

Single Integrated Metadata Structure (SIMS)

Country: Greece

Domain name: 2013 Farm Structure Survey

ELSTAT metadata	
Contents	
1. Contact	
2. Introduction	
3. Metadata update	
4. Statistical presentation	
5. Unit of measure	
6. Reference period	
7. Institutional mandate	
8. Confidentiality	
9. Release policy	
10. Frequency of dissemination	
11. Dissemination format, Accessibility and clarity	
12. Accessibility of documentation	
13. Quality management	
14. Relevance	
15. Accuracy and reliability	
16. Timeliness and punctuality	
17. Comparability	
18. Coherence	
19. Cost and burden	
20. Data revision	
21. Statistical processing	
22. Comment	

1. Contact		Contents
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2. Introduction

[Contents](#)

The Farm Structure Survey (FSS) is a wide range, periodic statistical survey carried out in two forms:

- A basic survey (Agricultural-Livestock Census), conducted every ten years
- A sample survey conducted on a two-year basis till 2010 and on a three-year basis since then, in the period between Agricultural-Livestock Censuses.

The FSS aims at collecting quantitative information in order to determine the key characteristics of the structure of agricultural holdings in Greece. The data are collected at regular time intervals, at farm level, in order to generate time series of data at overlaying geographical levels: Great Geographical Areas (NUTS 1), Decentralized Administrations, Regions (NUTS 2), Departments/Regional Units (NUTS 3), Municipalities, Municipal Units, Municipal/Local Communities, Settlements. Therefore, the FSS provides the basis for making decisions relevant to the Common Agricultural Policy.

3. Metadata update

[Contents](#)

3.1 Metadata last certified	January 2016
3.2 Metadata last posted	January 2016
3.3 Metadata last update	January 2016

4. Statistical presentation

[Contents](#)

4.1 Data description

Through the FSS, statistical data are collected on characteristics laid down in the relevant Community legislation and which are distinguished into four groups:

- General characteristics (number of holdings, legal status, type of tenure, etc.)
- Utilized agricultural area per crop
- Agricultural machinery and equipment
- Livestock per type of animal and bird breeding
- Variables of special interest, such as labour force, rural development issues, agricultural machinery, management and cultivation methods.

The unit of the survey is the agricultural or livestock holding.

The aggregated data are tabulated and published at the following geographical levels: Department (NUTS 3), Region (NUTS 2) and Great Geographical Area (NUTS 1).

4.2 Classification system

Analytical information on the typology can be found in the following Community legislation:

- 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 and repealing Council Regulation (EEC) No 571/88.
- Regulation (EC) No 1242/2008 of 8 December 2008 establishing a Community typology for agricultural holdings.
- Commission Regulation (EC) No 1200/2009 of 30 November 2009 implementing Regulation (EC) No 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods, as regards livestock unit coefficients and definitions of the characteristics.
- Typology Handbook, RI/CC rev.3, 5/10/2009
- Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS).
- Commission Regulation (EU) No 1319/2013 of 9 December 2013 amending annexes to Regulation (EC) No 1059/2003 of the European Parliament and of the Council on the establishment of a common

classification of territorial units for statistics (NUTS).

4.3 Sector coverage

The 2013 FSS was conducted in all the Departments (NUTS 3) of Greece and it covers at least 98% of the agricultural activity of the Country. The remaining 2% corresponds to very small agricultural holdings that, according to Regulation (EC) 1166/2008, are beyond the scope of the survey.

4.4 Statistical concepts and definitions

The main purpose of the FSS is to provide a common list of characteristics, which are studied on the basis of common rules and procedures, thus offering the possibility to make comparisons among the agricultural and livestock holdings all over the European Union. As a result, a complex volume of statistical data is compiled.

Both Farm Structure surveys and Agricultural-Livestock Censuses produce statistical information on specific targets set by the Common Agricultural Policy and at the same time they offer a basis for the compilation of statistical data on agriculture.

The surveyed characteristics and the relevant definitions are laid down by the Community legislation listed in section 4.2.

The information collected for each holding is grouped into the following categories:

- The number of agricultural and livestock holdings at national, regional and local level.
- General information: location of the holding and system of farming (biological farming, owned or rented agricultural areas, etc).
- Management and labour force: all the people who are responsible for the holding or/and work in the holding.
- Agricultural area and land use: size and distribution of the land of the holding and more specifically of the utilized agricultural area (arable land, permanent crops and kitchen gardens, permanent meadows and grassland), as well as specific cultivations.
- Agricultural machinery and equipment.
- Livestock: animals that are bred in the holding (cattle, sheep and goats, pig, poultry, horses and other animals).
- Secondary activities: activities, which are directly linked with the holding (making use of its production means) and agro-environmental issues.

The typology of the FSS, which is also laid down by Community legislation, consists of a harmonized classification of the holdings all over the European Union. This classification is based on the type of farming activity and the economic size of the holding. These two factors are determined on the basis of the Standard Output (SO).

The standard output of an agricultural product (crop or livestock) is the average monetary value of the agricultural output at farm-gate price, in euro per hectare or per head of livestock. The base year of the weights of the Standard Output for the 2013 FSS was the year 2010.

