

ROMANIA – GENERAL AGRICULTURAL CENSUS 2020 – METADATA REVIEW

1. Historical outline

Romania conducted the first regular agricultural census in 1941 (together with the population census), followed by a general agricultural census in 1948¹. The third General Agricultural Census (GAC) was conducted in 1970, the fourth in 2002, and the fifth GAC was carried out in 2010. The present metadata review and data refer to the sixth GAC, carried out in 2020.

2. Legal basis and organization

Legal framework

The agricultural census legislation included:

- Law No. 226/2009, on the organization and functioning of official statistics, as subsequently amended and supplemented;
- Government Emergency Ordinance (GEO) No. 22/2020 on the GAC 2020, published in the Official Gazette of Romania, Part I, No. 105 of 12 February 2020, approved with amendments and completions by Law No. 177/2020;
- Government Decision No. 1056 of 4 December 2020 establishing the budget and categories of expenditures necessary to carry out the GAC 2020, as well as the measures regarding the implementation of some provisions of the GEO No. 22/2020;
- Regulation (EU) 2018/1091 of the 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;
- Commission Implementing Regulation (EU) 2018/1874 of 29 November 2018 on the data to be provided for 2020 under Regulation (EU) 2018/1091 of the European Parliament and of the Council on integrated farm statistics and repealing Regulations (EC) No 1166/2008 and (EU) No 1337/2011, as regards the list of variables and their description; and
- Commission Implementing Regulation (EU) 2020/405 of 16 March 2020 specifying the arrangements for, and contents of, the quality reports to be transmitted under Regulation (EU) 2018/1091 of the European Parliament and of the Council on integrated farm statistics.

Institutional framework and international collaboration

The National Institute of Statistics (NIS) is responsible for conducting agricultural censuses every ten years. The GAC 2020 was prepared, organized, and conducted by the NIS in cooperation with the Ministry of Agriculture and Rural Development and with the Ministry of Internal Affairs together with their subordinate territorial structures, under the coordination and control of the Central Census Commission (CCC), with the technical support of the Special Telecommunications Service. The specific attributions of each entity were provided in GEO No. 22/2020.

In order to carry out the GAC 2020, working structures were created at central level (Central Commission and Central Technical Secretariat) and territorial level (County Commissions and County Technical Secretariats, as well as local commissions) with specific attributions also provided in GEO No. 22/2020.

According to the EU regulation, NIS benefited from the union contribution and signed the Grant No. 2019.0212 “Integrated Farm Statistics programme pursuant to Regulation (EU) 2018/1091 of the European Parliament and of the Council”. The grant actions cover the period from January 2020 to March 2022.

¹ Between 1948 and 1989, there were regularly conducted livestock censuses: (i) yearly, between 1951–1954 and 1979–1989; and (ii) every four years (between 1954–1962 and 1973–1977). Two specialized censuses on vineyards and orchards were conducted in 1964 and 1979.

Also, for the GAC 2020 activities, NIS received technical assistance through the Operational Program Administrative Capacity 2014-2020, by CONRENA project - "Consolidation of the National Statistical System and modernization of statistical production processes for conducting national censuses", SIPOCA Code 598 / MySMIS Code 127577 / No. of financing contract 430 / 17.09.2019.

Census staff

The field staff involved in census data collection amounted to around 17500 enumerators, 3700 chief enumerators (supervisors), and 41 coordinators. Also, additional staff was employed for a determined period at the NIS, Ministry of Agriculture and Rural Development, and at their territorial structures.

3. Reference date and period

Reference day: 31 December 2020, for livestock and animal housing facilities and organic farming on animal sector.

Reference periods:

- the agricultural year 2020 (from 1 October 2019 to 30 September 2020) for variables on land use, labour force, other gainful activities, organic farming for crops sector, irrigation and soil management practices, etc.
- the calendar year 2020 for management of animal manure; and
- the last three years (2018-2020) for rural development support.

Although data collection was carried out in 2021, the time and reference periods of the agricultural census were related to the 2020 agricultural year.

4. Enumeration period

The GAC 2020 data collection was conducted from 10 May 2021 to 31 July 2021. Due to the COVID-19 pandemic, the NIS postponed several activities such as the pilot census from May to October 2020, which caused the enumeration to be postponed from the original dates (from February to May 2021).

5. Scope of the census and definition of the statistical unit

The **census scope** covered agricultural activities (crop and animal production).

The **statistical unit** was the agricultural holding, defined as a single unit, both technically and economically, that has a single management and that undertakes economic activities in agriculture in accordance with Regulation (EC) No 1893/2006 belonging to groups A.01.1, A.01.2, A.01.3, A.01.4, A.01.5 or to the "maintenance of agricultural land in good agricultural and environmental condition" of group A.01.6 within the economic territory of the Union, either as its primary or secondary activity, as it is stated in the Regulation (EU) No. 2018/1091 of the European Parliament and of the Council on integrated agricultural statistics. Regarding activities of class A.01.49, only the activities "Raising and breeding of semi-domesticated or other live animals" (except for raising of insects) and "Bee-keeping and production of honey and beeswax" were included.

Community-level data

There were no community-level data collected along with the census.

6. Census coverage

Geographic coverage

The GAC 2020 covered the entire territory of the country, both rural and urban areas.

Cut-off threshold and other exclusions

The following thresholds, which are the same to the thresholds used in GAC 2010, were used in the GAC 2020: (i) 0.15 ha of kitchen garden; (ii) ten head of poultry; (iii) any area of UAA excluding kitchen gardens; or (iv) any livestock units excluding poultry.

