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Principal quality characteristics of EU countries' Agricultural Censuses for 2020

2024 edition

 STATISTICAL
REPORTS



**Principal quality characteristics
of EU countries' Agricultural
Censuses for 2020 | 2024 edition**

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Preface

This report describes the main national characteristics of the Integrated farm statistics conducted in 2020 in the Member States of the European Union (EU). This will enable users to evaluate the degree of comparability achieved.

The data collections are organized in line with [Regulation \(EU\) 2018/1091](#) and have a new structure, consisting of a core data set and several modules. The regulation covers the data collections in 2020 (the agricultural census), 2023 and 2026. The data are as comparable and coherent as possible across European countries.

In 2020, data were collected in the form of an agricultural census. The agricultural census is a data collection method that produces statistical information about farms at the most detailed geographical level. Updates on the entire EU farming population were obtained through the agricultural census.

The list of core variables is set in Annex III of Regulation (EU) 2018/1091.

The descriptions of the core variables as well as the lists and descriptions of the variables for the modules collected in 2020 are set in [Commission Implementing Regulation \(EU\) 2018/1874](#).

The following groups of variables are collected in 2020:

- for **Core**: location of the holding, legal personality of the holding, manager, type of tenure of the utilised agricultural area, variables of land, organic farming, irrigation on cultivated outdoor area, variables of livestock, organic production methods applied to animal production,
- for the module "**Labour force and other gainful activities**": farm management, family labour force, non-family labour force, other gainful activities directly and not directly related to the agricultural holding,
- for the module "**Rural development**": support received by agricultural holdings through various rural development measures,
- for the module "**Animal housing and rural development module**": animal housing, nutrient use and manure on the farm, manure application techniques, facilities for manure.

The agricultural census is an essential source of information for governments, policy makers, scientists, researchers, farmers and the public. It allows the users to better understand the state of the farming sector and the impact of agriculture on the environment.

The aggregated results are disseminated through statistical tables and can be viewed in Eurostat's [database](#). The data are presented at different geographical levels and over periods.

For more detailed information on the legal basis, results, common practices, methods and definitions of the agricultural census and in general of farm statistics, see the dedicated page at: [Agricultural census - Eurostat \(europa.eu\)](#), the page on quality reports at: [Quality - Eurostat \(europa.eu\)](#) and the EU-IFS Statistics Explained website at: [Statistical explained](#).

Eurostat wishes to thank the experts responsible for the national Integrated farm statistics in the EU Member States for their help in compiling the data presented in this report.

List of abbreviations

AFR	Agricultural Farm Register
AGRA2010	Processing program for completeness and plausibility checks
AHMM	Animal Housing and Manure Management
AWU	Annual working units
BLAISE	Computer-assisted interviewing (CAI) system and survey processing tool developed by CBS (Statistics Netherlands)
BR	Business Register
CALMAR	Calibration Programme
CAP	Common Agricultural Policy
CAPI	Computer Assisted Personal Interview
CATI	Computer Assisted Telephone Interview
CBS	Statistics Netherlands
CAWI	Computer Assisted Web Interview
COA	Paper Data Collection
CORE	General, crops and livestock variables
CSB	Central Statistical Bureau
EC	European Community
EQ	Equals to
ELSTAT	Hellenic Statistical Authority
EU	European Union
EUROSTAT (ESTAT)	Statistical Office of the European Union
FAO	Food and Agriculture Organisation of the United Nations
FSS	Farm Structure Survey
GE	Greater than or equal to
GT	Greater than
HA	Hectares
HD	Heads
HCSO	Hungarian Central Statistical Office
IACS	Integrated Administration and Control System
ISDAVS CASIS	Integrated statistical data processing and management system, Computer Assisted Statistical Information System
IFS	Integrated Farm Statistics
INE	National Statistical Institute of Spain
INS	National Institute of Statistics
IRIA	Integration of Information Collection and Administration
I&R registers	Identification and Registration of Livestock
LAFO	Labour Force and Other Gainful Activities
LPIS	Land Parcel Identification System
LSU	Livestock units
NACE	Nomenclature of Economic Activities
NUTS	Nomenclature of territorial units for statistics
OGA	Other gainful activities
REGA	Farm Registry (Registro de Explotación)
RSEs	Relative Standard Errors
RVO	Rijksdienst voor Ondernemend Nederland/Netherlands Enterprise Agency
SAS	Statistical Analysis System
SFR	Statistical Farm Register
SPSS	Statistical software platform
SURS	Statistical Office of the Republic of Slovenia
SVS	Social insurance for farmers
UAA	Utilised agricultural area
VIS	Veterinary Information System
YN	Yes/No variable

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1

BELGIUM

1. Belgium

1.1. Background

1.1.1. Coverage - Time

Until 2007 (for 35 years), Statistics Belgium have been organising annually an agricultural census to comply with different European obligations. In 2008, Statistics Belgium decided to replace the census by a sample survey in certain years.

1.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

1.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

1.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, increased use of administrative data.

1.2. Target population

1.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

In a few cases, farmers are doing one declaration for several single agricultural holdings and therefore the data recorded for a single agricultural holding covers more than one agricultural holding.

1.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 1.

Variable	SIGN ¹	VALUE	UNIT
Utilised agricultural area	GE	2.00	HA
Horticultural crops	GE	0.50	HA
Potatoes	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Aromatic, medicinal, and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.20	HA
Fruits, berries, nuts, citrus fruits, other permanent crops including other permanent crops for human consumption	GE	0.30	HA
Cultivated mushrooms	GE	0.01	HA
Greenhouses	GE	0.01	HA
Livestock units	GE	1.50	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities”, with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

1.2.3. Geographical area

The entire territory of the country.

1.2.4. Criteria used to establish the geographical location of the holding

The administrative building (this is mostly also the residence of the farmer).

¹ SIGN: GE (Greater than or equal to), GT(Greater than), EQ (Equals), depending on the case

1.3. Reference period

1.3.1. Land variables

From the end of February until the end of April 2020, the farmers declared their main crops to IACS. If a crop was not sown at the moment of the declaration, they were obliged to provide the area of crops that would be sown. Second crops were not taken into account for IFS.

1.3.2. Irrigation

The 12-month period ending on 15 October 2020.

1.3.3. Livestock and animal housing

The reference day 15 October 2020.

1.3.4. Manure management

The 12-month period ending on 15 October 2020. This period includes the reference day used for livestock and animal housing.

1.3.5. Labour force

The 12-month period ending on 30 September 2020.

1.3.6. Rural development measures

The three-year period ending on 31 December 2020.

1.3.7. All other variables

The reference day 15 October 2020.

1.4. Coverage and data collection

1.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Quarterly.

1.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 3.7%.

1.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

1.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Electronic version (email),
- Use of internet.

1.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 11.1%.

Reasons: Refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Reminders, imputation.

1.4.6. Average duration of farm interview

Core and module “Labour force and other gainful activities” were carried out as a census. As there is one form it is impossible to separate the average duration to fill the variables for the core and this module. Average: 28 minutes.

Module “Animal housing and manure management” module: Average: 44 minutes. The time to fill in the core and labour force variables are included.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

1.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Organic farming register, Rural development measures.

1.5. Data compilation

Tools used for data validation: Blaise and SAS.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

1.6. Data quality

1.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

There is no case of non-compliant precision requirements for Belgium.

1.6.2. Variables mostly affected by measurement errors

When the values were too high or incoherent, we contacted the farmers and asked to correct their data. High values were detected by using thresholds. There is no specific list of variables affected by measurement errors. Measurement errors can occur to every numeric variable.

2

BULGARIA

2. Bulgaria

2.1. Background

2.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2003 onwards.

2.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

2.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

2.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation, increased use of administrative data.

2.2. Target population

2.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

2.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 2.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	0.50	HA
Arable land	GE	0.30	HA
Potatoes (including seed potatoes) - outdoor	GE	0.10	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.10	HA
Permanent grassland - outdoor	GE	0.50	HA
Pome fruits - outdoor	GE	0.10	HA
Stone fruits - outdoor	GE	0.10	HA
Fruits from subtropical and tropical climate zones - outdoor	GE	0.10	HA
Berries (excluding strawberries) - outdoor	GE	0.10	HA
Nuts - outdoor	GE	0.10	HA
Grapes - outdoor	GE	0.10	HA
Other permanent crops including other permanent crops for human consumption - outdoor	GE	0.10	HA
Pome fruits - outdoor, stone fruits - outdoor, fruits from subtropical and tropical climate zones - outdoor, berries (excluding strawberries) - outdoor, nuts - outdoor, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Tobacco - outdoor	GE	0.10	HA
Hops - outdoor	GE	0.10	HA
Flowers and ornamental plants (excluding nurseries) - outdoor	GE	0.10	HA
Seeds and seedlings - outdoor	GE	0.10	HA
Nurseries - outdoor	GE	0.10	HA
Aromatic, medicinal, and culinary plants - outdoor	GE	0.10	HA
Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor, nurseries - outdoor	GE	0.20	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Cows	GE	1.00	HD
Bovine animals, less than 1 year old; male bovine animals, 1 to less than 2 years old; heifers, 1 to less than 2 years old; male bovine animals, 2 years old or over; heifers, 2 years old and over	GE	2.00	HD

Variable	SIGN	VALUE	UNIT
Live horses, asses, mules, and hinnies	GE	2.00	HD
Piglets, live weight under 20 kg, other pigs	GE	5.00	HD
Breeding sows, live weight 50 kg or over	GE	1.00	HD
Sheep, breeding females	GE	5.00	HD
Goats, breeding females	GE	2.00	HD
Laying hens	GE	50.00	HD
Broilers	GE	100.00	HD
Bees	GE	10.00	HIVE
Rabbits of domestic species, breeding females	GE	10.00	HD
Male bovine animals, 2 years old or over	GE	1.00	HD
Turkeys, ducks, geese, guinea fowls, pheasants, pigeons, other poultry	GE	30.00	HD
Ostriches	GE	1.00	HD
Quails	GE	400.00	HD
Other livestock	GE	1.00	HD
Deer	GE	1.00	HD
Fur animals	GE	1.00	HD
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module "Labour force and other gainful activities". Data have been collected including for those farms that have used fertilizers but do not have animals. All holdings were monitored comprehensively, and all collected data were sent to Eurostat.

2.2.3. Geographical area

The entire territory of the country.

2.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the location where all agricultural activities are situated, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from

the farm.

2.3. Reference period

2.3.1. Land variables

The 12-month period ending on 31 August 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

2.3.2. Irrigation

The 12-month period ending on 31 August 2020.

2.3.3. Livestock and animal housing

The reference day 31 August 2020.

2.3.4. Manure management

The 12-month period ending on 31 August 2020. This period includes the reference day used for livestock and animal housing.

2.3.5. Labour force

The 12-month period ending on 31 August 2020.

2.3.6. Rural development measures

The three-year period ending on 31 December 2020.

2.3.7. All other variables

The reference day 31 August 2020.

2.4. Coverage and data collection

2.4.1. Frame

Type of frame: List frame.

Name of frame: The statistical register of the agricultural farms supplemented with new holdings and updated by removing the inactive ones.

Update frequency: Less frequent than annual.

2.4.2. Over coverage rate

Rate (unweighted, for the population of the core data): 33.9%.

2.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation

(EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

2.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, non-electronic version,
- Face-to-face, electronic version,
- Use of Internet.

2.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0%.

Reasons: Refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders.

2.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

2.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Rural development measures, Bovine register, Ovine register, Caprine register, Organic farming register, Other administrative sources (e.g., Ministry of Agriculture).

2.5. Data compilation

Tools used for data validation: Comparison of the data, logical checks in the information system, Eurostat’s data testing system.

The number of working days corresponding to a full-time job: 232.

The number of working hours corresponding to a full-time job: 1856.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

2.6. Data quality

2.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

2.6.2. Variables mostly affected by measurement errors

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:
 - ✓ Data collection with a paper questionnaire implies technical mistakes. In order to limit these errors multiple controls are set in the computer system during data entry,
 - ✓ Some logically related fields get controlled. Example: The sum of the crop area cannot be greater than UAA, irrigated area and organic farming area cannot be larger than main area, etc.
- Respondent: respondents may, consciously or unconsciously, give erroneous data:
 - ✓ The individual data are compared and clarified, if necessary, with a second interview. Such interviews are carried out by phone in case significant differences are recorded between the interview data, the administrative cross checks, and data from previous surveys. Controls of sums, and some logically related fields.
- Interviewer: interviewers may influence the answers given by respondents:
 - ✓ Low possibility of such an error. Problems caused by difficult questions, unclear definitions, sensitive questions etc. which are likely to determine measurement errors,
 - ✓ Problems caused by difficult questions, unclear definitions, sensitive questions etc. which are likely to determine measurement errors.

3

CZECHIA

3. Czechia

3.1. Background

3.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2000 onwards.

3.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

3.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

3.1.4. Efficiency gains since the last data transmission to Eurostat

- On-line surveys;
- Lowered burden for those respondents included in both IFS and Areas under crops survey and/or Livestock survey.

3.2. Target population

3.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

3.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 3.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries	GE	0.50	HA
Fruit trees, berries, nut trees, other permanent crops excluding nurseries, vineyards and olive trees	GE	0.30	HA
Aromatic, medicinal and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.20	HA
Vineyards	GE	0.10	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

3.2.3. Geographical area

The entire territory of the country.

