

ANALYSIS OF ECOLOGICAL AGRICULTURE EVOLUTION IN ROMANIA

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***Abstract:** The tendencies at world level regarding the ecological products consumption have been adopted also at national level due to the fact of increasing concern that consumers have for a healthy life style and growing conscience of the necessity of environment protection. In order to meet the ecological products demand, more and more agricultural producers orient towards the ecological agriculture farming system, being motivated by the selling prices of ecological products, that usually are higher than the ones of the products obtained in normal conditions. In the present paper, the attention is focused on dynamics of surfaces designated to ecological agriculture and to main ecological crops.*

Key words: *farming systems, ecological agriculture, evolution*

INTRODUCTION

Ecological agriculture or organic agriculture represents one of the trend in global agriculture. After the adhesion to European Union, Romania had to adopt the legislative framework regarding the organic agriculture and the organic products.

MATERIALS AND METHODS

The researches were based on statistical data from Ministry of Agriculture and Rural Development regarding the ecological agriculture. The dynamics of operators number from this field and the evolution of surfaces and organic crops.

RESEARCH RESULTS

The dynamics of surfaces cultivated in organic farming system express a strong variation from one year to another, as seen in table 1.

In 2010 the cereals had the highest percentage from the analyzed period, while the year 2015 represented the lowest value. The variation of cereals percentage in total surface was between 6% in the period 2010-2016..

The year 2010 was also the pick for leguminous in the period 2010-2016, and the percentage registered was 3,0433 from total surface. Also, as in the case of cereals, the lowest percentage from total surface was registered in the year 2015. The lowest percentage in the case of leguminous was 0,7459.

The year 2011 was the year when tubercles registered the highest percentage, more precisely 0,4675 from total surface while the year 2014 represented the year with the lowest percentage in the case of tubercles crops. So, the variation of percentage in the case of tubercles varied from 0,4675 to 0,2168 from total surface.

In the case of industry crops the year 2010 registered the highest percentage from the analyzed period with the value 26.1705. The year 2012 was the year with the lowest percentage for industry crops, only 15.5376 from total surface.

Table 1.

Percentage of crops in total surface

Crt. no.	Specification	Year						
		2010	2011	2012	2013	2014	2015	2016
1	Cereals	39.5706	34.4285	36.4770	36.2297	35.4471	33.1157	33.2282
2	Leguminous	3.0433	1.3687	0.9589	0.7961	0.8001	0.7459	0.9738
3	Tuberculs	0.2761	0.4675	0.3902	0.2460	0.2168	0.2714	0.3124
4	Industry crops	26.1705	20.8221	15.5376	17.1911	18.7190	21.3819	23.5947
5	Green plants	5.6514	2.0824	3.8447	4.3779	4.6636	5.5450	6.3102
6	Other arable crops	0.3172	0.3703	0.0096	0.0876	0.0103	0.1448	0.1142
7	Vegetables	0.4019	0.3975	0.3109	0.3545	0.6667	0.4921	0.5193
8	Orchards, vineyards	1.6929	1.8120	2.6994	3.1215	3.2631	4.5206	5.3112
9	Grasslands	17.2841	34.0069	36.7153	34.4356	33.0801	30.8443	25.4571
10	Uncultivated land	5.5919	4.2438	3.0565	3.1600	3.1318	2.9382	4.1789

Source: Own calculation based on statistical data, 2017

The year 2016 was the pick point for green plants with a percentage of 6.3102 from total surface, while the year 2011 represented the year with the lowest percentage – 2.0824. The variation in the case of green plants was 4% in the period 2010-2016.

The other arable crops do not exceed 1% from total surface and variation was from the lowest value registered in 2012, more exactly 0.0096 to 0.3703 in the year 2011.

The vegetables were another crop that do not exceed 1% from total surface, but with variation not so large as in the case of other arable crops. The year 2012 was the year with the lowest percentage – 0.3109 from total surface, while the year 2014 registered the highest percentage 0.6667 from total surface.

