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## CZECH REPUBLIC - Census of Agriculture 2010 – Explanatory notes

### 1. Historical Outline

In 1930 a census of agricultural works was conducted by the State Statistical Institute of that time. The results were brought out in tens of volumes of the journal "Československá statistika" (Czechoslovak Statistics). The census had been prepared in accordance with the world census of agricultural works organized in the same year by the International Institute of Agriculture in Rome.

The former Czechoslovakia participated in the WCAs in 1970, 1980 and 1990.

At the turn of the millennium the CZSO mounted the Agricultural Census 2000. The census was implemented in the framework of the World Census of Agriculture arranged by the Food and Agriculture Organisation of the United Nations (FAO) regularly at the turn of every decade. The indicators measured in Agricultural Census 2000 were mostly in line with EU legislation. In 2003, 2005 a 2007, Farm Structure Surveys were organized as sample surveys.

### 2. Legal Basis and Organization

Act No. 89/1995 Coll., on the State Statistical Service, as amended, is the basic national legislation related to statistical surveys.

The 2010 Census of Agriculture was carried out on the basis of the Program of Statistical Surveys for the year 2010, which was published as an annex to Chapter 125 of the Decree No. 386/2009, in the Collection of Laws of the Czech Republic, of 13 November 2009. The agricultural holding shall supply all requested data requested either in written form or personally by the interviewers.

The Agricultural, Forestry and Environmental Statistics Department of the Czech Statistical Office (CZSO) was responsible for the preparation, adherence to methodology, organization as well as financial aspects. The responsible staff collaborated with other CZSO departments such as the Department of Statistical Data Processing, the Unit for Statistical Territorial Units, and other institutions; for example the Ministry of Agriculture of the Czech Republic, the Institute of Agricultural Economics and Information, the Research Institute of Agricultural Engineering, the Agrarian Chamber of the Czech Republic and other agricultural organizations.

The director of the department was fully responsible for the course of the survey. The heads of the CZSO regional offices were responsible for the survey operations in the field.

### 3. Reference Period or Date

The reference periods for the Farm Structure Survey (FSS) and the Survey of Agricultural Production Methods (SAPM) were:

- (1) Land use, livestock and SAPM variables - 30 September 2010
- (2) Labour force variables - 1 October 2009 to 30 September 2010
- (3) Support for rural development variables - last three years (2008 to 2010)

### 4. Enumeration Period

September to December 2010 was the enumeration period with respondents requested to reply within 30 days of being contacted. The very last day of the follow-up data collection operation was 22 February 2011.

### 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 the Czech Republic included agricultural holdings reaching following threshold values as at the day of generating of the population:

- Area above 5 ha of utilised agricultural area (own or rented); or
- More than 1 ha of orchards; or 3,500 m<sup>2</sup> of vineyards; or
- Sum of area for vegetable, strawberries and flowers above 2,500 m<sup>2</sup>; or
- Breeding of 5 heads of cattle, or 10 heads of pigs, or 10 heads of sheep and goats; or
- 100 heads of poultry including ostriches.

The threshold excludes only small proportion of agricultural holdings, less than 2 percent of utilized agricultural area and livestock units.

### 6. Geographic Coverage

Covered the entire country.

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## 7. 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.

## 8. Methodology

### *Use of the FAO Modular Approach*

No

### *Frame*

The frame for agricultural statistical surveys is based on the Farm Register managed by the Agricultural Statistics Department. The Farm Register is updated regularly. Data on livestock numbers and areas under crops are updated yearly after finishing particular statistical surveys as well as updates from the administrative sources such as the Land Parcel Information system and the Animal Register. Data in the Farm Register are not subject to any quality control.

The 2010 Census also served as a data source for update of the Farm Register, which is the basis for the annual agriculture survey program.

### *Complete or Sample Enumeration Methods*

The Census of Agriculture, (Farm Structure Survey and the Survey on Agricultural Production Methods) was conducted as a census. The Farm Register contained 47,281 agricultural holdings at the time of the 2010 Census of Agriculture. In total, data for 22 864 agricultural holdings which reached the threshold values for the survey was collected.

