Farm structure (ef)

National Reference Metadata in ESS Standard for Quality Reports Structure (ESQRS)
Compiling agency: Please provide the name of the organisation of the contact points for the data or metadata. Natural Resources Institute Finland (Luke)
Time Dimension: 2013-A0
Data Provider: FI1
Data Flow: FSS_ESQRS_A:1.0

Eurostat metadata

Reference metadata

For any question on data and metadata, please contact: EUROPEAN STATISTICAL DATA SUPPORT

Download

1. Contact

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1.1. Contact organisation	*Please provide the name of the organisation of the contact points for the data or metadata.*
	Natural Resources Institute Finland (Luke)
1.2. Contact organisation unit	*Please specify an addressable subdivision of an organisation.*
	Statistical services
1.5. Contact mail address	*Please specify the postal address of the contact points for the data or metadata.*
	Luke, Elimäenkatu 17-19, FI-00510 Helsinki, Finland

2. Introduction

Top

2.a. Brief description of the national history of Farm Structure Surveys (FSS)

*This item is of special interest for countries with less experience in FSS surveys. In these cases it is useful to include a brief description about the related statistical activities e.g. establishment/update of the statistical register, etc. Please keep the description **brief** (expected length of maximum 250 words)*

The first Agricultural Census in Finland was conducted in 1910, and the tenth in 2010. Since Finland joined the EU in 1995, the Information Centre of the Ministry of Agriculture and Forestry (Tike) has been responsible for implementing Farm Structure Surveys. From the beginning of the year 2015 Tike's Statistical services have been joined to the Luke (Natural Resources Institute Finland).

2.b. Brief description of the national legislation of FSS

*Please **briefly** specify the following provisions from the national legislation:*

- the reference of the national legal base of the FSS	The Farm Structure Survey complies with current EU legislation. There is no separate national legislation governing Farm Structure Surveys. Lukes's statistical production is based on the Act on the Natural Resources Institute of Finland (561/2014) and on the Act on Natural Resources Statistics (562/2014), which grants Tike extensive rights to collect data on commercial agriculture and horticulture that involves trade, product processing, and running a commercial rural enterprise.

survey (Act, Government Decree, etc.)	Finland's Statistics Act (280/2004) governs statistical production and disclosure obligation. According to this act, statistical authorities must attempt to produce their statistics using existing administrative material. Information that cannot be gathered from other sources may be collected from informants, as long as this has been agreed on in advance with either the informants or their benefits organisations. Changes to existing data collections must also be agreed in advance.
- the scope and the coverage of the survey	The frame of the survey was farms and horticultural enterprises. The threshold of the farm was SO 2000 €. The whole territory of Finland was covered.
- the frequency and the reference period of the survey	Previous FSS was done 2010 (Agricultural Census) and next will be year 2016. Reference period of the survey was mainly the year 2013. Reference period of labour force was 1.9.2012 - 31.8.2013.
- the responsibility for the survey	Tike was responsible for the survey. Tike has been merged to the Luke (Natural Resources Institute Finland) from the beginning of the 2015.
- the administrative and financial provisions	There is no national legislation for FSS. EU Grant was 150 000 € which was paid to the Ministry of Agriculture. The cost of FSS was covered from the Tike´s budget funding.
- the obligations of the respondents with respect to the survey	According to the Finland's Statistical Act respondents are required to answer to the statistical questionnaires. In practice there is no penalties in use. Farmes are very conscientious and the response rate of the surveys is high enough.
- the identification, protection and obligations of survey enumerators	The respondents were informed about the survey in advance by a letter. The telephone interviewers were obliged to keep the information collected as confidential.
- the right of access to administrative data	Agricultural statistics have large rights of access to the administrative data. About a half of the FSS 2013 data was from administrative registers.
- confidentiality provisions	Finland's Statistics Act (280/2004) also governs confidentiality and data release for survey results. Statistical activities must adhere to the Act on Openness of Government Activities and the Personal Data Act. There is no separate national legislation governing the FSS or the Agricultural Census.

3. Quality management - assessment

Top

[Not requested]

4. Relevance

Top

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4.1. Relevance - User Needs

4.1.a Overview of the main groups of national characteristics

Please indicate the main groups of national characteristics which are surveyed.
Please include references to characteristics surveyed only for national purposes and mention for which purposes and where the request came from (i.e. which are the users).

The survey gathers information on the structure of farms and horticultural enterprises. This data covers production sectors, forms of ownership, land use, crop production, livestock production, farmers and other farm labour, time spent on agricultural work, and other business or income-generating activities carried out on farms other than agriculture and horticulture. Only for national purposes were asked questions of computers and use of internet at farms, amount of grain storage, area under drainage, field area where cereal straw was burnt and use of energy at farms. Use of energy was asked because we publish statistics about use of energy at farms. Use of internet is very topical because farmes should use it to fullfil their requirements. However internet is not working well enough in many places. Amount of grain storage, area under drainage and area where straw was burnt were asked because there was a national need for this information (Ministry of Agriculture and Forestry, research on agricultural economics and environment).

The FSS also collected the following types of data for national statistical requirements:

- Labour force on farms and horticultural enterprises: a by-person breakdown of the hours worked by permanent employees and farmers and their family members. Alongside agricultural and horticultural work, information was also collected on the time spent on forestry work and other business and income-generating activities.
- Foreign labour force: the number of employees and number of hours worked on agricultural and horticultural tasks.
- Computers and the Internet: Computer use, type of Internet connection and type of the device used to access Internet.
- The use of different sources of energy for farm activities.
- Area of drained field according to the type of drainage.
- Grain storage capacity of the farm.
- Field area where cereal straw was burned.

- Information on other gainful activity (including line of business) was collected in greater detail than required by EU legislation.

4.1.b Reference periods/dates of the main groups of national characteristics

Please indicate the reference periods/dates of the main groups of national characteristics. (new) Please provide justifications if the reference periods/dates from the Regulation 1166/2008 are not respected.

Reference dates for the FSS 2013 are as follows:
Use of arable land: 30th of June 2012 - 1st of July 2013
Number of livestock: horses, pigs and poultry 1 April 2013; cattle, sheep and goats 1 May 2013

- Labour force: 1 September 2012–31 August 2013
- Energy production from renewable sources: calendar year 2013
- Irrigation: irrigated area 2013 (from late April to mid-October)
- Other gainful activities: calendar year 2013
- Land characteristics other than arable land: 1 May 2013
- Rural development measures: years 2011, 2012 and 2013

4.2. Relevance - User Satisfaction

It was possible to fullfill users needs by adding national questions to the questionnaire.

4.3. Completeness

Characteristics not collected (non-significant, non-existent or *(new)* possibly not collected for other reasons)

For non-significant or non-existent characteristics, you may repeat the information sent to Eurostat according to art. 7 par. 3 of Regulation 1166/2008. You can also attach the relevant file to this section using the "Add file" button below.
The overall answer to this item should provide information on:
-the list of characteristics non-significant and the list of characteristics non-existent from the EU list of characteristics [1];
-the reasons i.e. the prevalence or physical thresholds;
-the source(s) of information used (for the prevalence or physical thresholds);
- (new) how are non-significant or non-existent characteristics marked in the dataset transmitted to Eurostat.
(new) In addition, please specify whether non-significant characteristics are reported under the headings of other characteristics (as in the case of some countries). If yes, please specify which those other characteristics are and please indicate if the Standard Output of those other characteristics is recalculated considering the inclusion of the non-significant characteristics.

The NS/NE characteristics of Finland are indicated in the attached file. The characteristics in question are found in very small numbers or not at all. NS characteristics are not collected under the headings of other characteristics.
NE characteristics are filled with "0". NS characteristics are null.
There were about 2 700 beekeepers in Finland in 2013 (MMM 2015). Most of the beekeepers practise the activity as a hobby in a small scale (<10 beehives) (MMM 2009). It has been estimated for the year 2003 that 2% of the Finnish beekeepers had beekeeping as their main occupation, 15% as their secondary occupation, and for about 80% it was a hobby (SML 2006). Beekeepers represent a wide range of professions and only a part of them are farmers. The number of beehives is not considered in the Finnish definition of a farm. Because the number of beekeepers is relatively small and only part of the beekeeping is carried out on farms, it is concluded that in national scale beekeeping is not a significant occupation on Finnish farms.
References:
MMM 2009. Hunajantuotanto maailmalla ja EU:ssa (Beekeeping in the world and in the EU). Maa- ja metsätalousministeriö (Finnish Ministry of Agriculture and Forestry). (in Finnish). [Cited 20-Nov-2009, currently not available]
SML 2006. Millaista hunajaa ostoskoriin? (What kind of honey to shopping basket?) Suomen mehiläishoitajain liitto (Finnish beekeepers' association). (in Finnish). [Cited 20-Nov-2009, currently not available]
Available (12-Nov-2015) references with corresponding information:
Raiskio, S. 2010. Mehiläisalan yhteistoimintastrategia (Strategy for co-operation in beekeeping sector). (HAMK) (in Finnish). (Available at: http://mehilaishoitajat-fi-bin.directo.fi/@Bin/dffd9d7cd38e1334b757148cc0a77b3c/1447313183/application/pdf/438883/mehilaisalan_yhteistoimintastrategia_2010_raiskio.pdf
Ruokatieto 2013. Hunajantuotanto voisi kolminkertaistua Suomessa (Honey production could be tripled in Finland). Ruokatieto (Food Info). (in Finnish). Available at: http://www.ruokatieto.fi/uutiset/hunajantuotanto-voisi-kolminkertaistua-suomessa
[1] See Annex III of Regulation (EC) 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) 571/88.

