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Quality and control of organically produced fruit as a factor of sustainable soil conservation in the Republic of Serbia

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Abstract

Organic agriculture plays a key role in providing healthy food, preserving the environment and sustainable use of natural resources, primarily soil. Organic production implies a system of cultivation based on the principles of sustainable and ecological agriculture, which avoids the use of artificial fertilizers, pesticides, GMOs and other chemicals, while protecting people and the natural environment. In addition to ecological and nutritional benefits, the development of the market for organic products allows consumers access to safe, high-quality and diverse foods, while providing producers with economic sustainability and a competitive advantage. Effective control and certification of organic products is necessary to maintain consumer confi-dence and ensure compliance with international food quality and safety standards. The integration of production, markets and control mechanisms is the key to improving a sustainable food industry system. The aim of this work is to point out the importance of the market and quality control of organic fruit in Serbia (2019-2024), which represents one of the most famous organic plant species, of which the raspberry, apple, plum and cherry are the leading ones. In addition to the introduction, the paper consists of three parts. The first part of the paper discusses the causes and effects of pollution from agriculture, as well as sustainable production strategies, including organic agriculture, which enables the production of healthy food in the context of modern environmental challenges. The second part of the paper indicates the connection between the goals of sustainable development and organic agriculture, their relationship through the 2030 Agenda, as well as the importance of controlling organic agriculture and organic products in order to produce safer and better quality products for the environment and human health. The third part of the work shows the most famous organic plant and fruit species in Serbia.

Keywords: *market, quality control, organic fruit, Serbia.*

Introduction

The standard of living and the state of the environment are going through a phase of significant changes due to the pressures of global development processes, with food production occupying a central place. The traditional agricultural model, which relies on high-yielding varieties and hybrids, synthetic fertilizers, chemical agents for crop protection and modern mechanization, although it brings high yields, has led to serious environmental and health problems, calling into question the long-term sustainability of this type of production (Bajagić et al., 2023; Sarker et al., 2024; Bajagić, Ignjatović, 2025). At the same time, from the consumer's point of view, there is a growing need for food that is of nutritional quality and free of toxic residues — that is, for products that are obtained in accordance with the principles of ecological sustainability and food safety standards (Bajagić et al., 2024; Ignjatović et

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al., 2025). Agriculture conceived in this way no longer meets only quantity criteria, but also demands for quality, environmental protection and human health. In this context, the transition to methods that minimize the use of chemical inputs, increase biodiversity and nurture soil health becomes necessary, so that food production is based on the principles of sustainability and safety (Leskovac, Petrović, 2023; Singh et al., 2024; Raveloaritiana, Wanger, 2024).

The state of the environment, caused by various sources and forms of pollution — land, water and air, has a direct or indirect impact on the quality of the ecosystem and, indirectly, on the health of the population. Soil pollution, soil degradation and contamination of water resources are parts of a wider problem, which cannot be seen in isolation from production and agricultural processes (Hakami, 2015; Tasleem et al., 2023).

Key environmental problems, such as excessive use of pesticides and agrochemicals, improper use of fertilizers, soil pollution with industrial and municipal waste, and water contamination are factors that significantly threaten agroecosystems. Such conditions can lead to soil and water no longer functioning as a "filter" and a source of healthy raw materials, but becoming a source of contamination (FAO, 2018). Furthermore, due to soil and water pollution, pollutants, i.e. chemicals, heavy metals, persistent organic compounds (such as pesticides, industrial chemicals, contaminants from waste) can enter the food chain. Plants or fodder grown/treated in such conditions can accumulate harmful substances, which then reach consumers through food. Such food can pose a serious risk to public health (Lu et al., 2015). In this context, the production of health-safe food is particularly important, which implies that the production process, from soil processing, through cultivation, to final consumption, must be in compliance with ecological, sanitary-hygienic and legal standards. Without such an approach, even food that seems adequate in terms of nutritional value may carry a hidden risk of contamination (Guerrieri et al., 2024; Lazarevic-Pašti, Potkonjak, 2025).

