

Gordana Radović¹

Institute of Agricultural Economics, Belgrade

P. 57-76

REVIEW PAPER

DOI: 10.5937/ESD2602057R

Received: July 16, 2025

Accepted: March 15, 2026

FINANCING DEVELOPMENT OF ORGANIC AGRICULTURE: EXPERIENCES OF SERBIA

Abstract

A precise strategic vision of development, an adequate basis in the normative framework, as well as financial support (incentives) are necessary for the achievement of sustainable rural development. The aim of the research is to analyze the amount, structure and share in the agricultural budget of incentives for sustainable rural development in the period 2013–2023, as well as to assess the effectiveness of these incentives on the development of organic production in the Republic of Serbia. The paper used descriptive statistics methods, desk research method, methods of analysis and synthesis, as well as descriptive and comparative methods. The author concludes that in the Republic of Serbia, incentives for sustainable rural development are continuously paid from the state (agricultural) budget, that incentives for organic production had a dominant share in their structure in the analyzed period (2013–2023), but that organic production has not been developed in accordance with natural resources and allocations from the state (agricultural) budget. The paper also analyzes the experiences of the Republic of Croatia regarding financial support for the development of ecological and sustainable agriculture and makes proposals for the introduction of new types of incentives within the framework of agricultural policy measures in the Republic of Serbia.

Key words: agricultural budget, incentives for sustainable rural development, incentives for organic production, development of organic production, Serbia

JEL classification: R11, Q57

ФИНАНСИРАЊЕ РАЗВОЈА ОРГАНСКЕ ПОЉОПРИВРЕДЕ: ИСКУСТВА СРБИЈЕ

Апстракт

Прецизна стратешка визија развоја, адекватна основа у нормативном оквиру, као и финансијска подршка (подстицаји) неопходни су за остваривање одрживог руралног развоја. Циљ истраживања је анализа износа, структуре и учешће подстицаја за одрживи рурални развој у аграрном буџету у периоду 2013–2023, као и процена ефикасности ових подстицаја на развијеност органске производње у Републици Србији. У раду су коришћене методе дескриптивне статистике, метод истраживања за столом, методе анализе

¹ gordana_r@iep.bg.ac.rs, ORCID ID 0000-0001-9770-6306

и синтезе, као и дескриптивни и компаративни метод. Аутор закључује да се у Републици Србији подстицаји за одрживи рурални развој континуирано исплаћују из државног (пољопривредног) буџета, да су подстицаји за органску производњу имали доминантно учешће у њиховој структури у анализираном периоду (2013–2023), али да органска производња није развијена у складу са природним ресурсима и издавањима из државног (пољопривредног) буџета. У раду се, такође, анализирају искуства Републике Хрватске у вези са финансијском подршком за развој еколошке и одрживе пољопривреде и дају предлози за увођење нових врста подстицаја у оквиру мера пољопривредне политике у Републици Србији.

Кључне речи: аграрни буџет, подстицаји за одрживи рурални развој, подстицаји за органску производњу, развој органске пољопривреде, Србија

Introduction

The strategic goals of sustainable rural development in Serbia are defined in the Agriculture and Rural Development Strategy for the period 2014–2024. Their essence is to ensure the agricultural and rural development and the growth of farmers' living standards, with "sustainable resource management and environmental protection" (Strategy, 2014). Also, in the document (Serbia and Agenda 2030), the goals of sustainable rural development are defined, within which "environmental protection and the fight against climate change" are particularly emphasized. In order to combat climate change, a special Law on Climate Change (Law, c) was adopted. All the mentioned documents are of strategic importance for ensuring sustainable rural development in the Republic of Serbia.

Sustainable rural development in the Republic of Serbia has been financed from the agricultural budget since 2005 (Radović & Jeločnik, 2021). The legal framework for this source of financing is defined in accordance with the Law on Incentives in Agriculture and Rural Development (Law, a). The financial framework for incentives for sustainable rural development is defined on an annual basis, by regulations, as well as for other types of incentives. Financing for sustainable rural development in the Republic of Serbia should be implemented from the IPARD 3 program. More precisely, from Measure 4 of this program. Measure 4 of the IPARD 3 program is still in the accreditation process. It is expected that it will soon be accredited, as well as that a public call for potential applicants will be published immediately after the accreditation.

Organic agriculture is the most widely used concept of sustainable agricultural production in the Republic of Serbia. Organic agricultural production, as a special type of sustainable agricultural production, has been developing in the Republic of Serbia since the 1980s. The Law on Organic Production (Law, a), which was adopted in 2010, defined the legal basis for the development of this production more precisely than the previous law. This enabled faster development of this type of sustainable agricultural production in the Republic of Serbia. For example, from 2010 to 2019, the total number of producers in the organic production system increased 45 times (Radović & Jeločnik, 2021). The research question that the author will attempt to answer in this paper is whether

the resources that evidently exist in Serbia for the development of organic agricultural production, are being adequately used.

The starting point for the research in this paper is the results of the research by Tomaš-Simin et al. (2019), who concluded in their research that “organic farming in Serbia is legally a well-regulated area, but still not developed to the necessary and possible extent” (p. 265). Considering that the research results of the cited authors were published seven years ago, the aim of the research in this paper is to determine whether the above statement is still true.

Therefore, the paper analyzes the legal framework, financial incentives from the agricultural budget for sustainable rural development, and primarily for organic production. In the research, the author uses official statistical documents, i.e. reports from the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia, as the only available and authoritative ones in the field of organic agriculture.

The paper, also, analyzes the experiences of the Republic of Croatia. Agriculture in Serbia and Croatia has similar economic importance. Specifically, the share of gross added value created in agriculture in the gross domestic product in 2023 was 5.5% in Serbia, and 3.36% in Croatia. In both countries, the structure of agricultural entities is dominated by family farms, and the average size of agricultural holdings is similar. In 2023, it was 7 ha in Croatia, and 6.4 ha in Serbia (Radović et al., 2025). However, when analyzing the development of organic, i.e. ecological agriculture, the author notice that it is more developed in Croatia compared to Serbia. Specifically, in 2023, 4% of the total number of farms in Croatia practiced organic farming, and only 1.3% in Serbia (Radović et al., 2025). In addition, the Republic of Croatia is a member of the European Union, so it applies agricultural policy measures harmonized with the EU Common Agricultural Policy, which can also be a guideline for the Republic of Serbia, as a country in the process of European integration.

