



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 Statistical Bureau of Latvia

Time Dimension: 2013-A0

Data Provider: LV1

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 Statistical Bureau of Latvia</p>
1.2. Contact organisation unit	<p><i>Please specify an addressable subdivision of an organisation.</i></p> <p>Agricultural and Environmental Statistics Department, Agricultural Statistics 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>Lāčplēša Street 1, Riga LV-1301, Latvia</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)*

Latvia had experience in carrying out some separate censuses on sown area, agricultural crops, cropland, livestock and fruit gardens, but the first Farm Structure Survey (FSS) in Latvia, organised in compliance with the requirements of the European Union legislation took place in 2001 in the form of census. In this Census, basic information on the number of agricultural farms, their size, structure and economic activities was obtained. This information served as a basis for the creation of farm concept in the Statistical Farm Register, which was built up at the level of households in 1999. After Agricultural Census 2001, FSS were carried out every second year. In 2003, 2005 and 2007 Latvia organised FSS similar to other EU Member States. The FSS 2010 was carried out in the form of census in compliance with European Parliament and Council Regulation (EC) No 1166/2008. In accordance with this Regulation, common FSSs are carried out every third year, and the last FSS took place in 2013.

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

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

<p>- the reference of the national legal base of the FSS survey (Act, Government Decree, etc.)</p>	<ul style="list-style-type: none"> • Official Statistics Law adopted by the Parliament of Latvia on 6 November 1997 and 28 January 1999, 18 March and 7 October 2004, 16 March 2006, 15 November 2007 and 29 January 2009. • Cabinet Regulation No 922 of 6 November 2006 “Regulations on Approval of State Statistical Reports and Questionnaires” with amendments of 30 October 2012, Annex 180. • Regulations on State Statistical Information Programme for 2013, approved by the Cabinet of Ministers on 13 November 2012. Regulations on State Statistical Information Programme for 2014, approved by the Cabinet of Ministers on 17 December 2013.
<p>- the scope and the coverage of the survey</p>	<p>FSS 2013 was a sample survey carried out to acquire information on 30 thousand agricultural holdings. The survey unit of the FSS 2013 was an agricultural holding. Holdings for FSS 2013 were selected based on their economic size, type of farming and statistical region (NUTS 3 region in Latvia).</p> <p>As a result, all agricultural holdings with the agricultural area over 1 ha or standard output (SO) over EUR 70 regardless of the area were included in the FSS frame. SO threshold was used also when selecting holdings which did not have agricultural area but which were breeding livestock.</p>
<p>- the frequency and the reference period of the survey</p>	<p>FSS is carried out once in three years, and the previous survey in Latvia took place in 2010 in the form of census.</p> <p>The reference period of the FSS 2013 was 1 July 2013, but depending on the information to be obtained, it may vary:</p> <ul style="list-style-type: none"> • for use of utilised agriculture area – crop year 2013 or 12-month period from 1 July 2012 until 30 June 2013; • for number of livestock and agricultural machinery – 1 July 2013; • for support for rural development – last 3 years (2011, 2012, 2013); • for labour force – 1 July 2012 to 30 June 2013.

- the responsibility for the survey	CSB of Latvia was the main institution responsible for the organisation of the FSS 2013.
- the administrative and financial provisions	<p>Financial provision:</p> <ul style="list-style-type: none"> • CSB budget; • EU Grant agreement No 40201.2012.002-2012.988 Contribution of the European Union to farm structure survey 2013
- the obligations of the respondents with respect to the survey	<p>The work of the CSB is regulated by the Official Statistics Law that determines the procedure under which the state statistical information, incl. FSS 2013, is to be submitted, rights and obligations of the respondents, as well as statistical information confidentiality requirements.</p> <p>Upon request of the CSB respondents are obliged, in due time and in full scope prepare and provide individual statistical data in accordance with the indicators specified in the official forms (including FSS 2013). Submission of information for official statistical observations shall be considered a mandatory duty to be performed free of charge.</p>
- the identification, protection and obligations of survey enumerators	<p>The interviewer is obliged to explain the objectives of the survey, to provide information on the use and protection of the data obtained in accordance with the Law on State Statistics.</p> <p>The interviewer obtains information in accordance with the form developed by the CSB and in line with the methodological instructions, entering the information obtained during the interview in a computer programme or by completing a paper-form questionnaire.</p> <p>All the involved personnel must ensure compliance with Section 18 of the State Statistics Law regarding personal data protection requirements, and it is prohibited to use the data collected in their own interest, hand over or disclose to other persons.</p>
- the right of access to administrative data	<p>In compliance with Article 4 of the European Parliament and Council Regulation No 1166/2008 in the FSS 2013 it is allowed to use information of the state register as a source of the statistical data.</p> <p>In accordance with the State Statistics Law, the CSB is entitled to receive, free of charge, information from public records or databases necessary for the execution of the national statistical information programme, including individual statistical data relating to individuals.</p> <p>Within the framework of FSS 2013, three state registers were used: Agricultural Data Centre (ADC) Livestock and Herd Register, ADC Organic Farming Statistics Information System and Rural Support Service (RSS) Integrated Administration and Control System (IACS) databases.</p>
- confidentiality provisions	<p>Information of FSS is confidential in the sense of the EU Regulation 223/2003 on European statistics, which defines confidential data as “data which allow statistical units to be identified either directly or indirectly thereby disclosing individual information”.</p> <p>In accordance with item 5 of Quality Guidelines of the CSB of Latvia, the CSB ensures confidentiality and protection of information provided by the respondents as well as individual information received from other sources pursuant to the respondent of national legislation in force.</p>

3. Quality management - assessment

[Top](#)

[Not requested]

4. Relevance

[Top](#)

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 FSS 2013 questionnaire also included indicators necessary for the users of statistical information in Latvia and for the CSB needs. The questionnaire included 8 characteristics that meet the needs of the CSB and 29 characteristics that meet the needs of the Ministry of Agriculture (MoA).

The indicators included for the needs of the CSB identify respondents and are needed for maintaining information of the Statistical Farm Register (SFR); they also facilitate the use of administrative data in agricultural surveys.

The indicators included for the needs of the MoA are used for the evaluation and assurance of the national agricultural policy. MoA needs detailed information on the land use in agricultural holdings, including unused agricultural area, as well as detailed information on the types of equipment used for agricultural purposes, etc.

*See the list of characteristics collected solely for national purposes in **Annex 1**.*

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.

The reference period of the FSS 2013 was 1 July 2013, but depending on the information to be obtained, it may vary.

The reference period of the main groups of characteristics are mentioned above, in item 2.b row 'the frequency and the reference period of the survey'.

The reference period of the groups of national characteristics complies with the reference period of FSS 2013.

The reference period of respondent identification indicators – 1 July 2013

The reference period of indicators related to the use of agricultural area – crop year 2013 or 12-month period from July 1 2012 until June 30 2013.

The reference period of indicators related to the use of agricultural equipment – 1 July 2013.

The reference period of indicators related to the number of livestock - 1 July 2013.

*See the list of characteristics collected solely for national purposes in **Annex 1**.*

Annexes:

[List of characteristics collected solely for national purposes](#)

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.

The list of indicators defined by the European Parliament and Council Regulation included variables not economically significant (NS) for Latvia or non-existent (NE) at all. The NE indicators were not included in the FSS 2013 questionnaire, but NS indicators were included in the survey form. NS indicators, included in the FSS questionnaire, are collected as separate indicator and they have SO.

In compliance with the Eurostat recommendations, the value of the NE indicators in the data file is "0".

The indicator "Support for rural development – Use of advisory services" was not selected as non-existing indicator, but IACS database included non-agricultural holding registered with the characteristics during the set time period, therefore the value of this indicator is "0".