3.2.4. Criteria used to establish the geographical location of the holding

The location where all agricultural activities are situated, the most important parcel by physical size, the residence of the farmer (manager) not further than 5 km straight from the farm.

3.3. Reference period

3.3.1. Land variables

The use of land refers to the 12-month reference period ending on 30 September 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

3.3.2. Irrigation

The 12-month period ending on 30 September 2020.

3.3.3. Livestock and animal housing

The reference day 30 September 2020.

3.3.4. Manure management

The 12-month period ending on 30 September 2020. This period includes the reference day used for livestock and animal housing.

3.3.5. Labour force

The 12-month period ending on 30 September 2020.

3.3.6. Rural development measures

The three-year period ending on 31 December 2020.

3.3.7. All other variables

The reference day 30 September 2020.

3.4. Coverage and data collection

3.4.1. Frame

Type of frame: List frame.

Name of frame: Farm Register.

Update frequency: Continuous.

3.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 18%.

3.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

3.4.4. Methods of data collection

The data collection methods are the following:

- Paper, self-administered questionnaire,
- Postal, non-electronic version,
- Postal, electronic version (email),
- Face-to-face, non-electronic version,
- Telephone, electronic version,
- Use of Internet.

3.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 3.9%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

3.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

3.4.7. Administrative sources

The administrative sources used are: Rural development measures.

3.5. Data compilation

All core as well as module data in IFS 2020 were collected as a census.

Therefore, no design weights were used for data compilation.

The data imputation method used for non-responding units is the nearest neighbour imputation.

Tools used for data validation:

Step 1: Internal check rules (including linkages between inter-related parts of the questionnaire).

Step 2: Validation rules developed by Eurostat.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

3.6. Data quality

3.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

3.6.2. Variables mostly affected by measurement errors

The questionnaire used in IFS 2020 was very similar to one used in former surveys so the risk that the respondents did not correctly understand the questions was minimised.

4

DENMARK

4. Denmark

4.1. Background

4.1.1. Coverage - Time

Farm structure statistics in Denmark cover the period from 1982 onwards at an almost complete comparability.

4.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

4.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

4.1.4. Efficiency gains since the last data transmission to Eurostat

None.

4.2. Target population

4.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

4.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 4.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Standard output	GE	7,500.00	EUR
Fruits, berries, nuts, and nurseries	GE	0.50	HA
Fresh vegetables (including melons) and strawberries	GE	0.50	HA
Greenhouses and mushrooms	GE	0.01	HA
Cattle	GE	10.00	HD
Pigs	GE	50.00	HD
Sows	GE	10.00	HD
Sheep and goats	GE	20.00	HD
Poultry	GE	1,000.00	HD
Fur animals	GE	40.00	HD
Cereals, pulses, root crops, grass and green fodder in rotation, industrial crops, horticultural crops, vegetables and strawberries, ornamental plants, fruits	GE	2.00	HA
Potatoes	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Nurseries, ornamental plants, and leguminous plants	GE	0.20	HA
Pome fruits, stone fruits, berries, nuts, nurseries, and other permanent crops	GE	0.30	HA
Livestock units	GE	1.70	LSU
Fruits, berries, nuts, and other permanent crops	GE	0.30	HA

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

4.2.3. Geographical area

The entire territory of the country.

4.2.4. Criteria used to establish the geographical location of the holding

The majority of the area of the holding, the residence of the farmer (manager) not further than 5 km straight from the farm.

4.3. Reference period

4.3.1. Land variables

For the farms applying for crop subsidies – and they constitute the vast majority – crops on free land reflect what the farms have reported to the Ministry of Agriculture in April 2020. The deadline for applying for crop subsidies in 2020 was 17 April. Thus the 12-month period is 18 April 2019 -17 April 2020. For forestry and green house area, the reference day 19 June 2020 applies for all farms.

4.3.2. Irrigation

The 12-month period ending on 19 June 2020.

4.3.3. Livestock and animal housing,

For cattle, the date of 1 June 2020. For all other livestock and for animal housing, the reference day 19 June 2020.

4.3.4. Manure management

The manure management reflects the techniques used by the farm in 12-month period ending on 19 June 2020.

4.3.5. Labour force

The 12-month period ending on 19 June 2020.

4.3.6. Rural development measures

The years 2018, 2019 and 2020.

4.3.7. All other variables

The reference day 19 June 2020.

4.4. Coverage and data collection

4.4.1. Frame

Type of frame: List frame.

Name of frame: FSS Population Register.

Update frequency: Continuous.

4.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 5.4%.

4.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

4.4.4. Methods of data collection

The data collection method is the following:

- Postal, electronic version (email).

4.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 14.0%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Reminders, imputation.

4.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: The questionnaire is normally completed online and we have thereby no knowledge on how long time it takes. In cases where the questionnaire is completed through telephone interviews the experience is that it most often can be completed in less than ten minutes. How the time is distributed to the different parts of the questionnaire is not known.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

4.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Register of farms receiving rural development support.

4.5. Data compilation

Tools used for data validation: Oracle and SAS.

The number of working days corresponding to a full-time job: 208.125.

The number of working hours corresponding to a full-time job: 1665.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

4.6. Data quality

4.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

4.6.2. Variables mostly affected by measurement errors

There is no available information.

5

GERMANY

5. Germany

5.1. Background

5.1.1. Coverage - Time

Farm structure statistics in Germany cover the period from the 1930s onwards. The results are comparable to a limited extent, as the survey characteristics and thresholds have changed over time.

5.1.2. Frequency of data collection

The IFS is conducted every 3 to 4 years.

5.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

5.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data.

5.2. Target population

5.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

Agricultural holdings that produce olive oil from olives for personal use are included in the scope of the regulation but are not relevant for Germany in the context of the IFS 2020. The breeding and keeping of ostriches, emus and rabbits, as well as the beekeeping are not relevant for Germany, either.

5.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 5.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.0	HA
Hops	GE	0.5	HA
Tobacco	GE	0.5	HA
Permanent crops	GE	1.0	HA
Orchards (outdoor and under glass or high accessible cover)	GE	0.5	HA
Grapes	GE	0.5	HA
Nurseries (outdoor and under glass or high accessible cover)	GE	0.5	HA
Fresh vegetables and strawberries	GE	0.5	HA
Flowers and ornamental plants	GE	0.3	HA
Utilised agricultural area under glass or high accessible cover	GE	0.1	HA
Cultivated mushrooms	GE	0.1	HA
Bovine animals	GE	10.0	HD
Pigs	GE	50.0	HD
Breeding sows	GE	10.0	HD
Sheep	GE	20.0	HD
Goats	GE	20.0	HD
Poultry (places and not heads)	GE	1,000.0	HD

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: Yes.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

5.2.3. Geographical area

The entire territory of the country.

5.2.4. Criteria used to establish the geographical location of the holding

The location of the holding was, in most cases, the parcel on which the farm building was located. If farm buildings were located on multiple parcels, the holding location was the parcel on which the most important farm buildings or buildings were located.

5.3. Reference period

5.3.1. Land variables

The land variables refer to the reference year 2020. In the case of successive crops, the land variables refer to a crop that is harvested during the reference year, regardless of when the crop is sown.

5.3.2. Irrigation

The 12-month period ending on 31 December 2019.

5.3.3. Livestock and animal housing

The reference day is 1 March 2020.

5.3.4. Manure management

The 12-month period ending on 1 March 2020. This period includes the reference day used for livestock and animal housing.

5.3.5. Labour force

The 12-month period ending on 29 February 2020. The calendar year 2019 is the reference period of the other gainful activities.

5.3.6. Rural development measures

The three-year period ending on 31 December 2020.

5.3.7. All other variables

The reference day 1 March 2020.

5.4. Coverage and data collection

5.4.1. Frame

Type of frame: List frame.

Name of frame: The population for the IFS 2020 was established on the basis of the Farm Register

which is regularly updated by results from various agricultural statistical surveys and by information from administrative sources such as the Herkunfts und Informationssystem für Tiere (HIT, Bovine Register). The adds and outs (e.g., newly established, or abandoned holdings) ascertained in intermediate years in the Farm Register, which result from the regular updates of survey units using administrative sources, were taken into consideration. With a population of 262 800 holdings, the sampling fraction² is approx. 29%. The information from the Farm Register is not subject to any fixed updating schedules, the contents of the Farm Register are constantly (but at least once a year) updated by the statistical offices of the Länder.

Update frequency: Continuous.

5.4.2. Over coverage rate

Rate (unweighted, for the population of the core data): 6.4%.

5.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

Module “Rural development” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

5.4.4. Methods of data collection

The data collection methods are the following:

- Paper, self-administered questionnaire,
- Telephone, non-electronic version,
- Use of internet.

5.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0,4%.

Reasons: Refusal to participate, inability to participate (e.g., illness, absence).

² The ratio of the sample size to the population size.

Actions to minimise or address it: follow-up interviews, reminders, legal actions, imputation, weighting.

5.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

5.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Rural development measures.

5.5. Data compilation

Since the modules of IFS 2020 are collected from a random sample, the data compiled must be extrapolated. The results of the sample were extrapolated using the Horvitz–Thompson estimator. The weight is the inverse value of the sampling fraction, i.e., per stratum N/n whereby N = stratum size and n = sample size per stratum. The smaller the sample size in each stratum, the greater the extrapolation factor. Holdings from a full coverage stratum, e.g., new holdings or holdings with large amounts of livestock and organic farming are given the weight 1.

The extrapolation factor for sample holdings is adjusted for “true” non-responses. For this, a correction factor was included in the extrapolation method in the sample survey. Under the assumption that the “true” non-responses possess the same structure as the units that responded, the mathematical adjustment was made so that only the observed values of the effective sample size were used to identify the extrapolation factor, i.e., n_{strata} minus the number of “true” non-responses within strata.

This correction extrapolation factor is not adjusted for not sample holdings. Therefore, the core data are not treated for non-response and that explains the slightly different population sizes using the data for core and the data for the modules.

Tools used for data validation: The national AGRA2010 processing program was the main instrument for completeness and plausibility checks. This program stores more than 800 obligatory and facultative error tests and many automated corrections.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

5.6. Data quality

5.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

There are no cases where the estimated RSEs are above the determined thresholds.

5.6.2. Variables mostly affected by measurement errors

The main reasons for missing or erroneous information in the IFS 2020 are the size of the questionnaire and the complexity of the survey. The same problem will occur in the IFS 2023. Furthermore, in the IFS 2020 some variables are considered sensitive by respondents (e.g., ownership or the breakdown of the number of employees and working hours, the manure management), which lessens response willingness. In addition, and in spite of the great care that was taken in preparing the questionnaire, comprehension difficulties frequently occurred in the questionnaire sections on manure management, other gainful activities and areas under high accessible protective covers including greenhouses, as identified by the large number of follow-up enquiries. All measurement errors were corrected – if recognised as such, for example through distinct deviations from previous year or experienced values – during data editing. Moreover, a pre-test was conducted with voluntary farmers to improve the questionnaire. In the context of the pre-test, the performance, and the usability (understanding / user-friendliness) of the online questionnaire were tested.

6

ESTONIA

6. Estonia

6.1. Background

6.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2001 onwards.

6.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

6.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

6.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation.

6.2. Target population

6.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

6.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 6.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Aromatic, medicinal, and culinary plants – outdoor, flowers and ornamental plants (excluding nurseries) – outdoor, seeds and seedlings – outdoor, nurseries - outdoor	GE	0.20	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes, and strawberries) - outdoor including organic, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Total livestock units	GE	1.7	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module "Labour force and other gainful activities" with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

6.2.3. Geographical area

The entire territory of the country.

6.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the most important parcel by physical size, the residence of the farmer (manager) not further than 5 km straight from the farm, other.

Within criteria used to establish the geographical location of the holding, 'other' means the location which is reported by the holder (on the level of settlement) as the main location of the holding. This information is based on IACS, and it is used as additional information while determining the geographical location of the holding.

6.3. Reference period

6.3.1. Land variables

The use of land refers to the reference year 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

6.3.2. Irrigation

The 12-month period ending on 1 September 2020.

6.3.3. Livestock and animal housing

The reference day is 1 September 2020.

6.3.4. Manure management

The 12-month period ending on 1 September 2020. This period includes the reference day used for livestock and animal housing.

6.3.5. Labour force

The 12-month period ending on 1 September 2020.

6.3.6. Rural development measures

The three-year period ending on 31 December 2020.

6.3.7. All other variables

The reference day 15 October 2020.

6.4. Coverage and data collection

6.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Continuous.

6.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 1.9%.

6.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit specialization, other.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit specialization, other.

6.4.4. Methods of data collection

The data collection methods are the following:

- Telephone, electronic version,
- Use of internet.

6.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 1.9%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

6.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: The average duration of collection of the IFS 2020 questionnaire was 30 minutes. There is no information about the separate durations for core and modules.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

6.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Ovine register, Caprine register, Organic farming register, Rural development measures, Cadastre, Database of pigs, Register of beehives, Employment Register, Statistical Farm Register, Statistical Business Register.

6.5. Data compilation

The weights of the modules’ sample were adjusted for non-response. Holdings outside the scope (over-coverage) were not taken into account.

Tools used for data validation: Validation rules were used in the questionnaires and within special data processing software. Additional validations were done through special queries.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

6.6. Data quality

6.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

There are no cases where estimated RSEs are above thresholds.