1. Literature Review

For the purpose of sustainable development, and within it – the sustainable development of agriculture, the United Nations has adopted the Sustainable Development Goals (SDG), and the European Union has implemented the long-term planning document “The European Green Deal” (Boix-Fayos & De Vente, 2023; Filipović et al., 2025). In the literature, there are also views that sustainable rural development, the green transition and the fight against climate change should be in the scope of the “responsibility of every national economy” (Đuričin et al., 2024, p. 24).

For sustainable development, the use of renewable energy sources (Bathaei & Štreimikienė, 2023; Madžar et al., 2025) and environmental protection (Filipović, 2024) are important. Also, it is of great importance that all economic activities are carried out in a sustainable manner. Above all, this refers to agriculture (Adisa et al., 2024; Shang, Xie, 2024; Saleem et al., 2024; Adefila et al., 2024) and tourism (López-Sanz et al., 2021; Turtureanu et al., 2025). Agricultural development should be carried out in a sustainable manner with the aim of more efficient use of natural resources, food safety and increased living standards for farmers (FAO, 2016; Stanojević et al., 2022).

Organic agricultural production is part of sustainable development (Glamočlija et al, 2015; Vapa-Tankosić et al., 2023; Khan et al., 2024; Reimer et al., 2024; Bocean,

2025; Yerkinbayeva et al., 2025) “based on an essential connection between agriculture and nature” (Mihailović & Brzaković, 2018, p. 127). A group of authors (Katić et al., 2008) points out that this production “ensures the harmony of environmental protection requirements and production based on natural processes” (p. 271), and Kovačević (2021) states that “organic products are the path to competitive and sustainable agriculture (p. 31).

Clark (2020) points out that “organic agriculture has experienced remarkable growth in recent decades as societal interest in environmental protection and healthy eating has increased” (p. 12). The group of authors (Wu & Marette, 2020) and (Zollet & Lall-Maharjan, 2021) emphasize the significance of well-defined regulations for organic production development.

The European Union’s budget allocates funds for financing sustainable rural development (Marković, 2015; Walenia, 2022; Kalinowska et al., 2022; Romanchuk et al., 2024). Financing of agriculture and rural development in Serbia has been realized from the agricultural budget since 1996, when this financial instrument was constituted (Pejanović & Radović, 2011; Radović, 2015; Radović, 2024). Agricultural policy measures often changed in the previous period, but their essence remained the same (Radović et al., 2024).

For sustainable development of agriculture in Serbia is of particular importance that incentives for organic production were introduced in 2005 and since then they have been paid continuously from the agricultural budget (Radović et al., 2023). Roljević-Nikolić et al. (2017) state that, the intensive development of organic agriculture in the EU is the result of continuous and stable financial support from the EU agricultural budget, while “in Serbia not only the amount of support changes from year to year, but also the types of support” (p. 334).

2. Methodology and Data Sources

The aim of the research in this paper is to assess the effectiveness of incentives for sustainable rural development on the development of organic production in the Republic of Serbia. To this end, the paper analyzes the amounts and structure of incentives for sustainable rural development, as well as their share in the agricultural budget in the period 2013–2023 in the Republic of Serbia. In order to assess the effectiveness of the aforementioned incentives, the author analyzed trends in the development of organic plant and livestock production in the Republic of Serbia in the period 2013–2023. More precisely, in order to assess the effectiveness of the incentives, the increase/decrease in areas in organic plant production and the number of animals in organic livestock production in the period 2013–2023 is analyzed. Also, the effectiveness of incentives for organic agricultural production was also analyzed based on the share of arable land used in the organic plant production system relative to the total arable land in the Republic of Serbia in the final year of the analyzed period (2023). In addition, the analysis considered the share of individual species of domestic animals within the organic livestock production system in relation to the total number of animals of the same species in 2023.

The initial hypothesis on which the research is based is that financial incentives, although paid continuously from the agricultural budget, do not have an adequate impact on the development of organic agriculture in Serbia. The paper used the desk research method,

descriptive statistics, methods of analysis and synthesis, as well as the descriptive method. The paper also uses a comparative method, with the aim of comparing the experience of the Republic of Croatia related to the sustainable development of agriculture.

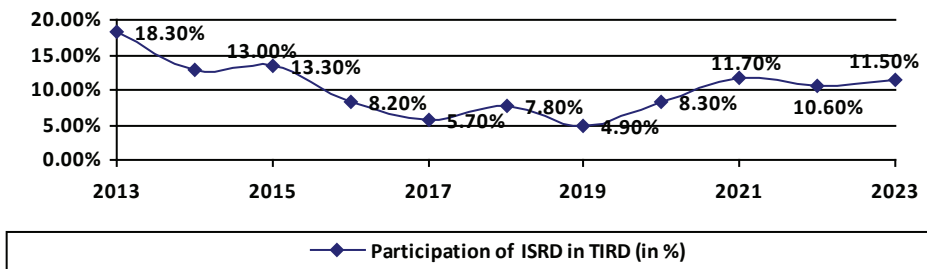
The data sources used are domestic and foreign academic literature, laws, regulations and ordinances regulating the research area. The data sources used are from the website of the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia and from the website of the Ministry of Agriculture, Forestry and Fisheries of the Republic of Croatia.

3. Research Results and Discussion

Incentives for sustainable rural development (ISRDI), i.e. incentives for the preservation and improvement of the environment and natural resources (the name of this measure of agrarian policy bis 2017) are paid in Serbia in accordance with the Law on Incentives in Agriculture and Rural Development (Law, a), rules and regulations adopted for each calendar year.

Incentives for sustainable rural development (ISRDI) are part of rural development incentives (RDI). The share of incentives for sustainable rural development (ISRDI) in total rural development incentives (TRDI) is shown in Figure 1. Participation of ISRDI in the TIRD had a downward trend in the period 2013–2023. More precisely, the share of ISRDI in TIRD was 37% lower in 2023 compared to the initial 2013. The average share of ISRDI in TIRD was 9.4% in the period 2013–2023. This is almost 50% less participation compared to the participation of ISRDI in TIRD in 2013, as the starting year of the analyzed period (Figure 1). This trend is worrying, given the importance of sustainable development of agricultural production for rural communities, rural economies, and more broadly at the national level.

Figure 1: Participation of ISRDI in TIRD (2013–2023)



Data source: RDIARD 2013–2023. Author's processing

In the structure of ISRDI in the analyzed period (2013–2023) there are:

- (a) incentives for organic production – IOP;
- (b) incentives for conservation of plant and animal genetic resources – ICPAGR;
- (c) incentives to support agroecological measures, good agricultural practice and other environmental protection and preservation policies;
- (d) incentives for sustainable use of forest resources.

