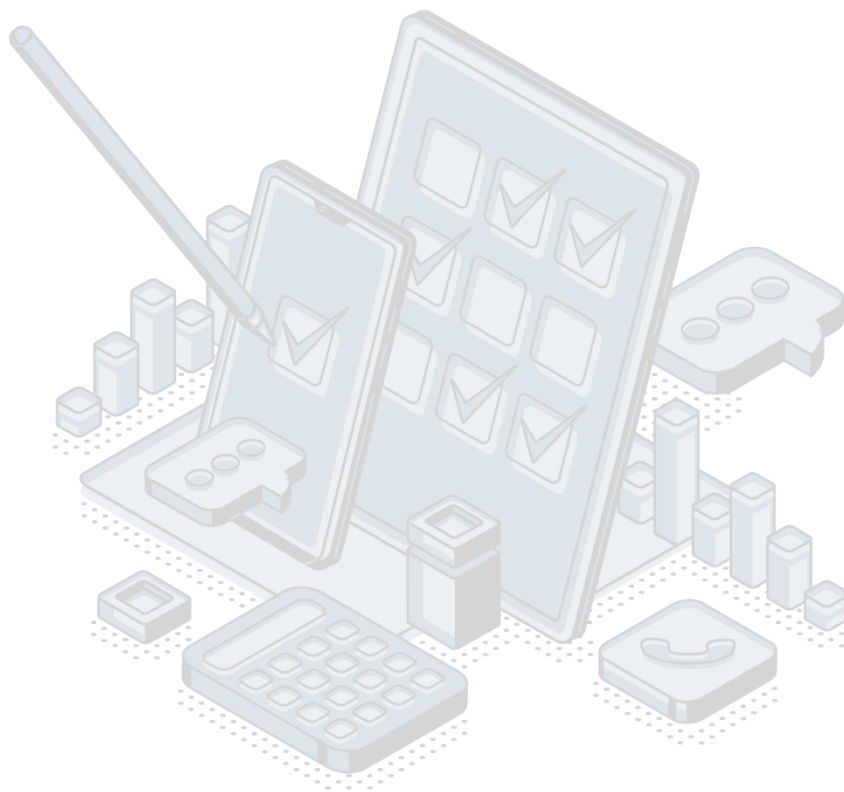


QUALITY REPORT

Agricultural Census 2024



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1. Introduction – Basic information on census

1.1 Purpose, goal, and subject of census

The purpose of the Agricultural Census is to obtain internationally comparable data on structure of agricultural holdings by which a realistic picture of agriculture in Montenegro is to be presented, and based on which appropriate decisions for its development will be planned and made.

The Agricultural Census collects the data on: number of agricultural holdings, area of utilized agricultural land by categories of use, livestock by type and category; persons participating in agricultural production by sex; facilities for housing livestock; machinery; equipment, etc.

Based on available official statistics sources and administrative sources, the Statistical Office created the population (the list of holdings) which will be included in the Agricultural Census.

1.2 Legal basis

The National legal framework:

- Law on Official Statistics and System of Official Statistics ("Official Gazette of Montenegro", no. 18/12, 47/19 and 23/25);
- Law on the Agricultural Census for the year 2024 ("Official Gazette of Montenegro", No. 77/2024 of August 5, 2024).

International settlement framework:

- Regulation (EU) no. 2018/1091 of the European Parliament and the Council of June 18, 2018 on integrated statistics at the level of agricultural holdings;
- Regulation (EU) no. 2018/1874 of the European Parliament and the Council of November 29, 2018 year;
- Regulation (EU) no. 2021/2286 of the European Parliament and the Council of December 16, 2021 year.

1.3 Statistical units

Family agricultural farms, business entities or legal entities, entrepreneurs, production organizations and educational or scientific research institution that engaged in agricultural activities.

1.4 Coverage and scope of survey

1.4.1 Sectors

Sector A - Agriculture, hunting and forestry.

1.4.2 Statistical population

The Agricultural Census will include all agricultural holdings (family agricultural holding, and economic operator, i.e. another legal person or entrepreneur) which fulfil conditions in accordance with the Law on Agricultural Census (Official Gazette of Montenegro No 77/24), Article 4 (Units included in the agricultural census) i.e. agricultural holdings that satisfy at least one of the following criteria:

- 5 000 m² of used agricultural land;
- 3 000 m² of arable land;
- 1 000 m² of aromatic, medicinal and culinary plants, flowers and ornamental plants, seeds and seedlings;
- 1 000 m² of fruits, berries, nuts, vineyards, olive trees, nurseries and other permanent plants;
- 100 m² greenhouse;

- 100 m² of mushrooms;
- 10 beehives;
- 1 Livestock Unit (LSU).