7. Methodology

Methodological modality for conducting the census

The GAC 2020 was composed of a core module and three thematic modules on labour force and other gainful activities, rural development, and animal housing and manure management. However, the

classical approach (one-off complete enumeration) was used in the GAC 2020, even for the thematic modules.

Relation to other censuses

Coordination in time regarding data collection period and relationship in some resources between the GAC 2020 and the Population and Housing Census (PHC 2021) was ensured. For both censuses the integrated IT system was used.

Frames

The census frame was established based on information from the Agriculture Registers (which was organized and filled-in by town-halls of 3200 administrative territorial units) and from the Integrated Administration and Control System (IACS) with lists of agricultural holdings that applied for subsidies to the Agency for Payments and Interventions for Agriculture (APIA).

Complete or/and sample enumeration methods

The GAC 2020 was conducted on a complete enumeration basis of all agricultural holdings.

Sample design

No sampling was used.

Data collection methods

The data collection of the GAC 2020 was carried out, in person, by interviewers using the CAPI method.

Questionnaire(s) and items covered

One electronic questionnaire, developed with Survey Solutions application of the World Bank, was used for the GAC 2020. The questionnaire covered 20 out of 23 essential items recommended in the WCA 2020².

8. Use of technology

In the GAC 2020, data was collected through the CAPI method using tablets installed with Survey Solutions (SuSo). Data collection was also monitored using the Survey Solutions application.

9. Data processing

Direct data capture was ensured by the CAPI method. Data processing, including validation, corrections and aggregation, was carried out in the period May 2021 to September 2022. The electronic data collection questionnaire was developed using the SuSo data collection application which allowed automatic rejections and approvals of questionnaires by implementing consistency checks at the level of the questionnaire, within the chapters and between chapters. In the case of incorrect completion of the data, the application generates an error flag. These types of errors were reported as the enumerator completed the questionnaire with the possibility to make the necessary corrections and complete the questionnaire without errors. The questionnaire, once completed by the enumerator without errors, was submitted to the analysis of the supervisor and then to the analysis and approval by the headquarter (three specific roles in SuSo). Imputation was carried out using data sources from APIA, and using deductive, mean and ratio imputation. Software used for data capture, processing, analysis and tabulations were: Survey Solution application, Microsoft Visual Fox Pro, RStudio.

10. Quality assurance

The NIS performed statistical activities in accordance with the Generic Statistical Business Process Model (GSBPM), according to which the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. A peer review (of the NIS) was conducted in 2015. Certification according to ISO 9001:2015 is ongoing. Quality assurance and assessment procedures include training courses, use of best practices, quality guidelines, benchmarking, designated quality manager, quality unit and/or senior level committee, compliance monitoring, and peer review. Further

² The following essential items were not covered: (i) 0407 Number of permanent crop trees in scattered plantings; (ii) 0601 Use of agricultural pesticides (for each tree crop); (iii) 0801 Household size by sex and age groups.

details on quality assurance at NIS Romania can be found at <https://insse.ro/cms/en/content/quality-national-statistical-system>. In the preparation stage of the GAC 2020, a pilot census was carried out to verify the feasibility, to improve the organizational and technical aspects, to assess the clarity of the questions included in the questionnaire and to test the procedures and tools for collecting data from agricultural holdings. A selection of about 4 500 agricultural holdings with and without legal status were included from all over the country. Due to the COVID-19 pandemic, the pilot was postponed from May to October 2020. Analysis, verification and validation of data during the data collection period led to the minimization of content errors.

11. Data and metadata archiving

Microdata was anonymized using removal of variables and was disseminated using EU methodology. The aggregated data does not allow the identification of an agricultural holding through dissemination. Output dissemination is available until counties level (NUTS 3). In some special cases, neighbouring intervals are joined to obtain larger ones, with more agricultural holdings, to avoid situations in which confidentiality could be affected. Statistical data and national metadata are available at <http://80.96.186.4:81/metadata/public.htm?locale=en>.

12. Data reconciliation

There was no reconciliation process of GAC 2020 data.

13. Dissemination of census results and microdata

Dissemination of census results included a press release published in March 2022 (available at https://insse.ro/cms/sites/default/files/com_presa/com_pdf/rga_2020r.pdf), and two publications corresponding to data at the national level (Volume 1) and by macro-regions, development regions and counties, available at <https://insse.ro/cms/ro/content/recens%C4%83m%C3%A2ntul-general-agricol-runda-2020-volumul-i-date-generale-ale-recens%C4%83m%C3%A2ntului-general> and <https://insse.ro/cms/ro/content/recens%C4%83m%C3%A2ntul-general-agricol-runda-2020-volumul-ii-date-generale-ale-recens%C4%83m%C3%A2ntului>, respectively. Both volumes were published online and printed in December 2022. Eurofarm file was transmitted to Eurostat in March 2022. The census data are disseminated at national, regional and county level. Access to microdata is permitted only for scientific purposes on the basis of a written commitment. It is submitted under NIS confidentiality rules, available at <https://insse.ro/cms/en/content/nis-microdata-scientific-purposes>.

14. Data sources

Eurostat. 2022. *Integrated Farm Statistics - National quality reports 2020: Romania* [online]. Luxembourg. [Cited 10 February 2023]. https://ec.europa.eu/eurostat/cache/metadata/en/ef_simsif_ro.htm

National Institute of Statistics (NIS). 2021. *General Agricultural Census 2020*. In: *NIS* [online]. Bucharest, Romania. [Cited 27 September 2021]. <https://insse.ro/cms/ro/RGA2020/>.

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