The type of the holding is determined by the relative participation of the various activities in the overall Standard Output of the holding.

4.5 Statistical unit

The statistical unit of the FSS is the agricultural, livestock or mixed holding (a unified unit both in terms of technical and economic perspective, which is run by a unified management body and produces agricultural products) which:

- a) has at least 0.1 ha (1 stremma) of utilized land, or at least 0.05 ha (0.5 stremma) of greenhouses, regardless of the production type, ownership, or the location of the holding, or
- b) has animals of its own and more specifically at least: one (1) or more cows or two (2) or more other "large animals" of any type and age (oxen, horses, donkeys, mules), or five (5) or more "small animals" (sheep, goats, pigs) of any age and type, or fifty (50) or more poultry birds, or twenty (20) or more hives of "domestic" or "European" bees or five (5) or more ostriches, or
- c) cultivates mushrooms.

4.6 Statistical population

The statistical population of the FSS are all the statistical units which satisfy the criteria of unit 4.5.

The Sampling Frame used in this survey, was the updated Register of Agricultural Holdings of ELSTAT (Farm Register) as this resulted from the Agricultural Census of 2009 and the relevant updating procedures hence. The Farm Register is updated from administrative sources (Registers of the Ministry of Rural Development and Food and the Ministry of Finance, specifically on New Farmers and Organic Farming), as well as other surveys conducted by ELSTAT such as the agricultural and livestock capital surveys: orchard survey, areas under vine, pigs livestock, cattle livestock, sheep livestock, goats livestock.

4.7 Reference area

The 2013 FSS was conducted in all the Departments/Regional Units of Greece (NUTS 3 level consisting of 75 Regional Units).

4.8 Time coverage

FSS data are available for the following years: 1983, 1985, 1987, 1991 (Census), 1993, 1995, 1997, 2000 (Census), 2003, 2005, 2007 and 2009 (Census). Data after 2000 are available in electronic form on the website of ELSTAT in the form of fixed tables grouped into categories:

Statistics> Agriculture, Livestock, Fishery>

- Holdings and number of animals: [http://www.statistics.gr/statistics/-/publication/SPK12/-](http://www.statistics.gr/statistics/-/publication/SPK12/)
- Employment: [http://www.statistics.gr/statistics/-/publication/SPG12/-](http://www.statistics.gr/statistics/-/publication/SPG12/)
- Holdings and areas: [http://www.statistics.gr/statistics/-/publication/SPG32/-](http://www.statistics.gr/statistics/-/publication/SPG32/)

Data for the previous years are available in hardcopy or digitised publications through the Digital Library of ELSTAT.

(http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007960&p_topic=10007960)

4.9 Base period

Not applicable.

5. Unit of measure

[Contents](#)

Two kind of units of measure are predominant:

- The units for measuring the survey characteristics (stremmas for agricultural areas-0.1 ha, number of heads for livestock, persons or annual work units for the labour force), and
- The number of agricultural holdings having the specific characteristic.

6. Reference period

[Contents](#)

The reference period for the 2013 FSS, as regards crops, labour force and other characteristics was the cultivation period from 1 October 2012 until 30 September 2013. The reference date as regards animal capital of the holding was the 1st November 2013. Finally, as regards rural development measures, the reference period was three years ending on 31 December 2013.

7. Institutional mandate

[Contents](#)

7.1 Legal acts and other agreements

- The Hellenic Statistical Authority (ELSTAT) is an independent Authority enjoying operational independence as well as administrative and financial autonomy. It is not subject to the control of governmental bodies or other administrative authority. Its operation is subject to the control of the Hellenic Parliament. The legal framework concerning the organization and operation of ELSTAT can be found at:

<http://www.statistics.gr/en/legal-framework>.

The national legislative framework for the implementation of the 2013 FSS is as follows:

- Act no 10361/Γ2-900/Government Gazette (G.G.) no 2860B/11-11-2013) on the “Approval, proclamation, assignment and distribution of costs for conducting the farm survey structure for the year 2013, as well as approval of using statistical representatives and determination of their fee for the year 2013” as modified by Act no 128128/Γ2-1222/20-12-2013/G.G. no 3406B/31-12-2013.
- Act no 3256/Γ2-167/G.G. no 754B/17-03-2014 on the “Extension of the 2013 farm survey structure as well as approval of using statistical representatives and determination of their fee for the year 2014” as modified by Act no 8766/Γ2-551/16-07-2014/G.G. no 2101B/31-07-2014.

7.2 Data sharing

No.

8. Confidentiality

[Contents](#)

8.1 Confidentiality-policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 7, 8 and 9 of the Law 3832/2010 as in force, by Articles 8, 10 and 11(2) of the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System and by Articles 10 and 15 of the Regulation on the Operation and Administration of ELSTAT (<http://www.statistics.gr/en/statistical-confidentiality>).

More precisely ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

8.2 Confidentiality-data treatment

ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:

- a) these data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or
- b) the statistical unit has given its consent, without any reservations, for the disclosure of data.

The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.

