

**The 6<sup>th</sup> International Conference on Economics and Social Sciences**  
**Geopolitical Perspectives and Technological Challenges**  
**for Sustainable Growth in the 21<sup>st</sup> Century**  
**June 15-16, 2023**  
**Bucharest University of Economic Studies, Romania**

## **The Market of Organic Agri-Food Products in Romania**

Andreea Daniela GIUCĂ<sup>1\*</sup>,  
Monica GAIDARGI (CHELARU)<sup>2</sup>, Boris KUZMAN<sup>3</sup>

DOI: 10.24789788367405546-018

### **Abstract**

*An important trend influencing consumer behaviour and consumption choices is the trend towards a healthy lifestyle with a balanced diet. Especially among millennials, the demand for organic products obtained from sustainable production processes has increased significantly, due to their increased level of information and purchasing power. The consumption of organic food products is increasing, the main reason being the assimilation of environmental protection principles. The main purpose of this research is to study the demand and supply of organic food products in Romania, based on the analysis of specialised literature, European Commission reports and statistical data. Since 2017, Romania has registered a rapid increase in agricultural areas cultivated in an ecological system (under conversion and maintenance), reaching 469,000 hectares in 2020 (of which 41 % are under conversion). However, the share in 2020 (3.5%) is still below the EU average of 9.1 %. Most of the organically cultivated land (61%) is used for cereals and permanent grassland. The number of organic dairy cows peaked in 2014, falling to almost half of the 2014 level in 2020. In recent years, there has been a rapid increase in the number of organic poultry (especially for egg production) and the number of beehives. From 2015 to 2019, the number of processors in the organic system increased from 106 to 191 and the range of organic products diversified a lot. The demand for organic products by Romanian consumers is still at a very low level. Organic food retail sales amounted to € 41 million in 2020.*

**Keywords:** organic market, organic agri-food products, consumption, price, Romania.

**JEL Classification:** Q13.

---

<sup>1</sup> Bucharest University of Economic Studies, Research Institute for Agricultural Economics and Rural Development, Bucharest, Romania, andreeagiuca@yahoo.com.

\* Corresponding author.

<sup>2</sup> Bucharest University of Economic Studies, Bucharest, Romania, monicagaidargi@gmail.com.

<sup>3</sup> Institute of Agricultural Economics – Belgrade, Belgrade, Serbia, kuzmanboris@yahoo.com.

## **1. Introduction**

"Being an integrative system of organising, leading and managing production, organic agriculture develops and improves the robustness of agroecosystems, and at the same time the diversity from the point of view of biological elements, biological cycles and biological activity of the soil. Through it, managerial strategies against the use of inputs from outside the agricultural holding are highlighted, taking into account the zonal conditions that imply the adaptability of the systems at the local level. By implementing methods specific to the agronomic, biological and mechanical fields, these strategies can be implemented, thus not resorting to synthetic materials to achieve the characteristic functions in the dynamics of the system" (Comisia FAO/OMS Codex Alimentarius, 1999; Stoica et al., 2022).

Organic agriculture represents the integral part of the viability of this field of the economy, having as its interest the satisfaction of the pressing needs of agricultural products, which have met the quality and sanitary standards, respecting the natural environment, the ecological balance over a long period of time (Lupănescu, Rădoi, 2021).

Organic agriculture contributes fundamentally to the evolution of sustainability, involving the development of economic activities that produce added value at a high rate, as well as the positive dynamic growth of the interest given to rural areas. At the level of the European Union and at the level of our country, laws have been elaborated and implemented that establish objectives, principles, and norms that apply in the framework of organic production. Thus, the rules together with the establishment of the typology, the methodology of the production system related to the plant, animal, and aquaculture productive sector establish legal reports regarding the processing method, the labelling method, the type of trade practiced, verification and authentication, integral processes of the ecological agriculture system (MADR, 2023).

Organic agriculture was born as an improved variant of agriculture accepted by tradition, with industry at its base, and which has limiting tendencies and negative repercussions in terms of the quality of the products and the way they are obtained, on the environment, a fact mainly due to the use in excess of substances of chemical origin, harming the health of people and animals to the same extent, also affecting the quality of the soil. Through the lens of its components, organic farming is ahead of other types of agricultural production by promoting non-conventional and recyclable resources, thus providing the soil with organic nutrients (Lupănescu, Rădoi, 2021).

