

REPORT ON THE SITUATION OF AGRICULTURE IN THE REPUBLIC OF SERBIA IN 2023

BOOK I

Horizontal Analysis



Republic of Serbia

Ministry of Agriculture, Forestry and Water Management

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INTRODUCTION BY THE MINISTER

Dear readers,

It's with great pleasure that we present this year's edition of the Report on the Situation in Agriculture in the Republic of Serbia in 2023, which continues the long-standing practice of publishing this document. This year's "Green Book 2023" provides a macroeconomic overview of the agricultural sector, as well as an overview of the situation in the market for the most important agricultural products through a multitude of statistical indicators.

By creating and publishing this document, we want to present to experts and the public the situation in agriculture in the previous year, which was certainly full of challenges, especially for our agricultural producers. Also, this document, in addition to an overview of the situation in 2023, indicates the medium- and long-term trends of certain indicators, which provides the public with a broader insight into the situation in the sector and the challenges that this business faces.

Bearing in mind the accession process of the Republic of Serbia to the European Union, a special part of the "Green Book 2023" is dedicated to the situation in agriculture in the European Union, to enable readers to compare the indicators for Serbian agriculture with those for the EU member countries. In this sense, we are proud of the fact that the "Green Book" was prepared according to the methodology used in the European Union for this purpose, which is supported by the positive evaluations of the European Commission.

We are extremely satisfied with the positive reaction of the expert public to the quality and content of the "Green Book", and we hope that the "Green Book 2023" will also meet the expectations of the readers. Certainly, we will continue to improve this document in the future, including current topics, with the desire to present this, perhaps the most important sector of the economy, in the best possible way and thereby contribute to better information of the public.

With respect,

Minister Aleksandar Martinović LL.D.

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INTRODUCTION

The report on the situation in agriculture in the Republic of Serbia in 2023 ("Green Book 2023") is the eleventh report of this type, prepared and published by the Ministry of Agriculture, Forestry and Water Management, with the desire to offer a comprehensive analytical document to experts and the public, which gives an overview of the Serbian agriculture sector in the previous year.

The particular importance of this year's "Green Book" lies in the fact that the results of the 2023 Census of Agriculture are included in the analysis, which makes this report one of the first public analytical documents that present the results of the 2023 Census of Agriculture by sectors. The results of the 2023 Census of Agriculture were prepared and adapted to the needs of this document by the Statistical Office of the Republic of Serbia, whose experts are the authors of a special chapter in the "Green Book 2023", dedicated to the 2023 Census of Agriculture, with the aim of presenting to the public the importance of the Census of Agriculture as a comprehensive survey in agriculture.

This year's "Green Book 2023", has retained the structure of previous editions, and it consists of two parts – Book I that presents the agricultural sector from a macroeconomic perspective, including economic and financial indicators, and Book II that provides an overview of the situation in the most important branches of agriculture, i.e., agricultural markets in 2023. As specialized chapters are included in this document every year, in accordance with the current situation and trends, in addition to the chapter on the 2023 Census of Agriculture, this year's edition contains a chapter on climate change, as well as a statistical overview of agricultural production in the European Union in 2022.

All statistical data in this document are based on official statistical data for the year 2023 and are shown in relation to the previous year, 2022, as well as in relation to the previous five-year average (2018-2022), while they are graphically and tabularly (annex) shown within ten-year time series (2014-2023). The producer of most of the statistical data contained in this document is the Statistical Office of the Republic of Serbia, while other sources of statistics are relevant administrative sources – individual registers of the Ministry and other state bodies, the National Bank of Serbia, Eurostat, DG AGRI and others.

Given that the agricultural statistics for Serbia are almost completely aligned with the Eurostat methodology, and that the structure of the "Green Book" is adapted to the structure of similar analytical reports published in the European Union, the Report on the Situation in Agriculture in the Republic of Serbia in 2023 ensures comparability with data at the EU level, as well as with relevant analytical documents in EU agriculture.

The Ministry of Agriculture, Forestry and Water Management would like to thank the **Statistical Office of the Republic of Serbia** for its support and assistance in preparing this document.

1. SITUATION IN AGRICULTURE

1.1. Macroeconomic environment and importance of the agricultural and food sector

The macroeconomic trends in the Republic of Serbia in the previous five-year period were largely conditioned by global trends, caused by non-economic factors – the COVID-19 pandemic and the Russian-Ukrainian conflict resulted in market disruptions such as interrupted supply chains, limited supply of raw materials and energy sources, changes in consumer habits, inflationary trends, disruptions in cash flows, etc. However, in 2022, and especially in 2023, there was a gradual recovery of economic activities and improvement of the economic environment, with continued significant influence of prices on indicators that contain a price component.

After a year of limited real GDP growth, an increase in the foreign trade deficit and extremely high inflation, the year 2023 was marked by the continuation of stable real GDP growth, a significant reduction in the trade deficit, as well as a decrease in the annual inflation rate. In 2023, the labour market also showed signs of stabilization, primarily in terms of maintaining the unemployment rate below 10%, as well as increasing average salaries. In terms of monetary indicators, the year 2023 is characterized by continued stability of the exchange rate, as well as a significant increase in foreign exchange reserves, while budgetary indicators indicate a reduction in the balance of payments deficit and its share in GDP, as well as a decrease in the share of public debt in GDP.

	2019	2020	2021	2022	2023
GDP (mill. EUR) ¹	46,005	46,815	53,345	60,427	69,521
Real GDP growth (% of change from the previous year) ²	4.3	-0.9	7.7	2.5	2.5
Unemployment rate (%) ³	11.2	9.7	11.1	9.5	9.5
Salaries (annual average, EUR) ⁴	466.0	510.9	560.2	637.9	733.5
Total exports of goods and services (mill. EUR) ⁵	23,349	22,271	28,818	38,004	41,009
Total imports of goods and services (mill. EUR) ⁵	27,960	26,370	33,439	45,054	44,596
Balance of trade (mill. EUR) ⁵	-4,612	-4,099	-4,621	-7,050	-3,587
Foreign trade (mill. EUR) ⁵	51,309	48,641	62,258	83,058	85,605
Current account of the balance of payments (% of GDP)	-6.9	-4.1	-4.2	-6.9	-2.6
Budget surplus/deficit (% of GDP) ⁶	0.2	-8.3	-4.6	-3.3	-2.2
Public debt (central government) (% of GDP)	51.9	57.0	56.5	55.1	52.0
Inflation (consumer prices, % of change from the same month of previous year)	1.9	1.3	7.9	15.1	7.6
NBS foreign exchange reserves (mill. EUR)	13,378	13,492	16,455	19,416	24,909
Foreign exchange rate (annual average, RSD/EUR)	117.85	117.58	117.57	117.46	117.25
Foreign exchange rate (annual average, RSD/USD)	105.28	103.03	99.49	111.86	108.41

Table 1: Basic macroeconomic indicators; 2019-2023

¹ According to the ESA 2010 methodology. The data for 2023 were obtained as the sum of four quarters.

² In constant prices of the previous year.

³ From 2021, data are aligned with the 2022 Census. The data was previously revised according to the 2021 Labour Force Survey methodology. The data for 2023 is the average of four quarters.

⁴ Until 2018, salaries were presented according to the old methodology. Since 2018, salaries have been presented according to a new methodology and based on data from the Tax Administration. The average RSD/EUR exchange rate in the observed period was used to convert salaries in RSD into EUR ⁵ Since 2007, data on the balance of payments (current account, export and import of goods and services) have been harmonized with the guidelines contained in the Manual for the preparation of the balance of payments and international investment position no. 6 of the IMF (BPM6). Data for 2005 and 2006 are presented according to the previous methodology. Due to the interruption of the series, the growth rates of exports and imports of goods are given according to the general system of trade, which is a broader concept and includes all goods that enter or leave the economic territory of a country, with the exception of goods that are in transit.

⁶ The consolidated (since 2005) and national (since 2008) deficits include the payment of activated guarantees, bank recapitalisations and debt accession, according to the IMF methodology.

Source: NBS

The beginning and middle of the previous ten-year period was marked by a stable slight growth of the GDP level (from EUR 36 to 47 billion), and at the end of the period, a slightly higher GDP growth was recorded, reaching a level of close to EUR 70 billion in 2023¹. Along with the evident increase in economic activities, this growth of GDP in the previous three years was also significantly influenced by price growth.

After significant growth in 2021 (as a result of the low base value), real GDP growth in the next two years records a stable level of $2.5\%^2$ year-over-year.

Graph 1: Gross domestic product (bn EUR) and real GDP growth (%) (right axis); 2014-2023



When observed by quarters in 2023, real GDP growth rates increased progressively from quarter to quarter, recording the lowest level of growth in Q1 (0.9%), and then in the Q2 and Q3 a GDP growth level of 1.6% and 3.6%, reaching the highest growth in the Q4 (3.8%).

In regard to the agriculture, forestry and fishery sector, the rates of real GVA growth recorded a relatively high level in all four quarters of 2023, to a large extent due to the low base values of the previous year. The highest level of real growth in GVA of agriculture was recorded in the Q1 and Q3 (8.6% and 8.9%), while slightly lower growth was achieved in the Q2 and Q4 (7.3% and 7.7%).

In the context of the use of GDP, the highest real growth was achieved in the component of gross investment in fixed assets, with the maximum achieved level of growth in Q4 of 5.2%.





In the first half of the previous decade, the country's public debt was at a stable level, ranging from EUR 23 to 25 billion, and started increasing from 2020, reaching its maximum level in 2023 at EUR 36.2 billion.

However, considering the increase in the absolute value of GDP in the same period at a rate slightly higher than the growth rate of public debt, a decrease in the share of public debt in GDP is expected. At the beginning of the period, this share recorded a level of close to 70%, in order to decrease to the level of 52% in the middle of the period and in 2023.

¹Data for 2023 were obtained as a sum of four quarters.

² In constant prices of the previous year.

The structure of public debt at the central level is dominated by direct liabilities (EUR 34.3 billion), while the total external debt was at the level of EUR 25.4 billion, i.e., internal debt at the level of EUR 10.8 billion.

After the three-year budget surplus in the period 2017-2019 and the maximum budget deficit recorded in 2020, the following period was marked by a decrease in the share of the budget deficit in GDP.

In 2023, the budget deficit recorded a level of 2.2% of GDP, which is 1 pp less than the previous year, which continues the trend of decreasing the value of this indicator.





After reaching a record share of the current account of the balance of payments deficit in GDP in 2022, in the following year, 2023, the value of this indicator was recorded at the level of 2.6% (4.3 pp less than in 2022). This decrease was largely influenced by the decrease in the goods deficit, with the continued increase in the surplus on the services account, as well as the increase in capital inflows through foreign direct investments.

Foreign trade of goods and services, after permanent growth in the first half of the previous decade, and stagnation during the period of global disruptions in the pandemic, continues to grow from 2021, and the growth is particularly pronounced in the following two years. Such a movement was expected, bearing in mind the general increase in the prices of raw materials and energy at the global level, which greatly affected the prices of goods and services, but with a visible stabilization in 2023.

In 2023, the value of foreign trade reached a record level of EUR 85.6 billion (3% higher than the previous year), with exports of goods and services worth EUR 41 billion and the value of imports at the level of EUR 44.6 billion.

Due to this exchange ratio, in 2023 the value of the deficit was halved compared to 2022 (EUR 3.6 billion).

Graph 4: Foreign trade of RS (bn EUR); 2014-2023



Source: NBS

The decrease in the commodities deficit is the result of the combined impact of export growth (3.7% year-over-year) and lower imports (-4.8% year-over-year), primarily due to a smaller energy balance deficit (by around EUR 1.9 billion), due to the drop in world energy prices, lower quantitative imports and increased exports of electricity. The export

of the processing industry contributes the most to the growth of goods exports, which increased by 5.4% as a result of investments from the previous period, where 16 of 23 branches have recorded growth, especially branches related to the automotive industry, the production of machinery, equipment and electronics. (*Report on inflation, February 2024, NBS*)

Due to the increase in exports in 2023 and the simultaneous decrease in imports, the level of coverage of imports by exports in 2023 reaches the maximum value in the previous decade, at the level of 92%, equivalent to an increase of 7.6 pp compared to the previous year.





Considering the fact that the GDP in 2023 grew at a rate higher than the growth of exports, and that imports decreased, there was a drop in the country's export dependence (by 3.9 pp), as well as a greater decrease in import dependence (by 10.4 pp) compared to the previous year.

As the recorded deficit in 2023 is lower compared to the previous year, its very existence points to a greater import dependence than export dependence, but due to the deficit value, the difference between these two values is reduced compared to the previous period.

After the record level of the economic openness ratio, reached in 2022, its decrease was recorded the following year, caused by the higher growth of GDP in relation to the growth of the foreign trade value. The recorded value of the economic openness ratio in 2023 reaches the level of 1.23 (14.3 pp less compared to 2022), indicating the fact that the value of foreign trade of goods and services in 2023 exceeded the value of the realized GDP by 23%.

In 2023, positive trends in the labour continued. market were expressed through an increase in the employment rate by 0.7 pp, i.e., a drop in the unemployment rate by 0.1 pp compared to the previous year. The achieved employment rates of 50.2% and unemployment of 9.4% in 2023 represent record values in the previous decade.





³ From 2021, the Statistical Office of the Republic of Serbia conducts the Labor Force Survey (LFS) according to the new, redesigned methodology of Eurostat. The changes that have been introduced in the LFS since 2021 mainly relate to the definitions and the manner of specifying certain categories of the population in the labour market - employed persons, unemployed persons and persons outside the labour force - as well as the scope and volume of variables dedicated to their additional characteristics. In order to ensure the comparability of data after the transition to the new methodology, the revision of the time series of LFS for the period from 2010 to 2020 was carried out.

According to data from the Labour Force Survey (SORS), 2.84 million persons⁴ were employed in 2023, which is close to the level from the previous year (+0.8%). A similar trend of stagnation is also present in the number of unemployed, considering that in 2023, around 296,000 unemployed persons were registered, i.e., 0.2% lower than in 2022.

Graph 7: Average salaries⁵ (EUR) and trend; 2014-2023



After the stagnation of foreign exchange reserves of the NBS in the first half of the previous decade at the level of around EUR 10 billion and the period of accelerated growth from the middle of the period, in 2023 a record level of foreign exchange reserves was recorded, of EUR 24.9 billion.

This level of gross foreign exchange reserves is the result of an increase in foreign exchange reserves by about EUR 5.5 billion in 2023, reaching a result that is 28.3% higher than the previous year.

The first half of the previous decade was characterized by the stagnation of average salaries at the level of around EUR 400, while their growth was recorded in the second half of the period (on average 12% year-overyear in the period 2019-2023).

In 2023, average salaries reached the maximum level of EUR 734, which is an increase of 15% compared to the salaries of the previous year and 93% higher than the value of average salaries at the beginning of the period.





This high growth of gross foreign exchange reserves was largely influenced by inflows based on the interventions of the NBS through the purchase of foreign currency and the management of foreign exchange reserves. Also, the net market effects were positive, which was primarily influenced by the increase in the price of gold in USD on the international market, while the weakening of the dollar against the euro had the opposite effect⁶.

⁴ In the category "population aged 15 and more".

⁵ Average of the period.

⁶ Source: Report on the state of foreign exchange reserves and movements on the interbank foreign exchange market in December 2023, NBS, 2024



The annual inflation rate, measured by the growth of consumer prices, in most of the previous decade moved at a stable level of up to 3%, so that in the period 2021-2023 inflation would increase significantly, reaching its maximum level in 2022 (15.1%).

In 2023, a lower inflation rate of 7.6% was recorded, which is 7.5 pp less than last year. This level of inflation was mostly influenced by the increase in the prices of gas, electricity for households, processed food, industrial products, services, etc.

In the first third of the observed period, the inflation rate moved below the target inflation zone, and the same trend would continue in 2020, after three years of inflation within the projected level. In the last three years, the inflation rate shows a significant (positive) deviation from the target (with a maximum in 2022), which in 2023 records a value of 4.6 pp (3.1 pp/6.1 pp).

The ratio of dinar to euro in 2023 maintains a stable level (-0.2% year-over-year) compared to the previous period, recording a level of RSD 117.25.

After reaching its maximum value in 2022, the value of US dollar in 2023 decreased by 3.1%, remaining at the level of RSD 108.41.

Graph 10: Exchange rate of the dinar (RSD); 2014-2023



Table 2: Participation of the agricultural sector in basic macroeconomic indicators (%);2019-2023

	2019	2020	2021	2022	2023
GVA in current prices (mill. RSD)					
Agriculture, forestry and fishing (A)	322,840	349,165	394,708	458,499	426,644
Share in total GVA (%)					
Agriculture, forestry and fishing (A)	7.2	7.6	7.6	7.7	6.3
Number of employees (000 persons)					
Agriculture, forestry and fishing (A)	452.7	421.4	390.5	390.7	373.2
Manufacture of food products (C10)	88.6	91.4	89.5	98.3	95.9
Manufacture of beverages (C 11)	10.9	11.7	10.0	10.3	10
Manufacture of tobacco products (C 12)	2.3	2.6	4.3	4.3	2.7
Share in total employment (%)					
Agriculture, forestry and fishing (A)	15.6	14.6	14.2	13.9	13.1
Manufacture of food products (C10)	3.1	3.2	3.2	3.5	3.4
Manufacture of beverages (C 11)	0.4	0.4	0.4	0.4	0.4
Manufacture of tobacco products (C 12)	0.1	0.1	0.2	0.2	0.1
Average net salary in regard to average net salary (%)					
Agriculture, forestry and fishing (A)	86.3	87.0	84.9	82.3	81.0
Manufacture of food products (C10)	77.5	76.8	76.6	75.9	76.4

	Manufacture of beverages (C 11)	126.9	118.8	114.8	109.3	106.0
	Manufacture of tobacco products (C 12)	197.7	211.8	181.7	168.4	163.1
Share of agricultural and food products in total foreign trade (%)						
	in exports	18.5	21.3	19.0	17.3	16.2
	in imports	7.8	8.9	8.4	8.0	9.1
	Source: SORS					

Most of the economic indicators in the agricultural sector in 2023 have recorded a decrease compared to the previous year, which is somewhat expected when it comes to indicators that contain a price component, and bearing in mind the decrease in market prices at the world level, as well as the slowdown in inflationary trends in 2023. In addition, the development of other sectors of the economy, especially construction and services, results in a decrease in the participation of the agriculture sector in the basic macroeconomic indicators in 2023.

Graph 11: GVA of agriculture (bn RSD) and share in total GVA (%) (right axis); 2014-2023



After the previous slight decrease and temporary two-year stabilization (2021-2022), the trend of decreasing number of employees in the agriculture and food industry sector continues in 2023, recording a level of 373 thousand employees, or 4.3% lower than in 2022. This decrease is largely the result of a drop in the number of employees in primary agriculture (-4.5%) and in the production of tobacco products (even - 37.2%).

Observed in current prices, in 2023, 7% lower GVA in agriculture was achieved compared to the previous year, as a consequence, first of all, of price reductions and inflation. However, the rate of real GVA growth recorded a positive value in all four quarters of 2023, especially in Q1 (8.6%) and Q3 (8.9%), making agriculture one of the sectors with the highest GVA growth in 2023.

The share of GVA of agriculture in the total GVA, after varying in the middle of the period, continues to decrease in 2023, reaching a minimum level of 6.3%, i.e., 1.4 pp less compared to the previous year.





⁷ The number of employees refers to employees in agriculture and the food industry, i.e. to business sectors KD2010: A – Agriculture, forestry and fisheries, C 10 – Manufacture of food products, C 11 – Manufacture of beverages and C 12 – Manufacture of tobacco products.

The share of employees in agriculture and the food industry in the total number of employees in 2023 recorded a level of 17% (-1 pp compared to 2022 and 6.6 pp less compared to the beginning of the period), which continued the trend of decreasing share of employees in this sector in the total number of employees in the economy.

Graph 13: Deviation of average monthly net salary in agriculture from average net salary in RS (average = 0) (%); 2019-2023



The increase in the value of the total export of goods and services in 2023 by 8% year-over-year, with a simultaneous decrease in the value of exports in agriculture by 3%, resulted in the share of agricultural exports in total exports of 16.2%, which is the minimum share of agriculture in exports in the last decade.

In contrast, the growth in the value of imports of agricultural and food products by 7% year-over-year led to an increased share of this product category in total imports (to 9.1%), given that total imports decreased compared to the previous year (-1%).

1.2. Structure of agricultural production

1.2.1. Utilized agricultural area

The utilized agricultural area (UAA) in the Republic of Serbia in 2023 covered 3,396,315 ha, which is 2.6% lower than the previous year, and which, in terms of this indicator, can be considered an above-average deviation. This level of reduction in the area of UAA is to the greatest extent the result of a decrease in the area under permanent grasslands, especially pastures (-28.1%).

The largest area of UAA consists of arable land, the share of which increased by 2.1 pp compared to the previous year. Arable land was mostly used for growing cereals, which

Average net salaries in the agriculture and food industry sector in 2023 have increased in all activities between 11% and 15.5%.

However, taking into account the increase in average net salary at the level of the economy at the rate of 14.8% compared to 2022, the deviation of net salaries from the average increased in primary agriculture by 1.3 pp (to -19%), while in other activities, the average salary deviates from the average less than the previous year.





were sown on more than two thirds of this area (67.8%). Among cereals, the most represented crop is maize on 35.4% of harvested areas, while wheat is harvested on 26.2% of areas. Oilseeds were grown on 19.1% of the total harvested area, with sunflower and soya bean dominating.





The largest year-over-year increase in sown areas in 2023 was recorded for sugar beet (20%), but it should be taken into account that the previous year these areas were reduced by 11.9% compared to 2021. Also, the areas under fallow land have increased by 13.8%, while orchards occupy a 4.7% larger area than in 2022.

In addition to reduced areas under pastures, in 2023, smaller areas under legumes (-19.3%) and vineyards (-8.1%) were recorded, while the reduction of production areas is also noticeable with flowers, nurseries, potatoes and fodder plants (6.5-7.5%).

1.2.2. General indicators of agricultural production

In 2023, agricultural (net) production reached 8.7% higher level compared to the previous year, but the relatively low base value from 2022 should be taken into account. The increase in net production was largely contributed to by an increase in the physical volume of plant production of 15.5% compared to the previous year, despite a significant decrease in livestock production of 4.9% year-over-year, which continued the negative trend present in the previous three years.

Observed by sector, the increase in the physical volume of plant production was mostly contributed to by the increase in cereal production (35.4%), especially maize production (as much as 54.8%), which was expected, bearing in mind the poor production results in 2022. Also, in 2023, the production of industrial plants increased by 29.5% year-overyear, especially the production of sugar beet (22.4%). A significant increase was also registered in fodder plants, whose volume of production increased by 49% compared to the previous year. On the other hand, the physical volume of vegetable production⁹ decreased by 15.5% compared to 2022, while a drop in production was also recorded for fruits and grapes (19%).

⁸ The data in brackets refer to the share of a certain category in the total in UAA.

⁹ Without potato. Potato production increased by 14.5% compared to 2022, but with a low base value of the previous year.

Graph 16: Changes in the physical volume of production (%); (0=2022.); 2023



The downward trend continues in livestock production in 2023, to the greatest extent under the influence of the decline in the number of animals. Livestock production, measured by the physical volume of production, decreased by 4.9% in 2023 compared to the previous year, with the largest decrease recorded in honey production (20.3%), while the decrease in cattle and pig production was at the level of 5.8%.

In regard to the production of individual products in livestock production, the production of cow's milk decreased by 6% in 2023, while at the same time, the production of sheep's milk increased by 24.8%.

Plant production

Cereals were grown on a slightly larger area in 2023 compared to the previous year (+2.4%), on 1.77 million ha, where slightly more than half of this area was under maize (52.3%), while wheat was grown on an 8.1% larger area than in 2022 (682 thousand ha). In 2023, oilseeds were grown on a 5% smaller area than the previous year, which was mostly contributed to by the decrease in the area under soya bean (-10.2%) and somewhat less under sunflower (-4.2%), while the increase in the area under rapeseed (31.1%) had no significant impact.

The largest increase in area in 2023 was recorded for sugar beet (20%), reaching a level of 42 thousand ha, which brings this area back to the level in 2019. Area increase of 8.7% year-over-year was also recorded in fruit production (on 200 thousand ha), whereby the area under berries increased by 14.1%.

In contrast to 2022, when a drop in yields was recorded for all field crops, the year 2023 was marked by higher yields, with an increase in the total cereal yield by as much as one third. Bearing in mind low production results of the previous year, maize in 2023 recorded a 59.6% higher yield, at the level of 7.2 t/ha.

A higher level of yield (31.7%) was also achieved with oilseeds, recorded a level of 2.9 t/ha, which was largely contributed to by the increase in soya bean yield (67.2%) and its return to a level slightly above the average (2.8 t/ha).

Graph 17: Yields in plant production (t/ha); 2014-2023



The yield of vegetables at 15.9 t/ha also indicates an increase compared to the previous year (by 16.2%), which was largely contributed to by the increase in the yield of potato (22.8%) and beans (11.8%).

In contrast, the fruit sector recorded lower yields in 2023 compared to the previous year, by 22.6% for woody fruits and 9.8% for berries. The yield of all woody fruits recorded a decrease in 2023, with the largest year-on-year decrease for apricots (-33.7%), cherries (-31.1%), plums (-27.2%) and apples (-22.2%). In the berry sector, the yield of strawberry has decreased by 30.2% compared to 2022, while the yield of blackberry was lower by 17.1%, and the yield of raspberries was lower by 12%.

Bearing in mind the poor production results in the previous year (low base value) in the cereal production sector, as well as a significant increase in yields, with slightly increased areas under cereals, an increase in production in this sector is expected in 2023, with an achieved level of 10.8 million t (+34.9% year-over-year). This increase was largely contributed to by the increase in maize production (54.8%), while wheat production increased by 10.9% year-over-year. A similar situation exists in the oilseeds production sector, with total production in 2023 at 1.4 million t, which is an increase of 25.6% compared to 2022, with the highest production growth recorded for rapeseed (53.7%) and soya beans (50.3%).