Annexes:
NS/NE characteristics and administrative sources

4.3.1. Data completeness - rate

[Not requested]

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5. Accuracy and reliability

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5.1. Accuracy - overall

Main sources of error

*Please provide a **brief** general assessment on the main sources of error (e.g. sampling errors, measurement errors etc.)*

The main sources of errors are sampling errors and measurement errors.

5.2. Sampling error

Section 5.2 should be completed only in case of sample surveys.

5.2.a. Applicability of precision requirements (precision criteria)

The precision requirements stipulated in Annex IV "Precision Requirements" of the Regulation 1166/2008 are applicable only in some cases, depending on the actual value of characteristics. Thus, we are first interested to know the actual value of characteristics, in order to determine the applicability of precision requirements.

Please provide the actual values of the characteristics in a separate Excel file (template provided by Eurostat) and annex the completed file using the "Add file" button below. Here, we are interested in the point estimates (the weighted values), NOT in the relative standard errors (RSEs).

5.2.b. Method used for estimation of relative standard errors (RSEs)

Please describe the method used for estimation of RSEs. You can annex a document with the description of method and formulae applied, using the "Add file" button.

The results were estimated with SAS software. Variances of the characteristics collected on the sample survey were estimated using the CLAN software developed by Statistics Sweden (see annex, also available at http://www.amstat.org/meetings/ices/2000/proceedings/S09.pdf).

Annexes:

CLAN software

5.2.1. Sampling error - indicators

5.2.1.a Relative standard errors (RSEs)

(new - the information request is not new, but only the template) Please provide the RSEs in a separate Excel file (template provided by Eurostat) and annex the completed file using the "Add file" button below. The Excel file comprises tables related to the precision requirements stipulated in Annex IV "Precision Requirements" of the Regulation 1166/2008.

5.2.1.b. (new) **Reasons for possible cases where precision requirements are applicable and estimated RSEs are above the thresholds**

The cases where precision requirements are applicable are identified with the information provided in section 5.2.a. For those cases, the requirement is that the estimated RSEs are below the thresholds stipulated in Annex IV "Precision Requirements" of the Regulation 1166/2008. However, in some of these cases, estimated RSEs might be above the thresholds. In the latter cases, please provide justifications.

All key variables are taken from administrative sources and the values of variables were calculated from the total data.

5.3. Non-sampling error

Section 5.3 should be completed only in case of a sample survey or a census.
*Section 5.3 should **not** be completed when data are entirely taken from administrative sources. In this case, section 12.1.e.5 of the report provides the relevant information.*

Assessment of possible bias

*If comparison with another source or consistency study is made, please give a **brief** description of the source used and the differences observed which can be proof of bias.*
(new) Please also consider here bias risks associated with non-response by assessing the distribution of non-response across holdings' categories.

One way to describe the reliability of a sample is to compare the estimated data for farms included in the sample with the exhaustive data available for all farms. In the structure survey, this kind of comparison is possible for data such as livestock numbers and crop areas. These kinds of comparisons were also made during post-stratification. An attempt was made to adjust the stratification so that the values estimated from the sample were as close as possible to the 'actual' values calculated from the total data. Table "Structure survey differences between estimates and actual values in 2013" compares certain estimated data with exhaustive data. The estimated values for the most important crop areas and livestock numbers differ very little from the actual values, that is, usually less than 5 per cent.

We have not run an analysis of non-response. However we suppose that there is no significant difference between non-response and respondents' characteristics.

Annexes:

Structure survey differences between estimates and actual values in 2013

5.3.1. Coverage error

5.3.1.a Under-coverage errors

Under-coverage units are target population units that are not accessible via the frame. This mainly includes new units not included in the frame, either through real birth or demergers, and wrongly classified units. This generally leads to bias in the estimates.If possible, please provide an assessment on the extent of under-coverage.

Registers are updated annually in Finland, so undercoverage does not pose a significant problem. The risk for undercoverage is very small, because practically all farms that have significant agricultural production apply for subsidies. Since the 2013 the threshold to the farm has been SO 2000 €.

5.3.1.b Over-coverage

Over-coverage units are units that do not belong to the target population. Please mention whether the data was corrected for over-coverage and if yes, please describe.

During the data collection we collected data from the farms which had stopped production. Administrative registers were also used to find out farms which had stopped farming. We used also a web-survey and telephone interviews to remove any instances of overcoverage, that is, non-functioning farms (sold, combined, or production ceased). Therefore, there is no longer any overcoverage in the final sample frame for the FSS 2013. SO of the farms was calculated all the farms in the frame. This could be done because all the information needed to the SO calculation are from the administrative registers. Thus there was no farms in the survey which SO is under the threshold. We have not adjusted the weights afterwards.

5.3.1.c Misclassification errors

Misclassification refers to wrongly classified units (for example by geographical area or size) which belong to the target population.Please provide an assessment on the extent of misclassification errors and how they were addressed.

There are no wrongly classified units. Classification variables are from registers.

5.3.1.d Contact errors

They refer to units with incomplete or incorrect contact data. Please describe how possible errors were corrected.

We have access to the Population register centre's database. Contact data was found using the social security number of the farmer.

5.3.1.e Multiple listings

Multiple listings are units which are present more than once in the frame. Please indicate the proportion of multiple listings in the frame which are present more than once in the frame and specify how the duplicates were eliminated.

There was no multiple listing in the frame. Each farm is only once in the frame.

5.3.1.f Other relevant information, if any

There is no other relevant information.

5.3.1.1. Over-coverage - rate

Please provide the value of the over-coverage rate.
The over-coverage rate is the proportion of units accessible via the frame which do not belong to the target population (e.g. holdings with ceased activities still included in the frame).

In the sample (19 457 farms) were 694 farms which had stopped farming. Over-coverage rate was 3,57 %. The rate is this high because we forced some farms to the sample in order to find out if they have stopped production or not. After data collection the sample was re-weighted.

5.3.2. Measurement error

5.3.2.a Causes of measurement errors in the FSS survey

The causes are commonly categorised as:
- Survey instrument: the form, questionnaire or measuring device used for data collection may lead to the recording of wrong values;
- Respondent: respondents may, consciously or unconsciously, give erroneous data;
- Interviewer: interviewers may influence the answers given by respondents.
Please include here possible problems caused by difficult questions, unclear definitions, sensitive questions etc. which are likely to determine measurement errors.

Administrative registers

The most important adiministrative source of data for farm structure statistics is Integrated Administration and Control System (IACS), where the date from farm subsidy applications is recorded. Farmers almost invariably fill in their subsidy applications meticulously, as they may otherwise face sanctions. Errors in land areas and livestock figures are usually minor and result from misunderstandings, lack of time, or inaccurate data entry. Information from other animal registers (bovine, pig, sheep and goat) is used as a source of animal number data. Farmers must inform the record keeper of any changes in their farm's animal numbers by the due date. These registers are therefore largely comprehensive.

Web-survey and telephone interviews

Farmers found questions concerning their labour force and the farm's other business activities quite difficult. Calculating working hours retrospectively was a problem, as most farms do not keep an account of working hours. In these cases, calculating the annual number of hours spent on farm work was sometimes challenging. In Finland, agricultural workers – and livestock farmers in particular – work more than 1,800 hours per year, that is, more than one person-year. In previous surveys, forestry work may have been partially included in farm work. However, from 2005 onwards, the number of hours spent on forestry work has been a separate item in the questionnaire. Even now, the classification of

certain tasks is open to various interpretations. In some cases, it is not always clear at what point farm or horticultural production becomes further processing, that is, other business activity.
Other questions for which farmers' responses may contain measurement errors include irrigation, arable farming, horticulture, and livestock production. As this information may not be directly obtainable from registers, farmers may find it difficult to provide completely accurate information. This does not, however, have a significant effect on the final results.

5.3.2.b If available, failure rates during data editing. *Please mention if the data was corrected.*

Not available.

5.3.2.c If available, assessments based on comparisons with external data, re-interviews, etc.

During verification, it was noticed that some farms had illogical data with regard to working hours and other paid employment. Farmers may have noted that they engaged in other paid employment in addition to agriculture, but had not included the hours spent working on these activities, or vice versa. This problem occurred in data collected both electronically and via telephone interviews. If any illogical data was identified, it was corrected by calling again to the farm or by using FSS 2010 data.

5.3.3. Non response error

5.3.3.a (new) **Unit non-response: reasons and treatment**
Please specify the reasons for unit non-response and how the unit non-response was accounted for. Unit non-response can be accounted for by e.g. re-weighting, imputation.

The were two main sources of the FSS data. First source was administrative registers and the second source was questionnaire. Administrative registers includes all the farms so there were actually not at all no responding to the variables which are from the registers. Instead there were some non-response in the questionnaire. About 1 000 farms had either refused to respond, or a response had not been received for some other reason (illness, farmer not reached, etc.).
Farms and horticultural enterprises that did not respond were left out and remaining farms were re-weighted.

