
SLOVENIA - Census of Agriculture 2010 – Explanatory notes

1. Historical Outline

Only two independent censuses of agricultural holdings, or farm structure surveys, were conducted before the year 2000, the first was in 1930 and the second in 1960. In 1969 a sample census of agricultural holdings was conducted, and in 1971, 1981 and 1991 censuses of agricultural holdings were conducted as a component of population censuses.

The first Farm Structure Survey, harmonized with EU legislation, was carried out in 1997. The EU definitions thresholds were used and the Farm Structure Survey 1997 was treated as a pilot survey for the Agricultural Census 2000.

Based on the AC data from 2000, the Statistical Farm Register (SFR) was established in Slovenia in 2004. The SFR was later on updated with every statistical survey that was conducted in Slovenia and with all reliable administrative sources of data.

2. Legal Basis and Organization

The legal basis for the Agricultural Census 2010 are three acts: (1) National Statistics Act (OJ RS No. 45/95 and No. 9/01), (2) National Programme of Statistical Surveys (OJ RS No 114/08, 35/09 and 51/09), which deals with all statistical surveys and work to be done in 2009, and (3) National Programme of Statistical Surveys (OJ RS No 93/09, 19/10, 50/10 and 72/10), which deals with all statistical surveys and work to be done in 2010.

The Statistical Office of the Republic of Slovenia is the responsible institution with the authority for the collection, compilation and publication of statistical information.

3. Reference Period or Date

The census reference date is 1 June 2010, and the reference period is the previous 12-month period ending with the census reference day. For data on rural development measures the period of three years ending on the census reference day was taken.

4. Enumeration period

The enumeration period was between the 1st of June and the 15th of July 2010.

5. Definition of the Statistical Unit

EC Regulation 1166/2008 defines the statistical unit as an agricultural holding.

„Agricultural holding“ or „holding“ means a single unit, both technically and economically, which has a single management and which undertakes agricultural activities listed in Annex I to the European Parliament and Council Regulation (EC) No 1166/2008 within the economic territory of the European Union, either as its primary or secondary activity. In addition, the EU regulation determines thresholds of size.

In line with EU legislation Slovenia applied the following threshold:

- at least one hectare of utilised agricultural area, or
- less than one hectare of utilised agricultural area, but:
- at least 0.1 hectare of utilised agricultural area and 0.9 hectare of forest, or
- at least 0.3 hectare of vineyards and/or orchards, or
- two or more livestock units (LSU), or
- 0.15 to 0.3 hectare of vineyards/orchards and 1 or 2 LSU, or
- more than 50 beehives, or
- are market producers of vegetables, herbs, strawberries, mushrooms, flowers or ornamental plants.

6. Geographic Coverage

Covered the entire country.

7. Exclusions and Cut-Off Thresholds

None noted other than those stated as the minimum threshold of agricultural activity in the definition of an agricultural holding.

8. Methodology

Use of the FAO Modular Approach

No

Frame

The frame included agricultural holdings that satisfied the minimum agricultural activity thresholds. The frame was obtained from the Statistical Farm Register (SFR), but the SFR was first updated.

The Statistical Farm Register was established after the Agricultural Census 2000 in order to have a stable sampling frame for all agricultural surveys. The Register has been operational since 2004. The Register is updated twice a year, in February and September, which enables Slovenia to have an updated sampling frame for the surveys in June and December. Results of statistical surveys as well as the Integrated Administrative Control System data are used for updating the Register.

Complete or Sample Enumeration Methods

The Agricultural Census 2010 (Farm Structure Survey) was an exhaustive survey (census), and the Survey of Agricultural Production Methods was a stratified random sample survey.

Sample Design

The Survey on Agricultural Production Methods 2010 (SAPM) was conducted as a sample survey in the same time with the Agricultural Census (complete enumeration). The sample size was based on the degree of precision required by the EU and set down in Annex IV to Regulation (EC) No 1166/2008. There were 9,863 agricultural holdings included in the SAPM. The design was stratified sampling with a systematic random selection of units in the stratum.

Strata were defined as a combination of two NUTS2 regions and four production size classes. In Slovenia the distribution of farms by NUTS2 regions is not very uniform as (NUTS2 Region 1 has ~ 70% of agricultural holdings and NUTS2 Region 2 has ~ 30% of agricultural holdings). A high proportion of agricultural holdings from NUTS2 Region 2 are consequently selected to achieve the optimal stratum allocation. As the sample size was quite large and to get more efficient weights, weighting classes were defined at the lower level, in this case at NUTS3 (the production size class).

Collection Method

The 2010 Agricultural Census (Farm Structure Survey) and the 2010 Survey on Agricultural Production Methods data were collected together using Computer Assisted Personal Interviews (CAPI) in combination with administrative data sources. Approximately 600 interviewers conducted the interviews between the 1st of June and the 15th of July 2010. Telephone interviewing (CATI) of some agricultural holdings (about 0.6% of units) was used after fieldwork; the purpose was to check the correctness of entered data.

