

## **The Geographic Distribution of Organic Operators in Romania During 2012-2014**

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**Abstract:** *In Romania, the popularity of organic products have been increasing during the last years. The number of organic operators (companies, authorized natural persons and natural persons) has been steadily increasing. Part of a larger body of research investigating the structure and performance of the organic market, this articles presents the geographic distribution of organically certified operators in Romania, during 2012 until 2014. Results show that the organic operators are concentrated in the North-West of the Country, in the Transylvanian Plateau. This region of high density is consistent throughout the analyzed period.*

**Keywords:** *organic operators, Romania, organic agriculture*

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### **I. INTRODUCTION**

On the Romanian market, in the last ten years or so, the popularity of the organic product has been increasing with a steady pace. Past estimates [1] place the level of the organic market at less than 1% of the retail market. This level is very low compared to the average of the EU countries which reaches 7.2%, Denmark, or Austria 6% [2]. We could expect that Romania will follow the tendencies present in the other EU countries for two main reasons: first, due to the overall agricultural potential of the country and second, due to the increasing trend of organic operators, which represent the supply side of the market. At the level of year 2012, in Romania, the organically cultivated areas amount to 2.1% of the agricultural land. Moreover, according to the data from the Romanian Ministry of Agriculture and Rural Development (MARD) [3], the organically cultivated agricultural surface steadily increased since 2006, reaching over 298 thousands ha in 2014. On the other hand, in the EU, there are countries with more mature organic markets like Germany or Spain where the organic areas represent around 6.4% of the total arable land or Poland with 4.3% [4, pg. 43]. Experts expect the further growth as the organic practices and principles are still at the beginning in Romania.

It is worth noting though that the growth level in Romania are higher than in other EU countries. Therefore in 2013 compared to 2012, the overall increase of organic land in Romania reaches 4.4% well above the EU level of 3% [4, pg. 209]. Moreover, the highest increase in total area of organic is registered for pasture and meadows which increased by more than three times in Romania in 2013 compared to 2012 while the overall area reserved for organic pastures in Europe has been declining by 2% [4, pg. 210] in the same timeframe. The current article is part of a larger research program that aims to investigate the structure and performances of the organic market in Romania during 2012 and 2014. The aim of the article is to reveal the geographic distribution of the organic operators in Romania. The results are unique, to the best knowledge of the authors, in the level of detail for the mentioned period. Moreover, the outcomes of the current analysis reveal the patterns on the geographic density of organic operators and how they evolved during the analyzed period.

### **II. METHODOLOGY**

At this point it is important to mention that the term “organic operator” refers in this article to the operators that are organically certified against the prescriptions of the EU legislation [5] transposed into national law [6] in Romania. The data regarding the organic operators and their location was collected by the researchers in 2012 and 2015, from both certification and inspection bodies in Romania and also the MARD. The MARD data is available on the website of the institution. Overall, over 41,500 organic certifications were collected and analyzed for the period of 2012 - 2014. The data regarding the organic operators was collected and stored in electronic format by year and by certification body.

The certificates data is stored in electronic format and was analyzed using Microsoft Excel. The database that resulted contains all organic operators: companies, authorized natural persons, natural persons, associations, cooperatives. The data was cleaned and organized over a period of several months until it resulted in a comprehensive list of the certificates arranged per year, the permanence of operators in the system, and the migration of organic operators from one certification and inspection body to another in the period. It is important to note that, to the best knowledge of the authors, this research is unique for the 2012-2014 period. Moreover, the authors are unaware of any type of research following similar methodologies in the previous years as well for the Romanian market. In addition, the results of the analysis are valuable as they refer

to the whole group of organic operator in Romania. Please note that Romania is organized in 41 counties. In some statistics representations, Bucharest, the capital city is presented separately from Ilfov, the county where it is located. Therefore, this is the reason that in Table one there are 42 counties.

