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The Development of Ecological Agriculture in Romania

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Abstract

Organic farming has gradually become a sector with a profound impact on the development of economy and agriculture. It is the system that supports the ecosystems, soils and human health. It focuses on ecological processes, biodiversity and cycles adapted to local conditions. In Romania, the market share for organic products grew in the past few years, due to population's growing concerns towards health; the preoccupation is to be seen in the demand for more natural products, from food industry to beauty and healthcare. This paper investigates the dynamics of organic farming in the Romanian market, its importance in a world where pollution is a global problem along with the depletion of resources, the emergence of new diseases and health problems. In the context of a global pandemic, organic products come as an alternative for a world where processed and lab-created products substitute natural food.

Keywords: ecological, agriculture, market, health problems.

JEL Classification: Q15, Q01, O13

1. Introduction

The development of organic farming is seen as an alternative and a concept that would characterize the third millennium. It is already well known the role of agriculture in the economy of a country, being considered one of the activities that can be the basis of economic development. As in any sector, the goal is to efficiently use the available resources that lead to sustainable development. Economic growth is not the only objective of the European Union's policy for agriculture, because it does not automatically represent social development and a better quality of life. The new Common Agriculture Policy directs 30% of its payments to ecological farming. The concerns are that the more industrialized is the crop to food chain, the higher are the presences of chemicals in food. In pursue of a longer shelf life and better taste, foods have been chemically enhanced to the point where artificial will cost less than natural food. Many studies have shown a

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direct connection to heart diseases and strokes, high blood pressure, high cholesterol, and other co-morbidities and poor nutrition. (Willett, 2013). The benefits of a healthy life don't come only from what is eaten but from the chemical components of a food, the complexity of micronutrients and the lack of chemical fertilizers and others could mean the difference between a healthy individual and a sick one. Overly-processed foods took over the home cooked meals, the so-called frozen and ready-to-eat food, the fast food industries and other similar products lead to a world where at least 2.8 million people die of obesity. (Obesity and overweight – World Health Organization, 2017).

2. Problem Statement

The concept of organic farming is that system that aims to supply the consumer with fresh and authentic products and at the same time protects the natural ecosystems. As Food and Agriculture Organization of the United Nations states, a healthy diet should be considered before and after the Covid-19 pandemic, as consuming healthy and natural products contributes to a better immune response. Whether it refers to organic farming, renewable or sustainable agriculture, the whole system indicates the same thing, an alternative to traditional agriculture. Newly discovered issues that are caused by the conventional agriculture have effects on plants, animals and soil quality as well (Prandecki, 2014).

The role of organic farming is to produce healthy food, more suitable for human metabolism, in full correlation with the preservation and development of the environment. One purpose is to bring to market fresh and authentic products that are made in a process designed to respect nature. Due to the lockdown, the fragility of our system was witnessed, and the most affected were the small producers. (Press release by IPES-Food, April 2020). Organic products come from a farming system which avoids the use of chemical fertilizers, pesticides; growth regulators and livestock feed additives – as BBC defines it.

3. Aims of the Research

This paper aims to show the development of Romania's ecological market, from consumer to producer in the context of increases in global sales of ecological products. Starting from the much discussed subject of artificial foods and its link to health problems, the paper questions the BIO products consumption in the context of new diseases, and highlights the main steps to be taken for having a healthier market.

4. Research Methods

This paper contains quantitative methods – Data analysis and comparison of organic agriculture for human health and protection of the environment and vice versa – conventional one. It also contains scenario analysis – starting from the current data and calculating when and how the desired results will be obtained.

Romania's status

Romania is considered, at European level, within the agricultural sector, an agricultural paradise, due to the quality of the products and the methods used to produce them. Regarding organic crops, it is said about Romania that it has a high potential and the basic reason for these claims is that no chemical fertilizers and pesticides are used in excessive quantities, which is quite important considering the fact that the methods applied lead to an easier transition to organic farming.

Currently, in Romania, intensive agriculture is practiced but, at the same time, unintentional organic farming can be found on the land that is owned by family associations or small producers. This type of unintentional organic farming is practiced by farmers who do not have the money to use chemicals and for this reason they cannot afford to apply intensive agricultural technology.

Regarding animal welfare – market expectations are that animals should be raised on farms they are fed with fresh food, they should be offered living and medical conditions with the same rigor with which they are offered to humans. So, it is based on the idea that animals also have rights which must be observed. Despite those, most of animals and animal products are obtained in such a highly industrialized sector, that in some places, animals are kept in very bad conditions, tight spaces, fed and injected with growth hormones, most of them never see the sunlight, being born and raised without being able to move (Grandin, 2000) (Oscar, 2018).

