

Analysis of Organic Farming Sector in Romania

Raluca Andreea ION¹

Abstract

The objective of the paper is to identify how large is the sector of organic farming in Romania, as part of agro-food system. The research question is: what are the dimensions of organic farming in Romania? In pursuing this, statistical data regarding agricultural areas and livestock under organic farming are gathered and analysed. Results show that organic sector has insignificant weight in agro-food system. However, accelerated growth of indicators shows the high potential of developing organic farming in Romania.

The subject is more attractive and of high interest as there are many voices that emphasize the role of the farming in a fast growing population and the challenges that are associated with this process.

Keywords: *organic farming, sustainable development, agro-food system, agricultural potential.*

JEL classification: Q15.

Introduction

Organic farming has a major contribution to sustainable development, increasing economic activities with significant added value and increase interest in rural areas.

„Ecological farming" is the protected term given by the European Union to Romania to define this system of agriculture and it is similar to terms „organic agriculture" or „agriculture biologique" used in other Member States (Stoian, 2003).

Ecological food system is designed to produce cleaner food in full correlation with environmental conservation and development, using methods that respect nature and its systems (Manole, 2006). In the farm production stage, the use of genetically modified organisms, fertilizers and pesticides of synthetic promoters and regulators of growth hormones and antibiotics is prohibited. In the processing stage, the use of additives, additional substances and synthetic chemicals used in the preparation of organic food are restricted.

This paper aims at answering the question how large is the organic farming sector in Romanian agriculture. In pursuing this, statistical data regarding agricultural areas and livestock under organic farming are gathered and analysed.

Scientific papers studied organic farming worldwide. According to the latest statistics of ecological production and consumption, the study „World of Organic Agriculture 2007" (Willer, Yussefi, 2007) shows that global sales volume

¹ Raluca Andreea ION, Bucharest University of Economic Studies, Romania,
Email: raluca.ion@eam.ase.ro, Phone/fax: +4 0213191900

of organic food and drink increased by 43%, to 25.5 billion between 2002 and 2005. The same study predicted that these sales will reach 30.9 billion euros in 2006. Although organic farming is practiced in most countries of the world, the study shows the concentration of consumption in Europe and North America, areas which have a greater demand than supply.

The study World of Organic Agriculture 2007 estimated that sales of organic products in Europe ranged from 13 to 14 billion Euro in 2005, the largest market accounting for Germany that has had, at that time, annual sales of 3.9 billion. This was followed by Italy and France, with annual figures of 2.4 and respectively 2.2 billion Euros. Annual growth in the EU market for organic products is 10-15%.

In terms of average expenditure per consumer for organic products, Denmark was the first among EU countries over 60 Euro per capita, followed by Sweden with 45 Euro, Austria and Germany with 41 Euro and 40 Euro. The report also showed that Denmark had the largest share of total food and drink organic food, 5%, followed by Sweden with 3%, Germany 2.6%, Netherlands 1.8% and France with 1.3%.

Consumption of green food is insignificant as a share of food consumption: 2 million euros, representing 0.1 euro / inhabitant. The share of expenditures for such products is approximately 4% of total food expenditure of a household.

Organic farming is based on certain objectives and principles, as well as on best practices designed to minimize human impact on the environment, while ensuring that the agricultural system operates as naturally as possible. Specific practices of organic farming include (Ministry of Agriculture and Rural Development, Romania, Ignat 2011):

- Crop rotation as a prerequisite and efficient use of resources within the farm;
- Strict limits on the use of synthetic chemical pesticides and chemical fertilizers, antibiotics for animals, food additives and other substances used for additional processing of agricultural products;
- Prohibit the use of genetically modified organisms;
- Exploiting existing resources on site, for example, use of manure as fertilizer from animals and feed produced on the farm;
- Choice of plant and animal species resistant to diseases and pests, adapted to local conditions;
- Livestock at large and open shelters and feeding them with organic feed;
- Use of farming practices tailored to each race separately.

Organic farmers do their best to get food from the environment using the system as close as possible to those existing naturally (Bran M., 2011). Producers are working on the concept of closed agricultural circuit. For example, soil fertility, resulting from the use of manure and soil formation of the organic matter acts as its agent fertilization, reduces erosion and loss of water and nutrients (Bran F., 2011). Moreover, inputs such as manure and fodder should be produced, in principle,

within the same farm, or neighboring farms, to reduce the need for external inputs. The use of hand works against mechanization has a low environmental impact. For example, mechanical weed control is practiced instead of using herbicides.

The principles of organic production are applied to organic livestock feed. Currently, according to regulations on organic production, 85% of the organic livestock feed must be organically produced. From January 1, 2008, organic farmers must provide 100% organic feed for cattle fattening and dairy cows.