See the list non-existing (NE) and economically non-significant (NS) indicators and substantiation for their selection in **Annex 2**

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

Annexes:

[Non-existent and non-significant characteristics in FSS 2013](#)

4.3.1. Data completeness - rate

[Not requested]

5. Accuracy and reliability

[Top](#)

-

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.)

Main sources of error are under-coverage, over-coverage and non-response.

5.2. Sampling error

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

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

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

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

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

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

The variance estimation is done by the ultimate cluster method (Hansen, Hurwitz and Madow, 1953) and residual estimation from the regression model to take weight calibration into account. Direct estimator of variance for totals is used. Software R package *vardpoor* is used for variance estimation.

See formulas applied for estimating variance of estimates of totals in **Annex 4**

Annexes:

[Formulas applied for estimating variance of estimates of totals](#)

[Applicability of precision requirements](#)

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.

FSS 2013 sample was created in accordance with the precision requirements stipulated in Annex IV "Precision Requirements" of Regulation 1166/2008 selecting indicators the proportion of which exceeds 7.5% of utilised agricultural area (UAA) in crop production, and the total number of livestock in livestock units (LSU) in livestock breeding. For these key crop and livestock performance indicators relative standard error (RSE) does not exceed 5%. RSE exceeds 5% limit for indicator "Flowers and ornamental plants (excluding nurseries)" and indicator "Goats". Their proportion is less than the 7.5% threshold laid down in the regulation.

The proportion of area of flowers and ornamental plants is very small in Latvia - 31 ha or 0.002% of the utilized agricultural area and is not relevant; therefore these areas were not taken into account in the sample formation process.

The goat population in 2013 was 13.6 thsd or 1361 LSU, which was 0.3% of the total number of LSU. Goat population was not taken into account in the sample formation process

Annexes:

[Relative standard errors](#)

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.

Assessment of the potential for bias- not estimated.

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.

Under coverage - 0.064%

Under-coverage error value for FSS 2013 is irrelevant, and does not significantly affect the quality of calculations.

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.

In the survey it was found that 1064 agricultural holdings or 4% of the holdings included in the sample are no longer engaged in agriculture, as the main reason mentioning the fact that the land has been leased or sold, or it is not managed.

Information on these farms was not corrected.

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.

Misclassification errors weren't found. For sampling was used statistical Farm register (SFR). Information in SFR is regularly updated from administrative data sources and surveys.

5.3.1.d Contact errors

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

By telephone interviews were found agricultural holdings with incorrect phone numbers (number changed or disabled). If it was possible, the interviewers looked for new phone numbers in public catalogues. In cases where a new telephone numbers were not found holding was considered to be not responding.

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.

Multiple listings of holdings in the frame weren't found. Each holding in SFR has unique ID numbers that exclude multiple listings

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).

Over-coverage rate 9% was calculated based on the sample, using the weight coefficients.

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.

Since 2003 are carried out farm structure surveys in Latvia. Regular improvements are made in the organization process of the survey. This helps to prevent measurement errors.

Main problem in FSS 2013 was our latest data collection method – CAWI (computer assisted web interviews). We use this method the second time for data collection in FSS and it is new for our respondents. The response in CAWI was not high, the main reasons were mentioned technical problems (no internet access in all holdings), FSS questionnaire is long and for fulfil is ca. 50 minutes needed.

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

n/a

5.3.2.c If available, assessments based on comparisons with external data, re-interviews, etc.**5.3.3. Non response error****5.3.3.a (new) Unit non-response: reasons and treatment**

Please specify the reasons for unit non-response and how the unit non-response was accounted for. Unit non-response can be accounted for by e.g. re-weighting, imputation.

The response rate is calculated as the ratio of weighted number of eligible responding holdings, divided by the weighted number of eligible holdings in the sample. Eligible holdings are resolved holdings belonging to the target population.

Unit non – response had two reasons:

- respondent was not met;
- respondent refused to answer.

Unit non-response was eliminated by re-weighting

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.

Most common inaccuracies:

- it was not specified how many per cent of agricultural goods produced by the holding are sold;
- land use table was completed only partly;
- meadows and pastures were indicated as grassland sown on arable land and vice versa;
- table on machinery used by several holdings was completed only partly;
- age of holder and manager age were not specified;
- spouse of the holder was not indicated.

Partially completed questionnaires were received mainly from web-respondents. Incorrect filling of the questionnaire had different reasons, such as problems with the Internet connection and the speed, survey was comprehensive, and very detailed information was asked, farmers considered this information confidential, as well as there was a need for additional explanations for the indicators in the questionnaire.

The problem was also caused by the difference in the definitions of the respondent units in FSS and administrative sources; for example, answers were not provided for the whole area available to the holding, but only for the part support payments were received or of that part belonging to the agricultural holding registered in the Register of Enterprises.

To obtain the missing information data from the Statistical Farm Register, Population Register, IACS database were used, repeatedly contacting respondents to specify the information if needed.

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).

Information was not received from 1151 holdings or 3.8% of the total number of respondents.

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.

628 questionnaires or 2.1% out of the total number were filled in partly, mostly those completed in the Internet.

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.

During the data processing weaknesses were identified mainly in web-forms (2% of holdings). To improve the quality of the data and fill in the missing information, we contacted the respondents repeatedly or made data imputation from administrative data sources.

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.

To obtain the missing information the data from the SFR, Population Register, IACS database were used, as well as respondents were repeatedly contacted to specify the information.

5.3.4.c Imputation methods

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

Data imputation was performed for partly completely questionnaires. The key imputed indicators include:

- owner's age and information about the owner's spouse;
- forests and other land;
- permanent and temporary employees;
- other income-generating activities.

For the data Imputation information from the SFR, as well as Agricultural Census 2010 data and other agricultural survey information was used.

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

Data were imputed by CSB employees, involved in the FSS 2013 organisation and execution.

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.

628 questionnaires or 2.1% of the total number were filled in partly, mostly those completed in the internet (web-form).

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.

5.3.6. Data revision

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5.3.6.1. Data revision - policy

Brief description of the revision policy

Unplanned revision of the FSS 2013 may be carried out. It may be necessary to carry out the unplanned revision if a mistake in data sources or calculations is found, or due to the unexpected changes in the methodology or data sources.

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.

There has been no need to perform data revision.

5.3.6.3. Data revision - average size

[Not requested]

5.3.7. Seasonal adjustment

[Not requested]

6. Timeliness and punctuality

[Top](#)

-

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.

The last day of reference period is July 1 2013.

Time lag - 1st provisional results: after 10 months. Press release of the information on progress of the FSS 2013 and the number of agricultural holdings surveyed.

Time lag - 2nd provisional results: after 16 months. Press release of the information on the number of agricultural holdings, utilised agricultural area, and number of livestock in agricultural holdings of various economic sizes. These provisional results were also published on the CSB webpage.

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.

Time lag - final results: after 18 months. Final results are published on the CSB webpage.

The data file of the FSS 2013 was sent to the Eurostat in December 2014.

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.

Results were provided in accordance with the schedule.

7. Accessibility and clarity

[Top](#)

-

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.

There are two press releases on the preliminary results of the FSS 2013 available on the CSB homepage, as well as

information on the progress of the survey, and a press release on the final results of FSS 2013. FSS 2013 results and methodological information is available only in the CSB database.

7.2.b Date of issuing (actual or planned)

- 1st provisional results (general information) in a press release of April 2014.
- 2nd provisional results in a press release of October 2014.
- Final results in a press release of December 2014.

7.2.c References for on-line publications.

<http://www.csb.gov.lv/en/notikumi/average-size-agricultural-holdings-growing-while-number-holdings-decreasing-39623.html>

<http://www.csb.gov.lv/en/notikumi/size-agricultural-holdings-keeps-increasing-39682.html>

<http://www.csb.gov.lv/en/notikumi/medium-sized-and-large-agricultural-holdings-manage-636-agricultural-area-39697.html>

7.3. Dissemination format - online database

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

<http://data.csb.gov.lv/pxweb/en/lauks/?rxid=cdbc978c-22b0-416a-aacc-aa650d3e2ce0>

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.