Graph 18: Production of oilseeds, fruits and vegetables (mill. t); 2014-2023



In the vegetable sector, the total production increased by 11% in 2023, with the largest recorded increase in the production of potato (14.5%), while the largest decrease in production was recorded in tomatoes (-23.1%), onions (-20.4%) and peppers (-17.1%).

Regardless of the increase in the area under fruit in 2023, the drop in fruit yield affected the production level of 1.26 million t, which is 16.5% lower production than in the previous year, which was mostly contributed to by the decline in the production of apricots (-33.9%), cherries (-32.3%) and plums (25.7%).

Livestock production

Trends in livestock number showed negative results in 2023 in all aspects (except for the number of beehives). In this sense, in 2023, the number of cattle decreased by 9.4% (by 75 thousand head) compared to the previous year, with a rate of decrease in the number of dairy cows of 10.2%, where both categories recorded minimum values in the last two decades. In the pig production sector, an even more significant decrease in the number of heads is recorded – by 19.7%, which is equivalent to a decrease in the number of 526 thousand in the last year and reaching the minimum level. Bearing in mind that in 2023 the number of sows decreased by 16.9%, the downward trend in the number of pigs can be expected to continue in the following period.

While the number of sheep in 2023 remained at approximately the same level as the previous year (-0.2%), the number of goats decreased by 23.4%.

In the poultry sector, the number of heads is 3.6% lower than in 2022, while the number of laying hens has decreased by 5.2%.

The only positive movement of indicators in livestock production in 2023 was recorded in the number of beehives, which compared to the previous year increased by 12.9%, reaching a level 14.3% higher than the five-year average.

Graph 20: Production of cattle, pigs, sheep and poultry (weight gain/live weight; 000 t); 2014-2023



Beef production in 2023 remained at the same level as the previous year (79 thousand t), while pork production decreased slightly (-3.3%).

On the other hand, an increase in the level of meat production was recorded, except in the sheep production sector (3.2%) in the poultry sector as well (10.3%), which continues the trend of poultry meat production growth.

Graph 19: Number of cattle, pigs, sheep and goats (mill. heads); 2014-2023



In line with the reduction in the number of heads, the production of cattle and pigs in 2023 recorded a drop by 5.6-5.8% in both sectors, with the pig sector recording production below 400 thousand t for the first time in the last decade, and both sectors recorded below-average results.

In the sheep production sector, a decrease of 3% was also recorded compared to the previous year, while in the poultry sector, there was a 7.7% increase in production compared to 2022.





¹⁰ Gross domestic production (exported live cattle included, imported live cattle excluded), without raw fats.



Graph 22: Milk production (mill. l); 2014-2023

Egg production at the level of slightly more than 1.5 billion eggs in 2023 is the minimum level of egg production recorded in the previous ten years (12% lower than the five-year average). This trend is expected, considering the decrease in the average number of laying hens in 2023 by 2.6% year-over-year. The production of cow's milk recorded a further year-on-year decrease (-5.7%), which means that the level of production was lower than 1.4 billion. I (9.1% below the five-year average) in 2023, for the first time in the previous two decades.

A significant decrease in production in 2023 compared to the previous year was also recorded in goat milk (-38.2%), also recording the minimum level.

In contrast, in the production of sheep's milk, a growth of 22.2% was achieved compared to the previous year.





The multi-year minimum result was recorded in 2023 in wool production also (30.5% year-over-year), reaching the level of 2 thousand t.

Honey production recorded a drop compared to the previous year by a fifth, but it should be taken into account the high base value due to excellent production results in 2022, and the production of 11.3 thousand t in 2023 is a 19.4% higher level than the five-year average.

1.2.3. Prices of agricultural products

The previous two years saw a significant increase in the prices of agricultural products in Serbia, mostly as a reflection of price movements at the world level. Following the global price impact, in 2023 there was a 7.9% drop in prices at the level of the agricultural sector, while, observed by individual sectors, a drop in prices was recorded in crop production, fruit production and viticulture, with the continuation of the annual increase in prices in the sectors of livestock production, processing from own production and fishery.

sector (%) (0=2022); 2023



Graph 24: Price changes in the agriculture The biggest price decrease in 2023 compared to the previous year was recorded in the sectors of crop production (-22.6%) and fruit production and viticulture (-21.9%), while the year-on-year price increase was registered in fishery (17.4%) and livestock production (16.7%).

Observed according to individual products, the most pronounced price increase in plant production in 2023 was recorded in vegetables (40.1%), which was largely contributed to by the increased prices of seed potatoes, onions, lettuce and peppers. An increase in price in 2023 was also recorded for wine (12.3%), while a drop in price was recorded for grain (-25.8%), industrial plants (-22.1%) and fruit (-21.9%).



Graph 25: Price changes of individual products (%) (0=2022); 2023

In regard to the year-on-year price movement in the livestock sector, price increase is recorded for almost all products, except for honey (-12.3%) and poultry (-1.4%). The most pronounced increase in prices was recorded for milk (23.4%), eggs (18.4%), pigs (17.6%) and calves (17.4%).

Market Information System of Agriculture of Serbia (STIPS)

STIPS is an online database, which provides weekly/monthly information on the prices of agricultural and food products and inputs. STIPS includes retail prices at the green markets and wholesale prices in the wholesale markets, with the information showing the predominant prices. Reports are prepared based on collected data, and they indicate the situation in supply and demand, quality and price trends in the previous seven days for selected agricultural and food products.

As all world economies were to some extent affected by the Russian-Ukrainian crisis in the previous period, the agricultural sector in Serbia also felt the impact of this conflict, with the additional negative impact of climate change on production. Warm weather at the beginning of the year and abundant rainfall during the year on the one hand, as well as a significant increase in the price of raw materials and an increase in labour costs on the other hand, have significantly affected the yield and price of specific agricultural products in 2023.

In addition to high production costs, unfavourable weather conditions also affected the reduction of fruit production in 2023. The winter without snow and temperatures above normal for the beginning of the year affected the fruit trees. considering that the vegetation of some fruit species started earlier, especially in the case of early varieties. In the case of raspberries, a good yield was achieved, but frequent and heavy rains, as well as drought during the harvest period, affected the quality of the fruit. The predominant price of raspberries at green markets remained at last year's level.





The conflict in Ukraine has affected the decline of apple exports to the Russian Federation, traditionally Serbian largest export market for apples, due to increased transport costs. However, the losses were partially offset by exports to new markets, such as the United Arab Emirates. The predominant price of apples remained at last year's level of 80 RSD/kg, while the predominant price of grapes was 33% higher compared to the previous year.

Graph 27: Predominant prices of certain vegetables on green markets (RSD/kg); 2014-2023



In addition to fruit production, unfavourable climatic conditions in 2023 significantly affected the vegetable production. Early vegetables had a high price due to the high cost of production inputs as well as because of the limited supply.

The prices of onions, potatoes and tomatoes in 2023 increased compared to the previous year – the predominant prices of tomatoes increased by 33%, potatoes by 25%, and onions by as much as 114% compared to the previous year. The cold weather did not favour the spring sowing of field crops (maize, soya beans and sunflower), while the temperature had a particularly negative effect on small cereals. Frequent rainfall during the critical stages of flowering and heading led to lodged plants in some parts of Serbia. However, when it comes to maize, the year 2023 can be considered significantly more favourable than the previous year.

Graph 28: Dominant prices of certain cereals from silos (RSD/kg); 2014-2023



The predominant price of sunflower in 2023, of 45 RSD/kg, was as much as 34% lower compared to the previous year, when, due to the drought, producers were granted financial assistance (up to 7.8 RSD/kg). The predominant price of wheat in 2023 was also 38% lower compared to the previous year, recording a level of 21 RSD/kg, which significantly reduced income for farmers, especially those with smaller holdings. In 2023, the recorded predominant price of maize was 41% lower compared to the previous year.

Graph 29: Predominant prices in slaughterhouses (RSD/kg); 2014-2023



The emergence of African swine fever in Serbia and the region had a significant impact on the pig market. The predominant price of piglets (16-25 kg) and lambs in 2023 compared to the previous year increased by more than 14%, while the price of fattening pigs increased by 53%.

2. FOREIGN TRADE EXCHANGE OF AGRICULTURAL AND FOOD PRODUCTS

2.1. Total exchange

The foreign trade exchange of the agricultural and food sector significantly participates in the total foreign trade of the Republic of Serbia, maintaining the status of the only sector in the economy of Serbia, which achieves a positive foreign trade balance. The trade of agricultural and food products contributes significantly to the total foreign trade of Serbia, where the agricultural and food products participate in the total trade of the Republic of Serbia with 12.2% in 2023, while the share of the export of agricultural and food products in the total export was 16.2 %, and agricultural and food products accounted for 9.1% of total imports.

The realized value of the total trade in agricultural and food products in 2023 was close to EUR 8.2 billion, which is at the same level as the previous year, in 2022, i.e., 35.9% higher than the previous five-year average.

The value of exports of agricultural and food products in 2023 was at the level of EUR 4.7 billion, which is only 2.8% lower than the export value of the previous year, but 25.3% higher than the previous five-year average.

Graph 30: Foreign trade of agriculture of the Republic of Serbia (bn EUR); 2014-2023



At the same time, the value of imports of agricultural and food products amounted to EUR 3.5 billion, which is the highest value of imports recorded so far, 6.8% higher than the value of imports in 2022, and even 53.5% higher than the five-year average.

In 2023, the tendency to have a surplus in the trade of agricultural and food products, which amounted to EUR 1.2 billion, will continue, which is a drop of 22.8% compared to 2022, and of 17.9% compared to the previous five-year period average.

The drop in the export of agricultural and food products was primarily due to the drop in the export of cereals, mainly mercantile wheat and mercantile maize, the export of which in 2023 was 42% lower compared to the previous year. Logistical problems with the Danube River transportation have contributed significantly to the drop in cereal exports, as the largest volume of exports is usually carried out by this route.

In addition to all the above, the decrease in exports was largely influenced by the decrease in the export of cereals to the EU market, which is Serbian traditional export market for cereals, and on which, in the last two years, cereals from Ukraine have been increasingly available, and the cereals from Serbia cannot compete with their price.





The unit values of export and import of agricultural and food products in 2023 were higher compared to previous years, because of the rise in prices at the global level. Namely, in 2023, the unit value of exports was 0.92 EUR/kg (0.89 EUR/kg in 2022), whereby 5.1 million t of products worth EUR 4.7 billion were exported (in 2022, 5.4 million t of products with a value of EUR 4.8 billion were exported).

The situation is similar with imports, given that the unit value of imports in 2023 was 1.89 EUR/kg (1.8 million t of products were imported for EUR 3.5 billion), while in 2022 it was 1.72 EUR/kg (1.9 million t of products were imported for EUR 3.3 billion).

2.2. Trade structure

The export of agricultural and food products from the Republic of Serbia is still dominated by primary agricultural products, and their share in the structure of exports in 2023 was 60.7%, 7 pp less than the share of these products in exports in 2022, and by 9.7 pp less than the five-year average.

The realized value of exports of primary agricultural products in 2023 was close to EUR 2.9 billion, which is 12.8% lower than the realized export value of primary agricultural products in 2022, or 7.3% higher compared to the previous five-year average. The decrease in the share of primary agricultural products in exports was because of a drop in exports of mercantile wheat and maize, as well as of other products that normally dominate exports from the Republic of Serbia (frozen raspberries, fresh apples, refined sunflower oil, refined white sugar, etc.), and also because of an increase in exports of processed agricultural products. Among the primary agricultural products, frozen raspberries were the most exported in 2023, and the share in exports of this product group was 9.8%, followed by mercantile maize, with a share of 6.6%, followed by dog and cat food (6.5% share), mercantile wheat (5.2% share), etc.

With an export value of EUR 1.8 billion, the share of processed agricultural products in the structure of exports in 2023 amounted to 38.8%, which is about 7 pp more compared to 2022, and 9.8 pp more compared to the previous five-year average.

Compared to 2022, the value of exports of processed products increased by 18.3%, and compared to the five-year average, exports increased by as much as 65,3%.





As in previous years, the export of processed agricultural products in 2023 was dominated by cigarettes, with a share in exports of 14.3%, followed by smoking tobacco with a share of 13.2%, still and sparkling water with sugar added (9.7%), soft drinks (5.4%), etc.

The share of fish and fishery products in the export structure is very low and in 2023 it amounted to only 0.4%, which is at the level of share in the previous few years. The total value of the export of fish and fishery products in 2023 was EUR 20.1 million, and the most exported were salmon fillets, fresh or chilled, frozen and smoked (52.7% of the value of the export of fish and fishery products), which was contributed to by the application of the Regional Convention on Pan Euro-Mediterranean preferential rules of Origin, which enabled the cumulation of the origin of goods between the signatory countries (in this case about the cumulation of origin with EFTA members – the Kingdom of Norway).

As in the case of exports, imports are dominated by primary agricultural products, which with an import value of EUR 2.1 billion in 2023, make up 61.5% of the value of imports of agricultural and food products, approximately the same share as the previous year (+0.4 pp), i.e., close to the level of the five-year average.

Observed according to the value of imports, the import of primary agricultural products in 2023 compared to 2022 was higher by 7.5%, and by as much as 50.4% compared to the previous five-year average. Among the primary agricultural products, the most imported were frozen boneless pork (5.3%), unroasted coffee (3.9%), bananas (3.1%), seed maize (2.8%), mercantile soya beans (2.5%), etc.





Processed agricultural products in 2023 accounted for 34.1% of the total import of agricultural and food products, which is at approximately the same level as the previous year (-0.2) and at approximately the same level compared to the previous five-year average (+0.3 pp).

In terms of value, the import of processed agricultural products in 2023 is 6% higher compared to the previous year, while compared to the previous five-year period it is higher by as much as 51% (the average value of imports in this period was EUR 785 million).

The reason for this increase in the value of imports lies in the fact that in 2022 and 2023 there was a significant increase in prices, especially of processed agricultural products as products of a higher phase of processing, primarily due to the increase in prices of energy, but also of raw materials used in producing these products. Among the processed agricultural products, in 2023 the following products were imported the most: various food products (5.7%), various food products for nutrition with milk fat content up to 1.5% and starch content up to 5% (5.6%), still and sparkling water with sugar added (4.4%), tobacco extracts and essences (4.4%), cigarettes (4.2%), etc.

The share of fish and fishery products in the total import of agricultural and food products in 2023 was at the level of 4.4%, which is approximately the same level as the previous year, as well as compared to the five-year average. The total value of the import of fish and fishery products in 2023 was EUR 153.6 million, where the imports were dominated by frozen hake (12.2%), fresh or chilled salmon (7.8%), flour and pellets from fish or aquatic vertebrates used as animal feed (7.5%).

2.3. Main products in trade

The fruit sector (including nuts, melons and watermelons) will continue to have a significant place in the export of agricultural and food products in 2023. With an export value of EUR 731.5 million, the share of product exports within this sector in the total agricultural exports of the Republic of Serbia was at the level of 15.6%. In second place are tobacco and tobacco products with a share in exports of 11.7%, followed by the sector of beverages, alcohol and vinegar with a share of 10%, while the cereal sector is in fourth place with a share of 9.4%, followed by the animal feed sector (8.4%), various food products for nutrition (7.6%), etc.

The share of the six leading sectors in the total value of exports of agricultural and food products in 2023 amounted to 62.7%.

		2022		2023		Index
Chapter	Description	Value	Share	Value	Share	2023/22
		(000 EUR)	(%)	(000 EUR)	(%)	2023/22
8	Edible fruit and nuts; peel of citrus fruit or melons	851,100	17.6	731,500	15.6	85.9
24	Tobacco and manufactured tobacco substitutes	459,900	9.5	549,600	11.7	119.5
22	Beverages, spirits and vinegar	386,500	8.0	469,500	10.0	121.5
10	Cereals	694,600	14.4	440,800	9.4	63.5
23	Residues and waste from the food industries; prepared animal fodder	333,800	6.9	392,700	8.4	117.6
21	Miscellaneous edible preparations	322,300	6.7	356,700	7.6	110.7
Total top	6 by chapters	3,048,200	63.1	2,940,800	62.7	96.5
Total exports		4,828,000	100.0	4,691,000	100.0	97.2
Source: SORS (processed by the MAFWM)						

Table 3: Highest export values (by tariff chapters) (000 EUR; %); 2023/2022

Source: SORS (processed by the MAFWM)

Compared to the previous year, 2022, the largest drop in exports was recorded in the export of cereals – 36.5% (from EUR 694.6 million in 2022 to EUR 440.8 million in 2023). In the fruit sector, there is also a decrease in exports of 14.9% compared to 2022. In other sectors, export growth was recorded compared to the previous year, and the highest was recorded in beverages, alcohol and vinegar, by 21.5%.

On the import side, in 2023, products from the fruit sector also dominate, with a share in total imports of 8.9%. In second place are various food products with a share of 8.5%, followed by the tobacco and tobacco products sector – 8.4%, cereal, flour and starch products (this includes pasta, different types of bread, waffles, biscuits, etc.) – 7.4%, meat and edible meat offal – 6.8%, etc. The participation of the six leading sectors in the total value of imports of agricultural and food products in 2023 was 46%.

In contrast to exports, compared to 2022, imports recorded growth in all sectors. The largest increase in imports was recorded in the sector of meat and edible meat offal -19.9%, (primarily due to the large import of frozen pork), then in the sector of cereal, flour and starch products – 18.3%, cocoa and cocoa preparations – 16.8%, etc.

Table 4: Highest import values (by tariff chapte	ers) (000 EUR; %	b); 2023/2022
	2022	2022

		2022		2023		Index	
Chapter	Description	Value	Share	Value	Share	2023/22	
		(000 EUR)	(%)	(000 EUR)	(%)	2023/22	
8	Edible fruit and nuts; peel of citrus fruit or melons	295,700	9.1	310,900	8.9	105.1	
21	Miscellaneous edible preparations	269,000	8.3	296,700	8.5	110.3	
24	Tobacco and manufactured tobacco substitutes	292,200	9.0	292,500	8.4	100.1	
19	Preparations of cereals, flour or starch	217,400	6.7	257,200	7.4	118.3	
2	Meat and edible meat offal	197,300	6.1	236,600	6.8	119.9	
18	Cocoa and cocoa preparations	175,900	5.4	205,400	5.9	116.8	
Total top 6 by chapters		1,447,500	44.4	1,599,300	46.0	110.5	
Total im	3,259,000	100.0	3,479,000	100.0	106.8		

Source: SORS (processed by the MAFWM)

The largest trade surplus in 2023 was achieved in the fruit sector – EUR 420.6 million, cereals – EUR 359.6 million, as well as beverages, alcohol and vinegar – EUR 278.1 million.

On the other hand, the largest deficit was recorded in the sector of meat and edible meat offal - EUR 210.8 million, coffee, maté tea and spices - EUR 97 million, as well as to the sector of milk and dairy products, eggs and natural honey – EUR 70.8 million.

Observed according to individual products, in 2023, as in the previous year, the leading export product was frozen raspberries, which participated in the total export of agricultural and food products with 6.7% with an export value of EUR 278.2 million. Nevertheless, the export value of this product in 2023 was 21.3% lower compared to the previous year. Cigarettes are in second place in exports, with a realized export value of EUR 261.2 million (+14.3% year-over-year). The largest export growth was recorded in dog and cat food – 49.3% (from EUR 124.2 million in 2022 to EUR 185.4 million in 2023), and the largest drop in export value was recorded in mercantile maize (-45.6%) and mercantile wheat (-36.3%).

		2022		2023		Index
CN code	Description	Value	Share	Value	Share	2023/22
		(000 EUR)	(%)	(000 EUR)	(%)	2023/22
<mark>0811 20 31 00</mark>	Raspberries, frozen, not containing added sugar	353,497	8.5	278,188	6.7	78,7
2402 20 90 00	Cigarettes containing tobacco	228,487	5.5	261,185	6.3	114,3
<mark>2403 19 90 00</mark>	Smoking tobacco, other	193,561	4.6	240,053	5.8	124,0
1005 90 00 00	Maize, other	343,983	8.3	187,058	4.5	54,4
2309 10 51 00	Dog or cat food	124,182	3.0	185,431	4.5	149,3
2202 10 00 00	Waters, including mineral waters and aerated waters, containing added sugar	154,769	3.7	176,637	4.2	114,1
1001 99 00 00	Wheat and meslin, other	229,420	5.5	146,215	3.5	63,7
2202 99 19 00	Non-alcoholic beverages, not containing milk and milkfat	81,966	2.0	98,926	2.4	120,7
<mark>0808 10 80 00</mark>	Apples, fresh, other	101,052	2.4	90,385	2.2	89,4
1512 19 90 00	Sunflower-seed, safflower oil, other	97,512	2.3	86,419	2.1	88,6
Total top 10 products		1,908,429	45.8	1,750,496	42.0	91,7
Total exports		4,828,000	100.0	4,691,000	100.0	97,2

Table 5: Highest export values	(by tariff items in 10 digits)	(000 EUR; %); 2023/2022
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Source: SORS (processed by the MAFWM)

As many as six products from the agricultural and food sector are among the top twenty products in the export of the Republic of Serbia, but, unlike in previous years, there is not a single agricultural and food product in the top ten. In this sense, the best ranked are frozen raspberries, which are in 12th place.

On the import side, the highest import value was achieved by the import of frozen boneless pork in the value of EUR 102.5 million, that is, 21.7% higher than the realized value of the import of these products in 2022. In terms of import value, raw coffee beans are second, while various food preparation not elsewhere specified are third. As a matter of fact, the largest increase in imports in 2023 was recorded in the import of seed maize hybrids – 51.3%.

Table 6: Highest import values (by tariff items in 10 digits) (000 EUR; %); 2023/2022

		2022	2	2023	3	Index
CN code	Description	Value	Share	Value	Share	2023/22
		(000 EUR)	(%)	(000 EUR)	(%)	2023/22
<mark>0203 29 55 00</mark>	Meat of domestic swine, other, boneless, frozen	84,192	3.4	102,480	2.5	121.7
0901 11 00 00	Coffee, not roasted, not decaffeinated	89,914	3.7	84,427	2.0	93.9
<mark>2106 90 98 90</mark>	Food preparations not elsewhere specified or included, other	81,966	3.4	67,007	1.6	81.7
0803 90 10 00	Bananas, fresh, other	61,164	2.5	66,153	1.6	108.2
2106 90 92 90	Food preparations not elsewhere specified or included, containing less than 1,5% milkfat and 5% sucrose or starch	57,931	2.4	65,025	1.6	112.2
1005 10 15 00	Maize, seed, simple hybrids	39,154	1.6	59,252	1.4	151.3
1201 90 00 00	Soya beans, whether or not broken, other	63,912	2.6	54,405	1.3	85.1
2202 10 00 00	Waters, including mineral waters and aerated waters, containing added sugar	44,066	1.8	52,367	1.3	118.8
2403 99 90 00	Tobacco extracts and essences:	46,562	1.9	51,704	1.2	111.0

2402 20 90 00 Cigarettes containing tobacco	58,765	2.4	50,370	1.2	85.7
Total top 10 products	371,555	11.4	653,190	15.7	175.8
Total imports	3,259,000	100.0	3,479,000	100.0	106.8

Source: SORS (processed by the MAFWM)

In contrast to exports, products from the agricultural-food sector are not represented to that extent in the total imports of the Republic of Serbia, therefore none of these products are among the top twenty products by import value in 2023.

2.4. Key trading partners

Looking at the directions of trade, i.e., according to the relevant markets, in 2023, 47.2% of the total value of exports of agricultural and food products from Serbia was placed on the EU market, followed by the CEFTA market with 28.9%, while exports to other markets participated in the total export with 23.9%.

On the import side, the participation of imports from the European Union in total imports in 2023 was at the level of 69.9%, while imports from the CEFTA market participated with only 7.8%. The share of imports from the markets of other countries in the total import of agricultural and food products to the Republic of Serbia was 22.3%.

As a matter of fact, of the total exports to other markets, 58.3% was exports to the markets of countries the Republic of Serbia did not sign a free trade agreement, while the share of imports from these markets is even higher at 65.6%.







The European Union is still the most important trade partner of the Republic of Serbia in agricultural and food products, with a total trade value of EUR 4.6 billion (56.9% of the total trade in agricultural and food products of the Republic of Serbia), which is 1.3% lower than the realized trade in 2022, but 37.6% higher than the previous five-year average.

The realized value of the export of agricultural and food products to the EU market in 2023 was EUR 2.2 billion, and lower by 10.2% than the realized export value of the previous year, and higher by 17.5% than the previous five-year average. The value of imports was at the level of EUR 2.4 billion, 8.4% higher than the realized value of imports in 2022, and as much as 61.4% higher than the average five-year imports.

For the first time in the last twenty years, a deficit was recorded in trade with the European Union in the amount of EUR 216.5 million in 2023. The last time a deficit in trade in agricultural and food products with the European Union was recorded in 2000, and since 2001, the Republic of Serbia (thanks to the preferential status it received at the end of 2000 through the Autonomous Trade Measures) had a positive foreign trade balance in trade with the European Union, which grew from year to year.

Observed by individual product groups, primary agricultural products were mostly exported to the European Union in 2023, which accounted for 71.8% of the export of all agricultural and food products to the EU market. The share of the export of processed agricultural products to the EU market was 27.5%, while the export of fish and fishery products, as in previous years, was at an extremely low level, with a share of less than 1% of the total exports.

The products that were individually the most exported to the European Union from the Republic of Serbia in 2023 were: frozen raspberries – EUR 218 million; mercantile maize – EUR 124 million, mercantile wheat – EUR 98 million, still and sparkling water, with sugar added – EUR 95 million, dog and cat food – EUR 81 million, etc.

As is the case with exports, imports are dominated by primary agricultural products, which accounted for 59.1% of the total import of agricultural and food products from the European Union. The share of import of processed agricultural products was 37.6%, while the share of fish and fishery products was at the level of 3.3%.