6.6.2. Variables mostly affected by measurement errors

The most difficult questions were NETEXP_FER_O_LM_LQ_SL ("Net export of slurry/liquid manure from the farm") and NETEXP_FER_O_LM_SO ("Net export of solid manure from the farm"). The reason is that holders do not have information about these quantities, and if they try to give an estimate, these estimations may not be accurate. The data were checked using the number of livestock, manure coefficients and utilised agricultural area. The data were checked also on the aggregated level.

Difficult questions are also those related to manure storage facilities and capacity. If there is more than one manure storage facility, it may be difficult to provide the percentages of manure stored in different storage facilities. Data about capacity also seem difficult as holders tend to state the number of months the manure is stored and not the capacity. Information about other major measurement errors is not known. The questionnaires were carefully designed, they were in the electronic format and included several arithmetical and logical checks. The majority of the information was collected by trained interviewers.

7

IRELAND

7. Ireland

7.1. Background

7.1.1. Coverage - Time

A Farm Structure Survey (FSS) is carried out between Censuses to measure changes in Farm Structure. The first Census of Agriculture (COA) in Ireland was carried out in 1847, and annually thereafter until 1953. Between 1960 and 1980 Censuses were carried out at 5 yearly intervals. From 1980 Censuses were carried out at 10 yearly intervals.

There is an available time series from the 1850s to the present day for the number of holdings, livestock totals and utilised agricultural area.

7.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

7.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

7.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, increased use of administrative data.

7.2. Target population

7.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

7.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 7.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Total livestock units	GE	1.70	LSU
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Seeds and seedlings - outdoor, aromatic, medicinal and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor and nurseries - outdoor	GE	0.20	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes, and strawberries) - outdoor and other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Greenhouses	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

7.2.3. Geographical area

The entire territory of the country.

7.2.4. Criteria used to establish the geographical location of the holding

The most important parcel by physical size.

7.3. Reference period

7.3.1. Land variables

The use of land refers to the reference year 2020, as land variables are obtained from the IACS system; the 12-month reference period is 1 January 2020 to 31 December 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

7.3.2. Irrigation

The 12-month period for total irrigable area is from 1 January 2020 to 31 December 2020.

7.3.3. Livestock and animal housing

The reference day 1 June 2020.

7.3.4. Manure management

The 12-month period ending on 31 December 2020. This period includes the reference day used for livestock and animal housing.

7.3.5. Labour force

The 12-month period ending on 31 December 2020.

7.3.6. Rural development measures

The three-year period ending on 31 December 2020.

7.3.7. All other variables

The reference day of 1 June 2020.

7.4. Coverage and data collection

7.4.1. Frame

Type of frame: List frame.

Name of frame: The frame is housed in the CSOs Data Management System and is named the "Agriculture Register".

Update frequency: Annual.

7.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 6.2%.

7.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module "Labour force and other gainful activities" on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, other.

7.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Telephone, electronic version,
- Use of internet.

7.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 11.5%.

Reasons: Failure to contact the unit.

Actions to minimise or address it: Reminders, imputation, weighting, other.

7.4.6. Average duration of farm interview

Core: The mean time in minutes to complete the core questionnaire (online & paper together) was 16.70 minutes and the median was 15 minutes.

Module “Labour force and other gainful activities: The mean time in minutes to complete the LAFO questionnaire (paper only) was 16.02 minutes and the median was 10 minutes.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: The mean time in minutes to complete the AHMM questionnaire (paper only) was 20.48 minutes, and the median was 15 minutes.

7.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Ovine register, Organic farming register, Rural development measures.

7.5. Data compilation

Design weights were obtained by taking the inverse of the inclusion probabilities. Weights were then adjusted based on non-response within the sampling strata.

Tools used for data validation: The CSO Data Management System was used for verification and edits of each questionnaire that was returned. Further data validation took place using SAS and R-Studio.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

7.6. Data quality

7.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

Of the 65 eligible cases, five were non-compliant (7.69%).

Some land variables in the LAFO module had large RSEs; two eligible cases, “Cereals for the production of grain (including seed) - outdoor” and “Plants harvested green from arable land - outdoor” in IE06 had RSEs over 5%. The “Cereals / IE06” pair has an RSE of 6.33% and the “Plants harvested green / IE06” pair has an RSE of 5.07% so a larger sample size in future data collections for the LAFO module should lower these RSEs.

In the IE06 region for the LAFO module, there were two RSEs for two eligible cases: the “Dairy Cows” LSU and “Sheep and Goats” LSU variables. These RSEs were 5.20% and 5.68%; dairy farming and sheep farming are not predominant in this region and a larger sample size for these modules in future data collections should be adequate to lower the RSEs.

In the IE06 region for the AHMM module, there was one non-compliant RSE (8.7%), for the “Sheep and Goats” eligible case. As stated above, sheep farming is not predominant in this region and a larger sample size will be required for AHMM modules in future IFS data collections.

Finally, the IE06 region has the fewest farms among the NUTS 2 regions of Ireland but is also a predominant region for arable land and most of the common Irish livestock variables will be eligible cases in this region. Future sampling designs will incorporate this information and ensure that IE06 eligible cases are compliant.

7.6.2. Variables mostly affected by measurement errors

“Temporary grasses and grazings - outdoor” (G1000T), “Permanent pastures and meadow, (excluding rough grazings) – outdoor” (J1000T) and “Permanent rough grazings - outdoor” (J2000T). Areas declared for the above variables in IACS differed substantially from the returns on the Census instrument. The breakdown of grasslands obtained from respondents on the instrument was assumed valid, particularly given the geographical location of the rough grazing returns

8

Greece

8. Greece

8.1. Background

8.1.1. Coverage - Time

Farm structure statistics for Greece cover the period from 1983 onwards.

8.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3 years in-between.

8.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

8.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation.

8.2. Target population

8.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

8.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 8.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	0.10	HA
Greenhouses, regardless of the production type, ownership, or the location of the holding	GE	0.01	HA
Cows	GE	1.00	HD
Other "large animals" of any type and age (oxen, horses, donkeys, mules)	GE	2.00	HD
Small animals (sheep, goats, pigs of any age and type)	GE	5.00	HD
Poultry birds	GE	50.00	HD
"Domestic" or "European" bees	GE	20.00	HIVE
Mushrooms	GT	0.00	HA
Ostriches	GE	5.00	HD
Female rabbits	GE	50.00	HD

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules "Labour force and other gainful activities" and "Rural development": The same population of agricultural holdings defined for the core data.

Module "Animal housing and manure management": The same population of agricultural holdings of the module "Labour force and other gainful activities".

8.2.3. Geographical area

The entire territory of the country.

8.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the location where all agricultural activities are situated, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from the farm.

8.3. Reference period

8.3.1. Land variables

The use of land refers to the period 1 October 2019 - 30 September 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

8.3.2. Irrigation

The 12-month period ending on 30 September 2020.

8.3.3. Livestock and animal housing

The reference day 1 November 2020.

8.3.4. Manure management

The 12-month period ending on 1 November 2020. This period includes the reference day used for livestock and animal housing.

8.3.5. Labour force

The 12-month period ending on 30 September 2020.

8.3.6. Rural development measures

The three-year period ending on 31 December 2020.

8.3.7. All other variables

The reference day 30 September 2020.

8.4. Coverage and data collection

8.4.1. Frame

Type of frame: List frame.

Name of frame: Agricultural Register of ELSTAT.

Update frequency: Annual.

8.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 32%.

8.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

8.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

8.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 3.8%.

Reasons: Failure to identify the unit, failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, weighting.

8.4.6. Average duration of farm interview

Core: 12 minutes.

Module “Labour force and other gainful activities: 5 minutes.

Module “Rural development”: 2 minutes.

Module “Animal housing and manure management”: 8 minutes.

8.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System.

8.5. Data compilation

For small holdings (frame extension) the sampling method used by ELSTAT is the single-stage random stratified sampling. In the design phase of the survey, an initial weight (design weight) was given to each sampling unit (holding), estimated as the inverse of the probability of selection.

The initial weights were corrected by a factor that considers the change in sample size imposed by the holders that refused to respond and the holdings that were ineligible (closed holdings, merged holdings, duplicates etc.).

For holdings that were split into two or more new ones, all the resulting new holdings were surveyed, and the weight of the initial holding was given to each one of them.

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

In each stratum, h , let:

N_h : the total number of holdings belonging to stratum h ,

n_h : the initial sample size in stratum h ,

dw_h : design weight of holdings in stratum h , where $dw_h = N_h/n_h$,

R_h : the response rate of eligible sampling units in stratum h ,

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

w_h : the extrapolation factor, where $w_h = dw_h \cdot R_h^{-1}$.

Because of the presence of some strata h with all eligible units not respondent, the extrapolation factors w_h , were increased suitably to reduce the underestimation of the surveyed characteristics.

That was achieved by creating homogeneous classes c , applying the Region (NUTS 2), Typology combination and Size class, whereas the weighted response rate R_c of eligible units was calculated.

Next, the inverse of this response rate of class R_c , was multiplied by the extrapolation factor w_h ($h \in c$), giving the adjusted extrapolation factor $w'_h = w_h (h \in c) \cdot R_c^{-1}$.

In a very few cases, a further weighting adjustment took place by using as homogeneous classes the crossing of Region (NUTS 2) and Typology combination.

After the above adjustment, we took the final extrapolation factors w^f_h in stratum h .

Tools used for data validation: Custom Oracle SQL based applications developed in house and Microsoft Excel.

The number of working days corresponding to a full-time job: 275.

The number of working hours corresponding to a full-time job: 2200.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

8.6. Data quality

8.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

In the extended sampling frame, the information used for stratification was not entirely accurate and as a result, the variances and sampling errors of the obtained estimations were larger than those expected from accurate stratification information. Thus, the benefits of precision due to stratification have been reduced.

In addition, the sampling frame included sample units that do not belong to the target population, such as units that no longer exist or units that are not within the survey scope.

The main consequence of ineligible units included in the sampling frame is that the actual sample size gets diminished as those units are discarded. Therefore, the estimation efficiency is reduced.

8.6.2. Variables mostly affected by measurement errors

The interview was conducted with the owner or the manager of the holding. However, if the owner or the manager was found temporarily absent, then the required information could be retrieved by interviewing another member of the holder's family or an employee with knowledge (e.g., foreman) of the holding. The most common problematic questions/characteristics identified during the quality control of the data were the following:

- Location of the holding,
- Kitchen gardens vs outdoor fresh vegetables,

- Permanent grassland vs common land, in some cases difficult to discern,
- Manure export/import,
- Manure application techniques,
- Manure storage.

9

SPAIN

9. Spain

9.1. Background

9.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1962 onwards.

9.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

9.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

9.1.4. Efficiency gains since the last data transmission to Eurostat

Increased use of administrative data.

9.2. Target population

9.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

9.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 9.

Region	Variable	SIGN	VALUE	UNIT
ES11	Utilised agricultural area	GE	1	HA
ES11	Arable land	GE	1	HA
ES11	Potatoes (including seed potatoes) - outdoor	GE	0.5	HA
ES11	Fresh vegetables (including melons) and strawberries - outdoor	GE	0.2	HA
ES11	Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor and nurseries - outdoor	GE	0.2	HA
ES11	Fruits, berries, and nuts (excluding citrus fruits, grapes and strawberries) - outdoor, citrus fruits - outdoor, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.2	HA
ES11	Grapes - outdoor	GE	0.1	HA
ES11	Olives - outdoor	GE	0.3	HA
ES11	Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
ES11	Cultivated mushrooms	GE	0.01	HA
ES11	Total livestock units	GE	1	LSU
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Utilised agricultural area	GE	5	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Arable land	GE	2	HA

Region	Variable	SIGN	VALUE	UNIT
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Potatoes (including seed potatoes) - outdoor	GE	0.5	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Fresh vegetables (including melons) and strawberries - outdoor	GE	0.5	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Aromatic, medicinal and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor and nurseries - outdoor	GE	0.2	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Fruits, berries and nuts (excluding citrus fruits, grapes and strawberries) - outdoor, citrus fruits - outdoor, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.3	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Grapes - outdoor	GE	0.1	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Olives - outdoor	GE	0.3	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Cultivated mushrooms	GE	0.01	HA
ES12, ES13, ES21, ES22, ES23, ES24, ES30, ES41, ES42, ES43, ES51, ES52, ES53, ES61, ES62, ES63, ES64, ES70	Total livestock units	GE	1.7	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The subset of population of agricultural holdings defined for the core data which falls in the main frame i.e., above at least one of the thresholds set in Regulation (EU) 2018/1091.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following types of livestock: bovine animals, pigs, sheep, goats, poultry, between 1 October 2019 and 30 September 2020, not as of 30 September 2020. The country conducted the module AHMM on a coverage larger than the minimum required by the Regulation.

9.2.3. Geographical area

The entire territory of the country.

9.2.4. Criteria used to establish the geographical location of the holding

The most important parcel by physical size.

9.3. Reference period

9.3.1. Land variables

The use of land refers to the reference year 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown. For the variables related to land, the reference period is the 2020 agricultural campaign, from 1 October 2019 to 30 September 2020.

9.3.2. Irrigation

The 12-month reference period for the total irrigable area coincides with the cropping season, starting on 1 October 2019 and ending on 30 September 2020.

