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## **BULGARIA - Census of Agriculture 2010 – Explanatory notes**

### **1. Historical Outline**

The first Census of Agriculture was carried out in 1897 when the Royal Decree No 39 (SG. 93 of 3 May 1897) set the "Rules for the collection of information on agricultural statistics". Subsequent agriculture censuses were held in 1908, 1926, 1934, 1946, 1963, 1993, 2003 and 2010.

Preparation for the accession of Bulgaria to the EU called for the implementation of specific statistical activities. The introduction of European standards led to structural and methodological changes in the agricultural statistics. In 1998 a specialized statistical office, the Agrostistics Department, was created in the Ministry of Agriculture and Forestry, and it was assigned the responsibility for the organization, collection and processing of agriculture statistics. The first census of agriculture following EU legislation was conducted by the Ministry of Agriculture and Forestry in 2003. The basis for the establishment of the list of holdings in the household sector was the 2001 Population and Housing Census in Bulgaria, conducted by the National Statistical Institute. An agriculture module was included to collect information on basic agricultural characteristics of the households shortly after the end of the agricultural land restitution process.

### **2. Legal Basis and Organization**

The 2010 census is the second census in compliance with the EU legislation and the first carried out after the Bulgarian accession to the European Union (EU).

The Ministry of Agriculture and Food carried out the 2010 Census of Agriculture (2009-10 Farm Structure Survey and the 2009-10 Survey of Agricultural Production Methods) in accordance with Bulgaria's 2010 Agricultural Census Law.

The Census was conducted using a methodology consistent with the requirements of Regulation (EC) No 1166/2008 of the European Parliament and of the Council of 19 November 2008 on farm structure surveys and the survey on agricultural production methods.

The Ministry of Agriculture and Food, together with the regional governors and mayors of the municipalities, organized and managed the agricultural census in Bulgaria. The census bodies were the Agrostistics department, being the agricultural statistical office at the Ministry of Agriculture and Food, the regional offices of the Ministry, the Central Census Commission and the Regional Census Commissions (RCC).

### **3. Reference Period or Date**

The reference periods are:

- (1) Area and crops- Crop year 2009/2010 (1 October 2009 to 30 September 2010)
- (2) Labour force - 12 month period ending 31 August 2010
- (3) Livestock - 31 August 2010
- (4) Average Irrigated Area and Rural Development Measures - last 3 years (2008 - 2010)

### **4. Enumeration Period**

The Census of Agriculture field collection operations and the enumeration started on 1 September 2010 and ended on 30 December 2010. (The data collection period was extended one month beyond the original deadline of 30 November 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 compliance with the EU Regulations Bulgaria applied the following national threshold: 0.5 ha of utilised agricultural area; or 0.3 ha of arable land; or 0.5 ha of natural meadows; or 0.1 ha of orchard (compact plantation), vineyard, vegetables, hops, tobacco, spices, medical and essential oil crops, flowers, ornamental plants; or 0.05 ha of greenhouses; or 1 cow/ buffalo-cow; or 2 cattle/ buffaloes; 1 female for reproduction (equidae); or 2 working animals (equidae); or 5 pigs; or 1 breeding-sow; or 5 breeding-ewes; or 2 breeding she-goats; or 50 laying hens; or 100 chicken for fattening; or 1 reproductive male animal used for natural mating - bull, stud, boar, etc.

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## 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 national definition of an agricultural holding.

## 8. Methodology

### *Use of the FAO Modular Approach*

No

### *Frame*

All agricultural holdings throughout the country on the list of agricultural holdings prepared by the Agrostatistics Department of the Ministry of Agriculture and Food. The list contained 750 733 agricultural holdings and was based on data from the previous census, agricultural administrative records and the annual updates from twelve major sources.

### *Complete or Sample Enumeration Methods*

There was no sampling as the Census was an enumeration of all agricultural holdings for both the Farm Structure Survey, and the Survey on Agricultural Production Methods.