### III. RESULTS: THE GEOGRAPHIC DISTRIBUTION OF OPERATORS

In this section are presented the both the evolution of the number of organic operators in Romania and the geographic distribution. First, let's look in more detail at the overall evolution of the number of organic certificates in Romania during 2012 and 2014. In 2012, there were more than 15,500 organic operators, while in 2013 is registered a slight decline of 2% in 2013 compared to the previous year. In addition, in 2014 the decrease continues by 7% in 2014 compared to 2013. Even though the number of operators has been decreasing slightly between 2012 and 2014, the overall area under organic cultivation has been slowly increasing by 0.3% in 2014 compared to 2012[3]. Even though that oscillation in the number of the operators inside the counties may be significant, the average number of operators by country is slowly increasing from 241 operators in 2012, to 352 operators in 2013 and 366 in 2014. There researchers created categories to reflect the number of the organic operators in counties. Therefore, six categories emerged: from zero to fifty operators, 51 to 100, 101 to 250, 251-500, 501- 1000 and over 1001. Table one presents the results for the analyzed period.

In 2012 there are five counties with more than 1001 operators, while in 2013 and 2014 there are only four counties with the same amount of operators. On the other side of the scale, there are 15 counties with less than 50 organically certified operators in 2012, while in the following two years there are only 14 counties with this volume of operators. The number of counties with issued certificates between 501 and 1000 amounts to five in 2012, six in 2013 and six in 2014. These counties total 3667 certificates in 2012, and respectively 4366 in 2013 and 4203 in 2014. For this category of counties the average number of certificates in the analyzed period oscillates between 700 and 733 certificates per county. Another category of counties is the one with 101 to 250 issued certificates. In this category, during the analyzed period, the average number of issued certificates varies from almost 130 in 2012 to 152 in 2014. More details are available in Table one.

Let's now take a closer look at the geographic distribution of the organic operators. During the analyses period (from 2012 to 2014), the top five counties with the highest number of organic operators has been constantly changing due to the yearly fluctuations in the number of organic operators. Table two presents the counties with the highest numbers of operators in 2012, 2013 and 2014. In 2012, the counties with more than 1,000 organic operators are Alba, Bistrita Nasaud, Caras-Severin, Iasi, and Suceava. In 2013, only Alba, Bistrita Nasaud and Suceava maintain the level of more than 1000 operators. In the following year, the top counties change again, with Bucharest and Ilfov and Salaj Counties surpassing the 1000 level. In 2014, there are three counties (Alba, Suceava, and Salaj) and Bucharest city with the more than 1,001 organic operators. The first two are the same as the previous year. The following section will present more details regarding the geographic distribution of operators by county in each of the years of the analysis. In 2012, in Alba County, when the number of organic operators reached 2,179 increasing more than 28 times compare to the level in 2011. Interesting to note that Alba County, in all the years of the analysis, is consistently above the level of 2000 organic operators. The level increases in 2013 and slightly decrease in 2014 by 3% compared to 2013 Bistrita-Nasaud County also registered a slighter decrease of 7% in 2012 compared with 2011. In 2013 and 2014, the number of operators continues the decreasing trend in Bistrita Nasaud Country, reaching in 2014 the level of 30% compared to 2012.

**Table 1** Categories of number of certificates during 2012 -2014

Category (number of certificates)	Total number of certificates in category in 2012	Number of counties in category in 2012	Total number of certificates in category in 2013	Number of counties in category in 2013	Total number of certificates in category in 2014	Number of counties in category in 2014
0-50	452	15	395	14	457	14
51-100	591	7	450	6	182	3
101-250	646	5	1472	9	1681	11
251-500	1698	5	1142	3	1374	4
501-1000	3667	5	4366	6	4203	6
>1001	8317	5	6959	4	6439	4
<b>Total</b>	<b>15371</b>	<b>42</b>	<b>14784</b>	<b>42</b>	<b>14336</b>	<b>42</b>