ELSTAT may grant researchers conducting statistical analyses for scientific purposes access to data that enable the indirect identification of the statistical units concerned. The access is granted provided the following conditions are satisfied:

- a) an appropriate request together with a detailed research proposal in conformity with current scientific standards have been submitted;
- b) the research proposal indicates in sufficient detail the set of data to be accessed, the methods of analyzing them, and the time needed for the research;
- c) a contract specifying the conditions for access, the obligations of the researchers, the measures for respecting the confidentiality of statistical data and the sanctions in case of breach of these obligations has been signed by the individual researcher, by his/her institution, or by the organization commissioning the research, as the case may be, and by ELSTAT.

Issues referring to the observance of statistical confidentiality are examined by the Statistical Confidentiality Committee (SCC) operating in ELSTAT. The responsibilities of this Committee are to make recommendations to the President of ELSTAT on:

- the level of detail at which statistical data can be disseminated, so as the identification, either directly or

- indirectly, of the surveyed statistical unit is not possible;
- the anonymization criteria for the microdata provided to users;
- the granting to researchers access to confidential data for scientific purposes.

The staff of ELSTAT, under any employment status, as well as the temporary survey workers who are employed for the collection of statistical data in statistical surveys conducted by ELSTAT, who acquire access by any means to confidential data, are bound by the principle of confidentiality and must use these data exclusively for the statistical purposes of ELSTAT. After the termination of their term of office, they are not allowed to use these data for any purpose.

Violation of data confidentiality and/or statistical confidentiality by any civil servant or employee of ELSTAT constitutes the disciplinary offence of violation of duty and may be punished with the penalty of final dismissal.

ELSTAT, by its decision, may impose a penalty amounting from ten thousand (10,000) up to two hundred thousand (200,000) euros to anyone who violates the confidentiality of data and/or statistical confidentiality. The penalty is always imposed after the hearing of the defence of the person liable for the breach, depending on the gravity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.

9. Release policy

[Contents](#)

9.1 Release calendar

The release calendar fully meets legal requirements concerning the deadlines for the release of data by:

- meeting the legal and contractual requirements concerning the deadlines for the transmission of the survey results,
- ensuring the longest possible time for data checking,
- ensuring additional time in case it is needed.

9.2 Release calendar access

The announcement calendar is distributed to the Press and is available on the website of ELSTAT (<http://www.statistics.gr/calendar>).

9.3 User access

Results are made available simultaneously to all interested parties and users through a Press Release, the publication of tabulated data on the website of ELSTAT, through the link [Statistics>Agriculture, Livestock, Fishery>](#), on the website of Eurostat and by submitting an application to the Statistical Information and Publications Division/Library Section and Section of Statistical Information, upon request: 46, Pireos & Eponiton Str, GR-18510, Piraeus, (Tel (+30) 213135 2023, 2022, 2346, 2308, Fax: (+30) 213135 2819, 2312, e-mail: library@statistics.gr, data.dissem@statistics.gr.)

Users do not have any kind of access to data prior to their release.

10. Frequency of dissemination

[Contents](#)

The results of the Agricultural-Livestock Census are disseminated every 10 years, whereas the results of the in-between Farm Structure Surveys were disseminated every two years till 2010 and every three years since then.

The results of the 2013 FSS were released in April 2015.

11. Dissemination format, Accessibility and clarity

[Contents](#)

11.1 News release

There was one [Press Release](#) in order to present the results of the 2013 FSS.

11.2 Publications
The main results of the 2013 FSS were released in the electronic publications under the general title “Greece in figures” accessible through the website of ELSTAT. (http://www.statistics.gr/greece-in-figures).
11.3 On-line database
Tabulated data are available through the website of ELSTAT (http://www.statistics.gr/statistics/agr) as well as the website of Eurostat (http://ec.europa.eu/eurostat/web/agriculture/data/database) (see also unit 11.5 Other).
11.3.1 Data tables-consultations (webpage traffic)
2450 consultations in 2015, including consultations of metadata.
11.4 Micro-data access
Users can request access to microdata by submitting an application to the Hellenic Statistical Authority, Statistical Information and Publications Division, 46, Pireos & Eponiton Str, GR-18510, Piraeus (Tel (+30) 213135 2023, 2022, 2346, 2308, Fax: (+30) 213135 2819, 2312, e-mail: data.dissem@statistics.gr .
11.5 Other
There are 9 Tables with data from the 2013 FSS, available on the website of ELSTAT, grouped in categories and accessible to all users, through the route Statistics> Agriculture, Livestock, Fishery>: <ul style="list-style-type: none"> • Holdings and number of animals: http://www.statistics.gr/statistics/-/publication/SPK12/ • Employment: http://www.statistics.gr/statistics/-/publication/SPG12/ • Holdings and areas: http://www.statistics.gr/statistics/-/publication/SPG32/
11.5.1 Metadata-consultations (webpage traffic)
2450 consultations in 2015, including consultations of data tables.

