

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. Central Statistics Office

Time Dimension: 2013-A0

Data Provider: IE1

Data Flow: FSS_ESQRS_A:1.0



Eurostat metadata

Reference metadata

- [1. Contact](#)
- [2. Introduction](#)
- [3. Quality management - assessment](#)
- [4. Relevance](#)
- [5. Accuracy and reliability](#)
- [6. Timeliness and punctuality](#)
- [7. Accessibility and clarity](#)
- [8. Comparability](#)
- [9. Coherence](#)
- [10. Cost and Burden](#)
- [11. Confidentiality](#)
- [12. Statistical processing](#)
- [13. Comment](#)
- [Related Metadata](#)
- [Annexes](#) (including footnotes)

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[Download](#)

1. Contact

[Top](#)

1.1. Contact organisation	<p><i>Please provide the name of the organisation of the contact points for the data or metadata.</i></p> <p>Central Statistics Office</p>
1.2. Contact organisation unit	<p><i>Please specify an addressable subdivision of an organisation.</i></p> <p>Agriculture Surveys Section</p>
1.5. Contact mail address	<p><i>Please specify the postal address of the contact points for the data or metadata.</i></p> <p>Central Statistics Office, Skehard Road, Cork, Ireland</p>

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)*

A Farm Structure Survey (FSS) is carried out between Censuses to measure changes in Farm Structure. The first Census of Agriculture in Ireland was carried out in 1847, and annually thereafter until 1953. Between 1960 and 1980 Censuses were carried out at 5 yearly intervals. From 1980 Censuses were carried out at 10 yearly intervals. Farm Structure Surveys were carried out on three occasions in the 1980s ('83, '85, and '87), 1990s ('93, '95, and '97) and 2000s ('03, '05, '07).

In 2010, the Farm structure Survey took the form of a Census of Agriculture and data were collected using an 8-page postal questionnaire. This questionnaire data was, for the first time, supplemented by the use of administrative data from the Irish Ministry of Agriculture. The administrative databases utilised were the IACS and Bovine Registers. The use of these administrative databases has continued in subsequent years including Farm Structure Survey 2013.

The statistical register compiled for the 2010 Census of Agriculture was updated for FSS 2013 by adding new administrative records of agriculture holdings or livestock herds created since the 2010 Census. These administrative records were provided by the Irish Ministry of Agriculture, known as the Department of Food, Agriculture and the Marine (DAFM). 3,879 new administrative 'births' were added to the existing register of 139,860 holdings from the 2010 Census giving a total sample frame of 143,739 holdings.

Questionnaires were issued to 54,669 holdings in the week preceding the reference date of 1st June 2013. Four reminders were issued at approximately fortnightly intervals to maximise the response rate.

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 survey (Act, Government Decree, etc.)	The statistical activities of the CSO are governed by the Statistics Act, 1993. See: http://www.irishstatutebook.ie/1993/en/act/pub/0021/print.html This act provides the legislative framework for the CSO. It sets out the right of the Office to conduct statistical inquiries (See Part III - Collection of Information of the Act above)
- the scope and the coverage of the survey	The Statistics Act does not specify the type of information that may be collected. This responsibility is delegated to the Director General of the CSO. (See Part III – Collection of Information of the Statistics Act 1993)
- the frequency and the reference period of the survey	As above, the Statistics Act does not specify the frequency, or reference period of the Survey. This responsibility is delegated to the Director General of the CSO. (See Part III – Collection of Information of the Statistics Act 1993)
- the responsibility for the survey	The Farm Structure Survey (FSS) is carried out by the Agriculture Division of the Central Statistics Office (CSO) of Ireland.
- the administrative and financial provisions	See Part I (Sections 6 and 19) of the Statistics Act.
- the obligations of the respondents with respect to the survey	Part III (Section 24) of the Statistics Act specifies that a person may be invited to provide information on a voluntary basis. As the level of voluntary response to agricultural surveys in Ireland was already deemed satisfactory, a ministerial order was not deemed necessary for FSS 2013.
- the identification, protection and obligations of survey enumerators	Part II (Section 20, 21 and 22) of the Statistics Act specifies the responsibilities of Central Statistics Office staff. It should be noted that as the Farm Structure Survey is a postal survey, enumerators do not directly visit farms/respondents.
- the right of access to administrative data	The Statistics Act, 1993 (Part IV) also grants the CSO right of access to records of public authorities for statistical purposes (with a number of exceptions). Specifically under the Act the CSO may request any public authority to consult and co-operate with (the CSO) for the purpose of assessing the potential of the records of the authority as a source of statistical information and, where appropriate and practicable, developing its recording methods and systems for statistical purposes. This underpins co-operation with the Department of Agriculture on the subject of its farm registers. (See Part IV - Use of Records of Public Authorities for Statistical Purposes of the Act above)
- confidentiality provisions	The Act also guarantees the confidentiality of all data provided, expressly prohibiting the disclosure of information which can be related to any identifiable person or enterprise. (See Part V - Protection of Information of the Act above). It specifies the offences and penalties occurred for breaching this confidentiality. (See Part VI - Offences, Penalties and Evidence of the Act above)

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 main groups of national characteristics surveyed are decided based on EU FSS legislation, ie Regulation 1166/2008. These include crops, livestock, machinery/equipment, labour force, other gainful activities and geographical indicators.

A small number of additional variables were collected for national purposes. The need for these variables was identified through a consultation process with the main stakeholders prior to the survey design stage. Specifically these variables related to:

- Sheep: A more detailed breakdown of sheep, consisting of rams, ewes (both under and over 2 years) and other sheep (both under and over 1 year)
- Poultry: The sub-division of both broilers and turkeys into breeding birds and table birds and also the sub-division of other poultry into ducks, geese and other.
- Equidae: The sub-division of equidae into thoroughbred, other horses and mules, jennets and asses.
- Deer: Number of farmed deer.
- Administrative Burden: the number of minutes taken to complete the FSS2013 questionnaire
- Machinery: A detailed breakdown into usage in either hours per annum (tractors) or area covered (other machinery)

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.

For survey data, a reference date for the land characteristics was June 1st 2013, with the reasonable assumption that the crop in the ground on that date was the main crop for the 12 month period ending June 1st 2013. The administrative data source used a reference date of 31st May 2013, with a similar assumption.

The reference date for the livestock characteristics was June 1st 2013 in the survey. This is also the reference date for bovines in the administrative data.

The reference period for the all Labour Force characteristics was the twelve-month period prior to June 1st 2013.

The reference period for the Rural Development measures was the three-year period between January 1st 2011 and December 31st 2013.

4.2. Relevance - User Satisfaction

[Not requested]

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.

A number of characteristics listed for collection in the regulation were not collected as these were determined to be either non-existent or non-significant based on empirical data from previous Farm Structure Surveys, examination of more recent Single Farm Payment (IACS) variables as well as extensive consultations with Ministry of Agriculture and Teagasc (Ireland's national body for Agricultural Research & Training). These are provided in **Annex I** to this document.

[\[1\]](#)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.

4.3.1. Data completeness - rate

[Not requested]

5. Accuracy and reliability

[Top](#)

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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.)

