



POLAND – AGRICULTURAL CENSUS 2020 – METADATA REVIEW

1. Historical outline

The first agricultural censuses (ACs) were conducted during the 1960 to 1990 WCA rounds in 1960, 1970, 1981, and 1990. Subsequent agricultural censuses were conducted in 1996, 2002 and 2010, the latter in conjunction with the Survey on Agricultural Production Methods (SAPM). The most recent one, to which the metadata review and data presented here refer, was conducted in 2020 and was the second AC conducted after Poland joined the EU.

2. Legal basis and organization

Legal framework

The AC legislation included:

- Act on the 2020 Census of Agriculture (Journal of Laws of 2019, item 1728, as amended) of 31 July 2019, defining in detail the rules for conducting the census, entities subject to the census and scope of data to be collected;
- Act of 29 June 1995 on official statistics (Journal of Laws of 2020, item 443, as amended);
- Act of 10 May 2018 on the Protection of Personal Data (Journal of Laws of 2019, item 1781);
- 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; and
- 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.

Institutional framework and international collaboration

The institution with the authority and responsibility for conducting the AC 2020 was the Statistics Poland (GUS). In accordance with the AC Act, the census work was managed by the President of the GUS as the General Census Commissioner. The Central Census Bureau was responsible for the operational activities of the AC, and it was supported in content-related matters by the AC 2020 Working Group.

Census staff

The AC staff involved 16 provincial census commissioners, 16 deputy provincial commissioners, 991 members from the Provincial Census Bureau, 426 members from the Provincial Management Centre, 84 helpline consultants, 226 provincial supervisors, and 7 334 census enumerators.

3. Reference date and period

Reference day: 1 June 2020, for land use, sown area, livestock, machinery and equipment.

Reference periods:

- from 2 June 2019 to 1 June 2020, for use of fertilizers, plant protection, farm buildings, income structure, labour force, other gainful activities, manure management, animal housing, cultivation of edible mushrooms, irrigation and soil management practices;
- from 26 May to 1 June 2020, for the current activity in the economic activity section; and
- from 1 January 2018 to 31 December 2020, for rural development measures.

4. Enumeration period

The enumeration period for the AC was between 1 September and 30 November 2020 with response rate of 97 percent. Due to the COVID-19 pandemic GUS had to adapt the established organization of the agricultural census and the mode of work to the conditions of a reduction of face-to-face contacts. It was necessary to adapt the census systems to telework. Statistics Poland changed the agricultural census legal acts for data collection, including: e-learning training of enumerators; use of CATI and CAWI besides the planned CAPI and administrative data; using personal protective equipment for data

collection; publicity campaigns promoting self-enumeration as the safest way of data collection; and setting up a hotline for CATI.

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

The **census scope** covered agricultural activities (crop and livestock 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. This data is obtained from administrative sources.

6. Census coverage

Geographic coverage

The AC 2020 covered the entire country.

Cut-off threshold and other exclusions

For the AC 2020, the country adopted the following thresholds: (i) one ha of agricultural land; (ii) two ha of arable land; (iii) 0.5 ha of potatoes or fresh vegetables and strawberries; (iv) 0.2 ha of aromatic, medicinal and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries; (v) 0.3 ha of fruits trees, berries, nuts trees, other permanent crops excluding nurseries, vineyards; (vi) 0.1 ha of vineyards; (vii) 0.01 ha of greenhouses or cultivated mushrooms; or (viii) 1.7 total livestock units. Thresholds were lowered compared to Regulation (EU) 2018/1091.

7. Methodology

Methodological modality for conducting the census

The AC 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 AC 2020, even for the thematic modules. Some census data for the core module, the frame extension of this module and all census data regarding the rural development module were collected directly from administrative registers.

Relation to other censuses

The Central Census Bureau was appointed to support AC 2020 and the National Population and Housing Census in 2021 (NSP), considering working groups on management, data sources, IT development, data processing, publicity, etc. Despite this, no joint activities were carried out between AC and NSP.

Frames

The frame of agricultural holdings for the AC 2020 was the result of the work of the Agricultural Research Sampling Frame (ODBR) carried out in 2020. The list was built based on the ODBR 2019, the Statistical Units Database (BJS) from the GUS, administrative sources such as the National Official Register of the Territorial Division of the Country (TERYT) and the System of Identifiers and Place Names (SIMC), and non-statistical collections; and it was updated before and during the census, eliminating duplicate or extinct farms or adding farms omitted from the frame. The final list included around 1.5 million of agricultural holdings.

Complete or/and sample enumeration methods

The AC 2020 was a complete enumeration of all agricultural holdings.

Sample design

No sampling was used.

Data collection methods

In the AC 2020, data was collected using CAPI, CATI and CAWI. Because of COVID-19, CATI and CAWI were promoted to increase participation of respondents in those methods. Also, mobile devices were adapted to work with the CAPI and CATI methods. Statistics Poland used the following administrative registers for data collection: Integrated Administration and Control System (IACS), rural development measures, bovine register, ovine register, caprine register, pig register, organic farming register, cadastre, and statistical business register.