The following products dominated imports from EU member states in 2023: frozen boneless pork meat – EUR 94.7 million, various food products – EUR 71.1 million, food products containing up to 1.5% milk fat and up to 5% sucrose or starch – EUR 64.6 million, mercantile soya beans – EUR 52.9 million, reconstructed or homogenized tobacco – EUR 50.3 million, etc.

Observed by individual member countries of the European Union, in 2023 the most was exported to Italy – 13.8%, followed by Germany – 13.7%, Croatia – 11.5%, Romania – 10.4%, Bulgaria – 6.2%, etc. In regard to imports, in 2023 the most imports were from Germany (12.1% of imports), Italy (10.4%), Poland (9.5%), Croatia (8.7%), the Netherlands (8.5%), etc.

In 2023, the Republic of Serbia has achieved the largest surplus in the trade of agricultural and food products with Romania, Bulgaria, Italy, Croatia and Slovenia, while the largest trade deficit was recorded with Spain, Poland, the Netherlands, Hungary and Belgium.

The second most important partner of the Republic of Serbia, in trade in agricultural and food products, are the CEFTA members. Due to the proximity of the market and the traditional ties, the region of Southeast European countries (signatories to the CEFTA Agreement) is a very important market for agricultural and food products from Serbia.

The total value of trade with CEFTA partners in 2023 was EUR 1.6 billion, an increase of 6.1% compared to 2022, and 35.7% compared to the previous five-year average. The realized value of exports to CEFTA partners was at the level of around EUR 1.3 billion (6.4% higher than exports in 2022, and 36.2% higher in relation to the five-year average), while the value of imports amounted to EUR 273 million (4.6% higher compared to the previous year, and 33.2% higher compared to the five-year average), with an exchange surplus of close to EUR 1.1 billion.

Exports to the CEFTA market by their structure are dominated by primary agricultural products with a share of 52.8%, while the share of processed agricultural products in exports is 46.7%, and fish and fishery products are below 0.5%.

Imports are also dominated by primary agricultural products, with a share of 69%, the share of processed agricultural products in imports was 26.8%, while the share of fish and fishery products was at the level of 4.2%.

Observed by individual CEFTA partners, in 2023, as in previous years, the most was exported to the market of Bosnia and Herzegovina - EUR 600 million (44.3% of total exports to the CEFTA market), followed by Montenegro with EUR 367.8 million, North Macedonia with EUR 280.4 million, Albania – about EUR 93 million and Moldova – EUR 8.4 million. Bosnia and Herzegovina and Montenegro are at the same time the countries to which in 2023, of all countries in the world, the most exports were made. Mercantile maize, beer, sunflower seeds, refreshing beverages, etc. were mostly exported.

Of all the CEFTA partners, Bosnia and Herzegovina leads in Serbian imports in 2023, with nearly EUR 98 million worth of agricultural and food products were imported into the Republic of Serbia; North Macedonia is second with an import value of EUR 93.3 million, followed by Albania and Montenegro with EUR 33.4 million each, while Moldova is in the last place with an import value of EUR 12.7 million. The following products were mostly imported: smoked and dried pork, tomatoes, canned vegetables, table grapes, ethyl alcohol of agricultural origin, etc.

The Republic of Serbia achieved a surplus in the trade of agricultural and food products with all CEFTA partners in 2023, except with Moldova; the largest surplus in the trade was achieved with Bosnia and Herzegovina in the value of EUR 502.3 million, while the value of the deficit with Moldova was EUR 4.3 million.

In regard to the EFTA countries, the total trade in agricultural and food products in 2023 was approximately EUR 48.4 million, which is a slight increase (+1%) compared to 2022. The value of imports in 2023 was at the level of EUR 34.7 million and was higher by 5.5% than the realized value of imports in 2022. Observed by individual EFTA countries, in 2023 most of the exports were to Switzerland (81% of exports to EFTA), while most were imported from the Kingdom of Norway (67.8%).

The products that were mostly exported to the Swiss market were: frozen raspberries, other frozen fruits, raw soya bean oil, dog and cat food, sweet biscuits, etc. The products most imported from Norway were fresh or chilled Atlantic salmon, salmon fillets, other starches, fish fats and oils, frozen mackerel, etc.

Of the countries the Republic of Serbia has signed free trade agreements with, the most important trade partner is certainly the Russian Federation, with the total trade in agricultural and food products realized in the value of EUR 298.5 million in 2023, which is at the same level as the previous year (EUR 301.7 million).

As a matter of fact, in the last few years, there has been a declining trend in exports to the Russian market, which is particularly noticeable in 2021, as a result of the political crisis due to war events on the territory of Ukraine, which has contributed in many ways to the difficulties in transporting goods to the Russian Federation.

The decrease in exports is particularly noticeable for fresh apples, whose exports in 2023 was even 48.2% lower than the previous year, but also for other fresh fruits (strawberries, cherries, sour cherries, plums, blueberries) and cheese.

Graph 35: Trade of agricultural and food products between the Republic of Serbia and the Russian Federation (mill. EUR); 2019-2023



Source: SORS (processed by the MAFWM)

On the other hand, there was an increase in the export of dog and cat food to the Russian market, by 104.3% compared to 2022, as well as an increase in the export of still and sparkling water with sugar added, sunflower seeds, chocolates and other confectionery products, that is, products that can withstand long distance transport.

As for imports from the Russian Federation to the Republic of Serbia, in 2023 it recorded a level of EUR 101.9 million (9.2% lower compared to 2022) and was based on: products containing tobacco intended for inhalation without combustion (IQOS type and similar products), frozen boneless pork (import value in 2023 is three times higher than in 2022), frozen boneless chicken meat, refined sunflower oil (also a significant increase in imports, from EUR 1.8 million to EUR 7.4 million), tobacco extracts and essences, etc.

In addition to the Russian Federation, the most important trade partners Serbia has signed free trade agreements with are Great Britain and Turkey. The Partnership, Trade and Cooperation Agreement¹¹ allowed trade with the United Kingdom to continue within the framework that applied when the UK was an EU member. Total trade in agricultural and food products between the Republic of Serbia and Great Britain in 2023 was at the level of EUR 66.2 million, which is close to the level of the previous year, while the value of imports was lower by as much as 47.3% (only EUR 16.9 million). Agricultural and food products that were predominantly exported from the Republic of Serbia to the UK market in 2023 were frozen raspberries, other frozen fruit, various pastas, fresh apples, protein concentrates, etc. On the other hand, imports were dominated by food products, preparations based on coffee extracts, essences and concentrates, frozen mackerel, spice mixtures for the food industry, etc.

Trade with Turkey has been at a steady level for years. In 2023, the realized value of exports was at the level of EUR 61.3 million (17.8% higher than in 2022), while the value of imports was EUR 101.3 million (7.4% higher compared to 2022). The products that dominated exports from Serbia to Turkey were cigarettes, dog and cat food, raw and refined sunflower oil, muesli-type products, frozen blackberries, prunes, etc., while

¹¹ Agreement on partnership and trade cooperation between the Government of the Republic of Serbia and the Government of the United Kingdom of Great Britain and Northern Ireland (Official Gazette of RS - International Agreements, no. 13/21)

imports were dominated by lemons, tangerines, tomatoes, hazelnuts, etc. as in previous years.

The agreement with Turkey is based on quotas, so the foreign trade of agricultural and food products is based on products with quotas.

Of the countries the Republic of Serbia has not signed a free trade agreement with, Algeria occupies a significant place, ranked at 9th place, regarding the export of agricultural and food products, with an export value of EUR 205.2 million. However, the scope of products that are placed on the Algerian market is very small and consists of only a few products, the main product in exports is smoking tobacco (99% of exports). In addition to Algeria, important markets for the export of our agricultural and food products are also Japan, the United States of America, Egypt, Canada, etc.

Free Trade Agreement with the People's Republic of China: The Free Trade Agreement between the Government of the Republic of Serbia and the Government of the People's Republic of China (hereinafter: the Agreement) was signed in Beijing on October 17, 2023, within the framework of the third "Belt and Road" Forum. At the session held on November 28, 2023, the National Assembly of the Republic of Serbia adopted the Law on Ratification of the Agreement on Free Trade between the Government of the Republic of Serbia and the Government of the People's Republic of China¹², and the Agreement of the People's Republic of China¹², and the Agreement officially enters into force on July 1, 2024.

In regard to the import of agricultural products from China, the most sensitive products (category E) are exempted from the liberalization – frozen beef, pork, sheep, goat and poultry meat, as well as other slaughterhouse products, frozen freshwater river fish typical for the domestic market (e.g. carp, trout, catfish), milk and sour cream, milk powder, butter, milk spreads, certain types of cheese typical for the domestic market (yellow cheese, feta, cheddar, gouda, *Edam, Emmenthal*, fresh cheese and curd), poultry eggs, natural honey, fresh and chilled vegetables (tomatoes, peppers, sweet corn, potatoes, beans and green beans), fruits (hazelnuts and walnuts, grapes, apples, pears, apricots, quinces, plums, peaches and nectarines, cherries, sour cherries, strawberries, raspberries, blackberries, blueberries, currants). The list of exceptions also includes sunflower oil, meat products, refined white sugar and sugar products, various confectionery products (gummy and hard candies, chocolate and other products containing cocoa, isoglucose syrups, bread, biscuits), baby food, spirits (fruit brandy, cognac, whiskey, brandy, tequila, vodka, gin, etc.), cigarettes and tobacco.

Within 15 years from the entry into force of the Agreement (category A15), Serbia will gradually liberalize imports from China for the following agricultural products: mozzarella and grated or powdered cheese (such as Parmesan), fresh or chilled cucumbers and gherkins, dried onions, dried tomatoes and carrots, watermelons and melons, dried peppers, canned sardines and tuna, dog and cat food prepared for retail.

Slightly faster trade liberalization (category A10 – ten years) is for products of medium sensitivity level, such as edible meat flour and powder, fresh cabbage, soya bean flour, vegetable mixtures, certain medicinal herbs (chamomile, mint), fruit purees and pastes, other prepared or canned fish, soups and broths and similar types of products.

Products that are not highly sensitive will be liberalized within 5 years (category A5), primarily due to limited transport possibilities (various types of fresh or chilled beef,

 $^{^{\}rm 12}$ Official Gazette of RS - International Agreements, no. 6/23

pork, sheep and goat meat and fish), as well as various types of dairy products with a shorter shelf life (fermented milk products), certain cheeses (with geographically protected origin such as *Roquefort, Gruyere, Kefalotyri, Parmesan, Pecorino,* etc.), mineral water, live plants (e.g. roses and orchids) and particular types of vegetables typical for Asian, which are not grown in Serbia (various types of leguminous vegetables, mushrooms, some varieties of cabbage, etc.) and fruits (e.g. citrus fruits – oranges, tangerines, limes, but also other subtropical and tropical fruits). This category also includes cereals such as wheat, maize, rye, barley, oats, and wheat and meslin flour, barley, oat and rice flour, fresh garlic, leeks, carrots, canned sweet corn and mushrooms, particular types of canned fruit and stone fruits, canned tuna, various types of wine, etc.

On the other hand, on the date of entry into force of this agreement, Serbia will fully liberalize imports from China for the following agricultural products (category A0): certain types of frozen and fresh fish, all live animals (given that the physical distance is a significant challenge for transport, no greater competition from China is expected), oleaginous seeds and fruits, various grains, seeds, as well as products that are not produced in Serbia, but are important for domestic consumption, such as palm oil, rice, etc., certain products of animal origin (animal hair, feathers, bones, shells, shellac, rubber, resins), particular plants (bulbs and seedlings of hyacinths, daffodils, tulips, etc.), other live edible plants, vegetables such as kale, asparagus, eggplant, celery, shiitake mushrooms, truffles, etc., almonds, chestnuts, tropical fruits and tropical stone fruits such as coconuts, bananas, pineapples, avocados, dates and figs, lemons, grapefruit and pomelo, certain types of fats and oils, etc.

On the day the Agreement enters into force, Serbia will have duty-free access to the Chinese market (A0) for the following agricultural products: fresh apples, peaches, sour cherries, plums, watermelons, raisins, seeded rye, barley and oats, sunflower seeds, rapeseed seeds, roses, dried leguminous vegetables, watermelons, pickles and gherkins, sweet corn, frozen pork, lard, trout and carp, processed or canned meat products, sausage products, other canned vegetables, jams, mineral and still water, beer, fresh and dried herbs for industrial purposes, cowhides, etc.

In a period of 5 years (category A5), China will fully liberalize imports from Serbia for products such as champagne and sparkling wines, other wines in packages up to 2 l, other fermented drinks and fruit wines, potatoes, tomatoes, onions and garlic, cabbage, fresh pears and grapes, melons, eggplant, fresh peppers, fresh cucumbers and gherkins, carrots, fresh leguminous vegetables (peas and beans), spinach, pumpkins and squashes, other truffles, other dried vegetables, soups and stews, chewing gum, mixed fruit juices, apple juice, different types of edible and canned mushrooms, ketchup, waffles and wafers, vinegar, etc.

In a period of 10 years (category A10), customs duties on imports from Serbia will be abolished for frozen raspberries and blackberries, wine in packages larger than 10 l, particular frozen beef, strawberries, dried peppers, canned tomatoes, yogurt, butter, natural honey, buckwheat and millet, beeswax, sweet biscuits, crusty bread, ice creams, fruit brandies, whiskey, tequila, liqueurs, stuffed pasta, chocolates, muesli, dog and cat food, etc.

China has approved a slightly longer period of phased liberalization (15 years from the entry into force of the Agreement) for fresh and dried apricots, prunes and apples, dried

and smoked pork and beef, certain cereal products, rum, vodka, gin, wheat gluten, teas, hazelnuts and walnuts in the shell, etc.

China has exempted from the liberalization enabled by this Agreement cigarettes, tobacco, coffee, rice, maize and maize flour and meal, wheat and wheat flour and meal, sunflower oil and rapeseed oil, milk and cream, cheese with blue molds, processed cheese, sugar, milk formula for babies, all types of starch, other dried fruits, certain types of soya beans in grain, soya bean flour and soya bean oil, chestnuts, fresh raspberries and blackberries, vermouth, etc. Most of the exempted products are otherwise among products that China has traditionally protected in its free trade agreements.

3. 2023 CENSUS OF AGRICULTURE

The 2023 Census of Agriculture was conducted on the territory of the Republic of Serbia in the period from October 1 to December 15, 2023. The 2023 Census of Agriculture was prepared, organized and implemented in the field by the Statistical Office of the Republic of Serbia (SORS), in accordance with the Law on 2023 Census of Agriculture¹³ and within the project of pre-accession funds of the European Union (IPA 2018).

Within its scope and tasks established by the Law, the Ministry of Agriculture, Forestry and Water Management participated in the execution of certain tasks on the organization and implementation of the 2023 Census of Agriculture, together with SORS.

The applied instruments, scope, characteristics and standardization of concepts and definitions are in accordance with the World Programme for the Census of Agriculture 2020, FAO-UN, the current regulation of the European Parliament and the Council on integrated farm statistics¹⁴ and the methodology of Eurostat.

This survey, which is conducted every ten years, aimed to ensure the continuity in the production of structural data in the field of agriculture after the 2012 Census of Agriculture and the 2018 Farm Structure Survey. In this regard, in order to meet the national needs and provide comparable data with the results of previous structural surveys in the Republic of Serbia, as well as for the sake of harmonization with current EU standards, the 2023 Census of Agriculture includes all the necessary characteristics – in full or on a sample of agricultural holdings.

The Census of Agriculture was carried out in the field by 2,842 enumerators, whose work was controlled by 253 municipal coordinators. The main innovations implemented in the 2023 Census of Agriculture related to the collection of data on family agricultural holdings, which were interviewed by the enumerators using the "face-to-face" method and data were entered into an electronic questionnaire on a laptop (CAPI method), as well as to the independent enumeration of holdings of legal entities by a web Questionnaire (CAWI method).

The 2023 Census of Agriculture provides data on the number of agricultural holdings, the land fund and the category of agricultural land use, the number of livestock by species and categories, the size of holdings, irrigation, machinery, facilities and equipment, the way livestock are kept, the labour force and other profitable activities that are performed on

¹³ Official Gazette of RS, No 76/21

¹⁴Regulation [EC] No 2018/1091 of European Parliament and of the Council of 18 July 2018, on integrated farm statistics and repealing Regulations [EC] No 1166/2008 and [EU] No 1337/2011

holdings alongside agricultural production activities and which represent the holdings not only as producers of goods, but also as providers of services. In this sense, the 2023 Census of Agriculture offers details on the activities of agricultural holdings in the territory of the Republic of Serbia, which, although traditional, are increasingly striving for innovation and expanding their range of activities.

The data obtained from this census will enable an overview of the situation in agriculture in the Republic of Serbia at the national and local level, as well as at the farm level, and it will satisfy the national needs and the needs of international institutions and organizations for structural data in this area, which are of vital importance for socioeconomic analyses and planning.

Figure 1: First results of the 2023Census of Agriculture



	2023	2018***, %
Republic of Serbia	508 365	10.0 🎽
Beogradski region	26 297	12,4
Region Vojvodine	111 884	12,0 🔪
Region Šumadije i Zapadne Srbije	224 433	7,5 🍾
Region Južne i Istočne Srbije	145 751	12,0 🍾
5	*** 2018 Farm Str	ucture Survey

STRUCTURE OF AVAILABLE LAND OF AGRICULTURAL HOLDINGS BY REGIONS, 2023 (ha)

	Total	Beogradski region	Region Vojvodine	Region Šumadije i Zapadne Srbije	Region Južne i Istočne Srbije	Change from 2018***, %
Available	4 073 703	174 291	1 732 762	1 305 204	861 446	21,3 ×
UAA**	3 257 100	148 937	1 474 709	993 598	639 856	6,3 ×
Unutilized	122 257	7 602	28 683	34 378	51 594	57,8 ×
Wooded area	504 104	12 928	111 549	233 445	146 181	48,2 ×
Other land	190 242	4 823	117 822	43 783	23 815	56,8 ×

Of the total area of available land, 80% is UAA, and 3% is land not used in 2023

AREA OF UAA** BY CATEGORIES OF USE AND REGIONS (ha)

	Total	Beogradski region	Region Vojvodine	Region Šumadije i Zapadne Srbije	Region Južne i Istočne Srbije	Change from 2018***, %
Kitchen garden	33 531	2 278	4 108	18 739	8 406	51,5 ↑
Arable land	2 518 584	119 589	1 404 405	572 346	422 244	2,1 ≥
Pastures and meadows	482 253	12 557	40 166	283 687	145 842	28,7 ≥
Perennial plantations	222 733	14 514	26 029	118 826	63 363	8,4 ↑
orchards	200 616	13 598	21 692	110 051	55 275	9,7 ↑
vineyards	18 201	760	3 314	6 724	7 403	11,1 ≥

The largest areas of arable land are in Region Vojvodine (55.8%), while orchards are most represented in Region Šumadije i Zapadne Srbije.

NUMBER OF LIVESTOCK BY REGIONS, 2023

		Total	Beogradski region	Region Vojvodine	Region Šumadije i Zapadne Srbije	Region Južne i Istočne Srbije	Change from 2018***, %
14	Bovine	725 408	34 656	230 332	330 005	130 415	17,7 🍾
-99	Pigs	2 263 705	107 960	1 000 249	780 881	374 615	30,7 🎽
- (A)	Sheep	1 702 682	76 194	311 045	1 039 046	276 397	5,4 🍾
R.	Goats	149 558	7 113	26 697	54 498	61 250	31,5 🎽
>	Poultry	22 022 439	1 199 866	9 794 304	7 244 027	3 784 242	5,0 🍾
	Beehives	1 261 323	74 214	232 967	527 045	427 097	38,0 🗡

Of the total number of holdings, 61.7% are engaged in livestock production. The most bovine and pigs are grown in Mačvanska oblast, sheep and bees in Zlatiborska oblast, goats in Pčinjska oblast, and poultrz in Srednjobanatska oblast.

Farm holders



The average age of the family farm holder is 60 years.

Every **11**th farm holder is younger than 40 years old.

Source: Press release, SORS

** UAA – Utilized Agricultural Area *** 2018 Farm Structure Survey

4. FARM ACCOUNTANCY DATA NETWORK IN THE REPUBLIC OF SERBIA AND ANALYSIS OF FINANCIAL DATA IN SERBIA

4.1. Transformation into the Farm Sustainability Data Network

The multi-year objectives of the Common Agricultural Policy (CAP), such as the reduction of the use of chemical fertilizers and pesticides and the new Farm to Fork Strategy define the need for agriculture to provide everyone with access to healthy and safe food, with a neutral or positive impact on the environment, as well as that agriculture should adapt to the impacts of climate change, and contribute to mitigating the impact of climate change.

In line with the new CAP objectives, the European Commission has announced a plan to transform the Farm Accounting Data Network (FADN) into the Farm Sustainability Data Network (FSDN). This initiative will expand the scope of the current FADN database to collect farm-level data on environmental and social farming practices, along with information from farmers in the form of farm performance reports. The methodology, which prescribes the method of data collection for the new FSDN system, will be in accordance with the existing methodology, which is applied in the existing FADN system.

After a wider consultative process within the body of the EC, the basic act was adopted¹⁵, which regulates the establishment of the FSDN system. The FSDN basic act determines the list of economic, environmental and social topics that will be covered by data collection, while the list of new data and variables to be included in the future FSDN is to be set out in secondary legislation (implementing and delegated acts).

4.2. Field of research and FADN sample

Based on the results of the 2018 Farm Structure Survey, conducted by the SORS, there were 564,541 agricultural holdings in the Republic of Serbia in 2018. Of that number, 275,593 farms exceed the lower threshold of economic size of EUR 4,000 and these farms form the field of research of the FADN in Serbia. According to the 2023 Census of Agriculture, the number of agricultural holdings in 2023 was 508,365, and based on the final results, a new framework for the field of research will be prepared in the following period.

The FADN sample for 2022 includes 1,761 agricultural holdings, representing population of 275,593 agricultural holdings, which exceed the lower threshold of EUR 4,000 in the Republic of Serbia. The field of research of the FADN covers 49% of the total number of agricultural holdings, where these farms use about 90% of UAA, keep 90% of the number of livestock units and create about 90% of the total value of production. A little less than 300 thousand very small farms (288,040), which do not exceed the threshold of EUR 4,000, were excluded from the field of research, given that they have a small contribution to the total value of agricultural production in Serbia. These small agricultural holdings own less than 6.4 ha of UAA and 2-3 LSU and realize the value of agricultural production below the average for the whole country.

¹⁵ Regulation (EU) 2023/2674 of the European Parliament and of the Council of 22 November 2023 amending Council Regulation (EC) No 1217/2009 as regards conversion of the Farm Accountancy Data Network into a Farm Sustainability Data Network
Economic size classes	Agricultural holdings		UAA		Total SO		Animals	
(EUR)	No	%	ha	%	mill. EUR	%	No of heads	%
< 2,000	156,180	100%	181,801	100%	175	100%	79,097	100%
2,000 - 4,000	132,768	72%	309,994	95%	387	96%	139,007	96%
4,000 - 8,000	130,180	49%	529,058	86%	742	88%	278,308	89%
8,000 - 15,000	83,141	26%	591,865	71%	897	73%	358,670	74%
15,000 - 25,000	34,983	11%	439,258	54%	664	55%	268,757	56%
25,000 - 50,000	18,881	5%	424,406	41%	637	41%	249,336	42%
50,000 - 100,000	6,136	1%	294,064	29%	412	28%	145,833	29%
100,000 - 250,000	1,646	0%	191,658	20%	239	19%	86,959	21%
250,000 - 500,000	293	0%	84,157	15%	99	15%	41,715	17%
500,000 - 750,000	127	0%	67,342	12%	76	13%	35,806	15%
750,000 - 1,000,000	36	0%	46,603	10%	31	11%	6,018	13%
1,000,000 - 1,500,000	44	0%	62,459	9%	54	10%	15,860	13%
1,500,000 - 3,000,000	77	0%	122,310	7%	168	9%	50,928	12%
> 3,000,000	49	0%	130,918	4%	279	6%	177,544	9%
Total	564,541		3,475,893		4,860		1,933,840	

Table 7: Field of research of the FADN

Source: SORS

The selection plan of agricultural holdings is drawn up in a timely manner in cooperation with the SORS (October of the current year, for the previous accounting year) for two regions at the level of NUTS 1¹⁶. It is important that a large number of agricultural producers cooperate for several years in the system, so that operations and indicators can be monitored and analysed over a period of several years. Based on the final results of the 2023 Census of Agriculture and the calculation of the standard value of agricultural production for all farms, a new Selection Plan for of agricultural holdings for the FADN survey will be prepared.

Since the system was established, the FADN sample has been continuously increasing annually, by including new farms in the system. In 2022, the sample size reached the level of 1,761 farms, with 590 farms located in the Serbia North region, while 1,171 farms belong to the Serbia South region.

Graph 36: Number of holdings in the FADN sample in the Republic of Serbia; 2011-2022



4.3. Analysis of the business of agricultural holdings

The analysis of production and economic indicators is based on the obtained results shown in the tables of standard results, which were calculated according to a predefined methodology (Farm Return Results). Based on the standard results, it is possible to get a

¹⁶ Nomenclature of territorial units for statistics (NUTS)

clear insight into the economic condition of the agricultural holding by different criteria (region, district, type of production and economic size).

The main purpose of collecting production and economic indicators from agricultural holdings is to:

- determine the income and expenditure of agricultural holdings and analyse the achieved results of agricultural holdings;
- feedback for agricultural producers, compare results with other farms of the same type of production from the same region and similar economic size and business improvement;
- analyse and create the agricultural policy measures and improve advisory work with producers.

The FADN, as well as other similar data collection systems, have certain limitations in terms of the quantity and quality of the data they provide, which arise from the fact that these systems are based on a sample that is representative to a greater or lesser extent, but always includes relatively a small number of farms (up to 2% of the total number of farms). In addition, the question of the quality of the obtained data depends to a large extent on the cooperation of the advisors with the agricultural producers, considering that the research is based on voluntary participation. Namely, producers are sometimes inclined to reduce the financial and production results achieved by the farm, which is why the quality of this data is relative, especially in countries where farms do not have an obligation to keep books.