Information is not available

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.

Interviewers' manual "2013 farm structure survey methodological guidance." Available only in Latvian.

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.

Activities of the Total Quality Management System: to identify statistical and organisational processes and develop their descriptions in compliance with the requirements of the quality management system. Components are fundamental processes such as project preparation, data collection, data processing, data analysis, data dissemination and support processes as metadata and documentation of processes. Quality Management System is maintained and updated electronically in the QPR (*Quality.Process.Results*) portal.

7.7. Dissemination format - other

[Not requested]

8. Comparability

[Top](#)

-

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.

Definition and explanation of an agricultural holding was developed in compliance with European Parliament and Council Regulation No 1166/2008 and Handbook on implementing the FSS and SAPM definitions - REV 10 (document 3.1. Methodology - Handbook on implementing the FSS and SAPM definitions - REV 10).

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.*

National survey coverage is the same coverage of the records sent to Eurostat.

8.1.c National vs. EU definitions of characteristics

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

Definitions and explanations of the variables included in the FSS 2013 were developed in compliance with the Handbook on implementing the FSS and SAPM definitions, REV 10. All indicators are compatible with the surveys conducted before.

For the indicators included to meet the national needs, the definitions were developed by experts of the the Ministry of Agriculture.

In accordance with the Latvian legislation there are 230 working days or 1 840 hours in a year.

8.1.d Common land

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

8.1.d.1 Current methodology for collecting information on the common land

If common land does not exist in the country, please specify this.

If common land exists and you do not collect information on common land, please specify this and the reasons.

If you collect information on common land, please describe the methodology by referring to the below options.

Combinations of the options are possible; if you use more options, please briefly describe each one.

- common land is included in the land use data of the agricultural holdings making use of the common land.

- common land is included as special holdings i.e. the common land holdings. In addition to records with data representing agricultural holdings, records representing the common land holdings are created.

- common land is collected at regional level and included in regional records. In addition to records with data representing agricultural holdings, records representing the regional sum of the common land are created. According to discussion in a Working Group, this third option has been converted into the second option (common land holdings) allowing all common land to be formatted and included in the Eurofarm tables.

In addition, please specify:

- whether there was a set of specific questions in the FSS questionnaire on common land or a separate questionnaire.

In the case of a separate questionnaire, it should be attached to this report, section 12.3.e.

- (new) how was the common land treated in terms of tenure classification;

- (*new*) how can common land be identified in the data.

Common land in Latvia existed in the 1990s (common land of local municipalities), but since 2000 all such land is leased out to several agricultural holdings, and in our surveys it is regarded as land used by the respective holding. Thus in the FSS it is included as distributed to the user holdings, and is defined as “agricultural area utilised for farming by tenant”.

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.

See explanation in 8.1.d.1

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.

See explanation in 8.1.d.1

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.

See explanation in 8.1.d.1

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.

In order to determine the holding's main production site, the cadastre number of the most significant land parcel was indicated in the questionnaire, because the geographical coordinates of these parcels are known.

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 determine the geographical coordinates of the holding main production site a software *GeoMedia Professional 6.1* was used.

Geographical information:

- geometrical data of the cadastre – cadastre maps from the State Land Service (SLS) in Microstation DGN format containing 2 levels:
 - 1) network of lines forming the cadastre boundaries,
 - 2) cadastre number texts;
- map coordinate system: *LSK-92 one meter*;
- layer of Latvia counties - map coordinate system *LSK-92 one meter*; *Geomedia* format.

Each land plot centre coordinates were identified. Afterwards these coordinates were used to create polygons (a 5' grid), and agricultural holdings, cadastre centre coordinates of which fell within the polygon, were added to the polygon centres, taking into account the boundaries of NUTS3 regions and territory of Latvia. If the polygon centre was located outside the territory of Latvia, holdings were linked with the nearest polygon centre located in the territory of Latvia. Coordinates were determined for each holding in LKS-92 one meter geographical coordinate system. This system meets

the ETRS89 parameters, thus it was not necessary to convert the acquired coordinates.

See description of methodology used for adding coordinates to the agricultural holding in Annex 6

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).

To ensure individual data protection, the geographical coordinates of the main location of the agricultural holding were rounded to 5 minutes (5'), by using the 5' grid.

The holdings in grid cells containing an insufficient number of holdings in term of confidentiality (a minimum of two holdings are necessary) were reallocated to a suitable nearest neighbouring grid cell in correct NUTS3 region (44 holdings).

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).*

With an aim to ensure precision of the holding's main production site, rounded-up coordinates nearby NUTS 3 regions and state boundaries, verification of the compliance of the holding's main production site NUTS3 code with the central-point of grid-cell NUTS3 code was carried out.

If the NUTS3 attribution was matching, the central point of the grid cell was assigned to the object (26731 holdings).

If the NUTS3 attribution was not matching, the distances to neighbouring NUTS3 grid-cells were calculated and the object was moved to the nearest NUTS3 neighbouring grid-cell (1056 holdings).

Assessing accuracy by calculating the distance between the original coordinate and the chosen/perturbed coordinates:

- mean, median: 2.9 km, 2.83 km,
- min, max: 0.03 km, 12.67 km.

Only 9 holdings do not meet the required accuracy (distance below 9.27 km), due to perturbation. Those 9 holdings remained perturbed, and were not moved again.

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).

Development of organic farming in Latvia is carried out in accordance with Council Regulation No. 834/2007.

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

Annexes:

[Description of methodology used for adding coordinates to the agricultural holding](#)

8.1.1. Asymmetry for mirror flow statistics - coefficient

[Not requested]

8.2. Comparability - over time

8.2.a Possible changes of the definition of the holding the reasons and the impact of the changes on the comparability

with previous sample survey/census data

Please indicate the relevant case from the ones below:

- a. There have been no changes, in which case this should be reported.
- b. There have been some changes but not enough to warrant the designation of a break in series.
- c. There have been sufficient changes to warrant the designation of a break in series.

In the second and third cases, please indicate the changes, the reasons and their impact on the comparability over time. Particularly in the third case, please indicate any information relevant for users.

There have been no changes, in which case this should be reported.

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

Please indicate the relevant case from the ones below:

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

In the second and third cases, please indicate the changes, the reasons and their impact on the comparability over time. Particularly in the third case, please indicate which procedure Eurostat should apply to compare the data over years and any other information relevant for users.

There have been 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:

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

Particularly in the second case, please indicate any information relevant for users.

Definitions and explanations of the variables included in the FSS 2013 were developed in compliance with the Handbook on implementing the FSS and SAPM definitions Rev.10 (document 3.1. Methodology - Handbook on implementing the FSS and SAPM definitions, REV 10). All indicators are compatible with the surveys conducted before.

To obtain the data within the framework of the FSS questionnaire filled in only by the agricultural holdings included in the sample were developed and approved by the Cabinet of Ministers.

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.

FSS 2010 – census; FSS 2013 – sample survey.

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.

See explanation in 8.1.d.1

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.