FSS2013 provides a farm population of 137,595 farms made up of the following:

- (i) 37,627 records from an FSS2013 sample survey **PLUS**
- (ii) 100,298 records confirmed active on administrative databases held by Ministry of Agriculture **PLUS**
- (iii) 60 pig farms not in (i) or (ii) above but confirmed active in a specialised Pig Survey held on same reference date **PLUS**
- (iv) 1,779 records not in (i) or (ii) or (iii) but confirmed active in FSS2010 and no evidence in the interim to suggest activity has ceased **PLUS**
- (v) 27 commonage areas.

196 farms were removed from the dataset at the end as no activity was found from any source.

The following are considered to be the main sources of error in FSS2013.

Coverage Error
Non-response Error
Measurement Error

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.

RSEs not required for main characteristics.

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.

Crops and livestock the data is available for each population unit from the sample combined with administrative sources or entirely from administrative sources, so there is no need to report the RSEs

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.

FSS2013 provides a farm population of 137,595 farms made up of the following:

- (i) 37,627 records from an FSS2013 sample survey **PLUS**
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- (iii) 60 pig farms not in (i) or (ii) above but confirmed active in a specialised Pig Survey held on same reference date **PLUS**
- (iv) 1,779 records not in (i) or (ii) or (iii) but confirmed active in FSS2010 and no evidence in the interim to suggest activity has ceased **PLUS**
- (v) 27 commonage areas.

196 farms were removed from the dataset at the end as no activity was found from any source.

All necessary steps were taken to ensure full coverage of the population. By combining both sample data and administrative data, a Census has been created for FSS2013. During FSS2013 full non-response was addressed by using administrative data to confirm level of activity and provide data. Therefore, bias due to non-response is considered to have been addressed.

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.

All necessary steps are taken to ensure full coverage of the population. The Agriculture Register, finalised after Census of Agriculture 2010, was further updated in April 2013 (prior to FSS2013) to add 3,879 new 'births' which had been identified as newly-active holdings on Ministry of Agriculture's administrative databases. Therefore, the Agriculture register contained 143,739 entries and was considered to be very comprehensive. The only units that could have been excluded were those farming but not registered on either of the two administrative databases (IACS & Bovine Register). However, the likelihood of a new farm not falling into one of these two databases is considered low.

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.

While 3,879 'births' were added to the register, it is not always easy to identify farm 'deaths'. However, page 1 of the FSS questionnaire asks the respondent to indicate if the holding has been sold or leased or if the registered holder has retired or is deceased. These units are subsequently marked as inactive and considered 'out-of-scope'. These out-of-scope units are taken into consideration when calculating survey weights, in that only in-scope responses are included when calculating the non-response weight.

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.

Units were initially classified according to data collected in Census of Agriculture (FSS) 2010 which was very comprehensive, extensively validated and agreed with Eurostat. Therefore, we do not consider misclassification to have been an issue. There is the possibility that units have increased/decreased in size and economic size since 2010 and moved into a new class size as a result but this is likely to have only affected a very small number of holdings. Therefore, there was no adjustment of strata prior to weighting up.

5.3.1.d Contact errors

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

The contact data was provided by the Agriculture Register. In some cases, the holder could not be reached at that address and the questionnaire was returned unopened. This occurred in just 28 cases. These were considered inactive and out of scope and excluded from the non-response weight calculation.

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.

While 3,879 'births' were added to the register, it was difficult to identify farm 'deaths' and this may lead to duplicate entries on the register if the new record related to a new owner taking over an existing farm holding. While every effort is made to eliminate these prior to issuing questionnaires, it was possible that some farms received two questionnaires. In some of these cases, farmers returned the second (blank) questionnaire with the completed questionnaire. To eliminate cases where two questionnaires were completed for the same holding, a thorough examination of data was carried out to identify records with identical data. This was done primarily using name and address matching, but also using several of the key variables. In all, approximately 145 duplicates were identified. These were considered inactive and out of scope and excluded from the non-response weight calculation.

5.3.1.f Other relevant information, if any

N/A

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).

Estimated at approximately 2.7%.

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.

The FSS2013 Survey Instrument is a paper questionnaire issued by post and self-completed by the respondent, not by a trained interviewer. Therefore, the interpretation of certain questions is difficult to control without having a trained interviewer present during completion. However, data are validated extensively at each stage of processing for consistency (with previous responses/ external data sources) and for coherence.

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

Data are validated extensively at each stage of processing for consistency (with previous responses/ external data sources) and for coherence.

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

Data are validated extensively at each stage of processing for consistency (with previous responses/ external data sources) and for coherence. Re-interview/Re-surveying does not occur.

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.

Unit non-response occurred when a sample unit declined to respond to the questionnaire, despite the issuing of four reminders. Non-response was assumed (as opposed to out-of-scope/inactivity) when a form wasn't returned. Administrative data was utilised where possible for farms which were found to be active on administrative files despite providing no response. Otherwise, imputation was used to impute certain characteristics for the non-sampled units to compile a full census.

However, there was no administrative data or robust imputation method available for a small number of FSS characteristics (organic data, machinery and equipment, other gainful activities and rural development). Therefore, these are available for the responding units only (n=37,627) and as such are weighted variables. Non-response was taken in to consideration when calculating weights for these particular variables.

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.

As all data on bovines and certain crops were collected from administrative records, only variables collected in the FSS paper questionnaire were affected by item non-response. This seemed to occur mostly in the farm labour, OGA and training sections. The FSS is a self-completed postal questionnaire (8 pages) and as such there may be respondent fatigue by the time these sections are reached. The data being collected are complex and do not work well in a postal questionnaire with no trained interviewer present during completion. It can therefore be difficult also to determine if the cells are empty due to non-response or are in fact real zero.

Where available, administrative data is used to impute for item non-response or to confirm real zero. In the absence of administrative data, data were imputed using regression if appropriate explanatory variables could be identified.

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).

The unit non-response rate was 29.5%.

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.

This was not captured.

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.

Each form was scrutinised before scanning to highlight any obvious errors. After scanning, the verification procedure ensured that any questionable cells were checked and corrected.

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.

Full imputation was carried out for non-respondents where the holding could be confirmed active in 2013 based on data held in administrative files.

Various methods and sources were employed to complete missing items. The sources relied upon included administrative files and previous survey returns, particularly Census of Agriculture (FSS) 2010. If these did not provide the missing data, imputation and regression were used to complete for missing items. Some of the areas affected are provided in Section 5.3.3.b.

5.3.4.c Imputation methods

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

Imputation techniques were used to complete the dataset for the population for the following characteristics which carry an extrapolation factor of 1:

Sheep: The annual Sheep & Goat Census carried out by the Ministry of Agriculture, which provides a register of all sheep producers with a reference date of December of each year. This was used to impute for missing sheep data. The number of breeding females (C_3_1_1) was taken from the Census and an expected non-breeding flock (C_3_1_99) per unit of breeding female was derived controlling for whether the farm was an upland or lowland holding (as this factor influences productivity per breeding female).

Labour: Where the age of the holder was not provided or a unit was not sampled, administrative files were first checked for a date of birth. If this failed, the age at the last Census in 2010 was checked if available and adjusted accordingly. Finally, if the age could still not be confirmed, the distribution of holder ages across all returns was examined and this distribution was used to randomly assign ages to the missing cases. In returns where the labour force section was left completely blank or in cases where the farm was not directly surveyed in 2013, regression techniques were utilised to provide a model for labour component of farms based on all available explanatory variables including area farmed, number of livestock, age of holder, gender of holder amongst others. Time spent was also regressed on explanatory variables.

