

Organic Agriculture in the World, European Union and Romania between 2010 -2014

Raluca-Mihaela Sandu
Alexandru Ioan Cuza University of Iași
ralucamihaelasandu@yahoo.com

Abstract

The purpose of this paper is to analyze in a synthetic but comprehensive manner the evolution of the organic farming in the world, European Union and Romania. In this sense, official statistics were in depth reviewed especially from The World of Organic Agriculture yearbooks for the period of 2010-2014. Available data starting from 2010 until present was collected, investigated and interpreted and taking this into consideration the most recent published data included the year 2014.

Keywords: world's organic agriculture, European Union's organic agriculture, Romanian organic agriculture

JEL Classification: M31; Q01; Q15

1. Introduction

“The economy depends upon the environment, what happens in the economy affects the environment and changes in the environment affect the economy. Regarded as two systems, the economy and the environment are interdependent” (Common and Stagl, 2005, p.87). Thus, there is a two-way relationship between the environment and the economy.

The modernization of agriculture, the introduction of advanced technologies, the use of large quantities of chemicals (fertilizers and pesticides) have led, in time, to the maximization of productivity, but have also brought negative effects on the environment, like chemical, biological and physical degradation (Rusu, 2012). Organic farming seems to be an alternative to this situation, implying a mix of tradition, innovation and science in the advantage of the environment and promoting equitable relations and also a qualitative life of all the parts involved (Rusu, 2012).

If at the beginning, in the 40's, the concept was called “humus farming”, meaning traditional farming practices which conserved and regenerated the soil (Kuepper, 2010, p.2). But through time, this term lost field and was replaced by more notorious words like: “organic” (Kuepper, 2010), “biologic” or “ecologic”. The difference between them is the region where they are utilized. Taking this into consideration, “organic” can be found in English speaking European Union's countries (United Kingdom, Ireland), “biologic” in France, Italy, Portugal, Holland and “ecologic” in Denmark, Germany and Spanish speaking countries (Constantin, 2012).

Because people are becoming more and more interested in healthy food, this is the reason why “organic consumption is increasing and organic acreage is growing” (Kuepper, 2010, p.2).

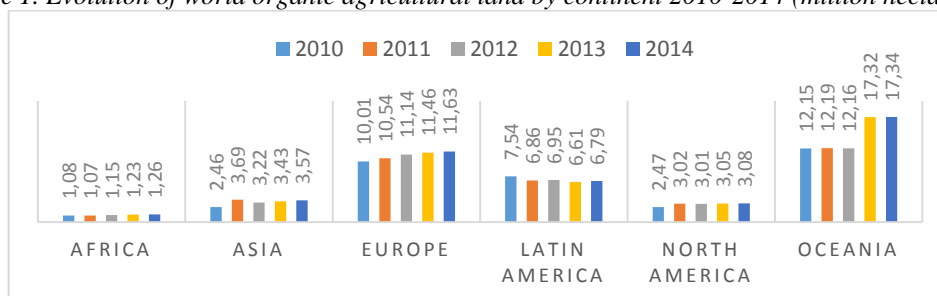
2. Material and method

The present paper analyses the evolution of the organic farming in the world, European Union and Romania for the period 2010-2014. In this sense, the methodology applied involves an in-depth review of the The World of Organic Agriculture reports for the following years 2013, 2014, 2015 and 2016 and also significant published scientific papers on organic agriculture. The method used was the indirect research, the documentation. As organic farming is a relatively new sector of the European agri-food economy, the official statistical data are limited, the most up to date published data including the year 2014.

3. Overview of the world organic agriculture

In 2010, the regions with the largest areas of organic agricultural land are Oceania (12.15 million hectares), Europe (10.01 million hectares) and Latin America (7.54 million hectares) and the rank is maintained until 2014, but with increased numbers: Oceania (17.34 million hectares), Europe (11.63 million hectares) and Latin America (6.79 million hectares) (see Figure 1). From 2010 until 2014, the total surface of the world organic agricultural land increased with 7.97 million hectares, equivalent of a 18.25% growth (see Figure 1).