The results of the 2018 Farm Structure Survey on the number of agricultural holdings and their classification by economic size and type of agricultural production were used to extrapolate the results from agricultural holdings within the field of FADN research. All standard results, obtained from the FADN survey for the level of Serbia, represent a weighted average per farm and show the situation in the entire agricultural sector in Serbia.

The effects of the business of farms engaged in crop and livestock production largely depend on their size and the region in which they operate – with the increase in the size of agricultural holdings, particular indicators of business improve, while others decrease. By monitoring specific indicators, it is possible to determine the business efficiency of family farms, where the most favourable economic effects are achieved in crop and livestock production.

The following analysis presents data for agricultural holdings engaged in crop production and in milk production, extracted from the total sample at the level of Serbia for a fiveyear period. The most important production and economic indicators were analysed: UAA, engaged labour force, costs, achieved business results through the realized total value of production and the participation of subsidies, net added value and farm net income.

4.3.1. Utilized agricultural area

The average size of an agricultural holding in the EU in 2022, according to the FADN database, was 40.4 ha¹⁷, and Serbia, with an average of 11.8 ha, is below the EU-27 average.

 $^{^{17}} https://agridata.ec.europa.eu/extensions/FADNPublicDatabase/FADNPublicDatabase.html$

The basic characteristic of Serbian agriculture is that the UAA is increasing in agricultural holdings in both regions, but the results confirm significant differences in the average size of UAA between agricultural holdings in the regions of Serbia North and Serbia South.

The average UAA in the Serbia North region in 2022 was 19.1 ha per farm, while in the Serbia South it was at the level of 8.3 ha.

Graph 37: Average UAA per farm, by regions of NUTS 1 (ha); 2018-2022



In contrast to the beginning of the observed period, when it accounted for about half of the total UAA, the average area of rented UAA stabilized in the following years at the level of about one third of UAA.



Graph 38: Ownership structure of UAA,

For agricultural holdings, specialized in crop production, land is the basic production resource, so these farms use an average of 17.9 ha of UAA. The average size of UAA per farm in the two regions differs in accordance with the predominant production, and farms in the Serbia North use an average of 23 ha of UAA, while the average size of UAA on farms in the Serbia South is 11.3 ha.

In contrast, agricultural holdings engaged in milk production use agricultural land mainly for the production of animal feed, so the average UAA is at the level of 11.4 ha per holding, with 14.4 ha in the Serbia North, and 10.1 ha in the Serbia South. Farms in the Serbia South have very similar average UAA, regardless of whether they are engaged in crop production or in milk production.

Graph 39: Average UAA per farm in crop production and milk production, by regions of NUTS 1 (ha); 2018-2022



Source: MAFWM, FADN

The average rented UAA of farms engaged in crop production increased in both regions in the previous period. The only negative trend in the average rented UAA is shown by farms that specialized in milk production in the Serbia North. In the Serbia South, farms engaged in milk production do not own enough land to produce feed for livestock, which is shown by the ratio of owned UAA and rented UAA. Rented UAA on these farms (39%) is owned mostly by physical persons, who normally do not cultivate this agricultural land.





Agricultural holdings engaged in crop production, which achieve a standard production value of EUR 4,000-8,000, use on average a minimum of 7.5 ha of UAA, while farms that produce milk use about 5 ha of UAA.

However, agricultural holdings in crop production with an annual value of production over EUR 100 thousand use 176 ha of UAA, which is almost twice as much as farms engaged in milk production (91 ha).

Graph 41: Average UAA per farm in crop production and milk production, by economic size (ha); 2022



4.3.2. Labour input

Graph 42: Average labour input, by regions of NUTS 1 (AWU); 2018-2022



The average labour input per farm in Serbia in 2022 was 1.5 AWU¹⁸. As in previous years, the results show that in the Serbia North, the average labour input is significantly lower than in the Serbia South, because the farms are larger.

The trend of reduction in labour input in the observed period in both regions indicates a reduction in effective labour due to the introduction of innovative technical-technological solutions in the production process (investments in fixed assets).

¹⁸ Annual work unit (AWU). 1 AWU is equivalent to 1,800 working hours

The traditional way of production, which implies greater involvement of family members in the production, results in a large share of unpaid labour (89%) in the total labour cost, while paid labour makes up only about 10% of the average labour cost.

Graph 43: Average paid and unpaid labour input (%); 2018-2022



The total labour input shows a decreasing trend in the previous five-year period, however, the ratio of paid and unpaid labour in the observed period did not change significantly, with a particularly high share of unpaid, that is, family labour. This ratio is equally represented in the Serbia North and Serbia South.





Unpaid labour is predominantly represented on agricultural holdings engaged in milk production, as a result of the daily work engagement of family members, especially in small and medium-sized farms, which very rarely hire labour outside the family farm, which is shown by the fact that paid labour input is insignificant (0.01 AWU).





The average paid labour input in all farms has higher values (0.2 AWU) than in the farms engaged in milk production (0.01 AWU), but unpaid/family labour is still predominant in all farms.

Graph 46: Average paid and unpaid labour input in crop production and milk production (AWU); 2018-2022



The total paid labour input for all types of farms in 2022 was 307 h per year (equivalent to about 38 working days¹⁹). However, farms engaged in milk production use significantly less hired paid labour (only 80 h per year on average). These farms use mainly family labour, while some of them introduce innovative systems of complete mechanization/automation of work operations in milk production, for rearing and milking cows.

¹⁹ Calculation based on an 8-hour working day, five days a week

The average price of work for paid labour in Serbia in 2022 was from 334 to 394 RSD/h, which indicates daily labour costs (for an eight-hour engaged day) of about RSD 3,000. The average price of paid labour in the previous five-year period increased by about 40% (from 242 to 380 RSD/h), while the paid labour input remained unchanged.

Graph 47: Average paid labour input and labour costs per hour in crop production and milk production (AWU); 2018-2022



Source: MAFWM, FADN

4.3.3. Value of production

Graph 48: Value of production, by regions (mill. RSD); 2018-2022



The total value of production in 2022 per farm amounted to an average of RSD 3.9 million (EUR 33,000) shows continuous growth during the five-year period. The results of the FADN survey show that there are large deviations in the Serbia North compared to the Serbia South, with a 30% higher value of production in the Serbia North compared to the Serbia South.

The reason for such a large deviation in the value of production between the regions is the structure of farms in these regions, as well as productivity (yields), given that farms belonging to larger categories of economic size are located in the Serbia North.

The data show that the total value of production is higher for agricultural holdings engaged in milk production, which is the result of a larger volume of production in one year. Also, the value of production is significantly higher in the Serbia North compared to the Serbia South for both types of production (cereal and milk production). The higher total value of production in the Serbia North is influenced by higher average yields, both in crop and cattle production, as well as the structure of farms (large farms are predominantly represented in the north).



4

3 2

1

0

Source: MAFWM, FADN

2018

Graph 49: Value of production in crop production and milk production, by regions of NUTS 1 (mill. RSD); 2018-2022

4.3.4. **Production costs**

2019

3

2

1

0

2018

In 2022, the total production costs for all agricultural holdings amounted to about RSD 2 million on average (without paid wages), which is 25% higher than the previous year (RSD 1.6 million).

2020

2021

2022

This increase in the costs of agricultural production is a consequence of the high increase in energy prices on the world market, which spilled over to the prices of almost all agricultural inputs, especially the price mineral fertilizers. of Accordingly, a greater increase in costs is expected in the Serbia North.

Graph 51: Total costs, by type of cost (mill. RSD); 2018-2022



Graph 50: Total costs, by regoins of NUTS 1 (mill. RSD); 2018-2022

2020

2021

2022

2019



The structure of costs is dominated by specific costs, which make up about 62% of costs, followed by overhead costs (21%), depreciation costs (7%) and total external factors (11%).

The results of survey in 2022 show that the level of specific costs related to the procurement of seeds, plant protection products, fertilizers, etc., is higher than the average in the observed period. The reason should be sought in the increased price of inputs, especially fertilizers, due to the war in Ukraine. Overhead costs, such as maintenance costs of machinery and facilities, contracted work, lease of machinery and facilities, energy costs, telephone costs, water, insurance, etc. also record growth in 2022 by as much as $25\%^{20}$ compared to the previous year. Depreciation costs and total external factors recorded a relatively mild growth of around 8% in the observed period.

If the total costs are observed by the types of production, the farms engaged in milk production achieve an above-average level of production costs, considering that the value of specific costs is higher by 60% compared to the specific costs of farms in other agricultural activities, including crop production.





Such a high level of specific costs in dairy farms is before all the result of animal feed costs, since these farms do not use enough agricultural land for their own production, or the value of concentrated feed has increased.

In 2022, due to the war in Ukraine and the global increase in input prices on the market, the indicator of specific costs for plant production per hectare of UAA shows a constant growth trend and reaches a value of about 50 thousand RSD/ha in 2022 (an increase of about 50% compared to the period 2018-2021).





If the specific costs for plant production per UAA are observed by region, agricultural holdings in the Serbia North have significantly higher costs per hectare for seeds, plant protection products and fertilizers, given that they have higher investments in production, using more expensive and better-quality seeds and fertilizers.

²⁰ Costs that cannot be allocated to certain types of production according to the FADN methodology, are considered common to several production lines. These costs also include the cost of procurement related to production activities, but not for individual production lines. They refer only to the expenses of the agricultural holding, not for private purposes.

²¹ SE 284 / Specific crop costs (costs of seed, plant protection products and fertilizers for crop production per ha)

If specific costs are observed per livestock unit²², the amount of specific costs on farms engaged in livestock production increased by about 40% in the observed period, due to the increase in the price of feed for livestock.

Graph 54: Specific costs in livestock production per LSU, by regions of NUTS 1 (000 RSD); 2018-2022



The structure of costs differs significantly by the types of production, which is conditioned by different production characteristics: on farms engaged in crop production, specific costs make up 52% of total costs, while on farms with milk production, these costs make up over 70% of total costs. At farms engaged in crop production, overhead costs are higher, which is significantly contributed by the costs of maintaining machinery and facilities, contracted work or renting machinery.

Graph 55: Structure of costs in crop production and milk production (%); 2018-2022



Source: MAFWM, FADN

A higher share of specific costs in milk production is expected due to the high share of animal feed costs. However, the extremely high growth in the costs of cereals and other feed components in 2022 additionally influenced the growth of this category of costs.

²² SE 309 / Specific livestock costs (costs for feeding grazing livestock, for pigs and poultry, and other costs in livestock production, including veterinary costs per livestock unit (SE310+SE320+SE330)/SE080

4.3.5. Subsidies

As in previous years, subsidies in agriculture and rural development were implemented in 2022 through direct payments, rural development measures, specific subsidies, credit support and IPARD subsidies. In addition to these support measures, and due to the need to react due to market disturbances, extraordinary support measures were implemented.

For the purposes of direct payments in 2022, the largest part of the funds from the budget was paid for direct payments in livestock production, basic subsidies for crop production and milk premiums, as well as payments based on the procurement of inputs for the production. In regard to rural development measures and IPARD support measures, in 2022, the most funds were realized for investment support measures to improve competitiveness. Within this category of subsidies, almost half of the funds related to investments in the physical assets of farms, for insurance premium costs, and for investments in processing and marketing.

The subject of analysis in this document is total subsidies (without subsidies for investments)²³ in the period 2018-2022, as well as their impact on the business of agricultural holdings.

Graph 56: Subsidies by regions of NUTS 1 (000 RSD); 2018-2022



After a growing trend in the first half of the observed period and a drop in the level of subsidies in 2021, this indicator shows a renewed growth in 2022, with a uniform level in both regions around RSD 250 thousand.

²³ According to the FADN methodology, subsidies in agriculture in the Republic of Serbia show the following indicators: SE 605 are total subsidies to agricultural holdings, a sum of all subsidies in a year: SE 610 – total subsidies on crops, SE 615 – total subsidies on livestock, SE 620 - other subsidies, SE 624 – total support for rural development, SE 630 – single payment for agricultural holdings and SE 699 – price support and other received subsidies, including grants and subsidies for disasters or extraordinary subsidies (agricultural-cash refunds, etc.).

Considering the level of support within the agricultural policy through the system of subsidies, the value of total subsidies for farms engaged in crop production is the lowest, while farms engaged in livestock production, as expected, show values almost twice as high as other types of farms and amount to RSD 645 thousand compared to the average for all agricultural holdings, where they amount to RSD 247 thousand.

Graph 57: Subsidies in crop production and milk production (000 RSD); 2018-2022



If the level of subsidies is observed by regions, agricultural holdings engaged in crop production in the Serbia North in 2022 make twice the level of total subsidies compared to the Serbia South.





Total subsidies for farms engaged in milk production are significantly higher in the Serbia North than in the Serbia South and amount to about RSD 1.1 million. This ratio is a consequence of the structure of agricultural holdings, where the average capacities in milk production are significantly higher in the Serbia North.

However, when the subsidies in the crop production are observed by the UAA, in 2022 a uniform level of subsidies is noticeable in both regions, at the level of about 7,000 RSD/ha of UAA.

Graph 59: Subsidies in crop production per ha of UAA, by regions of NUTS 1 (000 RSD); 2018-2022



Graph 60: Subsidies in milk production per LSU, by regions of NUTS 1 (000 RSD); 2018-2022



Also, when the value of total subsidies is observed by the livestock unit in the milk production, this value is significantly higher in the Serbia North, which is a consequence of the higher average milk yield of cows.





For farms engaged in crop production, the share of subsidies in the total value of production at the level is only 3%. On the other hand, as expected, the share of subsidies in the total value of production is significantly higher and amounts to 15% for farms engaged in milk production.

Also, when the value of total subsidies is observed by the livestock unit, this value is significantly higher in the Serbia North, which is a consequence of the higher average milk yield of cows.

Graph 62: Subsidies in milk production per LSU, by regions of NUTS 1 (000 RSD); 2018-2022



4.3.6. Net value added

Graph 63: NVA per farm, by regions of NUTS 1 (mill. RSD); 2018-2022



The average NVA of farms²⁴ in Serbia in 2022 was RSD 2.3 million (EUR 19.5 thousand), with a slightly higher level in the Serbia North (RSD 2.4 million) compared to the Serbia South (RSD 2.3 million). NVA can be seen as the amount that covers the costs of engaging fixed assets in production (labour, land and capital), regardless of whether they are rented or owned by the family farm.

²⁴ Net value added (NVA) of the farm indicates the compensation of all factors of production (land, capital and labour), both owned by the farm and externally engaged. It is equal to the sum of the total value of production and support from public funds (the difference between current subsidies and taxes), from which intermediate consumption (specific and overhead costs) and depreciation are subtracted.

The value of the average NVA per agricultural holding depends on the size of the farm, the type of agricultural production and the structural participation of the labour force employed in agriculture. NVA for farms engaged in crop production shows lower values compared to farms engaged in other business activities. Graph 64: NVA per farm in crop production and milk production (mill. RSD); 2018-2022



Graph 65: NVA per farm in crop production and milk production, by regions of NUTS 1 (mill. RSD); 2018-2022



Source: MAFWM, FADN

If we look at the level of NVA by region, the levels for both types of farms (crop production and in milk production) are higher in the Serbia North compared to the Serbia South. Farms engaged in milk production in the observed five-year period have achieved a significantly lower net value added in the last two years, primarily due to the increase in input prices.

Graph 66: Share of subsidies in the NVA of the farm in crop production and milk production (%); 2018-2022



The share of subsidies in the NVA of a farm shows the extent to which the received subsidies have contributed to the newly created value of the farm. In farms engaged in milk production, the share of subsidies is far more significant than in other types of farms and amounts to 28%.

4.3.7. Net value added per AWU

The amount of average NVA per farm depends on the size of the agricultural holding, the type of agricultural production, as well as the efficiency or structural reduction of the labour force employed in agriculture.

As a measure of labour productivity on agricultural holdings, NVA is usually expressed by AWU and it is expected to be higher in the Serbia North and on farms engaged in crop production (which have lower labour expenditure).

Graph 68: NVA per AWU by farm in crop production and milk production, by regions of NUTS 1 (mill. RSD); 2018-2022



Graph 67: NVA per AWU by farm, by regions of NUTS 1 (mill. RSD); 2018-2022



Larger farms, concentrated in the Serbia North and higher levels of efficiency in crop production, due to the use of machinery with a higher level of efficiency, directly affect the differences in the amounts of NVA/AWU.

During the observed period, the increased value of the average NVA per agricultural holding in the Serbia North was also recorded by farms engaged in crop production and in milk production.





Source: MAFWM, FADN

4.3.8. Net income

Total income is a value indicator, which represents the financial resources (income) remaining to the producer after covering all accounting costs. The structure of the distribution of the total income indicates the profitability of the agricultural holding, which is why it is important to determine the value of the net income of the agricultural holding, i.e., the return on own capital, unpaid labour and own management.

The average net income of all farms in Serbia is RSD 2.1 million (about EUR 18 thousand) per year, which is below the average in the EU.

The net income in the Serbia North shows higher values than in the Serbia South, which indicates a more favourable volume and value of production (larger area of UAA, greater number of cattle, etc.), i.e., more profitable use of resources. Due to the stronger impact of drought on yields in crop production in the Serbia North in 2022, this indicator in the Serbia South shows higher values than in the previous period (RSD 2.2 million).

Graph 71: Farm net income in crop production and milk production (mill. RSD); 2018-2022



Graph 70: Farm net income, by regions of NUTS 1 (mill. RSD); 2018-2022



Due to the drought and reduced yields, as well as significant subsidies in the livestock sector (29% share), farms engaged in milk production achieved a higher net income for the first time in 2022.

Graph 72: Farm net income in crop production and milk production, by regions of NUTS 1 (mill. RSD); 2018-2022





Source: MAFWM, FADN

The share of subsidies in net income shows that agricultural holdings engaged in milk production are highly dependent on subsidies.

Also, this indicator shows how economic sustainability of farms depends on subsidies. If farmers are not able to cover the opportunity costs (family labour force, lease of their own land and interest on their own capital) from the net income, the situation would then be significantly worse without the subsidies.

Graph 73: Share of subsidies in farm net income in crop production and milk production (%); 2018-2022



4.3.9. Net income per AWU

If the farm net income is put in relation to the engaged labour force of the members of the farm, a more objective indicator of the level of profit is obtained according to the family (unpaid) labour force, engaged in the production that generated the revenue²⁵.

This indicator fully follows the trend, i.e., the increase in the farm net income, which indicates an increase in the farm income both at the national level and at the level of the regions of Serbia North and Serbia South. Thanks to investments in agricultural holdings and the gradual introduction of new technologies in work (new mechanisation, machinery and digitization in agriculture), net income per AWU at the level of RSD 1.6 million in 2022 is 60% higher than in 2018.

²⁵ Farm net income per engaged family labour

Graph 74: Farm net income per AWU, by regions of NUTS 1 (mill. RSD); 2018-2022



Farms engaged in crop production realize a higher value compared to farms engaged in milk production.

The increased value of the average NVA per farm depends on the size of the agricultural holding, on the type of agricultural production or on the structural reduction of the labour employed in agriculture.





The value of this indicator shows the income achieved by the agricultural holding in relation to the invested own work and management. Thus, the farm net income per AWU in the Serbia North has twice the value of the average for the whole of Serbia, which indicates increased labour productivity on agricultural holdings due to a more favourable structure of agricultural holdings and investments that introduce innovative technologies.

Graph 76: Farm net income per AWU in crop production and milk production, by regions of NUTS 1 (mill. RSD); 2018-2022



Source: MAFWM, FADN

5. AGRICULTURAL POLICY

5.1. Framework of agricultural policy and rural development policy

Strategic and program framework

The Strategy for the Agriculture and Rural Development of the Republic of Serbia for the period 2014-2024²⁶ (hereinafter: the Strategy) is a strategic document of the highest level of generality, which defines the vision, goals, priority areas of action, as well as directions for the development of agriculture and rural development of the Republic of Serbia in the previous ten-year period. As the validity and implementation of this document ends at the end of 2024, the drafting of a strategic document for the next period has started and is ongoing.

National programs for agriculture and rural development are adopted on the basis of the Strategy as medium-term program documents, which cover a three-year period and contain plans and dynamics of the implementation of measures. In addition, the national programs contain activities and measures, which are applied in the relevant period with the aim of further harmonizing the national agricultural policy with the EU Common Agricultural Policy (CAP).

Legal framework

The Law on Agriculture and Rural Development ²⁷ is an umbrella law, which prescribes the establishment of institutional bodies, instruments and mechanisms for the creation and implementation of the agricultural policy and the rural development policy.

Support within the framework of agricultural policy and rural development policy is defined by the Law on Subsidies in Agriculture and Rural Development²⁸, which, in addition to the types of subsidies, prescribes the conditions, methods of use and beneficiaries of subsidies in agriculture and rural development. The Regulation on the allocation of subsidies in agriculture and rural development for each calendar year is adopted pursuant to this law, and it allocates budget funds, prescribed by the Law on the Budget of the Republic of Serbia for the calendar year.

Financial basis

Subsidies in agriculture and rural development are financed from the budget of the Republic of Serbia, while certain support measures are financed from EU funds and international donor funds. Financial funds for subsidies in agriculture and rural development are provided for by the Law on the Budget of the Republic of Serbia for the calendar year, in the position of the Ministry of Agriculture, Forestry and Water Management as the budget beneficiary, and they are allocated to individual measures through the Regulation on the allocation of subsidies in agriculture and rural development for each calendar year.

In addition to support at the national level, support for agriculture and rural development is also implemented at the local and provincial level according to special programs and is financed from local/provincial funding sources.

²⁶ Official Gazette of RS, No. 85/14

 $^{^{\}rm 27}$ Official Gazette of RS, No. 41/09, 10/13 – other law, 101/16, 67/21 – other law and 114/21

 $^{^{28}}$ Official Gazette of RS, No. 10/13, 142/14, 103/15, 101/16, 35/23 and 92/23

5.2. Measures of agricultural policy and rural development policy in 2023

In 2023, within the framework of the national agricultural policy and rural development policy, the following subsidies were implemented:

- 1) direct payments,
- 2) rural development measures,
- 3) specific subsidies,
- 4) IPARD subsidies,
- 5) credit support in agriculture.

Table 8: Types of subsidies in agriculture and rural development*; 2023

	Measure	Support per unit
I	DIRECT PAYMENTS	
1.	Premiums	
		10 RSD/l (Q4 2022)
1.1	Milk premium ¹	15 RSD/l (Q1)
	•	19 RSD/l (Q2-Q3)
2.	Subsidies for production	
2.1	Basic subsidies in plant production**2	9,000 RSD/ha
2.2	Subsidies for livestock production	
2.2.1	Subsidies for quality breeding dairy cows ³	40,000 RSD/head
2.2.2	Subsidies for quality breeding fattening cows and bulls ³	40,000 RSD/head
2.2.3	Subsidies for quality breeding sows and boars ³	18,000 RSD/head
2.2.4	Subsidies for quality breeding sheep, rams and goats ³	7,000 RSD/head
2.2.5	Subsidies for quality breeding nuts of fish carp ³	500 RSD/head
2.2.6	Subsidies for quality breeding nuts of fish trout ³	300 RSD/head
2.2.7	Subsidies for parental heavy-type hens ³	60 RSD/head
2.2.8	Subsidies for parental light-type hens ³	100 RSD/head
2.2.9	Subsidies for parental turkeys ³	300 RSD/head
2.2.10	Subsidies for cattle fattening ⁴	15,000 RSD/head
2.2.11	Subsidies for lambs fattening ⁴	2,000 RSD/head
2.2.12	Subsidies for kids fattening ⁴	2,000 RSD/head
2.2.13	Subsidies for pig fattening ⁴	1.000 RSD/head
2.2.14	Subsidies for beehives ⁵	800 RSD/beehive
2.2.15	Subsidies for consumable fish production ⁶	10 RSD/kg of fish
2.2.16	Subsidies for cows for breeding calves for fattening ⁷	20,000 RSD/head
3.	Input subsidies	0.000 DCD //
3.1	Input subsidies for fuel ^{**2}	9,000 RSD/ha
II 1	SUPPORT FOR RURAL DEVELOPMENT MEASURES	
1 .	Subsidies for competitiveness improvement Investments in physical assets of agricultural holding	
	Support for establishment of new permanent crops plantations of fruits,	
1.1.1	grapevines and hops ⁸	
	Support for establishment of new permanent crops plantations of fruits and	
1.1.1.1	hops	50-65%
1.1.1.2	Support for establishment of new permanent crops plantations of grapevines	60%
1.1.2	Support for primary agricultural production improvement	
1.1.2.1	Support for investments in procurement of new machinery and equipment for	50-65%
	improvement of primary plant production ⁹	
1.1.2.2	Support for investments in procurement of new machinery and equipment for improvement of primary livestock production ¹⁰	50-65%
	Support for investments in procurement of quality breeding animals for	
1.1.2.3	improvement of primary livestock production ¹¹	50-65%
1.2		40-45%
1.3	Risk management ¹²	70% for 8 counties
2.	Subsidies for preservation and improvement of the environment and natural	
	resources	
2.1	Organic production	2500/
2.1.1 2.1.2	Organic plant production ¹³ Organic livestock production ¹⁴	250%
2.1.2	Subsidies for conservation of plant and animal genetic resources	40%
2.2	Subsidies for conservation of plant genetic resources ¹⁵	100%
2.2.1	Subsidies for conservation of animal genetic resources ¹⁶	per head
4.4.4	המשהותוכה והו להווסבו גמווחוו הו מווווומו לבוובוור ובפחתו רבה.	per neau

3.	Subsidies for diversification of income and improving the life quality in rural areas				
3.1	Investments in rural infrastructure	100%			
4.	Subsidies for improvement of system for creation and transfer of knowledge				
4.1	Development of technical-technological, applied, developmental and innovative projects in agriculture and rural development ¹⁷	100%			
4.2	Support to providing advice and information to agricultural producers, associations, cooperatives and other legal entities in agriculture ¹⁸	100%			
III	SPECIFIC SUBSIDIES				
1.	Subsidies for implementation of breeding programs, in order to achieve the objectives in livestock production – selection measures ¹⁹²⁰				
2.	Subsidies for promotional activities in the agriculture and rural development $(measures and actions in agriculture)^{21}$				
3.	Subsidies for production of planting material, certification and clone selection ²²				
IV	IPARD				
	Measure 1: Investments in physical assets of agricultural holdings ²³				
	Measure 3: Investments in physical assets related to processing and marketing of				
	agricultural and fishery products ²⁴				
	Measure 7: Diversification of agricultural holding and business development ²⁵				
	Measure 9: Technical assistance				
V					
* (1-36) Bylaw	s on subsidies in agriculture and rural development in 2023 is presented in Annex 3.2				

** Basic subsidies in plant production in 2023 and input subsidies for fuel were realized in 2023 as a financial grant for plant production based on a special regulation

Source: The Regulation on allocation of subsidies in agriculture and rural development in 2023 and other bylaws

Budget funds allocated for subsidies in agriculture and rural development in 2023 have been increased compared to previous years, which enabled an increase in the level of support for certain measures of direct payments. In this sense, the milk premiums were increased from 10 RSD/l, in 2022, to 15 RSD/l in 2023, and then again to 19 RSD/l. The basic subsidies in plant production were significantly increased – to 9,000 RSD/ha, while the same level of support was realized through input subsidies for fuel.