See explanation in 8.1.d.1

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

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

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

Main characteristic	Current FSS survey	Previous FSS survey	Difference in %	Comments
Number of holdings	81796	83386	-1.9	
UAA, ha	1 877 721	1 796 286	4.5	
Arable land, ha	1 204 144	1 119 960	7.5	
Permanent grassland, ha	654 263	651 050	0.5	
Permanent crops, ha	6 617	8 515	-22.3	The areas of permanent crops, in compliance with the definition, include only new and producing commercial orchards. Areas of fruit trees and berry bushes for own consumption are included in the kitchen garden areas. There are still orchard areas in Latvia, which were planted in the 1950s – 1960s with varieties with periodical yields. These orchards are gradually cut out, thereby reducing the perennial areas. New commercial orchards are not planted in so large areas.
Wooded area, ha	792 507	714 161	11.0	With the increase in the total area of agricultural land, also the wooded area owned by agricultural holdings is increasing. The area of short rotation coppices has increased by 25% as compared to 2010.
Unutilised agricultural area, ha	159 886	137 520	16.3	
Fallow land, ha	60 343	74 453	-19.0	Areas of fallow land in 2013 have decreased by 19.0%, as compared to 2010. Taking into account the unfavorable wintering conditions when in spring agricultural holdings partially resowed the winter crop areas for economic reasons fallow areas were reduced.
Number of livestock in LSU	485 992	474 627	2.4	
Cattle, head	412 887	394 344	4.7	
Family Labour force - in persons	154 128	163 924	-6.0	
Family Labour force - in AWU	67 807	71 354	-5.0	
Non family labour force - in persons	20 310	17 439	16.5	An increase in the utilized agricultural area, the number of livestock, and also the number of people employed in agriculture increases. The trend in 2013 showed that the number of family members employed in agriculture is decreasing, while the number of non-family employees is growing. However, the increase in the total number of hours worked is not as significant (Awu 5.1%) compared to 2010, which shows that not all work full-time work in agriculture.
Non family labour force -	13 964	13 285	5.1	

in AWU
8.2.1. Length of comparable time series
[Not requested]
8.3. Comparability - domain
Comparisons with other data sources at micro/macro level
<i>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.</i>
8.3.a Comparisons at micro level
The results of the FSS 2013 at the level of holdings were compared with the administrative data sources as well as with the annual surveys conducted by the CSB – Crop Production Survey 2013 and Animal Survey 2013. Significant inconsistencies at the level of holdings were revised by calling the respondents.
8.3.b Comparisons at macro level
The results of the FSS 2013 national level were compared with the annual surveys conducted by the CSB – crop production survey 2013 and animal survey 2013. See comparison between crop survey 2013 and FSS 2013 and comparison between animal survey 2013 and FSS 2013 in Annex 7 . Comparison of the crop survey 2013 and FSS 2013 results show significant changes in areas of potatoes, vegetables and forage crops - plants harvested green. The differences between vegetable areas and potato plantations may be explained with the fact that in FSS 2013 potatoes and vegetables for own consumption are included in the data on kitchen gardens, not in breakdown by each crop. Regarding number of livestock the changes are due to different reference time. Date of reference for livestock in FSS 2013 is July 1 2013, but in Animal production survey – December 31 2013. This differences in reference date explain differences in number of livestock.
Annexes: Comparison between crop survey 2013 and FSS 2013 and comparison between animal survey 2013 and FSS 2013

9. Coherence	Top
-	
9.1. Coherence - cross domain	
(new) Coherence with other data sources	
<i>Please indicate whether the FSS statistics are reconcilable (i.e. can be combined) with those obtained through other data sources or statistical domains.</i>	
FSS 2013 data are reconcilable with Crop statistics, Animal statistics results, with SFR information, Farm Accountancy Data Network (FADN) and with information of administrative data sources - Animal register, IACS database, Organic Farming Statistics Information System.	
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.

In order to reduce respondent burden and avoid duplication of the questions in statistical surveys the FSS 2013 was conducted simultaneously with the Crop survey 2013 and Animal survey 2013. The FSS 2013 and Crop survey 2013 questionnaire was prepared in a way that respondent did not have to provide the same information repeatedly.

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.

Confidential statistical micro-data may be used for scientific purposes, if the scientific institution guarantees the protection of the data, ensuring that respondents may not be identified directly.

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).

During the collection, processing and dissemination of the FSS 2013 data, the data confidentiality and security were guaranteed to every respondent in compliance with the Official Statistics Law. The staff engaged in the FSS had to sign legal confidentiality commitments.

During the data collection the data safety was ensured also by using safe public data transfer network. After sending the data to the CSB the interviewers were not able to access the respondent information. At the end of the FSS 2013 field works the employees of the CSB IT Department deleted data input programme from the interviewer laptop computers.

For aggregated data the primary confidentiality detection criterion is used: the minimum number of cases.

Confidentiality is determined by the minimum number of cases to prevent direct identification. All the table cells whose values are derived from less than 3 respondents considered to be confidential.

The FSS 2013 information will be published at country and statistical region level.

12. Statistical processing

[Top](#)

Survey organisation and calendar

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

The aim of the survey is to provide data users with qualitative and internationally comparable statistical information on structure of agricultural holdings that will be used to evaluate trends of agricultural sector development as well as for agricultural policy planning and assessment.

1. Definition of survey objective and requirements:

1.1. the first works related to the development of the FSS 2013 started in January 2012. In February 2012 the CSB created an internal working group for organising FSS 2013;

1.2. consultations with the key data users and the agricultural industry

12.a The steps of the survey organisation and the starting and ending time of each step.

This information could help countries in the future planning of the activities.

As guidelines, the steps can consist of the following. Please adapt to the national situation if needed.

1. definition of survey objective and requirements:

1.1. formation of workgroups for survey organisation;

1.2. consultation of users;

1.3. set-up objectives, target population, statistical units, classifications, precision requirements etc.;

1.4. survey promotion.

2. survey design:

2.1. set-up organisation of the survey (e.g. detailed timetable, specification of resources, costs estimation);

2.2. definition of the survey variables;

2.3. design of the sampling frame and sampling procedures;

2.4. design of data collection procedures (e.g. questionnaire design, selection of data collection modes etc.);

2.5. design of data processing procedures (e.g. CATI/CAPI/CAWI input programmes etc.);

experts were launched on the FSS 2013 organization, the information to be acquired in the survey and the level of detail. The possibility of using information from administrative data source for FSS 2013 was also analysed. Consultations on the list of FSS indicators and definitions were rounded up in May 2012;

1.3. the target population of the survey was defined in accordance with the survey objective - all economically active agricultural holdings, selected from the Statistical Farm Register in compliance with the coverage and precision requirements set out in Regulation No 1166/2008. In accordance with the set precision requirements the necessary sample size was evaluated. The survey unit of the FSS 2013 was agricultural holding. The definition of the agricultural holdings complies with the definition set by the EU and is compatible with the one in FSS 2003, FSS 2005, FSS 2007 and FSS 2010. <

2. Survey design:

2.1. starting the FSS 2013 the available resources were evaluated, and detailed work and financial plan developed. For the most important items of the plan see **Annex 8**. Grant agreement for an action “Contribution of the European Union to farm structure survey 2013 pursuant to Council Regulation (EC) No 1166/2008 of the European Parliament and the Council” was signed 15 August 2012;

2.2. FSS list of indicators was developed in accordance with Regulation No. 1166/2008 Annex III and recommendations of the national experts. The indicators included in the form are defined in accordance with the Handbook of Implementing the FSS and SAPM Definitions, REV 10. Definitions of indicators included for national needs were developed working together with data users;

2.3. The frame of holdings included in the FSS 2013 was arranged based on the statistical Farm Register information. The SFR was developed by the CSB in 1999 and is updated on a regular basis. To update the SFR various data sources are used – information from regular statistical surveys and censuses, Statistical Business Register, State Land Cadastre, Population Register, ACD Animal Register, and RSS IACS database. Such updating ensured the possibility to find new holdings and add them to the SFR.

2.4. To obtain the data within the framework of FSS 2013 a questionnaire was developed and approved by the Cabinet of Ministers on 30 October 2012. Face-to-face interviews, telephone interviews and Internet assisted survey were used for data collection.