The year 2016 was the year with the highest percentage in the case of orchards and vineyards, with the value 5.3112. The starting year of the analyzed period, 2010, was the year with the lowest value registered in the case of orchards and vineyards, more precisely 1.6929.

In the case of grasslands the variation was very large, almost 50% from the highest value. So, the year 2012 registered the largest percentage -36.7153 from total surface while the year 2010 was the year with the lowest percentage – 17.2841 from total surface.

The uncultivated land registered the pick point in the year 2010 with the value 5.5919 while the lowest value was in the year 2015 with the value 2.9382.

In the last year of the analysis the green plants, orchards and vineyards registered the high percentage from the analyzed period.

The total surface occurred by ecological agriculture has reached the highest point in 2012, and after that year the total surfaces and also the number of operators in this field entered on a decreasing slope. In the figure 1, there are presented the average surfaces of main crops in the period 2010-2016.

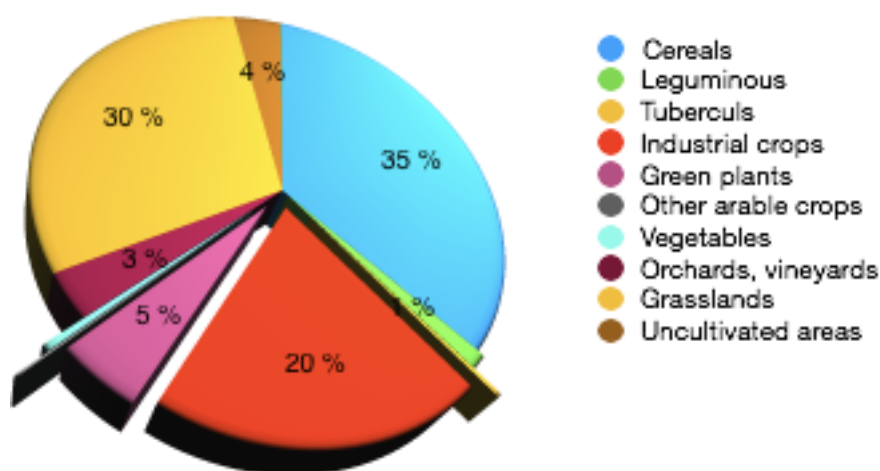


Figure 1. Average surfaces of main crops in period 2010-2016

In order to present better the evolution of total surface from the period 2010-2016 there were calculated the dynamics index of total surface with fix base and mobile base as seen in figure 2. The year 2013 was the year with the largest surface used for the crops mentioned before.