Contemporary research indicates that sustainable agricultural practices, such as crop diversification, organic fertilizers, crop rotation, reduced use of chemicals, responsible management of soil and water resources can significantly contribute to the preservation of soil fertility, biodiversity and ecosystem health, while food production remains productive (Babar, Akan, 2024; Raveloaritiana, Wanger, 2024; Islam, 2025). Also, sustainability policy and regulations (e.g. CAP in the EU) promote the application of these practices as part of a long-term strategy for the preservation of natural resources and food safety (Nikolić Popadić & Milenković, 2023). In the era of climate change and increasing pressure on resources, an integrated approach to the environment and agricultural production, supported by modern technologies (organic agriculture, precision agriculture), represents the only sustainable way for food to reach consumers in a safe and healthy way.

Fruit quality is essential for nutrition and human health and requires attention in agricultural practice. Organic agriculture can provide higher quality in fruit crops, thanks to the absence of synthetic fertilizers and pesticides, improved pollination, reduction of protective treatments, which encourages

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the production of antioxidant compounds (Munne-Bosch & Bermejo, 2024). Organic production systems promote resilience, stability and security in the face of unforeseen circumstances. In this regard, organic agriculture can be the answer in a strategy for a sustainable future for a long period of time, when it comes to the food crisis (Padel et al., 2007; Arben et al., 2016). According to Ignjatović et al. (2025) organic production in the Republic of Serbia is governed by laws and regulations that are in accordance with the regulations of the European Union, and the control of organic production is carried out in accordance with the law and refers to all stages of organic production and high quality products (Bošković, 2016). Simić (2020) states that the Law on Organic Production ("Official Gazette of the RS", number 30/10, 17/19-second law) regulates the production of agricultural and other products using organic production methods, control and certification of organic products, processing, labeling, storage, transportation, circulation, import and export of organic products, as well as other issues.

Pollution in agriculture — contemporary context

Agriculture and food production are necessary for the survival and development of society, but in modern intensive farming systems, a significant negative impact on the environment occurs more and more often. Soil, water and air pollution, land degradation, loss of biodiversity and food contamination — these are all risks that agriculture can generate, and which also affect public health (Blagojević et al. 2024).

The moderate development of the agricultural sector for the needs of food production in the shortest possible time for the population has led to the creation of aggressive destruction of natural and renewable resources. The cause of the problem is the progressive work of the chemical industry, and the use of various synthetic agents for plant protection is often excessive and uncontrolled (Ahmad et al., 2024). The consequences occur through the following problems: climate change, global warming, destroyed environment, which results in the loss of ecosystem elements and functions, as well as the loss of functional biodiversity. The constant use of mineral fertilizers and chemical inputs, irrigation and mechanization in agriculture contributed to an increase in CO2 emissions by about 14% (The Carbon Footprint of Crop Protection Products, 2012). Facts from recent research confirm that the topic of pollution in agriculture is more current and urgent than ever (Table 1).

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Table 1. Causes and consequences of pollution in agriculture