9.3.3. Livestock and animal housing

For variables on livestock, the reference date shall be 30 September 2020. For variables on animal housing, the reference period is the 2020 agricultural campaign, from 1 October 2019 to 30 September 2020.

9.3.4. Manure management

For variables on manure management, the reference period is the 2020 agricultural campaign, from 1 October 2019 to 30 September 2020. This period includes the reference day used for livestock.

9.3.5. Labour force

For variables on labour force, the reference period is the 2020 agricultural campaign, from 1 October 2019 to 30 September 2020.

9.3.6. Rural development measures

The three-year period ending on 31 December 2020.

9.3.7. All other variables

The reference day 30 September 2020.

9.4. Coverage and data collection

9.4.1. Frame

Type of frame: List frame.

Name of frame: The administrative registers referred to in Article 4 paragraph (2) of Regulation (EU) 2018/1091 were used.

Update frequency: Annual.

9.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 12.2%.

9.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

9.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Telephone, non-electronic version,
- Use of internet.

9.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 10.4%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Imputation, weighting, other.

9.4.6. Average duration of farm interview

Core: The average duration for collecting the core variables from the farm is 10.3 minutes.

Module “Labour force and other gainful activities: The average duration for collecting the Labour force and other gainful activities variables from the farm is 6.5 minutes.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: The average duration for collecting the Animal housing and manure management variables from the farm is 4.7 minutes.

9.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, REGA, Register of Livestock Farms, Rural development measures, Municipal census dataset of inhabitants.

9.5. Data compilation

The population for the LAFO module is slightly larger than the population for CORE, because the LAFO population is an estimated based on a sample, while the CORE population is based on census data.

We apply calibration techniques, using the CALMAR macro in SAS, in the cases there are correlations between core and module variables.

Thus, for the LAFO module, small holdings are calibrated by the labour contribution of the head of the holding and generally, in each UAA size, the data are calibrated by the number of census holdings, hectares of cultivated area and of pastures.

For the AHMM module, the data are calibrated, in each UAA size, by the number of census holdings belonging to this population, and at NUTS 2 level, the data are calibrated by different types of LSU.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

9.6. Data quality

9.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

We comply with most precision requirements established in Annex 5 of the regulation.

An exception refers to the LAFO module and the variable “Pasture and meadow” in the NUTS 2 region ES30. In this case, the RSE is 5.1%. The NUTS 2 region ES30 has less than 10,000 holdings and its NUTS 1 region coincides with the NUTS 2 region. The main reason for non-compliance was the lack of updated sample frame for this relevant population; the sample frame was mainly built using agricultural census 2009.

Concerning ES6 and “Poultry”, we designed the sample having in mind that the prevalence of the variable does not make this case qualify for precision requirements. With data from pre-census (before collecting the 2020 census) based on our sampling frame, “Poultry” was not relevant for this NUTS 1 region. The same situation occurs for ES62 and “Sheep and goats” and for ES43 and “Poultry”.

Concerning ES70 and “Fresh vegetables, strawberries, flowers and ornamental plants”, the gross sample size was 780 and the net sample size was 630. This reduction has led to an increase in sampling errors.

9.6.2. Variables mostly affected by measurement errors

The main causes of measurement errors are due to self-completion without interviewer assistance. The questionnaire and the collection method were improved with the experience gained from the census and previous surveys. To ensure data consistency and minimize errors, an application (IRIA) developed by INE was used that integrated all phases of data collection and editing. All questionnaires (mail, CAWI, CATI) were registered with IRIA.

During the collection and recording phases of the mailed questionnaires, the data were checked, with a quality control of the recording and a control of the data supplied. In addition, CAWI and CATI have their own checks in IRIA. IRIA detects errors in the internal consistency of the questionnaires (partial absence of data in a questionnaire, inconsistent data between different variables and control of the range and existence of quantitative variables). It also detects and lists controls for outliers, such as crops that are not common in certain regions. Post-recording editing was carried out centrally by the Promoter Unit with the help of an external company. After this manual correction of errors and before obtaining the datasets with the final data, all questionnaires were subjected to Automatic Data Imputation processes.

10

FRANCE

10. France

10.1. Background

10.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1966 onwards:

- National census: 1955-1970-1979-1988-2000-2010-2020.
- National farm structure surveys: 1963-1967-1975-1981-1983-1985-1990-1993-1995-1997-2003-2005-2007-2013-2016.

10.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

10.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

10.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, increased use of administrative data, further training.

10.2. Target population

10.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

10.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 10.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor, nurseries - outdoor	GE	0.20	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes, and strawberries) - outdoor, citrus fruits - outdoor, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Grapes - outdoor	GE	0.10	HA
Olives - outdoor	GE	0.30	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module "Labour force and other gainful activities" with at least one of the following: bovine animals, pigs, sheep, goats, poultry. It may happen that there are no animal present on the holding at the reference date (1 November 2020) but there is a breeding activity at certain moments of the year. In such case, these holdings have been questioned about manure management.

10.2.3. Geographical area

The entire territory of the country.

10.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the most important parcel by physical size.

10.3. Reference period

10.3.1. Land variables

The use of land refers to the reference year 2020:

- IACS 2020 is used for IFS 2020 and registers the present crop on May 15, 2020.
- For farms not in IACS, we register the harvested crop in 2020, referring to crop year from 1 November 2019 to 31 October 2020.
- In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during 2020.

10.3.2. Irrigation

The reference crop year from 1 November 2019 to 31 October 2020.

10.3.3. Livestock and animal housing

The reference day is 1 November 2020 for livestock. For animal housing, we refer to the 2020 year, not to a day, in order to avoid specific situations.

10.3.4. Manure management

From 1 November 2019 to 31 October 2020.

10.3.5. Labour force

From 1 November 2019 to 31 October 2020.

10.3.6. Rural development measures

The three-year period ending on 31 December 2020.

10.3.7. All other variables

1 November 2020.

10.4. Coverage and data collection

10.4.1. Frame

Type of frame: List frame.

Name of frame: BALSAs: Database for agricultural statistics, our agricultural register (Base de Sondage pour la Statistique Agricole).

Update frequency: Monthly.

10.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 23.2%.

10.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

10.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of internet.

10.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 2%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Follow-up interviews, reminders, legal actions, imputation, weighting.

10.4.6. Average duration of farm interview

Core: Around 30 minutes.

Module “Labour force and other gainful activities: Around 50 minutes (including core data).

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: Around 50 minutes (including core data).

10.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Rural development measures.

10.5. Data compilation

For sample data (LAFO, AHMM), we applied re-weighting.

First, new weights are calculated for respondents with the same NUTS 3 region, farm type, standard output, legal status and first updating date in the frame Balsa. Then, we applied a calibration method using, for each NUTS 3 region, the number of units by standard output, the total utilised agricultural area, the total livestock units, and the total annual working units.

Tools used for data validation:

- Validation checks within data collection tools,
- E-lists of questionnaires to check, connected to electronic questionnaires (face-to-face data collection, for modules only), for regional staff,
- Validation based on R-programs,
- XLSX files with aggregated results, comparing results for 2020 and 2010 for core variables, at the national, NUTS 2 and NUTS 3 levels.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1575.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

10.6. Data quality

10.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

Cases for which estimated RSEs are above the thresholds of applicable RSEs:

Table 11.

MODULE	VARIABLE_CODE	LABEL	RSE	NUTS 2	Regions
LAFO	G0000T	Plants harvested green from arable land	5.10	FRJ1	Languedoc-Roussillon
LAFO	G0000T	Plants harvested green from arable land	5.73	FRL0	Provence-Apes - Côte d'Azur
LAFO	J1000_3000TE	Permanent grassland, excluding rough grazing	6.29	FRL0	Provence-Apes - Côte d'Azur
LAFO	A4000_LSU	Sheep and goats	5.41	FRI1	Aquitaine

Concerned variables include heterogeneous categories, while farms in concerned regions can be very scattered.

Moreover, it is possible that the actual values of these variables of these farms in the farm register (BALSA) are not well known.

10.6.2. Variables mostly affected by measurement errors

To prevent measurement errors, the questionnaire was pre-tested before data collection, pre-populated with IACS data and surveyors had full online training before data collection. They also had a handbook during data collection and definitions were included in the on-line or electronic survey for face-to-face interviews. Moreover, we had checks during and after data collection. However, we can highlight some difficulties for some variables:

- “Seeds and seedlings” (E0000T) as there are a lot of included / not included items,
- “Fresh vegetables, melons, strawberries - open field or market gardening” (V0000_S0000TO or respectively V0000_S0000TK), for which we made checks and corrections after data collection,
- “Other farmland” (FA_OTH): errors of units by respondents, for which we made checks and corrections after the data collection,
- “Farm safety plan” (FARM_SPLAN): often unknown by respondents,
- Manure storage capacities in months (STCAP_) and in % (ST_): difficult to understand for respondents, but we made efforts to choose pertinent units in our questionnaire.

11

CROATIA

11. Croatia

11.1. Background

11.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2007 onwards.

11.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

11.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

11.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data.

11.2. Target population

11.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

11.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 12.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	0.4	HA
Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor, nurseries - outdoor	GE	0.2	HA
Fresh vegetables (including melons) and strawberries - outdoor	GT	0.0	HA
Fresh vegetables (including melons) and strawberries - under glass or high accessible cover	GT	0.0	HA
Flowers and ornamental plants - under glass or high accessible cover	GT	0.0	HA
Fruits, berries, nuts, and citrus fruits (excluding grapes and strawberries)	GE	0.1	HA
Cultivated mushrooms	GT	0.0	HA
Grapes - outdoor	GE	0.1	HA
Olives - outdoor	GE	0.1	HA
Total livestock units	GE	0.5	LSU
Bees (hives)	GE	1.0	HIVE

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: A subset of the population of agricultural holdings of the module “Labour force and other gainful activities” (but not only agricultural holdings with at least one of the following: bovine animals, pigs, sheep, goats, poultry).

11.2.3. Geographical area

The entire territory of the country.

11.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the location where all agricultural activities are situated, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from the farm.

11.3. Reference period

11.3.1. Land variables

The use of land refers to the 12-month period ending on 1 June 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

11.3.2. Irrigation

The 12-month period ending on 1 June 2020.

11.3.3. Livestock and animal housing

The reference day 1 June 2020.

11.3.4. Manure management

The 12-month period ending on 1 June 2020. This period includes the reference day used for livestock and animal housing.

11.3.5. Labour force

The 12-month period ending on 1 June 2020.

11.3.6. Rural development measures

The three-year period ending on 31 December 2020.

11.3.7. All other variables

The reference day 1 June 2020.

11.4. Coverage and data collection

11.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Register of Agricultural holdings.

Update frequency: Annual.

11.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 19.2%.

11.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

11.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Postal, electronic version (email),
- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

11.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 6.9%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

11.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

11.4.7. Administrative sources

The administrative sources used are: Rural development measures, IACS-Integrated Administration and Control System, Organic farming register, Cadastre.

11.5. Data compilation

Tools used for data validation: Validation rules were used in the questionnaires and within the special data processing tool. Additional validations were done through special queries.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

11.6. Data quality

11.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore

there are no cases where the estimated RSEs are above thresholds.

11.6.2. Variables mostly affected by measurement errors

Statistics correct possible errors of measurement using the logic-numeric control. We are trying to avoid the measurement error by training of interviewers and supervisors, control data and process validation. Variables that are complicated for both respondents and interviewers are related to labour force and to animal housing and manure management. After data entry, extreme values of variables are checked and corrected if necessary.

12

ITALY

12. Italy

12.1. Background

12.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1961 onwards.

12.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

12.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

12.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further training.

12.2. Target population

12.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

12.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 13.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	0.20	HA
Grapes - outdoor	GE	0.10	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.00	LSU
Bees (hives)	GE	3.00	HIVE

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry or where fertilisers (whatever type) have been used.

12.2.3. Geographical area

The entire territory of the country.

12.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the majority of the area of the holding, the residence of the farmer (manager) not further than 5 km straight from the farm.

12.3. Reference period

12.3.1. Land variables

The use of land refers to the reference year 2019/2020; the crop year was considered from 1 November 2019 to 31 October 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

12.3.2. Irrigation

The reference period for irrigable area is the crop year from 1 November 2019 to 31 October 2020.

12.3.3. Livestock and animal housing

According to Regulation (EU) 2018/1091, the reference day for livestock is 1 December 2020, with

the exception of poultry for which the average number in a 12-month period including 1 December 2020 was considered.

The variables on animal housing refer to a 12-month period from 1 January 2020 to 31 December 2020.

12.3.4. Manure management

The variables on manure management refer to a 12-month period from 1 January 2020 to 31 December 2020.

12.3.5. Labour force

The 12-month period ending on 31 October 2020.

12.3.6. Rural development measures

The three-year period ending on 31 December 2020.

12.3.7. All other variables

The reference day 1 December 2020.

12.4. Coverage and data collection

12.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Annual.

12.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 33.6%.

12.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

12.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,

- Telephone, electronic version,
- Use of internet.

12.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 12.4%.

Reasons: Failure to identify the unit, failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

12.4.6. Average duration of farm interview

Core: 30 minutes.

Module “Labour force and other gainful activities: 15 minutes.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: 15 minutes.

12.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Rural development measures, Livestock register.

12.5. Data compilation

No weights were used.

Tools used for data validation: Electronic tools (Excel, SAS, specific software).