### *Sample Design*

Not applicable.

### *Collection Method*

The Agricultural Census data was collected via face-to-face interviews, conducted by 2,654 enumerators. The enumerators visited and interviewed all statistical units in the list and new holdings, not included in the initial list and identified with the support of the mayors of the settlements. The information was recorded on printed questionnaires.

### *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, erosion protection, livestock housing and livestock management, grazing of animals, manure application, manure storage and treatment facilities, maintenance and installation of landscape features. In addition, Bulgaria included more detailed breakdown on land ownership, area with aromatic crops – oil rose, coriander, lavender, spearmint, valeriana; questions on holding's bookkeeping, mineral fertilizers and plant protection products application on open-field area; availability and types of milking facilities. There were three collection forms. The main statistical questionnaire (Form No.1) was a questionnaire collecting information on farm characteristics. The household-listing questionnaire (Form No.2) was used to determine whether the households in urban areas met the criteria for an agricultural holding. Form No.3 was used for temporary or permanently inactive holdings being part of the farm holdings list or the Farm Register.

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

The primary effort to minimize non-sampling error was placed in the interviewer and supervisor training programs and the instruction and procedures manuals for the field collection operation. Processes were also put in place for correction of the anticipated under-coverage, duplicate records, non-response and no contacts. Measurement errors were mostly detected by control in the computer module or by the additional monitoring of the data at central level. When discovering errors the regional experts and the enumerators contacted the holder for data clarification and data correction.

### *Innovative Methodologies*

None specifically mentioned or noted.

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

Data processing, estimation and analysis were carried out on central level. The data file was prepared and sent to Eurostat for final validation. A special computer module was prepared for data entry. Data

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entry from the completed questionnaires in the computer module began in mid-September 2010 by operators in the regional offices of the Ministry of Agriculture and Food. Data regarding Rural Development Support was cross-checked with the administrative records of the Paying Agency. In the case of doubt, data from Paying Agency was imputed into the database.

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

The preliminary results were published in May 2011 on the website of the Ministry of Agriculture and Food, seven months after the end of the reference period (crop year). Final detailed results were released in October 2012.

The census results reflect the state of agriculture in Bulgaria in 2010 and are the basis for decision-making by state and local governments, as well as by the European Union and other European institutions in the implementation of the Common Agricultural Policy in the EU.

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

The individual and aggregated data control on regional and central level started from mid-September 2010, together with the data entry of the questionnaires into the computer program. The 28 regional offices sent data to Headquarter's database on a weekly basis.

The Agrostistics Department at the Ministry of Agriculture and Food conducted multiple checks of the logical links within each data record. Obvious erroneous questionnaires with incoherent data were compared with data from administrative sources. In case of significant differences holdings were re-visited for follow-up interviews.

The data was summarized and analyzed at central level for the 28 districts and the 6 statistical regions. The data from regular crop, livestock, poultry and beekeeping surveys proved to be comparable with the Census data. Some of the differences were attributable to the different survey reference periods. The difference in annual crop estimates was often due to non-harvested area and was normally within the published survey sampling errors.

#### **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)

Report:

[http://ec.europa.eu/eurostat/documents/749240/749313/BG\\_NMR\\_FSS\\_2010.pdf/29fde8a8-4751-4217-a1cf-b2f4bb2aefd5](http://ec.europa.eu/eurostat/documents/749240/749313/BG_NMR_FSS_2010.pdf/29fde8a8-4751-4217-a1cf-b2f4bb2aefd5)

#### **13. Contact**

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#### **Website**

Ministry of Agriculture and Food:

[http://www.mzh.government.bg/MZH/bg/ShortLinks/SelskaPolitika/Agrostistics/Structure\\_agricultural\\_holdings/Posts\\_copy1/Buletini2012.aspx](http://www.mzh.government.bg/MZH/bg/ShortLinks/SelskaPolitika/Agrostistics/Structure_agricultural_holdings/Posts_copy1/Buletini2012.aspx)