5.3.3.b Item non-response: reasons and treatment
Please mention any characteristic(s) having higher item non-response rate together with the reasons of the item non-response. This information is important and will be useful for the organisation of future surveys.
Please also specify how the item non-response was accounted for. Item non-response can be accounted for by e.g. re-weighting, imputation.

Almost all respondents provided complete information. There were, however, rare exceptions when the farmer did not supply all the required information. For example, some agricultural workers failed to disclose their year of birth and/or gender. In the case of farmers and their spouses, this information was, however, largely available in the Farm Register or IACS customer records. Information on other members of farmers' families was obtained from the Population Register.
Some data on working hours was also missing. These gaps were filled in using a comparable person's average working hours. For example, if the working hours for a milk-cattle farmer's wife were missing, the average working hours of a milk-cattle farmers' wife was used instead. Missing information was so rare that it was dealt with on a case-by-case basis, and case-specific discretion was also used in individual cases. Discretion was used in, for example, information on a farm's livestock numbers and the farmer's employment outside the farm.
Missing information about other business activities was obtained using corresponding information from the 2007 and 2010 Farm Structure Survey.

5.3.3.1. Unit non-response - rate

Please provide the ratio of the number of non-responding holdings with no information or not usable information (item 5.1, table in section 12.3.d) to the total number of in-scope (eligible) units (item 5, table in section 12.3.d).

1,0 %

5.3.3.2. Item non-response - rate

Please provide the ratio of the in-scope (eligible) units which have not responded to a particular item (characteristic) to the in-scope (eligible) units that are required to respond to that particular item (characteristic). Please provide this rate for characteristics with high item non-response.

There are no characteristics which had high non-response.

5.3.4. Processing error

5.3.4.a Assessment of processing errors affecting individual observations
Please give a quantitative or qualitative assessment of processing errors.

Due to numerous controls and checks, data processing errors are extremely unlikely. However, there was the potential for error when, for example, files were transferred from the telephone interviewer to Tike, or when data from various registers were combined. The data collected via telephone interviews was carefully checked on its arrival at Tike. As all the registers use the same farm identification code, combining register data was relatively trouble-free.
There is also a small chance of a processing error occurring when information is modified to fit the format specified by Eurostat. It is sometimes challenging to modify the data obtained from questionnaires so that it matches the variables used in the structure survey. Various errors can take place when information is reformatted. For example, labour force data were collected as working hours and then changed to person-years as required by Eurostat. However, Eurostat's validation process is highly comprehensive and the potential for errors is minimal.

5.3.4.b Completion/correction methods applied
These can consist of follow-up interviews, imputation, re-weighting, use of other data sources etc. Please describe.

Certain questions were covered in greater detail, such as energy production from renewable sources. Free-form responses to energy production questions were checked, and several responses were transferred to the correct option. Comparisons of and corrections to, for example, crop area data were made both before this information was submitted and after it was returned. Some illogicality concerning other business activities – between the line of business and working hours – was noticed.

5.3.4.c Imputation methods

Please specify what kind of imputation methods were used and for which items (characteristics).

The imputation method used varied depending on the amount of background information available for the variable in question. For example, IACS data on the farmer or farmer's spouse could be used to fill in missing data about a farm's labour force. The most common imputation method was to fill in a missing data item using an average obtained from similar farms, or to substitute information on a missing farm with data from a similar farm that had filled in the questionnaire. Missing geographical coordinates were obtained using the farm's address details.

5.3.4.d Tools used and people/organisations authorised to make corrections

Corrections were the responsibility of the Tike researcher in charge of the Farm Structure Survey. All corrections/changes were made by order of the researcher. Erroneous values were searched by looking at minimum and maximum values and outliers, and by cross-checks between different characteristics.

Once the electronic response period had closed, any missing information was collected via telephone interview.

5.3.4.1. Imputation - rate

Please provide the ratio of the number of replaced values to the total number of values for a given characteristic, for each main characteristic where this method was applied.

The main variables are from registers. The number of replaced values of the main variables is zero (and the ratio is zero).

5.3.4.2. Common units - proportion

[*Not requested*]

5.3.5. Model assumption error

In case of models used for estimation, please provide an estimation of related errors.

Our model doesn't produce this information.

5.3.6. Data revision

See 5.3.6.1., 5.3.6.2. and 5.3.6.3.

5.3.6.1. Data revision - policy

Brief description of the revision policy

The revision policy allows revisions and corrections of the data, after it is published.

5.3.6.2. Data revision - practice

Data revision practice

Please describe the practice, provide the main reasons for revisions and the extent to which the revisions improved accuracy.
Please provide the average number of revisions (planned and unplanned) for main characteristics.

The data collected during the FSS was delivered to Eurostat as a single file. The information was validated by Eurostat, which sent Tike a list of errors and items to be checked. Tike then carried out the necessary changes and corrections. This validation process was carried out about three times. If any errors are later detected or specified, a revised file will be sent to Eurostat.

Part of the data were published nationally. Once the data have passed Eurostat's validation process, a final version will be published. Any corrections to published national data will be made according to the recommendations of the Official Statistics of Finland.

5.3.6.3. Data revision - average size

[*Not requested*]

5.3.7. Seasonal adjustment

[*Not requested*]

6. Timeliness and punctuality

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6.1. Timeliness

SEE BELOW

6.1.1. Time lag - first result

Please indicate the number of months from the last day of the reference period to the day of publication of first results.

Data collection was finished at the end of March 2014. The first preliminary data were published on 25 June 2014. The time between the end of data collection and publication of the first results was about three months. The time between the end of the reference period of

labour characteristics (31.8.2013) and the publication of the first results was about ten months. For other characteristics the reference period ended at the end of the year 2013, after which there were about six months before the publication of the first results.

6.1.2. Time lag - final result

Please indicate the number of months from the last day of the reference period to the day of publication of complete and final results.

The time between the end of data collection and completion of the final results was nine months. The time between the end of the reference period of labour characteristics (31.8.2013) and the publication of the final results was about 16 months. For other characteristics the reference period ended at the end of the year 2013, after which there were about 12 months before the publication of the final results.

6.2. Punctuality

SEE BELOW

6.2.1. Punctuality - delivery and publication

Please indicate the number of days between the delivery/ release date of data and the target date on which they were scheduled for delivery/ release.

The publication of the data occurred as planned. First publications were done as preliminary because Eurostat has not yet accepted the data. However there were no changes between preliminary and final data.
Data itself was finalised by the end of the August 2014. However there was several technical details which took time during the fall. Finland got control tables from the Eurostat on 18 December 2014.

7. Accessibility and clarity

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7.1. Dissemination format - News release

There was three press releases about the results:
Energy use on farms: http://www.maataloustilastot.fi/en/energy-consumption-agriculture-and-horticulture-2013_en-0
Labour force: http://www.maataloustilastot.fi/en/2013-agriculture-and-horticulture-provided-employment-150000-people_en
Machinery: http://www.maataloustilastot.fi/en/150000-tractors-use-farms_en

7.2. Dissemination format - Publications

Regular and ad-hoc publications in which data are made available to the public

7.2.a The nature of publications
Please specify the nature of publications. For example, the publications can contain preliminary results or final results, can be technical reports, etc.
Please also specify if the publications contain metadata.

Data for the FSS 2013 was published in five batches on the website of agricultural statistics, which is currently located at: http://stat.luke.fi/en (choose "Agriculture" / "Structure"). The results consisted of Excel spreadsheets and major points (in Finnish, Swedish and English). An additional electronic online publication was compiled of labour force results (only in Finnish, see item 7.2.c). There will be no printed publication of the results of FSS 2013.

7.2.b Date of issuing (actual or planned)

First results were published as preliminary because the data was not yet accepted by Eurostat. However there were no changes in the results.
Publications to date:
FSS 2013 - Energy use on farms, final data 25 June 2014
FSS 2013 - Farmland management and irrigation final data 26 June 2014
FSS 2013 - Labour force, preliminary data 25th September 2014, final data 28 November 2014
FSS 2013 - Other entrepreneurship, final data 12 December 2014
FSS 2013 - Machinery, final data 17 December 2014

7.2.c References for on-line publications.

The on-line publication about labour force is available in Finnish in website http://stat.luke.fi/e-lehti-tyovoima-2013/index.html There will be no printed publications about the results.

7.3. Dissemination format - online database

Please provide information about on-line databases in which the disseminated data can be accessed.

FSS 2013 results were not published in the on-line database.

7.3.1. Data tables - consultations

The number of consultations of on-line data tables for a given time period

Please indicate on-line data tables with an indicative number of consultations.

Not applicable.

7.4. Dissemination format - microdata access

Microdata is not disseminated. However researchers can apply the right to use of the microdata.

7.5. Documentation on methodology

7.5.a Available documentation on methodology on FSS national survey
Please provide references.

There is a description in three languages (Finnish, Swedish and English) about every publishing in the website Maataloustilastot.fi. In addition there is a quality report in Finnish in the website about every publishing.

7.5.b Main scientific references
Please provide references.

7.5.1. Metadata completeness - rate

[*Not requested*]

7.5.2. Metadata - consultations

[*Not requested*]

7.6. Quality management - documentation

Available documentation on quality
Please provide references.

FSS 2013 data follows Eurostat's instructions.