Cause / agricultural practice / chemical substance	Example / mechanism	Consequences / effects (on soil, water, food, health, biodiversity)	Reference / the source
Excessive / inadequate use of pesticides	Systematic pesticides, insecticides, herbicides, fungicides in intensive agriculture	Viral contamination of soil and water; degradation of soil biodiversity: destruction of beneficial microbes, insects, deposition of resistance; harmful accumulation in plants — death or disease of plants, entry into the food chain, danger to human and animal health.	Alengebawy et al., 2021 Rad et al., 2022
Long-term use of mineral / synthetic fertilizers (NPK, superphosphates, etc.)	Fertilizers containing nitrogen, phosphorus, sometimes traces of heavy metals (cadmium, lead, copper...)	Accumulation of toxic metals in the soil; reduction of soil fertility; plant contamination; risk of metal entering food; water pollution: nitrate/phosphate leaching, eutrophication, groundwater contamination.	Tasleem et al., 2023
Washing (run off) and washing of fertilizers and pesticides from fields into surface and underground water	Rain and irrigation wash undistributed pesticides and fertilizers into waterways	Pollution of rivers, lakes and springs — eutrophication (excessive growth of algae), reduced oxygen in the water, death of fish and other aquatic organisms; endangered drinking and irrigation water.	Wijekoon, 2017 Bayabil & Teshome, 2022
Changes in the chemical and biological structure of the soil (pH, microbes, soil biodiversity)	Soil acidification (from nitrogen fertilizers), reduction of organic matter, reduction of beneficial microorganisms and soil fauna	Reduced fertility, soil degradation, poorer structure and lower soil resistance; reduced ability of soil to support healthy plant growth; potentially greater need for chemicals, necessitating a cycle of degradation.	Morariu et al., 2018 Rashid et al., 2023
Destruction of natural habitats and replacement of natural ecosystems with monocultures / intensive use of agricultural land	Deforestation, transfer of natural areas to arable land; monoculture of crops, lack of awareness of the ecological diversity of the soil	Reduction of biodiversity — plants, animals, microorganisms; loss of ecosystem functions (eg natural pest regulation, soil fertility, natural resilience) — increased risk of degradation and chemical dependency.	Apoorva & Kundlas, 2024

Source: Authors.

The importance of soil quality in organic agricultural production

Soil is a key resource in organic agriculture because its biological, physical and chemical structure depends on the fertility and stability of the agroecosystem (Antony, 2022).

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Organic production emphasizes preserving and increasing the content of organic matter in the soil, which contributes to better structure and water retention without the use of synthetic fertilizers (Janković et al., 2022). Organic practices, such as compost application, green manure and crop rotation, promote the activity of beneficial microorganisms and nutrient cycling (FAO and ITPS, 2021). Research shows that soils in organic systems have greater microbial diversity and more stable aggregates compared to conventional systems (Huang et al., 2025). Preservation of organic carbon in the soil contributes to reducing erosion and increasing resistance to drought and climatic extremes (John et al., 2025). Healthy soil provides plants with better nutrition and natural resistance to diseases and pests (FAO, 2022). Soil quality directly affects the yield and nutritional value of organic products (Antony, 2022). In the long term, maintaining soil fertility is the basis of sustainable organic production and environmental protection (Janković et al., 2022).

Sustainable Solutions: Strategies and Management of Agricultural Systems

Contemporary challenges require a transition from conventional, intensified production models to sustainable, environmentally responsible practices. Some of the recommended approaches are:

- Ecological / organic farming - reducing the use of synthetic pesticides and fertilizers, using natural materials, maintaining the biological activity of the soil, crop rotation, tilling the soil without toxic chemicals. This contributes to the conservation of soil, water and biodiversity (Sarker et al., 2024; Bajagić, Ignjatović, 2025).
- Precision and integrated agriculture (integrated pest/soil/water management) - rational, targeted use of resources and chemicals, monitoring of soil and crop conditions, minimization of waste and contamination, combining agroecological practices (Janković et al., 2024; Modu et al., 2025).
- Reduction of plastic use, waste control and recycling - avoidance of plastic materials in mulching, packaging, optimization of biological waste, recycling, transition to earth-friendly materials, which helps to reduce micro/nano plastics in the soil (Nuruzzaman et al., 2025).
- Monitoring and regulation, soil and water protection policies - establishment of systematic soil and water monitoring, legal regulations, education of all persons involved in new production systems, implementation of good practices, transparency in the management of agrochemicals (European Commission, 2024).