Researchers have argued that poor life conditions for animals from which we consume meat or other animal products could lead to health problems for humans, and an easier transmission of diseases from animal to human (Fallah, 2015). Wet markets as well as stressed animals kept in bad conditions are more prone to spreading diseases. This added to the trends of a bad nutrition, poverty and lack of medical services ramped up the death cases due to poor nutrition. An analysis of global deaths due to various causes showed that in 2020 most of worldwide deaths are caused by diabetes and on third place by COVID-19, an infectious respiratory disease that mixed with other co-morbidities (Barratt, 2020). In Romania, statistics showed that the first cause of death from 2007 to 2016 were the cardiovascular diseases followed by tumours and digestive diseases (Cucu, 2017).

The trends of industrialization, mechanization and globalization changed the eating habits from rich in fibre foods to consumption of foods with high caloric and lipid density; these trends, mixed with a sedentary lifestyle, caused a raise in cardiovascular diseases and type 2 diabetes. In the past years, smoking was the first known cause of cancers, now we have the dietary habits on second place as the main root causes for cancers (Graur, 2006).

Those highlights paved the way to a better nutrition and prevention, the concerns for a healthier lifestyle grew, fact that can be seen in the growth of demand for organic products, recreational activities – gym, cycling, skiing and other sports.

Consumer's level

First thing to be tackled is consumer confidence – being the most important in this chain, from marketing to sales, the attention falls on the customer and his/her needs. It is practically the end of this chain of distribution process of organic farms. If organic products were not very present 3 years ago in the market, and Romania's market was still developing, now in most of supermarkets, especially the large ones, there are special aisles for Bio products, light green shelves and tags can be seen almost everywhere. A growing trend in this area is also the growth of sustainable clothing, where big clothing manufactures are using recycled cotton and collect old clothes for the same reason. (Fletcher,2008); what can be seen on tags now are the words “from organic cotton” – as shown in figure 1 below:

Figure 1. Organic Cotton Tag



Source: (Internet search for organic tags)

Now, after years of research, scientists and doctors both proved that there is a direct connection between death causes and high processed foods. (Srour, 2019). In the past years, the nutrition headlights and information campaigns launched by government and media, as well as the growing culture of healthy lifestyle, established the relation between diseases and artificial food in population's minds. There are no conclusive studies regarding consumers in Romania, but as far as the observation went, the consumer of ecological products is the educated adult, from urban areas; the concern also brought a new niche in HoReCa domain, many premises are serving organic foods, wines and use recycled products. A big stake has the social media, where many of local producers found a voice and a regular database of clients. Regarding consumption of BIO products, since the 90s, when the organic and healthy culture had a big start, the revenues were almost 65 million USD in 2019, with almost 30% more than two years ago. In Romania, the growth is between 15%-20% per year, mostly due to the 5% VAT. The most developed country in BIO products consumption is Germany, Romania being placed at the end of the ranking in EU, Sweden having consumption of EUR 197 per inhabitant, Denmark - EUR 277 per inhabitant, while in Romania only EUR 3.72 per inhabitant, as per 2016 data (Analysis - Financeintelligence.ro, 2020).

Figure 2. BIO symbol



Source: (MADR)

As per the data from Eurostat – in table 1 – Organic producers by status of registration process, in Romania in 2018 there were 8,518 registered producers.

Table 1. – Organic producers

GEO/TIME	2012	2013	2014	2015	2016	2017	2018
European Union - 28 countries (2013-2020)	-	257,123	257,641	271,349	295,577	-	-
Belgium	1,435	1,656	1,602	1,733	1,946	2,105	2,264
Bulgaria	2,754	3,854	3,893	5,919	6,964	-	6,213
Czech Republic	3,907	3,910	3,866	4,121	4,271	4,426	4,601
Denmark	2,651	2,563	2,538	2,984	3,306	3,631	3,941
Germany	23,032	23,271	23,717	25,078	27,636	29,764	32,366
Greece	23,448	21,986	20,186	19,604	20,197	27,808	29,594
Spain	30,462	30,502	30,602	34,673	36,207	37,712	39,505
France	24,425	25,467	26,466	28,884	32,266	36,691	-
Italy	43,831	45,965	48,662	52,609	64,227	66,788	69,335
Hungary	1,560	1,682	1,672	1,971	3,414	3,642	3,929
Austria	21,843	21,863	22,184	23,070	24,213	24,998	25,795
Poland	25,944	26,598	24,829	22,295	22,451	20,276	19,224
Portugal	2,833	3,029	3,329	4,103	4,246	4,674	5,213
Romania	15,280	14,553	14,151	11,812	10,083	7,908	8,518
Slovenia	2,680	3,045	3,293	3,412	3,513	3,627	3,738

Source: (Eurostat)

Producer – Organic area cultivated

As it can be noticed in table 2, the area of land cultivated with organic products grew along with global trends and concerns for a healthier lifestyle. In 2000, there were only 17,388 ha – only 0.12% from the total farmland. Before joining the EU, the numbers tripled, having in 2006 an area of 107,578 ha – roughly 0.77% from the total cultivated areas. Romania is still under EU average, with approximately 7% cultivated area.