2.5. For data collection purposes the CSB unified data collection system ISDAVS CASIS was used. Three data collection applications were used:

- CAPI (Computer assisted personal interviews) - application for face-to-face interviews;
- CATI (Computer assisted telephone interviews) - application for telephone interviews;
- CAWI (Computer assisted web interviews) – application for Internet assisted survey.

3. Data collection:

3.1. Holdings for the FSS 2013 were selected based on their economic size and type of farming. All economically active agricultural holdings the agricultural area of which exceeded 1 ha or standard output (SO) of which exceeded EUR 70 regardless of their area were included in the FSS 2013. SO threshold was used also when selecting holdings which

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*

did not have agricultural area but which were breeding livestock.

In the middle of 2013 SO calculations for the holdings in the SFR were made on the basis of information obtained from various statistical and administrative data sources: ADC Animal Register, RSS IACS information and also data on sown areas from the last Crop Survey. Out of 97.3 thousand active agricultural holdings registered in the SFR on 1 January 2013, 87.5 thousand holdings complied with the requirement of Regulation No 1166/2008 were included in the FSS 2013 frame. Out of this frame random sample with 30.0 thsd agricultural holdings was created.

3.2. On behalf of the Ministry of Agriculture also the Latvian Rural Advisory and Training Centre (LRATC) took part in the FSS. 124 interviewers were engaged in the data collection process.

3.3. It was possible to fill in the FSS 2013 questionnaires in the Internet during the time period from 26 August until 16 September. The CAWI form of the FSS was used for the second time. Holdings, e-mail addresses of which were known and which in 2013 used RSS electronic area payment application system, had an opportunity to fill in the FSS 2013 questionnaire on the Internet. Altogether web questionnaires were completed by 4.3 % of the total number of respondents.

Information on this opportunity was sent to e-mail addresses of the CAWI respondents:

1. 26.08.2013 – invitation and information about the user name and password;
2. 4.09.2013 – first reminder;
3. 9. – 10.09.2013 – second reminder.

In order to reduce respondent burden and work load of statistical staff, CAPI interviews were carried out simultaneously with the annual Crop Survey. Interviews were conducted by the LRATC interviewers. Interviews were conducted during the period from 1 October to 20 December. Interviewer training was carried out beforehand. LRATC interviewers obtained information about 25.0 thousand or 83.3% of agricultural holdings.

Telephone interviews were conducted along with the CAPI interviews during the time period between 1 October and 20 December 2013. They took place in the CSB CATI Centre in Preiļi, where 10 interviewers obtained information on 12.3 % holdings of the total number of respondents. This surveying method ensured interviewing of smaller and inactive agricultural holdings, telephone numbers of which were known. Training of telephone interviewers was conducted on 1 October 2013.

4. *Data processing and validation*

Interviewers performed both data collection and data entry, as well as the primary control because CAPI application contains around 200 logical and mathematical controls.

Mathematical and logical controls were developed in compliance with the requirements of the “Data Supplier Manual”. In order to obtain more precise information and facilitate further data processing, they were supplemented with other necessary controls.

Once the survey was completed repeated data control was carried out in the CSB central office, and data were revised at the level of holdings. If necessary the responsible employees called the holdings to update the information. Afterwards information was integrated from the

	<p>administrative data sources. Also these data were analysed at level of holdings before adding to the data mass.</p> <p>5. Data dissemination</p> <p>FSS 2013 preliminary results were published in the CSB database. Final results were published on 30 December. Microdata have been prepared and sent to Eurostat within the set time.</p>
<p>12.b The bodies involved and the split of responsibilities among bodies with respect to the main steps of the survey process</p>	<p>The CSB of Latvia was the main institution responsible for the organisation of the FSS 2013.</p> <p><u>Responsibilities of the CSB</u></p> <p>Agricultural Statistics Section:</p> <ul style="list-style-type: none"> • development of the survey methodology and questionnaires in compliance with Regulation (EC) No 1166/2008 of the European Parliament and of the Council and needs of the national data users; • management of the data collection process; • development of data input programme methodology and logical controls, programme testing; • interviewer training; • development of table layouts, preparation and publishing of press releases and obtained statistical information. <p>Mathematical Support Division:</p> <ul style="list-style-type: none"> • design of the FSS 2013 sample; • determination of extrapolation factors and estimation of sampling errors. <p>Informatics Department:</p> <ul style="list-style-type: none"> • development of data input application for the face-to-face interviews (CAPI - <i>Computer Assisted Personal Interviewing</i>); • development of data input application for the telephone interviews (CATI - <i>Computer Assisted Telephone Interviewing</i>) and Internet application (CAWI - <i>Computer Assisted Web Interviewing</i>); • development of data control application; • arrangement of summary tables; • determining geographical coordinates of the agricultural holding location. <p>CSB Telephone Interviews Centre:</p> <p>organisation and conduction of telephone interviews.</p> <p>Information, Publishing and printing Department:</p> <p>responsible for printing and dissemination of methodological materials of FSS 2013.</p> <p>Technical Maintenance and Procurement Division</p> <ul style="list-style-type: none"> • technical provisions of the workplaces, communications; • supply of the methodological materials to the regional offices.

	<p>Survey staff of CSB:</p> <ul style="list-style-type: none"> • Agricultural statistics section: 10 regular employees for data analysis, processing and publishing; • Mathematical Support Division – 1 person; • Informatics Department – 2 person; • CSB CATI Centre – 10 regular employees. <p>Survey staff of LRATC (responsible institution for obtaining census data from 25 thsd agricultural holdings):</p> <ul style="list-style-type: none"> • 1 manager and coordinator; • interviewers – 124 persons.
<p>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.</p>	<p>FSS 2013 was conducted in accordance with the schedule and the quality requirements of Council Regulation (EC) No 1166/2008 of the European Parliament and the Council.</p>

Annexes:

[Timetable FSS 2013](#)

12.1. Source data

12.1.a Target population

12.1.a.1 The national definition of an agricultural holding

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

The definition of the agricultural holdings complies with the definition set by the EU and is compatible with the one in FSS 2003, FSS 2005, FSS 2007 and FSS 2010.

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.

SFR data for all economically active holdings

- Number of holdings: 97290
- Agricultural area: 2116.5 thsd. ha
- Utilised agricultural area: 1902.9 thsd ha
- Number of livestock: 462.9 thsd LSU

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).

Holdings for the FSS 2013 were selected based on their economic size and type of farming. All economically active agricultural holdings the agricultural area of which exceeded 1 ha or Standard Output (SO) of which exceeded EUR 70 regardless of the area were included in the survey. SO threshold was used also when selecting holdings which did not

have agricultural area but which were breeding livestock

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).*

At the begin of 2013, the SO re-calculations for the holdings in the SFR were made on the base of information obtained from administrative data sources: ADC Animal Register and RSS IACS information. Out of 97.3 thousand active agricultural holdings registered with the Statistical Farm Register at the beginning of 2013, 87.5 thousand holdings, survey of which ensured that the requirement of the European Parliament and Council Regulation (EC) No 1166/2008 are met, were included in the FSS 2013.

FSS 2013 included:

- number of holdings: 87 479
- agricultural area: 2 074.2 thsd. ha
- utilised agricultural area: 1 873.9 thsd. Ha
- number of livestock: 455.0 thsd LSU

12.1.a.5 (new) The survey coverage of the records sent to Eurostat

The survey coverage of the records sent to Eurostat can be different from the national survey coverage in case very low (or no) national thresholds are applied.

Please indicate if the coverage of the records sent to Eurostat is different the national survey coverage. If yes, please indicate the differences and how you selected the records sent to Eurostat.

No differences

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*).

For the needs of Eurofarm a database on 81 796 holdings was developed and sent to Eurostat in a form of anonymous individual data.

12.1.a.7 (new) Records sent to Eurostat on holdings with standard output equal to zero.