The potential that this form of agriculture offers at the level of our country is particularly high, because the natural framework offered by Romanian space offers the right conditions for the expansion of organic agriculture, having fertile land and a low degree of pollution in the rural environment, compared with countries that have experienced economic development, where super-intensive agriculture is the most widespread, based on chemical fertilisers and pesticides (Ilie, 2013; Gonciarov, 2014; Lupănescu, Rădoi, 2021).

At the level of the European Community, the use of organic agriculture has been developed due to an increasing need of consumers to access agri-food products that ensure their safety and security from a sanitary point of view and at the same time have a certain quality standard, thus improving the consumption of the population by offering genuine foods that, through use, improve the health of citizens (Pîrvu et al., 2009).

At the level of our country, the verification and certification of products obtained through the practice of organic agriculture are carried out by Private Inspection and Certification Bodies (ICB). These bodies can only carry out their activity following the approval received from the Ministry of Agriculture and Rural Development. Obtaining the approvals is preceded by the accreditation of the bodies through another accreditation body: RENAR (SRAC, Ecological Agriculture).

In order to be able to carry out the activity of organic production, precise standards and norms imposed by organic agriculture must be respected. They are carried out in a manner in which they have as a foundation principle of a general nature but also of a specific nature to support environmental protection, maintain ecosystems at the European level, and achieve consumer education regarding the consumption of organic products. The regulations listed above are the basis of all sectors related to organic production and are based on the following principles: the use of genetically modified organisms (GMOs) is not accepted, the use of ionising radiation is not accepted, the limited use of materials used for soil fertilisation; of chemicals used in the eradication of plants and pests that attack crops; does not accept the use of hormones, and the use of antibiotics is limited to the situation of necessity regarding the health of the animals. In other words, organic producers are required to adopt diverse approaches to soil fertility and the health status of both animals and plants (European Commission, 2023).

## **2. Problem Statement**

Following the reform of the Common Agricultural Policy (PAC) that took place in 1992, the promotion of the quantitative increase of ecologically specific agricultural holdings at the level of the European Union was achieved, but the level of market growth is conditioned to a very large extent by the study of consumer needs and their habits procurement, so that an effective marketing mix can be productively applied (Fortea et al., 2022).

The percentage of agricultural land used for organic farming at the level of the European Union experienced an increase of over 50 % in the period 2012-2020, the annual average being 5.7 %, reaching an organic cultivated agricultural area of 9.1 % of the entire cultivated area of the EU in 2020. In a different proportion from one member state to another, the considerably larger size of organic farms compared to classic ones, with young entrepreneurs at the management level, is noted (European Commission, 2023).

The first four positions in the top of the countries achieved according to the area in which organic agriculture is carried out at the level of the European Union are:

France, Spain, Italy, and Germany, so the organically cultivated areas of the 4 countries combined represent 52 % of the entire area in 2012, reaching 59 % in 2020. Permanent pastures held the most important share in the total area used for organic agriculture, representing 42 %, followed by green fodder with a percentage of 17 %, then cereals with 16%, and permanent crops with a percentage of 11 %. Even if the increase was significant, the organic animal production sector constitutes only a small fraction of the total animal production at the level of the European Union, being between 1-7 %, depending on the sector of origin. The PAC offered important amounts, in the form of organic support to meet the development of organic agriculture, for organic cultivated lands, which represented in 2020 approximately 61.6 % of the total cultivated lands, with an average of 144 euros/hectare from the PAC part, and 79 euros/hectare co-financing at the national level (The European Commission, 2023).

Currently, the implementation of the European Green Deal is a vital action for society to ensure food security and transform food chains into a sustainable model. The European Green Pact allows the gradual abandonment of intensive agriculture and, at the same time, supports the responsible consumption of agri-food products by developing the consumption culture toward the appreciation of organic food (Chiripuci et al., 2022).

## ***2.1 The Organic Products Market at the EU Level***

The demand and supply of organic products is experiencing accelerated growth both in developed countries and in developing countries, for which the rate is lower. If we analyse the share held by the trade in organic products at the global level, it can be seen that the market is quite large, which leads to a possible development and diversification of these types of products (Dash et al., 2023; Sindhu, 2023).

Being a large and continuously developing market, the market for organic certified agro-food products at the global level had an estimated value of 96.7 billion euros in 2018. There is an assured supply of 2.8 million producers who work in this market, and worldwide the organic cultivated area represents 71.5 million hectares.

Analysing the data for 2015 compared to 2020 for the sales of organic products, it can be seen that they have doubled in value, significant increases have also been registered for imports from countries that are not part of the EU, especially exotic fruits. The same growth was recorded in the market of fresh organic products, in all varieties and in terms of volume and value.