Grass: Where no grassland area was provided for farms with bovines, the number of bovines in each category were used as explanatory variables in predicting a value for area of grassland.

Imputation techniques were used for the following characteristics which carry an Extrapolation Factor = Survey Weight

Machinery: Where data on machinery was not provided by a respondent, explanatory variables (UAA, livestock and area of cereals) were identified to predict a response for the machinery characteristics in the 37,627 sample returns.

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

Imputed and regression estimates were compiled by the Statisticians responsible for FSS2013 and all work was carried out in SAS.

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.

Plants Harvested Green (B_1_9) and Pasture and Meadow excluding rough grazing (B_3 minus B_3_2): Total grassland was available from administrative sources, however the breakdown between Plants harvested green and Pasture and Meadow was unavailable. Therefore the proportional breakdown of pasture and meadow and plants harvested green (from questionnaire) to total grassland (from administrative data) was applied to the non-surveyed units. Imputation rate for B_1_9 and B_3=72.6%

Fresh vegetables, melons and strawberries (B_1_7): For non-survey units, this value was imputed from Census of Agriculture 2010. Imputation rate: 72.6%

Fruit and Berry plantations (B_4_1): A value for apples was available from administrative data. However, a value for berries had to be imputed from Census of Agriculture 2010. Imputation rate: 72.6%

Administrative data was available for all other main characteristics.

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.

The best-fit explanatory variables were identified by observing the R-squared values and these variables were used to predict dependent variables where appropriate.

5.3.6. Data revision

N/A

5.3.6.1. Data revision - policy**Brief description of the revision policy**

Ireland does not have a revisions policy.

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.

Some revisions may take place arising from Eurostat validation checks. Otherwise, the data is considered to be final.

5.3.6.3. Data revision - average size

[Not requested]

5.3.7. Seasonal adjustment

[Not requested]

6. Timeliness and punctuality[Top](#)

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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.

FSS2013 results will not be published until the dataset and NMR have been validated and accepted by Eurostat. However, totals for crops and cattles for 2013 gathered from administrative data sources were published in October 2013 as part of annual time series publications for crops & livestock required under EU Regulation 1165/2008 (Livestock) and EU Regulation 543/2009 (Crops).

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.

FSS2013 results will not be published until the dataset and NMR have been validated and accepted by Eurostat. However, totals for crops and cattles for 2013 gathered from administrative data sources were published in June 2014 as part of annual time series publications for crops & livestock required under EU Regulation 1165/2008 (Livestock) and EU Regulation 543/2009 (Crops).

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.

Initial Delivery of FSS2013 to Eurostat = On schedule (Sent Dec 18th 2014)

Final Delivery of FSS2013 to Eurostat = April 30th 2015

FSS2013 results will not be published until the dataset and NMR have been validated and accepted by Eurostat.

7. Accessibility and clarity[Top](#)

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7.1. Dissemination format - News release

[Not requested]

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.

1. Some results for June 2013 were published nationally on October 14th 2013 as "Crops and Livestock Survey June 2013 Provisional estimates". This publication covered cereals, potatoes, cattle and sheep at National level.

2. Final areas of crops and numbers of livestock for June 2013 were published on June 19th 2014 as "Crops and Livestock June 2013 Final Results". This publication provided details of crops at national and regional level and cattle at national, regional and county level, and results for sheep, pigs and other livestock at national and regional level. Background notes are provided with the data.

3. A final FSS publication detailing farms by size, type, economic size and detailed farm labour force data will be published once NMR and FSS2013 dataset have been validated and accepted by Eurostat . The data tables will be accompanied by background notes on data collection, derivation of farm typology, livestock unit coefficients and a copy of the questionnaire.

7.2.b Date of issuing (actual or planned)

1. Published nationally on October 14th 2013.

2. Published nationally on June 19th 2014

3. To be published mid-2015

7.2.c References for on-line publications.

1. <http://www.cso.ie/en/releasesandpublications/er/clsjp/cropsandlivestocksurveyjuneprovisional2013/#.VHSf4dJFU0Y>
2. <http://www.cso.ie/en/releasesandpublications/er/clsjf/cropsandlivestocksurveyjunefinal2014/#.VdScRbJViko>

7.3. Dissemination format - online database

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

1. AAA08 Number of cattle in June by type of cattle, region, county and year
<http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=AAA08&PLanguage=0>
2. AAA07 Number of livestock in June by type of animal, region and year
<http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=AAA07&PLanguage=0>
3. Area Farmed in June by type of land use, region and year
<http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=AQA05&PLanguage=0>

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.

tba

7.4. Dissemination format - microdata access

[Not requested]

7.5. Documentation on methodology**7.5.a Available documentation on methodology on FSS national survey**

Please provide references.

National Methodological Report (as requested by Eurostat) is the main methodological document for FSS.

7.5.b Main scientific references

Please provide references.

n/a

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.

National Methodological Report as requested by Eurostat

7.7. Dissemination format - other

[Not requested]

8. Comparability

[Top](#)

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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.

An "agricultural holding" is defined in accordance with Regulation 1166/2008. That is, "a single unit, both technically and economically, which has a single management and which undertakes

agricultural activities listed in Annex I within the economic territory of the European Union, either as its primary or secondary activity";

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.

No thresholds were applied. The population covered in the national survey is the same as that delivered 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 characteristics collected in FSS 2013 correspond to the list of characteristics provided in Annex III of Regulation (EC) No.1166/2008.

The 10th version of the 'Handbook on implementing the FSS and SAPM definitions' was used to define the variables.

1,800 hours per annum for a fulltime employee is used to calculate the Annual Work Unit

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.

There are 27 special holdings for common land, covering 423, 020 ha. This estimate was obtained from the Irish agriculture ministry, DAFM. This data is the most accurate data in the state for declared commonage and follows a year-long review undertaken by DAFM of all declared common land in Ireland. This comprehensive review occurred in 2009/2010, and consisted of physical inspections of the areas and/or a review of the ortho-imagery. It involved excluding all ineligible features such as scrub, rock, roadways, forests etc to construct accurate areas.

In terms of tenure, common land is treated as shared farming. Only common land appears in this category.

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.

None known.

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.

The estimate of Common Land was 423,020 hectares for 2013 and was obtained from the Agriculture Ministry, DAFM.

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.

27 specially created holdings.

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.

Coordinates have been provided for the 37,627 units which were surveyed. These coordinates were provided by the Integrated Administration and Control System (IACS) database received from the Ministry of Agriculture. Geo-coordinates for any of the 37,627 holdings that did not appear on the IACS database were derived. The address of the holding (which was available on the NSI Agriculture Register) was used to determine the appropriate NUTS 5 region, and this NUTS 5 region allowed us to create geo-ordinates.

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).

The coordinates are Irish National Grid System coordinates, and these were transformed into ETRS89 system coordinates using GIS software.

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).

Exact co-ordinates were provided. No rounding applied.

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).

The majority of the total area of the holding where the holding is located. The largest parcel of land on each farm was used as the reference parcel to allocate a farm into the various NUTS regions.

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).