As part of direct payments in livestock production, subsidies for quality breeding dairy cows were increased from 25,000 to 40,000 RSD/head, while subsidies for quality breeding sows were increased from 15,000 to 18,000 RSD/head in 2023. Apart from subsidies for suckler cows being abolished in 2023, other direct payments remained unchanged compared to the previous year.

Regarding measures to support rural development, certain groups of measures were not implemented in 2023 (investments in processing and marketing of agricultural, food and fishery products, subsidies for diversification of income and improving the life quality in rural areas (except for rural infrastructure) and subsidies for preparation and implementation of rural development local strategies). The implemented support measures for rural development in 2023 kept the levels of support from the previous year. Support levels remained unchanged for other types of subsidies (specific subsidies, credit support, IPARD).

5.3. Budget funds to support agriculture and rural development

5.3.1. Budget of the Ministry of Agriculture, Forestry and Water Management

Defined budget funds, allocated to MAFWM as the budget beneficiary responsible for the implementation of the agricultural policy, for the most part of the previous ten-year period was at a level below RSD 60 billion, in 2022 they were increased to about RSD 79 billion. In 2023, a significant increase in the budget for this purpose by as much as 46% was recorded, which achieved the maximum level of the MAFWM's annual budget, in the amount of RSD 114.4 billion.

After the reduced share of the MAFWM budget in the budget of the RS in the middle of the previous ten-year period, in the last two years an increase of this share has been recorded, reaching the maximum level in 2023 of 7%, or 1.74 pp more compared to the previous year. In this way, the highest level of share of the budget for agriculture in the total budget was achieved in the last ten years.

Graph 77: Budget of the MAFWM (bn RSD) and share in the total budget of the RS (%) (right axis); 2014-2023



5.3.2. Funds allocated for incentives in agriculture and rural development

Subsidies in agriculture and rural development traditionally make up about threequarters of the MAFWM budget, a trend that continued in 2023, considering that funds for subsidies participated in the MAFWM budget with about 77%, which is about 5 pp more compared to the previous year. In 2023, budget funds allocated for financing payments based on subsidies in agriculture and rural development amounted to RSD 87.8 billion, which is an increase of as much as 55% compared to the funds allocated for this purpose in 2022. Within this amount, the funds were intended for financing direct payments, rural development measures, specific subsidies, credit support and IPARD subsidies, but also for extraordinary measures of the state's reaction due to market disturbances in 2022 and 2023.

Table 9: Funds allocated for subsidies in agriculture and rural development, by type of
subsidies (RSD); 2022/2023

Type of subsidies	2022	2023
Direct payments	41,256,678,000	67,372,802,000
Support for rural development measures	9,051,459,000	12,740,585,000
Specific subsidies	226,100,000	250,000,000
IPARD subsidies	5,416,650,000	6,294,000,000
Credit support	722,000,000	1,181,005,000
Total	56,672,887,000	87,838,392,000

Source: Regulations on the allocation of subsidies in agriculture and rural development in 2022 and 2023 and bylaws

The largest part of the total allocated funds for subsidies in agriculture and rural development in 2023 was allocated to direct payments – as much as 77%, while 15% of the funds for subsidies were allocated for rural development measures, and around 7% for IPARD subsidies.

If the level of allocated budget funds is observed by types of measures compared to the previous year, the largest increase is recorded in direct payments and credit support (+63%), while funds for rural development measures in 2023 increased by 41%, and IPARD subsidies increased by 16%.

5.3.3. Funds realized for incentives in agriculture and rural development

In 2023, RSD 85.2 billion was paid on the basis of subsidies in agriculture and rural development, that is, 58% higher compared to the realized budget funds in 2022.

Table 10: Funds realized for subsidies in agriculture and rural development, by type (RSD); 2022/2023

Type of subsidies	2022	2023
Direct payments	41,245,651,001	66,784,617,711
Support for rural development measures	9,001,866,581	11,613,892,003
Specific subsidies	224,913,111	231,795,412
IPARD subsidies	2,688,967,331	5,421,123,472
Credit support	712,341,220	1,180,188,028
Total	53,873,739,245	85,231,616,625

Source: MAFWM, DAP

The greatest increase in the realization of funds was recorded for IPARD subsidies, considering that the funds paid for this type of measure in 2023 were double, compared to the previous year. Realization of direct payments in terms of value in 2023 increased by 62% year-over-year, while funds paid for credit support increased by 66% and funds paid for rural development measures increased by 29%, compared to the previous year.

According to the structure of funds allocated to specific types of subsidies, direct payments have the largest share in the total value of funds realized (78%), while funds based on rural development measures participate in the total with around 14%.

Regardless of the absolute increase in realized funds, the structure of realization remained approximately the same as in the previous year, with a slight increase in the realization of direct payments (+1.8 pp) and IPARD subsidies (+1.4 pp).

Graph 78: Structure of funds realized for subsidies in agriculture and rural development, by type; 2023



Source: MAFWM, DAP

Direct payments

Graph 79: Structure of funds realized for direct payments, by measures (%); 2023



* Financial grant for plant production includes basic subsidies in plant production and input subsidies for fuel Source: MAFWM. DAP

Subsidies for rural development measures

In 2023, based on support through rural development measures, around RSD 11.6 billion was realized. The largest amount of funds was directed to measures to improve competitiveness (81%), whereby more than half of the funds within this category of subsidies were spent on investments in physical assets of holdings (about RSD 6.1 billion).

About 10% of the funds realized as part of rural development measures were spent on measures for preservation and improvement of the environment, while payments for other groups of measures are at a lower level. The structure of payments based on direct payments in 2023 has not changed significantly compared to the previous year.

The largest part of the realized funds in 2023 was spent on direct payments – RSD 66.8 billion, where the largest part of this amount (44%) was realized based on financial assistance for the agricultural production of plant crops, i.e., for basic subsidies in plant production and input subsidies for fuel.

Slightly more than a third of the realized funds (37%) were spent on subsidies in livestock production, while 19% of the funds were spent on the milk premiums.

Graph 80: Structure of funds realized for rural development measures, by measures (%); 2023



Specific subsidies

Graph 81: Structure of funds realized for specific subsidies, by measures (%); 2023



In 2023, about RSD 232 million was spent on specific subsidies, with the unchanged share of specific groups of measures in the total funds for this purpose – 64% of the funds were used for support through breeding programs in livestock production (selection measures), while 35% was allocated for subsidies for production of planting material, certification and clone selection, with a negligible level of payment based on promotional activities in agriculture.

Credit support

Credit support is one of the oldest measures of agricultural policy, based on which RSD 1.2 billion was realized in 2023, significantly more compared to the payment on this basis from the previous year.

As in previous years, credit support, through subsidizing part of the interest rate, was aimed at: 1) the procurement of animals (including animal insurance premium); 2) procurement of seeds, planting material and plant protection products; 3) investments in agricultural mechanization and equipment; 4) procurement of feed for animals; 5) investments in certain types of mechanization and equipment used in plant production; 6) procurement of quality breeding heifers and quality breeding cows (up to five years of age); 7) procurement of fertilizers.

IPARD subsidies

By the Decision of the Directorate for Agriculture and Rural Development of the European Commission, of January 20, 2015, the Pre-Accession Assistance Program for Rural Development of the Republic of Serbia for the period 2014-2020 (IPARD II Program) was adopted. The main purpose of the IPARD II program is to support the agricultural producers and processors, as well as the population of rural areas in the Republic of Serbia, for the purposes of improving their capacities and potential in order to enable them to prepare in a timely manner for reaching European standards in the field of agriculture, food industry and environmental protection, as well as improving quality of life and increasing the income of the population in rural areas. The IPARD II program defines measures that provide financial support to the sector of primary agricultural production, the sector of processing and marketing of agricultural and fishery products, as well as support for the diversification of agricultural holdings and business development in rural areas of the Republic of Serbia.

The IPARD II program includes the following accredited measures:

- Measure 1: Investments in physical assets of agricultural holdings;
- Measure 3: Investments in physical assets related to the processing and marketing of agricultural and fishery products;
- Measure 7: Diversification of agricultural holdings and business development;
- Measure 9: Technical assistance.

For the program period 2014-2020, to which the IPARD II program refers, the Republic of Serbia was initially granted EUR 175 million from European funds²⁹.

From the beginning of the implementation of the IPARD II program until the end of 2023, fifteen public calls for the application for IPARD projects were published: seven for Measure 1, with total allocated funds in the amount of EUR 111.2 million, four for Measure 3, with total allocated funds in the amount of EUR 81.5 million, two for Measure 7, with total allocated funds in the amount of EUR 26.3 million and two for Measure 9, with total allocated funds for the approval of projects for IPARD subsidies under Measure 9 was published, with total allocated budget funds in the amount of EUR 508,128, and two applications were submitted by the IPARD Managing Authority within it for the procurement of promotional and printed material.

As of December 31, 2023, 3,181 applications were submitted for the realization of the right to IPARD subsidies, with requested public support in the amount of EUR 408.1 million, 1,540 IPARD projects were approved (EUR 194.9 million approved public support), 1,064 IPARD projects were paid (EUR 98.7 million paid public support), including advance payment, of which 999 IPARD projects were fully paid (EUR 86.1 million in public support). The average amount of public support paid for a fully paid IPARD project is EUR 86,172. The largest amount of IPARD support, paid on an annual basis during the entire period of implementation of the IPARD II program, was in 2023 (EUR 46.7 million), which brought the execution rate of the program budget for fully paid IPARD projects as of December 31, 2023, to 40.7%, i.e., 46.7% including advance payments.

²⁹ The Decision of the Directorate General for Agriculture and Rural Development of the European Commission, C(2023)5240 of July 27, 2023 and the Conclusion of the Government of the Republic of Serbia of November 3, 2023, adopted the Sixth Amendment to the IPARD II program of the Republic of Serbia for the period 2014-2020. The amendment, taking into account the previously approved financial changes of the IPARD II program in accordance with the relevant provisions of the Sectoral Agreement concluded between the Government of the Republic of Serbia and the European Commission, resulted in a reduction of the determined EU budget contribution for the IPARD II program, which amounts to EUR 158,484,279.56 after the automatic cancellation of unused funds until December 31, 2023.

By the end of 2023, 934 IPARD projects for Measure 1 have been paid, with the amount of public support paid in the amount of EUR 70.1 million (including payments). significantly advance А smaller number of beneficiaries' applications were paid for projects under Measure 3 (102), with public support paid in the amount of EUR 25.7 million, while under Measure 7, EUR 2.8 million was paid out for 28 projects. The average amount of paid IPARD support for a fully paid project achieves the highest value in Measure 3 (EUR 183,991).

Graph 82: Share of individual measures in the total number of paid applications and paid IPARD support (%); IPARD Program 2014-2020



Source: MAFWM, IPARD Managing Authority

The largest number of IPARD projects as of December 31, 2023 for Measure 1 was paid for investments in the sector of other crops, while for Measure 3 the fruit and vegetable processing sector is the most represented in terms of the number of paid IPARD projects. Investments in rural tourism and recreational activities are the most attractive from the aspect of submitted applications and implementation of projects within Measure 7.





Source: MAFWM, IPARD Managing Authority

In regard to the type of investments in accordance with the IPARD measures, the procurement of equipment, machinery and mechanization is the most represented type of investment within Measure 1 in terms of the number of submitted applications, while investments in the construction and modernization of facilities are more significant in terms of the volume of investments, of the required amount of IPARD support, which results in a higher average investment value per submitted application for this type of investment. Of the total number of submitted applications classified by sector in Measure 3, 149 applications were submitted for the purpose of building and equipping facilities and setting up new processing plants, while 109 applications were submitted for the modernization of the processing equipment. The establishment of tourist households and recreational zones are the predominant type of investment within Measure 7, for which 468 applications have been submitted by the end of 2022.

Graph 84: Structure of paid IPARD projects, by type of investment (%); IPARD Program 2014-2020



Source: MAFWM, IPARD Managing Authority

The largest volume of payment of IPARD support within primary agriculture (Measure 1) was made for the procurement of tractors (as of December 31, 2023, 581 requests in the amount of public support of EUR 23.2 million were fully paid). In regard to Measure 3, the largest number of beneficiaries implemented IPARD support for investments in the modernization of processing and packaging equipment in the fruit and vegetable processing sector (44 projects were paid in the amount of EUR 9.9 million). For the most represented type of investment for business development and diversification of activities on agricultural holdings in rural areas (Measure 7): Establishment of tourist households and recreational zones, seven beneficiaries were paid IPARD support by the end of 2023, amounting to EUR 686,926.

The predominant type of beneficiaries of IPARD support in Measure 1 and Measure 7 were natural persons (mostly family farms, and to a significantly lesser extent entrepreneurs), while for Measure 3 within the framework of legal entities, companies were the predominant type of beneficiaries, compared to agricultural cooperatives.

The largest number of IPARD projects was submitted in the Region of Vojvodina, which in the total number of submitted applications for the exercise the right to IPARD subsidies achieved a participation of 56%, while in the required total public costs for IPARD projects, the participation of this region was 47%.

Along with the implementation of the IPARD program 2014-2020, which, in accordance with the n+4 funding rule, when approved by the European Commission, will be concluded on December 31, 2024, MAFWM carried out preparatory activities for the Pre-Accession Assistance Program for Rural Development of the Republic of Serbia for the period 2021-2027 (IPARD III program). The EU Pre-Accession Assistance Program for Rural Development of the Republic of Serbia for the period 2021-2027 was adopted by the European Commission Decision C(2022) 1537 of March 9, 2022³⁰. The Government of the Republic of Serbia adopted the IPARD III program on December 14, 2023³¹. The funds of the European Union designated for the IPARD III program amount to EUR 288 million for the selected measures:

³⁰ The first amendment of the IPARD III program, carried out in order to improve the quality of the planning document, was approved by the European Commission by Decision C(2023) 7299 of October 20, 2023.

³¹ Official Gazette of RS, No. 118/23

- Measure 1: Investments in physical assets of agricultural holdings;
- Measure 3: Investments in physical assets related to the processing and marketing of agricultural and fishery products;
- Measure 4: Agri-ecological-climatic measure and organic production;
- Measure 5: Implementation of local rural development strategies LEADER approach;
- Measure 6: Investments in rural public infrastructure;
- Measure 7: Diversification of agricultural holdings and business development;
- Measure 9: Technical assistance.

The implementation of the IPARD III program began with the announcement of the First public call for submitting projects in the first quarter of 2024.

5.4. Support at the provincial and local level

In addition to support for agriculture and rural development at the national level, support for this sector is also implemented at the provincial and local levels, by competent provincial and local self-government units and it is financed from their own budgets. Support is prescribed within the annual program of support measures for the implementation of agricultural policy and rural development policy for the territory of the autonomous province or of the local self-government unit, with the prior approval of the MAFWM. After the completion of the implementation of the program, the competent authorities need to submit to the Ministry their reports on the implementation of the program in the previous calendar year.

In accordance with the provisions of the Law on Subsidies in Agriculture and Rural Development, the bodies of the autonomous provinces and local self-government units can implement all types of subsidies in their territory, except for direct payments (with the exception of recourse for storage costs in public warehouses and recourse for reproductive material/artificial insemination).

In 2023, 111 programs were approved, and support of a total value of about RSD 3.8 billion was paid to agricultural producers for measures to support agriculture and rural development at the provincial and local level. The realized amount of support in 2023 is about 9% higher than the support paid in the previous year.

As there is a limited possibility of applying direct payments at the provincial and local level, this group of measures participates with only 3% of the realized funds at the provincial and local level.

As expected, the largest amount of funds was allocated to the financing of rural development measures (89%), while 3% of support was allocated for credit support and specific subsidies.

On the other hand, about RSD 443 mil. was spent on other types of support.





6. CLIMATE CHANGES IN AGRICULTURE

Climate changes, which are at least ten times faster than ever in the history of planet Earth, have increased damages and losses, threatened people's lives and the functionality of natural systems, both globally and in the Republic of Serbia. Estimates show that the Republic of Serbia is warming more and faster than the global average. While the observed increase in the global mean temperature is 1.1 °C, Serbia is already at 1.8 °C, and in summer it is as much as 2.6 °C. At the same time, since 2000, the Republic of Serbia has faced several significant extreme climatic and weather episodes, which have caused significant material and financial losses, as well as losses of human lives.

Climatic hazards, which cause the most damage and losses in the Republic of Serbia and whose intensity and frequency are increasing, are heat waves, intense precipitation and droughts. Other climatic hazards, caused by climate change, include floods, landslides, mudslides, fires, as well as the decreased water, soil and air quality. They imply that other conditions are met that enable their occurrence, such as terrain characteristics, human activities, sources of pollution, etc.

It is precisely for this reason that risk assessments of these climate hazards need to be taken into account when planning policies at the national level and at the level of local self-governments. Due to the impact of climate change on the increased frequency of extreme events, it is necessary to include assessments of the impact of climate change in plans for the management of risks from extreme events, as well as spatial and general urban planning, with the aim of reducing these risks and increasing the capacity for recovery from damage caused by extreme events, which will contribute to increasing the resilience of the Republic of Serbia to climatic hazards.

The current monitoring of climate change in the Republic of Serbia indicates the following characteristics of climate change:

- 1. increase in mean temperature, with a greater increase in mean maximum temperature than mean minimum temperature and with the greatest increase during the summer season;
- 2. the change in average annual precipitation amounts is not significant; a change in the distribution of precipitation by intensity was observed through an average decrease in the number of days with moderate and low precipitation and an increase in the number of days with high and extreme precipitation; the change in the annual distribution of precipitation occurs through the extension of the drier season characteristic of summer and the shift of the average monthly maximum of precipitation to an earlier period (on average from late spring and early summer to an earlier period in spring);
- 3. increase in the frequency and intensity/duration of heat waves;
- 4. increase in the frequency and intensity/duration of droughts.

The frequency and intensity of climate hazards caused by climate change will increase in the future, with a clear trend of change until the middle of the 21st century, after which changes depend on the success of the implementation of the mitigation measures and adaptation to climate change. Estimates at the national level show that an increase in the average global temperature will significantly affect the value of GDP in the Republic of Serbia. The decrease of total GDP, depending on the scenario of global temperature increase, without adjustment and compared to the case of complete absence of global warming, is shown in the table.

Increase of T for:	2020-2040	2040-2100	2020-2100
1 °C	15,465	328,899	344,364
I C	(1.20%)	(4.74%)	(4.19%)
2 °C	58,124	708,193	766,317
	(4.53%)	(10.20%)	(9.32%)
3 °C	59,107	831,296	890,403
	(4.97%)	(12.88%)	(11.65%)
4 °C	97,536	1,904,874	2,002,410
	(6.87%)	(18.46%)	(17.06%)

Table 11: Expected impact of climate change on GDP: Reduction of total GDP compared to GDP in conditions without climate change* (bn USD; %); 2020-2100

* The energy sector is covered together with the three most vulnerable sectors Source: UNFCCC

In order to ensure the systematic implementation and monitoring of adaptation to changed climatic conditions, to which the Republic of Serbia has committed by signing the Paris Agreement (ratified in 2017), the Law on Climate Change³² prescribed the development of a Program of Adaptation to Changed Climatic Conditions with an Action Plan. The program was developed in accordance with the principles of the EU Climate Change Adaptation Strategy, which mandates the need to implement adaptation as "smart", "systematic" and "fast", with an emphasis on the importance of preserving water resources, which are considered particularly endangered by climate change. During the final drafting of the Program, the Guidelines for Strategies and Plans for Adaptation to Changed Climate Conditions³³ from June 2023 were also taken into account

The Program of Adaptation to Changed Climatic Conditions for the period 2023-2030 was adopted at the end of 2023³⁴. An integral part of the Program is the Action Plan for its implementation, which covers the period from 2024 to 2026 and which contains detailed measures and activities that contribute to the realization of the specific objectives of the Program, including the assessment of costs, that is, the funds needed for their implementation.

As part of the development of the Program, an analysis of the existing knowledge about climate change and its impacts was carried out, and the necessary additional analysis was prepared in accordance with the existing and available information. The analysis showed that the agricultural sector is the most sensitive to climate change and has a high exposure, because most of the cultivation is in open space. Taking into account the prepared impact analyses, it is necessary to provide capacities for adapting the agricultural production to climate change in a sustainable manner, that is, in accordance with the preservation of endangered resources (water and soil), necessary for agricultural production. Adaptation to climate change is a process that needs to be maintained in the future, due to the dynamics of climate change, through renewing and expanding the knowledge and information, increasing the efficiency of their availability to producers and other stakeholders, as well as by including this information in planning, i.e., strategic and planning documents.

Information on changed climatic conditions, the dynamics of their change and risk assessments, as well as recommendations for measures to be implemented, need to be systematized through the reionization of the Republic of Serbia for the needs of various sub-sectors of agriculture. Regular and mandatory education of advisors is necessary for effective dissemination of new knowledge and information, as well as the education of

³² Official Gazette of RS, No. 26/21

³³ Guidelines on Member States' adaptation strategies and plans

³⁴ Official Gazette of RS, No. 119/23

producers and other stakeholders, including the implementation of knowledge in the programs of schools and higher education institutions. Due to the need for faster implementation of scientific information and methods for adapting to climate change in practice, it is necessary to strengthen cooperation with the scientific community and increase the interdisciplinary approach in the development of methodologies, information and the provision of other services. In addition to the above, providing the capacity for adaptation also means enabling producers to protect their production from hail, high temperatures, and frost, as well as to ensure enough water for normal production.

In addition to relatively long-term planning in adapting agricultural production to the climate change, it is necessary to provide capacities for so-called short-term "adjustments" of production due to announcements of unfavorable conditions, in order to reduce damages. This indicates the need to increase the capacity of the agrometeorological services of the Republic Hydrometeorological Service of Serbia, which would improve the monitoring and announcement of weather conditions on different time scales (from long-term to short-term) forecasts, adapted to the needs of producers and ensure effective availability of information.

The obtained results of the analysis of vulnerability and risk from climate change in the sector of agriculture have indicated the need to implement priority measures to adapt the agricultural production, which include mitigating the impact of extreme weather events and increasing the capacity to adapt to future climate conditions, i.e. providing additional services and information to producers, to enable their decision-making to mitigate the negative consequences of climate change and to take advantage of the potential benefits. Also, adaptation measures aim to strengthen capacities at the national level in planning agricultural production through the implementation of sub-sectoral reionization, which provide information on the spatial potential for growing species and risks, as well as on the dynamics of changes in those potentials due to climate change.

The proposed adaptation measures for the agricultural sector in the Action Plan for the Program of Adaptation to Changed Climatic Conditions are:

- Improving the protection of perennial crops from extreme weather conditions;
- Increasing the resilience of livestock production to climate change;
- Increasing the resilience of meadows and pastures to climate change;
- Optimizing irrigation in accordance with needs and resources;
- Capacity building and knowledge improvement in order to adapt agricultural production to climate change;
- Improving the agrometeorological services to provide the necessary information to increase the resilience of agricultural production to climate change.

In addition to adaptation, it is necessary to go in the direction of mitigating climate change and developing climate-smart agriculture. This implies the introduction and implementation of activities that contribute to the agricultural sector reducing its negative impact on the environment. In this regard, the Strategy of Low Carbon Development of the Republic of Serbia for the period 2023-2030 with projections until 2050^{35} was adopted, as prescribed by the Law on Climate Change, and with the aim of determining the strategic directions of action and the public policy of reducing emissions of a greenhouse gases at the level of the entire economy. With the adoption of the Strategy,

³⁵ Official Gazette of RS, No. 46/23

opportunities for additional development, modernization and increasing the competitiveness of the domestic economy have opened, given that economic growth and investments accompanied by low greenhouse gas emissions have become one of the demands of the international and European markets.

The mitigation measures, i.e., reduction of greenhouse gas emissions, were selected based on the analysis of the potential for reducing greenhouse gas emissions, as well as the impact on social, economic and environmental protection parameters. This strategy served as the basis for the revision of the first Nationally Determined Contribution, in relation to which the national goal of reducing greenhouse gas emissions at the level of the entire economy is 33.3% by 2030 (compared to 1990) and it establishes the necessary strategic-political and legislative framework for combating climate change, which will be in accordance with the obligations of the Republic of Serbia, as a candidate for membership and a potential member of the EU, as well as the obligations under the Energy Community Treaty, while simultaneously fulfilling the obligations under the UN Framework Convention on Climate Change and the Paris Agreement.