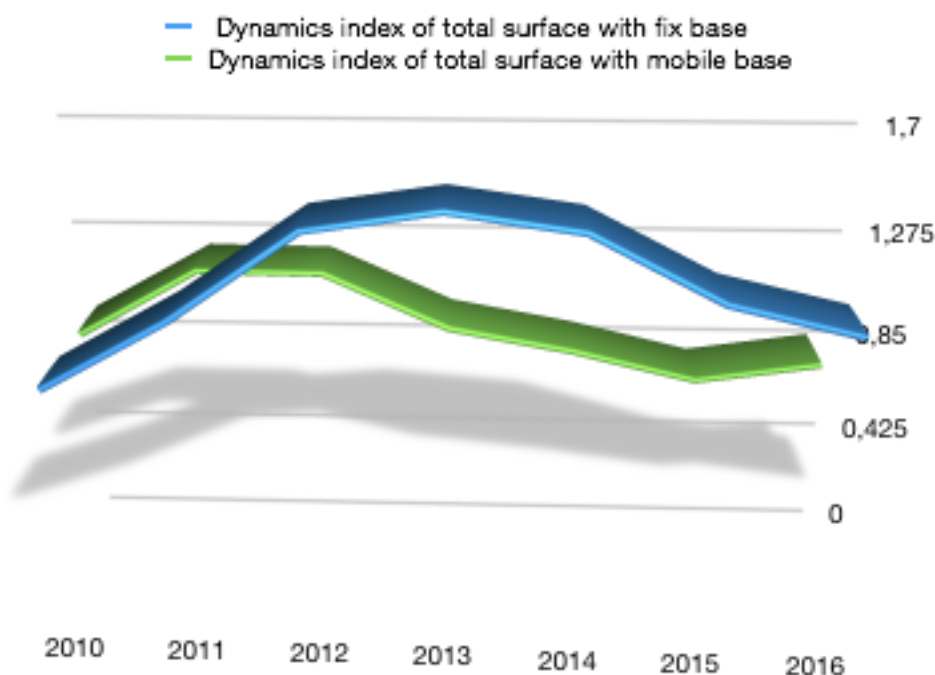


Figure 2. Dynamics index of total surface for the period 2010-2016

In the period 2010-2016, there were also changes referring to the number of operators from ecological agriculture as presented in figure 3. The year 2012 was the pick point in the case of dynamics index calculated with fix base while the year 2011 was the pick point for the dynamics index with mobile base.

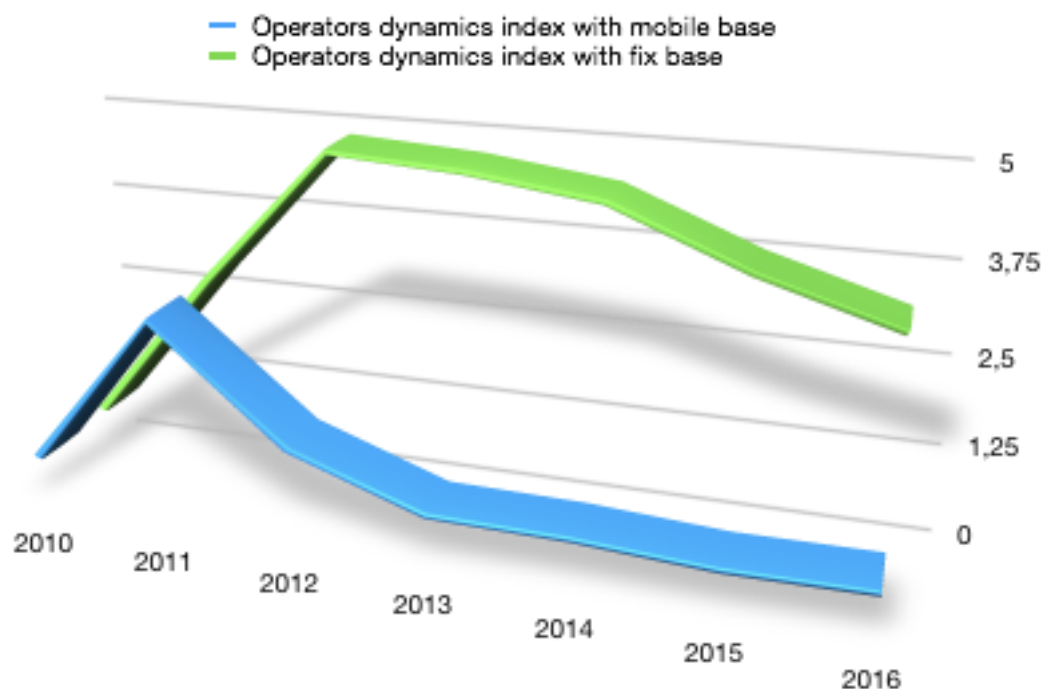


Figure 3. Dynamics index of operators for the period 2010-2016

CONCLUSIONS

If the number of operators from the ecological agriculture is influenced by the legislative framework, their capacity to adapt to market demand, the variation of surfaces is mainly influenced by the number of operators. Romania has potential to further develop organic farming system and this can be an alternative to traditional farming systems for the rural areas due to the internal and external demand for ecological products.

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