Table 1: Structure of ISRD 2013–2023

Incentives Year	IOP (in %)	ICPAGR (in %)	Incentives for agroecological measures, good agricultural practice and other environmental protection and preservation policies (in %)	Incentives for sustainable use of forest resources (in %)	ISRD (in %)
2013	90.9	9.09	-	-	100.00
2014	75.7	24.3	-	-	100.00
2015	82.2	17.8	.	.	100.00
2016	61.3	38.7	.	.	100.00
2017	55.21	39.88	4.91	.	100.00
2018	43.30	56.70	.	.	100.00
2019	46.55	53.45	.	.	100.00
2020	69.44	30.56	.	.	100.00
2021	99.99	0.01	.	.	100.00
2022	71.70	28.29	.	0.01	100.00
2023	70.00	30.00	.	.	100.00
Average:	69.66	29.89	0.45	.	100.00

Data source: RDIARD 2013-2023. Author's processing

IOP had a dominant average share (69.66%) in the structure of ISRD in the analyzed period (2013–2023). In second place in terms of participation are ICPAGR, with an average participation of 29.89% (Table 1). Incentives for supporting agroecological measures, good agricultural practice and other environmental protection and preservation policies, as well as incentives for the sustainable use of forest resources, had a symbolic average share in the total ISRD in the analyzed period, and they will not be the subject of a more detailed analysis in this paper.

ISRD, also, include ICPAGR. ICPAGR include: (a) incentives for conservation of plant genetic resources – ICPGR; (b) incentives for conservation of animal genetic resources – ICAGR; (c) incentives for conservation of animal genetic resources in the gene bank – ICAGRGB. In the structure of ICPAGR, in the analyzed period (2017–2023), incentives for the conservation of animal genetic resources (ICAGR) had the largest average share (82.24%). Incentives for the conservation of plant genetic resources (ICPGR) had an average participation of 11.28%, and the average participation of incentives for the conservation of genetic resources in the gene bank (ICGRGB) was 6.48% in the total ICPAGR in the period 2017–2023 (Table 2).

Table 2: Structure of ICPAGR 2017–2023

Incentives Year	ICPGR (in %)	ICAGR (in %)	ICGRGB (in %)	Total ICPAGR (in %)
2017	7.69	89.23	3.08	100.00
2018	1.39	97.22	1.39	100.00
2019	1.61	96.78	1.61	100.00
2020	1.30	97.40	1.30	100.00
2021	33.33	33.34	33.33	100.00
2022	33.33	66.67	-	100.00
2023	0.28	95.05	4.67	100.00
Average:	11.28	82.24	6.48	100.00

Data source: RDIARD 2017–2023. Author's processing

It is evident that in the structure of incentives for sustainable rural development, incentives for plant production have a significantly smaller share compared to livestock production. The large imbalance in the structure of these incentives (ICPAGR) should be corrected in the coming period (Table 2).

ICPGR include incentives to support programs related to sustainable rural development, and which are implemented to preserve and improve the environment. According to current regulations, the maximum amount of ICPGR per one user (agricultural entity) is 2,000,000 RSD per year (Rulebook, c), and the maximum total amount of ICAGR per one user can receive for one calendar year is 3,000,000 RSD (Rulebook, d).

On the other hand, ICGRGB include support that is realized in accordance with a special regulation defining “the list of genetic reserves of domestic animals and the method of preserving the genetic reserves of domestic animals, as well as the list of indigenous breeds of domestic animals and endangered indigenous breeds”. The highest total amount of incentives that one user can achieve in one calendar year amounts to 15,000,000 RSD (Rulebook, e).

Bearing in mind that, according to the data presented in Table 1, incentives for organic production (IOP) had the largest average participation in total incentives for sustainable rural development (TISRd) in the period 2013–2023, IOP will be the subject of a more detailed analysis in this paper. Table 3 shows the share of incentives for sustainable rural development (ISRd) and incentives for organic production (IOP) in the agricultural budget (AB) in the period 2013–2023.

Table 3: Participation TISRd and IOP in AB 2013–2023

Incentives Year	AB (in RSD)	TISRd (in mil. RSD)	IOP (in RSD)	Participation of TISRd in AB (in %)	Participation of IOP in AB (in %)
2013	44,699.5	220.0	200.0	0.49	0.45
2014	45,427.2	123.8	93.7	0.27	0.21
2015	45,308.2	112.0	92.0	0.25	0.20

2016	40,465.7	150.00	91.0	0.37	0.22
2017	43,787.6	163.0	90.0	0.37	0.21
2018	44,109.2	254.0	110.0	0.58	0.25
2019	54,614.7	232.0	108.0	0.42	0.20
2020	56,067.9	504.0	350.0	0.90	0.62
2021	60,271.3	200.0	200.0	0.33	0.33
2022	78,571.5	530.0	380.0	0.67	0.48
2023	79,700.0	1,070.9	750.0	1.34	0.94
Average participation:				0.54	0.37

Data source: RDIARD 2013–2023. Author's processing

Based on the analysis of the presented data in Table 3, it can be concluded that both participations (IOP and TISRD) had a cyclical movement in the period 2013–2023. In the last analyzed year (2023), there was an increase in the share of TISRD and IOP in AB compared to the first year of the analyzed period (2013). Specifically, the share of TISRD in AB increased by 273% in 2023 compared to 2013. The share of total IOP in AB increased by 209% in 2023 compared to 2013. However, the average participation of IOP in AB was 0.37%, and the average participation of TISRD in AB was 0.54%, in the analyzed period (Table 3).

In the coming period, it would be appropriate to allocate more funds from the agricultural budget for incentives for sustainable rural development and incentives for organic production, as well as to direct some of them to incentives for increasing demand, i.e. for subsidizing the selling prices of organic products.