1.5 Reference geographical area

The data collected by the census refer to the territory of Montenegro and may be presented at the level of municipalities.

1.6 Concepts and definitions

Agricultural holdings represent a unique technical and economic unit with single administration, which performs agricultural activity and which can be:

- family agricultural farms,
- business entities or legal entities or entrepreneurs,
- production organizations,
- educational or scientific research institution that also engages in agricultural activities.

Holder of a family agricultural holding means a person who is the owner or user (lessee for a shorter or longer period) of a family agricultural holding, that is, a person who is responsible for carrying out the agricultural activities of the holding.

Manager of a family agricultural holding is a person who makes daily decisions at the holding, i.e. a person who is responsible for financial and production activities at the holding.

Agricultural production means the cultivation of agricultural crops (cereals, potatoes, pulses for dry grain, industrial plants, medicinal, aromatic, and spicy plants, fodder plants, vegetables, flowers, ornamental plants, seeds, planting material, fruits, and vines), mushroom cultivation, raising livestock (cattle, pigs, sheep, goats), poultry and other animals (horses, donkeys, mules, mules, bees, rabbits), processing own grapes into wine and own olives into oil; except stables of riding horses, racehorses, galloping horses (land used for the treatment of racehorses), processing of agricultural products (excluding processing of own grapes into wine and own olives into oil), forestry, hunting, fishing or fish farming and performing agricultural services for others with their machinery.

Utilised agricultural land covers arable land, kitchen gardens and/or gardens, orchards, vineyards, nurseries, meadows and pastures, regardless of the type of ownership (land owned or land taken in tenure).

The livestock represents the number and type of livestock raised by category.

1.7 Classifications

NACE Rev.2

1.8 Frequency of data collection

The census is conducted every ten years.

1.9 Data dissemination schedule

The preliminary data for the Agricultural Census 2024 were published on February 20, 2025, and the final data were published on July 1, 2026.

1.10 Methodology

The methodological guidelines for the Agricultural Census 2024 are available on the official website of the Statistical Office of Montenegro, at the following link:

<https://www.monstat.org/eng/page.php?id=1985&pageid=56>

1.11 Base period

Not applicable.

1.12 Unit of measure

During dissemination, data values refer to numbers (agricultural holdings, livestock, workforce), while areas are expressed in hectares (ha).

1.13 Data source

The data source is agricultural holdings, including family farms and business entities (i.e. other legal entities or entrepreneurs).

1.14 Method of data collection

The Agricultural Census was conducted using the CAPI method of data collection.

2. Relevance – data users

2.1 User needs

International users: Eurostat, World Bank, UN organizations,

International Monetary Fund National users: Ministries and other public administration bodies, local government, and other local government bodies, Central bank, Non-governmental organizations, Students, Researchers, Media.

2.2 User satisfaction

Within its obligations related to quality management in official statistics, and with the aim of measuring the extent to which it fulfils its obligations towards users, the Statistical Office conducts a user satisfaction survey. The results of the survey are available on the website of the Statistical Office at the following link:

<https://monstat.org/eng/page.php?id=1502&pageid=1>

3. Accuracy and reliability

In accordance with the Census Law, the Statistical Office conducted a post-enumeration survey in order to measure coverage and accuracy. The survey was carried out in the period from 5 to 16 December 2024. The objective of the post-enumeration survey was to assess the coverage of census units as well as the quality of responses collected during the census.

Two control methods were applied in the post-enumeration survey:

- coverage control (of dwellings, households and persons);
- quality control of responses.

Coverage control assessed whether all census units were included and correctly classified in the census, i.e. whether any units were omitted or enumerated more than once. Quality control of responses assessed the reliability of answers to selected questions in the census questionnaires. The post-enumeration survey questionnaires were also used to check the methodological correctness of responses for the requested

characteristics, i.e. to verify the consistent application of prescribed instructions, definitions and classifications provided in the census methodology.

