
MALTA - Census of Agriculture 2010 – Explanatory notes

1. Historical Outline

The Central Office of Statistics (COS) had been set up in 1947 but had no legal basis; however on May 1955 the law was enacted, in the shape of the Statistics Act XV of 1955. Consequently, the COS carried out the 1956 Census of Agriculture covering the period October 1955 to September 1956. The 1955 Act was superseded by the Malta Statistics Authority Act XXIV of 2000, which came into effect on 1 March 2001. The Census of Agriculture 2001 was one of the first major operations to be undertaken under the new act. As from the date of accession in the European Union, Malta has followed the legislation as laid down in Council Regulation 571/88 and has carried out a Farm Structure Survey in 2003, 2005 and 2007.

The National Statistics Office was the official body responsible for undertaking the Census of Agriculture in 2010.

2. Legal Basis and Organization

In Malta the legal basis for the collection of agricultural statistical data are the Malta Statistics Authority Act No XXIV, enacted in the year 2000. This places full responsibility on the National Statistics Office to carry out any statistical survey and to produce official statistics.

In Malta, no Farm Structure Survey committee was established, as all staff members who were involved in the organization and implementation of the Census were all staff members within the Agricultural and Fisheries Statistics section of the National Statistics Office.

The Agricultural and Fisheries statistics section is responsible for all domains in Agriculture. The unit co-ordinated all the requirements required for the census which included obtaining and updating lists of farmers, the questionnaire design, briefing of interviewers, printing of forms, running the Census, data capture, validation, analysis, transmission and the dissemination of the results.

3. Reference Period or Date

The Census reference date was 31 August 2010 for all characteristics such as livestock, utilised agricultural area, buildings, machinery and others where it is meaningful to assign a specific day. The reference period for permanent crops, arable land, mushrooms, organic land and vines is the crop year 1 September 2009 to 31 August 2010. This reference period is also applicable for animal housing and the labour force.

4. Enumeration Period

Data collection extended over a five (5) month period from September 2010 to the end of January 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.

Malta did not impose any minimum thresholds on agricultural activity and there were no changes in the definition of a holding from the previous Census. All holdings in the agricultural register were taken into consideration for the Census. These amounted to 15,411 holdings.

6. Geographic Coverage

Covered the entire country.

7. Exclusions and Cut-Off Thresholds

No minimum thresholds of agricultural activity were used in the Census and the complete population in the Agricultural Register was enumerated for the Census of Agriculture 2010 and the Survey on Agricultural Production Methods (SAPM).

8. Methodology

Use of the FAO Modular Approach

No

Frame

The Agricultural Register and its 15,411 holdings, was the frame for the 2010 Census of Agriculture. The Agricultural Register contains the details of all agricultural holdings and is maintained and updated by the National Statistics Office on a regular basis. Updates are either sent by the Ministry of Rural Affairs and the Environment or through the number of surveys undertaken by the Agricultural and Fisheries Statistics Section.

The Agricultural and Fisheries statistics section maintains the agricultural register, which consists of a central database having the details of the holding and the data from previous surveys. This enables the unit to compile and extract an updated list of holdings for the Census of Agriculture. No threshold is applied for the register.

The agricultural register is updated frequently and new units may be traced from:

- (1) Animal Register maintained by the Directorate of Wholesale markets and Fishing Fleet Facilities
- (2) Farmer's Register maintained by the Department of Agriculture
- (3) Other administrative sources such as IACS (Integrated Administration and Control System)
- (4) Surveys carried out by the Agricultural and Fisheries statistics section – data collected is compared to the register

Complete or Sample Enumeration Methods

Maltese agriculture is diverse and there are a small number of holdings. The Census of Agriculture is an exhaustive survey hence all the holdings in the register were interviewed.

Sample Design

Not applicable.

Collection Method

The data collected in the Census is "As per holder's declarations". The Census of Agriculture data were collected using face-to-face interviews and interviewers were recruited for that work. Responses were recorded on paper questionnaires which were then passed to supervisors. The supervisor's work was to check and verify any anomalies. After all the necessary checking, the questionnaires were returned to the Statistics Section for data entry.