Table 4: Structure of IOP 2017–2023

Incentives Year	IOPP (in %)	IOLP (in %)	IOP (in %)
2017	33.33	66.67	100.00
2018	8.18	91.82	100.00
2019	7.41	92.59	100.00
2020	42.86	57.14	100.00
2021	20.00	80.00	100.00
2022	21.05	78.95	100.00
2023	46.67	53.33	100.00
Average participation:	25.99	74.01	100.00

Data source: RDIARD 2017–2023. Author's processing

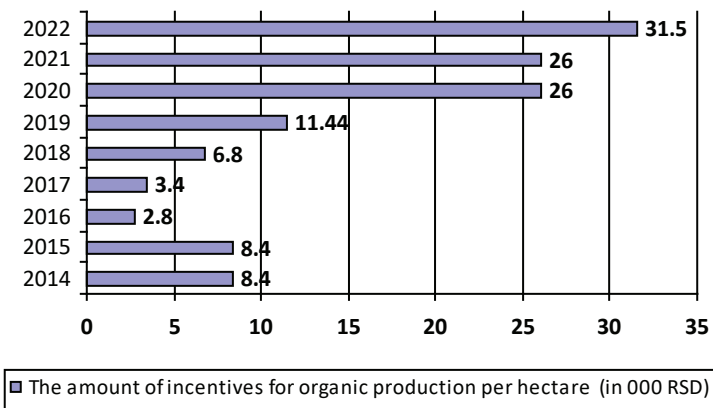
Analyzing the structure of IOP, it can be concluded that incentives for organic livestock production (IOLP) had a dominant share in their structure in the entire analyzed period. More precisely, the average share of IOLP was 74.01%, and the average share of incentives for organic plant production (IOPP) was 25.99% in the total IOP in the analyzed period, 2017–2023 (Table 4). The stated results of the research are expected considering that, according to the current regulations, the amounts of incentives in

organic livestock production are significantly higher than in organic plant production. Specifically, the maximum amount of incentives for organic livestock production per user (agricultural entity) in one calendar year is 55 million RSD (Rulebook, b, 2023), and for organic plant production, the maximum amount of incentives per user (agricultural entity) in one calendar year is only 1.26 million RSD (Rulebook, a, 2023).

Despite the evidently smaller amounts of incentives in organic plant production, they are significantly higher than incentives in conventional plant production. By analyzing both categories of incentives (paid per hectare of arable land), it can be concluded that IOP were higher than incentives for conventional production: (a) by 40% in 2014, 2015 and 2016; (b) by 70% in 2017 and 2018; (c) by 120% in 2019; (d) by 400% in 2020; (e) by 550% in 2021; (f) by 250% in 2022.

IOP have been paid continuously since 2005 from the AB of the Republic of Serbia. Analyzing the data shown on Figure 2, it can be noticed that the absolute amount of incentives per hectare increased by 375% in 2022 compared to 2013. Also, IOP are paid from the budget of the Autonomous Province of Vojvodina, as well as from the budget of individual local governments. For example, the City of Novi Sad is the first local government to introduce IOPP, and they have been paid continuously since 2011. All of the above represents a good basis for the development of organic production in the Republic of Serbia.

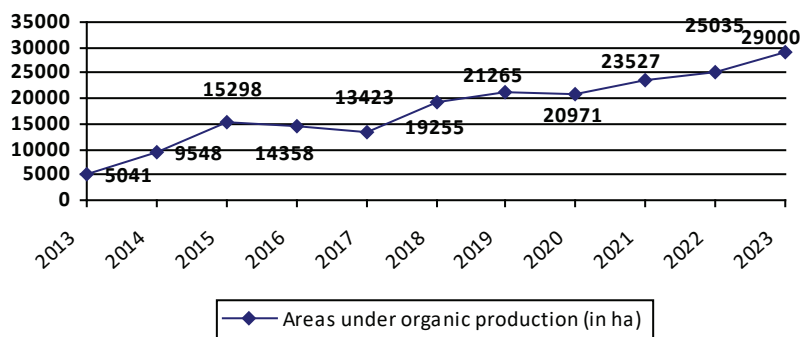
Figure 2: The amount of IOP per hectare 2014–2022 (in 000 RSD)



Data source: RDIARD 2014–2022. Author's processing

Are the above incentives a good basis for the development of organic agriculture in the Republic of Serbia? Have higher amounts of incentives in organic livestock production initiated a greater development of this production compared to organic plant production? The answers to these questions will be the subject of research and analysis in the remainder of the paper. The development of organic plant and livestock production in the Republic of Serbia in the period 2013–2022 is presented on Figure 3 and Table 5.

Figure 3: Organic plant production in Serbia (in ha) 2013–2023



Data source: RSMAFWM-OP. Author's processing

Arable areas in the organic agricultural production system in Serbia increased by 496.6% in 2022 compared to 2013 (Figure 3). However, taking into account that 3,257,100 ha is the total area of used agricultural land (Census of agriculture, 2023), it can be concluded that only 0.9% of the total arable land was in the organic agricultural production system in 2023. It is a very small participation. For example, in the Republic of Croatia, areas under ecological farming account for 8.1% of the total used agricultural land (Radović, Gantner, Subić, 2025).

According to Eurostat data (Eurostat, 2025), in Europe in 2023, the areas under organic production had the largest share in the total arable areas in the following countries: Estonia (22.8%), Portugal (22.5%), Italy (18.8%), Sweden (18.4%), Switzerland (18.2%) and the Czech Republic (16.2%). When analyzing the neighboring countries, the areas under organic production had the smallest share in the total cultivated areas in Albania (0.1%), North Macedonia (0.3%) and Montenegro (1.6%). This participation was slightly higher in Bulgaria (3%), Romania (5.5%), and Hungary (6.4%). In Croatia, as already mentioned, it was (8.1%), and in Slovenia it was the highest (11.4%). When comparing the mentioned data with the modest areas under organic production in Serbia, we can state that there are certain problems in the development of organic production in Serbia.

This conclusion is also indicated by the fact that the cultivable areas in the organic production system were 27,600 ha in 2024, that is, they were reduced by 5% compared to 2023. Possible reasons for insufficient areas in the system of organic agricultural production in Serbia are the lack of labor in rural areas, which is necessary for this type of production. Also, the prices of organic products are often too high at resellers (in markets), and many producers do not have the conditions for direct sales of their products. Therefore, the demand exists, but the supply is fragmented and dislocated, and in order to develop organic production in Serbia, it is necessary to invest in sales channels, as well as better organization of producers.