Organic agriculture is considered an important component of sustainable development because it promotes environmental sustainability and social responsibility, including the use of practices that minimize the negative impact of agriculture on the environment and human health (Panzaru et al., 2023). The sustainability of the planet and human life is closely related to the implementation of

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measures related to the 2030 Agenda, because through the Sustainable Development Goals, it supports the promotion of large-scale organic agriculture as an essential condition for well-being, quality of life and environmental protection, as well as the reduction of climate imbalances (UN, 2015; Bennetzen et al., 2016). The Food and Agriculture Organization of the United Nations (FAO) clearly supports the fact that organic agriculture is affected by the way all involved actors address the sustainable development goals of the 2030 Agenda, and that organic agriculture has a direct impact on achieving those goals at the global level. This means that the goals of sustainable development are directly or indirectly related to healthy food, a healthy living environment and organic agriculture, and must be the focus of short- and long-term projects and action plans. The Food and Agriculture Organization identifies a total of eight sustainable development goals that are most relevant to organic agriculture, namely: clean water, combating climate change, life under water, life on land, zero hunger, healthy health and well-being, decent work and economic growth, sustainable consumption and production (Panzaru et al., 2023).

Production of high-quality food (high nutritional value), development of sustainable agriculture while preserving the ecosystem, maintaining and increasing soil fertility through the cultivation of legumes, application of green and manure or deep-rooted plants in perennial crop rotation and addition of composted or non-composted organic matter to the soil, is the goal of organic production. Control of organic production in the Republic of Serbia is carried out in accordance with the Law, which is based on European regulations, IFOAM and Codex Alimentarius. One of the main tasks that IFOAM (International Federation of Organic Agriculture Movements) traditionally adopts is to harmonize international standards on organic agricultural production as much as possible (Janković et al., 2023). In the Republic of Serbia, the Law on Organic Production was adopted in 2010, in accordance with the regulations of the European Union - Council Regulation (EC) no. 834/2007 and Commission Regulation (EC) no. 889/2008, until changes were made in 2019 (Filipović et al., 2021). This law regulates the production of agricultural and other products using organic production methods, goals and principles of organic production, organic production methods, control and certification in organic production, and other important issues. The law contains two regulations, namely: the Regulation on control and certification in organic production and methods of organic production ("Official Gazette of the RS", number 95/20) and the Rulebook on documentation submitted to the authorized control organization for issuing a certificate, as well as on the conditions and methods of selling organic products ("Official Gazette of the RS", number 88/16). In order to obtain a certificate for the production of organic food, it is necessary that the soil has not been treated with chemicals for at least 3 years, but is prepared using manure, that is, biological and liquid fertilizer (Jugović et al., 2017).

The Ministry of Agriculture, Forestry and Water Management establishes a list of control organizations (Table 2) (Ignjatović et al., 2025), for a period of one year, which have an impartial role in the control and certification program, in order to comply with the rules of organic production and achieve high product quality (Bošković, 2016). Accreditation of control organizations is carried out by

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the Accreditation Body of Serbia, in accordance with the SRPS EN ISO/IEC 17065 standard, which is one of the conditions for obtaining authorization from the Ministry of Internal Affairs and Communications (Simić, 2020).

Table 2. The authorized control organizations, 2025.

"CENTAR ZA ISPITIVANJE NAMIRNICA DOO CIN", BELGRADE
"ECOCERT BALKAN DRUŠTVO SA OGRANIČENOM ODGOVORNOŠĆU, BELGRADE
"DOO ORGANIC CONTROL SYSTEM", SUBOTICA
"ECOVIVENDI" DOO, BELGRADE
"PREDUZEĆE ZA TEHNIČKA ISPITIVANJA I ANALIZE SGS" DOO, BELGRADE
"PROFI LAB"DOO, BELGRADE
"JUGOINSPEKT - PREDUZEĆE ZA KONTROLU KVALITETA I KVANTITETA ROBE I USLUGA", DOO, NOVI SAD

Source. Ignjatović et al., 2025a, Ignjatović et al., 2025b.