Following a survey of the organic product with the highest organic share but also with the fastest growth on the market of fresh organic products, the egg took first place for countries such as France, Italy, Germany, Spain.

Because local organic producers do not have the capacity to meet such a high demand, increasing amounts of organically certified agro-food products are imported as raw materials for final food products. The level of total imports for the European Union with respect to such products reached the level of 2.7 million tons

in the year 2020 and with an increase of 2.8 %, respectively, 2.87 million tons for the year 2021. If they are not taken calculating imports for the UK at the level of 2021, imports at the EU level decreased by 1% if we compare them with the previous year, up to the share of 2.76 million tons. From this point of view, the European Union represents an importer particularly high on the market for semi-finished products or finished organic products.

Analysed through the prism of the traded volume of organic products, most imports were for cereals, coffee beans, cocoa, fruits, vegetables, and meat. 44% of imports for organic products, were goods and primary products., and for products with a higher value the level was a low one, while juices, olive oil registered increases of 7 %, i.e., up to 212 thousand tons. Imports were twice as high for prepared foods (+120 %) reaching 98,000 tons, but also for beverages (+120 %), 3,700 tons. The Netherlands and Germany are the largest importing countries with a percentage of 50% of total imports, respectively, 945,000 tons (Netherlands) with +10.2 % compared to 2020 and almost 20% Germany (517,000 tons) Germany (+5.2 %). Compared to the first two importers, the following Belgium, France (European Commission, 2022).

## ***2.2 The Organic Products Market in Romania***

At the level of our country, MADR regulates the sphere of organic agriculture, while at the European Commission it carries out this regulation for the member countries of the Community. The laws imposed on the organic agricultural sector, as well as on the production of this kind, are carried out in a way that supports sustainable development, while assuring consumers of the quality of the products offered and of this agricultural sector, guaranteeing the functioning of the market mechanisms (Panait, Cucu, 2019).

Romania's organic food production potential is growing. However, this potential is not properly exploited, the demand for this type of product being very low, a fact due to the lack of education and information held by consumers, combined with the very high prices charged compared to the prices of conventional products (Răbonțu, Todoruț, 2010).

Agri-food products are distributed mainly through retailers, a trade that every year improves the range of organic products, using already existing brands or in the form of its own brand. The sales volume of organic food products represents barely 1% of total food sales. At the level of our country, exports are represented by the vast majority of ecological production, while imports are represented by organic finished products. This happens because there is no specific technical-material basis for the processing and production of ecologically certified products, combined with a small number of authorised producers (Panait, Cucu, 2019).

The distribution of organic certified products is also done through specialised stores, directly from the manufacturer or online. Selling directly from the manufacturer gives a small range of seasonal products, and the volume of sales on this distribution channel is low (Popovici et al., 2018).

### **2.3 The Price of Ecological Products**

Analysing the price dynamics of organic products compared to the prices of conventional products, it can be stated that the prices of certified organic products are at a higher level than the others. However, this does not have major repercussions on the ecological products market because it is already formed, there are categories of consumers who opt for the consumption of these products. If organic products are purchased directly from producers, the price paid by consumers is more advantageous, not only from a financial point of view, but also from a sanitary and environmental protection point of view (Răbonțu, Todoruț, 2010).

The difference between the prices of organic products and the prices of other products is reflected by the fact that the harvest level is low (20 % - 50 % lower), the labour force used involves a larger number of workers, the distribution is done only in stores or districts specialised requiring compliance with certification standards (Dobrescu, 2004).

Depending on the specifics of organic products, they are sold at different prices, taking into account their physical properties, namely: perishability, degree of demand from consumers, their condition (fresh, frozen, for use as raw materials in obtaining other products), and also by the number of producers for the same type of product.

The main drivers of the market for organic products are demand and competition. The long distance between the organic agricultural farms and the cities where their products are distributed is not a determining factor in setting the price, nor is the competition, which largely depends on the demand expressed for organically certified products, thus determining its lower level. Agricultural farms located at smaller distances from the cities where they sell their organic products set the price according to competitors, which leads to an extremely high level of it, without any concrete justification. Farmers, regardless of their location in relation to the distribution area, do not adopt price policies taking into account market segmentation according to income (Atanasoaie, 2014).

A major consulting company, Everis, conducted a study on the motivation behind the price difference between organic and conventionally farmed products, also finding a notable discrepancy between the two and concluded that among the determining factors that influence these components of the market (product prices), the seasonality of crops is found, but also their rotation, something that visibly affects profit.