*Table 5: Organic livestock production in Serbia
(in the number of animals) 2013–2023*

Year	Sheep	Pigs	Cattle	Goats	Poultry	Horses	Bee colonies
2013	4,031	175	2,176	946	1,390	210	1,940
2014	3,153	76	2,726	1,154	1,140	173	894
2015	4,848	232	2,746	1,686	1,380	218	2,504
2016	4,378	283	2,895	1,406	3,158	165	2,878
2017	4,665	87	3,094	2,048	4,415	177	2,307
2018	5,138	284	3,594	1,486	6,735	114	3,061
2019	6,099	315	3,556	536	17,751	88	9,969
2020	5,711	326	4,627	286	14,936	16	12,618
2021	11,152	280	6,708	349	32,896	45	11,964
2022	13,212	217	9,423	522	40,066	20	103,236
2023	15,322	190	8,772	535	36,726	27	12,305

Data source: RSMAFWM-OP. Author's processing

In 2023 in Serbia, the number of almost all domestic animals in the organic production system increased compared to 2013, except for the number of goats and horses. When analyzing the movement of the number of individual animals by year, a cyclical movement is observed. In 2023, compared to 2022, the number of pigs in the organic production system was reduced by 12.4%, and the number of beehives was reduced by as much as 88.1% (Table 5). When the number of animals in the organic production system in 2023 is compared with the total number of individual species of animals in the same year according data in Census of agriculture – 2023, it can be concluded that in 2023 there were only 0.9% sheep, 0.01% pigs, 1.2% cattle, 0.4% goats, 0.2% poultry and 1% beehives in the organic production system.

The author concludes that, also, and organic livestock production is underdeveloped in Serbia, despite high incentives for this type of production. The reasons lie in problems in production, but also in placement. Specifically, producers are dissatisfied with the selling prices of their products, which prevent them from making adequate profits and therefore, often, they give up this production.

*Table 6: Incentives for the development of ecological (organic)
agriculture in the Republic of Croatia in 2023*

Incentives for the development of ecological (organic) agriculture	Realized incentive amounts in 2023 (in €)	Number of users (producers) who have exercised their right to incentives
Incentives for the transition to ecological agricultural practices and methods	100,551.30	110
Incentives for maintaining ecological agricultural practices and methods	3,485,858.48	1,549
Total:	3,586,409.78	1,659

Data source: ARSA, 2023, p. 72. Author's processing

Table 7: Green payments (eco schemes) in the Republic of Croatia

Type of incentives within the framework "Eco-scheme "	Incentive amount in 2023 (in €)	Participation in total incentives for "Eco Schemes" in 2023 (in %)
Incentives for intensifying the diversity of agricultural areas	28,467,585.86	77.0
Incentives for intensive maintenance of ecologically significant areas	600,091.24	1.70
Incentives for maintaining a minimum share of legumes of 20% within agricultural areas	7,275,535.81	19.7%
Incentives for the conservation of grasslands of great natural value	560,639.10	1.6%
Total:	36,903,852.01	100.00

Data source: ARSA, 2023, p. 67. Author's processing

To explore possible directions for the development of organic plant production in Serbia, incentives for this type of production in the Republic of Croatia are also examined. Incentives for the development of organic (ecological) agriculture are also paid out in Croatia, as well as in Serbia, within the framework of incentives for rural development measures. Incentives for the development of ecological (organic) agriculture in the Republic of Croatia in 2023 are shown in Table 6. Analyzing the data presented in Table 6, it can be concluded that in Croatia in 2023, producers in the organic production system were entitled to annual incentives in the amount of 914.10 euros – incentives for the transition to ecological agricultural practices and methods or 2,250.40 euros – incentives for maintaining ecological agricultural practices and methods.

As a member of the European Union, the Republic of Croatia applies other types of incentives for sustainable rural development. These are greening payments, which were introduced in 2013 as a measure of the Common Agricultural Policy, and they began to be applied, that is, paid to farmers in 2015. These incentives are part of direct payments, they are paid per hectare of arable land, with the aim of adopting ecologically acceptable agricultural practices. The structure and amounts of green payments, which were paid to farmers in the Republic of Croatia in 2023, are shown in Table 7. It is important to note that these schemes are voluntary for farmers. Farmers who apply them undertake an annual obligation to comply with them and on that basis receive the mentioned incentives.

Conclusion

Based on the results of the research carried out in this paper, it can be concluded that:

- (a) incentives for organic agriculture dominated in the structure of incentives for sustainable rural development in the Republic of Serbia in the analyzed

- period (the average share of incentives for organic agriculture in incentives for sustainable rural development in the period 2013–2023 was 69.66%);
- (b) in the structure of incentives for organic agriculture, incentives for organic livestock production had a dominant share in the Republic of Serbia in the analyzed period (the average share of incentives for organic livestock production in incentives for organic agriculture, in the period 2013–2023, was 74.01%);
 - (c) arable land in the organic farming system recorded growth in the analyzed period (2013–2023), but in 2023 only 0.9% of the total arable agricultural land in the Republic of Serbia was in the organic farming system;
 - (d) the number of almost all domestic animals in the organic production system increased in the period 2013–2023, but in 2023 there were only 0.9% sheep, 0.01% pigs, 1.2% cattle, 0.4% goats, 0.2% poultry and 1% beehives in the organic livestock production system out of the total number of the mentioned species of animals in the Republic of Serbia.

The above data are proof of the accuracy of the initial hypothesis of this research, that financial incentives in the previous period did not have an adequate impact on the development of organic agriculture in the Republic of Serbia.

What are the possible reasons? There are certainly many of them.

Financing is an important condition for the development of any production, but it is also necessary to have a good organization of it, as well as a good sales strategy. Many producers are not able to do it independently, and they are also not ready to join forces, so they often give up on organic production for the above reasons. The relatively high prices of products from the organic production system require developed sales channels, which would connect the dislocated supply with the paying demand. The paper also proposes the introduction of new incentives to increase demand for organic agricultural products, which could also be implemented as subsidies for reduced sales prices for certain categories of residents. Of course, it is necessary to educate producers, not only in the area of production, but also in the area of sales and promotion.

Therefore, in order to promote the development of organic agriculture in the Republic of Serbia, it is necessary to adopt a strategic document that would unify the identified development challenges and propose potential solutions. The development strategy and financial incentives, existing and new, proposed in this paper, would collectively encourage the development of organic agriculture, but and sustainable agricultural production in the Republic of Serbia.