7.7. Dissemination format - other

[*Not requested*]

8. Comparability

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8.1. Comparability - geographical

8.1.a National vs. EU definition of a holding

Please indicate possible differences between the national definition and the EU definition of the holding [2]. Please also indicate the reasons.

The Finnish definition of agricultural holding is in line with the EU definition (Regulation 1166/2008) except for the national threshold on standard output (see 12.1 a). The agricultural activities are the same as in Annex I of the Regulation 1166/2008.

8.1.b National survey coverage vs. coverage of the records sent to Eurostat

Please indicate possible differences between the population covered in the national survey and the population covered by the records sent to Eurostat. Please also specify the reasons.
The population covered in the national survey may be different from the population covered by the records which are sent to Eurostat, in case very low national thresholds are applied or no national thresholds are applied.

There are no differences. The population is the same for the national survey and the records sent to Eurostat.

8.1.c National vs. EU definitions of characteristics

Please indicate the version of the Handbook on implementing the FSS definitions used for the organisation of the current FSS survey.
Please indicate possible differences between national and EU definitions of characteristics and classifications of characteristics, the differences, the reasons and the impact on the comparability with the EU definitions. This information is relevant for users.
Please also indicate the number of hours per year for a full-time employee, used to calculate the Annual Work Unit.

The data to be collected in the FSS is determined by EU legislation (European Parliament and Council Regulation (EEC) no. 1166/2008). The source used to obtain detailed definitions of this data was the *Handbook on implementing the FSS and SAPM definitions – revision 10, CPSA/SB/652. Ver. 10.* For information on national characteristics, see 4.1.a "Overview of the main groups of national characteristics". The characteristics delivered to Eurostat are in line with the EU definitions.
AWU = 1800 working hours.

8.1.d Common land

The legal change of the utilised agricultural area concept, and also the fact that there are various options for the coverage of the common land make this an obligatory section in this report for all countries.

8.1.d.1 Current methodology for collecting information on the common land
If common land does not exist in the country, please specify this.
If common land exists and you do not collect information on common land, please specify this and the reasons.
If you collect information on common land, please describe the methodology by referring to the below options. Combinations of the options are possible; if you use more options, please briefly describe each one.
- common land is included in the land use data of the agricultural holdings making use of the common land.

- common land is included as special holdings i.e. the common land holdings. In addition to records with data representing agricultural holdings, records representing the common land holdings are created.
- common land is collected at regional level and included in regional records. In addition to records with data representing agricultural holdings, records representing the regional sum of the common land are created. According to discussion in a Working Group, this third option has been converted into the second option (common land holdings) allowing all common land to be formatted and included in the Eurofarm tables.
In addition, please specify:
- whether there was a set of specific questions in the FSS questionnaire on common land or a separate questionnaire. In the case of a separate questionnaire, it should be attached to this report, section 12.3.e.
- (new) how was the common land treated in terms of tenure classification;
- (new) how can common land be identified in the data.

Common land is non-significant in Finland.

8.1.d.2 Possible problems encountered in relation to the collection of information on common land and possible solutions for future FSS surveys
Please provide this information in case information on common land is collected.

NA

8.1.d.3 Total area of common land surveyed in the reference year
Please indicate the survey estimate in case information on common land is collected.

NA

8.1.d.4 (new) **Number of agricultural holdings making use of the common land** or **Number of (specially created) common land holdings in the reference year**
Please indicate this number in case information on common land is collected.

NA

8.1.e. Location of the holding

8.1.e.1 The origin of the coordinates
Please specify from which source you have obtained the origin of the coordinates (the geographical reference of the holding).This is required in the Handbook (document 3.1. Methodology - Handbook on implementing the FSS and SAPM definitions - REV 10). For example: cadastre information system, IACS (Integrated Administrative Control System), CAPI (Computer Assisted Personal Interview) with digital maps, address register (address of the farm or of the farmer), LAU2 (village, town, municipality etc.) region of the farm.

The majority of the coordinates were obtained from IACS, in which coordinates are primarily used to pinpoint a farm's administrative centre. If a farm's coordinates were not contained in this register, they were obtained from the information service maintained by the National Land Survey of Finland on the basis of the farm's address.

8.1.e.2 (new) **The reference system**
Eurostat asks to transmit the coordinates based on the reference system ETRS89 (European Terrestrial Reference system 1989) but has set up his system to allow coordinate transformation from different reference systems.
Please specify the reference system used in countries to store data on location of the agricultural holdings. This information is required by the Handbook (document 3.1. Methodology - Handbook on implementing the FSS and SAPM definitions - REV 10).

IACS presents coordinates using the Finnish National Coordinate System (KKJ). Oracle's spatial transformation function was used to transform them into ETRS89 geographical coordinates (the pan-European coordinate system).

8.1.e.3 (new) **The rounding of the coordinates**
Eurostat recommends the transmission of the exact coordinates (the data is handled respecting statistical confidentiality provisions).
If countries still round the coordinates to a grid system, Eurostat recommends the grid based on the INSPIRE data specification on Coordinate Reference System.
Please specify if you transmit the exact coordinates or if you round them. If in the last case, please briefly describe the rounding method and the level of the rounding. For example: LAU2, regions lower than LAU2, census enumeration areas, grids, grouping by 5 holdings (ranked by latitude and longitude).

Initially, the SAS software's ROUND function was used to perform a simple, unlimited rounding of the coordinates. A five-minute rounding was not always enough to remove all individual coordinates, and for these the rounding was increased gradually (next five minutes). However, the rounding process resulted in a large number of coordinates that either a) were no longer within the original NUTS3 area, or b) the pinpointed area was no longer on the map. The rounding of coordinates was therefore abandoned.
For a number of farms, the NUTS3 area calculated on the basis of their coordinates did not match the register's NUTS3 area, which is defined on the basis of the municipality in which a farm is located. The coordinates assigned to these farms were an average of all the coordinates given in the register for that municipality. It was not assessed whether the 5' threshold value was exceeded in these cases. The reasons for deviations in coordinates will be examined at a future date if further cases come to light as the register data are specified.

8.1.e.4 (new) **The criteria used to determine the NUTS3 region of the holding**
Please indicate which criterion is used to determine the NUTS3 region of the holding. Criteria:
- the majority of the total area of the holding where the holding is located;
- the building (administrative, for livestock or other production);
- the most important parcel (in terms of production);
- the residence of the farmer (if it is not further than 5 km from the farm).

NUTS3 region of the holding was determined according to the location of the administrative centre of the farm.

8.1.f (new) **Organic farming**

Possible differences between national standards and rules for certification of organic products and the ones set out in Council Regulation No.834/2007
Please mention possible differences. This information is requested by the handbook (document 3.1. Methodology - Handbook on implementing the FSS and SAPM definitions - REV 10).

NA

[2] See Article 2 of Regulation (EC) 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) 571/88

8.1.1. Asymmetry for mirror flow statistics - coefficient

[*Not requested*]

8.2. Comparability - over time

8.2.a Possible changes of the definition of the holding, **the reasons** and **the impact** of the changes on the comparability with previous sample survey/census data

Please indicate the relevant case from the ones below:
a. There have been no changes, in which case this should be reported.
b. There have been some changes but not enough to warrant the designation of a break in series.
c. There have been sufficient changes to warrant the designation of a break in series.
In the second and third cases, please indicate the changes, the reasons and their impact on the comparability over time.
Particularly in the third case, please indicate any information relevant for users.

There have been no changes in the definition of the agricultural holding. The definition of the agricultural holding is in line with the Regulation.

8.2.b (new) **Possible changes in the coverage of holdings for which records are sent to Eurostat, the reasons** and **the impact** on the comparability with previous sample survey/census data processed by Eurostat

Please indicate the relevant case from the ones below:
a. There have been no changes.
b. There have been some changes but not enough to warrant the designation of a break in series.
c. There have been sufficient changes to warrant the designation of a break in series.
In the second and third cases, please indicate the changes, the reasons and their impact on the comparability over time.
Particularly in the third case, please indicate which procedure Eurostat should apply to compare the data over years and any other information relevant for users.

The coverage of agricultural holdings has changed over 2010-2013. A new threshold of SO 2000 € was applied in 2013. About 4 000 farms were left out of the population because the new threshold. New threshold didn't affect to the number of animals at all and just one percent to the amount of UAA. The threshold in 2010 was 1 ha UAA or 1 LSU.

8.2.c Changes of definitions and/or reference time and/or measurements of characteristics, **the reasons** and **the impact of the changes** on the comparability with previous sample survey/census data

Please specify the characteristics whose definitions underwent changes, the reasons and the impact on the comparability over time.
Please indicate the relevant case from the ones below:
a. There have been some changes but not enough to warrant the designation of a break in series.
b. There have been sufficient changes to warrant the designation of a break in series.
Particularly in the second case, please indicate any information relevant for users.

a. There are no changes of definitions or reference time or measurement of characteristics between FSS 2013 and FSS 2010.

8.2.d (new) **Changes over time in the results as compared to previous sample survey/census, which may be attributed to sampling variability**

This item is applicable when at least one of the two surveys whose results are compared is carried out as a sample survey.
Please indicate any information relevant for users.

There are no such changes.