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

In FSS 2013 data set there are 433 agricultural holdings (weighted – 5776 holdings) without SO (SO=0). Of which 239 holdings (weighted - 3437 holdings) with kitchen gardens only and 194 holdings with no agricultural production, but with fallow land or permanent grassland with no economic use (172 holdings have only permanent grassland no longer used for production purposes and eligible for the payment of subsidies; 2 holdings have only fallow land with subsidies; and 18 holdings have only fallow land without any subsidies). The land in these holdings with no agricultural production, but with fallow land or permanent grassland with no economic use is kept in good agricultural and environmental conditions.>

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.

FSS 2013 included (% of SFR data for all economically active holdings):

- Number of holdings: 89.9%
- Agricultural area 98.0%
- Utilised agricultural area 98.5%
- Number of livestock 98.3 %.

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.

FSS 2013 in Latvia was carried out as a sample survey. The largest share of the information was obtained in the survey; however, in order to reduce the burden on respondents, administrative registers were also used as a source of information:

- ADC Animal register;
- ADC Organic Farming Statistics Information System;
- RSS IACS database.

Non-existent and non-significant characteristics in FSS 2013.

12.1.c (Sampling) frame

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

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

12.1.c.1 Source of the frame

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

The sample frame is created from agricultural holdings. The list of holdings included in FSS 2013 was created based on the SFR information.

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.

There was list frame for FSS 2013 created.

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

To update the SFR various data sources are used: information from regular statistical surveys and censuses, Statistical Business Register, State Land Cadastre, Population Register, ADC Animal Register, and RSS IACS database.

Before FSS 2013 agricultural holding SO was recalculated, using annual Crop and Animal Survey results, IACS database, ADC Animal Register. Such updating gave an opportunity to find new holdings and add them to the SFR.

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.

Sampling design was made as fully probabilistic sampling. The sample of FSS was made as stratified simple random sample.

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

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

n/a

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.

Agricultural 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.

Agricultural holdings were selected by their physical (utilized agricultural area, number of livestock), and economic (SO) criteria.

The holdings were stratified by region, type of farming and economical size class (SO, EUR).

The agricultural holdings were grouped by region into 5 groups (NUTS 3 level):

1. Pieriga,
2. Vidzeme,
3. Kurzeme,
4. Zemgale,
5. Latgale.

The 6th group or NUTS 3 level Riga isn't used by stratification because Riga, as capital city of Latvia, hasn't agricultural holdings and agricultural production.

The agricultural holdings were divided into 3 different types of farming groups:

1. crop production,
2. livestock production,
3. mixed production.

The size class of agricultural holding was defined according to the characteristics of holdings. Economical size (SO, EUR) for the holding in the SFR was calculated based on the information obtained from various statistical and administrative data sources. Economical size of agricultural holding was used as stratification variable for active agricultural holdings. Agricultural holdings were grouped by economical size (SO) into 9 groups:

1. 0 - 6.9 EUR,
2. 70 - 1499.9 EUR,
3. 1500 – 3999.9 EUR,
4. 4000 – 14999.9 EUR,
5. 15000 – 24999.9 EUR,
6. 25000 – 49999.9 EUR,
7. 50000 – 99999.9 EUR,
8. 100000 – 499999.9 EUR,
9. 500000 EUR and more.

The survey fully includes agricultural holdings, if economical size (SO):

1. 4 000 EUR and more;
2. 2 000 – 3999.9 EUR and UAA > 10ha;
3. if any of the crop production indicators below exceed the indicator boundary value

Indicator	Boundary value
Cereals, ha	89
Potatoes, ha	8

Oil seed crops, ha	30
Forage crops, ha	80
Vegetables, ha	4
Fruit and berry plantations, ha	7
Meadows and pastures, ha	200

4. if any of the livestock production indicators below exceeds the indicator boundary value

Indicator	Boundary value
Number of cattle	59
Number of cows	59
Number of dairy cows	24
Number of other cows	240
Number of other cattle	2400
Number of sheep	79
Number of goats	18
Number of pigs	80
Number of breeding pigs	800
Number of other pigs	800
Number of poultry	70
Survey on the number of pigs	80
Survey on the number of breeding pigs	80
Survey on the number of other pigs	80
Survey on the number poultry	99

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.

Simple random sampling

12.1.d.6 the list and description of full coverage strata

Full coverage strata are strata with complete enumeration (all units are selected in the sample).

The sampling ratio is 100% in strata:

- all strata with population size was 10 or fewer;
- all strata where adjusted Neyman sample size was equal to the population size of strata;
- all strata feature *full-scope_survey* is "1".

See Neyman Allocation description in Annex 9

12.1.d.7 the overall sample size, how it was determined and any allocation method used

Allocation methods can be equal allocation, proportional allocation, Neyman allocation, optimal allocation considering different costs across strata etc.

The total sample size was 30002 agricultural holdings. The main goal to assign sampling ratio equal to 100% in those strata is to get smaller amount of sampling errors for estimates.

See the optimal allocation of sample description in Annex 10

12.1.d.8 sampling across time

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

The sampling over time is not applied

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

Procedure for sample selection is self-made using *R and SPSS*®.

12.1.d.10 other relevant information, if any

n/a

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 Official Statistics Law of the Republic of Latvia stipulates that in order to implement the state statistical programme the CSB has right to receive the necessary information from the state registers or databases free of charge, including individual data on natural persons.

In compliance with Article 4 of European Parliament and Council Regulation No 1166/2008 in FSS surveys Member States shall use information from the Integrated Administration and Control System (IACS) provided for in Regulation (EC) No 1782/2003, the System for the Identification and Registration of Bovine Animals provided for in Regulation (EC) No 1760/2000, and the Organic farming register provided for in Regulation (EC) No 834/2007. Bovine Register is a part from Animal Register in Latvia.

Within the framework of the FSS 2013 three state registers were used:

ADC Animal Register, including Bovine register – number of livestock on 1 July 2013;

ADC Organic Farming Statistics Information System – UAA of the holding on which organic farming production methods are applied in 2013;

RSS IACS databases – support for rural development during the last 3 years (2011-2013).

The holder of the Animal Register and Organic Farming Statistics Information System is the Agricultural Data Centre, the largest and most important institution under supervision of the Ministry of Agriculture.

Information of **Animal Register** is used as a data source in FSS, to provide data on cattle, sheep, goats, horses, rabbits and beehives, as well as the number of organic livestock by species. Legal basis and activities for Animal Register:

- Cabinet Regulation No 393 (Arrangement for the registration of livestock and aquaculture animals, their herds and sheds as well as procedure of animal labelling);
- Supervision programmes in Latvia;
- Directive of European Union 92/102/EEC on the identification and registration of animals;
- Council Regulation (EC) 820/97 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products;
- 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

In accordance with Section 4 of Cabinet Regulations No 393 the owner is obliged to register and designate livestock and update information on their designation, transfer, and other events. The owner shall within 7-day time submit an application electronically or in paper form, informing about any changes.

Starting with FSS 2013 data on the area of organically grown crops will be obtained from the **Organic Farming Statistics Information System**, because the quality of these data has improved significantly. Legal basis and activities for Organic Farming Statistics Information System:

- Cabinet regulations No 485 “Procedure for the Supervision and Control of Organic Farming”;
- In accordance with Cabinet regulations No 485 “Procedure for the Supervision and Control of Organic Farming” of 26 May 2009 annually until 1 February, holdings shall submit the following information to a control body in which they have filed a submission regarding inclusion in the control system of organic farming: area, grown crops, production of plant and animal origin, type and amount of production. The control body shall annually by 30 April submit individual data to the Agricultural Data Centre to be included in the organic farming statistical information system.
- The Ministry of Agriculture shall each year by 1 July prepare statistical information in line with the requirements of Regulation No 588/2008 and send this information to Eurostat.