12. Accessibility of documentation	Contents
12.1 Documentation on methodology	
The principles of the documentation on the census methodology and the dissemination mode of the results of the 2013 FSS are laid down in a relevant Decision issued by ELSTAT, taking into consideration international practices, guidelines and rules set out by Eurostat on the specific statistical theme: <ul style="list-style-type: none"> • 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 and repealing Council Regulation (EEC) No 571/8 (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R1166&from=EN) • Regulation (EC) No 223/2009 of the European Parliament and of the Council, of 11 March 2009, on European statistics and repealing Regulation (EC, Euratom) No 1101/2008 of the European Parliament and of the Council on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009R0223&from=EN) • European Statistics Code of Practice (http://ec.europa.eu/eurostat/documents/3859598/5921861/KS-32-11-955-EN.PDF) • Quality Assurance Framework of the European Statistical System (http://ec.europa.eu/eurostat/documents/64157/4392716/qaf_2012-en.pdf/8bcff303-68da-43d9-aa7d-325a5bf7fb42) • ESS Quality Glossary (http://ec.europa.eu/eurostat/ramon/coded_files/ESS_Quality_Glossary.pdf) • ESS Handbook for Quality Reports (http://ec.europa.eu/eurostat/documents/64157/4373903/01-ESS-Handbook-for-Quality-Reports-2014.pdf/d6152567-a007-4949-a169-251e0ac7c655) • Principles Governing International Statistical Activities (http://unstats.un.org/unsd/methods/statorg/Principles_stat_activities/principles_stat_activities.pdf) 	

12.1.1 Metadata completeness-rate

100%, complete metadata are available.

12.2 Quality documentation

According to the provisions of paragraph 12.1 *Documentation on methodology* the following quality reports were/will be made available:

- [Summary quality report for users](#), Farm Structure Survey, Year 2013
- Single Integrated Metadata Structure (SIMS), Farm Structure Survey, 2013, Greece, ELSTAT website
- National Methodological Report Farm Structure Survey 2013, Greece (http://ec.europa.eu/eurostat/cache/metadata/EN/ef_esqrs_el.htm)

The National Methodological Report of the survey is also available upon request. Users can send their request to: Statistical Information and Publications Division, 46, Pireos & Eponiton Str, GR-18510, Piraeus ((+30) 213135 2023, 2022, 2346, 2308, Fax: (+30) 213135 2819, 2312, e-mail: data.dissem@statistics.gr)

13. Quality management

[Contents](#)

13.1 Quality assurance

ELSTAT aims at ensuring and continuously improving the quality of the produced statistics and maintaining user's confidence in these statistics. These goals are achieved, as described in the Quality Policy of ELSTAT, through the following principles:

- Safeguard and substantiate the operational independence of ELSTAT
- Produce timely and relevant statistics using scientifically sound methods
- Establish and maintain users' confidence in the reliability of the statistics
- Safeguard the confidence of the statistical units who provide their confidential information for the production of the statistics

(<http://www.statistics.gr/documents/20181/2571f853-1e37-46da-9387-595bbe2a162b>)

These quality objectives are achieved by incorporating the guidelines listed above in all the stages of collection, production and dissemination of the statistics, following the relevant Quality Guidelines.

The quality assurance procedures implemented during the collection and production of the statistics and especially the procedures of systematic data validation are described in the National Methodological Report (http://ec.europa.eu/eurostat/cache/metadata/EN/ef_esqrs_el.htm).

13.2 Quality assessment

First phase:

The questionnaires that had been collected by ELSTAT staff in the Regional Statistical Offices (RSOs) by department (NUTS 3) were checked in order to identify any errors. Logical checks were conducted and the questionnaires were also checked for correctness and completeness.

Second phase:

After the optical character reading of the questionnaires, additional electronic checks were also conducted. Then checks were conducted for identifying double recordings in the questionnaires and in the database. In the cases where errors were found, there was a contact with the RSOs in order to validate the data or to correct the errors. The results of the 2013 FSS were compared with the results of other surveys and with the available administrative data in order to identify the longitudinal trend and to assess the results.

Therefore, the results of the 2013 FSS are considered to be of high quality.

14. Relevance

[Contents](#)

14.1 User needs

The main users of the FSS results are the Ministry of Rural Development and Food, the Ministry of

Environment and Climate Change, Universities and Research Institutes, and individual researchers and consultants. Their respective needs, as recorded in the relevant requests for data, fully correspond to the characteristics of the survey, which are in full compliance with EU Regulations and more specifically with ver.10 of the Handbook on implementing the FSS and SAPM.

The surveyed characteristics are grouped into the following categories:

- General information: location of the holding and system of farming (number of holdings, biological farming, owned or rented agricultural areas, etc).
- Management and labour force: all the people who are responsible for the holding or/and work in the holding.
- Agricultural area and land use: size and distribution of the land of the holding and more specifically of the utilized agricultural area (arable land, permanent crops and kitchen gardens, permanent meadows and grassland), as well as specific cultivations.
- Livestock: animals that are bred in the holding (cattle, goats, pig, poultry, horses and other animals).
- Secondary activities: activities, which are directly linked with the holding (making use of its production means) and agro-environmental issues.

There are no characteristics that are surveyed only for national purposes.