Within the framework of the Strategy, measures for the agriculture sector are defined, which contribute to the reduction of harmful gases:

- Winter cover crops;
- Increasing the share of legumes in livestock grazing areas;
- Improving the genetic potential for higher milk production per head (Improving the genetic potential for higher milk production per head can contribute to the reduction of total greenhouse gas emissions if the milk production per head is increased and at the same time the health care of dairy cows is improved. This will lead to an increase of total milk production with not necessarily an increase in the number of dairy cows, which will also lead to a limited increase in greenhouse gas emissions. The necessity of improving milk production and increasing the efficiency and competitiveness of Serbian milk producers is also recognized by the Action Plan for the Implementation of the Government Program 2023-2026³⁶, in the Strategy of Agriculture and Rural Development of the Republic of Serbia 2014-2024, as well as in the IPARD program).
- Flaxseed as a feed supplement for cattle (after 2030);
- Additional measures after 2030, if the mitigation method is in accordance with scenarios M3 or M4: Precision agriculture and anaerobic digestion;
- Additional measures after 2030, if the mitigation method is in accordance with scenario M4: anti-methanogenic vaccination (predicted only in the period after 2030, if it is in accordance with the regulations related to animal health protection); breeding for ruminant efficiency; nitrification inhibitors; and nitrates as food additives.

MAFWM supports the process of adaptation and mitigation to climate change through its subsidizing measures for the procurement of new equipment and mechanization. Subsidies are made possible through national measures to support rural development and through the IPARD program, while respecting the demarcation criteria.

³⁶ Official Gazette of RS, No. 30/18

7. STATISTICAL OVERVIEW OF AGRICULTURAL PRODUCTION IN THE EUROPEAN UNION IN 2022

In the next chapter, statistical production and market indicators for the most important agricultural products at the level of the European Union and according to member countries in 2022 are presented. The text is based on the online publication of Eurostat³⁷.

7.1. Plant production

7.1.1. Cereals

The 2022 cereal harvest in the EU has been significantly reduced, as it was affected by the drought across Europe

It is estimated that the quantity of harvested cereals (including rice) in 2022 in the EU was at the level of 270.9 million t, which is 9%, or 26.7 million tons less than in 2021. In this sense, the level of production in 2022 is significantly below the record 307.9 million t, recorded in 2014.

Graph 86: Production of the key cereals in the EU (mill. t); 2012-2022



In France, 59.9 million tons of cereals were harvested in 2022, which accounts for 22.1% of the total EU cereal production in 2022. Cereal production in Germany recorded a level of 43.5 million tons (16.1% of the total production in the EU), 35 million tons were produced in Poland (12.9% of EU production), in Spain 19.3 million tons (7.1% of EU production), while in Romania the harvest was 18.9 million tons of cereals (7% of EU production).

The drop in cereal production in the EU in 2022 is the result of drought, primarily in Romania (-32.1%, drop by 8.9 million t), France (-10.4%, drop by 7 million t), Spain (-24.4%, drop by 6.2 million t) and Hungary (-35.2%, drop by 4.9 million t). On the other hand, in a small number of countries, cereal production has increased in 2022 compared to the previous year, in Germany (+2.6%, an increase by 1.1 million t), Finland (+39.1%, an increase by 1 million t, after a bad harvest in 2021) and in Poland (+2.9%, an increase by 1 million t).

³⁷ <u>https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Category:Crop and animal production</u>
Decreased production of maize and common wheat, production of barley at the same level



Graph 87: Structure of cereal production in the EU (%); 2022

Source: Eurostat

The production of common wheat and spelt in the EU reached the level of 126.7 million tons in 2022, which is 46.7% of the total production of all cereals in the EU. This level of production is lower by 3.2 million tons than in the previous year, 2021, which is a 2.5% decrease in production. The drop in production is entirely the result of reduced yields, given that the harvested area increased slightly (+0.5%, to 21.9 million ha).

Decrease in production in Spain (-25.1%, less by 1.9 million t), France (1.7 million tons less than in 2021), Romania (less by 1.7 million t) and Hungary (less by 0.9 million tons) was only partially compensated by the increase in production in Poland (increase of 1.3 million tons) and Germany (increase of 1.1 million tons).

The production of grain maize and corn-cob-mix in the EU decreased to 53 million tons in 2022, which is 20 million tons less than in 2021 (-27.5%). Such a significant drop in production is the result of the drought throughout the EU in 2022, which led to a large drop in yields, but also to a reduction in harvested areas (-4.4%, to 8.8 million ha). The lower production at the EU level is largely the result of reduced production in Romania (-45.8%, a drop of 6.8 million t), France (-29.2%, a drop of 4.5 million t) and Hungary (-57%, or less by 3.7 million tons).

Barley production in the EU recorded approximately the same level in 2022 as the previous year – 52 million t. However, there are significant discrepancies among the key barley-producing countries; a significant drop in production was recorded in Spain (-24.2%, a decrease of 2.2 million t), while higher production was achieved in Germany (+7.6%, an increase of 0.8 million t) and in the Nordic member countries (Denmark +19.1%, Sweden +42.4% and Finland +40.4%).

In 2022, oat products in the EU also remained at the same level as in the previous year, recording a volume of 7.5 million t, despite the evident reduction of harvested area (-8%). The recovery in production in Finland (+52.1%) and Sweden (+33.3%) largely offset lower production in Spain (-27.3%), France (-21%) and Poland (-7.6%).

A significant decrease in production areas under rye throughout the EU in 2022 (-9.9%) led to a drop in production by 7.7% (by 0.6 million tons), recording a level of 7.8 million t. This production result is primarily the result of reduced production in Poland (-9.5%), Germany (-5.8%) and Spain (-33.1%).



Graph 88: Production of cereals by main producing Member States (% of EU totals); 2022

The continued instability of the world market, further fuelled by the war in Ukraine, as well as by the general decrease in cereal production in the EU, have affected cereal prices, bringing them to a level even higher than in 2021 (on average 45.6% higher, in nominal terms).

The accelerated increase in cereal prices in 2022 is noticeable for all types of cereals: oats (+58.2%), rye and maslin (+53.3%), barley (+47.9%), wheat and spelt (+46.3%) and grain maize (+41.0%). The price of cereals as a product category was double in 2022 compared to 2015.

The increase in the average price of cereals after Q3 2020 accelerated in 2022. Apart from a temporary increase in prices from Q3 2018 to Q1 2019, there was relative price stability, viewed in the medium term, until the end of 2020.





7.1.2. Potatoes and sugar beets

The two main root crops grown in the EU are sugar beet, which was grown on 1.4 million ha across the EU in 2022, and potatoes, which are also produced on 1.4 million ha. Other root crops, such as fodder beet, fodder kale, rutabaga, fodder carrot and turnips, are specialized crops that are grown on only about 0.1 mil. ha.

The EU is the world's leading producer of beet sugar, as it produces around half of the world's production. However, only 20% of the world's sugar production comes from sugar beet, while 80% of sugar is produced from sugar cane.

Until September 2017, the EU sugar market was regulated by production quotas. The Directorate General for Agriculture and Rural Development (DG AGRI) then established the Sugar Market Observatory, in order to make the sugar sector in the EU more transparent, through the timely provision of market information and short-term analyses.

Sugar beet production and potato production in 2022 are significantly lower compared to 2021

After the decision to abolish production quotas, a series of fundamental reforms were implemented in the sugar sector in the EU – with the support of the CAP – in order to prepare for the new challenges and opportunities these reforms bring.

Graph 90: Production of sugar beet by main producing EU Members States (mill. t); 2012-2022



In 2017, farmers in the EU reacted to the cancellation of quotas by sowing more sugar beet (the planted areas in the EU were 16.5% higher than in 2016), and production reached a record level of million tons in 2017. The 134.2 continuous reduction of harvested areas under sugar beet in the following years, except for 2021, has fuelled the trend downward in sugar beet production. The combination of less harvested area in 2022 (-4.5%) and lower yields led to a decrease in sugar beet production in the EU to 103.5 million tons (-8.7% year-over-year).

Almost 4/5 of sugar beet production in the EU in 2022 comes from four member states – France (30.4%), Germany (27.3%), Poland (13.7%) and the Netherlands (7%). In France, 31.5 million tons of sugar beet were produced in 2022, which is 2.9 million tons less compared to 2021 (-8.3%). Germany also recorded a significant drop in production to 28.2 million tons in 2022 (3.7 million tons of sugar beet less; a decrease of 11.7%). Among the largest sugar beet producers, the Netherlands was the only one with increased sugar beet production in 2022 (by 10.7%, or 0.7 million tons more).

In 2022, 47.5 million tons of potatoes were produced in the EU, which is 3 million tons less than in 2021 (-5.9%). This decline was largely contributed by reduced production in Poland (-14.8%, 6 million tons produced), France (-10.2%, 8.1 million tons produced) and Germany (-5.6%, 10.7 million tons produced).



Graph 91: Production of potatoes and sugar beet (mill. t); 2022

Significant increase in sugar beet and potato prices in 2022

Graph 92: Potato and sugar beet price indices (2015=100); 2015-2022



For the second year in a row, a significant increase in the average price of sugar beet at the EU level was recorded; after a growth of 12.3% in 2021, there was an even bigger increase in prices of 34.9% in the following year, 2022. The average price of potatoes at the EU level also increased sharply in 2022 (by 30.5% on average), confirming the particularly volatile price of potatoes.

7.1.3. Oilseeds

Increase in total production of oilseeds in 2022, with strong growth in oilseed rape production

Mainly three oilseed crops are grown in the EU; the main two are oilseed rape and turnip rape, as well as sunflower, but soya beans are also produced. In 2022, about 32.5 million

tons of oilseeds were produced in the EU, which is about 1.2 million tons more than in 2021.

The production of oilseed rape and turnip rape in the EU amounted to 19.4 million tons in 2022, which is 2.5 million tons more than in 2021 (14.6%). This increase is largely the result of the expansion of areas under oilseed rape and turnip rape in 2022; increase in area to 5.9 million ha is a growth of 10.5% compared to 2021.



Graph 93: Production of oilseed rape and

On the other hand, adverse weather conditions had a major impact on sunflower yields across the EU in 2022. Sunflower production of 9.3 million tons in 2022 was by 1.1 million tons lower than in the previous year (-10.1%), despite a 12.9% larger harvested area (4.9 million ha). A similar situation was recorded with soya beans, where unfavourable weather conditions in 2022 significantly reduced the yield. Soya bean production decreased significantly (-7.6%), to 2.5 million t, despite the increase in production areas (estimate +16.5%).

Prices of all main oilseeds continued to rise sharply in 2022



The oilseed prices continued to grow rapidly in 2022 – oilseed rape and turnip rape by 30.3%, sunflowers by 32.7% and soya beans by 11.8%. This price development reflects problems in production and distribution at the world level, as well as unfavorable weather conditions in the case of particular oilseeds in the main producing countries of the EU. EU prices started to increase sharply from Q4 2020 and this trend continued until mid-2022.

7.1.4. Fruit

The EU supports the fruit and vegetable sector through various market organization schemes, which have four broad objectives:

- a more competitive and market-oriented sector;
- fewer crisis-related fluctuations in producer's income;
- consumption of fruits and vegetables in the EU; and
- increased use of eco-friendly cultivation and production techniques.

The EU produces millions of tons of fruit every year

Various types of fruit, berries and nuts are produced in the EU. It is estimated that in 2022, 35.9 million tons, of which 14.7 million tons of pome fruit (apples and pears), 10.5 million tons of citrus fruit (oranges, satsumas and lemons), 6.3 million tons of stone fruit (peaches, nectarines, apricots, cherries, sour cherries and plums), 2.6 million tons of subtropical and tropical fruit (figs, kiwi, avocados and bananas), 1.1 million tons of nuts and 0.7 million tons of berries.

The production of both apples and pears recorded a higher level in 2022 compared to 2021: apple production increased to 12.6 million tons (1.2% higher than in 2021), and pears to 2.1 million tons (+8.3%). Stone fruit production also recorded growth in 2022 (+5.1%), despite unfavourable weather conditions in some member states (e.g., production in Spain decreased by a quarter in 2022, while in Romania it decreased by one fifth). Unfavourable weather conditions affected citrus production, which is why decreased production in Spain particularly affected the overall decline in citrus production in the EU (-9.2%).

Italy, Poland and Spain are the main producers of fruit in the EU; however, other member countries are the main producers of specific types of fruit.

34% of apples in the EU are produced in Poland; Spain produces slightly less than half of all oranges in the EU

Thousands of apple varieties are grown around the world, many of which have been created and selected to grow in different climates, which made commercial apple production possible in all EU member states. Overall, three out of ten apples produced in the EU in 2022 (34%) were harvested in Poland. Other large producers of apples in the EU are Italy (18% of the total production in the EU) and France (14.2%). In contrast, the production of oranges and peaches is to a much greater extent influenced by climatic conditions, more than 90% of oranges and peaches produced in the EU come from Spain, Italy and Greece.



Graph 95: Production of selected fruit (mill. t); 2022

7.1.5. Vegetables

Italy and Spain produced about two-thirds of all tomatoes in the EU; The Netherlands and Spain produced slightly more than two fifths of onions in the EU

The production of fresh vegetables in the EU (including melons and strawberries) reached the level of 59.8 million tons in 2022, which is 7.4 million tons less than in 2021. In regard to fresh vegetables, production of tomatoes decreased to 15.4 million tons in 2022, of onions to 6.2 million tons and of carrots to 4.4 million t.

Almost two-thirds of the total tomato production in the EU in 2022 comes from Italy (6.1 million t) and Spain (3.7 million t), which is significantly lower production compared to the previous year (-7.7% and -23.2%).

In 2022, two thirds of the total production of carrots in the EU was produced in five member states, namely in Germany, France, Poland, the Netherlands and Spain. Carrot production in the EU in 2022 was significantly reduced (-15.9%) compared to 2021. A decrease in production was recorded in all five member states, the largest producers of carrots, ranging from a relatively moderate decrease in Poland (-2.9%) and France (-4.1%) to a significant decrease in production in Germany (-18.9%) and the Netherlands (-24%).

About three quarters of the onions produced in the EU in 2022 come from the Netherlands (down by 21.9% compared to 2021, to 1.5 million t), Spain (down by 15.7%, to 1,2 million t), France (-12.8%, to 0.7 million t), Germany (-13.6%, to 0.6 million t) and Poland (increase in production by 5.2%, to 0.6 million tons).



Graph 96: Production of selected vegetables (mill. t); 2022

7.1.6. Grapes for wine

The EU is a big player in the world wine market; in 2020, the EU had 64% of the world's production, 48% of the total consumption of wine and 45% of the world's vineyards were located in the EU.

Grape production in many major grape producing countries increased in 2022

It is estimated that in 2022, 23.8 million tons of grapes for wine were produced in the EU, which is 1 million tons more than in 2021, but is still significantly less than the 25.7 million tons produced in 2018. Italy, Spain and France produce the largest share of grapes for wine in the EU. The increase in the production of grapes for wine at the EU level is the result of higher production in France (increase of 1.1 million tons or, +22.2%) and in Italy (increase of 0.3 million t, or +4.8%). In contrast, production in Spain in 2022 was at a slightly lower level than the previous year (-2.9%).





Source: Eurostat

7.1.7. Olives for oil

The EU is the largest producer of olive oil in the world, with a share of about two-thirds of world production. Most of the world's production comes from southern Europe, northern Africa and the Middle East, given that 95% of olives are grown in the Mediterranean. With production concentrated in a relatively small area, the effects of disease outbreaks can have significant implications, which is why precautions are being taken against the spread of the bacteria *Xylella fastidiosa*, which arrived in Italy in 2013.

Spain is the largest producer of olives for oil in the EU, but its production halved in 2022

Olive production is often followed by a two-year cycle, with a large crop followed by a smaller yield the following year. Sometimes the weather can make these cycles more pronounced. Some countries may have cycles that are opposite to each other.





The total production of olives intended for the production of olive oil in the EU was at the level of 7.6 million tons in 2022, which is 4.6 million tons less than the production in 2021 and the lowest recorded production in the period since 2000. Unfavourable weather conditions affected production in Spain, traditionally the largest producer in the EU, which was cut in half (a drop of 52.1%) to 3.7 million t. After good production in Portugal in 2021, there was also a significant drop of 0.6 million tons in 2022 (a drop of 42.6%).

Reduction of production in Italy to 2.1 million tons in 2022 was somewhat more moderate (-4.9%), while in Greece a smaller increase in production was recorded (+3.8%), to 0.9 million t.

7.2. Livestock production

7.2.1. Livestock population

Majority of EU livestock populations held in just a few countries

The EU has a significant livestock population – at the end of 2022, 134 million pigs, 75 million cattle and 70 million sheep and goats were recorded.

Most livestock in the EU are raised in just a few member states. About a quarter of the total number of pigs (25.4%) and sheep (24.5%) in the EU was bred in Spain in 2022, Greece had a similar share in the goat livestock population (26.3%), while 22.7% of the total number of cattle in the EU were bred in France.

Some EU countries are relatively specialized in livestock production. For example, 8.8% of EU cattle in 2022 were bred in Ireland (slightly more than in Spain and Italy), while

Denmark breeds 8.6% of pig livestock (slightly less than France). After Spain, the second and third largest sheep populations in the EU were in Romania (17.4% of the total number of sheep in the EU) and Greece (12.5%).



Graph 99: Livestock populations in the EU (mill. heads); 2022

Looking more closely at the development of livestock population figures in 2021 and in 2022, the number of cattle in the EU decreased by 1.2%, while the decline was slightly greater in the number of sheep (-2.4%), goats (-4.1%) and pigs (-5.1%).

Over the past two decades, there has been a sharp decline in livestock population throughout the EU. In the period 2002-2022, the number of heads in each animal category has decreased: the largest percentage decrease was recorded in the number of sheep and goats (20% each), while the smallest rate of decrease was in the number of cattle (about 9 %).

Graph 100: Indices of livestock populations in the EU (2002=100); 2002-2022



Graph 101: Output price indices for animals in the EU (2015=100); 2015-2022



In contrast to the relative stability of prices, recorded for poultry and cattle in the period 2015-2020, their production prices increased significantly in 2021, and especially in 2022 (growth of 29.8% yearover-year for poultry and 25.6% yearover-year in cattle). Sheep and goat prices have also been relatively moderate in previous years, with prices expected to increase in 2020 and continue to rise rapidly in 2021 and 2022. Pig prices were more susceptible to fluctuations (in contrast to the price developments of other types of livestock) - production prices varied during the observed period, and they have significantly increased in 2022, by 26.4%.

7.2.2. Meat production

Ensuring a higher level of animal welfare affects the improvement of animal health and of the food quality. In the context of the EU "Farm to Fork Strategy", the European Commission plans to revise the legislation related to the slaughter of animals, so that they are based on scientific evidence, and to expand their scope, facilitate their implementation and, in the last instance, ensure a higher level of protection and animal welfare.

The collected data refer to the number and weight of carcasses in slaughterhouses, whose meat is intended for human consumption. In this sense, in this analysis, "meat" is represented as the equivalent of carcass weight from slaughterhouses.

Pig meat

Pig meat production dropped sharply in 2022 after record high in 2021

About 22.1 million tons of pig meat in 2022 were produced in the EU, which is 1.3 million tons less (-5.7%) than the record-breaking production level reported in 2021. More broadly, production in 2022 has almost reached the minimum level from 2009.

The two largest producers of pig meat in the EU are Spain (5.1 million tons in 2022) and Germany (4.5 million t). After eight consecutive years of growth in Spain, pig meat production declined slightly (-2.2%) in 2022. On the other hand, pig meat production in Germany in 2022 is decreasing for the sixth year in a row, but at a slightly higher rate (-9.6%). Also, in the other member states that are large producers of pig meat in the EU, a lower level of production was recorded in 2022, with the biggest drop in production in Poland (-9.2%) and Denmark (-6.6%).

Poultry meat

Poultry meat production continued to decrease in 2022, after reaching a record level in 2020

It is estimated that in 2022, around 13 million tons of poultry meat were produced in the EU, which is 1.5% lower compared to the production in 2021. This result represents an interruption of the markedly growing trend of poultry meat production in the EU until 2020. Poultry meat production level is higher by 3.2 million tons in 2022 than in 2007.



Graph 102: Indices of meat production in the EU (by quantity) (2007=100); 2007-2022

In 2022, the largest producers of poultry meat in the EU were Poland (21% of EU production, 2.7 million t), Spain (12.6%, 1.6 million t), Germany (11.9%, 1.5 million t), France (11.6%, 1.5 million t) and Italy (9.3%, 1.2 million t). Contrary to the general trend, poultry meat production in Poland increased significantly (+7.5%) in 2022, reaching a new record level, while in Spain it remained at a relatively stable level (+0.6%). In contrast, significantly lower production was recorded in France (-8.7%) and Italy (-11.8%).

Veal and beef³⁸

A lower level of beef production was achieved in 2022

In 2022, around 6.6 million tons of beef (beef and veal carcasses) were produced in the EU, which is about 160 thousand t less than in 2021 (-2.4%). The drop in beef production for the fourth year in a row led to a balancing of meat production, given the increase in meat production after the abolition of production quotas for milk on March 31, 2015 and the consequent increase in cow slaughter, as some small farms abandoned milk production (Graph 102).

About half of the total amount of beef in the EU in 2022 (Graph 103) was produced in three countries, France (20.8%), Germany (16.5%) and Italy (11.6%). In regard to veal,

³⁸ Beef is considered to be meat obtained by slaughtering cattle at least one year old. Certain breeds of cattle are raised primarily for meat, although beef is also obtained from dairy cattle. From the point of view of this analysis, veal means meat obtained from cattle up to one year of age (usually male calves and steers). Male calves of dairy breeds are not used for milk production and their potential for beef production is not optimal.

70% of the total veal production in the EU in 2022 comes from three countries, the Netherlands (26.9%), Spain (22.9%) and France (18.9%).

Sheep and goat meat

A minor decline in production was recorded in 2022

In 2022, around 0.5 million tons of sheep and goat meat were produced in the EU, which is 1.1% higher than in 2021. The largest part of this production (about 90%) is the production of sheep meat.

Three quarters of sheep meat in the EU in 2022 was produced in Spain (27.8%), France (18.2%), Ireland (14.5%) and Greece (14.3%). Greece and Spain are the main producers of goat meat in the EU.



Graph 103: Share in EU meat production (by quantity) (%); 2022

7.3. Production of milk and dairy products

7.3.1. Production of milk

160 million tons of raw milk were produced in 2022, of which 96% is cow's milk

It is estimated that in 2022, around 160 million tons of raw milk were produced on farms in the EU, which is 0.3 million tons less compared to the previous year. This relative stability of milk production in the EU can be viewed more broadly, by comparing it with the level of production immediately before the abolition of quotas; 149.7 million tons of raw milk were produced on farms in the EU in 2014.

The largest part of raw milk in 2022 was delivered to dairies; only 9.8 million tons was used on farms, whether it is used for food, direct sale, as animal feed or processed on the farm. From 149.9 million tons of milk delivered to dairies, 145.6 million tons was cow's milk, and the rest was sheep's milk, goat's milk or buffalo's milk.



Figure 2: Production and use of milk in the EU (mill. t); 2022

¹ Includes the estimated quantity of cows' milk produced in one Member State but delivered to another, which corresponds to an additional 0.7 mill. t. ² In whole milk equivalent;

³ Includes other yellow fat dairy products; expressed in butter equivalent;
 ⁴ In liquid whey equivalent;

Source: Eurostat

160 million tons of raw milk were produced in 2022, of which 96% is cow's milk

Graph 104: Dairy cows, milk production and apparent milk yield (000 head; mill. t); 2022



There are a number of factors that can affect the average annual milk yield per dairy cow, including dairy herd structure. The average annual milk yield in the EU continued to increase in 2022, reaching a level of 7,653 kg per dairy cow. Looking at countries, the average annual yield was highest in Denmark (10,187 kg per cow) and Estonia (10,128 kg per cow), while the lowest average yield was recorded in Bulgaria (3,621 kg per cow) and Romania (3,367 kg per cow). Among the EU member states, the largest producers of cow's milk, the annual yield was above the EU average in the Netherlands and Germany, while it was slightly below the average in France, Poland and Italy.

One fifth of the cow's milk in the EU was collected by dairies in Germany

Hygiene rules in the EU require milk collection to be done frequently and at a short distance between the farm and the dairy. However, the use of lactofreezes and larger milk tanks on farms has made this sanitary issue less critical. Meanwhile, the reduction of market restrictions has contributed to the cross-border distribution of milk between farms and dairies or between the dairies.

In 2022, just over one-fifth (21.1%) of raw cow's milk in the EU was produced on farms in Germany, and a similar percentage (22%) was processed by German dairies. Farmers in Germany, France, Poland, the Netherlands and Italy have together produced about two-thirds (64.7%) of raw cow's milk in the EU in 2022, while dairies from these countries provided two-thirds (66.0%) of cow's milk, collected by the dairies.

Graph 105: Collection of cows' milk by dairies in the EU (%); 2022



There are several EU member states, in which other types of animals, besides cows, contribute significantly to the total milk production; this is the case in many rural or arid regions, especially in the Mediterranean. In Spain, 1.1 million tons of sheep's and goat's milk were produced in 2022, while 0.9 million tons were produced in Greece, and in France 0.8 million t. In Italy, 0.7 million tons of milk from other animals (other than cows) were produced in 2022, which included almost entire production of buffalo milk in the EU.

Graph 106: Share of milk collection from animals other than cows in total milk delivered to dairies (%); 2022



Cow's milk makes up the largest part of milk delivered to dairies in most EU member states. However, the majority of milk (57.7%) delivered to dairies in Greece in 2022 was sheep and goat milk, while in Cyprus sheep and goat milk accounted for one fifth (21.1%) of the total amount of milk delivered.

The price of milk is increasing rapidly in 2022

The year 2022 was marked by a significant and constant increase in milk purchase prices, with the average annual price being 35.1% higher than the average purchase price in 2021. This trend indicates an accelerated growth in milk prices, bearing in mind that the average price of milk in 2021 was 7.2% higher than the average purchase price of milk in 2020. This kind of development of milk prices in the last couple of years indicates a significant fluctuation in the average price of milk compared to previously recorded prices.