### **2.4 Demand for Organic Products**

In the last century, there has been an upward trend in the demand for organic products, increasing 4 times at the global level, and at the EU level by 13 % and by 24.8 % in Spain. The same trend has been registered in the last 10 years, a fact that also involved the increase in the volume of sales and, therefore, also the level of production of ecologically certified products. The increases were confirmed by

FiBL, which presented a series of indicators that attest to these aspects, both at the European Union and worldwide level.

At the European level, the demand for organic products shows an imbalance depending on the area, being higher in Western European countries. However, the trend of increasing demand was also identified in Central-European and Eastern-European countries, especially in Hungary, Poland, and Romania, countries that traditionally developed organic crops that they mostly offered for export. At the global level, the European market is particularly large, and the trend is upward. (Țigan et al., 2021)

Due to the introduction of regulations regarding the certification and verification of organic products, consumers have gained confidence in this type of product, thus increasing the volume of demand (Tarhini, 2022).

Sales of organic products have grown significantly in recent years in the EU, reaching a value of € 34.3 billion in 2017.

Demand for organic products will continue to grow over the next ten years, with the fastest growth through 2025.

### ***2.5 The Offer of Ecological Products***

As for the offer at the level of our country for organic products, it contains a wide range of agri-food products: eggs, milk and milk products, meat and meat products, honey, wine, and others. FIBL has carried out research on the place occupied by each assortment of organic goods, resulting in the fact that the greatest success in this market is held by milk and milk products, followed by exotic fruits, with a preponderance of bananas and citrus fruits, counterweighted by apples produced nationally (Panait, Cucu, 2019).

### ***2.6 Consumers of Ecological Products***

In Spain, a market study was carried out regarding certain characteristics of consumers of organic certified products, and it was found that 53 % of them are women, with an average age of 43.3 years, being open to online purchases, the producers being thus having to adapt and satisfy these needs, while maintaining the connection with the consumer after completing the purchase.

The consumer chooses to satisfy his needs by purchasing organic products from his geographical area, as close as possible to his residence, supporting local farmers in this sense, helping to maintain a natural environment that is as little polluted as possible, avoiding to obtain imported products that require more distribution channels long and therefore a negative impact on the environment. There is an ever-increasing interest in environmental protection from large companies and not only (Tarhini, 2022).

An accelerated increase in sales indicates a change in demand in the same direction. This was particularly evident during the pandemic period, due to the intense interest in the state of health and the restrictions that accompanied this period of time, but also the lack of basic foods or household production. The current fund emphasises the presence of inflation at the food level, which

influences purchasing power and the decrease in demand for organically certified products (The European Commission, 2023).

At the level of our country, the value of sales of organic products has reached the level of 10 million euros, but due to the lack of processors in this field, the raw material is exported and returns in the form of imports of finished organic products, the cost being obviously much higher, reaching at about 4 times the price.

At the level of 2022, MADR produced reports according to which there is a guarantee of the authenticity of organic products that bear the national and European Community logos and that 95% of the raw materials used to obtain the respective product were certified as the result of organic production activity and that they comply with all the standards imposed in this regard (Dimitriu et al., 2022).

There is a clear citizen interest in the sustainability approach for the agricultural sector. Thus, they certified through a survey initiated by the "Sustainable Romania" project that they want to promote the consumption of the healthiest food while also taking into account the protection of the environment. Consumers want the development of the agricultural sector at the national level by certifying traditional products in a percentage of 79 %, promoting and encouraging farmers 81 %, implementing a functional irrigation system at the country level 78 %, and approximately 90 % want to protect the environment by preventing and combating pollution. Therefore, at the level of the citizens of our country, there is support for sustainable agriculture.

The development involves the consumption of certified organic products, which have higher purchase prices than conventional products; this requires higher incomes, with which the consumer can secure an organic product when faced with the choice of goods on the shelf. We can definitely talk about the increasingly high consumer interest in healthy living, an aspect that can also be supported by adequate ecological and food education.

### **3. Research Questions / Aims of the Research**

This paper aims to analyse the ecological market in Romania. Through the work, it is desired to answer one of the most important questions namely: "What are the trends on the organic market in Romania?"

The research results are intended to help farmers, processors and traders to understand what are the factors that have a direct impact on consumption and production of organic products in Romania.