In the Farm Structure Survey 2010 Slovenia replaced part of the data collection directly from agricultural holdings with data from administrative sources. The following administrative data sources were used:

- (1) System for the Identification and Registration of Bovine Animals
- (2) Organic Farming Register
- (3) Register of Genetically Modified Crops (none in Slovenia in 2009/2010)
- (4) Rural Development Measures
- (5) Information from the Integrated Administration and Control System (IACS), which includes the following data sets:
 - Register of Farms (locations of agricultural holdings)
 - Register of Fruit Producers in Intensive Orchards
 - Register of Producers of Olives
 - Register of Fruit Producers in Orchards

- Grape and Wine Producers Register and Vineyards Cadaster
- Register of Producers of Hops
- Register of Common Land
- Subsidies for 2010
- Data Set on Gainful Activities

Questionnaire(s)

EU Regulations require information on holding location and geo-coordinates, legal status, ownership and tenancy, land use and crops grown, irrigation, livestock, organic farming, machinery (mandatory in 2013 FSS), renewable energy installations, other gainful activities, socio-economic circumstances (full and part-time farming), labour force (family, non-family, contractors), agricultural and vocational training of the manager, inclusion in rural development support programmes, soil tillage methods, crop rotation, and erosion protection, livestock keeping places and keeping methods, animal grazing, manure application and manure storage and treatment facilities, maintenance and installation of landscape features.

Slovenia included some additional characteristics and variables to address National requirements for example the number of times permanent grassland is harvested, number of trees in extensive orchards and number of vines in vineyards, more detailed livestock categories, more detailed information on horticulture, machinery and equipment and farm labour and other gainful activities. CAPI questionnaire was used, a consolidated computer based version of the Farm Structure and Agricultural Production Methods survey questionnaire.

Controls to Minimize Non-Sampling Errors

Key to minimising non-sampling errors was rigorous controls and procedures for the data collection activity. Interviewers were carefully trained, as were their supervisors and once in the field they were provided with detailed procedures, questionnaire manuals and supervision.

Innovative Methodologies

CAPI, CATI, and administrative data were used in Agricultural census 2010. In addition, researchers may have access to the 2010 Agricultural Census micro-data under specific conditions when the data are required for research purposes. Instructions concerning access and the use of statistically protected micro-data are available on the web page, www.stat.si/eng/drz_stat_mikro.asp.

9. Data Entry, Edits and Imputations, Estimation and Tabulation

Non-response of agricultural enterprises was resolved by contacting all enterprises with non-response via telephone.

Edits and imputations were done using SAS software. Methodologists in the Department of Agriculture, Forestry, Fishery and Hunting (SURS) wrote the imputations. They were based on national rules, as well as validation rules in Eurofarm. The imputations were managed in SURS, in the Department for General Methodology and Standards.

The imputation methods used included:

- (1) Logical imputations (if some values were inconsistent with other values (we discovered there was clear a typing error), we imputed the values with the "Method of logical imputations").
- (2) Hot deck method (if we had only some data from administrative registers and no data for some variables, then we used the "Hot deck method" to get the data from similar farms (same UAA, same region, etc.)).
- (3) Structural hot deck method (if there was administrative data only for totals, then the "Structural hot deck method" was used to get all the subcategories, proportions were taken from similar farms such as the same UAA, same region, etc.).
- (4) Average values, if the data were missing, there was a possibility to input the mean value within a given variable, after a percentage of the maximum and minimum values are removed from the calculation).

10. Data Dissemination and Use

Dissemination of the Agricultural Census data is focused mainly on electronic data publications and available detailed data in the web-portal. All publications contain the meta-data for the data available in the particular publication or are linked to the publication or to the data web-portal. A special web page with detailed information about the, meta-data and with links to all published data concerning the Census is also available. The link to the web page is, www.stat.si/PopisKmetijstva2010.

Researchers may have access to the 2010 Agricultural Census micro-data under specific conditions when the data are required for research purposes. Instructions concerning access and the use of statistically protected micro-data are available on the web page, www.stat.si/eng/drz_stat_mikro.asp.

11. Census Data Quality

The results of the Agricultural Census 2010 were checked and compared with all the available administrative data, previous surveys and other surveys conducted by SURS. A comparison was made with other sources at micro and macro-data level. If data were inconsistent, they were examined and, if necessary they were revised.

The data from the Census were however consistent with the administrative sources, although the estimates from the Census were slightly higher than those of the administrative sources. However, this was understandable as some agricultural holdings still do not apply or in any way report data to the administrative offices.

12. Data Sources

Eurostat:

http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_2010

Final report:

http://ec.europa.eu/eurostat/documents/749240/749313/SI_NMR_FSS_2010.pdf/134625aa-acb7-43a0-92d5-f16c8913221f

13. Contact

Department for Agriculture, Forestry, Fishery and Hunting, Statistical Office of the Republic of Slovenia

Address: Litostrojska cesta 54, 1000 Ljubljana, Slovenia

Telephone: +386 1 241 64 00

E-mail: gp.surs@gov.si

Website

Statistical Office Republic of Slovenia: <http://www.stat.si/StatWeb/en/home>