

ECOLOGICAL AGRICULTURE – PRESENT AND TENDENCIES OF FUTURE DEVELOPMENT

AGRICULTURA ECOLOGICĂ – PREZENT ȘI TENDINȚE DE DEZVOLTARE ÎN PERSPECTIVĂ

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Abstract. *The segment that is occupied by the ecological agriculture has an ascending trend, both worldwide and in Romania. The positive evolution is determined, both by the increase of demand from the consumers of ecological products, and by the EC regulations regarding the increase of quality standards of the agricultural products. Worldwide, the largest areas occupied with ecological cultures are in Australia and Oceania with 39% of the total area, followed by Europe with 23,0% (about 8 million ha). Of the European countries, Italy has the largest area with 1,2 million hectares, followed by Great Britain and Germany, both with almost 0,7 million hectares. At the level of the European Union, the ecologically cultivated areas represent over 4% of the total agricultural area. In Romania the percent is over 1% (1,32). At present, in Romania, there are ecologically cultivated cultures on an area that exceeds 200 000 hectares, registering an average rhythm of areas growth of 36,8%. Of the former socialist countries, Poland occupies the first role, with almost 300 000 hectares, followed by Ukraine with 280 000 hectares.*

Key words: agriculture, ecology, development, perspectives, ecological products

Rezumat. *Segmentul pe care îl ocupă agricultura ecologică are un trend ascendent atât pe plan mondial cât și în România. Evoluția este determinată pe de o parte de creșterea cererii consumatorilor de produse ecologice, cât și de reglementările CE privind creșterea standardelor de calitate a produselor agricole. Pe plan mondial cele mai întinse suprafețe ocupate cu culturi ecologice le deține zona Australia – Oceania cu 39% din suprafața totală urmată de Europa cu 23% (circa 8 milioane hectare). Dintre țările europene Italia deține cea mai mare suprafață cu 1,2 milioane hectare, urmată de Marea Britanie și Germania, ambele cu aproape 0,7 milioane hectare. La nivelul Uniunii Europene terenurile cultivate ecologic reprezintă peste 4% din totalul suprafeței agricole. În România procentul depășește 1% (1,32). În prezent în România există culturi ecologice cultivate pe o suprafață ce depășește 200 000 hectare, înregistrându-se un ritm mediu de creștere a suprafețelor de 36,8%. Dintre fostele țări socialiste, Polonia ocupă primul loc, cu aproape 300 000 hectare urmată de Ucraina cu 280 000 hectare.*

Cuvinte cheie: agricultură, ecologie, dezvoltare, perspective, produse ecologice

INTRODUCTION

The segment that is occupied by the sector of the ecological agriculture has an ascending trend, both worldwide and in Romania. The evolution is determined

both by the increasing demand of consumers of ecological products as well as the content of recent reforms within the EU regarding the increase of quality standards of agricultural products where the ecological part is a priority.

Although there is a positive tendency at the EU level, the ecological agriculture has at present a reduced weight of the total cultivated areas (4,17% in 2007). The maximum level can be found in Austria, 13, 37%, but not far behind it is Germany which has proposed for the following years to reach at 20% the cultivated area.

In comparison, in Romania, at the level of 2000, only 0,12 % of the agricultural areas were exploited by means of ecological agriculture and at the level of 2007, 1,3 % (190 129 ha).

The study has in view an evaluation of the agricultural situation within the European area and also to identify the factors that bring forward or stop the development of this sector and to set the tendencies of the evolution and accomplishment of ecological products.

MATERIAL AND METHOD

In order to do the study there were used official sources with statistic character of the specialty literature. They refer to statistic yearbooks, some information data are with close circuit and also the information sources got from direct investigation. In order to identify the development tendencies and the factors of influence, the interpretation was done taking into consideration the dynamic evolution of products and phenomena using comparison, specific index, graphics and monographers. Some data have in view the situation of agricultural ecological production of Bacău County.

RESULTS AND DISCUSSIONS

According to the definition of FAO and OMS in Food code, ecological agriculture represents an integrated system of managing the production process, which contributes to the supporting and fortifying the agri-eco-system resistance, including the biodiversity, biological cycles and biological activity of the soil. This type of agriculture means a returning to the values of traditional agriculture, but not to its methods. The main objective of this type of agriculture is to protect the human health, together with insuring the biosphere protection and planet's natural resources, excluding the use of chemical fertilizers and herbicide, the prevention methods having an important role against pest, diseases and weeds.