In Ireland, all the EU standards and rules of organic certification as per the relevant Council Regulations viz: Council Reg 834/2007 and 889/2008 have been implemented. However, our Ministry of Agriculture confirmed that higher standards are adopted by two certifying Bodies which in some areas go beyond the EU Regulations.

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.

No changes.

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:

- There have been no changes.
- There have been some changes but not enough to warrant the designation of a break in series.
- 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.

No changes.

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:

- There have been some changes but not enough to warrant the designation of a break in series.
- 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.

No changes.

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.

By combining both sample data and administrative data, a Census has been created some of the characteristics in FSS2013.

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.

Utilised Agricultural Area (UAA) data for FSS reference years prior to 2010 has always excluded Common Land. To address this, an estimate of 422,415 hectares of common land was submitted to Eurostat in February 2011, pertaining to FSS 2007. Therefore the total UAA (including Common Land) for 2007 is now estimated at 4,558,941 hectares. The same total of 422,415 hectares was transmitted in respect of FSS2010 and a total of 423,020 hectares has now been transmitted in respect of FSS2013. Common Land data for FSS 2013 and FSS 2010 are based on the same methodology.

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.

The number of specially-created common land holdings remains at 27 as provided in FSS2010. The total area has increased from 422.415 hectares in 2010 to 423,020 hectares in 2013.

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
A_3_2_1	38934	24854.44	56.65	This increase is slightly offset by a decrease in A_3_2_2 of 2,682ha. We are aware that the Ministry sends organic data to Eurostat, but have not been able to use this data as a source. Therefore, the FSS questionnaire is our only source of data. The 2013 FSS estimate, while higher than 2010 is much closer to the estimate from the Ministry of 47,077.64ha.
A_3_2_2	4097	6779.08	-39.56	This decrease is offset by an increase in A_3_2_1. We are aware that the Ministry sends organic data to Eurostat, but have not been able to use this data as a source. Therefore, the FSS questionnaire is our only source of data.
A_3_2_3	43031	31633.52	36.03	We are aware that the Ministry sends organic data to Eurostat, but have not been able to use this data as a source. Therefore, the FSS questionnaire is our only source of data. The 2013 FSS estimate, while higher than 2010 is much closer to the estimate from the Ministry of 53812.21ha.
A_3_2_3_1	6373	1805.81	252.92	There has been an increase in both organic cereal and pasture, though proportionally the increase is much higher in cereals. It is difficult to say whether this is a real change or due to some methodological issues, as

A_3_2_3_7	36658	29782.03 23.09	the data in both years is of poor quality. There has been an increase in both organic cereal and pasture, though proportionally the increase is much higher in cereals. It is difficult to say whether this is a real change or due to some methodological issues, as the data in both years is of poor quality.
A_3_2_3_99	0	45.68- 100.00	Zero area/output
A_3_2_4_1	45637	35545 28.39	Data quality generally considered poor for this variable in the questionnaire. Similar issues in FSS 2010.
A_3_2_4_3	60962	36918 65.13	Data quality generally considered poor for this variable in the questionnaire. Similar issues in FSS 2010
A_3_2_4_4	72002	76871- 6.33	Data quality generally considered poor for this variable in the questionnaire. Similar issues in FSS 2010
B_1_1	307841.22	273897.56 12.39	Data completely from administrative sources, which have shown an increase over the period.
B_1_1_1	60600.64	77823.63- 22.13	Data completely from administrative sources, decrease evident 2012-2013. Corresponding increase in oats and barley in the year suggests a change in crop production type.
B_1_1_4	219466.69	174799.8 25.55	Data completely from administrative sources, increase evident 2012-2013. Corresponding decrease in wheat in the year suggests a change in crop production type.
B_1_1_5	26658.27	19706.68 35.28	Data completely from administrative sources, increase evident 2012-2013. Corresponding decrease in wheat in the year suggests a change in crop production type.
B_1_1_99	1115.62	1567.45- 28.83	Data completely from administrative sources, comprised of millet, triticale and rye.
B_1_11	12.48	45.68- 72.68	This data comes from administrative sources. The crop is linseed. The area is very small.
B_1_12_1	836.95	409.24 104.51	The only source of data for this is the FSS questionnaire. For the non-respondents, the figure was imputed using 2010 data. Therefore, the increase is among questionnaire respondents. We have no administrative data against which to check this figure. However, the area is small.
B_1_12_2	13457.79	4196.39 220.70	There are a number of payment schemes that are now included in this variable that were not in 2010, including 4937ha in REPS 4 New (Rural Environmental Protection Scheme) and 1942ha of wild bird cover.
B_1_3	10736.5	12198.13- 11.98	Both years data taken directly from administrative sources. Similar drop evident in ACS and Land Use.>
B_1_6	16421.26	12584.54 30.49	Similar increase in industrial crops evident since 2010 in Land Use and ACS (+25%)
B_1_6_4	13688.38	7978.71 71.56	Both data taken directly from administrative sources. There has been a move within the industry to increase the area of this crop.
B_1_6_99	2732.88	4605.83- 40.66	25% drop in administrative data for miscanthus alone. This crop has seen a decrease in popularity.
B_1_7	4451.53	5262.09- 15.40	Relatively small area. There has been an annual drop in the area of vegetables and peas farmed since 2010 according to administrative data. Vegetables dominate is characteristic, making up 78% of the total area.
B_1_7_1	4407.66	5236.52- 15.83	See above.
B_1_7_1_1	3967.49	4601.28- 13.77	See above.
B_1_7_1_2	440.17	635.24- 30.71	Very small area.
B_1_7_2	43.87	25.57 71.57	Very small area.
B_1_8	428.48	226.14 89.48	Very small area. Increase evident in administrative data.
B_1_8_1	288.72	193.75 49.02	Very small area .Increase evident in administrative data.>
B_1_8_2	139.76	32.39 331.49	Very small area. Increase evident in administrative data.
B_1_9_2	18503.66	26899.6- 31.21	See B_1_9_2_1. Difference mainly due to decline in maize.
B_1_9_2_1	14545.13	22846.27- 36.33	All data from administrative sources indicates national decline.
B_2	120.79	151.79- 20.42	Very small area with a lot of variability.
B_3_3	909.43	1428.39- 36.33	Some or all of this may have moved into fallow. Relatively small area.
B_4	1593.93	968.06 64.65	Increase mainly in nurseries, with some increase in apples also (See B_4_5 and B_4_1)
B_4_1_1	720.37	632.41 3.91	Very small area. Administrative data shows annual increase in apples since 2010.
B_4_1_1_1	720.37	632.41 3.91	Very small area. Administrative data shows annual increase in apples since 2010.
B_4_1_2	218.84	249.22- 12.19	Very small area. Administrative data indicates a drop in fruit of 40ha between 2012 and 2013.
B_4_5	184.41	86.44 113.34	Very small area. Increase evident in administrative data also.
B_4_7	0	0	Zero area/output
B_5_2_1	467.1	418.84 11.52	Very small area. 2013 figure matches administrative data.
B_6_1	34.6431	40.87- 15.24	Very small area. Reason for difference unclear.
B_6_3	2732.88	4605.83- 40.66	See B_1_6_99
C_2_1	1968473	1761250 11.77	Administrative data (Bovine Register)
C_2_2	872897	760694 14.75	Administrative data (Bovine Register)

C_2_4	429,408	557776-23.01	Administrative data (Bovine Register)
C_2_5	380135	426215-10.81	Administrative data (Bovine Register)
C_4_2	143244	159739-10.33	Drop is just over 10%.
C_5_3	468125	38741920.83	High variability around this variable.
E_1_3_M_100	8684	9817-11.54	Offset by an increase in male non-family workers working 100% AWU. Overall, male non-family AWU increased by 6%.
E_1_4_M_25_49	2692	244310.19	Offset by a slight decrease in male non-family workers working 25-<50% and 75-<100% AWU. Overall, male non-family AWU increased by 6%.
E_1_4_M_75_99	1944	175011.09	Offset by a slight decrease in male non-family workers working 100% AWU. Overall, male non-family AWU increased by 6%.
E_2_3_2	4062	326424.45	Employment has increased in Ireland over the period, therefore we would expect an increase in off-farm employment
E_2_4_1	188	14529.66	Numbers are very small and subject to higher error.

