

## ECOLOGICAL AGRICULTURE AROUND THE WORLD AND IN ROMANIA

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### Abstract

This work presents an analysis of the international and Romanian statistic data, illustrative of the ecological agriculture sector.

The ecological agriculture has known in recent years a constant development on all continents of the world. The areas ecologically certified, according to the latest international statistical data published by IFOAM and FiBL, have increased during the period 2000-2007 of about 2,5 times. With regard to the cultivated areas in the ecological agriculture, of the total agricultural area, in the world, in 2007, the first places are occupied by Oceania with 2.61% and Europe with 1.87%. As regards the number of the ecologic manufacturers, the first place belongs to Africa with 529,987 manufacturers, even if the area ecologically cultivated is the smallest in the world. In Europe, Latin America and Asia 200,000 manufacturers are registered. The ecologically certified arable areas in the world represent 14.40% of the entire certified area. The bigger arable areas are in Europe, about 3.4 million hectares, representing 72.1% of the total certified arable areas. Within the European Union, in 2007, Romania occupied the 15<sup>th</sup> position in terms of the ecologically certified agricultural area, with 131,401 hectares, which represent 1.87% of the ecological area of the European Union. In Romania, the ecologically cultivated areas have constantly increased, from 17,388 hectares in 2000 to 131,401 hectares in 2007, the most important weight being that of grass lands and hayfields.

**Key words:** ecologic agriculture, ecologically certified areas, certified ecologic operators, evolution

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Ecological agriculture represents a method of production which takes traditional knowledge into account and integrates the developments of science achieved in all the fields of agricultural science. One of the key objectives of ecological agriculture is the protection of the biosphere and of the planet's resources. The principles of ecological agriculture rely on making the most of local resources and on reducing to a minimum the economic and environmental risks. Ecological agriculture is not a "do-nothing" agriculture, without fertilisers and without treatments. The ecological production method differs from the conventional one in that it avoids the utilisation of chemical fertilisers and pesticides. The fundamental rule of ecological agriculture states that natural inputs are allowed while synthetic inputs are forbidden (Brumă I. S., 2004).

### MATERIAL AND METHOD

Studies conducted in recent years have focused on the analyses of statistical data regarding the state of ecological agriculture worldwide and in Romania. The statistical data examined covers the period 2000 – 2007. The main tracked indicators referred to certified organic farm land and certified operators.

### RESULTS AND DISCUSSIONS

Ecological agriculture has been constantly developing in recent years across all the continents. Certified ecological farm land, according to the latest international statistical data released by IFOAM and FiBL, increased two and a half times during the period 2000 – 2007. Analysing the data in table 1, it can be observed that areas of land farmed based on the ecological system increased linearly each year. On the other continents, there were years when certified organic land declined, e.g. in 2005 when they decreased compared with the year 2004 in Africa, Asia, Latin America and Oceania, leading to a reduction in the total certified land worldwide by approximately 700,000 hectares.

In the year 2007, according to data provided by FiBL and IFOAM (table 2), the area occupied by ecological agriculture worldwide reached 32 million ha. The largest farmed land belong to Oceania (12.1 mil. ha), Europe (7.6 mil. ha) and Latin America (6.3 mil. ha).

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Table 1

**Development of ecologically farmed land in the world**

(http://www.organic-world.net/fileadmin/documents/data-sheets-public/world-of-organic-data-sources.pdf)

Continent	Year							
	2000	2001	2002	2003	2004	2005	2006	2007
Africa	52,601	233,558	317,169	358,507	517,804	486,674	684,978	875,370
Asia	62,330	421,381	424,289	497,421	3,812,244	2,682,182	3,000,607	2,900,068
Europe	4,345,887	5,296,918	5,683,778	6,013,007	6,211,245	6,668,395	7,207,209	7,627,915
Latin America	3,917,676	4,767,682	5,752,270	5,973,972	5,233,402	5,072,158	4,966,295	6,380,996
North America	1,058,951	1,278,122	1,257,936	1,405,154	1,721,063	2,219,643	2,245,173	2,197,042
Oceania	5,344,197	5,344,197	6,251,660	11,293,677	12,173,586	11,811,868	12,431,820	12,110,758
Total	14,781,642	17,341,858	19,687,102	25,541,739	29,669,343	28,940,920	30,536,082	32,092,149

As regards the share of organically farmed land in the total farm land, at global level, for the year 2007, the highest rank regions are Oceania with 2.61% and Europe with 1.87%. In terms of the number of ecological producers, it can be noted that Africa ranks first, with 529,987 producers,

although the area of ecologically farmed land is the smallest in the world. In Europe, Latin America and Asia there are approximately 200,000 registered producers. The fewest ecological producers, 7,222, are in Oceania, yet they exploit the largest area of ecologically certified agricultural land.

Table 2

**Ecological agriculture in the world, year 2007**

(http://www.organic-world.net/fileadmin/documents/data-sheets-public/world-of-organic-data-sources.pdf)

Continent	Ecologically farmed land (ha)	Share of the total agricultural land (%)	Number of ecological producers	Arable land area (ha)
Africa	875,370	0.10	529,987	81,187
Asia	2,900,068	0.21	234,565	224,654
Europe	7,627,915	1.87	209,980	3,330,207
Latin America	6,380,996	1.02	222,135	144,266
North America	2,197,042	0.56	12,275	838,070
Oceania	12,110,758	2.61	7,222	-
Total	32,092,149	0.78	1,216,164	4,618,384

Worldwide, certified organic arable land accounts for 14.40% of total certified land. The largest arable land areas are found in Europe, i.e. approximately 3.4 million hectares or 72.1% of certified arable land.