Figure 1. Evolution of world organic agricultural land by continent 2010-2014 (million hectares)



Source: Elaborated by the author based on *The World of Organic Agriculture 2015* and *The World of Organic Agriculture 2016*

At a global level, in the top ten of the countries with the largest organic agricultural land in 2014 are Australia (17.2 million hectares), Argentina (3.1 million hectares), United States of America (2.2 million hectares), China (1.9 million hectares), Spain (1.7 million hectares), Italy (1.4 million hectares), Uruguay (1.3 million hectares), France (1.1 million hectares), Germany (1.0 million hectares) and Canada (0.9 million hectares). All these regions sum up a total of 31.8 million of hectares, representing 72.77% share in the world (*The World of Organic Agriculture 2016*). Taking into consideration that the total global organic agricultural land in 2014 was of 43.7 million hectares, it's significant that these ten countries sum up a total of 31.8 million hectares.

But what are the key crops groups in the organic agriculture of the year 2014? Cereals rank first, with a global total of almost 3.36 million hectares, among which Europe (1.9 million hectares) is the largest supplier of cereals, followed by Asia (0.75 million hectares) and North America (0.56 million hectares). Oilseeds are the second global crop group and from a total of 0.98 million hectares, 0.44 million hectares are produced in Asia and almost 0.25 million hectares are in Europe. The third crop group is coffee, which totals 0.76 million hectares worldwide, Latin America being the most important supplier, with a total of 0.4 million hectares, followed by Africa, with 0.2 million hectares. Also, from the main crops groups can be mentioned also: olives, dried pulses, grapes, vegetables, cocoa, tropical and subtropical fruits, temperate fruits and citrus fruit (see Table 2).

Table 1. Selected key crops groups and crops in organic agriculture 2014

Crops	Africa [ha]	Asia [ha]	Europe [ha]	Latin America [ha]	North America [ha]	Oceania [ha]	Total [ha]
Cereals	6'845	755'473	1'911'845	123'223	557'329	2'724	3'357'439
Citrus fruit	6'263	8'311	38'232	14'403	7'528	480	75'215
Cocoa	38'609	3'282		206'242		1'060	249'194
Coffee	223'351	113'061		407'776		18'728	762'916
Dried pulses	354	18'532	299'229	105	49'248	18	367'485
Fruit, temperate	8'124	26'777	127'611	5'321	19'053	1'282	188'168
Fruit, tropical and subtropical	17'289	52'842	31'610	123'568	6'717	1'117	233'143
Grapes	1'316	18'083	266'208	11'496	16'094	2'782	315'979
Oilseeds	123'646	443'878	245'700	46'583	123'902	217	983'926
Olives	125'344	6'876	492'006	2'782		470	627'478
Vegetables	5'932	34'114	131'882	52'474	64'348	1'388	290'137

Source: *The World of Organic Agriculture 2016*, p.87

4. The EU-28 organic agriculture

In 2014, the European Union was on second place on global organic market at international level, after United States and covered 38% of the total, registering 23.9 billion euros. The total organic agricultural land in the European Union registered an increase from 2010 until 2014 of 1.2 million hectares. The countries with the largest organic agricultural land, possessing more than 1 million hectares in 2014 are: France (1.11 million hectares), Germany (1.04 million hectares), Italy (1.38 million hectares) and Spain (1.71 million hectares) (see Table 2).

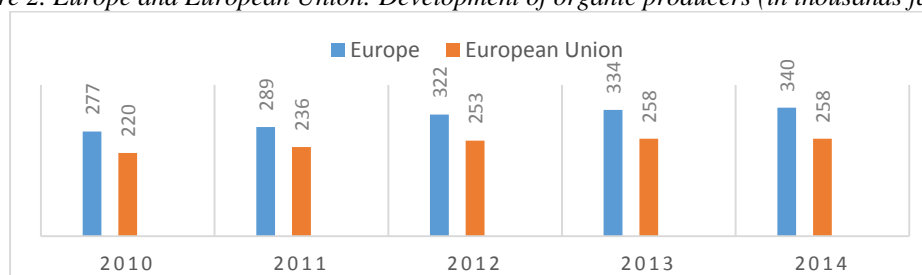
Table 2. Organic agricultural land in the EU-28 between 2010 -2014