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

Wherever possible, FSS data were also compared with other sources including administrative data. However, such comparisons can be made difficult by differences in definitions and/or reference periods and as such can be of limited use.

8.3.b Comparisons at macro level

Wherever possible, FSS data were also compared with other sources. However, such comparisons can be made difficult by differences in definitions and/or reference periods and as such can be of limited use.

9. Coherence

[Top](#)

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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.

Wherever possible, FSS data were also compared with other available sources and data in other domains. However, such comparisons can be difficult where differences in definitions and/or reference periods exist and as such may be of limited use. Therefore FSS data cannot be combined with other sources.

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

[Top](#)

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.

While the FSS data is not collected in another CSO survey, the annual June agriculture survey is replaced by the FSS in FSS years.

The utilisation of Bovine Register and IACS register eliminates the need for farmers to provide this data.

The CSO is focused on continuously reducing the response burden on farmers. The final section of the FSS questionnaire, and indeed every agricultural survey, asks the respondent to indicate, in minutes, how long it took to complete the form. This allows CSO to measure the change in response burden from year to year.

11. Confidentiality

[Top](#)

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.

All information returned on FSS questionnaires is treated as strictly confidential and is used for statistical purposes only. This is guaranteed by both Irish and EU law.

Section 33 of the Statistics Act 1993 states:

33.-(1) *No information obtained in any way under this Act or the repealed enactments which can be related to an identifiable person or undertaking shall, except with the written consent of that person or undertaking or the personal representative or next-of-kin of a deceased person, be disseminated, shown or communicated to any person or body except as follows-*

(a) *for the purposes of a prosecution for an offence under this Act;*

(b) *to officers of statistics in the course of their duties under this Act;*

(c) *for the purposes of recording such information solely for the use of the Office in such form and manner as is provided for by a contract in writing made by the Director General which protects its confidentiality to his satisfaction.*

There are usually only a very small number of requests for access to microdata, if any. Applicants must submit a detailed application through the Research Microdata File (RMF) application which requests comprehensive details around the researcher, the purpose of the research and the proposed outputs. The application goes through several layers of approval with the final approval always resting with the Director General of the CSO. Where approved, data may not be taken off-site and is accessed on a stand-alone PC with no network or internet connections. All outputs are placed in a folder to be examined by the Data Custodian to ensure there are no breaches of confidentiality.

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).

In the national release, a category is primary confidential if any one of the following conditions applies:

- there are three or less units
- one unit accounts for more than 80% of the total (dominance rule 1)
- two units account for more than 90% of the total (dominance rule 2)

A category is secondary confidential if publishing that category indirectly reveals information about a confidential category.

12. Statistical processing

[Top](#)

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. FSS 2013 Project Initiation

- December 2012: Transmission of NE/NS characteristics to ESTAT.
- February 2013: Project Plan development
- February - March 2013: Consultation with Stakeholders

2. Census Preparations/Survey Design

- Feb-Mar 2013: Design of questionnaire
- March 2013: Testing of questionnaire for electronic scanning
- May 2013: Printing of questionnaire

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*

Apr-May 2013: Selection & Training of temporary processing staff

A pilot survey was not carried out as the FSS questionnaire was quite similar in content and design to questionnaires issued in previous agricultural surveys. The questionnaire was circulated to a small number of people with agricultural expertise for review prior to being launched and this process provided constructive feedback which was incorporated into the final version of the questionnaire. The accompanying information booklet was designed to add clarity to the data being collected.

3. Survey Management

- Feb 2013 - April 2013: Update Farm Register
- May 2013: Issue FSS2013 postal Questionnaire
- June-Sept 2013: Returns received
- June 2013: 1st reminder notice issued
- July 2013: 2nd reminder notice issued
- July 2013: 3rd reminder notice issued
- August 2013: 4th reminder notice issued

4. Data Capture/Data Processing /Data analysis

- June-Oct 2013: Returns electronically scanned and verified
- August 2013-Dec 2013: Data on paper returns edited
- Nov 2013-Jan 2014: Integrate provisional administrative data with survey returns
- Apr 2014 - Oct 2014 : Integrate final administrative data with survey returns and check data for coherence
- Oct 2014 - Jan 2015: Imputation & weighting; check aggregates
- Jan 2015-April 2015: Impute for missing units to provide a full Census for FSS2013.

5. Data Dissemination

- September 2013: Pig results (2013) published
- October 2013: Provisional crops and livestock results published (state-level only)
- June 2014: Final crops and livestock results published (regional level)
- December 2014: First FSS2013 Micro-data file coded to Eurofarm format & transmitted
- December 2014: Draft National Methodological report transmitted
- April 2015: Final FSS2013 Micro-data file coded to Eurofarm format & transmitted
- April 2015: Final National Methodological report transmitted

12.b The bodies involved and the split of responsibilities among bodies with respect to the main steps of the survey process

The FSS2013 was carried out by the Agriculture Division within the Central Statistics Office.

The project team consisted of 8 core processing staff, 2 Statisticians (one of whom was Project Manager) and 1 Senior Statistician. A further 11 CSO staff were assigned on a temporary basis for data processing between May and October 2013. Together these staff made up the project team.

This team was responsible for all aspects of FSS2013 from project planning and survey management through to dissemination of results. The team updated the farm register, designed and issued the FSS questionnaire and reminder notices, receipted and scrutinised questionnaires returned, scanned and verified data. The team then moved on to merging questionnaire data with administrative data and finally analysis of data and preparation of results for transmission to Eurostat and national publications.

It was also responsible for a specialist survey of large pig units (320 units), carried out as part of the FSS.

The CSO has its own internal Printing section which produced the questionnaires and accompanying information booklets. The CSO has an Office Services Unit which provided support in managing the large volumes of outgoing and incoming post.

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.

An agricultural holding was defined, in line with the definition in Article 2 of Council Regulation 1166/2008 as 'a single unit, both technically and economically, which has a single management and which undertakes agricultural activities within the economic territory of the European Union, either as its primary or secondary activity'

Activities considered 'agricultural' for the purposes of the definition above as outlined in Annex 1 of Regulation 1166/2008, and include the growing of perennial and non-perennial crops, plant propagation, animal production, mixed farming and/or those maintaining agricultural land in good agricultural and environmental condition (under 01.61 of NACE Rev. 2).

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 NSI Agricultural Register used contained 143,739 agricultural holdings.

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).