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

12.6. Data quality

12.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

12.6.2. Variables mostly affected by measurement errors

The variables mostly affected by measurement errors are:

- UAA – “Utilised agricultural area”.
- Poultry:

- A5140 – “Broilers (heads)”,
- A51100 – “Laying hens (heads)”,
- A5000X5100 – “Other poultry (heads)”,
- A5230 – “Turkeys (heads)”,
- A5210 – “Ducks (heads)”,
- A5220 – “Geese (heads)”,
- A5240_5300 – “Other poultry fowls, not elsewhere classified (heads)”.

13

CYPRUS

13. Cyprus

13.1. Background

13.1.1. Coverage – Time

Farm structure statistics in Cyprus cover the period from 2003 onwards.

13.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

13.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

13.1.4. Efficiency gains since the last data transmission to Eurostat

None.

13.2. Target population

13.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

13.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 14.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	0.20	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Grapes - outdoor	GE	0.10	HA
Cultivated mushrooms	GE	0.01	HA
Cows	GE	1.00	HD
Bovine animals excluding cows (bovine animals, less than 1 year old; bovine animals, 1 to less than 2 years old; male bovine animals, 2 years old and over; heifers, 2 years old and over)	GE	2.00	HD
Sheep, goats, piglets, breeding sows, other pigs	GE	5.00	HD
Broilers, laying hens, turkeys, ducks, geese, ostriches, guinea fowls and small poultry	GE	50.00	HD
Ostriches	GE	5.00	HD
Bees (hives)	GE	20.00	HIVE
Rabbits of domestic species, breeding females	GE	10.00	HD

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

13.2.3. Geographical area

Republic of Cyprus

13.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the location where all agricultural activities are situated, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from

the farm.

13.3. Reference period

13.3.1. Land variables

Land characteristics refer to areas used in the reference period from 1 September 2019 to 31 August 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

13.3.2. Irrigation

The total irrigable area refers to areas used in the reference period from 1 September 2019 to 31 August 2020.

13.3.3. Livestock and animal housing

For variables on livestock and animal housing, the reference day is 31 December 2020.

13.3.4. Manure management

The 12-month period ended on 31 December 2020. This period includes the reference day used for livestock and animal housing.

13.3.5. Labour force

The 12-month period from 1 September 2019 to 31 August 2020.

13.3.6. Rural development measures

The three-year period ending on 31 December 2020.

13.3.7. All other variables

The reference day is 31 December 2020.

13.4. Coverage and data collection

13.4.1. Frame

Type of frame: List frame.

Name of frame: The Register of Agricultural and Livestock Holdings (Agricultural Register).

Update frequency: Continuous.

13.4.2. Over coverage rate

Rate (unweighted, for the population of the core data): 19.2%.

13.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

13.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, non-electronic version,
- Telephone, non-electronic version.

13.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0.6%.

Reasons: Refusal to participate, inability to participate (e.g., illness, absence), inability to communicate (e.g., language barriers).

Actions to minimise or address it: Follow-up interviews, reminders, legal actions.

13.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities”, module “Rural development” and module “Animal housing and manure management”: Not available.

13.4.7. Administrative sources

No administrative sources were used.

13.5. Data compilation

Tools used for data validation: a multilevel checking system of questionnaires was set up.

1. Supervisors had the responsibility of collecting and checking all questionnaires daily and handing them to the district officers on a weekly basis. The information contained in each questionnaire was checked for errors or inaccuracies including completeness, validations between related variables, acceptable ranges, summations, ratios and rational checks. Any errors made were identified at an early stage and the necessary clarifications were sought so that the degree of repetition of such errors would be minimized. Coverage checks were also made by contacting 5-10% of the respondents for whom a questionnaire was completed and ensuring that the questionnaire was filled out according to instructions, that is, during the personal visit or telephone call of the enumerator all questions were asked.

2. Checking teams were also set up, working under the guidance and supervision of the district officers. These teams checked the questionnaires submitted by each supervisor and performed additional checking by comparing all variables in relation to information available from previous surveys or other available information.

3. The data entry software was designed using Microsoft Office Access. The data entry program

itself was built in a way so as to identify any possible errors (consistency, value, range, arithmetic, etc.) that the questionnaires may have, as well as errors made during the data entry process (typing errors). The data entry was checked daily for any errors, missing items, changes and inaccuracies.

The number of working days corresponding to a full-time job: 245.

The number of working hours corresponding to a full-time job: 1960.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

13.6. Data quality

13.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

13.6.2. Variables mostly affected by measurement errors

When cases of measurement errors were found, they were corrected at the very moment they were found, therefore the measurement errors in the data were minimized by the end of the census.

14

LATVIA

14. Latvia

14.1. Background

14.1.1. Coverage - Time

Farm structure statistics in Latvia cover the period from 2001 onwards.

14.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organized every 3-4 years in-between.

14.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

14.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation, increased use of administrative data, further training.

14.2. Target population

14.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

14.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 15.

Variable	SIGN	VALUE	UNIT
Agricultural area	GE	1	HA
Standard output	GE	70	EUR

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

14.2.3. Geographical area

The entire territory of the country.

14.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from the farm.

14.3. Reference period

14.3.1. Land variables

The use of land, including irrigable area, refers to the 12-month period ending on 1 July 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

14.3.2. Irrigation

A 12-month period for variables on irrigation ending on 1 July 2020.

14.3.3. Livestock and animal housing

The reference day 1 July 2020.

14.3.4. Manure management

The 12-month period ending on 1 July 2020. This period includes the reference day used for livestock and animal housing.

14.3.5. Labour force

The 12-month period ending on 1 July 2020.

14.3.6. Rural development measures

The three-year period ending on 31 December 2020.

14.3.7. All other variables

The reference day 1 July 2020.

14.4. Coverage and data collection

14.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register (SFR).

Update frequency: Continuous.

14.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 7.8%.

14.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

14.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Postal, electronic version (email),
- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

14.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0.9%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Follow-up interviews, reminders, legal actions, imputation.

14.4.6. Average duration of farm interview

Core: 15 minutes.

Module “Labour force and other gainful activities: 20 minutes.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: 20 minutes.

14.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Rural development measures, Organic farming register, Animal Register.

14.5. Data compilation

During the survey and data processing, 3573 questionnaires or 5.8% of the total number of questionnaires were identified as being partially completed; for them imputation was done from administrative sources and other agricultural surveys.

Tools used for data validation: Data control was made in all data collection and data processing levels.

Mathematical and logical controls were developed in compliance with the requirements of the “Integrated farm statistics manual - 2020 edition”. To obtain more precise information and facilitate further data processing, these controls were supplemented with other necessary controls. With respect to the validation checks failing during the data input process, an error notification appeared that indicated the place of the error and the correct value (if possible).

167 controls were incorporated in the data input application ISDAVS CASIS (Integrated statistical data processing and management system, Computer Assisted Statistical Information System). This did not only ensure mathematical and logical controls, but also technically corrected data input.

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

Data comparison was based on the administrative data sources – Agricultural Data Centre Housing facilities infrastructure and manure storage register on housing facilities and manure management and SFR. The primary source used to specify the information was the respondent – CSB employees called the respondents and asked them to give the precise incorrect or missing information.

For data processing and validation purposes, SQL and access for individual data were used. For data set validation purposes, a standalone validation tool, developed by Eurostat, was used.

The number of working days corresponding to a full-time job: 230.

The number of working hours corresponding to a full-time job: 1840.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

14.6. Data quality

14.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The estimated relative standard errors (RSEs) for the holdings in the frame extension are below the thresholds stipulated in Annex V of the Regulation (EU) 2018/1091.

14.6.2. Variables mostly affected by measurement errors

Although IFS is a direct continuation of the previous FSS, which has been carried out in Latvia since 2001 and the survey materials, as well as the quality of training, are regularly improved, measurement errors have not been completely avoided. Due to Covid-19, IFS 2020 was rescheduled, especially the data collection methods, as face-to-face interviews were not allowed during the pandemic. The main sources of error in IFS 2020 have been respondents and interviewers. Face-to-face interviews were replaced by telephone or online interviews. Interviewers from the CSB Interview Organization who had not previously participated in the FSS and required in-depth training and explanatory work were involved. The questionnaires were filled in incorrectly due to several reasons, such as problems with the Internet connection and the Internet speed, the comprehensive nature of the survey and the very detailed information, the confidential nature of the information considered by farmers, and the need for additional explanations for the variables in the questionnaire. Main variables that caused most measurement errors:

- the labour force section seemed to be too complicated for respondents, as well as for interviewers. Respondents do not want to reveal information on employees, their working time, and other income-generating activities, as they believe that the respective information is sensitive and confidential,
- questions related to the animal housing and manure treatment,
- manure exported from the holding and manure imported to the holding.

The survey information on animal housing and manure treatment was compared to the data of animal housing facilities infrastructure and manure storage register. In cases when several animal holders had to be merged in one statistical holding, corrections were made without contacting the holding. The information that was not available in administrative data registers was clarified via phone with an interviewer or by directly calling the holding.

To carry out data validation, additional logical controls of source data and summary data were organized.

15

LITHUANIA

15. Lithuania

15.1. Background

15.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2003 onwards.

15.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

15.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

15.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data.

15.2. Target population

15.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

15.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 16.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	1.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Aromatic, medicinal and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.20	HA
Fruits, berries and nuts and other permanent crops for human consumption	GE	0.30	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU
Standard output	GE	1,000.00	EUR

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The subset of population of agricultural holdings defined for the core data which falls in the main frame i.e., above at least one of the thresholds set in Regulation (EU) 2018/1091.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module "Labour force and other gainful activities" with at least one of the following: bovine animals, pigs, sheep, goats, poultry. If during the AC 2020 it was clarified that some farms had no animals of the above-mentioned species, at the time of the census, these farms were monitored comprehensively anyway and all collected data of these farms for this module were sent to Eurostat.

15.2.3. Geographical area

The entire territory of the country.

15.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the most important parcel by physical size, the residence of the farmer (manager) not further than 5 km straight from the farm.

15.3. Reference period

15.3.1. Land variables

The use of land refers to the 12-month period ending on 1 June 2020. In the case of successive

crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

15.3.2. Irrigation

The 12-month period ending on 1 June 2020.

15.3.3. Livestock and animal housing

The reference day 1 June 2020.

15.3.4. Manure management

The 12-month period ending on 1 June 2020. This period includes the reference day used for livestock and animal housing.

15.3.5. Labour force

The 12-month period ending on 1 June 2020.

15.3.6. Rural development measures

The three-year period ending on 31 December 2020.

15.3.7. All other variables

The reference day 1 June 2020.

15.4. Coverage and data collection

15.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Continuous.

15.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 19.7%.

15.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

15.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

15.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 13.6%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Reminders, imputation, weighting, other. Farms which refused to provide information or were not contacted due to other reasons were analysed and checked in the administrative data sources.

15.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: The average duration of farm interview was 14 minutes for farmers and family farms and 69 minutes for agricultural companies and enterprises. There is no information about the separate duration for core and modules.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

15.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Organic farming register, Rural development measures, Farm Animal Register, Population Register.

15.5. Data compilation

The weights of holdings in the modules' sample were adjusted for non-response. Over-coverage holdings were not taken into account.

Tools used for data validation: During AC 2020, only electronic questionnaires were used. Validation rules were prepared and integrated into questionnaires. Moreover, additional validation rules were prepared for data processing software ORACLE. Also, some mistakes or inconsistencies were found during AC 2020 data comparison at macro level.

The number of working days corresponding to a full-time job: 252.

The number of working hours corresponding to a full-time job: 2016.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

15.6. Data quality

15.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The precision requirements set in the Regulation (EU) 2018/1091 are all met. However, there are two variables whose RSEs are high:

- F0000_T0000T (“Fruits, berries, nuts and citrus fruits (excluding grapes and strawberries) - outdoor”), LT01, LAFO, RSE= 7.57%,
- A4000_LSU (“Sheep and goats”), LT01, LAFO, RSE= 9.95%.

There are a few farms with fruits and berries as well as with sheep and goats in this NUTS region (LT01) of Lithuania. The area of fruits and berries and the number of sheep and goats are relatively small as well. However, the sample design is one for all variables of a certain module and a few farmers (respondents) lead to high RSEs.

In the future, more farms with areas of fruits and berries as well as more farms with sheep and goats will be selected to the sample with a selection probability equal to 1.

15.6.2. Variables mostly affected by measurement errors

Most questions in the questionnaire were clear for the farmers or clarified by the interviewers. However, some errors occurred. Mainly variables from module “Animal housing and manure management” caused measurement errors:

- A2300F_T_ALW (“Dairy cows always outdoors”). A big number of cows was indicated by farmers as always outdoors. Data were corrected by repeatedly contacting farmers.
- NETEXP_FER_O_LM_LQ_SL (“Net export of slurry/liquid manure from the farm”) and NETEXP_FER_O_LM_SO (“Net export of solid manure from the farm”). The main reason of measurement errors for these variables is that holders do not have information about these quantities. The data were checked using the number of livestock and manure coefficients. In some cases, farmers were repeatedly contacted.

FER_O_XLM (“Organic and waste-based fertilisers other than livestock manure used on the agricultural holding”). There were a lot of cases when farmers filled in the amount of solid manure. Data were corrected by repeatedly contacting farmers.

16

LUXEMBOURG

16. Luxembourg

16.1. Background

16.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1953 onwards.