The scientific contribution of the paper is in assessing the effectiveness of incentives for the development of organic agricultural production in the Republic of Serbia in the period 2013–2023, as well as in comparing the current types of incentives for sustainable rural development in the Republic of Serbia and the Republic of Croatia. The Republic of Croatia is taken as a comparative example, taking into account that in both countries, agriculture has a similar economic importance. Organic (ecological) agriculture is developing in approximately the same period in both Serbia and Croatia. The comparative analysis presented in this paper is significant given that the Republic of Croatia is a member of the European Union, while the Republic of Serbia is currently in the process of European integration. Precisely with the aim of harmonizing the agrarian

policy in the Republic of Serbia with the Common Agricultural Policy of the European Union, it would be useful to provide farmers in Serbia with the possibility of using “eco-schemes”, i.e. green payments. In particular, it would be useful to introduce, within the framework of incentives for sustainable rural development, measures supporting the intensive maintenance of ecologically significant areas, the conservation of grasslands of high natural value, and the maintenance of a minimum share of legumes of 20% within agricultural areas.

It is important to note that in the paper are only analyzed the planned amounts of incentives for organic production, given that analytical data on the realized individual types of incentives for sustainable rural development in the Republic of Serbia are not available. Future research should analyze planned and realized incentives for sustainable rural development, both in total and by type incentives.

Acknowledgement: Paper is a part of research financed by the MSTDI RS, as agreed in decision no. 451-03-33/2026-03/200009 from 05.02.2026.

References

- Adisa, O., Ilugbusi, B. S., Adewunmi, O., Franca, O., & Ndubuisi, L. (2024). A comprehensive review of redefining agricultural economics for sustainable development: Overcoming challenges and seizing opportunities in a changing world. *World Journal of Advanced Research and Reviews*, 21(1), 2329–2341. <https://doi.org/10.30574/wjarr.2024.21.1.0322>
- Adefila, A. O., Ajayi, O. O., Toromade, A. S., & Sam-Bulya, N. J. (2024). Integrating traditional knowledge with modern agricultural practices: A sociocultural framework for sustainable development. *World Journal of Biology Pharmacy and Health Sciences*, 20(2), 125–135. <https://doi.org/10.30574/wjbphs.2024.20.2.0850>
- Agriculture and Rural Development Strategy of the Republic of Serbia for the period 2014–2024 (Strategy 2014), Official Gazette of the RS No. 85/2014. [Strategija poljoprivrede i ruralnog razvoja Republike Srbije za period 2014–2024. Službeni glasnik RS br. 85/2014]
- Bathaci, A., & Štreimikienė, D. (2023). Renewable energy and sustainable agriculture: Review of indicators. *Sustainability*, 15(19), 14307. <https://doi.org/10.3390/su151914307>
- Bocean, C. G. (2025). The role of organic farming in reducing greenhouse gas emissions from agriculture in the European Union. *Agronomy*, 15(1), 198. <https://doi.org/10.3390/agronomy15010198>
- Boix-Fayos, C., & De Vente, J. (2023). Challenges and potential pathways towards sustainable agriculture within the European Green Deal. *Agricultural Systems*, 207, 103634. <https://doi.org/10.1016/j.agsy.2023.103634>
- Clark, S. (2020). Organic Farming and Climate Change: The Need for Innovation. *Sustainability*, 12, 7012. <https://doi.org/10.3390/su12177012>

- Dimovski, J., Krstić, B., & Radivojević, V. (2022). Ensuring the improvement of agricultural competitiveness through human capital development. *Ekonomika poljoprivrede*, 69(4), 1017–1029. <https://doi.org/10.5937/ekoPolj2204017D>
- Đuričin, D., Kuč, V., & Vuksanović-Herceg, I. (2024). Green transition action plan for Serbia: A call for urgent, systemic, comprehensive, and thoughtful action, *Ekonomika preduzeća*, 72(1–2), 1–33. <https://doi.org/10.5937/EKOPRE2402001D>
- Eurostat (2025). Area under organic farming. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/sdg_02_40/default/table?lang=en&category=ai
- FAO (2016). *Managing Climate Risk Using Climate-Smart Agriculture*, Rome, Italy, FAO Publication.
- Filipović, M., Radukić, S., & Bačaneć, V. (2025). The Importance of the EU Strategic Approach for Progress towards the Sustainable Development Goals. *Economics of Sustainable Development*, 8(1), 25–39. <https://doi.org/10.5937/ESD2401025F>
- Filipović, M. (2024). Trends in Sustainable Development and Environmental Protection in Serbia and the Western Balkans. *Economics of Sustainable Development*, 8(2), 53–66. <https://doi.org/10.5937/ESD2402053F>
- German Society for International Cooperation and Government of Republic of Serbia (2020). *Serbia and Agenda 2030*. [Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) i Vlada Republike Srbije (2020). *Srbija i Agenda 2030*] Retrieved from: <https://rsjp.gov.rs/wp-content/uploads/Srbija-i-Agenda-2030-novembar-2020.-lat.pdf>.
- Glamočlija, D., Janković, S., Popović, V., Filipović, V., Kuzevski, J., & Ugrenović, V. (2015). *Alternative agricultural plants in conventional and organic growing systems*, Belgrade, Institute for the Application of Sciences in Agriculture. [Glamočlija, D., Janković, S., Popović, V., Filipović, V., Kuzevski, J., Ugrenović, V. (2015). *Alternativne ratarske biljke u konvencionalnom i organskom sistemu gajenja*, Beograd, Institut za primenu nauke u poljoprivredi].
- Kalinowska, B., Bórawski, P., Bėdycka-Bórawska, A., Klepacki, B., Perkowska, A., & Rokicki, T. (2022). Sustainable development of agriculture in member states of the European Union. *Sustainability*, 14(7), 4184. <https://doi.org/10.3390/su14074184>
- Katić, B., Cvijanović, D., & Cicea, C. (2008). Organic production in the function of environmental protection in Serbia – situation and regulations, *Economics of Agriculture*, 55(1), 267–276. [Katić B., Cvijanović D., Cicea C. (2008). Organska proizvodnja u funkciji zaštite životne sredine u Srbiji – stanje i regulativa, *Ekonomika poljoprivrede*, 55(1), 267–276].
- Khan, M. T., Aleinikovienė, J., & Butkevičienė, L. M. (2024). Innovative organic fertilizers and cover crops: Perspectives for sustainable agriculture in the era of climate change and organic agriculture. *Agronomy*, 14(12), 2871. <https://doi.org/10.3390/agronomy14122871>
- Kovačević, V. (2021). Analysis of Current State and Limiting Factors for The Development of Organic Sector in Serbia. *Western Balkan Journal of Agricultural*