Based on the performed controls, the authorized control organization issues a certificate, which confirms that the product was obtained using organic production methods (Ignjatović et al., 2025) in accordance with the Law on Organic Production. After successful certification, the product is marked as "ORGANIC PRODUCT", with the national symbol and logo of the authorized control organization (Bošković, 2016). Successful certification confirms that an organic product is a product of 95% ingredients, produced by organic farming methods (Mickovski Stefanović et al., 2024), labeled in accordance with the Law on Organic Production. For the purposes of export, the manufacturer should have a certificate, which is recognized in the country where he plans to market his products, and these regulations are in accordance with the regulations of the European Union (Simić, 2020).

In addition to the national mark and logo, since 2013, the mark "BIOCS Organic Control System" has been in force. "Organic Control System" is an organization also authorized by the Ministry and the Accreditation Body of Serbia, the European Commission with the possibility of certification in the countries of the region as well (Filipović et al., 2021). It is authorized to certify unprocessed products of plant origin and processed agricultural products used as food, including products for export. Apart from these two marks present in Serbia, the products often have a European mark, which is not the accent of domestic producers (Filipović et al., 2021). In addition to the Ministry of Agriculture, Forestry and Water Management, the Group for Organic Production was formed as the competent authority that performs tasks related to organic production. During 2020, the Group came under the jurisdiction of the Sector for Agricultural Policy. The formed Group has the following duties: keeping records of authorized control organizations; conducts annual supervision over the work of authorized control organizations; collects annual reports on organic production from authorized control organizations, keeps summary records on organic production; prepares decisions on the fulfillment of conditions for performing control and certification activities; approves deviations from the methods of organic crop and livestock production and processing rules in organic production; approves the use of reproductive

material from conventional agricultural production after the conversion period and shortening or extending the conversion period and other tasks (Serbia Organica, 2024).

Table 3. The group of agricultural inspectors for organic production carries out inspection supervision over the implementation of laws and regulations

control of the ban on the use of food, food and animals, auxiliary means in processing, reproductive material, auxiliary means, microorganisms and animals obtained and/or modified from genetically modified organisms or with the help of genetically modified organisms;		
control of organic plant and livestock production, processing of ingredients, additives and auxiliary substances, cleaning agents and methods of cleaning technological lines;		control of labeling of products that have organic status and from the conversion period;
control of storage, distribution, traffic, import and export of organic products;	control of fulfilled requirements of organizations for performing control and certification tasks;	sampling and taking measures and actions to prevent illegalities, as well as others jobs.

Source: Simić, 2020.

Fruit production shows numerous advantages because it enables using various locations and regions, establishment of orchards on lands of different quality, fruit growth in different climatic conditions (Veličković, Golijan, 2017). In the Republic of Serbia, fruit production is mainly concentrated in the southern region, where the production of organic raspberries, blackberries, plums, strawberries, apples and cherries dominates. The Republic of Serbia represents a country with preserved agro-ecosystems and rich opportunities for improvement, not only of organic fruit production, but also of other organic products. Agroecological conditions in the Republic of Serbia are favorable, especially for the production of organic berries, with an emphasis on raspberries, where production is located in Arilje, which accounts for 30% of the total world production of raspberries. The production of raspberries, compared to other fruits, prevails because they are traditionally grown on large areas. Serbia is the world leader in the production of this type of fruit. In addition to the fact that our country provides extremely favorable conditions for organic production, the full potential of unpolluted soil is not used. Therefore, producers should focus on this shortcoming and improve production, because the demand for organic fruit in the international market is unlimited, which leads to an increase in profits.