14.2 User satisfaction

The 2013 FSS was conducted pursuant to EU Regulations which are compiled taking into consideration users' needs at European and international level. In order to fulfil the need of Greek users, ELSTAT carries out a User Survey. The data from this survey are posted on the portal of ELSTAT: <http://www.statistics.gr/user-satisfaction-survey>

14.3 Completeness

There aren't any non-significant characteristics, according to Regulation (EC) 1166/2008, therefore there were no characteristics being reported under the headings of other characteristics.

The non-existent characteristics are the following: B.1.6.2 - Hops, B.1.6.7 - Linseed (oil flax), B.1.6.10 - Hemp and B.4.1.2 - Berry species. These crops were surveyed for the last time during the 1999/2000 Agricultural Census and according to the results they were not cultivated in Greece. This was also confirmed by experts of the Ministry of Rural Development and Food, both after the 1999/2000 Agricultural Census and during the years that followed.

15. Accuracy and reliability

[Contents](#)

15.1 Overall accuracy

The main types of errors are the following:

- Sampling errors that derive from the application of the one-stage stratified random sampling, and which were estimated through the calculation of the coefficient of variation.
- Non-sampling errors that derive from any other reasons, except from sampling, and arise during the planning, conducting, processing and final stages of estimation, in all surveys. Non-sampling errors cannot be estimated through the sample data.

The main sources of errors are:

1. Cases of new holdings which had not been included in the Register of Agricultural and Livestock Holdings, thus creating under-coverage errors.
2. Cases where the Register of Agricultural and Livestock Holdings included holdings which were closed or holdings which had merged and which were identified during the conduct of the survey.
3. Counting errors which were identified and corrected by means of logical checks.
4. Non-response errors, Non-response results in bias, the importance of which is not possible to be measured through the sample data. However, comparisons were made between the survey results with the corresponding data from administrative sources (Greek Ministry of Rural Development and Food), annual agricultural statistical survey, as well the livestock and the crop production statistics surveys, to provide insights on the biases and other non-sampling errors.

Statistically significant differences were not identified. As a result, biases and other non-sampling errors are approximately negligible.

15.2 Sampling error

The sampling method used by ELSTAT is the single random stratified sampling. In the design phase of the survey an initial weight (design weight) was given to each sampling unit (holding), estimated as the inverse of the probability of selection. The initial weights were corrected by a factor that takes into account the change in sample size imposed by the holders that refused to respond. Corrections of this type were not applied to exhaustively surveyed strata.

Furthermore, for holdings that were split into two or more new ones, all the resulting new holdings were surveyed and the weight of the initial holding was given to each one of them. For cases where the result of the survey indicated that a holding has changed stratum, the holding retained the initial weight assigned to it during the design stage of the survey.

Sampling errors are estimated in terms of the coefficient of variation, CV (%) according to the following relationships:

In each stratum, h, let:

y_{hi} : the value of the characteristic y of the holding of order i belonging to stratum h

N_h : the total number of holdings belonging to stratum h

n_h : the number of the respondent holdings in stratum h

Then:

Y_h : the sum of variable Y over all the holdings in stratum h

$$Y_h = \sum_i y_{hi} \quad (1)$$

Y: the sum of variable Y over all the holdings in all the strata

$$Y = \sum_h Y_h \quad (2)$$

Estimates for Y_h and Y are given by:

$$\hat{Y}_h = \frac{N_h}{n_h} \sum_{i=1}^{n_h} y_{hi} \quad (3)$$

$$\hat{Y} = \sum_h \hat{Y}_h \quad (4)$$

The variance estimation of \hat{Y}_h and \hat{Y} is given by:

$$v(\hat{Y}_h) = \frac{N_h(N_h - n_h)}{n_h} S_h^2 \quad (5)$$

where

$$S_h^2 = \frac{1}{n_h - 1} \left[\sum_{i=1}^{n_h} y_{hi}^2 - \frac{\left(\sum_{i=1}^{n_h} y_{hi} \right)^2}{n_h} \right] \quad (6)$$

and

$$v(\hat{Y}) = \sum_h v(\hat{Y}_h) \quad (7)$$

The coefficient of variation of the estimate of Y is given by:

$$CV(\hat{Y}) = \frac{\sqrt{v(\hat{Y})}}{\hat{Y}} \quad (8)$$

15.2.1 Sampling errors-indicators

Sampling errors, expressed as the coefficient of variation, CV (%), are presented in the following table:

Code	Variable	CV (%)	Code	Variable	CV (%)
Cereals	B_1_1	1.2%	Olive plantations	B_4_3	0.7%
Dried pulses and protein crops	B_1_2	4.2%	Vineyards	B_4_4	3.6%
Potatoes	B_1_3	3.4%			
Sugar beet	B_1_4	8.6%	Dairy cows	C_2_6	4.0%
Oilseed crops	B_1_6_4 - B_1_6_8	3.0%	Other cows	C_2_99	4.1%
Fresh vegetables, melons and strawberries	B_1_7	2.4%	Other bovine animals	C_2_1-C_2_5	3.4%
Flowers and ornamental plants	B_1_8	28.0%	Breeding sows	C_4_2	9.4%
Plants harvested green	B_1_9	1.9%	Other pigs	C_4_1, C_4_99	15.3%
Pasture and meadow, excluding rough grazing	B_3_1, B_3_3	4.3%	Sheep	C_3_1	1.2%
Fruit and berry plantations	B_4_1	1.4%	Goats	C_3_2	2.0%
Citrus plantations	B_4_2	1.6%	Poultry	C_5_1-C_5_3	11.1%