Farmers who practice organic farming are subject to regular inspections to ensure that they comply with legal requirements so that they can market their products as organic, with the right to use one national or EU logos.

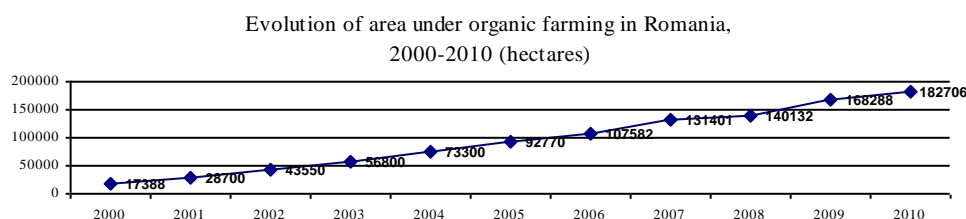
1. Material and Method

Worldwide, almost 31 million hectares are used for organic production (practiced in over 633 890 farms) representing 0.7% of total agricultural land. Seven of the top ten countries of the world, ranked by percentage of agricultural land worked in the ecological system, is the European Union (European Commission, 2010). Eurostat data provided by the European Commission shows that in 2005 the area under organic farming accounted for 4% of utilised agricultural area in the EU25. According to Eurostat, in 2005 there were 157,852 producers in organic farming system, which meant a significant increase of 13.4% compared to 2004.

In Romania, organic farming is practiced on an area of 182,706 ha. The surface increased 10 times between 2000-2010.

Table 1. Evolution of land under organic farming (certified+in conversion), in Romania, 2000-2010 (hectares)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
17388	28700	43550	56800	73300	92770	107582	131401	140132	168288	182706



Source: EUROSTAT

Romania's agricultural area is 14684900 hectares, of which 64% arable land, 22.5% pasture, 10.4% meadows, 1.46% vineyards and nurseries and 1.39% orchards and nurseries. Weights by use of organic agriculture in the total area under organic farming differ from the weights of the different categories of land in total agricultural area. Organic farming is practiced especially on arable land and pastures (39% and 47.6% of the total area included in the ecological system).

Table 2. Area under organic farming, by category of use, 2006

Category of use	Area	
	1000 ha	%
Arable	42.1	39.1
Pastures	51	47.6
Meadows	2.8	2.6
Horticulture	1.0	0.9
Others	10.5	9.7
Total	107.6	100

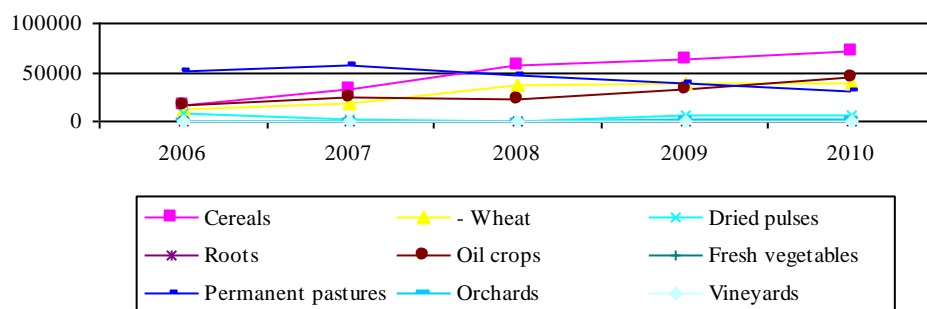
Source: Eurostat

Vegetable sector

Main organic crops are obtained in cereals and oilseeds (Table 3).

Table 3. Evolution of area under organic agriculture (certified and in conversion), in Romania, by main crops and plantations, 2006-2010 (hectares)

Crop/plantation	2006	2007	2008	2009	2010
Cereals	16310	32222	56337	63446	72298
- Wheat	11965	18418	36137	38979	39159
Dried pulses	7777	1394	870	6088	5560
Roots	29	45	407	435	504
Oil crops	16058	25093	23424	33225	45522
Fresh vegetables, mellons	727	310	259	344	734
Permanent pastures	51200	57611	46007	39233	31579
Orchards	211	749	950	1202	2198
Vineyards	83	113	601	668	894



Source: Eurostat

Surfaces of cereales under organic system increased four times, in the period 2006-2010. Wheat is grown on more than half the area occupied by grains. Areas planted with orchards and vineyards, roots and oilseeds become larger every year. Surfaces planted with vegetables vary from year to year, while the area occupied by grassland decreased by almost half.

Livestock

Livestock under organic system vary depending on the species (Table 4). The number of cattle decreased by half in 2006-2010, while the numbers of poultry, goats and bees increased. The largest oscillations are recorded in sheep sector. The weights of livestock under organic system in total number of animals is very low.