Questionnaire(s) and items covered

One questionnaire was used for all data collection methods and for all farms, regardless of the type of activity, size or legal status.

The census questionnaire covered 19 out of 23 core items recommended in the WCA 2020¹.

8. Use of technology

The AC 2020 used CAPI, CATI, and CAWI data collection methods. The use of administrative data reduced respondent burden and ensured better data quality with regard to information on the use of Rural Development. Because of COVID-19, training was conducted through e-learning applications. IT systems and applications were used during the census work: CORstat_Rol², for managing and monitoring the census; the Redmine Notification System, for clarification of problems and communication; IC Business Manager, for managing the helpline; and Information Dashboard, for accessing information about the census progress. Census results were disseminated and are accessible online.

9. Data processing

The data captured through the CAPI, CATI and CAWI methods were gathered and processed in the Operational Microdata Base (OBM) built for the AC 2020. Interviewers, supervisors, staff from local and central department validate data through data format checks, completeness checks, range checks, relational checks, comparisons with previous rounds of the data collection and with other domains in agricultural statistics. The processing of census data covered data control and correction, data imputation, supplementing of the census data with administrative data, calculating the typology of farms, and preparation of a dataset for the Eurostat database. Imputation was carried out using nearest neighbour imputation. The Statistical Data Acquisition, Processing and Integration System (SPDS) was used for data processing.

10. Quality assurance

Statistics Poland has a quality management system. For the AC 2020 census, a data collection system with very detailed validations was developed. Surveillance of the interviewers was optimized by using the Corstat application. Automatic validation in the questionnaire were implemented as well as quality management tools on the level of central database. During the census and after its completion, the Content Module System (MM) was used to control, analyze and verify the consistency of the data collected. A census helpline was implemented prior to and during the AC enumeration period to assist CAWI respondents regarding questionnaire inquiries. Non-sampling errors were minimized carrying out the following actions: removal of ineligible units from the records, leaving unchanged the weights for the other units to minimize over-coverage errors; the statistical farm register is regularly updated and additionally, during the AC 2020 it was admitted the option of adding a farm to the register of farms to minimize under-coverage errors; pre-testing questionnaire, pre-filled questions, explanatory notes or handbooks for enumerators or respondents, on-line FAQ or hot-line support for enumerators or

¹ The following essential items were not covered: (i) 0402 Area of temporary crops harvested (for each temporary crop type); (ii) 0406 Area of productive and non-productive permanent crops in compact plantations (for each permanent crop type); (iii) 0407 Number of permanent crop trees in scattered plantings (for each tree crop); and (iv) 0601 Use of agricultural pesticides.

² The CORstat_ROL is a survey management system developed and administered by GUS.

respondents, and training of enumerators to minimize measurement errors; reminders, legal actions and imputation to minimize non-response errors.

11. Data and metadata archiving

National metadata was published on 30 June 2021 and is available at <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/psr-2020/powszechny-spis-rolny-2020-metodologia-i-organizacja-badania,3,1.html>. The Local Data Bank (LDB) was loaded with the AC 2020 preliminary data in September-December 2021, and the final data is available since August 2022, and can be found at <http://swaid.stat.gov.pl/EN/SitePagesDBW/Rolnictwo.aspx>, <https://bdl.stat.gov.pl/bdl/dane/podgrup/temat>, and <https://portal.geo.stat.gov.pl/>. Microdata was anonymized using removal of variables and merging categories.

12. Data reconciliation

There was no reconciliation process of AC 2020 data.

13. Dissemination of census results and microdata

The preliminary results of the AC were published in March 2021 (basic data at the national level), in August 2021 in the Report on the Results of the Agricultural Census 2020 (in a broader thematic scope, at the level of voivodships), and in December 2021, regarding labour force. The final results on characteristic of agricultural holdings and on the labour force module were published in November 2022 at the voivodships level. All publications are available in Polish and English in paper form and online at <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/psr-2020/>. AC 2020 data is also available in comprehensive GUS publications, e.g., in the Statistical Yearbook of Poland and the Statistical Yearbook of Agriculture. All publications are released in paper form and are available on-line in the GUS website. Researchers can use anonymised microdata at a specially prepared computer station in GUS. Reports with aggregated data generated by user are checked by experts (statistical staff), responsible for enforcing statistical confidentiality.

14. Data sources

Eurostat. 2022. *Integrated Farm Statistics - National quality reports 2020: Poland* [online]. Luxembourg. [Cited 13 April 2023]. https://ec.europa.eu/eurostat/cache/metadata/en/ef_simsif_pl.htm

Statistics Poland (GUS). 2021. Powszechny Spis Rolny 2020. In: *GUS* [online]. Poland. [Cited 30 August 2021]. <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/psr-2020/>.

15. Contact

Statistics Poland (GUS)
Agriculture Department
Address: Al. Niepodległości 208, 00-925 Warsaw, Poland
Telephone: (+48) 22 6083000
E-mail: obslugaprasowa@stat.gov.pl
Website: <https://stat.gov.pl/>