### **4. Research Methods**

This research is based on statistical data provided by the National Institute of Statistics and the Ministry of Agriculture and Rural Development regarding, from which data were extracted regarding the agricultural area used organically cultivated, the share of organic agricultural production in the total agricultural

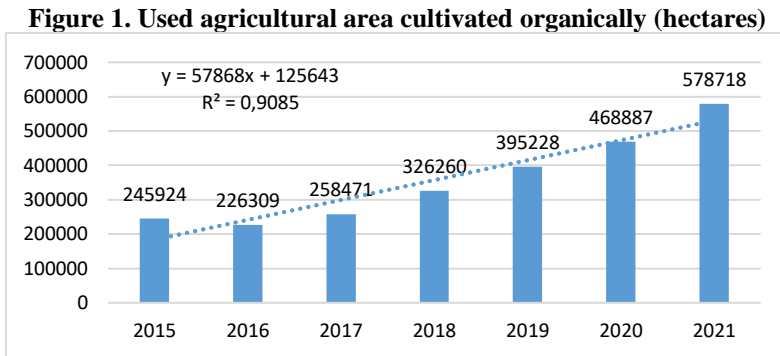


production, the dynamics of operators and areas in organic farming, the evolution of ecologically certified animal herds.

The research method used was quantitative and qualitative data analysis, as well as comparative analysis.

## 5. Findings

According to the data provided by Eurostat, in the European Union, the organic cultivated area is equivalent to 9.1 % of the total agricultural areas used. The lowest share of cultivated areas in the organic system is recorded in Malta, Ireland, Bulgaria, and Romania. In Romania, the share of cultivated in the system is 3.2 %, almost 3 times lower than the European average.

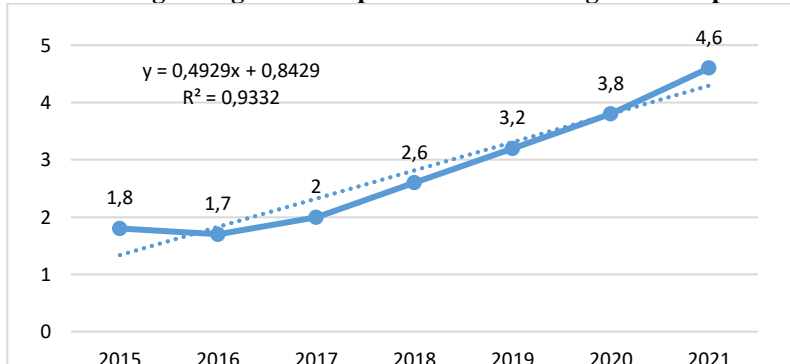


Source: INS – tempo online, TBU0262 - Target 6 - Environment - Used agricultural area cultivated ecologically, accessed on 16.03.2023.

Although the used agricultural area cultivated organically has increased year by year, up to 578,718 hectares in 2021, only 3% of Romania's total agricultural area is cultivated in this way.

The trend line  $y = 57868x + 125643$  shows an average increase of 57,868 hectares per year (Figure 1).

**Figure 2. Share of organic agricultural production in total agricultural production (%)**



Source: INS – tempo online, TBU0262 - Target 6 - Environment - Used agricultural area cultivated ecologically, accessed on 16.03.2023.

The European Commission has developed an action plan to develop organic production, its goal being to reach a rate of 25 % of the total agricultural land by 2030.

Along with the agricultural area cultivated in the organic system, the share of organic agricultural production in the total agricultural production also increased. In the period 2015-2021, there was an increase of approx. 156 percentage points, from 1.8 % to 4.6 % (Figure 2).

**Table 1. List of control bodies (CO) in the field of organic agriculture in Romania**

No. crt.	Control bodies (CO) in the field of organic agriculture	CODE
1.	SC ECOCERT SRL	EN-ECO-007
2.	SC ECOINSPECT SRL	EN-ECO-008
3.	BIOS SRL ITALY - ROMANIA BRANCH	EN-ECO-009
4.	AGRECO R.F. GÖDERZ GMBH GERMANY - ROMANIA BRANCH	RO-ECO-015
5.	BIOAGRICERT ITALIA SRL – ROMANIA BRANCH	RO-ECO-016
6.	AUSTRIA BIO GARANTIE GMBH ENZERSFELD BUCHAREST BRANCH	RO-ECO-018
7.	CERTROM SRL	RO-ECO-021
8.	SC ECOROISCERT SRL	RO-ECO-022
9.	THE ROMANIAN MOVEMENT FOR QUALITY	RO-ECO-023
10.	CERES ORGANIC CERT SRL	EN-ECO-024
11.	BIO CERT TRADITIONAL SRL	RO-ECO-025
12.	SC SRAC CERT SRL	RO-ECO-026
13.	SC TUV AUSTRIA ROMANIA SRL	RO-ECO-027
14.	RINA SIMTEX - CERTIFICATION ORGANIZATION SRL	RO-ECO-028

Source: MADR, Ecological Agriculture, <https://www.madr.ro/agricultura-ecologica/operatorii-certificati-in-agricultura-ecologica-2022.html>.