In some cases the estimated RSEs are above the thresholds due to the following reasons:

- 1) For some holdings (mainly livestock holdings) there seems to be an inconsistency between the SO (provided from Eurostat) based on the Register's data and the SO based on the observed LSU from the survey's results.
- 2) The precision requirements in some regions are above thresholds, as during the design of the survey based on those regions' characteristics it was not necessary for them to comply with the precision criteria, based on the Register's data.

15.3 Non-sampling error

Non-response results in bias, the importance of which is not possible to be measured through the sample data. However, comparisons were made between the survey results and the corresponding data from administrative sources (Greek Ministry of Rural Development and Food), annual agricultural statistical survey, as well the livestock and the crop production statistics surveys were made, to provide insights on the biases and other non-sampling errors

Statistically significant differences were not arisen. As a result, biases and other non-sampling errors are approximately negligible.

15.3.1 Coverage error

Under coverage is on account of the target population units which are not accessible via the sampling frame. Corrections and weighting for under-coverage is difficult, because it cannot be obtained from the sample itself, but only from external sources. Due to refusals and to the rest of the sample holdings that were not surveyed, about 10.36% of holdings were not covered by field enumeration:

$$UC(\%) = \frac{R + NS}{N + R + NS} \cdot 100$$

where:

UC: undercoverage rate (%)

N: respondents = 79,083 holdings (includes also holdings derived from splitting of other holdings and holdings that were used from the reserve sample)

R: refusals = 2,334 holdings

NS: rest not surveyed holdings (holders were unknown, temporarily absent, etc) = 6,808 holdings

15.3.1.1 Overcoverage rate

Over-coverage stems from the fact that there are units accessible via the frame but they do not belong to the target population. In agricultural surveys, the over-coverage mainly has to do with holdings that were included in the farm register, they were selected in the sample, but they did not actually exist at the time of the survey (holdings out of operation, permanently or temporarily, holdings fully turned over and merged with another holding etc.). These holdings actually reduce the initial sample size and inflate the variance of the survey characteristics.

Among the holdings selected in the initial sample:

- about 2.1% were found to have incomplete or incorrect contact data and could not be surveyed
- about 0.16% were found to be multiple recordings.

For cases where the result of the survey indicated that a holding had changed stratum, the holding retained the initial weight assigned to it during the design stage of the survey.

By using the sample data, the over-coverage rate (%) of closed and merged holdings amounts to 4.11% based on the following formula:

$$OC(\%) = \frac{C + M + D}{N_0} \cdot 100$$

where:

OC: overcoverage rate (%)

N₀: Gross sample size = 92,014 holdings (Holdings in Register + New holdings + Holdings arisen from the division of holdings + Reserve sample)

C: closed holdings = 1,951 holdings (Holdings that do not operate permanently + Holdings that do not operate temporarily + out-of-scope holdings)

M: merged holdings = 1,685 holdings

D: duplicates in the Register = 153 holdings

15.3.1.2 Common units- proportion

Non applicable.

15.3.2 Measurement error

The interview was conducted with the owner or the manager of the holding. However, if the owner or the manager was found temporarily absent then the required information could be retrieved by interviewing another member of the holder's family or from an employee with knowledge (e.g. foreman) of the holding.

For cases where the holder refused to provide information, the interviewer had instructions to insist and inform the holder about the Greek Statistical Law that obliges the surveyed person to provide the required statistical information. If the holder continued to refuse to cooperate then the interviewer had to inform the Supervisor in order to decide the proper action to be taken against the holder.

In cases in which it was impossible to collect statistical information from certain sampling units, these units were replaced by units included in the complementary sample.

15.3.3 Non-response error

In case of difficulties (no response, permanent absence of the holder etc.) the original sample holding was replaced by a holding from the "additional sample" according to the relevant rules that were given to

interviewers.

In the design phase of the survey an initial weight (design weight) was given to each sampling unit (holding), estimated as the inverse probability of selection. The initial weights were corrected by a factor that takes into account the change in sample size imposed by the holders that refused to respond. The essence of this correction is to increase the initial weights of the respondents, so that they represent the non-respondents.

Corrections of this type were not applied to exhaustively surveyed strata. There was no item non-response, because even in some very rare cases where a field in the questionnaire was not filled in, the personnel of ELSTAT contacted the farm owner in order to eliminate item non-response.

15.3.3.1 Unit non-response-rate

The unit non-response rate is estimated to be 8.4%, taking into account the holdings that derived from the reserve sample but not taking into account the holdings that derived from the splitting of other holdings.

15.3.3.2 Item non-response-rate

The item non-response rate is zero.