8.2.e Common Land

8.2.e.1 Possible change in the decision or in the methodology to collect common land, compared with previous sample survey/census data and **reasons**.
Please specify possible changes and reasons.

In Finland, there is no variable defined in the FSS for common land. Common land is therefore a NS variable in Finland.

8.2.e.2 Change of the total area of common land and of the number of agricultural holdings making use of the common land / number of common land holdings compared with the previous sample survey/census data and **possible reason(s)**
Please specify.

-

8.2.f Major trends on the main characteristics compared with the previous sample survey/census data

Please complete the following table. Comments must be given in case there is a change of more than 10% in the current FSS survey compared with the previous one for any numeric main characteristic.

This comparison concerns the population covered by the records sent to Eurostat.

Main characteristic	Current FSS survey	Previous FSS survey	Difference in %	Comments
Number of holdings	54398	63874	-14,8	Number of farms has declined about 9 % from 2010 to 2013. Labour input of the same farm populations has declined 8 % at the same period. The number of farms in Finland has been decreasing for decades. The profitability of agricultural production has been very low long time. Now economic situation is even worse. For example price of milk has decreased significantly and dairy farms have economical problems. Middle-age of Finnish farmers is quite high. Many farms close when farmer retires because there is no successor because of low profitability and hard work. Information on the labour force and other business activities can not fully be compared to previous Farm Structure Survey results because of the new threshold of farms. A new threshold affects to the number of labour involved in agriculture more than amount of labour input. However both the number of farms and people employed in agricultural occupations has declined steadily over the years. Questions concerning other business activities were first included in the 2000 Agricultural Census. The number of farms engaging in other business activities has also decreased over the years.
UAA (A_3_1), ha	2257632	2290980	-1,46	
Arable land, ha	2223229	2253450	-1,34	
Permanent grassland (B_3), ha	30672	32951	-6,9	area has decreased since 2010
Permanent crops (B_4), ha	3732	4579	-18,4	Number of farms producing berries has been decreasing.
Wooded area (B_5_2), ha	2807339	3118573	-9,98	Wooded area of the farms decreases when number of farms decreases.
Unutilised Agricultural area (B_5_1), ha	0	27209	-100	area for roads, scrubland, wasteland and other land is included in B_5_3 in year 2013
Fallow land (B_1_12_1 + B_1_12_2), ha	253953	306950	-17,3	area has decreased
LSU in LSU	1145732	1121046	+ 2,2	
Cattle (C_2), head	911847	925791	-1,5	
Family Labour force - in persons	101025	111165	-9,12	labour force has decreased since 2007
Family Labour force - in AWU	42470	47663	-10,9	labour force has decreased since 2007
Non family labour force - in persons	18982	14123	+34,4	
Non family labour force - in AWU	10513	7734	+35,9	

Due the reduction of number of farms in Finland since 2007, the family labour force has also decreased. Areas change every year.

8.2.1. Length of comparable time series

[*Not requested*]

8.3. Comparability - domain

Comparisons with other data sources at micro/macro level

Other data sources can be for example administrative data, crop production surveys, animal surveys, labour force surveys, National Accounts. If you run comparisons, please give a brief description of the results of these comparisons and possible adjustment made to FSS data. If not, please indicate why not.

8.3.a Comparisons at micro level

In Finland, arable land areas and livestock numbers are updated annually according to the data obtained from IACS and animal registers.
Permanent grassland is not very common in Finland. Animals can't be outside through the year and number of grazing animals is not very high. It is possible that some of permanent grassland has became arable land. Some parts of this land may have became forest also.

8.3.b Comparisons at macro level

Comparing agricultural labour force data with that collected by other organisations is more problematic. Statistics Finland collects labour force data in an annual survey, but differences in definitions mean that the results are not comparable. Statistics Finland's labour force data are based on industry-specific information, while the FSS includes all those who engage in agricultural work on farms.

9. Coherence

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9.1. Coherence - cross domain

(new) **Coherence with other data sources**

Please indicate whether the FSS statistics are reconcilable (i.e. can be combined) with those obtained through other data sources or statistical domains.

The published FSS statistics use the same classification of regions and production sectors as other agricultural statistics.
Farm specific FSS data can be combined with other data using farm code, but this data is confidential.

9.1.1 Coherence - sub annual and annual statistics

[*Not requested*]

9.1.2. Coherence - National Accounts

[*Not requested*]

9.2. Coherence - internal

[*Not requested*]

10. Cost and Burden

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Co-ordination with other surveys: burden on respondents

Please indicate if there is any co-ordination between surveys to avoid the situation that some farms have to answer multiple questionnaires with the same kind of questions.

The schedules of the FSS 2013 survey and other surveys were synchronised to avoid the situation where farmers must answer to several surveys simultaneously.
Tike as well as Luke follows the data collection principle laid down in the Finnish Statistics Act: existing register data should be utilised where possible, and no information included in registers should be inquired upon again for statistical purposes. The majority of the data for the FSS 2013 was taken directly from statistical register.

11. Confidentiality

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The confidentiality is required by law. This report should confirm these arrangements.
Please provide the requested information, taking into consideration that this report is a non-confidential document.

11.1. Confidentiality - policy

Dissemination of micro-data to external users for research purposes

Please mention if micro-data are also disseminated and if yes, the confidentiality provisions that are applied.

Microdata is not disseminated. Researchers can get microdata to the scientific research. This requires written application for the data. The researchers are not allowed to publish microdata.
Information for the FSS is collected for statistical use only. The format in which the results are published ensures that no information about individual farms can be deduced.
Farm-specific information is not surrendered to the authorities. Information can be provided to research institutions for research use, but only if the recipients and users adhere to the same confidentiality requirements as Luke.

11.2. Confidentiality - data treatment

The procedures applied for ensuring confidentiality of the data during dissemination

Procedures can include controlled rounding, cell suppression, aggregation of disclosive information, aggregation rules on aggregated confidential data, primary confidentiality with regard to single data values etc. Main reference: Handbook on Statistical Disclosure Control (2007).

The individual values of sums, averages or other data are not presented if calculated from figures of less than three farms.

12. Statistical processing

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Survey organisation and calendar

*Please provide **brief** information on:*

12.a The steps of the survey organisation and **the starting and ending time of each step.**
This information could help countries in the future planning of the activities.
As guidelines, the steps can consist of the following. Please adapt to the national situation if needed.

1. definition of survey objective and requirements:
1.1. formation of workgroups for survey organisation;
1.2. consultation of users;
1.3. set-up objectives, target population, statistical units, classifications, precision requirements etc.;
1.4. survey promotion.

2. survey design:
2.1. set-up organisation of the survey (e.g. detailed timetable, specification of resources, costs estimation);
2.2. definition of the survey variables;
2.3. design of the sampling frame and sampling procedures;
2.4. design of data collection procedures (e.g. questionnaire design, selection of data collection modes etc.);
2.5. design of data processing procedures (e.g. CATI/CAPI/CAWI input programmes etc.);
2.6. pilot survey organisation and execution.

3. data collection:
3.1. sampling frame construction and sample selection;
3.2. recruitment of interviewers;
3.3. training of interviewers;
3.4. fieldwork;
3.5. evaluation and assessment of fieldwork.

4. data processing and validation:
4.1.data entry and data coding:
4.2. data validation (at record level);
4.3. data correction and imputation.

5. data compilation:
5.1. weight calculation and estimation;
5.2. calculation of derived variables;
5.3. calculation of quality indicators (e.g. non-response rates, relative standard errors, coverage errors, bias etc.);
5.4. aggregation and tabulation;
5.5. validation of aggregated data.

6. data analysis

7. data dissemination

Survey organisation

The project's sub-areas were: information content, data collection, data processing, publication of the results.

Calendar (overview of work progress)

Timetable of the FSS 2013

	Beginning	End
Pre-design of the FSS 2013	2012	Feb 2013
Preparation of questionnaires	Feb 2013	Oct 2013
Preparation of data collection	Jan 2013	Nov 2013
Data collection: Web survey	1 Nov 2013	20 Dec 2013
Data collection: Telephone interviews	2 Jan 2014	31 Mar 2014
Data checks	Nov 2013	Nov 2014
Data to Eurostat	June 2014	Nov 2014

Release:	Date:
Energy	25 Jun 2014
Farmland management and irrigation	26 Jun 2014
Labour force	28 Nov 2014
Other gainful activity	12 Dec 2014
Machinery	17 Dec 2014

Tike was responsible for the implementation of the FSS 2013 Survey. Former Tike carried out its own data collection using data collection software, and also ran the telephone service for farmers that was used during electronic data collection. The

12.b The bodies involved and the split of responsabilies among bodies with respect to the main steps of the survey process	telephone interviews were done by Taloustutkimus Oy, which is an independent and unaffiliated Finnish market research company. Taloustutkimus was used for the telephone interviews as it was used in the Census. Taloustutkimus committed itself to complying with the information security and quality criteria set by Tike. The company uses both an ISO 9001:2008-certified quality system and the international market research industry standard ISO 20252. It operates in Finland, the Baltic countries and Russia. In Finland, it employs 100 people and about 300 part-time interviewers. The company's website address is http://www.taloustutkimus.fi/in-english/.
12.c Serious deviations (if any) from the established calendar and reasons. *Please mention only serious deviations with significant consequences on the quality and the transmission time of data to Eurostat.*	-

12.1. Source data

12.1.a Target population

12.1.a.1 The national definition of an agricultural holding
Please mention if the national definition of the holding is as according to the EU definition [3] or not. If not, please mention the national definition of a holding.