	2010	2011	2012	2013	2014
	Hectares of organic agricultural land				
Country					
Austria	543'605	542'553	533'230	526'689	525'521
Belgium	59'220	55'304	59'718	62'529	66'704
Bulgaria	25'648	25'022	39'137	56'287	74'351
Croatia	23'352	32'036	31'903	40'641	50'054
Cyprus	3'575	3'184	3'923	3'923	3'887
Czech Republic	448'202	460'498	488'658	474'231	472'663
Denmark	162'903	162'173	194'706	169'298	165'773
Estonia	112'972	133'779	144'147	151'256	155'560
Finland	169'168	188'189	197'751	206'170	212'653
France	845'442	977'234	1'032'941	1'060'756	1'118'845
Germany	990'702	1'015'620	1'034'355	1'060'669	1'047'633
Greece	309'823	213'276	462'618	383'606	256'131
Hungary	127'605	124'402	130'609	140'292	124'841
Ireland	47'864	47'864	54'122	52'793	51'871
Italy	1'113'742	1'096'880	1'167'362	1'317'177	1'387'913
Latvia	166'320	184'096	195'658	200'433	203'443
Lithuania	143'644	152'305	156'539	166'330	164'390
Luxemburg	3'720	3'614	3'924	4'448	4'490
Malta	24	23	26	37	34
Netherlands	46'233	47'205	48'038	49'394	49'159
Poland	521'970	609'412	661'956	661'956	657'902
Portugal	201'054	219'683	200'151	271'532	212'346
Romania	182'706	229'946	288'261	288'261	289'252
Slovakia	174'471	166'700	166'700	166'700	180'307
Slovenia	30'696	32'149	35'101	38'665	41'237
Spain	1'456'672	1'803'660	1'593'197	1'610'129	1'710'475
Sweden	438'693	480'185	477'685	500'996	501'831
United Kingdom	699'638	638'528	590'009	567'751	521'475
Total EU 28	9'049'664	9'645'520	9'992'425	10'232'949	10'250'741

Source: Elaborated by the author based on The World of Organic Agriculture reports 2013-2016. Own calculations

In Europe, between 2010 -2014 it can be noticed an ascendant trend, as the number of the global organic producers grew with 18.53%, from 277 thousands producers to 340 thousands producers, meaning 63 thousands more producers (see Figure 2). In what concerns the European Union, the number of global producers grew until 2013, from 220 thousands producers until 258 thousands producers and remained the same in 2014. Between 2010 and 2014, the European Union registered an increase of 38 thousands producers (see Figure 2).

Figure 2. Europe and European Union: Development of organic producers (in thousands farmers)



Source: *The World of Organic Agriculture 2016*, p.214

5. The case of the Romanian organic agriculture

In Romania, the consumption of the organic products is low compared to other European countries (The Ministry of Agriculture and Rural Development of Romania, 2013). The ascendant trend of the intern production of ecological products is greatly supported by external market growth, 70-80% of the total production being exported, as inside of the country there is a niche segment of eco food consumers (The Ministry of Agriculture and Rural Development of Romania, 2013).

It can be stated that the organic sector in the emerging countries of the European Union (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Romania) is confronting a primary stage of development, although the regulations and conventions of this type of agriculture have been practiced since ancient times (Bruma, 2014).