In Romania, the inspection and certification of organic products are carried out by private inspection and certification bodies. They are approved by the Ministry of Agriculture and Rural Development (MADR), based on the criteria of independence, impartiality, and competence provided for in Order no. 895/2016 for the approval of the regulations regarding the organisation of the inspection and certification system, approval of inspection and certification bodies, and supervision of the activity of control bodies. The approval by MADR of the inspection and certification bodies is necessarily preceded by their attestation by an authorised body for this purpose.

Following the checks carried out by the inspection and certification bodies, the operators who comply with the production rules will be able to obtain an organic product certificate and will be able to display the mention of "organic product" on their products. The organic product label must include information about organic production, logos, the name, and the code of the organisation inspection and certification that carried out the control and issued the organic product certificate (MADR, 2023).

Control bodies are responsible for ensuring that the certificate issued to the inspected operator/group of operators complies with the legislation in force.

Currently, Romania registers 14 control bodies in the field of organic agriculture, presented in Table 1.

**Table 2. Dynamics of operators and areas in organic agriculture**

INDICATOR	2015	2016	2017	2018	2019	2020	2021	2021/2015
<b>Total number of operators certified in organic farming</b>	<b>12231</b>	<b>10562</b>	<b>8434</b>	<b>9008</b>	<b>9821</b>	<b>10210</b>	<b>12231</b>	<b>0%</b>
<b>Total area in organic farming (ha)</b>	<b>245924</b>	<b>226309</b>	<b>258471</b>	<b>326260</b>	<b>395228</b>	<b>468887</b>	<b>578718</b>	<b>135%</b>
Total cereals (ha)	81440	75198	84,925.51	114427	126843	134170	139378	71%
Dry and protein legumes for grain production (including seeds and mixtures of cereals and legumes) (ha)	1834	2204	4995	8751	7411	5710	5853	219%
Tubercula ferrous and root crops total (ha)	668	707	666	506	516	387	269	-60%
Tubercula ferrous and root crops total (ha)	52583	53397	72,388.33	80193	78350	91639	114408	118%
Green harvested plants (ha)	13636	14281	20351	28254	37661	53718	74703	448%
Other crops on arable land (ha)	356	258	88.25	113	2	0	190	-47%
Fresh vegetables (including melons) and strawberries (ha)	1210	1175	1459	983	804	848	1227	1%
Permanent crops: beef orchards, fruit trees, nuts, etc. (Ha)	11117	12020	13,165.41	18569	22143	22219	21233	91%
Permanent crops pasture and hay (ha)	75854	57612	50686	66890	115420	155038	214657	183%
Uncultivated land (ha)	7226	9457	9748	7573	6077	5157	6799	-6%

Source: MADR, Ecological Agriculture <https://www.madr.ro/agricultura-ecologica/dinamica-operatorilor-si-a-suprafetelor-in-agricultura-ecologica.html>, accessed on 16.03.2023.

At EU level, approx. 344,000 organic producers and over 78,000 organic processors are active.

In Romania, in 2015, over 12,000 economic operators (producers, traders, processors) were registered in the organic agriculture system, according to data from MADR, but their number decreased in 2017 to 8,434 operators, reaching in 2021 the number the same number as in 2015, namely 12,231 operators. Thus, we observe a paradoxical situation, considering that the organically cultivated area increased by approximately 135 % to 578,718 hectares.

Most of the economic operators in Romania own in the ecological system areas cultivated with cereals (139,378 hectares in 2021) and permanent crops of pastures and hayfields (214,657 hectares in 2021) (Table 2).