The definition is in line with the EU definition (Regulation 1166/2008).

12.1.a.2 The number of holdings in the population disregarding any possible thresholds applied (the entire number of holdings in the country), according to the EU definition of a holding or, if different from the EU definition of a holding, according to the national definition.
Please indicate the number. If it is not possible to provide this information, please provide the reasons.

The total number of farms without any threshold was 58 398.

12.1.a.3 The national survey coverage; the thresholds applied in the national survey (if any) and the geographical coverage
Please briefly describe the national target population which is the population for which national inferences are made.
Please consider possible thresholds applied in the national survey and please mention them.
Please mention the geographical coverage (including any geographical areas not covered).

The Finnish threshold for FSS of agricultural holding: Farms engaging in agricultural or horticultural production in Finland with a standard output (SO) of at least EUR 2,000. Horses are not included when calculating the SO for the threshold. Statistical register of farms and horticultural enterprises includes only units over the threshold (SO 2000 €). All these units are included to the frame of the FSS. Statistics of Luke has also access to the administrative data which includes all the farms and horticulture enterprises. However new threshold does not affect the number of animals and it's effect on UAA is only 1 %. All the area of Finland is covered.

12.1.a.4 (new) **The number of holdings in the nationally covered population** (see 12.1.a.3), according to the EU definition of a holding or, if different from the EU definition of a holding, according to the national definition.
Please indicate the number. These are holdings in the national survey coverage. If national thresholds are applied, the size of the national survey population is the number of holdings in the population by considering the thresholds applied in the national survey (see 12.1.a.3).

There were 54 398 farms and horticultural enterprises in Finland in 2013.

12.1.a.5 (new) **The survey coverage of the records sent to Eurostat**
The survey coverage of the records sent to Eurostat can be different from the national survey coverage in case very low (or no) national thresholds are applied.
Please indicate if the coverage of the records sent to Eurostat is different the national survey coverage. If yes, please indicate the differences and how you selected the records sent to Eurostat.

The survey coverage is the same.

12.1.a.6 The number of holdings in the population covered by the records transferred to Eurostat, according to the EU definition of a holding and, if different from the EU definition of a holding, according to the national definition (*this number should be reported as item 1, in the table from section 12.3.d*).

The number of holdings was 54 398.

12.1.a.7 (new) **Records sent to Eurostat on holdings with standard output equal to zero.**
These can be holdings with only fallow land and/or only kitchen gardens and/or only crops and animals for which standard output coefficients are not defined (crops and animals not valued). In the case of a few countries, a significant amount of records have been sent to Eurostat with standard output equal to zero. Please provide any information that could help Eurostat and users to better understand why standard output is equal to zero and why those holdings are included in the survey.

In Finland there was 1 915 farms which SO was under 2000 € but UAA was over 5 ha. These farms were not included to the survey. There is no sense to collect data from these farms because there is no production and labour use is almost zero also.

12.1.a.8 Proofs that the requirements stipulated in art. 3.2 and (new) 3.3 of the Regulation 1166/2008 are met in the data transmitted to Eurostat

Art. 3.2: *However, Member States which use a survey threshold above one hectare shall fix this threshold at a level that excludes only the smallest agricultural holdings which together contribute 2% or less to the total utilised agricultural area excluding common land and 2% or less to the total number of livestock units.*

Art. 3.3: *In any case, all agricultural holdings reaching one of the physical thresholds specified in Annex II shall be covered.*

Under the threshold on standard output in the national definition of agricultural holding is 1 % of the total utilized agricultural area. There is no livestock under the threshold. Statistics of Luke has access to the administrative data which includes all the farms and horticulture enterprises and their utilised agricultural area. As well statistics of Luke can use administrative animal registers. The analysis has been done both 2010 and 2013.

12.1.b Source of data

Please mention the source of data for example exhaustive coverage of units in a survey (census), sample survey, use of administrative sources, combinations, etc.

Quite a lot of the data (the geographical location of the farm, the area under different crops, the number of livestock, organic production, and questions and coordination data relating to rural development subsidies) was obtained from registers, while the rest (labour force, education and training, other business activities on farms, renewable energy, and some data on irrigation) was collected in a sample survey using either an online questionnaire or telephone interview.

The source of data for each characteristic is indicated in the table attached to item 4.3.

12.1.c (Sampling) frame

Section 12.1.c refers to the frame used to identify holdings to be surveyed and therefore should be completed only in case of a sample survey or a census.

Section 12.1.c should **not** be completed when *data are entirely taken from administrative sources. In this case, section 12.1.e of the report provides the relevant information.*

12.1.c.1 Source of the frame

Please specify the source of the frame, for example a statistical register (farm register, business register etc.), an administrative source etc.

The sample frame for the FSS 2013 included all farms recorded in the 2013 whose standard output was more than 2 000 €. The registers used to form the sample frame are updated annually. As the Farm Register, Horticultural Enterprise Register and IACS use the same farm code, these registers could be successfully consolidated into a sample frame.

12.1.c.2 Type of frame

Please specify whether it is a list frame or an area frame, whether you used a combination of multiple frames etc.

The sample frame is a list frame.

12.1.c.3 Time reference and updating process for the frame

The sample frames were updated for the sampling 30.9.2013.

In 2013, no separate statistical survey was conducted for farms that had not applied for subsidies, as in connection with the farm survey these farms were asked to inform if they had stopped farming. In many cases this had happened. None of the farms that had not applied subsidies in the spring 2013, remained in the sample after the application of SO 2000 € threshold.

Farms that don't apply for subsidies are often small and their owners elderly. They want to cultivate a small area, mainly as a hobby. These farms often have only grassland and/or fallow land. It is sometimes difficult to decide whether such farms are active or not.

12.1.d Sampling design

Section 12.1.d should be completed onlyin case of a sample survey.

Please describe the sampling design according to the following structure. This structure aims to increase the clarity and comparability of information between countries.

12.1.d.1 the name of the sampling design and whether it is a probability design.

A probability sampling design ensures known probabilities for units selected. In practice, non-response generally makes samples depart from the probability ones. However, the point here is to report on whether or not the gross sample (net sample plus non-respondents) has been selected in a probability way.

Stratified simple random sample

12.1.d.2 (new) the number of sampling stages.

If the survey sample is selected from another sample (e.g. master sample) please consider this stage.
If you use sub-sampling for some of the characteristics, please distinguish the cases in your answer.

Single-stage design

12.1.d.3 (new) the sampling unit at each stage

For example, sampling units can be holdings in a single-stage design or municipalities/villages as primary sampling units and holdings as secondary sampling units in a two-stage design etc.

Sampling unit is holding

12.1.d.4 the stratification variables and the sampling stage where they are applied
For example, in a single-stage design, holdings can be stratified by region and size.

Holdings were stratified by region, the economic size of the farm and the type of production.

12.1.d.5 (new) **the sampling method at each stage**
The sampling method can be exhaustive selection, simple random sampling, systematic sampling with equal probabilities, systematic sampling with probabilities proportional to size, etc.

The sampling method is simple random sampling.

12.1.d.6 the list and description of full coverage strata
Full coverage strata are strata with complete enumeration (all units are selected in the sample).

All farms of a larger economic size were included and nearly all of the largest broiler farms. All greenhouse enterprises of at least 10,000 square metres were selected for the sample. In Finland, broiler chickens are centred on major farms and it is difficult to obtain a representative sample from such farms, as some areas only have a few large broiler farms. Sample selection was therefore more geared towards broiler farms than others.

12.1.d.7 the overall sample size, how it was determined and any allocation method used
Allocation methods can be equal allocation, proportional allocation, Neyman allocation, optimal allocation considering different costs across strata etc.

The sample was allocated using the mean of a proportional and optimal allocation (Neymann allocation). The allocation variable was the economic size of the farm. This allocation method resulted in a sample drawn randomly yet evenly from all over Finland, and in such a way that the sampling ratio increased with farm size. For livestock farms, the sampling ratio was greater than for farms engaged in crop production, as variances in economic size for livestock farms were greater than for farms engaged in crop production.

12.1.d.8 sampling across time
This item refers to whether a new sample is drawn in each occasion, or a part or the whole sample is retained over all/several occasions. The latter two cases should be justified.

The sample for the farm survey was drawn independently. The 2007 Farm Structure Survey sample and the 2010 Agricultural Production Methods Survey sample were therefore ignored in this sampling.

12.1.d.9 the software tool used in the sample selection

SAS software was used to select the sample.

12.1.d.10 other relevant information, if any

NA

12.1.e Use of administrative data sources

12.1.e.1 Name, legal base, time reference and (new) **updating of the source**

If more than one administrative data source is used, please provide this information for each of them.

About a half of the data for the FSS 2013 was obtained from statistical or administrative registers, and this information did not need to be obtained from farms during data collection. Sources for the FSS 2013 are detailed by variable in the annex.

IACS, Animal Register and Bovine Register

Integrated Administration and Control System (IACS), which contains information provided by farmers in subsidy applications, was the source of basic farm details (farm code, location, etc.), arable land use, crop areas, and the number of horses and poultry. Pig numbers were initially taken from IACS or, if IACS contained no pig data for a specific farm, from the Animal Register. Cattle numbers were updated from the Bovine Register, and sheep and goat numbers from the Animal Register.