The interest for organic farming grew in Romania after the year 2000 when a new legislative framework was embraced (Constantin, 2012) and has developed after entering the European Union in 2007, according to the new rules and principles (Popescu & Pop, 2013). At present, the Romanian ecological agriculture is a dynamic sector and this can be observed in results. Between 2010 -2014 the organic agricultural land increased from 182'706 hectares to 289'252 hectares and taking this into consideration, a growth of 106'546 hectares have been registered (see Table 2). Also, this gave Romania a twelfth rank at the European level (The World of Organic Agriculture, 2016). In 2014, Romania is on the sixth position in top ten countries with the largest wild collection areas, registering 1.79 million hectares (The World of Organic Agriculture, 2016). Also, Romania ranks fifth in top ten countries with the largest number of beehives, with a number of 81'583 in 2014 (The World of Organic Agriculture, 2016). In what concerns other important organic crops, Romania registered in 2014 an area of 102'531 hectares of organic cereals, 51'528 hectares of organic oilseeds, 6'035 hectares of organic temperate fruits, 2'314 hectares of organic dried pulses, 2'089 hectares of organic grapes, and 1'913 hectares of vegetables cultivated in organic system (The World of Organic Agriculture, 2016). From a total of 10'250'741 hectares of organic European agricultural land, EU 13 (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia) sums a total of 2.4 million hectares, while EU 15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom) totals 7.8 million hectares (The World of Organic Agriculture, 2016).

The organic agriculture in Romania is considered a sector with high potential and although it was promoted over time, it confronted different problems, like: incoherent policies, which blocked the sector and caused the existence of a small number of organic farmers; frequent changes in the legal framework which didn't target the real problems in this area; subventions given to the sector that had a reduced rate and were paid with delay; the lack of adequate and effective measures against those who make unfavorable advertising – the case of the operators who didn't respect the rules of organic production; the training system was weak –special programs for training the farmers are required (Rusu, 2012).

In the new European framework, Romania considered a priority to help farmers that decide in a voluntary manner to switch from conventional to ecologic agricultural system (Romanian National Network of Rural Development, 2015). In this sense, the National Program of Rural Development

2014-2020 was launched (Romanian National Network of Rural Development, 2015). The support given to the organic agriculture is based on the reason of promoting extensive farming practices, providing environmental public goods, the use of environmentally friendly agricultural practices, and offering organic products to consumers (Romanian National Network of Rural Development, 2015). Specific organic farming practices contribute to the protection of biodiversity, to maintaining the fertility and functionality of the soil, to reducing the water resources' pollution and improvement of water management (optimizing soil structure, reducing the risk and severity of floods and drought in the context of climate change), to reducing carbon emissions and ensuring animal welfare conditions (Romanian National Network of Rural Development, 2015). Also, besides the environmental benefits, they can serve as a basis for adding value to agricultural production and the development of local economic activities (Romanian National Network of Rural Development, 2015).

6. International acknowledgment: The Biofach Trade Fair

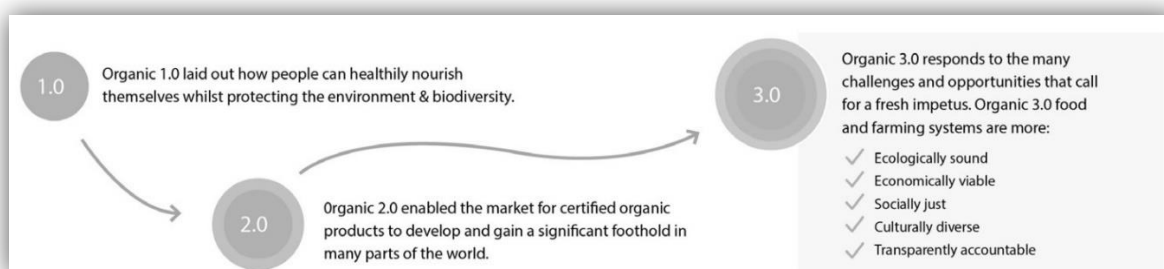
The Biofach Trade Fair is the world's leading trade fair of organic food products in the world. Its location is Nürnberg (Germany) and takes place each year in February. The objectives of this international trade fair is increasing the organic industry and gather buyers and sellers with the main interest in the business of organic (Nürnberg Messe Group, 2015).