Table 2. Organic area cultivated in Romania

Year	Organic area (farmland) [ha]
2000	17,388.00
2001	28,700.00
2002	43,550.00
2003	56,800.00
2004	73,300.00
2005	92,770.00
2006	107,578.00
2007	131,456.00
2008	140,132.00
2009	168,288.00
2010	182,706.00
2011	229,946.00
2012	288,261.00
2013	301,148.08
2014	289,251.79
2015	245,924.00
2016	226,309.00
2017	258,471.00
2018	326,260.00

Source: (Research Institute of Organic Agriculture FiBL)

As the EU Common Agricultural Policy came in place, we received more financing and the total of cultivated area tripled from 2006, only 12 years later, reaching 326,260 ha – 2.5% from the total farmland. At the current time, we have an approximate 0.13% growth from one year to another. The number is still low, but as the prediction in table 4 shows, if there is a 4.8 % growth per year, in 10 years there will be almost half of the cultivated area with organic agriculture. This is a scenario based on current numbers, considering that EU will raise the payments for ecological sector, the percent per year may grow in and the target will be reached sooner.

Table 3. Organic cultivated area – Growth Scenario

Year	Organic area (farmland) [ha]	Organic area share of total farmland [%]	Total cultivated area	Growth per year [%]
2000	17,388.00	0.12	1,736,713.44	n/a
2001	28,700.00	0.19	2,864,547.00	0.07
2002	43,550.00	0.29	4,342,370.50	0.10
2003	56,800.00	0.38	5,658,416.00	0.09
2004	73,300.00	0.52	7,291,884.00	0.14
2005	92,770.00	0.65	9,216,699.50	0.13
2006	107,578.00	0.77	10,674,964.94	0.12
2007	131,456.00	0.96	13,019,402.24	0.19
2008	140,132.00	1.03	13,868,864.04	0.07
2009	168,288.00	1.24	16,620,122.88	0.21
2010	182,706.00	1.29	18,034,909.26	0.05
2011	229,946.00	1.64	22,617,488.56	0.35
2012	288,261.00	2.06	28,232,282.34	0.42
2013	301,148.08	2.31	29,419,155.94	0.25
2014	289,251.79	2.22	28,283,040.03	(0.09)
2015	245,924.00	1.88	24,130,062.88	(0.34)
2016	226,309.00	1.73	22,239,385.43	(0.15)
2017	258,471.00	1.98	25,335,327.42	0.25
2018	326,260.00	2.50	31,810,350.00	0.52

Source: (Research Institute of Organic Agriculture FiBL, and author's calculation)

Table 4. Scenario Calculation

Current total cultivated area	31,810,350.00
Value to be reached	15,905,175.00
Current total organic area	326,260.00
Percent of growth	48.75
Percent of growth / 10 years	4.88

Source: (Author's work)

Society and economy – This concept makes the connection between the rural area and the metropolitan area within the European Union. The most important aspect is the financial one, as the higher quality of the products will bring higher incomes within the community.

Another aspect to be considered is that in Romania, 30% of the population is working in agriculture, which means that their only source of income is coming from growing and selling crops. The number of subsistence exploitation – 1-5 ha,

represents 79.8% from the overall agricultural area – as APIA provides. The aged population occupied in agriculture also represents a challenge when trying to convert to new technologies, as studies on generation differences showed – the elders are more conservative than their younger peers.

5. Findings

The mindset of Romanian consumers is not yet educated towards the consumption of organic products; on the other hand, a certain trend can be noticed, which foresees a harmonious development of the market for organic food products. One of the reasons, mentioned above, is to achieve the importance of consuming healthy products for a healthy life (Hanf, 2005).

Organic agri-food products can be found on the shelves of supermarkets or in some specialty shops, but they are addressed to a certain segment of buyers who have a certain education, the products having a higher price, satisfy a niche sector of the market.

One thing is obvious, that the Romanian consumer must be educated. The steps for this can start with the dissemination of information among the administrative structures of the state, the offices and associations subordinated to the Ministry of Agriculture and Rural Development, but also at the level of agricultural associations, at the mayoralty level in each locality, by door-to-door information, which ensures a better understanding of the phenomenon. Also, in schools, magazines, books, educational materials, informative materials should be included.

6. Conclusions

Selling products at local markets is still the main source of income for many families, so landowners cannot give up land cultivation; although they do not have enough budget, practicing unintentional organic farming, they give up buying herbicides, pesticides or fertilizers.

A child who has been informed during school years about the importance of environmental protection and conservation, but also about the consequences of his/her future actions that may harm the ecological balance, will be an adult who will act accordingly. Highlighting the need for healthy eating from a very young age, at the time of maturity the child will remember all these things and take them into account, because they are part of his/her education and values. Romanians have traditionalist behaviour, but without being conservative.

One thing for sure would be the investment in this area, so that the Romanian consumers approach the organic food products, which only bring benefits to the body, ensuring a balanced diet, as well as resistance to stress and pollution. Another important factor in the decision to influence consumer behaviour is the benefit of using the so-called “organic” products: honey and other bee products, herbal teas, homeopathic medicines, etc. These have the role of bringing the consumer closer to nature and ecological values.

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