Table 4. Evolution of livestock under organic farming, in Romania, 2006-2010 (heads)

Species	2006	2007	2008	2009	2010
Cattle	11365	6985	7567	8145	5358
Porks	1652	1174	416	603	320
Sheep	86180	59680	121175	51470	18883
Goats	117	215	4296	4738	1093
Poultry	4300	4320	6080	9400	21580
Bees (hives)	30796	37260	52599	59414	64836

Source: Eurostat

2. Results and discussions

The sector of organic farming has low weights in total agriculture in Romania. It accounts for 1% to 4% of total area and/or livestock.

In the field crops, the average dimension of organic farms is 72 ha, compared with only 7 ha which is the average size of a conventional farm in Romania. This demonstrates the commercial nature of organic farms and dismantles the theory that small farms are organic farms, because they do not use chemical inputs and pay no equivalent service for agricultural work, due to the lack of financial resources. These farms must go through a certification process to enter the organic farming system.

In the case of permanent crops, the size of organic farms is 75 ha, compared with only 4 ha for conventional farms. Labor used in organic farming is 16.7 workers per 100 hectares compared to 13.7 workers per 100 hectares in conventional agriculture. The difference is justified by the use of manual work in organic system and mechanical work in conventional one.

In Romania, there are 3078 producers who practice organic farming, representing 1.2% of the total number of producers in Europe.

As regards their distribution, organic products are available in a variety of forms, from fruit and vegetables delivered directly from the farm, fine wines and cheeses over several years (Nastase, 2011). Their distribution to consumers is done using different channels:

- Local markets specialized in organic products
- Specialized organic shops in rural or urban areas
- In the street in rural areas
- Straight from the farm where those products have been obtained
- Delivered to consumers' door or delivery to orders over the Internet and / or mail
- Supermarket.

As regards the retail network, 80% of organic food is distributed through supermarkets (conventional) and only 20% in stores specialized in selling organic products. Throughout Europe, the supermarket is becoming a source of increasingly popular organic food and drink. The supermarkets are usually very visible regions for organic products: fruits, vegetables and meat, processed organic food.

In Romania, only 10% of organic food consumption has domestic source, the remaining 90% coming from imports. Import dependence is higher in the new Member States except the Czech Republic, which imports more than 40% of organic food and Poland, which imports only 30% of organic food consumed.

Exports of organic food products were 100 million euros in 2008, equivalent to about 130,000 tons, of which only 1% were processed products and 0.94% honey. The main export destinations of Romanian organic products are: the Netherlands, Germany, Denmark, Italy and Britain.

Conclusions

Organic sector has insignificant weight in agro-food system, in those regarding agricultural area and livestock production (between 1% and 4%). However, accelerated growth of indicators show the high potential of development organic farming in Romania. Area under organic farming increased ten times in the last ten years.

Acknowledgments

This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/56287 „Postdoctoral research programs at the forefront of excellence in Information Society technologies and developing products and innovative processes”, partner Bucharest Academy of Economic Studies – Research Centre for “Analysis and Regional Policies”.

References

1. Bran, M., & Bran, S.D., (2011). *Durable harmonization of biodiversity in vegetal*, Supplement of Journal Quality – access to success, Volume 12(123)
2. Bran, M., Vidu, L., & Dobre, I. (2011). *Study regarding economic state of agriculture from South Muntenia development Region, Romania, XXV. microCAD International Scientific Conference*, 31 March – 1 April 2011, University of Miskolc, Hungary
3. Bran, F., Radulescu, C.V., & Ioan, I. (2011). Measures of Environmental Performance, *Review of International Comparative Management*, Vol. 12(5), pp. 893-900
4. Ignat, R. (2011). Performance of Romanian and European Agriculture from a Sustainable Development Perspective. A Comparative Approach, *Review*

- Quality access to success*, 121, pp. 286-290
5. Manole, V., Stoian, M., & Ion, R.A. (2003). *Agromarketing*, ASE Publishing House, Bucharest.
 6. Manole, V., & Popescu, G.C. (2006) The Efficiency of Ecological Panification Products in Romania, supplement *Journal Economics of Agriculture*, pp. 505-513.
 7. Nastase M., Stoian M., & Ion R. A. (2011) Developing the Management Competencies for Getting a Competitive Position in the Organic Food Market, *Review of International Comparative Management*, Vol. 12(5), pp. 863-870.
 8. Stoian, M., (2003). *Ecomarketing*, The Bucharest Univeristy of Economic Studies, Bucharest
 9. *** Ministry of Agriculture and Rural Development, Romania (2011)
 10. *** EUROSTAT, European Commission (2011)
 11. *** *The World of Organic Agriculture. Statistics and Emerging Trends 2007*, Edited by Helga Willer & Minou Yussefi
 12. *** European Commision, Agricultural and Rural Development (2010) *An analysis of the EU organic sector*