Data are copied from administrative registers for statistical use annually in October, when all subsidy applications have been recorded and no significant changes will be made to administrative data.

IACS is maintained by The Agency for Rural Affairs (Mavi). Its data are obtained from farmers' agricultural subsidy application forms, whose data are checked by municipal rural business authorities. About half of the farmers provide their information electronically using online forms. Pro Agria's (an advisory organization) Agricultural Data Processing Centre Ltd maintains the Bovine Register, while the Finnish Food Safety Authority (Evira) maintains the Animal Register. Farmers provide these organizations with data on livestock using online or printed forms, or over the telephone.

Areas of greenhouse crops are not in IACS. They are collected in an annual horticultural survey and obtained from the Agricultural and Horticultural Enterprise Register.

Some farms did not have coordinates of their location in IACS. For these farms, location data was received from the National Land Survey of Finland.

Organic Farming Register

Farms that engage in organic farming must be entered into the organic control system. Information on these monitored farms is collected in the Organic Farming Register, which is maintained by the Finnish Food Safety Authority (Evira).

12.1.e.2 Definition of the reporting unit (holding)

If more than one administrative data source is used, please provide this information for each of them.

See item 12.1.e.3, table row 2.

12.1.e.3 The purpose(s) of the use of administrative sources

Purpose	**Administrative source** *Please specify the name of the administrative source(s) in the rows of this column. The row(s) where the name(s) of the source(s) is (are) specified indicate(s) the purpose(s) of the use of that (those) source(s).*
- to totally replace the survey, on all characteristics and on the whole survey population	NA
- to replace the survey on some of the characteristics and on the whole survey population. *Please indicate these (groups of) characteristics, the common identifiers and the method(s) of integration (record linkage algorithm).*	All the registers used as data sources for the FSS employ the same ID (farm code) for their basic units (farms and horticultural enterprises). It is therefore relatively easy to integrate data from different registers, and units can be linked reliably between registers. See annex in item 4.3.
- to replace the survey on all characteristics and on a part of the survey population	NA
- to replace the survey on some of the characteristics and on a part of the survey population. *Please indicate these (groups of) characteristics, the common identifiers and the method(s) of integration (record linkage algorithm).*	NA
- to build/update the (sampling) frame (used for census or for sample survey)	NA
- to pre-fill answers in the questionnaires which are then checked by farmers during the survey	NA
- to impute item/unit non-response	NA
- to validate the survey data (quality control). *Please indicate actions taken in case of large discrepancies*	NA
- to calibrate of survey estimates. *Please indicate the calibration variables*	NA
- other (*please specify in the next column*)	NA

12.1.e.4 Difficulties of using administrative source(s) and measures taken

For each administrative source used, please briefly describe any difficulties and the way those difficulties were addressed. Examples of difficulties:
- incoherence of concepts/definitions;
- incoherence of classification systems;
- different population coverage;
- problems creating the links between the units: the units in administrative sources do not correspond directly to the definition of required statistical units;
- problems creating the links between databases caused by e.g. the lack of common identifiers, obstacles related to IT issues etc.;
- impossibilities to establish cooperation with register owners;
-(too high) costs charged for the access by the register owners;
- problems related to data quality of the source;
- resistance to change caused by a general lack of trust in the quality of the source;
- timeliness and punctuality: the final validated data in the source may not be in time to meet statistical deadlines or may relate to a period which does not coincide with the statistical reference period;
- risks concerning the stability of the source to political changes etc.

In Finland, questions required for statistical purposes have been added to subsidy application forms. These sections of the subsidy application forms have been designed in cooperation with the agricultural administration and Statistics Group. Therefore, as far as definitions are concerned, data extracted from, for example, IACS also match well with the data required for statistics. However, the integration of administrative and statistical data definitions is not always completely problem-free. For example, crop area data are collected in subsidy application forms in much greater detail than in structure surveys. IACS included data on over 200 different variables (codes) for crops and land use. However, only about 50 different plant and land use variables are recorded in the FSS, so the IACS data had to be selected and summed when compiling the results.

12.1.e.5 Quality assessment of the administrative sources

*Section 12.1.e.5 should **not** be completed when administrative sources are used only for building/updating the (sampling) frame of a census or a sample survey . In that case, other sections of the report (sections 5.3, 12.1.c, 12.3.d) provide relevant information.*

	Administrative source and assessment of errors

		Please specify the name of the administrative source(s) in this column, along with information required for each row.
-coverage:		The administrative registers used in FSS are generally of good quality. The use of a common farm code makes it easy to combine farm specific data from different sources. IACS data relates to the annual payments of subsidies and, therefore, both farmers and authorities are motivated to keep the data correct and up-to-date.
	- over-coverage *If the source covers more units than it should, please provide an assessment of the over-coverage rate and mention whether the out-of-scope units were excluded.*	Not relevant, because IACS was used to define the population of active farms in FSS.
	- under-coverage *If the source covers less units than it should, please provide an assessment of the extent of under-coverage (if possible) and mention if and how the missing information is derived.*	Not relevant, because IACS was used to define the population of active farms in FSS.
	- misclassification *Please mention whether the information allows for the requested classification of units and whether there are errors in classification variables.*	With the register data of pigs, inconsistency in the classification is a problem. In the register, pigs are classified by age, whereas in FSS the required classification is by weight. A project on animal registers is starting to build a statistical model where administrative pig register data could be used reliably as the sole source of pig numbers for animal statistics and FSS.
	- multiple listings *Please provide an assessment on units which were present more than once in the source and specify how the duplicates were eliminated.*	Not observed.
	- rate of unreported events *If data of the System for the Identification and Registration of Bovine Animals is used, please provide an assessment of the rate of unreported events. Unreported events refer to births, deaths or loss, sales or change of owners etc. of animals, which create under – and/or over-coverage errors for the estimates of animals.*	Not observed.
- missing data (analogue to item and unit non-response errors in a survey).*Please provide an assessment of missing data, specify for which characteristics and how it was accounted for (e.g. by imputation).*		It sometimes takes a long time before changes in animal numbers are reported and entered into the register. In the project on animal registers mentioned in item "misclassification", the process of estimating the number of animals from the register will be improved. However, with FSS there is a relatively long time between the reference date of animal numbers and the completion of the results, which mitigates the effect of delayed updating of the register on the animal numbers of the FSS. Some farms did not have coordinates in IACS. The missing coordinates were obtained from the National Land Survey of Finland.
- errors in register variables (analogue to measurement errors in a survey) i.e. erroneous values for certain variables		Very few (some typing errors).
- processing errors. *Please provide an assessment. You can mention here imputation methods used, if any.*		Very few.
- coherence (comparison to other available data) of the administrative data (ex-ante and/or ex-post)		Not carried out.
- other drawbacks (if any) of the use of data from the administrative source. *Please specify the drawbacks in the next column.*		NA

[3] See Article 2 of Regulation (EC) 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) 571/88

12.2. Frequency of data collection

(new) Please indicate the frequency of data collection.
Frequency of the surveys is 3-4 years. Previous survey before 2013 was 2010 and next survey will be 2016.

12.3. Data collection

12.3.a Data collection modes

Please specify the data collection mode(s) used.
These can be for example:
• Telephone
The data collection is carried out through the telephone interviews, usually supported by the CATI technology.
• Face-to-face
An interviewer visits selected holdings to directly communicate with them and get the required data.
• Internet
The data collection is carried out by using questionnaires which can be completed through internet applications.
• Self-completed paper questionnaires
The data is gathered through self-completed paper questionnaires which can be collected on a spot or sent to the survey organisation by mail.
• Mixed-mode
Several modes for data collection are combined. The typical example is the survey where the telephone interviews are complemented with the face-to-face interviews for the respondents who were not reached by telephone.

The data was collected both electronically and via telephone interviews.
When data collection began, farmers were sent a printed letter containing a) a request to provide data electronically, and b) a user ID and password for the electronic data collection system. A reminder was sent to those farmers who had not responded after a set period. A printed data collection form was only sent with the second reminder. Farmers were, however, still able to respond electronically at that stage. Once electronic data collection had closed, telephone interviews were conducted with those farmers who hadn't responded electronically. Farmers filled out data collection forms in advance, and then read this information to the telephone interviewer when prompted.
Telephone interviews were only conducted with those farms that had not responded electronically via the online form. Any farms that had ceased operation and notified Tike were removed from the list. The interviews went smoothly and to schedule. Table 1 shows a detailed breakdown of the non-response rate and the reasons for overcoverage in telephone interviews. However farms which din not answer to the questionnaire are not totally non response because a lot of data were from administrative registers.

Table 1. Telephone interviews – non-responses and overcoverage

FSS 2013			19,457
Farmer phoned to the Tike			512
Electronic response			8,720
Telephone interviews, gross sample			10,225
Of which			
	overcoverage		694
		- holding sold or combined	
		- ceased production	
Telephone interviews, net sample			9,877
	Interviews conducted		8,868
	Non-responses		1,009
	- no farm personnel could be reached		838
	- farmer refused to respond		102
	- other reason		48
	- phone number could not be found		0
	- illness or injury prevented interview		18
	- farmer avoided the interview		3

12.3.b Data entry modes

Please specify the data entry mode(s) used.
These can be, for example:
• Optical character recognition (OCR);
• Electronic data capture during personal interview;
• Entering the data online by the holder etc.