**Table 3. The evolution of ecologically certified livestock**

Road sign	2015	2016	2017	2018	2019	2020	2021	2021/2015
<b>Cattle animals (total)</b>	<b>29313</b>	<b>20093</b>	<b>19939</b>	<b>16890</b>	<b>19358</b>	<b>19870</b>	<b>23339</b>	<b>-20%</b>
Cattle animals for slaughter	491	478	481	701	426	690	922	88%
Dairy cows	21667	15171	12472	10694	13882	12837	14807	-32%
Other cattle animals	7155	4444	6386	5495	5050	6343	7610	6%
<b>Total pigs</b>	<b>86</b>	<b>20</b>	<b>20</b>	<b>9</b>	<b>9</b>	<b>14</b>	<b>9</b>	<b>-90%</b>
Pigs for fattening	43	13	17	0	0	0	0	-100%
Breeding sows	14	7	3	0	0	0	0	-100%
Other pigs	29	0	0	9	9	14	9	-69%
<b>Total sheep</b>	<b>85419</b>	<b>66401</b>	<b>55483</b>	<b>32579</b>	<b>19367</b>	<b>13189</b>	<b>13837</b>	<b>-84%</b>
Sheep, breeding females	0	0	0	0	14832	11509	10941	-
Other sheep	0	0	0	0	4535	1680	2896	-
<b>Goats (total)</b>	<b>5816</b>	<b>2618</b>	<b>1653</b>	<b>1360</b>	<b>8161</b>	<b>830</b>	<b>1080</b>	<b>-81%</b>
Goats, breeding females	0	0	0	0	8112	808	1032	-
Other goats	0	0	0	0	49	22	48	-
<b>Total birds</b>	<b>107639</b>	<b>63254</b>	<b>78681</b>	<b>83859</b>	<b>128596</b>	<b>171391</b>	<b>214104</b>	<b>99%</b>
Broilers	0	0	285	0	0	27045	27405	-
Laying hens	0	60220	77096	0	127136	143198	186699	-
Breeding birds	0	0	0	0	0	0	0	-
turkeys	0	0	0	0	1460	1148	0	-
Ducks	0	0	0	0	0	0	0	-
Geese	0	0	0	0	0	0	0	-
<b>Equidae</b>	<b>485</b>	<b>0</b>	<b>202</b>	<b>0</b>	<b>297</b>	<b>506</b>	<b>55</b>	<b>-89%</b>
<b>Bees</b>	<b>0</b>	<b>86195</b>	<b>108632</b>	<b>138557</b>	<b>175959</b>	<b>170789</b>	<b>171564</b>	<b>-</b>

Source: MADR, Ecological Agriculture <https://www.madr.ro/agricultura-ecologica/dinamica-operatorilor-si-a-suprafetelor-in-agricultura-ecologica.html>, accessed on 16.03.2023.

The data presented by MADR regarding the herds of organically certified animals show that in 2021, the herds of organically certified animals were 23,339 cattle, 13,837 sheep, 1,080 goats, 214,104 birds, of which 186,699 laying hens, 171,564 beehives, and only 9 pigs and 55 horses.

It is predicted that the herds of animals raised in the ecological system will increase for the pig and poultry categories. For pigs, however, only 2 % of EU livestock will be organically raised in 2030, while poultry (broilers and laying hens) raised in an ecological system could double, up to 5 % of the total.

## 6. Conclusions

Organic farming in Romania is export-based, farmers want to take advantage of the higher margins in export markets, a trend that is accentuated by the fact that the domestic market lacks processing facilities. Thus we end up exporting raw materials and importing ecological finished products, the main export markets for Romanian ecological products being Austria, USA, Japan, Germany, France, Italy and Denmark. In this context, investments are needed in the processing activity of organic agro-food products.

Manufacturers must constantly invest in research to provide innovative products that meet future consumer needs. However, many producers in Romania are scared by the fact that the conversion period is much too long, up to two years, and the activity requires inspections by control bodies accredited by MADR.

One of the essential conditions for the development of organic agriculture is the promotion of the concept of organic agriculture in order to make consumers aware of the advantages of consuming organic products, so that they offer a higher price for clean products whose quality is guaranteed by an inspection and certification system.

At the level of Romania, the ecological cultivated area is still below the European Union average and is not practiced on a large scale by Romanian farmers. This fact is one of the limitations of our research. Also, another limitation of the research this time is the lack of statistical data on organic agriculture in Romania. Currently, only data on areas, production, and economic operators can be found in the statistical databases. We do not have available data on the consumption of organic products and their prices.

## Acknowledgment

This paper was co-financed by the Bucharest University of Economic Studies during the Ph.D program.