16.1.2. Frequency of data collection

Luxembourg conducts a yearly census including land, animals and labour force variables. Other variables are added if needed (e.g., variables on production methods for emission calculations). In every Eurostat year, Luxembourg further implements all requested modules on a census base.

16.1.3. Legal obligation for respondents

No, the respondents are not obliged by law to reply to the survey.

16.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation.

16.2. Target population

16.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

16.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 17.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	3.00	HA
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries	GE	0.50	HA
Aromatic, medicinal, and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.20	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes, and strawberries), other permanent crops including other permanent crops for human consumption	GE	0.30	HA
Vineyards	GE	0.10	HA
Fresh vegetables (including melons) and strawberries - under glass or high accessible cover, flowers, and ornamental plants - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings defined for the core data. We sent records also on holdings without animals. Information on animal housing and manure management is however only available for holdings with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

16.2.3. Geographical area

The entire territory of the country.

16.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the majority of the area of the holding, the residence of the farmer (manager) not further than 5 km straight from the farm.

16.3. Reference period

16.3.1. Land variables

Even though land is measured at the reference date 1 April 2020, the measurement covers the crop year which is the 12-month period covering the whole cultivation period (from seed to harvest)

of the main arable crops cultivated in Luxembourg. The cultivation period lasts from autumn 2019 to autumn 2020. It lasts from September 1, T to August 31, T+1.

16.3.2. Irrigation

Variable "Irrigable utilised agricultural area-outdoor" is flagged as non-significant/not existent for Luxembourg. Thus, a reference period is not applicable for Luxembourg.

16.3.3. Livestock and animal housing

The reference day 1 April 2020.

16.3.4. Manure management

The 12-month period ending on 1 April 2020. This period includes the reference day used for livestock and animal housing.

16.3.5. Labour force

The 12-month period ending on 1 April 2020.

16.3.6. Rural development measures

The three-year period ending on 31 December 2020.

16.3.7. All other variables

The reference day 1 April 2020.

16.4. Coverage and data collection

16.4.1. Frame

Type of frame: List frame.

Name of frame: The frame is created based on the IACS register.

Update frequency: Annual.

16.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 2.1%.

16.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module "Labour force and other gainful activities" on main frame: Census.

Module "Rural development" on main frame: Census.

Module "Animal housing and manure management" on main frame: Census.

16.4.4. Methods of data collection

The data collection methods are the following:

- Paper self-administered questionnaire,
- Use of Internet.

16.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 6%.

Reasons: Failure to identify the unit, refusal to participate.

Actions to minimise or address it: Reminders, imputation.

16.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: No separate average duration available for core or single modules. An average duration is only available for the entire questionnaire. It is around 40 minutes.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

16.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Organic farming register, Rural development measures.

16.5. Data compilation

Tools used for data validation: Ordinary consistency checks with STATA. Use of the VIFS flow.

The number of working days corresponding to a full-time job: 275.

The number of working hours corresponding to a full-time job: 2200.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

16.6. Data quality

16.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

16.6.2. Variables mostly affected by measurement errors

There were some difficulties detected when it came to animal housing and manure management variables as no administrative sources were available. Considering animal housing, especially data collection on the housing of other bovine animals posed some problems as we tried to divide this category in several animal types to generate more precise data. Considering manure management, the storage of solid manure in heaps or compost piles turned out to be complicated because of

definition issues.

17

HUNGARY

17. Hungary

17.1. Background

17.1.1. Coverage - Time

The first agricultural census was implemented in Hungary in 1895 and covered all characteristics of agriculture (land, livestock, labour force).

However, the sixth agricultural census 2000 (AC 2000) is a historical milestone in the chronicle of Hungarian censuses. This was the first comprehensive survey that, apart from meeting the data needs of FAO, was also compliant with the relevant EU regulations.

The eight AC2020 was also a milestone for the Hungarian Central Statistical Office since a new methodology was introduced and the use of administrative sources became more focused.

17.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

17.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

17.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation, increased use of administrative data.

17.2. Target population

17.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

Regarding activities of class A.01.49, only the activities “Raising and breeding of semi-domesticated or other live animals” (with the exception of raising of insects) are included.

As threshold criteria refer to productive land area the definition of agricultural holding in Hungary also covers:

- holdings with only forests, fishponds, reeds,
- holdings providing agricultural services only.

17.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 18.

Variable	SIGN	VALUE	UNIT
Productive land area (arable land and gardens used as arable land, kitchen gardens, orchards, vineyards, grasslands, forests, fishponds, reeds)	GE	1.00	HA
Potatoes	GE	0.25	HA
Fresh vegetables and strawberries	GE	0.25	HA
Seeds and seedlings, nurseries, aromatic, medical and culinary plants, flowers, and ornamental plants	GE	0.20	HA
Fruits, berries, nuts, citrus fruit trees, other permanent crops (excluding nurseries, excluding vineyards and excluding olive trees) - outdoor	GE	0.25	HA
Vineyards	GE	0.10	HA
Area under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Bovine animals	GE	1.00	HD
Sheep	GE	10.00	HD
Goats	GE	10.00	HD
Piglets, live weight of under 20 kg	GE	30.00	HD
Pigs, live weight 20 kg or over	GE	2.00	HD
Laying hens, and broilers	GE	50.00	HD
Turkeys	GE	30.00	HD
Ducks	GE	100.00	HD

Variable	SIGN	VALUE	UNIT
Geese	GE	50.00	HD
Ostriches	GE	3.00	HD
Rabbits	GE	50.00	HD
Other gainful activities related to agricultural contractual work (using production means of the holding)	EQ	1.00	YN ³

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings defined for the core data.

17.2.3. Geographical area

The entire territory of the country.

17.2.4. Criteria used to establish the geographical location of the holding

The agricultural holding is located where the farm undertakes its main agricultural activity according to its typological classification.

In case of crop farms, the most important parcel by economic size based on IACS.

In case of animal farms, the main area of animal keeping.

In the absence of information on the location of the main activity, the location of residence of the farmer, which is usually close to the agricultural activity.

17.3. Reference period

17.3.1. Land variables

Land variables were surveyed by the reference date 1 June 2020. In case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

17.3.2. Irrigation

The size of the irrigable area referred to 1 June 2020.

³ “Y” is “1.00” in the IT system

17.3.3. Livestock and animal housing

The reference day was 1 June 2020 for livestock and the 12-month period ending on 1 June 2020 for animal housing.

17.3.4. Manure management

The 12-month period ending on 1 June 2020. This period includes the reference day used for livestock and animal housing.

17.3.5. Labour force

The 12-month period ending on 31 May 2020 for labour force.

17.3.6. Rural development measures

The three-year period ending on 31 December 2020.

17.3.7. All other variables

Besides the variables mentioned above, the following variables were collected for national purposes:

- Slaughtering outside slaughterhouses (January-June 2020),
- Digitalisation of the farm (1 June 2020),
- Future plans on farming activities.

17.4. Coverage and data collection

17.4.1. Frame

Type of frame: List frame.

Name of frame: Farm register.

Update frequency: Continuous.

17.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 70.4%.

17.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit legal status.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit legal status.

17.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of internet.

17.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 4.1%.

Reasons: Failure to contact the unit, refusal to participate.

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

17.4.6. Average duration of farm interview

Table 19.

MODULES	CAPI	CAWI	AVERAGE
Core	13.8 minutes	37.5 minutes	19.7 minutes
Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”	22.2 minutes	51.1 minutes	31.2 minutes

Module “Rural development”: Not relevant; the data were taken from administrative sources.

17.4.7. Administrative sources

The administrative sources used are: Rural development measures, Organic farming register, Vineyard register, IACS-Integrated Administration and Control System.

17.5. Data compilation

Holdings outside the scope (over-coverage) were excluded.

Non-response, presumably eligible holdings were imputed.

The weights of the modules’ sample were adjusted after unit-size reclassification.

Tools used for data validation:

- First logical and arithmetical checks within and between the tables were implemented

into HCSO's data collection application (MAJA /Integrated Data Gathering System for private farms, ELEKTRA for legal entities),

- Batch checks (arithmetical and logical) were run within HCSO's ADÉL applications (Uniform Data Entry and Validation System),
- After data collection, some software tools were used during processing and validation (SQL, R, Excel).

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

17.6. Data quality

17.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

Module sample was built up as a combination of census and stratified random sample.

Agricultural enterprises and key private holdings (which exceed certain threshold) were fully surveyed. Among smaller private holdings sample survey was carried out.

The preliminary size-classification of holdings was based on administrative information and our former surveys' data. The lower reliability of quantitative information than preliminary estimated of some administrative sources resulted that several large holdings were misclassified as smaller holdings mainly among poultry farms. Therefore, the variability of certain variables in the sample was higher than previously estimated and resulted in a higher error than previously estimated. Each size classification of holdings was re-examined based on the results of the survey.

For the future FSS, the size of a part of our fully analyzed universe will be increased and, in parallel, a larger sample of smaller private holdings will be worked on.

Feedback was also provided to the owners of the administrative data, hoping to obtain more accurate quantitative information in the future.

17.6.2. Variables mostly affected by measurement errors

No specific variables are mostly affected by measurement errors. In case of outliers and suspicious cases, follow-up interviews were carried out to check, correct or confirm the data.

18

MALTA

18. Malta

18.1. Background

18.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2001 onwards.

18.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

18.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

18.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation.

18.2. Target population

18.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

18.2.2. Thresholds for agricultural holdings

Malta did not use any thresholds and all agricultural holdings in Malta were covered.

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation

(EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for the core data.

Module “Animal housing and manure management”: The same population of agricultural holdings as for the module “Labour force and other gainful activities”.

18.2.3. Geographical area

The entire territory of the country.

18.2.4. Criteria used to establish the geographical location of the holding

The residence of the farmer (manager) not further than 5 km straight from the farm.

18.3. Reference period

18.3.1. Land variables

The use of land refers to the 12-month period ending on 31 August 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

18.3.2. Irrigation

The 12-month period ending on 31 August 2020.

18.3.3. Livestock and animal housing

The reference day 30 September 2020.

18.3.4. Manure management

The 12-month period ending on 30 September 2020. This period includes the reference day used for livestock and animal housing.

18.3.5. Labour force

The 12-month period ending on 31 August 2020.

18.3.6. Rural development measures

The three-year period ending on 31 December 2020.

18.3.7. All other variables

The reference day 30 September 2020.

18.4. Coverage and data collection

18.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Annual.

18.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 5.4%.

18.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

18.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version.

18.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0%.

Actions to minimise or address it: Follow-up interviews, reminders.

18.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

18.4.7. Administrative sources

The administrative sources used are: Organic farming register, Rural development measures, IACS-Integrated Administration and Control System

18.5. Data compilation

Tools used for data validation: Microsoft Access, SPSS and Excel were primarily used for data

validation.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

18.6. Data quality

18.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

18.6.2. Variables mostly affected by measurement errors

A thorough check of completed questionnaires is an integral part of the processing system. Data control started at the collection stage. Since we have opted for the CAPI, we have included several in-built validations directly in the system. Besides, we have tested the system prior to the launch of the data collection. Apart from this, all interviewers were instructed to interview not more than five holdings and submit the data to be able to identify any mistakes undertaken during the interviewing stage. This exercise helped the interviewers to reduce the number of errors in the remaining questionnaires. Once the interviewers submitted the questionnaires through the system, several validations were run on the data and, in cases where information was not clear, the interviewers were contacted again to verify the data given by the farmers. In such instances, the interviewers could update the data and resend the respective questionnaires.

The above measures were taken to minimise as much as possible the measurement errors. Basically, the following variables caused some measurement errors:

- Family male and female persons working on the holding - respondents' inability to provide accurate answers,
- Non-family male and female persons regularly working on the holding - respondents' inability to provide accurate answers.

19

NETHERLANDS

19. Netherlands

19.1. Background

19.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1980 onwards.

This concerns the information published online; older farm structure information is available, partly as far back as 1851, but only in paper publications.

19.1.2. Frequency of data collection

A national agricultural census is conducted every year. In the years the IFS are held, the IFS questions are integrated in the national agricultural census.

19.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

19.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data, other.

As for other gains achieved, further efficiency gains were reached by pre-filling the questionnaire as much as possible from the previous census, or from administrative registers, and (in specific cases) using algorithms to derive the requested animal categories directly from the I&R registers.

19.2. Target population

19.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

19.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 22.

Variable	SIGN	VALUE	UNIT
Standard output	GE	3,000	EUR

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

19.2.3. Geographical area

The entire territory of the country.

19.2.4. Criteria used to establish the geographical location of the holding

The geographical location of the holding corresponds to the headquarters of the holding in the business register, which is usually located close to the agricultural activities.

The coordinates of the headquarters are used to determine the geographical location; in a few cases where coordinates are missing, the postal code or the location of the largest parcel or stable is used.

19.3. Reference period

19.3.1. Land variables

The use of land refers to the reference year 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

19.3.2. Irrigation

The reference year 2020.

19.3.3. Livestock and animal housing

The reference day 1 April 2020.

19.3.4. Manure management

The 12-month period ending on 1 April 2020. This period includes the reference day used for livestock and animal housing.

19.3.5. Labour force

The 12-month period ending on 1 April 2020.

19.3.6. Rural development measures

The three-year period ending on 31 December 2020.

19.3.7. All other variables

The reference day 1 April 2020.