### *Sample Design*

Not applicable.

### *Collection Method*

Two data collection methods were used: one was by regular mail, and the second using interviewers. The Regional Czech Statistical Office (CZSO) offices were responsible for data collection by the interviewers. In case a holding refused to respond, a CZSO regional office employee asked the holding again personally or by phone. Phone calls were used mostly for reminder calls and for data checking.

The CZSO Department of Statistical Data Processing collected the data by regular mail, in several cases electronically (per e-mail).

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.

In addition, the following information was asked: Services for agriculture; Processed amount of own products; Own consumption (self-consumption of own products); Principal agricultural production of the holding by selected activities (CZ-NACE).

The characteristics concerning rural development support were not surveyed. These data were obtained using administrative data source, namely the State Agricultural Intervention Fund, the paying agency.

A single questionnaire was used.

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

There was a multi-stage control process starting with (1) basic controls in the field during the collection of questionnaires by interviewers, followed with (2) controls at questionnaire delivery by interviewers at the CZSO Regional Offices, and (3) controls during the processing (logic checks, checks for completeness, linkage to nomenclatures, duplicates).

### *Innovative Methodologies*

Optical character reader (OCR) software was used for much of the data entry. Use of administrative data for items on support for Rural development.

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

The Department of Statistical Data Processing provided centralized processing of questionnaires

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using an optical character reader (OCR). The same Department carried out checks for accuracy, coherence and completeness of the data files at the national level (including checks for duplicate ID numbers).

The Department of Statistical Data Processing was responsible for developing and delivering of the processing system that was used and for providing the databases Osev 3-01 and Zem 1-01 to the Regional Offices, the logical controls, data conversion to Dataman Windows. The CZSO Regional Offices staff converted their data files to an electronic form using Dataman Windows program, including the data from Osev 3-01 and Zem 1-01 databases

The other software programs used for processing included MS Visual FoxPro (matching coordinates with the address of the holding), Arc/Info 9.3, ArcView 3.3 (transformation of the geo coded coordinates, geographical data processing, spatial analyses, and map outputs), and MS Excel (development and completion of output tables).

#### **10. Data Dissemination and Use**

All the publications are free of charge (paid from a grant budget) both in paper version and from the website of the Czech Statistical Office ([www.czso.cz](http://www.czso.cz)). Almost all publications are bilingual (Czech and English).

#### **11. Census Data Quality**

The Department of Agricultural Statistics undertook the validation controls. Interviewers had to check visually completeness of the filled-in questionnaire, check sums and linkages between particular sections. When an inadequacy was found the respondent was contacted and the data were added or corrected. Staff of the CZSO regional offices controlled the questionnaires completed by the interviewers. The data were entered to the *Dataman Windows Program* where basic checks were conducted. The datasets were then sent to the Department of Statistical Data Processing, where validation was performed. During processing at the Department of Statistical Data Processing, questionnaires were thoroughly checked.

The data control procedures were considerably time consuming. First, scanner staff carried out optical check of scanned questionnaires whether numerical figures and codes were fetched properly. Cramped data were corrected and verified after careful checks. Data were then transferred to *Dataman* and the Department of Statistical Data Processing programmed automatic check tables for the most important indicators (agricultural land, main categories of animals, labour force).

Finally, data were compared to the data from the previous survey on the national level. The Department of Agricultural Statistics converted the data to Eurofarm database format and checked the data again using validation rules developed by Eurostat (DSM validation rules).

#### **12. 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)

Final report:

[http://ec.europa.eu/eurostat/documents/749240/749313/CZ\\_NMR\\_FSS\\_2010.pdf/4dfdb012-3525-4343-8bf3-3b628ba2b91c](http://ec.europa.eu/eurostat/documents/749240/749313/CZ_NMR_FSS_2010.pdf/4dfdb012-3525-4343-8bf3-3b628ba2b91c)

#### **13. Contact**

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