The essence of organic production is compliance with nature and its laws, which induces the natural defense mechanism of plants and develops greater resistance to diseases and pests (Veličković, 2002; Veličković & Golijan, 2015). Some of the certified organic fruit producers in Serbia are: "Nectar" doo, "Foodland" doo, "Ethnos Foundation", "BMD", GO "Organic" doo, "VONI-M" doo, "Zdravo organic", Gordana Šoškić, Poljoprovredno gazdinstvo Stojanović organic, Nebojša Antić and others (Serbia Organica, n.d.).

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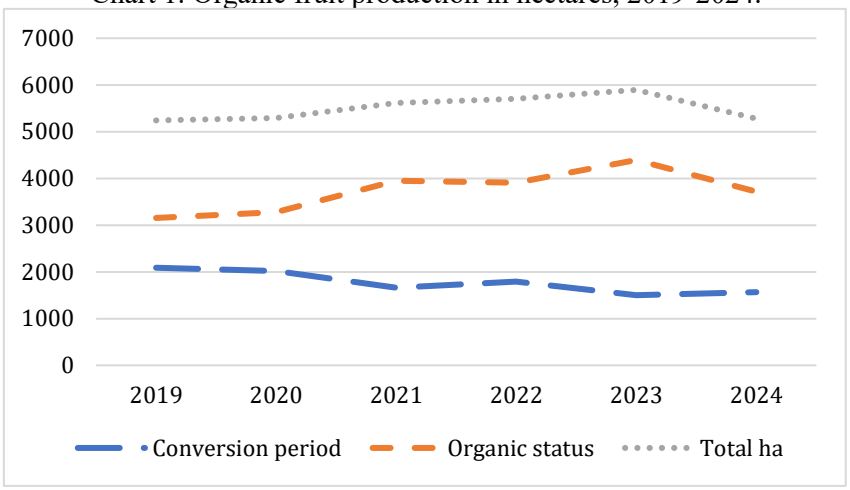
Fruit as an example of organic culture in Serbia

In Serbia, fruit is one of the most famous organic plant species (Ignjatović et al., 2025). The conversion period means the period of organic production, where the certificate has not yet been obtained, that the product can be sold, because there is another problem that needs to be solved (or some toxicant is present in the soil or some harmful organism is being eradicated, so a permitted pesticide must be used, etc.). In the case of certain types of fruit, there was a decrease in the area of plantations during the conversion period, precisely because of the transition to an organic system of production, or there was even an increase due to the acquired favorable conditions, that conventional systems were transferred to the conversion period, or new plantations were planted due to favorable market moments. According to data from the Ministry of Agriculture, the average conversion period for all types of fruit for the period 2019-2024. it was 1770.9 ha, while 3733.6 ha had organic status. The total average of fruit under organic production was on average 5504.6 ha (Chart 1).

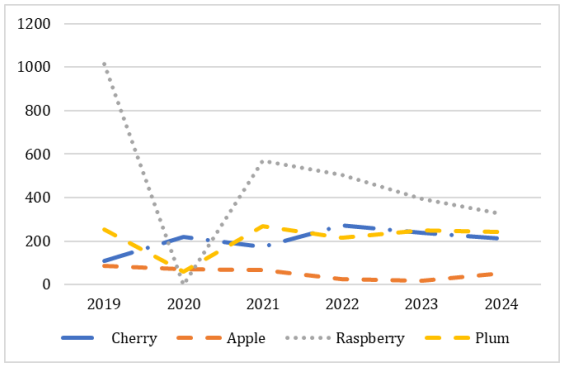
Chart 1. Organic fruit production in hectares, 2019-2024.