The number of global exhibitors between 2010 -2014 grew from 36% to 41% (Nürnberg Messe Group, 2015). From the international exhibitors in 2014, ten of the most important ones need to be mentioned: Italy, China, United States of America, Great Britain/ North Ireland, France, Austria, Netherlands, Switzerland, Spain and Czech Republic (Nürnberg Messe Group, 2015). This year, a number of 2'575 exhibitors were present from 79 countries. From this, 793 were exhibitors from Germany and 1'782 international ones. Also, a significant number of 48'533 visitors from 132 countries joined Biofach Trade Fair (Expodatabase).

7. The newest trend: Organic 3.0

Organic 3.0 is a new stage for the organic industry. Organic 3.0 is visible with more challenges and opportunities compared to Organic 1.0 and Organic 2.0 (see Figure 3). The strategy for Organic 3.0 targets six main points: a culture of innovation, continuous improvement towards best practice, diverse ways to ensure transparent integrity, inclusive of wider sustainability interests, holistic empowerment from farm to final consumer, true value and fair pricing (The World of Organic Agriculture 2016).

Figure 3. The need for Organic 3.0



Source: *The World of Organic Agriculture 2016*, p.307

8. Conclusions

At a worldwide view, progress can be remarked in the organic farming between 2010 -2014. The ascendant trend is accomplished also with the help of the financial support, which can only aid and stimulate the development of the global organic farming. In conclusion, the ecological agriculture contributes significantly to the sustainable development, to increasing the economic

activities with an important value added and to the rising the interest on the rural environment (Romanian National Network of Rural Development, 2015).

9. References

1. Brumă, I.S. (2014). The evolution of organic agricultural land areas in the emerging countries of the European Union, *Agricultural Economics and Rural Development, New Series*, year XI, no. 2, p.167- 179
2. Common, M., Stagl, S. (2005). *Ecological economics. An introduction*, Cambridge University Press
3. Constantin, F. (2012). Economic Performance of Organic Farming in Romania and European Union, *Economia. Seria Management*, Vol. 15, Issue 1, p. 108-119
4. Expodatabase, available at <http://www.expodatabase.com/tradeshaw/biofach-worlds-leading-trade-fair-for-organic-food-20211.html>, accessed 30 March 2016
5. FIBL, IFOAM Organics International, (2013). The World of Organic Agriculture. Statistics and Emerging Trends 2013, available at <https://shop.fibl.org/fileadmin/documents/shop/1606-organic-world-2013.pdf>, accessed 15 March 2016
6. FIBL, IFOAM Organics International, (2014). The World of Organic Agriculture. Statistics and Emerging Trends 2014, available at <https://shop.fibl.org/fileadmin/documents/shop/1636-organic-world-2014.pdf>, accessed 28 March 2016
7. FIBL, IFOAM Organics International, (2015). The World of Organic Agriculture. Statistics and Emerging Trends 2015, available at <https://shop.fibl.org/fileadmin/documents/shop/1663-organic-world-2015.pdf>, accessed 25 March 2016
8. FIBL, IFOAM Organics International, (2016). The World of Organic Agriculture. Statistics and Emerging Trends 2016, available at <https://shop.fibl.org/fileadmin/documents/shop/1698-organic-world-2016.pdf>, accessed 28 March 2016
9. Kuepper, G. (2010). A brief overview of the history and philosophy of organic agriculture, *Kerr Center of Sustainable Agriculture*, p.1-26
10. Nürnberg Messe Group, (2015). Annual Results. Press Conference, p.1-10
11. Popescu, A., Pop, C. (2013), Considerations regarding the development of organic agriculture in the world, the EU-27 and Romania, *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development* Vol. 13, Issue 2, p.323-330
12. Romanian National Network of Rural Development, *Romania Rurala*, 2015, second year, March, no. 21, p.1-29
13. Rusu, M. (2012). Organic Agriculture: Current Situation, Evolutions and Perspectives, p.819-831
14. The Ministry of Agriculture and Rural Development of Romania, (2013). Analiza socio-economica in perspectiva dezvoltarii rurale 2014-2020, available at <http://www.madr.ro/docs/dezvoltare-rurala/programare-2014-2020/analiza-dezvoltarii-rurale-agricultura-iulie-2013.pdf>, accesed 28 March 2016