When using web questionnaire, respondent entered the data that was stored directly to Tike's database. In telephone interview, the interviewer entered the date to the system of the Taloustutkimus company, from where it was later transferred to Tike's database.

12.3.c Measures taken to increase response rates

Please specify, for example: *- call-back strategies, written / telephone reminders, contacting respondents who have only partly completed the questionnaires;* *- giving priority to more important, for example large holdings;* *- taking care that the mailing list is based on up to date information;* *- training staff in handling difficult respondents;* *- legal actions taken on non-response.*
Farmers were encouraged to respond electronically, and two reminders were sent. The last of these also contained a printed data collection form. Text messages were also used to remind those who had begun to fill out the online form, but had not yet submitted it. Taloustutkimus Oy won the contract for the computer-aided telephone interviews. It had committed to a 97 per cent response rate. The number of times that Taloustutkimus would attempt to contact farmers had been agreed on in advance. Taloustutkimus also transferred difficult cases to the most experienced interviewers. Tike established a telephone service which farmers could call on weekdays from 9 a.m. to 3 p.m. for help on any matters associated with the FSS. Farmers could also send e-mail queries about the FSS to a dedicated address.

12.3.d Monitoring of response and non-response

The following table should be completed only in case of a sample survey or a census.
*It should **not** be completed when data are entirely taken from administrative sources. In the latter case, section 12.1.e.5 provides relevant information.*
The following table aims to collect exact information of the number of holdings in a uniform way. This information allows, among other, calculating response rates according to the definition of response rates in the Eurostat (2009) ESS Handbook for Quality Reports, page 49. These definitions of the response rates are presented in the handbook for sample surveys but, as stated in the same handbook, page 57, they are also applicable to censuses.
The following table refers to the number of holdings covered by the records sent to Eurostat.
- If you send records on all surveyed holdings to Eurostat, then please include all surveyed holdings.
- If you send records on a subset of surveyed holdings to Eurostat (that, according to Regulation 1166/2008, account for 98% of the utilised agricultural area and 98% of the livestock units), then please consider only the subset of holdings transferred to Eurostat, if possible. If this is not possible, please explain and then include information concerning all holdings surveyed in the country.
This table refers to the number of holdings according to the EU definition, and, if different from the EU definition [4], according to the national definition. Please specify the case.
Common land holdings (special holdings created to report common land), if any, should not be included in the number of the holdings of any category below. They should be reported in section 8.1.d.4

1.	**Number of holdings in the population covered by the records sent to Eurostat** *Please note that the survey coverage of the records sent to Eurostat can be different from the national survey coverage in case very low (or no) national thresholds are applied.* *In case of a census* **1=3+4+5**	54394
2.	**Number of holdings in the gross sample** *The number of holdings selected from the sampling frame to be included in the sample.* *This item should be completed only in case of a sample survey, in which case* **2=3+4+5**	19421
3.	(new) **Number of ineligible holdings** *The number of surveyed holdings which result to be out-of-scope (the frame is not updated and the data collection reveals that some holdings e.g. fall below set thresholds during the reference period), which do not exist at the selected address, which have the activities ceased during the reference period etc.*	857
3.1	**Number of holdings with ceased activities** *This item is a subset of 3.* **3.1>=3.1.1+3.1.2**	
3.1.1	**Number of holdings which definitively ceased i.e. the land is abandoned.** *This item should be completed only if information is available.*	
3.1.2	**Number of holdings with ceased activities following the change of manager** *This item should be completed only if information is available.*	

4	(new) **Number of holdings with unknown eligibility status** *The number of surveyed holdings which could not be contacted (e.g. in a CATI survey) and for which it is not certain if they are eligible (e.g.in scope) or not.*	838
5	(new) **Number of eligible holdings** *The number of surveyed holdings which are eligible* ***5=5.1+5.2***	17726
5.1	**Number of non-responding holdings** *The number of eligible holdings which:* *- were contacted but refused to take part in the survey;* *- were contacted but were unable to participate in the survey for various reasons;* *- participated in the survey but the entire survey form cannot be used because of poor quality etc.* *This item refers to holdings for which no data is collected (**unit non-response**).* **5.1>=5.1.1+5.1.2**	174
5.1.1	**Number of non-responding holdings – re-weighted**	174
5.1.2	**Number of non-responding holdings – imputed**	0
5.2	**Number of responding holdings** *This item includes holdings which provided completed questionnaires, either entirely or partially.*	17552

12.3.e Questionnaire(s)

Please annex the questionnaire(s) used for the data collection, using the "Add file" button. If possible, please provide the questionnaire in English, French or German.

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[4] See Article 2 of Regulation (EC) 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) 571/88

Annexes:

FSS 2013 Questionnaire (Finland, in Finnish)
FSS 2013 Questionnaire (Finland, in Swedish)

12.4. Data validation

12.4.a Edit rules/checks

Please mention edit rules applied. For example: data format checks, completeness checks, routing (skip) checks, range/outlier checks, relational checks, ratio edits, etc.

Thanks to both thorough guidelines and the numerous checks on electronically collected data, the information provided by farmers was largely reliable. The software rejected responses outside the value range and also ensured that information was recorded in every field. Checks resulted in either a warning or an error notification (=error). If an error was recorded, farmers were not able to submit the form until the error had been corrected.

Comparable checks were mostly used in the software used to record information given during telephone interviews.

The same checks were used in both the online forms and the software used to enter data from telephone interviews. There were two types of checks: a) errors that had to be corrected before the survey could continue, and b) warnings that could be skipped and did not prevent submission of the form.

Tike's Statistics Group performed the same checks that had already been made by the data entry software and online form. The data were also subjected to several logical checks, the minimum and maximum values were ascertained, and checks were made for missing information. Due to the numerous checks and controls built into the interview software, Tike found very few deficiencies. Any errors or missing information were corrected by Tike. Efforts were made to use other register data in the place of missing information.

12.4.b Tools used for data validation

Please mention tools used.

Data verification began during the collection period, as checks were carried out in online forms and by the software used to enter data during telephone interviews.

The checks done by Tike's Statistics Group were carried out with SAS software.

12.4.c Level of data validation

Please mention. For example, data validation can be done at the level of the interviewer, of the supervisor, of the local collection centre, of the final collection centre.

Although information was checked during collection, more thorough verification and processing were carried out once the data collection period

had ended.

12.5. Data compilation

Sections 12.5.a and 12.5.b should be completed only in case of sample surveys.

12.5.a Methods for deriving the extrapolation factor (the weight)

Please give a description of the extrapolation procedures used to weight the data of the sampled holdings to the population, discussing the different steps taken, as follows:

12.5.a.1 Design weights

Please explain how design weights were obtained. In case the approach departed from the usual one that consists of taking the inverse of the inclusion probabilities, then the latter should be explained.
Design weights are defined as the inverse of the units' selection probabilities.

Design weights are defined as the inverse of the units' selection probabilities.

12.5.a.2 Adjustment of weights for non-response

Please mention if you applied re-weighting for non-response. If yes, then the method used to determine the correction factors should be explained: reweighted Horvitz-Thompson estimator, ratio estimation, regression estimation, etc. 12.5. Data compilation *
Please indicate if response homogeneity groups have been created.

We applied re-weighting for non-response. The method used was reweighted Horvitz-Thompson estimator -method.

12.5.a.3 Adjustment of weights to external data sources

Please mention if you adjusted the weights to external sources and if so please describe and mention the variables used from the sources and the sources. Generally, samples are adjusted to external data sources in order to make their accuracy better. For instance, the calibration technique aims at calculating new weights which provide error-free estimates for a certain number of characteristics. If the characteristics are strongly correlated with the variables of interest, then the level of accuracy for most of the survey estimates is improved.

The sample were reweighted. An attempt was made to reweight the stratification so that the values estimated from the sample were as close as possible to the 'actual' values calculated from the total data. These 'actual' variables are all land characteristics and animal characteristics.

12.5.a.4 Any other applied adjustment of weights

For example, extreme weights (which increase the variance of the estimates) can be trimmed.

NA

12.5.b Formulae applied for estimation methods

Please annex the formulae applied for estimation methods, using the "Add file" button.

12.5.c Other relevant information (if any)

NA

12.6. Adjustment

[*Not requested*]

13. Comment

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13.a Any regional specification

Please include relevant information such as on extreme weather conditions in certain region(s) during the agricultural year (reference period), differences in methodology across regions etc.

Weather conditions in Finland during the 2013 growing season
In 2013 May and June were warmer than average and the rest of the summer was close to average. Thermal growing season was longer than average, and in northern Finland even exceptionally long. The summer rains were distributed unevenly. In south-western and north-eastern Finland there was less rain than average, but in most parts of the country precipitation was close to long-term average or above it.

13.b Possible improvements in the future

Please suggest possible improvements.

Work with NMR should start at the same time with the project.

13.c Other annexes

Please annex any other(s) file(s), deemed as useful, using the "Add file" button.

Please indicate here the nature and purpose of the file(s).

There is no other annexes

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