Source: own calculation

**Table 2** The top counties by number of organic operators in 2012-2014

County	Number of organic operators in 2012	Number of organic operators in 2013	Number of organic operators in 2014
Alba	2,179	2,456	2,370
Bistrita-Nasaud	2,013	1,601	604
Bucharest & Ilfov	85	126	1,360

Caras-Severin	1,028	980	216
Cluj	837	1,010	662
Iasi	1,085	792	879
Salaj	624	601	1,087
Suceava	2,012	1,892	1,668
Teleorman	71	61	741

**Source:** own calculation

Similar with Bistrita Nasaud, Caras Severin also experienced a significant decrease in the number of organic operators, decreasing in 2014 by almost 80% compare to the level of 2012. Bucharest, the capital of Romania and the largest city in the country is located in Ilfov country, although for administrative reasons, some of the statistics are presented separately. However, for the scope of Table two, the numbers of organic certifications issues in these two regions are summed up. The number of organic operators registered in Bucharest and Ilfov County increased very much, reaching 1,360, meaning 1,079% higher than 2013. This current evolution is explained by the fact that more and more companies are registered in Bucharest city as it has become a development pole in the country, having the highest GDP per capita and a low unemployment rate. Cluj country experiences a high oscillation in the number of operates. After the peak in 2013, of 1010 operators, the level dropped by 35% in 2014 compared to the previous year. In 2014 the number of organically certified operators is lower by 20% compared to 2012.

Iasi Country experience a constant decrease in the number of operators in the analyzed period. In 2013 the country occupies the sixth place in the country by number of organic operators, descending from the fourth spot in 2012. Salaj countries is one of the regions in Romania that experienced a constant increase trend in the analyzed period. The number of operators increased by 40% in 2014 compared to 2012. Another county that share the same trend is Teleorman, where the numbers of organically certified operators reached 741 in 2015, higher by 90% compared to 2012. Teleorman is situated in the south of the country and the landscape consist of mostly fertile plain. The evolution of the number of operators in the region could hint to an increasing popularity of organic agriculture in the area of the country where there is practiced the most intensive agriculture. Suceava County is another region where there were consistently more than 1001 operators during the three years of the analysis. Suceava registers in 2012 a 44% decrease compared with 2011. In 2013 Suceava County continued to register a decrease in numbers compared to the previous year, but of 6% so much lower than the rate of 37% registered between 2012 and 2011.

#### **IV. CONCLUSIONS AND DISCUSSION**

The geographical distribution of the issued certificates indicates that the north east and the center-west are the areas in the country with the highest concentration of organic operators. In 2014 center of the country remains a dense area with a lot of organic activity. This information should be correlated with the data regarding the landscape. These areas are both situated in the Transylvanian Plateau- and area of undulating plains and low hills inside the Carpathian Mountains arc. This is an important agricultural region in Romania characterized by a variety of cultivated crops and also animal husbandry, mostly cattle. Moreover, the organic operators in this area are cattle breeders that also certify meadows and pasture areas. In contrast with the south and the south-east where there is very little organic activity, expressed in a lower density of organic producers, processors and traders. It is also interesting to note that the south of the country is a large plain. Here the main agricultural activities are the cultivation of cereals in the intensive conventional agriculture. This explains in part the low density of organic certificates in the region.

This article aimed to explain the number and geographic location of organic operators. However, the authors would like to point out that in the future, the number of organic certificates could evolve very differently if the group certification would be allowed by EU and implicitly Romanian legislation. As studies argue there could be a lower number or issued certificates but referring to larger areas as more natural people could get certified under the umbrella of a group certification [1] or if more cooperative would be created [7]. Romania's landscape is almost equally divided between mountains, hills, and plains. As these different types of landscapes allow for different type of agricultural activities, the density of organic operators will not be the same in different regions in the country. However, a more detailed explanation on how the number of organic certifications varies in regions with similar landscape characteristics is an interesting and subjects for a future study. The discussion of the density of the organic operators should be put in the context of the type of legal organization of the organic operator and also type of organic activities and area under organic cultivation.

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