19.4. Coverage and data collection

19.4.1. Frame

Type of frame: List frame.

Name of frame: Administrative Farm Register (AFR), built up from and updated by the Business Register (BR) and other administrative sources.

Update frequency: Continuous.

19.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 12%.

19.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

19.4.4. Methods of data collection

The data collection method is the use of the internet.

19.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 1.1%.

Reasons: Refusal to participate, other.

Actions to minimise or address it: Reminders, legal actions, imputation, other.

19.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

19.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Rural development measures, Manure transports register.

19.5. Data compilation

After data collection and pre-processing by RVO, data are transferred to Statistics Netherlands for final data compilation, which includes checks and analyses at different levels (micro, meso, macro).

Tools used for data validation: Data validation is, as far as possible, already implemented in the internet application. After data collection, several software tools are used during processing and validation (SPSS, R, Excel).

The number of working days corresponding to a full-time job: 250.

The number of working hours corresponding to a full-time job: 2000.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

19.6. Data quality

19.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

19.6.2. Variables mostly affected by measurement errors

Measurement errors cannot totally be ruled out but are expected to be minimal. There are no specific variables that are mostly affected, but the possibility of measurement errors is closely related to the clarity and complexity of the questions. Also new/unfamiliar questions can lead to measurement errors. Many questions are recurring annually and will be improved if unclear, but for new questions their improvement may take some time.

20

AUSTRIA

20. Austria

20.1. Background

20.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1970 onwards.

20.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

20.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

20.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data.

20.2. Target population

20.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

20.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 23.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	3.00	HA
Permanent grassland	GE	3.00	HA
Arable land	GE	1.50	HA
Potatoes (including seed potatoes)	GE	0.50	HA
Fresh vegetables (including melons) and strawberries	GE	0.10	HA
Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants - outdoor, seeds and seedlings - outdoor, nurseries - outdoor)	GE	0.10	HA
Grapes - outdoor	GE	0.10	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes, and strawberries) - outdoor and other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

20.2.3. Geographical area

The entire territory of the country.

20.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the residence of the farmer (manager) not further than 5 km straight from the farm.

20.3. Reference period

20.3.1. Land variables

The use of land refers to the 12-month period ending on 31 December 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

20.3.2. Irrigation

The 12-month period ending on 31 December 2020.

20.3.3. Livestock and animal housing

The reference day 1 April 2020.

20.3.4. Manure management

The 12-month period ending on 31 December 2020. This period includes the reference day used for livestock and animal housing.

20.3.5. Labour force

The 12-month period ending on 31 December 2020.

20.3.6. Rural development measures

The three-year period ending on 31 December 2020.

20.3.7. All other variables

The reference day 1 March 2020.

20.4. Coverage and data collection

20.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical Farm Register.

Update frequency: Continuous.

20.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 6.3%.

20.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

20.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

20.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0.3%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, legal actions, imputation.

20.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Respondents could voluntarily indicate in the questionnaire how much time it took to complete it. The evaluation of this information yields a median of 60 minutes. However, no distinction was made between the individual parts (core/modules) of the questionnaire.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

20.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Veterinary Information System (VIS), Social insurance for Farmers (SVS), Rural development measures.

20.5. Data compilation

The IFS 2020 was conducted as a census. Data collected and administrative data were merged via the unique farm number/identifier.

Tools used for data validation: The data sets were checked for missing, incorrect or implausible information, using an extensive plausibility application. The program was developed in cooperation with the IT Dept. Care was taken to ensure that missing, incorrect, and implausible entries were detected by the program and either highlighted or immediately corrected. The functionality of the plausibility program was first checked using fictitious holdings. The correction applications contained several deliberate errors in order to check whether the program would recognise and report them.

For the IFS 2020 about 85% of the questionnaires needed further checking due to “information” (soft) errors or “real” errors. This share was higher than in 2016 due to the variables concerning manure management practices. For each holding, all errors and information errors were listed and categorised. The errors detected (incorrect entries, missing or implausible data) had to be

investigated and rectified by the processing team. Errors were eliminated and plausibility checks were repeatedly carried out directly via the application. The staff could correct logical obvious errors. Missing or incorrect entries were completed from other data sources wherever available (e.g., administrative data from IACS, VIS, “total area information” from the social insurance for farmers) to avoid burdening the respondents. The forestry yearbook, containing the areas of Austria’s largest forestry holdings, was another means of checking data. If these sources were not exhaustive, answers by individual farms from the 2010, 2013 or 2016 Farm Structure Survey were used, wherever possible, to supplement and/or check the data. Where this did not provide clarity, individual holdings had to be contacted by telephone.

The number of working days corresponding to a full-time job: 250.

The number of working hours corresponding to a full-time job: 2000.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

20.6. Data quality

20.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

20.6.2. Variables mostly affected by measurement errors

There were no variables with high measurement errors. Occasionally respondents transferred area data, which was not prefilled by administrative sources, from their land register without considering diverging units of area. This was the case for the variables e.g., “Other farmland” (FA_OTH), “Unutilised agricultural area” (NUAA), “Wooded areas” (WA), “Short rotation coppice areas” (SRCAA), “Other areas on the farms” (FA9).

21

POLAND

21. Poland

21.1. Background

21.1.1. Coverage - Time

Farm structure statistics cover the period from 2002 onwards.

21.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

21.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

21.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation, increased use of administrative data, further training.

21.2. Target population

21.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

21.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 24.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	1.00	HA
Arable land	GE	2.00	HA
Potatoes	GE	0.50	HA
Fresh vegetables and strawberries	GE	0.50	HA
Aromatic, medicinal, and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.20	HA
Fruits trees, berries, nuts trees, other permanent crops including other permanent crops excluding nurseries, vineyards	GE	0.30	HA
Vineyards	GE	0.10	HA
Greenhouses	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

21.2.3. Geographical area

The entire territory of the country.

21.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the most important parcel by physical size.

21.3. Reference period

21.3.1. Land variables

The use of land refers to 1 June 2020, except for the cultivation of edible mushrooms for which it refers to the 12-month period from 2 June 2019 to 1 June 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

21.3.2. Irrigation

The 12-month period ending on 1 June 2020.

21.3.3. Livestock and animal housing

The reference day for livestock is 1 June 2020. The end of 12 month-period falls on 1 June, for animal housing.

21.3.4. Manure management

The 12-month period ending on 1 June 2020.

21.3.5. Labour force

The 12-month period ending on 1 June 2020, except for the current activity which was related to the week from 26 May to 1 June 2020.

21.3.6. Rural development measures

The three-year period ending on 31 December 2020.

21.3.7. All other variables

Generally, the reference day is 1 June 2020 except for:

- the following variables which covered the period from 2 June 2019 to 1 June 2020: edible mushroom cultivation, fertilised area and amount of used mineral, lime and lime-magnesium fertilisers, fertilised area and amount of used manure, number of applied plant protection treatments, use of the support of qualified advisers when making decisions about the use of plant protection products, knowledge of the principles of integrated pest management, number and area of specialised livestock buildings, number and area of other farm buildings, use of tractors and machines owned by other farms, cooperatives or service companies, economic activity, structure of incomes, economic activity except for current activity as well as fish farming and breeding,
- variables on current activity which concerned the week from 26 May to 1 June 2020.

21.4. Coverage and data collection

21.4.1. Frame

Type of frame: List frame.

Name of frame: List of agricultural holdings.

Update frequency: Annual.

21.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 17%.

21.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation

(EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

21.4.4. Methods of data collection

The data collection methods are the following:

- Face-to-face, electronic version,
- Telephone, electronic version,
- Use of Internet.

21.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 3%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence), other.

Actions to minimise or address it: Reminders, legal actions, imputation, other.

21.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

21.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Rural development measures, Bovine register, Ovine register, Caprine register, Statistical Business Register, Organic farming register, Cadastre.

21.5. Data compilation

After data collection and pre-processing, data are accessed by the staff of the Agriculture Department and Labour Market Department for final data compilation, which includes checks and analyses at different levels (micro, macro).

Tools used for data validation: Validation rules were implemented in the questionnaires and within data processing software. For the purposes of census data processing, the Statistical Data Acquisition, Processing, and Integration System (SPDS) was used. This system replaced several dozen previously used applications managing the processing of data obtained in individual statistical surveys. The system operates in a uniform environment and provides all the necessary functions, which include import of collected statistical data, editing individual entries, validation of processed data, sharing data on the basis of which preliminary reports are generated, auto-correction and data imputation, editing information on the fulfilment of reporting obligations, defining

and generating reports and control tables, data storage and transfer to external subsystems (statistical data warehouse). Each stage of data processing ends with the generation of a validation report and control tables.

The number of working days corresponding to a full-time job: 265.

The number of working hours corresponding to a full-time job: 2120.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

21.6. Data quality

21.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

21.6.2. Variables mostly affected by measurement errors

The main source of measurement errors concerns respondents and interviewers. The scale of this type of errors is not fully known. Most errors were identified and corrected by a set of validations and by automatic corrections. There were cases when respondents discontinued the interview (CAWI).

Additionally, errors occurred when respondents entered data using the CAWI method. Wide range of surveyed variables, difficult questions and unclear definitions also caused measurement errors. Respondents and interviewers found the labour force section of the questionnaire as the most complicated. There was a tendency to deliberately shorten the list of members of the family labour particularly about the questions concerning OGA (MOGA_FAM_RH⁴, SOGA_FAM_RH⁵). There was also a problem with the collection of information on the number of hired workers involved in OGA (MOGA_NFAM_RH⁶, SOGA_NFAM_RH⁷).

The variables that caused most measurement errors refer to:

- the separation of the area of fresh vegetables grown in rotation with non-horticultural crops (V0000_S0000TO) from those grown in rotation with horticultural crops (V0000_S0000TK),
- too few reported people working in agricultural production in relation to the size of the farm.

All detected errors were corrected automatically or by expert method at the data collection stage or during the dataset validation. For variables for which errors most often appear, the manual for

⁴ Family members working on the holding and having other gainful activities (related to the agricultural holding) as their main activity.

⁵ Family members working on the holding and having other gainful activities (related to the agricultural holding) as their secondary activity.

⁶ Non-family labour force regularly working on the holding and having other gainful activities (related to the agricultural holding) as their main activity.

⁷ Non-family labour force regularly working on the holding and having other gainful activities (related to the agricultural holding) as their secondary activity.

interviewers is supplemented with comments and additional explanations. The control algorithms in the form application and the validation rules are also improved.

22

PORTUGAL

22. Portugal

22.1. Background

22.1.1. Coverage - Time

Farm structure statistics cover the period from 1989 onwards.

22.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

22.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

22.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, further training.

22.2. Target population

22.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

22.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 25.

Region	Variable	SIGN	VALUE	UNIT
PT11, PT15, PT16, PT17, PT18	Utilised agricultural area	GE	1	HA
PT11, PT15, PT16, PT17, PT18	Flowers and ornamental plants (excluding nurseries)	GE	0.05	HA
PT11, PT15, PT16, PT17, PT18	Fresh vegetables, melons, strawberries, and flowers - under glass	GE	0.05	HA
PT11, PT15, PT16, PT17, PT18	Nurseries	GE	0.05	HA
PT11, PT15, PT16, PT17, PT18	Aromatic, medicinal, and culinary plants	GE	0.05	HA
PT11, PT15, PT16, PT17, PT18	Market gardening fresh vegetables	GE	0.1	HA
PT11, PT15, PT16, PT17, PT18	Arable land seeds and seedings	GE	0.1	HA
PT11, PT15, PT16, PT17, PT18	Industrial crops (excluding aromatic, medicinal and culinary plants)	GE	0.2	HA
PT11, PT15, PT16, PT17, PT18	Fruit, berry, and citrus plantations - total	GE	0.2	HA
PT11, PT15, PT16, PT17, PT18	Vineyards	GE	0.2	HA
PT11, PT15, PT16, PT17, PT18	Olive plantations	GE	0.5	HA
PT11, PT15, PT16, PT17, PT18	Potatoes (excluding potatoes from market gardening and kitchen gardening)	GE	0.5	HA
PT11, PT15, PT16, PT17, PT18	Open field fresh vegetables	GE	0.5	HA
PT11, PT15, PT16, PT17, PT18	Breeding bulls	GE	1	HD
PT11, PT15, PT16, PT17, PT18	Cows (excluding work animals)	GE	1	HD
PT11, PT15, PT16, PT17, PT18	Bovine animals, 2 years old and over (excluding work animals)	GE	2	HD
PT11, PT15, PT16, PT17, PT18	Fattening pigs	GE	3	HD
PT11, PT15, PT16, PT17, PT18	Breeding sows	GE	1	HD
PT11, PT15, PT16, PT17, PT18	Sheep	GE	6	HD
PT11, PT15, PT16, PT17, PT18	Goats	GE	6	HD
PT11, PT15, PT16, PT17, PT18	Breeding female rabbits	GE	10	HD
PT11, PT15, PT16, PT17, PT18	Laying poultry and breeding poultry (chickens, turkeys, ducks, geese, guinea fowls, etc.)	GE	100	HD
PT11, PT15, PT16, PT17, PT18	Inhabited hives and traditional cork hives	GE	10	HIVE