A minimum size threshold of 1 hectare, as per Article 3 of Regulation 1166/2008, was not applied in advance of the FSS2013 survey. Excluding such units could significantly reduce state-level results for some characteristics that are more frequent on smaller holdings (e.g. goats, pigs, or poultry). In addition, there is a sizeable amount of common land in the state, which can allow very small land holders to keep significant numbers of livestock (sheep in particular). The target population of FSS2013 was all agricultural holdings in Ireland, irrespective of size.

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).

The estimated number of agricultural holdings in 2013 was 139,595, which includes 27 commonage units.

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 from the national survey coverage. If yes, please indicate the differences and how you selected the records sent to Eurostat.

Survey coverage is the same as the national coverage

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).

All 139,568 holdings were covered by the records transferred to Eurostat, along with 27 commonage areas. Therefore, the file transmitted contained 139,595 observations.

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.

SO not provided in micro-data file.

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.

No threshold was used in the FSS and the full population of holdings on the agricultural register was taken into consideration for FSS 2013. There is no threshold for inclusion on the register.

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.

The agricultural register used for FSS2013 was based on the register used for FSS2010 with new farm holdings ('births') instituted since 2010. The NSI Agriculture register contained 143,739 agricultural holdings. By combining both sample data and administrative data and imputing for any further variables required, a Census has been created for FSS2013 for most of the characteristics. FSS2013 provides a farm population of 139,595 farms as follows:

- i) 37,627 records from an FSS2013 sample survey PLUS
- (ii) 100,102 records confirmed active on administrative databases held by Ministry of Agriculture PLUS
- (iii) 60 pig farms not in (i) or (ii) above but confirmed active in a specialised Pig Survey held on same reference date PLUS
- (iv) 1,779 records not in (i) or (ii) or (iii) but confirmed active in FSS2010 and no evidence in the interim to suggest activity has ceased PLUS
- (v) 27 commonage areas.

FSS 2013 used a combination of both administrative records and completed paper questionnaires and imputation techniques to compile the required data. In an effort to reduce the response burden on farmers, all questions relating to cattle, cereals and potatoes were eliminated from the FSS 2013 questionnaire as the relevant data were available from administrative data files provided by DAFM.

The agricultural register used for FSS2013 was based on the register used for FSS2010 with new farm holdings ('births') instituted since 2010. The NSI Agriculture register contained 143,739 agricultural holdings.

A supplementary pig questionnaire was sent to a sample of 320 pig farmers. These were farmers who returned 100 or more pigs in one or more of the preceding four pig surveys (June 2011, December 2011, June 2012 and December 2012). This questionnaire allowed the pig producer to provide additional breakdowns of the breeding sows and of the non-breeding categories, a format which they were already familiar with.

All of the main characteristics are provided for the full population through a combination of administrative and survey data sources.

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 Farm Register was compiled using a combination of the pre-existing CSO Farm Register and two administrative databases held by the DAFM, namely the Corporate Client System (CCS) and the Animal Identification and Movement (AIM) system:

- (i) The **pre-existing CSO Farm Register** was created for the last FSS which took place in 2010. This register was maintained by the CSO Agriculture Register Section and updated with births and deaths identified in the annual June and December surveys between 2010 and 2013, which incorporates SPS (IACS) data. It was used as the sampling frame for every agriculture survey that was carried out by CSO since 2010. The availability of administrative files since 2010 ensures that now all entries on this register can be checked on an annual basis for activity and accurate contact details. The CSO register holds only contact information and location details. The register does not hold any structural variables.
- (ii) The **CCS database** was received from DAFM in Spring 2013. This contained records consisting of the name, address, telephone number, email, date of birth, and herd number of every farmer considered to be active by DAFM. The CCS database is separate to the IACS database but contains all of the holdings that are on the IACS system. The CCS database was used solely for the purposes of building the register. No statistical data was extracted from the CCS.
- (iii) The **AIM database** was received from DAFM in Spring 2013. Any record without a corresponding entry in CCS (ii above) were added to the Register. The resulting register was used as the frame for the FSS2013.

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.

Multiple list frames

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

See 12.1.c.1

12.1.d Sampling design

Section 12.1.d should be completed only in 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.

The sample was a multi-stage probability 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.

Farms were selected using data from Census of Agriculture 2010. The selection process comprised of 10 stages. There were a number of stages for whom we wanted to have a 100% sample. Farms selected for stage 1 and 2 were defined because of their importance in terms of their land use and economic activity respectively. Stages 3-7 were chosen due to their specialist nature and their relatively small population. Sheep farms were selected in stage 8, as we do not have an administrative data source for sheep and a matched sample is required annually for which we have a minimum sample size. Stage 9 included all new births. The remainder of the sample was selected in stage 10.

The specific order of selection was as follows:

1. All farms greater than or equal to 100 ha
2. All farms with a Standard Output of greater than or equal to €100,000
3. All Pig farms (farms with greater than or equal to 50 pigs)
4. All Poultry farms (farms with greater than or equal to 100 birds)
5. All horticulture farms (farms with any horticulture)
6. All apple farms (farms with any apples)
7. All flower farms (farms with any flowers)
8. Sheep farms, for which we had a target sample of 6,000. Firstly, we generated a matched sample with the June 2012 survey, which resulted in 3,802 sheep farms. In order to reach the target sample of 6,000, we then selected 2,198 farms from the remaining sheep farms on the census file, selected proportionally by county.
9. Stratum 9 consisted of all new births according to administrative files. Initially we expected 4,000 births and decided on the size of the remaining FSS sample based on that number. However, once the births were checked and duplicates identified, the final number of births was 3,880.
10. Stratum 1-9 initially resulted in 23,948 units selected into the sample. In order to generate a final sample of 55,000, 31,051 units needed to be selected from the remaining 96,409 units on the sampling frame that were not included in stratum 1-9 and were not sheep farmers (as these were involved in the selection process for Stratum 8). These units were selected based on NUTS2 region and farm size using the Neyman allocation method according to area farmed, and resulted in 10 additional strata.

The final sample was checked for duplicates or inactivity on the Agricultural Register, which resulted in dropping 211 units from the sample. This resulted in a final sample of 54,669.

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 was the farm holdings.

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.

Farms were initially selected by specialist type, then by region and size (see 12.1.d.2)

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.

Sampling was exhaustive for the specialist farms (stages 1-7) and for new births (stage 9). Sheep farms (stage 8) were selected using a combination of a matched sample and systematic sampling by county. The remaining stage was a stratified sample based on NUTS2 and farm size.

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).

The following farms had complete enumeration:

1. All farms greater than or equal to 100 ha
2. All farms with a Standard Output of greater than or equal to €100,000
3. All Pig farms (farms with greater than or equal to 50 pigs)
4. All Poultry farms (farms with greater than or equal to 100 birds)
5. All horticulture farms (farms with any horticulture)
6. All apple farms (farms with any apples)
7. All flower farms (farms with any flowers)

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.

Final sample size was 54,669.

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.

A new sample was selected from the register.

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

The sample was selected in SAS

12.1.d.10 other relevant information, if any**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.

