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# BELGIUM - Census of Agriculture 2010 – Explanatory notes

## 1. Historical Outline

The first agricultural census was conducted in 1846. Between 1846 and 1960, eight censuses were conducted at intervals of between 10 to 15 years. As a founding member of the European Union, Belgium has been organising a harmonised EU census of agriculture since 1960.

## 2. Legal Basis and Organization

The 2010 Agricultural Census is based on the Royal Decree of 12 March 2008, which provides for the organization of an annual agricultural survey in May 2010, in the form of a census.

The Economics Ministry of the Public Service, General Directorate of Statistics and Economic Information, is the authority with responsibility for the Agricultural Census. The actual execution of the census is under the responsibility of mayors, representatives of the central government, and municipality Reeves, who delegate the collection of information to one or more communal enumerators.

The farm structure survey is conducted annually (annual farmer's declarations) in the country and it is part of the regular activities of the agricultural statistics unit of the General Directorate of Statistics and Economic Information. It does not require any special organisation. In 2010 it was conducted as a complete enumeration.

## 3. Reference Period or Date

May 1<sup>st</sup> 2010 is the reference date for those characteristics for which a single date would be applicable (crops and livestock). For labour force it was 12 months prior to 1 May 2010. For Rural Development the data relates to the three years preceding the year of the survey. Survey on agricultural production methods (SAPM) characteristics – year 2010.

## 4. Enumeration Period

The enumeration period for the agricultural census was 1<sup>st</sup> May to 31<sup>st</sup> May 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.

The census in Belgium covered all holdings in the Register of Holdings and producing agricultural products for sale, without any thresholds being applied. The register is maintained by the General Directorate of Statistics and Economic Information.

## 6. Geographic Coverage

Covered the entire country.

## Exclusions and Cut-Off Thresholds

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

## 7. Methodology

### *Use of the FAO Modular Approach*

No

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### **Frame**

The frame is all agricultural holdings, on the General Directorate of Statistics and Economic Information's Register of Holdings, producing agricultural products with a view to selling them. In addition, the following are also covered by the census: experimental or research establishments, nursery services of public bodies producing for their own use, schools, religious communities, prisons and other similar establishments; as long as they cultivate at least one acre or keep animals, whether or not they produce goods for sale. The list of holdings to be surveyed was drawn up on the basis of the holdings which took part on the 2009 agricultural census, i.e. 33 891 units. The number of holdings making a declaration for the first time is 293.

### **Complete or Sample Enumeration Methods**

The Farm Structure Survey was a complete enumeration and addresses all agricultural holdings on the Register of Holdings. The Survey of Agricultural Production Methods was a sample survey.

### **Sample Design**

The Agricultural census 2010 covered all agricultural holdings meeting the definition of holding and there was no sampling. The Survey of Agricultural Production Methods was a stratified random sample of 2,407 farms (5.7% sample).

The sampling plan for SAPM resulted in 61 strata. Farms were first stratified by Region (NUTS 1), then Agricultural Region (13), and finally farm size. Large farms were included in the sample with a probability of one because of their significant contribution to the estimates.

The required sample size was calculated by estimating for each variable the sample size per stratum according to Neymann's allocation method and ensuring that the results met the EU requirements for statistical precision.

### **Collection Method**

Agricultural census data were collected by the census enumerators either at the farmer's residence or his/her representative or, more usually, at the offices of the municipal authorities after an interview has been arranged. The average time of a statement recorded using the electronic form was about 12 minutes. SAPM was sent by post directly to the selected farmers. The farmers either returned the paper form by post to Brussels or filled in the electronic form. The average time taken to complete an electronic declaration was 8 minutes.

The municipal authorities were responsible for the execution of the agricultural census. Farmers were normally contacted by mail, based on the address provided by the Directorate General Statistics and Economic Information Register of Holdings lists. The city administration is responsible for contacting the new farms created during the year in the territory of the municipality, and updating the Register of Holdings. There are some 589 Belgian municipalities.

The only administrative data that was directly used was data on support for rural development.

### **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.

Additional information collected: possible presence of a farm succession; use of accounting arrangements for managing the holding; more detailed information on area with horticultural crops (vegetables, ornamental plants, fruits and nursery products); Bovine breeds to observe the progression of production methods outside the traditional system; Systems for direct sale to consumers

The information for the agricultural census was collected using a single form except for farms with a large number of workers. Farms with a large number of workers also receive a questionnaire specifically devoted to agricultural labour.

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The information for the Survey of Agricultural Production Methods (SAPM) was collected using a single form and sent to the end of February 2011.

A printed form and an electronic 'Blaise' form (used by 51% of holdings) were available. Information that was unlikely to change from one year to another, which was on file in statistical and administrative data bases (identification data operation, information about the different people working on the farm) were pre-filled in both forms. Respondents were asked to verify the information and make revisions as necessary.

#### ***Controls to Minimize Non-Sampling Errors***

As the Census is obligatory the rate of non-response is extremely low. Measurement errors may occur in measurements of livestock, crop and land areas but given that farmers also provide the same information to other authorities for agricultural program purposes, information that is subject to audit they make few errors.

There are multiple checks and range and consistency edits in the Blaise data processing system to flag potential data errors. Missing or incorrect values are corrected by those responsible for data, usually after re-contacting contact the respondent by telephone. In some cases the statistician in charge did corrections.

#### ***Innovative Methodologies***

All respondents were provided with the opportunity to respond using an online Internet application and their mail login and password were sent with their survey documents in the mail.

### **8. Data Entry, Edits and Imputations, Estimation and Tabulation**

Following collection the paper based forms were returned by post to the nearest processing centre. The data are then subject to data entry using the Blaise survey processing system.

Electronic forms are also sent to the appropriate local processing centre office. Data are retrieved using a specific application and put in the same database that contains the statements encoded in the decentralized offices. At regular intervals, the data from each local processing centre were transferred to the central server in a Blaise database. Imputations have been rare as there were few non-responses and missing data issues were normally addressed by contacting the respondent. In the few situations where imputation was necessary it have been done by using data from a previous year's survey. The data are then transferred in an SPSS database in order to perform further analysis and calculation of results. The final reference file is an SPSS file.

### **9. Data Dissemination and Use**

The final data file of the 2010 Census was available early March 2012, coinciding with the release date of synthetic and detailed final results. The Census results are made available to users free of charge on the website of the Directorate-General Statistics and Economic Information ([www.statbel.fgov.be](http://www.statbel.fgov.be)).

Files containing the detailed results for specific geographic levels are available on request as are statistical requests, which cannot be satisfied standard tabulations, provided that the requested tables pose no problem in terms of data confidentiality. Results for the survey of production methods have not been made at the national level.

### **10. Census Data Quality.**

No comparisons were made with other statistical surveys such as surveys of crops or livestock because the agricultural census is the survey best suited for providing those estimates. There is also no comparison of labour data with administrative information because they are not available at the micro level and the macro results are available only after the results of the agricultural census.

### **11. Data Sources**

Eurostat:

[http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural\\_census\\_2010](http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_2010)

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## 12. Contact

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