts with end consumers (especially in the emerging modern markets such as the e-commerce), while others will collaborate in cooperation with companies.

Nevertheless, the challenge of the future will be to enable the development of the organic sector, encouraging farmers increase the organic production. This requires solidarity among farmers, respect from the processors and distributors and consumer support, not to mention that of the public authorities.



## CONCLUSIONS

Organic agriculture is represented by that production method that enhances soil fertility maintenance conservation of natural resources and promote ecological balance of the environment. For this, it uses agricultural and livestock practices that are directed to maintain natural balances. It is also a factor supporting sustainable development as it is environmentally friendly, fostering in the same time the improvement of the social and economic status in rural areas. Consequently, the development of ecological agriculture may create opportunities for underdeveloped rural areas of our country.

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