The main administrative data files used were:

1. the Integrated Administration and Control System (IACS). This is provided according to Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers and amending Regulations (EEC) No 2019/93, (EC) No 1452/2001, (EC) No 1453/2001, (EC) No 1454/2001, (EC) 1868/94, (EC) No 1251/1999, (EC) No 1254/1999, (EC) No 1673/2000, (EEC) No 2358/71 and (EC) No 2529/2001 [1].
2. the System for the Identification and Registration of Bovine Animals. This is provided according to Regulation (EC) No 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation (EC) No 820/97 [2].

Data on cereals and potatoes were obtained from DAFM's Single Payment Scheme (Council Regulation No 1782/2003) while all data on cattle was obtained from DAFM's Animal Identification and Movement system (Council Regulation No 1760/2000). The use of these administrative data sources was provided for under Article 4.1 of the FSS regulation. The earliest application date for the SPS is March, and the closing date for applications was May, so while the reference date does not correspond exactly to our FSS reference date of 01/06/2013, the information in the SPS dataset was still usable for FSS2013 as it represented what was in the ground for the harvest year.

In addition to the above, the **Corporate Client System database** was received from our Ministry of Agriculture (DAFM) in Spring 2013 for the purpose of enhancing the Agriculture Register held by this NSI. This contained records consisting of the name, address, telephone number, email, date of birth, and herd number of every farmer considered to be active by DAFM. The CCS database is held separately to the IACS database but does contain all of the holdings that are on the IACS system. The CCS database was used solely for the purposes of building the register. No survey data was extracted from the CCS.

[1] OJ No. L270, 21.10.2003,p.1.

[2] OJ No. L204, 11.08.2000,p.1.

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.

The reporting unit in the SPS (IACS) and the AIM databases is the Herd Number. Each herd number represents a farm holding in Ireland. All holdings are identified by their herd number and all data is linked based on herd number as this is the unique identifier. It is important to point out that all holdings have a herd number, irrespective of whether they hold any livestock or not.

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

Purpose	Administrative source <i>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).</i>
- to totally replace the survey, on all characteristics and on the whole survey population	No.
	AIM system (Bovine Register) The AIM system contains information on the following variables: <ul style="list-style-type: none"> • Herd Number – Unique identifier • Tag number • Gender • Date of birth • Herd of origin • Breed

<p>- to replace the survey on some of the characteristics and on the whole survey population. <i>Please indicate these (groups of) characteristics, the common identifiers and the method(s) of integration (record linkage algorithm).</i></p>	<ul style="list-style-type: none"> • Breed type (dairy or beef) • Animal class (cow/heifer, bull etc) • Details of whether the animal has ever calved. <p>This information makes it possible to compile estimates for the Bovine characteristics C_2 to C_2_99. These characteristics can all be directly computed based on the age and gender of the animal as recorded in the AIM database.</p> <p>The fact that the AIM system is the definitive register of cattle owners in Ireland implies that the coverage provided by this data source is more complete than by sample survey, and the system of fines for non-compliance with the AIM scheme incentivises farmers to keep its information up to date. As farmers must supply the date of birth when registering an animal, the AIM data for age is likely to be much more accurate than for survey data.</p> <p>A snapshot of the cattle population for a specific point in time can be extracted from the AIM system.</p> <p>Data from the AIM system is used for both building the register and to replace the collection of cattle variables on the survey form, therefore reducing response burden.</p> <p>SPS system (IACS database)</p> <p>The Single Payment System database is also known as the Integrated Administration and Control System (IACS) and contains the following variables:</p> <ul style="list-style-type: none"> • Herd Number – Unique identifier • Parcel ID – ID number of each separate parcel of land • Crop name – type of crop that is planted on the particular parcel • Area claimed – area (in hectares) being claimed for the parcel • X high, X low, Y high, Y low – co-ordinates based on the Irish National Grid reference system for each parcel <p>Data for each parcel of land in the SPS system is aggregated to the farm level.</p> <p>There are 78 different crop types in the SPS system.</p> <p>The X high, X low, Y high, Y low – co-ordinates from SPS were converted from the Irish National Grid system to ETRS89.</p> <p>X, Y co-ordinates for any holdings that are missing this information can be easily imputed based on the Region and DED(District Electoral Division) code.</p> <p>Data from the SPS system is used for both building the register and to replace the collection of selected crop variables on the survey form, therefore reducing response burden.</p> <p>The percentage of farmers who do not apply for payment under this scheme is now very small in number and in land area.</p>
<p>- to replace the survey on all characteristics and on a part of the survey population</p>	<p>N/A</p>
<p>- to replace the survey on some of the characteristics and on a part of the survey population. <i>Please indicate these (groups of) characteristics, the common identifiers and the method(s) of integration (record linkage algorithm).</i></p>	<p>N/A</p>
<p>- to build/update the (sampling) frame (used for census or for sample survey)</p>	<p>See also Section 12.1.c.1 -Source of the Frame. The Corporate Client System database The AIM database (Bovine REGISTER) The SPS (IACS) dataset</p>
<p>- to pre-fill answers in the questionnaires which are then checked by farmers during the survey</p>	<p>No</p>
<p>- to impute item/unit non-response</p>	<p>Where the respondent may have indicated that the farm holding was no longer active, both IACS & Bovine Register were used to confirm this was the case.</p>
<p>- to validate the survey data (quality control). <i>Please indicate actions taken in case of large</i></p>	<p>There were only a small number of crop characteristics which were provided by both survey return and IACS. In the case of any large discrepancies, the respondent's questionnaire was re-examined for any data entry errors or respondent inconsistency</p>

<i>discrepancies</i>	across survey periods. If the discrepancy could not be resolved the IACS data was taken to be correct as this is extensively audited by our Ministry of Agriculture.
- to calibrate of survey estimates. <i>Please indicate the calibration variables</i>	A small overall adjustment factor (139568/139860=.9979) was applied to the weight to account for the very slight change in population between 2010 and 2013.
- other (<i>please specify in the next column</i>)	

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.

Thorough checks were performed on all of the administrative databases that were used for the FSS. Records were joined across databases using the Herd Number identifier. In some but not all instances, farm holdings may have more than one herd number which complicates the linking process.

To reduce the possibility of under-coverage, all of the administrative databases were merged together with the existing CSO agriculture register and the union of all of these records was used to establish the 2013 Register of Farm holdings.

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 <i>Please specify the name of the administrative source(s) in this column, along with information required for each row.</i>
-coverage:		
	- over-coverage <i>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.</i>	N/A
	- under-coverage <i>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.</i>	A small number of small farms without Bovines and without IACS payment entitlements, may fall outside of the scope of administrative databases. We estimate this to be 1.3% of farms ((1779+60)/139568). However these are captured through the NSI Agriculture Register.
	- misclassification <i>Please mention whether the information allows for the requested classification of units and whether there are errors in classification variables.</i>	Farms are not classified on administrative databases.
	- multiple listings <i>Please provide an assessment on units which were present more than once in the source and specify how the duplicates were eliminated.</i>	Names and addresses and dates of birth examined.
	- rate of unreported events <i>If data of the System for the Identification and Registration of Bovine Animals is used, please provide an assessment of the rate of unreported</i>	This is not considered an issue as both the Bovine Register and IACS are subject to

<i>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.</i>	extensive audits and inspections.
- missing data (analogue to item and unit non-response errors in a survey). <i>Please provide an assessment of missing data, specify for which characteristics and how it was accounted for (e.g. by imputation).</i>	All cells were complete in the administrative database.
- errors in register variables (analogue to measurement errors in a survey) i.e. erroneous values for certain variables	Referred back to Ministry of Agriculture. Very very rare.
- processing errors. <i>Please provide an assessment. You can mention here imputation methods used, if any.</i>	Well-established processing systems which are carried out bi-annually (IACS) and Quarterly (Bovine Register) and also well documented.
- coherence (comparison to other available data) of the administrative data (ex-ante and/or ex-post)	N/A
- other drawbacks (if any) of the use of data from the administrative source. <i>Please specify the drawbacks in the next column.</i>	

[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.