Five briefing sessions were held for all interviewers. During the briefing session, all the interviewers were provided with a detailed instruction manual on each characteristic of the Census, a list of farmers to be interviewed, and a copy of the leaflet sent to the farmers.

In order to avoid errors during the initial stages of data collection, all interviewers were instructed to interview not more than five holdings and return the booklets back to their respective supervisor for an assessment to identify any mistakes undertaken during the interviewing stage. This exercise helped the interviewer to reduce the number of errors in the remaining questionnaires. This method, which was also used successfully in previous surveys, helped the Unit to reduce the total number of initial errors. In turn, this also reduced the processing time of any given questionnaire.

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.

Due to the specificity of the agricultural sector in Malta, most of the items related to land were non-existent or non-significant.

A thirty page (30) questionnaire was used on all the holdings. The questionnaire was split into seventeen (17) parts and covered all the fields required in the EU Commission Regulation 1166/2008. The data were collected over a five-month period starting from the September 2010. It was decided that the Census was to be carried through personal interviews, and thus no facility for the questionnaire to be filled on-line was made. Malta's experience, the use of laptop computers for interviewing proved to be very laborious and highly impractical during the interviewing stage.

In June 2010, a pilot survey was carried out on a small number of farmers to test the layout of the questionnaire and to identify any problems that may arise in the compilation of the data. As a result, a few alterations were needed to facilitate the data collection process and to ensure better understanding of the questionnaire from both the farmer's and the interviewer's point of view.

Controls to Minimize Non-Sampling Errors

Interviewers and supervisors were thoroughly trained, and provided with manuals and resource materials. In addition, interviewers were instructed to interview not more than five holdings, before providing them to their supervisor for assessment. This helped reduce data collection errors.

Innovative Methodologies

In order to minimize data collection errors interviewers were instructed to interview not more than five holdings, before providing them to their supervisor for assessment. This helped reduce data collection errors. The method, also used successfully in previous surveys, helped the Unit to reduce errors.

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

The software application system used for data entry used validation rules that triggered error reports. This facilitated the early stage of data analysis. Analysis and validation of data continued after all data entry was complete. Further edits and validation of the individual data were then undertaken.

The locally built computer program was designed in such a way in order to minimize errors encountered through the validation rules as stipulated in the Eurostat manual. The validations set up by Eurostat helped to identify and resolve any further anomalies. They involved logic and consistency checks with previous data, checks for extreme values and reconciliation of the total declared area information to the area declaration covered by the crop. Moreover, the computer application was designed in such a way that when an edit failure was encountered, a dialog box displaying the error message popped up. The data were then converted into the data format as required by Eurostat.

Notebook computers were not used for data collection because they were thought to be impractical and labour intensive in an earlier experience.

10. Data Dissemination and Use

The final results of the Census were published on 3 January 2012, after the transmission of the final data to Eurostat. These results are available on the National Statistics Office website www.nso.gov.mt/site/page.aspx. The publications include information on the structure of agricultural holdings, land use, livestock and labour force. A short methodological description on the implementation of the survey is also included. The Census data are not disseminated in an on-line database.

11. Census Data Quality

Following verification and analysis, the data collected during the census was compared to the results obtained from other surveys carried out by the Agricultural and Fisheries statistics section, mainly the Farm Structure Survey of 2007.

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/MT_NMR_FSS_2010.pdf/e2e189ef-7132-4110-bf03-3a01295a1db8

13. Contact

Unit B3: Agricultural and Fisheries Statistics, Directorate B - Business Statistics, National Statistics Office

Address: Lascaris Valletta VLT 2000, Malta

Telephone : +356 25997000

E-mail: nso@gov.mt

Website

National Statistics Office Malta: <http://nso.gov.mt/en/Pages/NSO-Home.aspx#>

DRAFT