15.3.4 Processing error

Errors in individual observations were identified and corrected during the two main phases of Processing:

- Data Processing and validation by the Regional Statistical Offices
- Quality Controls at NUTS 3 by the Central Service

During the Validation phase all values were checked for acceptability and consistency as described in section 21.4. The estimated gross error rate was 3 errors per questionnaire, including all types of errors from simple misspelling of a postal code or omission to fill-in a total to erroneous values being entered.

During the Quality Control phase, even though performed at the NUTS 3 level, corrections were attempted at the holding level mostly by identifying abnormally high or low values. Such corrections were relatively seldom. At this stage, some follow-up interviews were also considered necessary, resulting in a number of questionnaires being completed by phone interviews. During both the Validation and Quality control phases, corrections and/or completions, when necessary, were made, in order of preference, according to:

- the data already in the questionnaire (i.e. completion of missing totals),
- logical assumptions based on the experience of the handler (mostly for minor errors)
- telephone contact with the interviewee (mostly for holdings of a significant size)

15.3.5 Model assumption error

Non applicable.

16. Timeliness and punctuality

[Contents](#)

16.1 Timeliness

The deadline for the submission of data to Eurostat was the 31st of December 2014.

16.1.1 Time lag-first results

14 months after the end of the survey reference period.

16.1.2 Time lag-final results

24 months after the end of the survey reference period.

16.2 Punctuality

16.2.1 Punctuality-delivery and publication

Data were transmitted to Eurostat on time.

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17. Comparability	Contents
17.1 Comparability-geographical	
<p>The results of the 2013 FSS are comparable with the results of other EU Member States because they are based on common definitions of the variables and common procedures for data processing as stipulated in Article 2 of Regulation (EC) 1166/2008 of the European Parliament and of the Council. There are no differences between the national and EU definitions of the surveyed characteristics.</p> <p>The most important parcel of the holding (in terms of production) is used to determine the NUTS 3 region of the holding.</p> <p>The coordinates system used was the National Geodetic Reference System (Greece 87) EPSG 4121, as in the 2009 Agricultural Census, and the geographic coordinates reported refer to the settlement or locality rather than the actual location of the holding.</p>	
17.1.1 <u>Asymmetry for mirror flows statistics-coefficient</u>	
No.	
17.2 Comparability - over time	
<p>All the variables of the Farm Structure Surveys can be compared longitudinally because the results are produced on the basis of common definitions of the variables and common procedures for data processing. The rules determining the coverage of the survey have not changed neither have the definitions and/or reference time and/or measured characteristics.</p>	
17.2.1 <u>Length of comparable time series</u>	
A total of 12 reference periods, since 1983, are available.	

18. Coherence	Contents
18.1 Coherence- cross domain	
<p>The results exhibit partial coherence with the Livestock and the Crop Production Statistical Surveys, while there is no cross-domain coherence with the Annual Agricultural Statistical Survey (AASS) since the statistical unit differs. The unit for the Farm Structure Survey is the agricultural or livestock holding, whereas for AASS it is the Municipal/Local Community.</p>	
18.1.1 <u>Coherence - sub annual and annual statistics</u>	
Non applicable.	
18.1.2 <u>Coherence- National Accounts</u>	
Since the survey is conducted every 3 years, National Accounts can only use the results to cross-check the corresponding data from their annual data sources.	
18.2 Coherence – internal	
Internal coherence of correlating variables is ensured by means of checking the specific data of each holding.	

19. Cost and burden

[Contents](#)

According to the calculations for the cost and work burden for the 2013 FSS it is estimated that the personnel of ELSTAT worked during 104,053 hours over a period of for 2.5 years.

There was no co-ordination with other surveys.

20. Data revision

[Contents](#)

20.1 Data revision-policy

The revision policy of the Hellenic Statistical Authority (ELSTAT) defines standard rules and principles for data revisions, in accordance with the European Statistics Code of Practice and the principles for a common revision policy for European Statistics contained in the Annex of the European Statistical System (ESS) guidelines on revision policy.

(<http://www.statistics.gr/documents/20181/a49dca9a-dacf-4b52-b5df-b156216cb354>).

20.2 Data revision-practice

The released data are final and have been validated by Eurostat and ELSTAT. Nevertheless, the data can be revised, if it is deemed necessary, following the provisions of the Revision Policy is mentioned above.

20.2.1 Data revision-average size

There have been no revisions made.

21. Statistical processing

[Contents](#)

21.1 Source data

The data were collected through a sample survey covering about 10% of the target population using one-stage stratified sampling, except for the data on common land which were obtained from an administrative source (IACS register from OPEKEPE).

The sampling frame for the 2013 FSS was based on the latest available version of the Farm Register. Data from the rest of ELSTAT's statistical registers, originating from specialised national annual agricultural surveys were compared and crosschecked to those of the Farm Register on the basis of the identification data of the holder.

Cases of holders present in the new farmers register and the organic farming register of the Ministry of Rural Development and Food but not in Farm Register were added as new entries with distinctive identification numbers.