For the provision of information on rural development support measures during the last three years needed for FSS 2013, **RSS IACS** information at the customer level was used as the source of information. The database is updated once a year, when the land owner/user submits an application for the single area payment. Legal basis and Activities for RSS:

- Law on Rural Support Service, 04/28/2004;
- Cabinet Regulation No 876 "Rural Support Service Regulations" of 19 October 2004;
- Agriculture and Rural Development Law, 24.04.2004.

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.

Reporting units in the used administrative registers are both mutually different as well as different from the FSS Reporting unit.

In Livestock register reporting unit is the livestock herd holder. In one holding there may be several livestock herd owners/holders.

In Organic Farming Statistics Information System responding unit is a natural or legal person who is awarded a certificate of organic farming by any of the certification bodies. In one FSS holding there may be several persons certified for organic farming.

The unit registered in the **RSS IACS database** is client – natural or legal person eligible to apply for the support within the framework of the activities organised by the RSS. Each client has a unique RSS client registration number.

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	n/a
	<p>Animal register</p> <p>In order to reduce respondent burden when acquiring the livestock statistics data for the FSS 2013 (except number of pigs and poultry) the ADC Livestock Register information was used, and the mentioned indicators were not included in the questionnaire. CSB regularly twice a year receives individual data from the Livestock Register at herd level. To provide information on the number of livestock for the needs of the FSS 2013 the CSB on 1 July 2013 used the Livestock Register information.</p> <p>The basic unit of the register is animal, which is identified based on the following characteristics:</p> <ul style="list-style-type: none"> • identification number of the herd, containing no more than 12 digits, and the country code; • herd name and address; • animal identification number, containing not more than 12 digits, and the country code; • date of birth; • gender; • breed and colour; • identification number of the mother; • identification number of the herd in which the animal was born; • identification number of the herd in which the

- to replace the survey on some of the characteristics and on the whole survey population. *Please indicate these (groups of) characteristics, the common identifiers and the method(s) of integration (record linkage algorithm).*

animal is kept and each change in herds;
 • date of slaughtering or death.

For the needs of the FSS 2013 the CSB received individual data from the Livestock Register as well as information on the herd owner: name, identity code, and address of residence, address of animal stall, telephone number etc. To combine the data the identity code for physical persons or registration number for legal holdings served as a common identifier.

- Information on characteristics was integrated in the FSS 2013 database directly from the Livestock Register.

Organic Farming Statistics Information System

- Information on organic agricultural holdings was obtained from the Organic Farming register. The basic unit of the register is organic farming certificate, which is identified based on the following characteristics:
 - organic farming certificate number;
 - name and address of the holding;
 - registration number in the Register of Enterprises;
 - unified tax identification number;
 - owner's name;
 - telephone number etc.

For the needs of the FSS 2013 the CSB received individual data from the Organic Farming Register as well as information on the certified person: name, identity code, and address of residence, number of Organic farming certificate, , telephone number etc. To combine the data the identity code for physical persons or registration number for legal holdings served as a common identifier.

Information was integrated in the Statistical Farm register. Statistical farm register contains the information about agricultural holdings and persons, who lives in each holding. There were identified all certified persons and farms and added to agricultural holdings. Next step was integration on in the FSS 2013 database from Statistical farm register. For identification of agricultural holding the unique ID was used.

RSS IACS database

With an aim to reduce respondent burden it was decided to exclude questions on support for the rural development received during the last 3 years from the FSS 2013 questionnaire, but individual information from the RSS IACS databases on each agricultural holding was used instead and integrated in the FSS 2013 data file.

The RSS IACS database served as a source of information on support payments received within the framework of the RSS administrated field support activities. The information received by the CSB included identity code, address of residence, address of agricultural holding, telephone

	<p>number etc. For combining data, personal code for physical persons or registration number for legal holdings was used as a common identifier.</p> <p>The information from the IACS database was directly integrated into the FSS 2013 database</p> <p><i>See Information from administrative data sources in Annex 2</i></p>
- to replace the survey on all characteristics and on a part of the survey population	n/a
- 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>	n/a
- to build/update the (sampling) frame (used for census or for sample survey)	n/a
- to pre-fill answers in the questionnaires which are then checked by farmers during the survey	Provisional information of the RSS IACS Database on the sown area in 2013 was pre-filled in the questionnaires. This information is received in July 31 2013 and it isn't fully checked from RSS. Final IACS information was in end of September received and used for comparison with the relevant FSS information.
- to impute item/unit non-response	To obtain the missing information data from the Statistical Farm Register, Population Register were used. Information of the RSS IACS database on the sown area or data imputation at the level of holdings in case of non-response.
- to validate the survey data (quality control). <i>Please indicate actions taken in case of large discrepancies</i>	<p>Integrated Administration and Control System by Rural Support Service</p> <p>In FSS this information was used for the quality control. For combining the data, the identity code for physical persons or registration number for legal holdings was used as a common identifier.</p> <p>FSS 2013 data on sown area at the level of holding were compared with the final IACS information. In case of significant discrepancies, the information was revised by calling the respondent. Main differences arise due to the fact that not all areas of UAA are eligible for aid or not applied for support, although it is used for agricultural crop production.</p>
- to calibrate of survey estimates. <i>Please indicate the calibration variables</i>	For calibration information of the ADC Animal register and RSS IACS database was used. Variables used for calibration are listed in item 12.5.a.3.
- other (<i>please specify in the next column</i>)	n/a

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.

To link administrative data sources with the SFR information personal identity number of the owner or enterprise registration number in the Register of Enterprises is used. The main problems associated with the use of administrative data sources include

- different definitions - in Livestock Register respondent unit is the owner of the livestock herd, in IACS - a natural or legal person who receives support payments, in Organic Farming Register - a natural or legal person who has received organic farming certificate
- data availability - information on organic farming in 2013 was received on 1 July 2014, which extended the FSS data processing time.

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>	ADC Organic Farming register includes all the organically certified agricultural holdings and information on the sown areas required for the provision of FSS information. RSS IACS includes full information on customers who have applied for and receive support payments in any of the support for the rural development programmes
	- misclassification <i>Please mention whether the information allows for the requested classification of units and whether there are errors in classification variables.</i>	ADC Livestock Register contains information on livestock by species and category. Breakdown of the cattle into categories meets the FSS definitions.
	- 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>	Each unit in administrative data source has own ID number and multiple listings isn't possible.

<p>- 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 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></p>	n/a
<p>- 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></p>	n/a
<p>- errors in register variables (analogue to measurement errors in a survey) i.e. erroneous values for certain variables</p>	n/a
<p>- processing errors. <i>Please provide an assessment. You can mention here imputation methods used, if any.</i></p>	n/a
<p>- coherence (comparison to other available data) of the administrative data (ex-ante and/or ex-post)</p>	n/a
<p>- other drawbacks (if any) of the use of data from the administrative source. <i>Please specify the drawbacks in the next column.</i></p>	n/a

[\[3\] 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](#)

Annexes:

[Neyman Allocation](#)

[The optimal allocation of sample description](#)

12.2. Frequency of data collection

(new) Please indicate the frequency of data collection.

FSS is organised once in three years

12.3. Data collection

12.3.a Data collection modes

Please specify the data collection mode(s) used.

These can be for example:

- Telephone

The data collection is carried out through the telephone interviews, usually supported by the CATI technology.

- Face-to-face

An interviewer visits selected holdings to directly communicate with them and get the required data.

- Internet

The data collection is carried out by using questionnaires which can be completed through internet applications.

- Self-completed paper questionnaires

The data is gathered through self-completed paper questionnaires which can be collected on a spot or sent to the survey organisation by mail.

- Mixed-mode

Several modes for data collection are combined. The typical example is the survey where the telephone interviews are complemented with the face-to-face interviews for the respondents who were not reached by telephone.