A Farm Structure Survey (FSS) is carried out approximately every three years to measure changes in farm structure between Censuses. Between COA 2010 and 2020 there are Farm Structure Surveys in 2013 and 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.

By combining both sample survey data and administrative data and imputing for any further variables required, a Census has been created for FSS2013 for most of the characteristics. The survey data was collected as follows:

An 8-page A4 sized questionnaire (*see Annex III*) was issued to all farm holdings in the week prior to June 1st 2013. to be completed and returned to the CSO by Friday 7th June 2013. This was accompanied by an information booklet (*see Annex IV*) with detailed notes on each section of the questionnaire. Four reminders were issued in order to maximise the response rate.

A separate 2-page A4 sized questionnaire (*see Annex V*) was also issued to all specialist pig-producers.

The paper questionnaires returned to the CSO were batched, receipted and scrutinised. They were then electronically scanned, verified and edited.

The FSS survey data were collected entirely by post (ie no interviewers). Each questionnaire issued included a pre-addressed freepost reply envelope. The return address on the reply envelope was to a dedicated Post Office Boxes which were used exclusively for the Census of Agriculture. The advantage of this method was that post was segregated from other post when it was delivered to the CSO and the national Post Office was able to provide an exact count of how many envelopes were returned this way. The envelopes were mechanically cut open across the top and the questionnaire held within was removed manually.

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.

OCI scanning directly captured the respondents reply to every question on the form. Each question had an answer field with a specific box for each digit to be entered (or ticks in the case of tick-box questions). The OCI software created an image of each questionnaire. Where the OCI software could not clearly identify a numeric or character value entered on the questionnaire, the software 'held' the questionnaire for review by a member of staff. Once this verification process was completed the data on the questionnaire was written to a flat file for import into the CSO Data Management Systems' Data Entry module. A series of checks were run to ensure that the data returned was consistent (e.g. to ensure that totals equaled the sum of their parts, to ensure that livestock holdings returned sufficient grazing land etc.). Once these checks were completed, a 'clean-unit' copy of the data was available to be merged with administrative data and this produced a complete, or almost complete, record for each holding.

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.

The rate of return of questionnaires was monitored daily. When the response rate began to decline below targets, a reminder notice was issued to those who had not yet responded. In total four reminder notices were issued between June 2013 and August 2013. The second and fourth reminder notices also included a copy of the questionnaire, in case the original had been mislaid. A limited number of non-respondents were phoned. These consisted almost entirely of specialised pig holdings.

The questionnaire was issued to 54,669 holdings in the last week of May 2013. To increase the response rate four written reminders were posted out to non-respondents between June-August 2013. 73.5% (40,233) of the issued questionnaires were returned. Of these, 36,502 were considered active farms.

[1] <http://www.cso.ie/en/surveysandmethodology/agricultureandfishing/censusofagriculture2010/>

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.	<p>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</p>	139,595 (includes common land units)
2.	<p>Number of holdings in the gross sample The number of holdings selected from the sampling frame to be included in the sample. <u>This item should be completed only in case of a sample survey, in which case</u> 2=3+4+5</p>	54,669

3.	(new) Number of ineligible holdings <i>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.</i>	
3.1	Number of holdings with ceased activities <i>This item is a subset of 3.</i> 3.1>=3.1.1+3.1.2	1,282
3.1.1	Number of holdings which definitively ceased i.e. the land is abandoned. <i>This item should be completed only if information is available.</i>	0
3.1.2	Number of holdings with ceased activities following the change of manager <i>This item should be completed only if information is available.</i>	0
4	(new) Number of holdings with unknown eligibility status <i>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.</i>	1,779
5	(new) Number of eligible holdings <i>The number of surveyed holdings which are eligible</i> 5=5.1+5.2	53,387
5.1	Number of non-responding holdings <i>The number of eligible holdings which:</i> - 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. <i>This item refers to holdings for which no data is collected (unit non-response).</i> 5.1>=5.1.1+5.1.2	15,760
5.1.1	Number of non-responding holdings – re-weighted	
5.1.2	Number of non-responding holdings – imputed	
5.2	Number of responding holdings <i>This item includes holdings which provided completed questionnaires, either entirely or partially.</i>	37,627 (excluding common land units)

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.

[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

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.

The data undergoes checks and controls throughout the processing stages. This takes place across three stages; scrutiny, verification and editing.

Scrutiny is a manual process undertaken by processing staff. The function of scrutiny is to detect and rectify errors in advance of data entry. It involves visually examining the questionnaire, page by-page. Where a 'yes/no' tick box was left unchecked or an inconsistency in the data was encountered, it was manually amended on the questionnaire where possible.

After data entry, the data enters verification stage. This is done electronically. Illegible digits and data are highlighted and corrected on screen by referring to previous returns or by deduction.

The data then enters the edit phase where data is passed through a range of pre-programmed edit checks. Here, arithmetic checks, range checks and consistency checks (with previous returns) are carried out and data is examined where these checks fail and then edited if necessary.

12.4.b Tools used for data validation

Please mention tools used.

Data was processed through our Data Management System (DMS), which contains certain edit rules which ensure some basic unit level consistency. Edit rule failures were examined and corrected. Data was then processed using SAS for further edit checks.

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.

Each of these three stages was carried out by the processing staff in the CSO made up of temporary staff and more experienced supervisory staff.

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.

The design weights were the inverse of the sampling probability within the various strata. Stratum weight $h = N_h/n_h$, where N_h = number of farms in stratum h and n_h = number of sample farms in stratum h .

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.

Please indicate if response homogeneity groups have been created.

To account for non-response, the design weights were adjusted so that, Stratum weight $h = N_h/(n_h - m_h)$, where N_h = number of farms in stratum h , n_h = number of sample farms in stratum h , and m_h = number of non-respondent sample farms in stratum h .

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.

A small overall adjustment factor ($139568/139860 = .9979$) was applied to the weight to account for the very slight change in population between 2010 and 2013.

12.5.a.4 Any other applied adjustment of weights

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

Not applicable

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)

By combining both sample data and administrative data and imputing for any further variables required, a Census has been created for FSS2013 for the majority of the characteristics.

12.6. Adjustment

[Not requested]

13. Comment

[Top](#)

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.

Not applicable for FSS2013.

13.b Possible improvements in the future

Please suggest possible improvements.

FSS questionnaire will be re-designed for 2016 to take account of new data needs in FSS Regulation.

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).

Annexes:

[Explanatory note](#)

Related metadata

[Top](#)

Annexes

[Top](#)

[Applicability of Precision Requirements](#)

[NE and NS characteristics](#)

[FSS 2013 Questionnaire](#)

[FSS 2013 Information Booklet](#)

[Pig Survey Form 2013](#)