In the EU there have been applied a series of regulations, starting with 1991, the latest being EC no 834/2007, regarding the ecological production and ecological products' labelling starting its application with 1st January 2009. In Romania there regulations come together with other juridical regulations with specific character.

Worldwide, the ecological agriculture is ascending, being present in more than 100 countries situated on six continents and occupying an agricultural area of almost 31 million hectares. The repartition on continents of the ecological areas and farms is presented in table 1.

Table 1

The worldwide situation of ecological agriculture

Areas with ecological management on continents					%
Europe	Oceania Australia	Latin America	North America	Asia	Africa
23,0	39,0	19,0	7,0	9,0	3,0
Weight of ecological farms					
37,7	0,5	30,9	2,3	13,3	15,3
The average area of an ecological farm					
36,9	4405,0	32,8	182,3	22,2	7,1

The largest areas can be found in Australia (Oceania) with 11,8 million hectares, followed by Europe with 6,9%. We have to mention the reduced position of North America, continent with a powerful agricultural potential, but with few areas occupied with ecological plants, which represent 0,56% of the total agricultural area of the continent.

As regards the number of ecological farms, they are not in direct correlation with the cultivated areas. The smaller number can be found in Australia (Oceania) followed by North America and Asia. But there are large discrepancies between the sizes of ecological farms on continents. As regards Australia, the size of a farm exceed 4400 ha, followed by North America, at a great distance, with 182,3 ha. In Europe, the ecological farm has an average size of 36,9 ha.

At an European level, the situation of the areas destined for the ecological structures had a tendency of increase between 2003-2007. If we take into consideration all the European countries, in comparison with 2003 when there were cultivated 6 177 587 ha, after 5 years, in 2007 the area cultivated with ecological cultures increased with about 29% (7 976 935 ha). It is significant increase, having in view that the trend has been constant every year.

Table 2

Evolution of the ecological agriculture in Europe

Year	Indicators			
	Area		Producers	
	Ecological (organic)	% Ecological	Ecological (organic)	% ecological
2003	6.177.587	1,32	151.381	1,03
2004	6.377.623	1,34	164.126	1,08
2005	6.873.649	1,46	187.766	1,26
2006	7.444.619	1,62	204.080	1,38
2007	7.976.935	1,73	213.217	1,44

In 2003 there were cultivated about 5,0 million hectares, and this area increased to 7,34 million hectares; thus there was registered a grow of 46,8%. Related to the total cultivated area, the weight of the areas with ecological

cultures increased from 4,03% to 4,17%. At the same time there increased the number of producers with almost 50 thousand within the analyzed period.

As regards the countries belonging to the European Union the increase was even more spectacular in the same period. (table 3)

Table 3

Evolution of ecological agriculture in European Union

Year	Indicators		
	Area		Producers
	Ecological (organic)	% ecological	Ecological (organic)
2003	5.054.373	4,03	137.301
2004	5.774.379	3,71	140.666
2005	6.257.799	4,05	160.750
2006	6.858.588	3,92	179.453
2007	7.341.695	4,17	186.424

The ecological areas in Europe in 2003 showed that Austria occupied the first place of the cultivated area, followed by Switzerland and Italy. In absolute size, the largest ecological area was in Italy (1.230.000 ha), Great Britain (679.631 ha), Germany (632.165 ha). The number of ecological farms was of 56.440 in Italy, 18.292 in Germany, 15.608 in Spain. The average size of an ecological farm was the largest in Great Britain (170,7 ha), followed by Portugal (77,3 ha) and Sweden (53,9 ha).

Starting with 1990, the fastest growth of the ecologically exploited areas took place in Scandinavia, Italy, Austria, Germany, Great Britain and the Mediterranean countries.

In 2007 in the European Union the ecologically cultivated areas represent about 4,17% of the total agricultural area. Austria has the highest level of organic fields in the national agricultural area – 13,37% in 2007, but Italy is the country with the most extended ecologically cultivated areas of the European Union, more than 1,2 million hectares, which represent 18%-20% of the total organic fields in the European union. It is followed from a great distance by Germany (865.336 ha), Spain (988.323ha), Great Britain (682.196 ha) and France (557.133 ha). But the chart changes if we rapport the organic surface of a state to the total agricultural area of that state. From this point of view Austria is leader, the ecological cultures (371.000 ha in 2007) occupying in this country 13,37% of the national agricultural surface. On the second place is Italy with 9%, followed by Sweden 7% (225.385 ha). But the best clue on the evolution of the ecological sector of the near future is given by rapport between the area in conversion from the conventional agriculture to the ecological one and the area already certified. According to the study “Models of ecological agriculture in EU 25” in Cyprus, Leetonia, Lithuania, Malta and Slovakia the areas in conversion represent 70-100% of the organic certified fields. In these countries the growth potential of ecological agriculture is high, according to the specialists’ opinion. Ireland,

Greece, Italy, Hungary and Slovenia have a moderate potential of development, as these countries have areas in conversion which represent about 30% of the ecological ones. Denmark is in the last place as the conversion area represents only 1,4% of the total ecologic fields.