The sampling method used by the ELSTAT is the one-stage stratified random sampling (probability design), with sampling unit is agricultural, livestock or mixed holding. The sampling units were drawn randomly from the sampling frame. In detail, in each stratum the sample has been selected with equal probabilities by systematic random sampling from the population of holdings belonging to this stratum. Certain categories of holdings have been surveyed exhaustively. In total, the gross sample size accounts of 92,014 holdings and the decision for determining the sample size was based on precision as well as financial criteria.

21.2 Frequency of data collection

The data for the Farm Structure Survey are collected every three years.

21.3 Data collection

The data of the FSS 2013 were collected by means of face-to-face interviews with the owners of the agricultural holdings, on the basis of a specially designed questionnaire.

The survey questionnaire was designed in such a way so as to satisfy both national and Community needs for statistical information. It covered all variables stipulated in Regulation 11/66/2008 which must be analyzed, thus helping drawing the Hellenic agricultural policy.

The questionnaire was designed taking into consideration comments and observations made by the main data users (Ministry of Rural Development and Food, Ministry of Environments and Climate Change), as well as by other Divisions of ELSTAT (Division of Methodology and Organization, Division of Informatics, Division of Statistical Information and Publication, Division of National Accounts).

In order to ensure correctness and efficiency of data collection, special training seminars were organized targeted to the competent personnel assigned with the conduct of the survey.

The RSOs had the responsibility to collect the data. Every Supervisor was responsible to organise and coordinate all the statistical tasks in the Department under his competency. The Assistant Supervisors were assisting the Supervisor and together they trained the external survey workers, they assigned to them the holdings they had to survey and they monitored their work.

If a holding had been divided into two or more holdings, the external survey worker had to survey all the newly created holdings.

The external survey worker was also obliged to inform the competent assistant supervisor on the progress of the tasks on a weekly basis, and to submit the questionnaires he had filled in.

The Assistant Supervisors collected the filled in questionnaires with the aim of checking their quality. They had the right to correct any errors, marking them with red pen and at the end they signed the questionnaires.

If the filled in questionnaires did not meet the survey requirements, they had to be returned to the external survey worker in order to be dully corrected.

21.4 Data validation

The data were validated according to the following procedure:

1. Logical and completeness checks of the questionnaires in the RSO, in order to check their correctness and to correct any errors, if necessary. It should be noted that the external survey workers themselves had already performed such kind of checks before submitting the filled in questionnaires to the employees of the RSO.
2. Data entry by means of OCR and correction of the errors due to erroneous reading.
3. Validation of data after a series of checks which identified errors or notifications.
4. Checks for identifying double recordings. The questionnaires were checked in order to identify the holdings that had been enumerated twice.
5. Quality checks. The survey data were compared with the results for previous Censuses and previous Structure surveys, as well as with the results of the annual statistical surveys and with data from administrative sources. (Ministry of Rural Development and Food, etc). In case where major inconsistencies were identified for a specific variable, an in-depth study and analysis were carried out in cooperation with the RSO and the Ministry of Rural Development and Food.

The ABBYY FlexiCapture 10 software was used for OCR and the preliminary validation of the data. Then the data were exported for further validation in ELSTAT's database where all software tools used are developed within the Oracle system and are custom made either by the staff of ELSTAT or by external contractors.

Data validation has been carried out at all levels, according to the respective time frame. Assistant supervisors and interviewers carried out data quality control and initial validation during the data collection period. Supervisors and experienced personnel at the Regional and Central Offices carried out the final validation of the data after all data were collected and digitized, whereas specialised staff of the Central Office performed the final quality checks before the data were submitted to Eurostat.

21.5 Data compilation

After the collection of the questionnaires, the data, by means of OCR (optical character reading), were entered an electronic file. Afterwards, data processing followed in order to identify and dully correct any errors.

Then, the sample weights were adjusted to address non-response. In the design phase of the survey an initial weight (design weight) was given to each sampling unit (holding). This initial weight was estimated as the inverse of the probability of selection. More precisely, for the holding i that belongs to stratum h the initial

weight is:

$$W_h = \frac{N_h}{n_h}$$

where,

N_h : population size according to the data of the Agricultural Register

n_h : number of the respondent holdings in stratum h, excluding the extra holdings derived from splitting of other holdings

Weights have been adjusted to account for non-response by updating the unit's selection probabilities. For the non-response cases, the initial weights were corrected by a factor that takes into account the response rates in each separate stratum. The essence of this correction is to increase the initial weights of the respondents, so that they represent the non-respondents. More specifically, the initial weight in each stratum h is multiplied by the inverse of the response rate, r_h , defined as:

$$r_h = \frac{m_h}{n_h}$$

where,

m_h : is the number of respondents.

In order to reduce the effect of over-coverage error due to closed holdings the initial extrapolating factor, in each stratum, h, was adjusted to compensate for the closed holdings in each stratum, using the following formula:

$$f_h = 1 - \frac{C_h}{n_{0h}}$$

where,

n_{0h} : initial sample size

C_h : closed holdings

Finally, a database was created containing the microdata of the FSS 2013 and from those the tabulated data were produced.

21.5.1 Imputation-rate

No.

21.6 Adjustment

Non applicable

21.6.1 Seasonal adjustment

No.

22. Comment

[Contents](#)