- Economics and Rural Development (WBJAERD)*, 3(1), 23–33. <https://doi.org/10.5937/WBJAE2101023K>
- Law on Incentives in Agriculture and Rural Development (Law, a), Official Gazette of the Republic of Serbia No.10/2013, 142/2014, 103/2015, 101/2016, 35/2023, 92/2023. [Zakon o podsticajima u poljoprivredi i ruralnom razvoju, Službeni glasnik RS br. 10/2013, 142/2014, 103/2015, 101/2016, 35/2023, 92/2023].
- Law on organic production (Law, b), Official Gazette of the Republic of Serbia No. 30/2010, 17/2019 [Zakon o organskoj proizvodnji, Službeni glasnik RS br. 30/2010, 17/2019].
- Law on Climate Change (Law, c), Official Gazette of the Republic of Serbia No. 26/2021 [Zakon o klimatskim promenama, Službeni glasnik RS br. 26/2021].
- López-Sanz, J. M., Penelas-Leguía, A., Gutiérrez-Rodríguez, P., & Cuesta-Valiño, P. (2021). Sustainable development and rural tourism in depopulated areas. *Land*, 10(9), 985. <https://doi.org/10.3390/land10090985>
- Madžar, L., Peković, D., & Đekić, I. (2025). Assessment of Sustainable Development in Selected Countries of Southeast Europe. *Ekonomika*, 71(2), 73–88. <https://doi.org/10.5937/ekonomika2502073M>
- Marković, M. (2015). Adjustment of EU agricultural policy to the new environment. *Economics of Agriculture (Ekonomika poljoprivrede)*, 62(4), 1031–1044. <https://doi.org/10.5937/ekoPolj1504031M>
- Mihailović, B., & Brzaković, T. (2018). *Knowledge and Innovation Transfer in Agibusiness*, Belgrade, Institute of Agricultural Economics.
- Ministry of Agriculture, Forestry and Fisheries of the Republic of Croatia (2024). *Annual report on the state of agriculture in 2023*, Zagreb. (ARSA, 2023) [Ministarstvo poljoprivrede, šumarstva i ribarstva Republike Hrvatske (2024). *Godišnje izvješće o stanju poljoprivrede u 2023*, Zagreb]. Retrieved from: <https://poljoprivreda.gov.hr/istaknute-teme/poljoprivreda-173/poljoprivredna-politika/agroekonomske-analize/zeleno-izvjesce/189>.
- Ministry of Agriculture, Forestry and Water Management Republic of Serbia, Organic Production, (RSMAFWM-OP). [Ministarstvo poljoprivrede, šumarstva i vodoprivrede Republike Srbije, Organska proizvodnja], Retrieved from: <http://www.minpolj.gov.rs/organska/>.
- Pejanović, R., & Radović, G. (2011). Agrarian policy in the Republic of Serbia in the transition period, *Economy – theory and practice*, 1, 29–38. [Pejanović, R., Radović, G. (2011). Agrarna politika u Republici Srbiji u periodu tranzicije, *Ekonomija – teorija i praksa*, 1, 29–38].
- Radović, G., Gantner, V., & Subić, J. (2025). Analysis of the Economic Significance of Agriculture in the Republic of Serbia and the Republic of Croatia. *Economics of Agriculture*, 72(2), 501–517. <https://doi.org/10.59267/ekoPolj2502501R>
- Radović, G., Popović, V., & Grujić-Vučkovski, B. (2024). Incentives for Credit Support of Agriculture in the Republic of Serbia, *Western Balkan Journal of Agricultural Economics and Rural Development (WBJAERD)*, 6(1), 65–75. <https://doi.org/10.5937/WBJAE2401065R>

- Radović, G. (2024). Agricultural Budget as a Source of Financing Rural Development in the Republic of Serbia, *Ekonomika*, 70(2), 59–70. <https://doi.org/10.5937/ekonomika2402065R>
- Radović, G., Zejak, D., & Pejanović, V. (2023). Agricultural budget in the function of organic agriculture development in Serbia and Montenegro, *Economics of Agriculture*, 70(2), 645–659. <https://doi.org/10.59267/ekoPolj2302645R>
- Radović, G., & Jeločnik, M. (2021). Improving Food Security Through Organic Agriculture: Evidence from Serbia, In book: *Shifting Patterns of Agricultural Trade, The Protectionism Outbreak and Food Security*, Springer Nature. <https://doi.org/10.1007/978-981-16-3260-014>
- Radović, G. (2015). Financing of agriculture in the Republic of Serbia: experiences and possibilities, *Economy – theory and practice*, 4, 13–27 [Radović G. (2015). Finansiranje poljoprivrede u Republici Srbiji: iskustva i mogućnosti, *Ekonomija – teorija i praksa*, 4, 13–27].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2013 (RDIARD, 2013), Official Gazette of the Republic of Serbia no. 20/2013, 21/2013, 63/2013, 90/2013, 106/2013. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2013. godini, Službeni glasnik RS br. 20/2013, 21/2013, 63/2013, 90/2013, 106/2013].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2014 (RDIARD, 2014), Official Gazette of the Republic of Serbia no. 8/2014, 30/2014, 116/2014, 128/2014, 137/2014, 144/2014. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2014. godini, Službeni glasnik RS br. 8/2014, 30/2014, 116/2014, 128/2014, 137/2014, 144/2014].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2015 (RDIARD, 2015), Official Gazette of the Republic of Serbia no. 19/2015, 109/2015. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2015. godini, Službeni glasnik RS br. 19/2015, 109/2015].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2016 (RDIARD, 2016), Official Gazette of the Republic of Serbia no. 8/2016, 93/2016. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2016. godini, Službeni glasnik RS br. 8/2016, 93/2016].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2017 (RDIARD, 2017), Official Gazette of the Republic of Serbia no. 8/2017, 53/2017, 67/2017, 88/2017. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2017. godini, Službeni glasnik RS br. 8/2017, 53/2017, 67/2017, 88/2017].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2018 (RDIARD, 2018), Official Gazette of the Republic of Serbia no.18/2018, 66/2018, 86/2018, 93/2018, 101/2018. [Uredba o raspodeli

- podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2018. godini, Službeni glasnik RS br. 18/2018, 66/2018, 86/2018, 93/2018, 101/2018].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2019 (RDIARD, 2019), Official Gazette of the Republic of Serbia no. 3/2019. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2019. godini, Službeni glasnik RS br. 3/2019].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2020 (RDIARD, 2020), Official Gazette of the Republic of Serbia no. 1/2020, 13/2020, 27/2020, 52/2020, 75/2020, 106/2020, 118/2020, 124/2020. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2020. godini, Službeni glasnik RS br. 1/2020, 13/2020, 27/2020, 52/2020, 75/2020, 106/2020, 118/2020, 124/2020].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2021 (RDIARD, 2021), Official Gazette of the Republic of Serbia no. 159/2020, 15/2021. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2021. godini, Službeni glasnik RS br. 159/2020, 15/2021].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2022 (RDIARD, 2022), Official Gazette of the Republic of Serbia no. 125/2021, 10/2022, 30/2022, 52/2022, 67/2022. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2022. godini, Službeni glasnik RS br. 125/2021, 10/2022, 30/2022, 52/2022, 67/2022].
- Regulation on the distribution of incentives in agriculture and rural development in the Republic of Serbia in 2023 (RDIARD, 2023), Official Gazette of the Republic of Serbia No. 8/2023, 21/2023, 27/2023, 42/2023. [Uredba o raspodeli podsticaja u poljoprivredi i ruralnom razvoju u Republici Srbiji u 2023. godini, Službeni glasnik RS br. 8/2023, 21/2023, 27/2023, 42/2023].
- Reimer, M., Oelofse, M., Müller-Stöver, D., Möller, K., Bünemann, E. K., Bianchi, S., & Magid, J. (2024). Sustainable growth of organic farming in the EU requires a rethink of nutrient supply. *Nutrient Cycling in Agroecosystems*, 129(3), 299–315. DOI: 10.1007/s10705-023-102
- Republic Institute of Statistics Republic of Serbia (2024). Census of Agriculture 2023 – First results, Presentation, Belgrade, January 31, 2024.
- Roljević-Nikolić, S., Vuković, P., & Grujić, B. (2017). Measures to Support the Development of Organic Farming in the EU and Serbia, *Economics of Agriculture (Ekonomika poljoprivrede)*, 64(1), 323–337. <https://doi.org/10.5937/ekoPolj1701323R>
- Romanchuk, L., Abramova, I., Moroz, Y., Poplavskyi, P., Svitlyshyn, I. (2024). Funding for sustainable development of rural communities: European experience. *Agricultural and Resource Economics: International Scientific E-Journal*, 10(4), 203–234. <https://doi.org/10.22004/AG.ECON.356000>
- Rulebook on conditions and methods of exercising the right to incentives for organic plant production (Rulebook, a), Official Gazette of the Republic of Serbia No.

- 60/2023 [Pravilnik o uslovima i načinu ostvarivanja prava na podsticaje za organsku biljnu proizvodnju, Službeni glasnik RS br. 60/2023].
- Rulebook on the conditions and method of exercising the right to incentives for organic livestock production (Rulebook, b), Official Gazette of the Republic of Serbia no. 63/2023. [Pravilnik o uslovima i načinu ostvarivanja prava na podsticaje za organsku stočarsku proizvodnju, Službeni glasnik RS br. 63/2023].
- Rulebook on incentives for the preservation of plant genetic resources (Rulebook, c), Official Gazette of the RSno. 85/2013, 44/2018. [Pravilnik o podsticajima za očuvanje biljnih genetičkih resursa, Službeni glasnik RS br. 85/2013, 44/2018].
- Rulebook on incentives for the conservation of animal genetic resources (Rulebook, d), Official Gazette of the Republic of Serbia No. 44/2023. [Pravilnik o podsticajima za očuvanje životinjskih genetičkih resursa, Službeni glasnik RS br. 44/2023].
- Rulebook on incentives for the preservation of animal genetic resources in the gene bank (Rulebook, e), Official Gazette of the Republic of Serbia No. 99/2023 [Pravilnik o podsticajima za očuvanje životinjskih genetičkih resursa u banci gena, Službeni glasnik RS br. 99/2023].
- Saleem, A., Anwar, S., Nawaz, T., Fahad, S., Saud, S., Ur Rahman, T., & Nawaz, T. (2024). Securing a sustainable future: the climate change threat to agriculture, food security, and sustainable development goals. *Journal of Umm Al-Qura University for Applied Sciences*, 1–17. <https://doi.org/10.1007/s43994-024-00177-3>
- Shang, M., & Xie, J. (2024). Agricultural sustainable development: Soil, water resources, biodiversity, climate change, and technological innovation. *Advances in Resources Research*, 4(2), 181–204. https://doi.org/10.50908/arr.4.2_181
- Tomaš-Simin, M., Rodić, V., & Glavaš-Trbić, D. (2019). Organic agriculture as an indicator of sustainable agricultural development: Serbia in focus, *Economics of Agriculture (Ekonomika poljoprivrede)*, 66(1), 265–280. <https://doi.org/10.5937/ekoPolj1901265T>
- Turtureanu, A. G., Crețu, C. M., Pripoaie, R., Marinescu, E. Ș., Sîrbu, C. G., & Talaghir, L. G. (2025). Sustainable Development Through Agritourism and Rural Tourism: Research Trends and Future Perspectives in the Pandemic and Post-Pandemic Period. *Sustainability*, 17(9), 3998. <https://doi.org/10.3390/su17093998>
- Vapa-Tankosić, J., Ignjatijević, S., Lekić, N., Kljajić, N., Ivaniš, M., Andžić, S., & Ristić, D. (2023). The role of environmental attitudes and risk for adoption with respect to farmers' participation in the agri-environmental practices, *Agriculture*, 13(12), 2248. <https://doi.org/10.3390/agriculture13122248>
- Walenia, A. (2022). Sources of Financing Sustainable Agriculture and Rural Areas in the EU in the Financial Perspective of 2021–2027. *VUZF Review*, (1), 80. <https://doi.org/10.38188/2534-9228.22.1.08>
- Wu, H., & Marette, S. (2020). Local and Global Welfare When Regulating Organic Products: Should Local Regulation Target Production or Consumption? *Sustainability*, 12, 5492; doi:10.3390/su1214549. <https://doi.org/10.3390/su12145492>

- Yerkinbayeva, L., Myrzakarim, A., Moldagaliyeva, A., Kalymbek, B., Yerezhepkyzy, R., & Nurmukhankyzy, D. (2025). The role of legal regulation in promoting organic agriculture to achieve sustainable food security. *Journal of Lifestyle and SDGs Review*, 5(1), e04197–e04197. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n01.pe04197>
- Zollet, S., & Lall-Maharjan, K. (2021). Overcoming the Barriers to Entry of Newcomer Sustainable Farmers: Insights from the Emergence of Organic Clusters in Japan, *Sustainability*, 13, 866. <https://doi.org/10.3390/su13020866>