In addition to the post-enumeration survey used to measure census accuracy, accuracy control was carried out at all stages of the census.

Data accuracy control began at the very start of the census. State instructors and controllers reviewed the questionnaires completed by enumerators on a daily basis and made the necessary corrections. Data control was carried out online, using a special program developed exclusively for monitoring and verifying the accuracy of the completed questionnaires.

After the completion of the fieldwork phase of the census, the verification of data accuracy continued during the data processing stage through:

- matching data with administrative data sources;
- applying statistical, computational, and logical checks.

3.1 Accuracy – overall

Accuracy refers to the degree to which the information collected by the census correctly describes an agricultural holding that has utilised agricultural land, cattle, sheep, goats, available labour force, and other characteristics.

3.2 Sampling error

Not relevant.

Indikatori uzoračke greške

Not relevant.

3.3 Non-sampling error

Non-sampling errors include over-coverage errors, under-coverage errors, measurement and processing errors, data editing and imputation errors, as well as non-response.

3.3.1 Coverage error

Coverage control of enumerated units assesses whether all census units were included and correctly classified in the census, i.e. whether any of them were omitted or enumerated more than once.

Indicators of coverage error (A2)

Table 1: Coverage error indicators

	Under-coverage rate	Over-coverage rate
Number of agricultural holdings	0,31%	0,74%
Number of agricultural holdings engaged in crop production	0,31%	0,68%
Number of agricultural holdings engaged in livestock production	0,3%	0,74%

3.3.2 Measurement error

Measurement errors were corrected through logical and mathematical checks, by comparing the data with administrative data sources and other statistical sources, and by contacting the reporting units for additional verification and confirmation of data accuracy. In addition, through the post-enumeration survey, data were collected for selected questions to serve as a check of the methodological correctness of responses for the requested characteristics, which represents quality control of responses.

Table 2: Indicators of response quality (post-enumeration survey)

	Identical in the post-enumeration survey and the census	Different in the post-enumeration survey and the census where both data are available
Area of UAA	99,5%	0,5%
Area of arable land	98,1%	1,9%
Area of vineyards	99,7%	0,3%
Area of orchards	98,5%	1,5%
Number of cattle	99,6%	0,4%
Number of sheep	99,6%	0,6%
Number of goats	99,5%	0,5%
Number of poultry	98,8%	1,2%

3.3.3 Non-response error

Unit nonresponse rate (A3)

Non-response error in the census included the following status:

- The holding refused to cooperate – 227 holdings were recorded, representing 0.5%.

Topic-specific non-response rate

Not relevant.

3.3.4 Data processing error

The collected data passes through a series of processes before the final grade, which is: input, editing, imputation, tabulation, etc. The mistakes made in these phases are called processing errors.

Imputation rate

Not available.

3.4 Seasonal adjustment

Not relevant.

3.5 Data revision

3.5.1 Data revision policy

The Statistical Office has adopted a revision policy, which is available on its website:

<https://www.monstat.org/eng/page.php?id=2117&pageid=1>

3.5.2 Data revision practice

The Census Law provides that preliminary data shall be published within 90 days from the completion of the Agricultural Census, at the aggregate level for the territory of Montenegro. The final data of the Agricultural Census 2024 were published on 1 July 2025. This constitutes, by definition, a regular and planned revision.

3.5.3 Data revision - average size

In the comparison between the preliminary and final data, no changes were recorded with regard to the number of agricultural holdings or the number of livestock and poultry. With respect to utilised agricultural land (including katuns and commons), the final data showed an increase of 0.02% compared to the preliminary results, rising from 248 234,2 hectares according to the preliminary results to 248 279,6 hectares according to the final results.

4. Timeliness and punctuality

4.1 Timeliness

The data are published in accordance with the Law on the Agricultural Census ("Official Gazette of Montenegro", No. 77/24), the Annual Plan of Official Statistics for 2025, and the Statistical Release Calendar of the Statistical Office for 2025. The data are published on the date specified in the Statistical Release Calendar in the form of a statistical release.

Timeliness represents the time difference (in days, months and years) between the reference moment to which the data relate and the date of data publication (preliminary and final).

Time lag of preliminary results

The reference moment of the Agricultural Census is 30 September 2024, while the preliminary data were published on 20 February 2025. The time difference is 3 months and 20 days (Indicator TP1).