Among the EU member states, the largest producers of milk in the EU, the price of milk in 2022 increased more than the average growth at the EU level – the Netherlands (+47%), Poland (+46.9%), Ireland (+44, 9%) and Germany (+44.8%). In every EU member state, higher milk prices were recorded in 2022, both in relation to the previous year and in relation to 2020.

7.3.2. Production of dairy products

70% of whole milk delivered to dairies in the EU is used for cheese and butter production

The milk delivered to dairies in the EU is processed into a large number of fresh and processed dairy products. Dairy products are registered by weight, which is why there is

a problem when comparing the quantities of different products (e.g., fresh milk and powder milk). Consequently, comparing the amounts of whole or skimmed milk used in the processing gives a clearer picture.

In 2022, 149.9 million tons of whole milk were processed, from the total amount of milk in this sector in the EU.

For the production of 2.3 million tons of butter and the so-called "yellow products" (such as butter and rendered butter) in the EU, 46.4 million tons of whole milk (Table 12), while 43 million tons of skimmed milk was used in 2022. An additional 13.9 million tons of skimmed milk was produced in the process of cream production and 0.9 million tons in the production of other fresh products. Skimmed milk obtained, together with 84.3 million tons of whole milk was used for the production of other dairy products.

In this sense, in 2022, 16.9 million tons of skimmed milk, together with 59.2 million tons of whole milk, were used for the production of 10.4 million tons of cheese in the EU. Overall, in 2022, 70.4% of the total amount of milk available in dairies was used for the production of cheese and butter in the EU.

Utilisati	on of milk			
Skimmed milk	Whole milk	Product obtained		
0.0	149.9	-		
-57.8	65.6	7.0		
-43.0	46.4	2.3		
-13.9	16.3	2.5		
-0.9	2.9	2.3		
57.8	84.3	47.0		
9.7	12.7	22.5		
20.7	4.1	3.0		
1.0	1.3	1.0		
1.7	6.0	7.7		
0.4	0.0	0.4		
16.9	59.2	10.4		
1.0	0.6	1.8		
6.3	0.5	0.2		
	Skimmed milk 0.0 -57.8 -43.0 -13.9 -0.9 57.8 9.7 20.7 1.0 1.7 0.4 16.9 1.0	milk Whole milk 0.0 149.9 -57.8 65.6 -43.0 46.4 -13.9 16.3 -0.9 2.9 57.8 84.3 9.7 12.7 20.7 4.1 1.0 1.3 1.7 6.0 0.4 0.0 16.9 59.2 1.0 0.6		

Source: Eurostat

22.5 million tons of drinking milk were also produced in the EU in 2022, obtained from 9.7 million tons of skimmed milk and 12.7 million tons of whole milk. Drinking milk accounted for 8.5% of the total amount of milk used by dairies in 2022. In 2022, 3 million tons of dairy powder products were produced in the EU from 20.7 million tons of skimmed milk and 4.1 million tons of whole milk.

In 2022, Germany produced close to one fifth of drinking milk in the EU (19%), with a similar share of butter (20%) and cheese (22%) in EU production. Other EU member countries that are large producers of cheese, are France (about 1.9 million tons, 18% of total EU production) and Italy (1.4 million tons, 13% of total EU production). The Netherlands recorded the second highest level of whey production (about 15% of total EU production) and the fourth highest cheese production (about 9% of total EU production), while Ireland had the third highest share of butter produced (about 13% of total EU production).

8. ANNEXES

1. SITUATION IN AGRICULTURE

Annex 1.1: Holdings according to the size of UAA in Serbia; 2023

		Total (all holdi	ngs)	
	Area (ha)	Structure (%)	Number of holdings	Structure (%)
No land	0	0.0	5,279	1.0
> 0-≤ 1 ha	63,501	2.0	103,827	20.4
> 1-≤ 2 ha	133,546	4.1	90,069	17.7
>2-≤5 ha	493,945	15.2	149,152	29.3
>5-≤10 ha	629,384	19.4	89,838	17.7
>10-≤20 ha	620,254	19.1	44,753	8.8
>20-≤30 ha	341,590	10.5	14,321	2.8
>30-≤50 ha	247,008	7.6	6,567	1.3
>50-≤100 ha	205,270	6.3	3,046	0.6
>100 ha	504,876	15.6	1,473	0.3
Tatal				

Total

Source: SORS, Agriculture Census 2023

Annex 1.2: Gross agricultural production indexes in Serbia, 2014-2023 (previous year=100)

					-	-				
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AGRICULTURAL PRODUCTION - TOTAL - gross ¹⁾	104.6	92.8	111.6	84.5	116.1	101.5	102.9	92.5	91.7	108.5
AGRICULTURAL PRODUCTION - TOTAL - net ¹⁾	102.9	92.0	109.0	88.1	114.3	98.8	102.0	94.4	91.9	108.7
Plant production (1+2+3) ¹⁾	106.3	87.3	119.5	76.5	125.5	101.9	104.6	89.9	88.7	115.5
 Crop and vegetable production (a+b+c+d) 	111.8	83.4	124.7	71.9	130.8	101.5	104.4	89.8	83.3	127.1
a) Cereals	119.9	77.3	129.1	61.6	156.7	99.1	109.5	89.8	78.5	135.4
Wheat	88.7	101.7	118.8	78.9	129.3	86.2	113.4	119.8	90.3	110.9
Maize	135.6	68.6	135.2	54.5	173.3	105.5	107.2	76.6	71.1	154.8
b) Industrial plants	117.8	79.6	129.0	86.6	132.4	100.2	96.3	85.8	89.2	129.5
Sugar beet	110.3	62.2	122.9	93.7	92.5	99.1	87.5	101.5	81.4	122.4
Sunflower	99.3	85.8	142.1	87.0	135.7	99.4	87.3	95.4	105.9	106.7
c) Vegetables	83.0	113.2	109.5	90.9	77.6	106.1	95.8	107.8	95.9	95.3
Vegetables without potatoes	87.1	116.4	108.4	95.1	75.2	87	96.6	118.3	101.9	84.5
Potatoes	77.2	108.0	111.7	82.5	82.8	143.9	94.7	92.2	85.3	114.5
d) Fodder plants	104.6	85.0	124.2	73.2	126.8	117.4	107.2	67.5	81	149.0
2. Fruit production ¹⁾	84.1	105.0	102.2	94.7	109.3	102.9	106.0	89.6	109.3	80.6
3. Viticulture	61.3	139.3	85.5	113.5	90.4	109.3	98.0	97.1	104.3	80.9

Livestock production (1+2+3+4+5)	101.4	103.5	98.3	101.5	101.3	100.9	99.7	98.6	98.7	95.1
1. Beef cattle breeding	99.9	100.5	99.3	100.3	99.4	101.2	98.9	98.7	95.9	94.2
Weight gain	96.0	99.9	98.5	100.6	99.5	102	98.4	98.4	94.5	94.6
Cow's milk	102.9	100.9	99.8	100.0	99.3	100.7	99.3	98.9	96.8	94.0
2. Pig breeding	104.8	103.8	104.5	100.7	98.6	102.5	100.8	96.2	97.2	94.2
3. Sheep breeding	104.2	102.8	89.1	107.4	103.3	95.2	100.3	101.3	101.7	96.4
Weight gain	104.0	103.1	88.9	109.7	101.7	98.2	101.3	101	102.6	95.7
Sheep's milk	107.3	99.7	87.6	82.2	127.3	62.2	84.3	107.6	84.5	124.8
4. Poultry breeding	100.5	102.6	95.1	102.1	106.5	103.8	99.9	101.3	98.8	101
Weight gain	94.1	96.1	101.4	110.2	110.9	108.7	103.4	102.2	101.9	107.7
Eggs	107.8	108.9	89.9	94.9	102.1	98.8	96.1	100.3	95.4	93.0
5. Beekeeping - honey	51.2	279.8	47.0	121.7	162.9	66.5	90.0	108.8	191.3	79.7

1) Due to the revision of data on fruit production, the value of indexes for the series for 2013-2016 changed on the following positions: fruit production, plant production, agricultural production - total net and agricultural production - total gross.

Source: SORS

Annex 1.3: Agricultural land in Serbia, by categories of utilisation (000 ha); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Utilised agricultural area, total ¹⁾	3,518	3,480	3,456	3,438	3,487	3,482	3,504	3,506	3,488	3,396	97.37	97.22
Arable land	2,606	2,591	2,597	2,595	2,583	2,579	2,604	2,615	2,600	2,603	100.13	100.28
of which fallow land and uncultivated land	20	18	17	15	9	9	9	8	7	8	118.14	98.45
Area under permanent crops ¹⁾	199	200	204	208	204	206	207	204	206	214	103.67	103.97
of which orchards ¹⁾	175	176	180	184	183	184	185	182	184	193	104.89	105.12
vineyards	22	22	22	22	20	21	20	20	20	18	91.75	90.84
Permanent grassland	693	670	634	616	676	675	671	666	662	556	84.06	83.05
of which meadows	382	369	343	322	351	346	340	333	330	318	96.45	93.61
pastures	332	321	311	295	325	329	331	333	331	238	71.95	72.21

¹⁾ Due to revision of data on fruit production, the areas for the series for 2013-2016 changed on the following positions: orchards, permanent crops and utilised agricultural area.

Source: SORS

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Annex 1.4: Utilised agricultural area by c	categories (ha); 2014-2023
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	0											Index
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	2023/ Ø18-22
UAA, total ¹⁾	3,518,249	3,480,374	3,455,998	3,438,130	3,486,908	3,481,567	3,504,290	3,506,075	3,488,752	3,396,315	97.35	97.22
Arable land	2,606,073	2,590,985	2,597,808	2,594,980	2,582,909	2,578,898	2,604,295	2,615,194	2,600,681	2,603,443	100.11	100.27
Cereals	1,819,188	1,782,010	1,763,575	1,718,034	1,712,988	1,698,993	1,740,456	1,770,188	1,724,728	1,766,058	102.40	102.12
Legumes	7,830	9,362	9,788	10,582	7,827	7,733	7,235	6,731	7,035	5,674	80.65	77.59
Potatoes, early and late	51,819	421,004	40,388	38,183	28,232	34,110	29,676	26,388	24,870	23,145	93.06	80.77
Sugar beet	64,112	42,683	50,071	54,183	48,125	42,539	37,418	39,411	34,728	41,673	120.00	103.04
Industrial plants	346,524	376,812	408,867	449,147	490,126	489,369	491,776	482,616	525,443	498,114	94.80	100.45
Vegetables, melons and strawberries	52,680	66,935	68,183	66,488	50,294	47,832	48,097	47,746	47,986	47,657	99.31	98.48
Flowers	343	445	472	1,057	440	469	508	662	770	712	92.47	124.96
Fodder plants	242,041	250,359	236,684	240,088	230,484	243,480	234,842	228,495	222,650	208,122	93.47	89.71
Other crops on arable lands	1,713	2,252	2,831	2,249	4,732	5,407	5,746	5,029	5,203	4,019	77.24	76.94
Fallow land	19,655	17,969	16,624	14,680	9,143	8,966	8,541	7,929	7,267	8,270	113.80	98.81
Permanent grassland	693,074	669,707	633,925	616,434	676,363	675,314	671,774	665,984	661,578	556,446	84.11	83.03
Meadows	381,654	368,738	342,926	321,812	351,653	346,196	340,417	332,856	330,095	318,283	96.42	93.55
Pastures	331,588	320,837	311,211	294,622	324,710	329,118	331,357	333,128	331,483	238,163	71.85	72.18
Permanent crops ¹⁾	198,934	199,814	204,053	207,592	203,849	206,228	207,503	204,470	206,611	213,557	103.36	103.80
Orchards ¹⁾	174,729	175,917	180,173	183,609	183,460	183,611	185,418	182,084	184,265	192,999	104.74	105.02
Vineyards	22,150	22,150	22,150	22,150	20,333	20,501	19,840	20,113	19,973	18,349	91.87	91.05
Nurseries	1,531	1,182	1,112	1,246	1,336	1,363	1,532	1,578	1,642	1,519	92.51	101.93
Other permanent crops	524	565	618	587	719	753	713	695	731	690	94.39	95.54

¹⁾ Due to revision of data on fruit production, the areas for the series for 2013-2016 changed on the following positions: orchards, permanent crops and utilised agricultural area. *Source: SORS*

Annex 1.5: Structure of harvested areas in Serbia (%); 2014-2023

		-								
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Harvested area	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cereals	70.2	69.3	68.5	66.5	66.6	65.9	66.8	67.7	66.3	67.8
Maize	23.4	39.8	39.4	39.0	35.1	37.3	38.2	39.0	36.6	35.4
Wheat	40.9	23.3	23.2	21.6	25.0	22.4	22.3	22.9	24.3	26.2
Other cereals	6.0	6.3	6.0	5.9	6.5	6.2	6.3	5.8	5.4	6.2
Sugar beet	2.5	1.7	1.9	2.1	1.9	1.6	1.4	1.5	1.3	1.6
Oilseeds	13.2	14.3	15.5	17.1	18.8	18.6	18.6	18.1	19.5	19.1

Sunflower	6.8	6.5	7.8	8.5	9.3	8.5	8.5	8.1	9.7	9.4
Soya beans	6.0	7.3	7.1	7.8	7.6	8.9	9.1	9.1	9.0	8.2
Potatoes	2.0	1.7	1.6	1.5	1.1	1.3	1.1	1.0	1.0	0.9
Fresh vegetables and beans	3.1	3.0	2.9	3.1	2.3	2.1	2.3	2.3	3.1	2.3
Fodder plants	8.8	9.9	9.2	9.3	9.0	9.4	9.0	8.7	8.6	8.0
Other	0.5	0.1	0.4	0.4	0.4	1.1	0.8	0.7	0.2	0.3

Source: SORS

Annex 1.6: Areas under the main crops in Serbia (000 ha); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Cereals	1,817	1,759	1,759	1,710	1,713	1,699	1,740	1,770	1,724	1,766	102.44	102.13
Wheat	605	590	595	556	643	577	581	599	631	682	108.12	112.54
Maize	1,058	1,010	1,010	1,002	902	962	996	1,020	952	923	96.95	95.51
Other cereals	154	159	154	152	168	160	163	151	141	161	114.07	102.70
Sugar beet	64	42	49	54	48	43	37	39	35	42	119.07	103.15
Oilseeds	339	364	396	441	482	480	484	474	516	490	95.03	100.65
Sunflower	175	166	200	219	239	219	221	213	251	241	95.82	105.21
Soya beans	154	185	182	202	196	229	237	237	235	211	89.80	93.04
Rapeseed	10	12	13	19	46	31	25	23	29	38	131.10	123.44
Other crops for oil production	0	1	1	1	1	1	1	1	1	1	79.80	79.80
Tobacco – dry leaves	5	5	5	5	6	7	7	6	5	5	96.50	77.82
Potatoes	52	42	41	39	28	34	30	26	25	23	92.58	80.93
Fresh vegetables and beans	70	81	82	86	65	62	61	61	62	59	96.39	95.58
Fruit	172	174	179	183	183	188	185	182	184	200	108.70	108.46
of which berries	25	27	32	36	38	38	39	36	36	41	114.11	109.84
Grapes	21	21	21	21	21	21	20	20	20	18	91.75	89.95
Fodder plants	242	250	237	240	230	243	235	228	223	208	93.27	89.73

Source: SORS

Annex 1.7: Yields of main crops in Serbia (t/ha); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Cereals (t/ha)												
Wheat	4.0	4.1	4.9	4.1	4.6	4.4	4.9	5.7	5.0	5.1	101.10	102.74
Maize	7.5	5.4	7.3	4.0	7.7	7.6	7.9	5.9	4.5	7.2	159.65	106.91
Sugar beet	54.7	51.8	54.5	46.7	48.3	54.2	53.9	52.0	48.0	49.0	102.08	95.55
Oilseeds												
Sunflower	2.9	2.6	3.1	2.5	3.1	3.3	2.9	2.9	2.6	2.9	109.74	96.39
Soya beans	3.6	2.5	3.2	2.3	3.3	3.1	3.2	2.3	1.7	2.8	167.22	104.51
Rapeseed	3.2	2.7	2.9	2.5	2.9	2.7	3.0	3.2	3.0	3.5	117.27	118.86
Tobacco – dry leaves	1.9	1.8	1.5	1.4	1.2	1.1	1.3	1.7	1.3	1.5	117.92	116.14
Potatoes	11.4	15.4	17.8	15.3	17.3	20.6	22.4	23.3	21.1	25.9	122.77	123.71
Fresh vegetables and beans												
Tomatoes	13.9	16.6	15.9	15.6	15.3	14.2	14.1	17.8	19.0	14.6	77.04	91.03
Peppers (fresh)	9.7	11.1	13.4	11.4	11.2	11.7	10.7	14.4	14.1	12.0	85.40	96.96
Beans ¹⁾	1.4	1.0	1.1	1.0	1.2	1.0	1.1	1.1	1.0	1.1	111.80	103.52
Fruit – woody (t/ha)												
Apples ²)	16.5	17.5	16.1	15.1	17.8	19.1	18.6	19.0	17.8	13.9	77.82	75.03
Sour cherries ²)	6.7	6.6	5.8	5.2	6.8	5.1	8.5	7.9	8.2	7.4	90.06	101.16
Plums ²⁾	5.6	4.8	6.4	4.6	6.0	7.7	8.0	5.7	6.8	4.9	71.68	71.26
Berries (t/ha)												
Raspberries ²⁾	5.6	6.0	5.6	5.0	5.6	5.2	4.9	5.3	5.9	5.2	87.95	96.45
Strawberries	4.7	5.1	4.0	4.3	3.2	3.0	4.5	3.3	4.7	3.3	69.77	87.67
Grapes-total (t/ha)	5.8	8.1	6.9	7.8	7.0	8.0	8.0	7.4	8.1	7.2	88.49	93.09
Fodder (t/ha)												
Clover	3.3	2.9	4.0	3.0	4.0	5.0	5.0	3.9	3.1	4.0	129.03	95.24
Alfalfa	5.2	4.4	5.7	4.0	5.0	6.0	6.0	5.1	4.1	6.0	146.34	114.50
Fodder maize	19.2	17.3	21.3	16.0	20.0	20.0	21.0	15.8	15.0	20.0	133.33	108.93

Crop yield is expressed as barn yield with regular humidity, after deduction of all losses during harvesting (picking), transport, threshing. Yield per area unit (per ha) is calculated on harvested area. ¹⁾ Bean yields per ha is expressed for pure crops.

²⁾ Due to revision of data on fruit production, the data on fruit yield or the series for 2013-2016 changed on the following positions: apples, sour cherries, plums, raspberries.

Source: SORS

Annex 1.8: Production of the main crops in Serbia (000 t); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Cereals	10,849	8,437	10,869	6,793	10,527	10,437	11,446	10,236	8,012	10,809	134.91	106.69
Wheat	2,387	2,428	2,885	2,276	2,941	2,535	2,873	3,442	3,109	3,449	110.93	115.73
Maize	7,952	5,455	7,377	4,018	6,964	7,345	7,872	6,027	4,283	6,631	154.82	102.04
Other cereals	510	554	607	499	622	557	701	767	620	730	117.69	111.67
Sugar beet	3,507	2,183	2,684	2513	2325	2305	2018	2048	1667	2041	122.41	98.46
Oilseeds	1,087	924	1,238	1,052	1,517	1,516	1,465	1,222	1,131	2,041	180.43	148.93
Sunflower	509	437	621	541	734	729	637	608	644	686	106.56	102.37
Soya beans	546	454	576	461	646	701	752	540	399	600	150.35	98.73
Rapeseed	31	33	39	49	135	84	74	73	87	134	153.74	147.63
Other crops for oil production	0	1	2	1	2	2	2	1	1	1	87.38	54.61
Tobacco – dry leaves	9	9	8	7	7	8	9	10	6	7	123.28	92.46
Potatoes	592	639	714	589	488	702	665	614	523	600	114.64	100.20
Fresh vegetables and beans ¹⁾	920	1,095	1,146	1,100	836	747	726	805	1,182	713	60.28	82.93
Fruit ²⁾	1,304	1,307	1,359	1,205	1,406	1,542	1,619	1,436	1,513	1,264	83.54	84.09
of which berries ²⁾	132	157	169	174	189	177	185	183	202	208	102.78	110.90
Grapes (total)	122	171	146	166	150	164	160	156	162	132	81.19	83.03
Fodder plants	1,506	1,402	1,679	1,224	1,498	1,824	1,882	1,425	1,175	1,486	126.47	95.21

¹⁾ Beans growing is presented jointly for pure crops and cover crops. Cabbage and kale growing is presented jointly for the main and double crops. ²⁾ Due to revision of data on fruit growing, the data on production of the series for 2013-2016 changed on the following positions: fruit, of which berries.

Source: SORS

Annex 1.9: Head of cattle¹⁾ and number of beehives in Serbia (000); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Beef cattle (total)	920	916	893	899	878	898	886	860	800	725	90.63	83.87
of which cows	460	455	438	436	434	434	429	419	384	353	91.93	84.05
of which dairy cows	437	430	426	429	423	423	417	408	374	336	89.84	82.15
Pigs (total)	3,236	3,284	3,021	2,911	2,782	2,903	2,983	2,868	2,667	2,141	80.28	75.37
of which sows	346	354	356	350	343	350	346	331	301	250	83.06	74.81
Sheep	1,748	1,789	1,665	1,704	1,712	1,642	1,685	1,695	1,721	1,717	99.77	101.54
of which breeding ewes	1,266	1,287	1,231	1,287	1,264	1,197	1,178	1,186	1,211	1,210	99.92	100.23
Goats	219	203	200	183	196	191	202	195	192	147	76.56	75.31
Poultry (total)	17,167	17,450	16,242	16,338	16,232	15,780	15,249	15,348	14,817	14,278	96.36	92.20
of which laying hens	10,650	11,538	9,138	8,973	8,988	8,525	8,207	8,292	7,902	7,490	94.79	89.35
Beehives	677	792	792	849	914	977	980	976	977	1,103	112.90	114.32

¹⁾ Situation as at 1st December. The number of bee hives refers to the hives from which honey was extracted.

Source: SORS

Annex 1.10: Livestock production in Serbia; 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Total production (weight gain/live weight) (000 t)												
Beef cattle	155	156	152	153	152	155	153	150	142	134	94.37	89.10
Pigs	400	415	434	437	431	441	445	428	416	392	94.23	90.70
Poultry	121	116	117	129	143	156	161	165	168	181	107.74	114.12
Sheep	63	65	58	63	64	63	64	65	66	64	96.97	99.38
Gross meat production (carcass side weight) (000 t) ¹⁾												
Beef	73	77	77	71	76	71	75	77	79	79	100.00	104.50
Pork	258	278	301	307	303	298	299	307	299	289	96.66	95.95
Poultry	94	86	88	95	106	114	115	111	116	128	110.34	113.88
Lamb	27	30	34	30	32	38	31	31	31	32	103.23	98.16
Milk (mill. l) ²⁾												
Cow's milk	1,492	1,501	1,504	1,506	1,493	1,509	1,495	1,473	1,425	1,344	94.32	90.87
Ewes' milk	20	19	17	14	18	11	9	10	9	11	122.22	96.49
Goat milk	38	44	37	33	34	31	34	34	34	21	61.76	62.87
Eggs (mill.)	1,892	2,061	1,853	1,759	1,796	1,775	1,706	1,711	1,632	1,518	93.01	88.05
Honey (000 t)	4.38	12.26	5.76	7.01	11.43	7.60	6.84	7.44	14.23	11.35	79.77	119.38
Wool (000 t)	2.69	2.77	2.85	2.83	2.84	2.80	2.81	2.86	2.89	2.01	69.55	70.77

Gross domestic production (included exported, excluded imported live animals), without raw fats.
 Freshly milked milk, total

Source: SORS

	00.40								2023
Agriculture and fisheries 97.30	99.19	99.10	105.00	95.85	102.70	104.70	120.84	125.70	92.27
Agriculture 97.30	99.25	99.00	104.90	95.90	102.70	104.80	121.03	125.60	92.14
Crop production 95.20	103.07	101.60	107.00	95.22	103.00	104.80	132.58	126.00	77.37
Fruit production and viticulture 88.90	120.80	106.60	81.30	81.56	122.80	130.10	150.31	108.90	78.10
Livestock production 100.40	93.80	95.70	105.60	99.34	99.30	100.40	101.24	129.50	116.69
Processing from own production 103.40	102.90	101.30	102.40	104.99	104.20	99.80	105.82	121.70	111.65
Fisheries 95.30	93.50	103.10	126.30	89.91	98.00	95.50	98.24	154.40	117.41
Cereals 96.80	102.04	100.10	106.00	97.78	102.60	102.70	126.80	133.50	74.15
Wheat 101.60	100.10	87.00	111.00	98.59	112.50	100.10	119.23	145.30	70.91
Maize 91.80	105.60	102.70	104.90	96.89	100.40	109.60	139.28	128.10	69.40
Industrial plants 91.70	105.90	103.90	109.80	88.04	101.90	110.20	146.08	111.40	77.89
Sunflower 109.30	133.90	84.80	109.30	82.03	104.50	115.50	155.24	111.10	62.23
Soya beans 91.90	100.90	98.70	118.80	85.07	99.60	114.20	165.46	109.60	70.68
Sugar beet 79.00	92.80	122.90	104.20	87.05	107.60	103.60	114.17	98.60	130.45
Tobacco (dry leaves) 97.20	92.40	114.70	85.50	114.63	100.80	99.80	93.64	142.00	134.14
Vegetables ¹⁾ 109.30	114.10	103.40	98.20	125.40	128.00	94.20	120.45	114.50	140.15
Potatoes 91.20	100.60	100.80	100.00	131.41	121.50	81.70	100.93	167.50	122.55
Fodder plants 113.20	108.60	99.80	118.20	107.87	89.10	99.50	126.92	129.10	91.88
Fruit 88.90	120.80	106.60	81.30	81.56	122.80	130.10	150.31	108.90	78.10
Wine grapes 75.90	123.30	98.30	100.40	99.44	96.30	106.00	110.87	98.80	104.63
Wine 146.90	138.00	116.90	105.20	110.30	111.80	94.20	111.16	131.40	112.29
Beef cattle									
Calves 103.10	99.60	98.50	100.70	105.33	95.70	93.60	107.59	126.10	106.44
Pigs 104.30	103.30	96.80	102.20	102.05	104.10	99.50	102.07	114.20	117.40
Sheep and goats 99.20	84.10	92.70	115.80	89.84	100.50	104.00	94.52	129.90	117.55
Cattle and poultry 112.80	102.60	101.60	98.20	102.88	97.60	98.10	104.17	132.00	114.14
Livestock products									
Poultry 99.80	89.70	94.30	109.30	95.73	98.00	99.90	100.35	126.90	112.03
Milk									
Eggs 100.90	97.50	96.90	102.00	102.93	100.50	100.90	102.06	132.50	121.75
Honey 95.60	97.00	93.70	101.00	99.00	92.20	96.60	109.47	114.70	98.59

Annex 1.11: Price indices for agricultural products in Serbia (previous year=100); 2014-2023

Ponders which represent the structure of the value of products sold by legal entities from their own production and the value of products bought from family holdings are used for calculation of price indexes of agriculture and fisheries product producers. Product ponders are calculated for each month separately based on monthly data on buying-in and sale.