The main method used to obtain the data in the FSS 2013 was interviews; however, also other data collection methods were used: in the FSS 2013 three data collection methods were used – face-to-face interviews (CAPI - *Computer Assisted Personal Interviewing*), telephone interviews (CATI - *Computer Assisted Telephone Interviewing*), and web survey (CAWI - *Computer Assisted Web Interviewing*).

CAPI interviews

The LRATC interviewers used their laptop computers and data input programme developed by the CSB. During the time period from 1 October until the middle of December 25.0 thousand agricultural holdings were surveyed.

CAWI interviews:

Holdings, e-mail addresses of which were known and which in 2013 used RSS electronic area payment application system, had an opportunity to fill in the FSS 2013 on the Internet. Altogether 1290 respondents or 4.3% of the total number of respondents completed the web questionnaires.

Data collection methods

	Number of holdings	% of total
Total number of surveyed holdings	30070	100.0
Face-to-face interviews	25000	83.4
Telephone interviews	3692	12.3
Mail		
Internet	1290	4.3

12.3.b Data entry modes

Please specify the data entry mode(s) used.

These can be, for example:

- *Optical character recognition (OCR);*
- *Electronic data capture during personal interview;*
- *Entering the data online by the holder etc.*

CASIS (Computer Assisted Statistical Information System) was used. There were 3 different types of application

- application for face-to face interviews – CAPI (*Computer Assisted Personal Interviewing*). The application was installed on the interviewers' laptops;
- application for telephone interviews – CATI (*Computer Assisted Telephone Interviewing*);
- application for fulfilling questionnaire on the Internet – CAWI (*Computer Assisted Web Interviewing*).

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.

Interviewers had pre-developed methodological instructions that included indicator definitions and information on aim and legal basis of the FSS 2013. In case of refusal the task of the interviewer was to offer other opportunity to fill in the questionnaire – to send the completed form by mail, to fill in the survey on the Internet or to give the information by telephone.

Respondents having the opportunity to fill in the questionnaire on the Internet received an informative letter and two more notifications, if necessary.

With an aim to specify the information, during the data verification process respondents received a phone call:

- if questionnaire was filled in only partly;

if the given data were inaccurate or significantly differed from the information available in other administrative sources

CAPI interviews

The CSB personnel provided training of all interviewers. Training consisted of methodological part (explanation of the indicator definitions) and work with the data input programme (practical work).

CAWI interviews

Information on opportunity to participate in Agricultural Census by filling in the questionnaire on the Internet was sent to e-mail addresses of the CAWI respondents:

- 26.08.2013 – invitation and information about the user name and password;
- 4.09.2013 – first reminder;
- 9. – 10.09.2013 – second reminder.

In order to reduce FSS 2013 under-coverage the information is specified by telephone. Mainly respondents not met during data collection process were contacted. Information obtained by telephone was entered into the database

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</p> <p><i>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.</i></p> <p><i>In case of a census 1=3+4+5</i></p>	For the needs of Eurofarm a database on 81796 holdings was developed and sent to Eurostat in a form of anonymous individual data.
2.	<p>Number of holdings in the gross sample</p> <p><i>The number of holdings selected from the sampling frame to be included in the sample.</i></p> <p><i>This item should be completed <u>only</u> in case of a sample survey, in which case 2=3+4+5</i></p>	30002
3.	<p>(new) Number of ineligible holdings</p> <p><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></p>	1064

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	1064
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>	1064
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>	n/a
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>	n/a
5	(new) Number of eligible holdings <i>The number of surveyed holdings which are eligible</i> 5=5.1+5.2	28938
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	1151 (respondent was not met or respondent refused to answer)
5.1.1	Number of non-responding holdings – re-weighted	1151
5.1.2	Number of non-responding holdings – imputed	n/a
5.2	Number of responding holdings <i>This item includes holdings which provided completed questionnaires, either entirely or partially.</i>	27787

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.

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

Annexes:

[FSS 2013 questionnaire form](#)

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.

Data control was made in all data collection applications employed. Mathematical and logical controls were developed in compliance with the requirements of the “Data Supplier Manual”, as well as in order to obtain more precise information and facilitate further data processing, they were supplemented with other necessary controls.

200 controls were incorporated in the data input applications, and that ensured not only mathematical and logical control, but also technically correct data input. The CAWI application included only the most significant mathematical and logical validations facilitating the information provision for the respondents.

In respect to the validations failing during the data input process an error notification appeared that indicated the place of the error and the correct value (if possible).

When data were sent to the CSB server, the mathematical and logical control at the level of holdings was carried out. If necessary, the information was specified by contacting the interviewer or holding owner.

Data comparison was based on the administrative data sources – RSS IACS database on sown areas and SFR. The primary source used to specify the information was the respondent – CSB employees called the respondent and asked to give the precise incorrect or missing information.

12.4.b Tools used for data validation

Please mention tools used.

For data validation purposes ISDAVS CASIS for individual data was used. For data array validation purposes Standalone validation tool, developed by Eurostat was used

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.

The task of the interviewer was to acquire information from the respondent as well as to carry out the first data analysis and quality control.

When imputing the data interviewers also carried out the first logical and arithmetical control. Approximately 200 logical and arithmetical controls have been incorporated in the data input programme.

The CSB staff verified the received questionnaires, and the incorrect forms were sent back. In such situations interviewer specified the information with the respondent one more time. At the end of the field work the data at the level of holdings were controlled and revised by the CSB.

When data were sent to the CSB server in Riga the engaged personnel carried out deeper mathematical and logical controls at the level of holdings. If necessary, the information was revised by contacting interviewer or holder of agricultural holding.

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 (basic weights) are calculated according to the sample design. The design weights are calculated as the ratio of the number of holdings in the population to the number of holdings in the sample within each stratum.

Unit design weights are calculated according to sampling design and inclusion probabilities of units in the sample –

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

where N_h is population size of stratum h and n_h is the sample size 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.

Taking into account response rate, the holdings are broken down by the ones that have responded and ones - that have not. If information is obtained or imputed on farms and it is in over-coverage, the farms are considered as the ones that have responded; however, in other cases they will be assumed as the ones that have not responded.

$$k = \begin{cases} \frac{n_h}{n_h^R}, & \text{if resp} = 1 \\ 0, & \text{if resp} = 0 \end{cases},$$

where n_h - sample size in the stratum;

n_h^R - number of units responded in stratum.

Taking into account response rate end weights are:

$$w_2 = w_d * k,$$

w_d - design weights.

If no farm has responded in a stratum, similar strata are united and weights are recalculated in stratum.

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

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

The GREG estimator is used for estimation of totals.

Calibration:

Weight calibration was carried out by the number of sheep, pigs, dairy cows, other cattle, poultry, rabbits, bees in each region as of 1 July 2013 and by sown area of crops of IACS – spring rape, winter rape, oats, spring wheat – in each region and total number of farms in each region from frame of FSS.

Package “sampling” of software *R* is used for the calibration, and *g*-weights are calculated with the help of function “calib” from this package. In turn calibration is based on the raking method in the function “calib”.

Please note that using GREG (Generalized Regression) estimator (calibration) for FSS, the weights are not equivalent in one stratum within. The GREG estimator is used for estimation of totals. More about GREG estimator can found in the literature. [\[1\]](#)>[\[2\]](#)>.

[\[1\]](#)“Estimation in Surveys with Nonresponse Carl-Erik Särndal / SixtenLundström, Wiley”.

[\[2\]](#)“Estimation in the presence of nonresponse and frame imperfections SixtenLundström/ Carl-Erik Särndal,

StatisticsSweden”

12.5.a.4 Any other applied adjustment of weights

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

n/a

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)

n/a

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.

n/a

13.b Possible improvements in the future

Please suggest possible improvements.

The quality report is very long and extensive; therefore it would need to be simplified and shortened.

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).

n/a

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[Top](#)

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[Top](#)