Time lag of final data

The reference moment of the Agricultural Census is 30 September 2024, while the final data were published on 1 July 2025. The time difference is 8 months (Indicator TP2).

4.2 Punctuality

During 2025, there were no deviations between the announced dates in the Statistical Data Release Calendar and the actual publication dates.

Indicator TP3 is 0, i.e. there is no difference between the planned and the actual release.

5. Availability and clarity

5.1 Statistical Release Calendar

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12, 47/19 i 23/25) stipulates that official statistical producers prepare, update, and publish Statistical Release Calendar. It is published on the website of Statistical Office not later than 20 December for the next year, for all official

statistical producers that includes date of releasing statistical data. Any change in date of releasing in the Calendar is published in advance in accordance with the Procedure on Unplanned Revisions.

5.2 Access to Statistical Release Calendar

The Statistical Release Calendar is available at the following link:

<https://www.monstat.org/eng/page.php?id=1179&pageid=12>

5.3 Releases

The Preliminary Release on the Agricultural Census 2024 was published on 20 February 2025 and is available at the following link:

<https://www.monstat.org/eng/page.php?id=1985&pageid=1985>

The Final Release on the Agricultural Census 2024 was published on 1 July 2025 and is available at the following link:

<https://www.monstat.org/eng/page.php?id=1985&pageid=1985>

5.4 Publications

No publications are planned or released for the census.

5.5 Online database

No databases from the census are planned or published.

5.6 Other

A special form of data dissemination is provided through Excel tables, which are prepared as part of additional processing upon users' request. The data in Excel tables are available at the following link:

<https://www.monstat.org/eng/page.php?id=1985&pageid=1985>

5.7 Access to microdata

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12, 47/19 i 23/25) regulates rules under which external users can obtain an access to individual data for needs of research. Article 58 defines types of scientific and research organizations that can obtain such data. Providing individual data without identifier is possible only upon a written request of scientific and research institutions, with purpose of performing scientific and research activities as well as international statistical organizations and statistical producers from other countries. Research entity signs the agreement with Statistical Office, and it signs the statement on respecting the confidentiality principle. Official statistical producers keeps a separate records on users and purpose of using the statistical data given to these users.

6. Comparability

6.1 Spatial comparability

The Agricultural Census was carried out in accordance with international standards (Regulation (EU) No. 2018/1091, Regulation (EU) No. 2018/1874 and Regulation (EU) No. 2021/2286), by applying the regulations, comparability with all countries that apply them is ensured.

6.2 Time comparability

The data are comparable over time and are available from 2010 to 2024.

Time comparability indicator

Full comparability of the Census 2024 is achieved with the data from the Agricultural Census 2010.

7. Data protection

7.1 Data protection – policy

Data protection is defined by the following laws and secondary legislation:

- Chapter XIII – Confidentiality and Data Protection for the Purposes of Official Statistics of the Law on Official Statistics and the System of Official Statistics (Official Gazette of Montenegro No 018/12 of 30 March 2012, 047/19 of 12 August 2019, 023/25 of 11 March 2025);
- Law on the Agricultural Census 2024 ("Official Gazette of Montenegro", No. 77/2024 of 5 August 2024), Articles 21, 22, and 23.

As well as the internal acts of the Statistical Office, including in particular:

- Rule on Recording and Safekeeping of External Storage Media Containing Data from Administrative Sources (No. 01-041/23-2039/1 of 2 June 2023);
- Rule on Access to Databases of the Statistical Office (No. 01-041/23-2087/1 of 6 June 2023);
- Rule on Information Security Measures at the Statistical Office (No 01-041/23-2057/1 of 5 June 2023);
- Information and Communication Technology Risk Management at the Statistical Office (No. 01-041/23-2114/1 of 8 June 2023).

The application of these documents ensured data protection at all stages of the census.

7.2 Data protection – data treatment at dissemination

In accordance with the Law on Official Statistics and the System of Official Statistics, Articles 54–61 (Official Gazette of Montenegro No 18/12 of 30 March 2012, 47/19 of 12 August 2019 and 23/25 of 11 March 2025), and the internal rules of the Statistical Office, data with a frequency of fewer than 4 occurrences are protected (primary confidentiality protection) and are marked with the symbol “z”. In addition, the same symbol is used to mark other protected data in order to prevent indirect identification of census units (secondary confidentiality protection). The symbol indicating protected data is “z”.