¹⁾ Potatoes and beans are not included.

... = no data available

Source: SORS

Annex 1.12: Average producer prices of agricultural products in Serbia (RSD/kg); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Plant products												
Wheat	20.48	17.57	15.06	16.77	16.31	17.83	17.97	21.90	33.18	20.75	62.54	96.79
Maize	13.34	15.18	15.14	16.19	14.57	14.39	16.31	23.44	31.07	17.49	56.29	87.64
Rye	17.34	21.63	18.41	17.41	18.20	20.16	19.62	23.05	33.48	23.29	69.56	101.69
Barley	17.32	15.93	15.72	14.31	15.80	15.49	14.74	19.51	32.04	16.31	50.91	83.57
Brewing barley	15.97	16.95	16.35	16.06	16.12	17.34	16.39	19.38	35.08	20.45	58.30	98.03
Oats	22.45	21.48	18.61	17.87	19.06	15.09	16.04	22.15	35.86	25.48	71.05	117.74
Rapeseed	35.90	38.95	38.91	38.08	34.82	37.73	38.84	55.52	74.19	40.66	54.81	84.32
Sunflower	28.19	36.67	30.68	33.22	26.95	28.18	32.24	51.79	57.86	35.36	61.11	89.74
Soya beans	37.40	38.31	37.64	45.02	35.39	34.67	40.24	67.28	74.89	49.87	66.59	98.76
Sugar beet	3.49	3.24	4.07	4.24	3.56	3.80	4.00	4.37	4.77	6.08	127.46	148.29
Tobacco (dry leaves, non-fermented)	233.04	221.71	246.42	205.15	214.69	214.98	256.43	249.73	330.95	455.72	137.70	179.87
Beans	248.28	208.99	145.47	173.45	203.12	210.62	195.20	161.71	205.37	230.39	112.18	118.03
Potatoes (pure crops)	21.11	23.95	20.24	22.78	32.02	30.59	22.85	25.96	55.91	52.94	94.69	158.19
Peppers	69.90	52.61	49.22	54.34	62.19	76.03	75.46	55.20	68.49	104.43	152.47	154.77
Cabbage	18.89	22.12	17.12	21.07	21.92	23.84	18.65	33.26	30.56	31.61	103.44	123.26
Tomatoes	73.62	40.22	50.99	47.75	48.93	62.65	58.58	71.51	77.41	101.28	130.84	158.71
Cucumbers	39.17	27.55	36.60	27.71	37.34	46.07	43.91	42.31	57.71	62.38	108.09	137.20
Carrot	29.22	37.02	26.27	31.08	36.53	30.61	25.16	36.01	39.15	55.81	142.55	166.64
Onion	17.99	22.04	24.61	19.31	31.84	41.77	28.74	26.68	31.80	52.63	165.50	163.62
Apples	45.15	42.93	46.09	54.96	44.58	41.23	49.66	50.94	45.39	51.38	113.20	110.83
Pears (dessert)	53.18	69.39	75.92	75.48	69.72	69.66	78.27	45.16	88.23	103.90	117.76	147.99
Peaches and nectarines	60.75	61.60	74.99	68.42	67.95	57.67	67.56	88.35	80.48	72.31	89.85	99.87
Apricots	57.84	93.74	89.68	67.29	89.35	63.00	114.40	123.56	95.44	115.14	120.64	118.52
Sour cherries	50.80	142.39	108.56	96.22	127.04	114.51	78.14	118.75	84.13	84.30	100.20	80.66
Plums	57.04	55.50	46.51	60.97	57.54	40.43	53.54	59.77	58.16	60.41	103.87	112.10
Walnuts (whole)	271.53	230.48	216.06	266.40	234.14	180.31	159.04	191.49	217.90	271.78	124.73	138.26
Raspberries	151.37	192.89	194.23	131.72	96.26	143.64	196.29	377.37	488.13	189.83	38.89	72.92
Table grapes	73.12	70.57	63.06	75.18	53.66	70.67	82.63	96.07	90.94	116.16	127.73	147.42
Wine grapes	24.01	39.15	31.34	37.50	36.96	47.34	45.08	44.98	47.51	85.69	180.36	193.11
Livestock products												
Calves	322.36	328.33	316.91	322.82	333.16	351.15	338.95	354.89	419.43	514.05	122.56	142.98
Bullock and heifers	223.32	220.48	219.30	217.18	236.56	220.75	201.53	226.07	297.80	317.37	106.57	134.17
Pigs (≤ 110 kg)	158.88	148.64	140.65	165.47	144.48	150.98	152.69	150.38	206.93	247.15	119.44	153.42
Pigs (≥ 110 kg)	155.02	135.20	126.03	151.89	139.66	141.07	146.96	143.86	197.14	237.48	120.46	154.47
Lambs	261.04	260.41	259.10	250.54	249.13	241.14	217.16	237.93	319.34	368.63	115.43	145.74
Chickens	103.73	112.91	111.98	111.76	104.71	95.57	96.53	112.88	141.74	132.00	93.13	119.69
Eggs	10.34	7.79	7.69	8.55	7.70	8.04	7.99	8.22	11.80	13.38	113.39	152.91

Cow's milk	33.47	31.64	30.44	30.45	31.73	31.69	32.00	32.48	47.70	56.96	119.41	162.19
Honey	348.74	381.59	325.92	301.39	323.93	318.41	407.12	514.86	407.31	326.37	80.13	82.77
Source: SORS												

Annex 1.13: Average producer prices of agricultural products in Serbia (EUR/t); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Plant products												
Wheat	174.59	145.55	122.32	138.21	137.90	151.29	152.83	186.27	282.48	176.97	62.65	97.15
Maize	113.72	125.76	122.97	133.43	123.19	122.10	138.72	199.37	264.52	149.17	56.39	87.96
Rye	147.82	179.15	149.53	143.48	153.88	171.06	166.87	196.05	285.04	198.63	69.69	102.08
Barley	147.65	131.97	127.68	117.94	133.59	131.44	125.36	165.94	272.78	139.10	51.00	83.89
Brewing barley	136.14	140.39	132.80	132.36	136.30	147.13	139.40	164.83	298.66	174.41	58.40	98.39
Oats	191.38	177.95	151.16	147.28	161.15	128.04	136.42	188.39	305.30	217.31	71.18	118.19
Rapeseed	306.04	322.59	316.04	313.84	294.41	320.15	330.33	472.22	631.62	346.78	54.90	84.63
Sunflower	240.31	303.75	249.19	273.78	227.86	239.11	274.20	440.49	492.60	301.57	61.22	90.06
Soya beans	318.82	317.29	305.72	371.03	299.23	294.18	342.24	572.24	637.58	425.33	66.71	99.12
Sugar beet	29.75	26.87	33.06	34.94	30.10	32.24	34.02	37.17	40.61	51.85	127.69	148.89
Tobacco (dry leaves, non-fermented)	1,986.60	1,836.36	2,001.49	1,690.75	1,815.22	1,824.15	2,180.94	2,124.04	2,817.58	3,886.69	137.94	180.58
Beans	2,116.52	1,730.99	1,181.55	1,429.49	1,717.40	1,787.16	1,660.17	1,375.40	1,748.44	1,964.92	112.38	118.53
Potatoes (pure crops)	179.96	198.37	164.40	187.74	270.73	259.56	194.34	220.80	476.00	451.51	94.86	158.82
Peppers	595.88	435.77	399.78	447.84	525.82	645.13	641.79	469.50	583.10	890.65	152.74	155.42
Cabbage	161.03	183.23	139.05	173.65	185.34	202.29	158.62	282.89	260.18	269.59	103.62	123.74
Tomatoes	627.59	333.16	414.16	393.53	413.71	531.60	498.22	608.22	659.04	863.79	131.07	159.32
Cucumbers	333.91	228.21	297.28	228.37	315.71	390.91	373.45	359.86	491.32	532.02	108.28	137.74
Carrot	249.09	306.63	213.37	256.15	308.86	259.73	213.99	306.28	333.31	475.99	142.81	167.35
Onion	153.36	182.54	199.89	159.14	269.21	354.43	244.43	226.92	270.73	448.86	165.80	164.33
Apples	384.89	355.62	374.36	452.95	376.93	349.85	422.36	433.26	386.43	438.20	113.40	111.29
Pears (dessert)	453.34	574.77	616.64	622.07	589.49	591.08	665.69	384.10	751.16	886.13	117.97	148.60
Peaches and nectarines	517.88	510.21	609.09	563.88	574.52	489.34	574.60	751.45	685.18	616.71	90.01	100.28
Apricots	493.07	776.45	728.41	554.57	755.46	534.57	972.97	1.050.92	812.54	981.99	120.85	118.99
Sour cherries	433.06	1,179.39	881.76	793.00	1.074.13	971.64	664.58	1,010.01	716.25	718.97	100.38	81.03
Plums	486.25	459.73	377.77	502.48	486.51	343.06	455.36	508.37	495.15	515.22	104.05	112.57
Walnuts (whole)	2,314.72	1,908.99	1,754.90	2,195.54	1,979.67	1,529.97	1,352.63	1,628.69	1,855.12	2,317.93	124.95	138.86
Raspberries	1,290.39	1,597.62	1,577.59	1,085.57	813.89	1,218.82	1,669.44	3,209.67	4,155.75	1,619.00	38.96	73.14
Table grapes	623.33	584.50	512.19	619.60	453.70	599.65	702.77	817.11	774.23	990.69	127.96	147.98
Wine grapes	204.68	324.29	254.55	309.06	312.50	401.69	383.41	382.57	404.48	730.82	180.68	193.89
Livestock products												
Calves	2,748.03	2,719.48	2,574.03	2,660.52	2,816.90	2,979.58	2,882.77	3,018.47	3,570.86	4,384.17	122.78	143.57
Bullock and heifers	1,903.74	1,826.16	1,781.22	1,789.89	2,000.14	1,873.11	1,714.01	1,922.81	2,535.35	2,706.75	106.76	134.73

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Pigs (≤ 110 kg)	1,354.41	1,231.16	1,142.40	1,363.72	1,221.59	1,281.10	1,298.63	1,279.04	1,761.72	2,107.87	119.65	154.04
Pigs (≥ 110 kg)	1,321.50	1,119.86	1,023.65	1,251.80	1,180.84	1,197.01	1,249.89	1,223.58	1,678.37	2,025.39	120.68	155.09
Lambs	2,225.29	2,156.93	2,104.49	2,064.83	2,106.42	2,046.13	1,846.94	2,023.68	2,718.74	3,143.93	115.64	146.34
Chickens	884.27	935.22	909.53	921.07	885.33	810.93	820.99	960.08	1.206.72	1.125.79	93.29	120.17
Eggs (000)	88.15	64.49	62.46	70.46	65.10	68.22	67.95	69.91	100.46	114.11	113.59	153.52
Cow's milk (000 l)	285.32	262.10	247.24	250.95	268.28	268.90	272.16	276.25	406.10	485.79	119.62	162.83
Honey	2,972.91	3,160.65	2,647.22	2,483.91	2,738.86	2,701.78	3,462.55	4,379.07	3,467.68	2,783.51	80.27	83.09
Source: SORS												

2. FOREIGN TRADE

Annex 2.1: Foreign trade by tariff chapters (mill. EUR); 2023/22

		EXPORT							IMPORT		
		EUR	mill.	Index	%		EUR 1	nill.	Index	%	
		2022	2023	2023/22	2022	2023	2022	2023	2023/22	2022	2023
1	Live animals	51.3	48.1	93.76	1.1	1.0	22.5	23.7	105.33	0.7	0.7
2	Meat and edible meat offal	40.4	25.8	63.86	0.8	0.5	197.3	236.6	119.92	6.1	6.8
3	Fish and crustaceans, molluscs and other aquatic invertebrates	17.9	16.6	92.74	0.4	0.4	84.5	80.8	95.62	2.6	2.3
4	Dairy products, eggs, natural honey	116.2	109.5	94.23	2.4	2.3	212.0	180.3	85.05	6.5	5.2
5	Other products of animal origin	5.1	5.9	115.69	0.1	0.1	10.8	12.6	116.67	0.3	0.4
6	Live plants and flowers	36.6	33.2	90.71	0.8	0.7	31.4	37.0	117.83	1.0	1.1
7	Vegetables, plants, roots, rot crops	133.2	135.2	101.50	2.8	2.9	155.1	185.8	119.79	4.8	5.3
8	Fruit and nuts, citrus plants, melons and watermelons	851.1	731.5	85.95	17.6	15.6	295.7	310.9	105.14	9.1	8.9
9	Coffee, tea, mate, spices	25.7	29.0	112.84	0.5	0.6	123.6	126.0	101.94	3.8	3.6
10	Cereals	694.6	440.8	63.46	14.4	9.4	63.4	81.2	128.08	1.9	2.3
11	Milling industry products, malt, starch	119.7	110.5	92.31	2.5	2.4	28.1	34.4	122.42	0.9	1.0
12	Oil seed and oleaginous fruit	172.5	155.2	89.97	3.6	3.3	136.4	132.1	96.85	4.2	3.8
13	Flax, rubber, rosin, other plant juices and extracts	6.5	4.5	69.23	0.1	0.1	12.3	10.1	82.11	0.4	0.3
14	Vegetable plaiting materials, other products of plant origin	0.6	0.8	133.33	0.0	0.0	3.9	2.6	66.67	0.1	0.1
15	Animal and plant fats and oils	312.8	284.2	90.86	6.5	6.1	131.3	129.7	98.78	4.0	3.7
16	Meat products	70.9	74.2	104.65	1.5	1.6	126.8	129.1	101.81	3.9	3.7
17	Sugar and sugar products	97.1	70.9	73.02	2.0	1.5	72.4	89.6	123.76	2.2	2.6
18	Cocoa and cocoa products	112.7	142.3	126.26	2.3	3.0	175.9	205.4	116.77	5.4	5.9
19	Cereals, flour and starch products	246.3	302.9	122.98	5.1	6.5	217.4	257.2	118.31	6.7	7.4
20	Vegetable, fruit and nut products	177.0	170.0	96.05	3.7	3.6	154.4	155.5	100.71	4.7	4.5
21	Miscellaneous food products	322.3	356.7	110.67	6.7	7.6	269.0	296.7	110.30	8.3	8.5

22	Beverages, spirits and vinegar	386.5	469.5	121.47	8.0	10.0	192.6	191.4	99.38	5.9	5.5
23	Food industry waste and offal (fodder)	333.8	392.7	117.65	6.9	8.4	136.2	149.7	109.91	4.2	4.3
24	Tobacco and manufactured tobacco substitutes	459.9	549.6	119.50	9.5	11.7	292.2	292.5	100.10	9.0	8.4
	Total agricultural products (1-24)	4,790.7	4,659.6	97.26	99.2	99.3	3,145.2	3,350.9	106.54	96.5	96.3
	Other agricultural products (tariff chapters 29-53)	37.6	33.8	89.89	0.8	0.7	113.8	128.0	112.48	3.5	3.7
	Total	4,828.3	4,693.4	97.21	100.0	100.0	3,259.0	3,478.9	106.75	100.0	100.0

Source: SORS

Annex 2.2: Regional export structure of agricultural and food products (mill. EUR); 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
EXPORTS	2,338	2,605	2,922	2,823	2,854	3,238	3,635	4,163	4,828	4,691	97.16	125.31
ЕУ	1,155	1,248	1,411	1,284	1,305	1,585	1,814	2,249	2,465	2,241	90.91	118.97
CEFTA	775	833	865	918	915	924	877	983	1,272	1,354	106.45	136.19
Other	407	524	647	621	634	729	944	931	1,091	1,122	102.84	129.60
IMPORTS	1,292	1,489	1,362	1,617	1,714	1,872	2,048	2,442	3,259	3,479	106.75	153.46
ЕУ	821	970	869	978	1,069	1,223	1,346	1,635	2,242	2,431	108.43	161.74
CEFTA	153	162	156	162	167	178	189	230	261	273	104.60	133.17
Other	317	358	338	477	478	471	513	577	755	775	102.65	138.69
BALANCE	1,047	1,117	1,560	1,207	1,140	1,366	1,587	1,721	1,569	1,212	77.25	82.08
ЕУ	334	278	542	306	236	362	468	614	223	-190	-85.20	-49.92
CEFTA	622	672	709	756	748	746	688	753	1,011	1,081	106.92	136.97
Other	90	167	309	145	156	258	431	354	336	347	103.27	113.04

Source: SORS

Annex 2.3: Main indicators of foreign trade of agricultural and food products; 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Index 2023/22	Index 2023/ Ø18-22
Exports (EUR mill.)	2,338	2,605	2,922	2,823	2,854	3,238	3,635	4,163	4,765	4,637	97.31	124.28
Imports (EUR mill.)	1,292	1,489	1,362	1,617	1,714	1,872	2,048	2,442	3,138	3,341	106.47	148.97
Balance (EUR mill.)	1,047	1,117	1,560	1,206	1,140	1,366	1,587	1,721	1,627	1,296	79.66	87.09
Volume of trade (EUR mill.)	3,630	4,094	4,284	4,440	4,568	5,110	5,683	6,605	7,903	7,978	100.95	133.55
Export-to-import ratio (%)	181.0	175.0	214.5	174.6	166.5	173.0	177.5	170.5	151.8	138.8	91.44	82.69
Share of total trade of Serbia (%)	13.6	14.4	13.9	12.9	12.0	12.3	14.2	9.9	11.9	12.2	102.52	101.23
Share of exports in total exports (%)	20.8	21.6	21.8	18.8	17.5	18.5	21.3	15.1	17.3	16.2	93.64	90.30
Share of imports in total imports (%)	8.0	9.1	7.8	8.3	7.8	7.8	8.9	6.3	8.0	9.1	113.75	117.27

Source: SORS

3. AGRICULTURAL POLICY

Annex 3.1: Paid funds for subsidies in agriculture and rural development (RSD); 2023

	TYPE OF SUBSIDIES	PAID FUNDS
I	DIRECT PAYMENTS	66,784,617,711
1.	Premiums	12,775,671,274
1.1	Milk premium	12,775,671,274
2.	Production subsidies	54,008,919,158
2.1	Basic subsidies for plant production	29,189,816,627
2.2	Subsidies in livestock production	24,819,102,531
3.	Input subsidies	27,279
3.1	Input subsidies fuel, fertilizers and seed	27,279
II	SUBSIDIES FOR RURAL DEVELOPMENT MEASURES	11,613,892,003
1.	Subsidies for improvement of competitiveness	9,390,680,503
1.1	Investment in physical assets of holdings	6,095,544,086
1.2	Subsidies in processing and marketing of agricultural, food and fisheries products	1,399,152,297
1.3	Risk management	1,895,984,120
2.	Subsidies for preservation and improvement of the environment and natural resources	1,156,739,903
2.1	Organic production	810,457,501
2.2	Preservation of plant and animal genetic resources	346,282,402
3.	Subsidies for income diversification and improvement of the quality of life in rural areas	288,689,918
3.1	Improvement of rural economic activities through support to non-agricultural activities	33,172,205
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3.2	Implementation of activities with the aim of improving competitiveness in terms of adding value through processing, as well as for introduction and certification of the quality system for food, organic products and products with GI at holdings	25,717,712
3.3	Improvement and development of rural infrastructure	229,800,000
4.	Subsidies for improvement of system of creation and transfer of knowledge	775,069,819
4.1	Development of technical and technological, applied, development-related and innovative projects in agriculture and rural development	81,993,200
4.2	Support to provision of advice and information to farmers, associations, cooperatives and other legal entities in agriculture	693,076,619
III	CREDIT SUPPORT	1,180,188,028
IV	SPECIFIC SUBSIDIES	231,795,412
1.	Subsidies for implementation of breeding programmes, for the purpose of achieving breeding objectives in livestock breeding - selection measures	149,182,813
2.	Subsidies for promotional activities in agriculture and rural development (measures and actions in agriculture)	50,000
3.	Subsidies for production of propagation material and certification and clone selection	82,562,599
V	IPARD subsidies	5,421,123,472
	TOTAL	85,231,616,625

Source: MAFWM, Directorate for Agrarian Payments

Annex 3.2: Bylaws (implemented in 2023)

- ⁷ Rulebook on the conditions and manner for exercise the right on subsidies in livestock production for cows for breeding calves for fattening (Official Gazette of the RS, No 27/23 and 14/24)
- ⁸ Rulebook on subsidies for programs for improvement of competitiveness for investments in physical assets of agricultural holdings through support for establishment of new permanent crops plantations of fruits and hops (Official Gazette of the RS, No 58/23)
- ⁹ Rulebook on subsidies for investments in physical assets of agricultural holdings for the purchase of new machinery and equipment for the improvement of the primary plant production (Official Gazette of the RS, No 65/23)
- ¹⁰ Rulebook on subsidies for investments in physical assets of agricultural holdings for the purchase of new machinery and equipment for the improvement of the primary livestock production (Official Gazette of the RS, No 73/23)

¹¹ Rulebook on subsidies for investments in physical assets of agricultural holdings for the procurement of quality breeding animals for the improvement of primary livestock production (Official Gazette of the RS, No 68/23)

¹² Rulebook on the conditions, manner and application form for exercise the right to subsidies for insurance premiums for crops, permanent crops, nurseries and animals (Official Gazette of the RS, No 54/23, 87/23 and 89/23)

- ¹⁴ Rulebook on the use of subsidies for organic livestock production (Official Gazette of the RS, No 63/23)
- ¹⁵ Rulebook on subsidies for conservation of plant genetic resources (Official Gazette of the RS, No 85/13 and 44/18 other law)
- ¹⁶ Rulebook on subsidies for conservation of animal genetic resources (Official Gazette of the RS, No 44/23)

¹⁷ Rulebook on subsidies for improvement of system for creation and transfer of knowledge through development of technical-technological, applied, developmental and innovative projects in agriculture and rural development (Official Gazette of the RS, No 55/23)

¹⁸ Regulation on establishing the Annual Program for the development of advisory services in agriculture for 2023 (Official Gazette of the RS, No 21/23, 42/23 and 89/23)

¹⁹ Regulation on establishing the Multiannual Program of measures for the implementation of breeding programs in the Republic of Serbia for the period 2020-2024 (Official Gazette of the RS, No 38/20)

- ²⁰ Regulation on establishing the Annual Program of measures for the implementation of breeding programs for 2023 (Official Gazette of the RS, No 39/23)
- ²¹ Rulebook on the use of subsidies for promotional activities in agriculture and rural development (Official Gazette of the RS, No 72/17 and 139/22)
- ²² Rulebook on subsidies for production of planting material and certification and clone selection of fruits, vine, hops and roses (Official Gazette of the RS, No 58/17, 25/18, 3/23, 45/23 and 99/23 other rulebook)

²³ Rulebook on IPARD subsidies for investments in physical assets of agricultural holdings (Official Gazette of the RS, No 84/17, 112/17, 78/18, 67/19, 53/21, 10/22, 18/22 and 23/23)

- ²⁴ Rulebook on IPARD subsidies for investments in physical assets of agricultural holdings related to processing and marketing of agricultural and fishery products (Official Gazette of the RS, No 84/17, 23/18, 98/18, 82/19, 74/21, 10/22 and 23/23)
- ²⁵ Rulebook on IPARD subsidies for diversification of agricultural holdings and business development (Official Gazette of the RS, No 76/20, 87/21, 10/22 µ 25/23)
- ²⁶ Rulebook on the conditions and manner for exercise the right to credit support (Official Gazette of the RS, No 48/17, 88/17, 84/18, 23/19, 27/20, 36/21, 102/21, 130/21, 127/22, 144/22, 21/23 and 8/24)

¹ Rulebook on the conditions, manner and application form for exercise the right on milk premium (Official Gazette of the RS, No 25/23)

² Regulation on the amendments of the Regulation on financial support to agricultural holdings for plant production in 2023 (Official Gazette of the RS, No 27/23, 43/23, 78/23, 104/23, 110/23 and 116/23)

³ Rulebook on the manner for exercise the right on subsidies in livestock production for quality breeding animals (Official Gazette of the RS, No 29/23, 32/23, 21/24, 26/24 and 32/24)

⁴ Rulebook on the conditions and manner for exercise the right on subsidies in livestock production for cattle fattening, pigs fattening, lambs fattening and kids fattening (Official Gazette of the RS, No 32/23, 18/24 and 24/24)

⁵ Rulebook on the conditions and manner for exercise the right on subsidies in livestock production per beehive (Official Gazette of the RS, No 34/23)

⁶ Rulebook on the manner for exercise the right on subsidies in livestock production for consumable fish production (Official Gazette of the RS, No 61/13, 44/14, 44/18 – other law and 139/22)

¹³ Rulebook on the use of subsidies for organic plant production (Official Gazette of the RS, No 60/23)