The most important organic cultures are the annual ones. Greece, France, Italy, Cyprus and Portugal are the only countries of EU which have significant areas covered with permanent cultures, generally fruit trees, olive trees and vine. But only Cyprus has a larger area of olive trees and vine. In Greece and Portugal the “cote” of annual cultures and that of permanent cultures is very close – about 20% of the total certified organic surface. On the other hand, in Denmark, Finland and Leetonia the annual plants are cultivated on 80% of the certified field. Ecological meadows and grass lands occupy large areas in the Union. For example, in the Czech Republic and in Slovenia they represent 90% of the ecological cultures. At the other end there are Cyprus and Finland, where “eco” meadows and grass lands are an insignificant category. We can mention Italy, which has an important organic surface in the EU, has only 23% “eco” meadows, while Great Britain has over 70%.

As regards the situation of the ecological agriculture in Romania, there is an ascending tendency of the areas occupied with cultures belonging to this category. We will present in Table 4 this tendency in comparison with the existing one in the countries belonging to the geographical area where Romania is situated. The reference period is the time segment 2003-2007.

Table 4

The evolution of ecologically cultivated agricultural areas in countries near Romania

		AREAS									
		2003	%)	2004	%	2005	%	2006	%	2007	%
Bulgaria	Ha	650	0,01	1.114	0,02	2.432	0,05	4.692	0,09	166.741	3,21
	%	100,0		171,4		374,2		721,8		25.652	
Hungary	Ha	113.116	4,62	133.009	3,6	128.574	3,01	122.765	2,88	121.300	2,76
	%	100,0		117,6		113,7		108,4		107,3	
Moldova	Ha	7.721	0,30	10.755	0,42	11.075	0,44	11.405	0,45	11.405	0,45
	%	100,0		139,2		143,4		147,7		147,7	
Poland	Ha	76.252	0,53	82.730	0,57	159.709	1,08	228.009	1,55	285.875	1,94
	%	100,0		108,6		209,5		299,2		374,9	
Romania	Ha	57.200	0,41	73.300	0,53	92.770	0,67	107.582	0,77	190.129	1,32
	%	100,0		128,1		162,2		188,0		332,4	
Serbia	Ha	430	0,01	542	0,01	591	0,01	906	0,02	906	0,02
	%	100,0		126,0		137,4		210,6		210,6	
Ukraine	Ha	164.449	0,46	240.000	0,58	241.980	0,59	260.034	0,630	280.000	0,68
	%	100,0		145,9		147,2		158,2		170,3	

*) % of the agricultural area

In 2003, the areas occupied with ecological cultures were of 57200 in Romania. With an average annual rhythm of growth, which every years was of

36,8%, Romania has reached in 2007 an area of 3,32 times larger than the basic year (57.200 ha).

In comparison with the limitrophe or near countries, the situation shows that the largest areas are in Poland (285.875 ha) and Ukraine (280.000 ha). From the point of view of areas, Bulgaria (166.741 ha) and Hungary (121.300 ha) are close to one another.

From the point of view of the increase tendency, the most spectacular changes are in Bulgaria, which increased its surface with 250 times in the last five years. The other countries have registered important increases but not at the level of Bulgaria. Poland has increased its surface with 3,7 times, Serbia with 2,3 times and Ukraine with 1,7 times.

CONCLUSIONS

1. Ecological agriculture in Europe presents an ascending trend in the last years, being favoured by the increasing preferences of the consumers for the ecological products, as well as the recommendations and regulations of EC. In this domain, in Europe there were cultivated almost 8 million ha with ecological cultures in 2007.

2. Worldwide, the largest areas (39%). are in Australia and Oceania, followed by Europe (23%).

3. Romania situates on an ascendant trend having cultivated more than 200.000 ha with ecological cultures, with an annual average rhythm of increase of 36,8%.

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