In 2007, the European Union Member States (EU 27) managed approximately 21.9% of the global ecologically certified land and 92.16% of ecological farm land in Europe.

Analysing the data in table 3, one can note that Italy ranked first among the European countries in terms of the certified ecological agricultural land (1.15 mil. hectares), followed by Germany, Spain, United Kingdom and France, with areas above 500,000 hectares each.

Austria occupied the first spot in Europe in terms of the share of certified land, 13.4% of the agricultural land of the country being ecologically managed.

Within the EU, in 2007, Romania ranked 15 as regards the certified ecological agricultural land area, with 131,401 hectares, accounting for 1.87% of organic farm land in the European Union. In Romania, ecologically farmed land has grown constantly, from 17,388 ha in the year 2000 to 131,401 ha in the year 2007, with the largest share going to grazing land and meadows (cf. table 4).

Land cultivated with cereals based on the ecological system has seen linear growth from 2000 to 2005, from 4,000 hectares to 22,100 hectares, while in the year 2006, the area dropped to the 2003 level, but subsequently doubled in 2007 reaching 32,222 hectares.

Land cultivated with oleaginous plants and protein crops expanded constantly throughout the 2000-2007 period, from 4,000 hectares to 26,491 hectares.

Table 3

**Ecological agriculture in EU 27, year 2007**

(http://www.organic-world.net/fileadmin/documents/data-sheets-public/world-of-organic-data-sources.pdf)

Country	Ecologically farmed land (ha)	Share of the total agricultural land (%)	Number of ecological producers
Italy	1,150,253.0	9.1	45,231
Germany	865,336.0	5.1	18,703
Spain	804,884.2	3.2	18,226
United Kingdom	682,196.0	3.6	5,506
France	557,133.0	2.0	11,978
Austria	372,026.3	13.4	19,997
Czech Republic	312,890.0	7.4	1,318
Sweden	308,273.0	9.9	2,848
Poland	285,878.0	1.8	11,887
Greece	278,397.0	3.4	23,769
Portugal	229,717.0	5.9	1,949
Latvia	150,505.0	8.5	4,108
Finland	148,760.0	6.5	3,971
Denmark	142,857.1	5.4	2,841
Romania	131,401.0	0.9	2,238
Hungaria	122,270.2	2.9	1,389
Lithuania	120,418.0	4.5	*
Slovakia	117,906.0	5.6	280
Estonia	79,530.0	8.8	1,211
Netherlands	47,019.0	2.5	1,465
Ireland	41,122.0	1.0	1,140
Belgium	32,628.0	2.4	821
Slovenia	29,322.0	6.0	2,000
Bulgaria	13,646.0	0.3	240
Luxembourg	3,380.4	2.6	81
Cyprus	2,322.0	1.5	305
Malta	12.0	0.1	30
Total EU	7,030,082.1		183,532

\* - unavailable data

Table 4

**Development of ecologically farmed land in Romania**

(http://www.madr.ro/pages/page.php?self=01&amp;sub=0107)

Specification	Measuring unit	Production							
		2000	2001	2002	2003	2004	2005	2006	2007
Total area, of which:	ha	17,388	28,700	43,550	56,800	73,300	92,770	104,494	131,401
Cereals	ha	4,000	8,000	12,000	16,000	20,500	22,100	16,310	32,222
Grazing land and meadows	ha	9,300	14,000	20,000	24,000	31,300	42,300	51,200	57,600
Oleaginous plants and protein crops	ha	4,000	6,300	10,000	15,600	20,100	22,614	23,872	26,491
Vegetables	ha	38	100	700	200	300	440	720	310
Fruit	ha	-	-	50	100	200	432	292	650
Other crops	ha	50	300	800	900	900	4,884	12,100	14,128

According to a statement by the Romanian minister of agriculture to NewsIn news agency and quoted by [www.ecomagazin.ro](http://www.ecomagazin.ro), the area of

ecologically cultivated land for the agricultural year 2008, which ended on 30 June 2009, increased by 16.4%, to 221,410 hectares.

The number of operators (producers, processors, dealers) registered with the Romanian Ministry of Agriculture and Rural Development in the ecological agriculture system, in the year 2008, was 4,191, therefore almost double the number of operators registered in the year 2004 and 12% more than operators registered in the year 2007. Out of the total registered operators, 3,947 were producers, 85 were processors, and 159 dealers.

### CONCLUSIONS

Ecological agriculture, both worldwide and in Romania, has grown linearly in recent years, a development fuelled by the fact that people increasingly appreciate the benefits provided by organic products. The concern for health and food in developed countries has boosted the international market for ecological food products, further increasing the number certified producers and the area of certified agricultural land.

National statistical data in this field are provided by the Ministry of Agriculture and Rural Development in a general manner, yet in order to deliver a highly realistic picture of the state of certified ecological agriculture, the released data should also present in detail information on plant species, livestock species, total production levels, production per hectare, products traded on the domestic and foreign markets, value of exports of ecological products, and operators in the field (with precise records of the products they provide).

### BIBLIOGRAPHY

- Brumă, I.S., 2004** – *Tehnologii ecologice pentru producția vegetală și creșterea animalelor*. Editura "Terra Nostra", Iași.
- \*\*\* - <http://www.madr.ro/pages/page.php?self=01&sub=0107>.
- \*\*\* - <http://www.organic-world.net/fileadmin/documents/data-sheets-public/world-of-organic-data-sources.pdf>.