## References

---

- [1] Atanasoae, G.S. (2014). Politici de marketing in domeniul produselor agroalimentare ecologice. (teză de doctorat) Bucuresti, ASE [Marketing policies in the field of ecological agro-food products. (doctoral thesis) Bucharest, ASE].
- [2] Chiripuci, B., Popescu, M.F., Constantin, M. (2022). The European Consumers' Preferences for Organic Food in the Context of the European Green Deal. *Amfiteatru Economic*, 24(60), 361-378, <https://doi.org/10.24818/EA/2022/60/361>.
- [3] European Commission (2022). Agricultural Markets Briefs. EU imports of organic agri-food products. Key developments in 2021. September 2022, [https://agriculture.ec.europa.eu/system/files/2022-09/agri-market-brief-19-organic-imports\\_en.pdf](https://agriculture.ec.europa.eu/system/files/2022-09/agri-market-brief-19-organic-imports_en.pdf).
- [4] European Commission (2023). Organic production and products, [https://agriculture.ec.europa.eu/farming/organic-farming/organic-production-and-products\\_en](https://agriculture.ec.europa.eu/farming/organic-farming/organic-production-and-products_en).
- [5] Comisia FAO/OMS Codex Alimentarius (1999). <https://www.fao.org/organicag/oa-faq/oa-faq1/en/>.

- [6] Dash, S., Priyadarshini, S., Dulla, N. (2023). Food Security and Sustainability Dimensions of Organic Farming: A Comprehensive Scientometric Review (2010-2022).
- [7] Dimitriu, A.T., Ion, R.A., Popescu, C.G. (2022). Launching organic food products on the market. case study. *Revista De Management Comparat International*, 23(2), 284-291, <https://doi.org/10.24818/RMCI.2022.2.284>.
- [8] Dobrescu, E.M. (2004). Agricultura ecologica in unele tari europene. *Tribuna economica*, 15(9).
- [9] Fortea, C., Antohi, V.M., Zlati, M.L., Ionescu, R.V., Lazarescu, I., Petrea, S.M. and Cristea, D.S. (2022). The Dynamics of the Implementation of Organic Farming in Romania. *Agriculture*, 12(6), 774.
- [10] Ilie, L.I. (2013). Hazard assessment of sodium nitrite high level in some meat products. Current Opinion. *Biotechnology*, 24(1), S89.
- [11] Lupănescu, M., Rădoi, M.I. (2021). Economic and environmental sustainability in agriculture: Organic agriculture, *Revista De Stiinte Politice*, (69), 156-166.
- [12] MADR (2023). Agricultura ecologica, <https://www.madr.ro/agricultura-ecologica.html>.
- [13] MADR (2023). Agricultura ecologică, <https://www.madr.ro/agricultura-ecologica/dinamica-operatorilor-si-a-suprafetelor-in-agricultura-ecologica.html>, accessed on 16.03.2023.
- [14] Panait, I., Cucu, C. (2019). Organic Farming - Vector Of Influence In The Sustainable Development Of The Romanian Agricultural Sector. Bucharest: Faculty of Agro - Food and Environmental Economics - Bucharest University of Economic Studies, <https://doi.org/10.24818/CAFEE/2019/8/17>.
- [15] Pîrvu, G., Gruescu, R. (2009). Romania in the European Union, Economic Growth Through Structural Competitiveness. *Metalurgia International*, 14(6), 103-109.
- [16] Popovici, E.A., Grigorescu, I., Mitrică, B., Mocanu, I., Dumitrascu, M. (2018). Farming practices and policies in shaping the organic agriculture in Romania. A showcase of southern Romania, *Romanian agricultural research*, no. 35.
- [17] Răbonțu C.I., Todoruț A.V. (2010). Study On Organic Food Products In Romania. *Annals Of The University Of Petroșani, Economics*, 10(3), 2010, 265-272.
- [18] Sindhu, S. (2023). Organic Food Products: Potential and Challenges Globally. *Transforming Organic Agri-Produce into Processed Food Products: Post-COVID-19 Challenges and Opportunities*.
- [19] SRAC, Agricultura ecologică. Retrieved from <https://www.srac.ro/ro/agricultura-ecologica>.
- [20] Stoica, G.D., Sterie, M.C., Giucă, A.D., Ursu, A. And Petre, I.L. (2022). Trends in Organic Farming in Romania. *Scientific Papers: Management, Economic Engineering in Agriculture & Rural Development*, 22(3).
- [21] Tarhini M. (2022). Consumption and Consumer Behaviour of Organic Agri-Food Products, *Revista de Management Comparat International; Bucharest*, 23(1), (Mar 2022), 136-149, doi: 10.24818/RMCI.2022.1.136.
- [22] Țigan, E., Brînzan, O., Obrad, C., Lungu, M., Mateoc-Sîrb, N., Ioana, A.M., Gavrilaş, S. (2021). The consumption of organic, traditional, and/or european eco-label products: Elements of local production and sustainability. *Sustainability*, 13(17), 9944, <https://doi.org/10.3390/su13179944>.