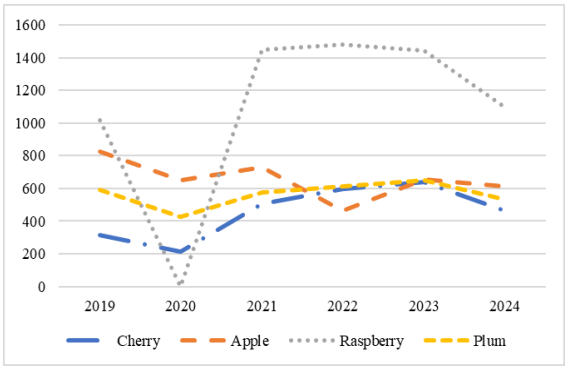


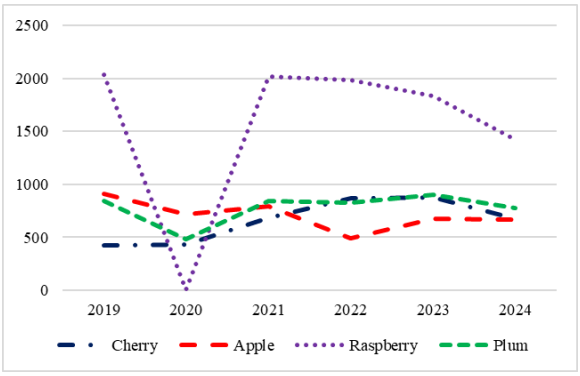
Source: Ministry of Agriculture, Forestry and Water Management, 2025.

In the period 2019-2025. year, the total area of organic fruit in Serbia was 33027.03 ha, of which 5241.3 ha (2019), 5294.8 ha (2020), 5614.9 ha (2021), 5702.7 ha (2022), 5894.1 ha (2023) and 5279.1 ha (2024). The largest areas in the same period 2019-2024. year, they recorded the crops that are the subject of analysis in this work, i.e. raspberry (9292 ha), apple (4842.4 ha), plum (4674.4 ha) and sour cherry (3958.2 ha), etc. The decline in total production in 2024 should be justified by the climatic conditions, which were generally very unfavorable for agriculture. In the period 2019-2024. year, the conversion period was 2880 ha (raspberry), 1287 ha (plum), 1226 ha (cherry) and 310 ha (apple), while the organic status was 6483 ha (raspberry), 3937 ha (apple), 3388 ha (plum), 3731 ha (cherry) (Charts 2, 3, 4).

Charts 2, 3, 4: Conversion period, Organic status, Total ha for cherry, apple, raspberry, plum, 2019-2024.







Source: Authors on the base Ministry of Agriculture, Forestry and Water Management, 2025.

The index level means the level of increase or decrease of some phenomenon in relation to a certain base (initial) value, expressed in %. In this research, the base value is the year 2019, on the basis of which the percentage values of the areas from 2020-2024 are shown. Table 4 shows the values of the areas of vegetable and fruit crops that are in the conversion period. Thus, in the case of cherry cultivation, an index level (%) was calculated that clearly shows the increase in areas from 2020-2024 compared to 2019. In the case of apples and raspberries, there is a high percentage difference in areas for the given period, but in a negative context. In 2020, the areas under plum fell significantly compared to 2019, while in the following year 2021 (6.38%), there was a sudden increase in areas (by 100%) and even a positive increase in the amount of 6.38%. The reason for this is attributed to the Covid-19 situation, where production stopped abruptly, and therefore the registration of areas to certification houses and the competent Ministry. The other years were in a very small percentage decline.

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Table 4. Areas (ha) in the conversion period and index level (%), 2019-2024

Frut	Conversion period					
	2019	2020	2021	2022	2023	2024
Cherry	110.6664	220.328	173.8487	274.0939	237.1171	210.6265
I.N.	100.00	99.09	57.09	147.68	114.26	90.33
Apple	84.4862	69.122	66.2694	23.991	16.8534	49.8705
I.N.	100.00	-18.19	-21.56	-71.60	-80.05	-40.97
Raspberry	1014.826	0.087	570.6622	505.3241	393.1749	324.6117
I.N.	100.00	-99.99	-43.77	-50.21	-61.26	-68.01
Plum	252.7867	58.1696	268.9243	215.5197	250.3234	241.5794
I.N.	100.00	-76.99	6.38	-14.74	-0.97	-4.43

Source: Authors on the base Ministry of Agriculture, Forestry and Water Management, 2025.

Conclusion

Current evidence clearly shows that agriculture, if it is based on intensive and chemical-intensive approaches, is a significant source of pollution of soil, water, food and biodiversity. However, sustainable and effective alternatives are available: organic and agroecological practices, precision agriculture, rational use of resources, reduction of harmful inputs and responsible management of land and water. The transition to such systems can contribute to the production of safe food, environmental conservation, stability of agroecosystems and long-term sustainability of agriculture. Organic production is an alternative that contributes to environmental conservation, rational use of resources, reduction of pesticide use, production of higher quality and healthier products, which can achieve sustainable development goals and, through organic agriculture, the achievement of one part of the 2030 Agenda, over a longer period of time. The Republic of Serbia, from the aspect of agriculture, has the potential to expand the market and the production of organic products. In this direction, there are certain institutional bodies that encourage, monitor, and control organic agricultural practices and products, for which a certain certificate is obtained, recognized by the European Union and European laws. In Serbia, fruit is one of the most famous organic plant species. In the period 2019-2025 the total area of organic fruit in Serbia amounted to 33,027.03 ha. The largest areas were recorded by raspberries, apples, plums and cherries. In the same period, the conversion period was the largest in the case of raspberries, plums, cherries and apples, while the highest organic status was recorded for raspberries, apples, plums and cherries. The only exception was in 2024, when climatic conditions were very unfavorable for agriculture.

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Kvalitet i kontrola organski proizvedenog voća kao faktor održive zaštite zemljišta u Republici Srbiji

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Abstract

Organska poljoprivreda ima ključnu ulogu u obezbeđivanju zdravstveno bezbedne hrane, očuvanju životne sredine i održivom korišćenju prirodnih resursa, prvenstveno zemljišta. Organska proizvodnja podrazumeva sistem kultivacije zasnovan na principima održive i ekološke poljoprivrede, koji izbegava upotrebu veštačkih đubriva, pesticida, GMO-a i drugih hemikalija, pri čemu štiti čoveka i prirodnu okolinu. Pored ekoloških i nutritivnih benefita, razvoj tržišta organskih proizvoda omogućava potrošačima pristup sigurnim, kvalitetnim i raznovrsnim namirnicama, dok proizvođačima pruža ekonomsku održivost i konkurentsku prednost. Efikasna kontrola i sertifikacija organskih proizvoda su neophodni za očuvanje poverenja potrošača i osiguranje usklađenosti sa međunarodnim standardima kvaliteta i bezbednosti hrane. Integracija proizvodnje, tržišta i kontrolnih mehanizama predstavlja ključ za unapređenje održivog sistema prehrambene industrije. Cilj ovog rada je da ukaže na značaj tržišta i kontrole kvaliteta organskog voća u Srbiji (2019-2024), koje predstavlja jednu od najpoznatijih organskih biljnih vrsta, od kojih prednjače malina, jabuka, šljiva i višnja. Rad se pored uvoda uvoda satoji od tri dela. U prvom delu rada razmatraju se uzroci i efekti zagađenja proisteklog iz poljoprivrede, kao i strategije održive proizvodnje, uključujući organsku poljoprivredu, koja omogućava proizvodnju zdravstveno bezbedne hrane u kontekstu savremenih ekoloških izazova. Drugi deo rada ukazuje na povezanost ciljeva održivog razvoja i organske poljoprivrede, njihovog odnosa kroz Agendu 2030, kao i važnost kontrolisanja organske poljoprivrede i organskih proizvoda kako bi se proizveli bezbedniji i kvalitetniji proizvodi za životnu sredinu i ljudsko zdravlje. Treći deo rada prikazuje najpoznatije organske biljne vrsta voća u Srbiji.

Ključne reči: *tržište, kontrola kvaliteta, organsko voće, Srbija.*

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