Region	Variable	SIGN	VALUE	UNIT
PT11, PT15, PT16, PT17, PT18	Bovine animals	GE	5	HD
PT11, PT15, PT16, PT17, PT18	Pigs	GE	5	HD
PT11, PT15, PT16, PT17, PT18	Geese	GE	250	HD
PT11, PT15, PT16, PT17, PT18	Turkeys	GE	250	HD
PT11, PT15, PT16, PT17, PT18	Broilers	GE	500	HD
PT11, PT15, PT16, PT17, PT18	Ducks	GE	500	HD
PT11, PT15, PT16, PT17, PT18	Ostriches	GE	15	HD
PT20, PT30	Utilised agricultural area	GE	0.1	HA
PT20, PT30	Flowers and ornamental plants (excluding nurseries)	GE	0.05	HA
PT20, PT30	Fresh vegetables, melons, strawberries, and flowers - under glass	GE	0.05	HA
PT20, PT30	Nurseries	GE	0.05	HA
PT20, PT30	Aromatic, medicinal, and culinary plants	GE	0.05	HA
PT20, PT30	Market gardening fresh vegetables	GE	0.1	HA
PT20, PT30	Arable land seeds and seedings	GE	0.1	HA
PT20, PT30	Industrial crops (excluding aromatic, medicinal and culinary plants)	GE	0.2	HA
PT20, PT30	Fruit, berry, and citrus plantations - total	GE	0.2	HA
PT20, PT30	Vineyards	GE	0.2	HA
PT20, PT30	Olive plantations	GE	0.5	HA
PT20, PT30	Potatoes (excluding potatoes from market gardening and kitchen gardening)	GE	0.5	HA
PT20, PT30	Open field fresh vegetables	GE	0.5	HA
PT20, PT30	Breeding bulls	GE	1	HD
PT20, PT30	Cows (excluding work animals)	GE	1	HD
PT20, PT30	Bovine animals, 2 years old and over (excluding work animals)	GE	2	HD
PT20, PT30	Fattening pigs	GE	3	HD
PT20, PT30	Breeding sows	GE	1	HD
PT20, PT30	Sheep	GE	6	HD

Region	Variable	SIGN	VALUE	UNIT
PT20, PT30	Goats	GE	6	HD
PT20, PT30	Breeding female rabbits	GE	10	HD
PT20, PT30	Laying poultry and breeding poultry (chickens, turkeys, ducks, geese, guinea fowls, etc.)	GE	100	HD
PT20, PT30	Inhabited hives and traditional cork hives	GE	10	HIVE
PT20, PT30	Bovine animals	GE	5	HD
PT20, PT30	Pigs	GE	5	HD
PT20, PT30	Geese	GE	250	HD
PT20, PT30	Turkeys	GE	250	HD
PT20, PT30	Broilers	GE	500	HD
PT20, PT30	Ducks	GE	500	HD
PT20, PT30	Ostriches	GE	15	HD

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings defined for core data.

22.2.3. Geographical area

The entire territory of the country.

22.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from the farm.

22.3. Reference period

22.3.1. Land variables

The use of land refers to the 12-month period from 1 November 2018 to 31 October 2019. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

22.3.2. Irrigation

The 12-month period ending on 31 October 2019.

22.3.3. Livestock and animal housing

The reference day 1 September 2019.

22.3.4. Manure management

The 12-month period ending on 31 October 2019. This period includes the reference day used for livestock and animal housing.

22.3.5. Labour force

The 12-month period ending on 31 October 2019.

22.3.6. Rural development measures

The three-year period ending on 31 December 2019.

22.3.7. All other variables

The reference day 1 October 2019.

22.4. Coverage and data collection

22.4.1. Frame

Type of frame: List frame.

Name of frame: Base de Amostragem Agrícola.

Update frequency: Less frequent than annual.

22.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 42%.

22.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

22.4.4. Methods of data collection

The data collection method is the face-to-face, non-electronic version.

22.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0%.

Reasons: Failure to identify the unit, failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Reminders, legal actions.

22.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities”, module “Rural development” and module “Animal housing and manure management”: Not available.

22.4.7. Administrative sources

Statistics Portugal do not use administrative sources.

22.5. Data compilation

Tools used for data validation: IT tools.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

22.6. Data quality

22.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

22.6.2. Variables mostly affected by measurement errors

It is considered that the variables are not affected by measurement errors.

23

ROMANIA

23. Romania

23.1. Background

23.1.1. Coverage - Time

Farm structure statistics in Romania cover the period from 2002 onwards.

23.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

23.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

23.1.4. Efficiency gains since the last data transmission to Eurostat

On-line surveys, further automation, further training.

23.2. Target population

23.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

23.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 26.

Variable	SIGN	VALUE	UNIT
Kitchen gardens - outdoor	GE	0.15	HA
Live poultry	GE	10.00	HD
Utilised agricultural area excluding kitchen gardens	GT	0.00	HA
Livestock units excluding live poultry	GT	0.00	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings defined for core data.

23.2.3. Geographical area

The entire territory of Romania.

23.2.4. Criteria used to establish the geographical location of the holding

The main building for production, the majority of the area of the holding, the most important parcel by physical size, the most important parcel by economic size, the residence of the farmer (manager) not further than 5 km straight from the farm.

23.3. Reference period

23.3.1. Land variables

The use of land refers to the crop reference year (1 October 2019 – 30 September 2020). In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

23.3.2. Irrigation

The reference period was the crop year (1 October 2019 – 30 September 2020).

23.3.3. Livestock and animal housing

The reference day is 31 December 2020.

23.3.4. Manure management

The 12-month period ending on 31 December 2020. This period includes the reference day used for livestock and animal housing.

23.3.5. Labour force

The reference period was the crop year (1 October 2019 – 30 September 2020).

23.3.6. Rural development measures

The three-year period ending on 31 December 2020.

23.3.7. All other variables

The reference day is 31 December 2020.

23.4. Coverage and data collection

23.4.1. Frame

Type of frame: List frame.

Name of frame: Administrative Farm Register, IACS.

Update frequency: Annual.

23.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 10.5%.

23.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

23.4.4. Methods of data collection

The data collection method is the face-to-face, electronic version.

23.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 1.7%.

Reasons: Refusal to participate.

Actions to minimise or address it: Reminders, legal actions, imputation.

23.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities”, module “Rural development” and module “Animal housing and manure management”: Not available.

23.4.7. Administrative sources

INS Romania does not use administrative data sources.

23.5. Data compilation

Tools used for data validation: At questionnaire level, validation conditions are included for each variable in the electronic questionnaire (Survey Solution). The validation between different chapters of the questionnaires is based on a customised in-house IT application.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

23.6. Data quality

23.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

23.6.2. Variables mostly affected by measurement errors

To minimise errors of measurement, we developed the data collection questionnaire by chapters (General information, Land use, Livestock etc) and we adopted the following measures:

- Every chapter heading specified the reference moment or period,
- The questionnaire included arithmetical checks between rows,
- If the queries had to be ticked off, a mention was made on the questionnaire if it was a single or multiple-choice question.

Enumerators were trained to understand and respect some obligations that contributed to the reduction of measurement errors, such as:

- The obligation to present his/her official role as enumerator by showing the personal identification card when first visiting an agricultural holding,
- Interviewing the most competent person from the agricultural holding, preferably the head of the agricultural holding,
- Avoiding the interview in front of people that do not belong to the concerned holding by explaining that the information is confidential and will be used only for statistical purposes,
- To get precise and sincere replies, the questions were formulated clearly and politely,
- If the questions were multiple choice questions, the interviewee was presented the full list of them so he/she could choose the correct one,
- Taking down the replies as they were provided by the interviewee,

- Coming back to certain questions where the answer did not meet the arithmetical checks or where the answers were not consistent.

Due to the above measures, no major measurement errors were recorded.

In addition, the data collection was done only electronically and was monitored using Survey Solutions software (CAPI method). Data collection using the CAPI method has as main advantage the assurance of a good quality of the collected data by implementing some sets of consistency and validation checks at the level of the questionnaire, in real time (during the data collection).

24

SLOVENIA

24. Slovenia

24.1. Background

24.1.1. Coverage - Time

In Slovenia only two independent censuses of agricultural holdings, or farm structure surveys, were conducted before the year 2000 – the first one in 1930 and the second one in 1960. However, due to political and economic changes in this period, it is difficult to compare them. In 1969 a sample survey of agricultural holdings was conducted, and in 1971, 1981 and 1991 censuses of agricultural holdings were conducted within population censuses. In 1997 the first Farm Structure Survey, harmonized with EU legislation, was carried out. After the agricultural census 2000 we followed the EU program of Farm Structure Surveys (FSS).

24.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

24.1.3. Legal obligation for respondents

Yes, there are legal obligations for agricultural businesses, but family farms are not legally required to respond to the survey.

24.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data.

24.2. Target population

24.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

24.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 27.

Variable	SIGN	VALUE	UNIT	LINK	Variable	SIGN	VALUE	UNIT
Arable land	GE	2	HA					
Potatoes	GE	0.5	HA					
Fresh vegetables and strawberries	GE	0.5	HA					
Aromatic, medicinal, and culinary plants, flowers and ornamental plants, seeds and seedlings, nurseries	GE	0.2	HA					
Fruit trees, berries, nut trees, citrus fruit trees, other permanent crops excluding nurseries, vineyards, and olive trees	GE	0.3	HA					
Vineyards	GE	0.1	HA					
Olive trees	GE	0.3	HA					
Greenhouses	GE	0.01	HA					
Livestock	GE	1.7	LSU					
Utilised agricultural area	GE	1	HA					
Utilised agricultural area	GE	0.1	HA	AND	Wooded area	GE	0.9	HA
Vineyards and orchards	GE	0.3	HA					
Livestock	GE	1	LSU	AND	Vineyards	GE	0.15	HA
Beehives	GE	50	HIVE					
Market producers of vegetables and strawberries, herbs, mushrooms, flowers and ornamental plants, seeds, and seedlings	GT	0	HA					

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: Yes.

Modules “Labour force and other gainful activities” and “Rural development”: The subset of the population of agricultural holdings defined for core data which falls in the main frame i.e., above at least one of the thresholds set in Regulation (EU) 2018/1091.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry. There were 25 farms which were later identified that did not have animals, but had other data, so we left them in the subset population.

24.2.3. Geographical area

The entire territory of the country.

24.2.4. Criteria used to establish the geographical location of the holding

The main building for production.

24.3. Reference period

24.3.1. Land variables

The use of land refers to the reference year 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown. The reference period was from 1 January 2020 to 31 December 2020.

24.3.2. Irrigation

The reference period was from 1 January 2020 to 31 December 2020.

24.3.3. Livestock and animal housing

The reference day 1 February 2020.

24.3.4. Manure management

The 12-month period ending on 1 December 2020. The variables on manure management refer to a 12-month period including the reference day used for livestock and animal housing.

24.3.5. Labour force

The 12-month period ending on 1 December 2020.

24.3.6. Rural development measures

The three-year period ending on 31 December 2020.

24.3.7. All other variables

Not relevant.

24.4. Coverage and data collection

24.4.1. Frame

Type of frame: List frame.

Name of frame: The Statistical Farm Register.

Update frequency: Annual.

24.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 6.3%.

24.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Core on frame extension (i.e., on holdings below all thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit legal status.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit legal status.

24.4.4. Methods of data collection

The data collection methods are the following:

- Postal, non-electronic version,
- Telephone, electronic version,
- Other.

24.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation, weighting.

24.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and

manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

24.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Ovine register, Caprine register, Vineyard register, Rural development measures, Organic farming register, Cadastre, Other (Register of agricultural holdings (including olive producers, hop producers, orchard producers, location of agricultural holding, other gainful activities, irrigation systems, seeds and seedlings production, education on agricultural holdings (EVIZO)), Central pig register, Register of stables for laying hens, Register of bees, held by the Ministry of Agriculture, Forestry and Food, Register of Equidae, held by the Ministry of Agriculture, Forestry and Food, Central Database for Cattle Agricultural Institute of Slovenia, Land parcel identification system (LPIS) in combination with IACS).

24.5. Data compilation

The extrapolation factor was obtained based on the design weight and was adjusted for non-response. Weights were calculated as product of selection weight and non-response weight only. The sample survey for the labour force module and the module on animal housing was not calibrated to the number of agricultural holdings from the census core.

Tools used for data validation: The data were validated at the national level by using SAS programs and the application built by SURS.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

24.6. Data quality

24.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

There are no cases where estimated RSEs are above thresholds.

24.6.2. Variables mostly affected by measurement errors

We are aware of measurement errors, and we try to avoid this kind of errors by training interviewers, supervisors, by data checking and validation process. Where inconsistencies or extreme values were discovered, the data were checked with possible administrative data or there was also a “call-back” to the farmers, and the data were checked again. So extreme values of variables were checked and corrected if necessary. Since the data were inserted directly into the data entry program (controls were included), it was likely to have less mistakes caused by interviewers.

25

SLOVAKIA

25. Slovakia

25.1. Background

25.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 2001 onwards.

25.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

25.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

25.1.4. Efficiency gains since the last data transmission to Eurostat

Increased use of administrative data.

25.2. Target population

25.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

25.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 29.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Arable land	GE	2.00	HA
Potatoes (including seed potatoes) - outdoor	GE	0.50	HA
Fresh vegetables (including melons) and strawberries - outdoor	GE	0.50	HA
Aromatic, medicinal, and culinary plants - outdoor, flowers and ornamental plants (excluding nurseries) - outdoor, seeds and seedlings - outdoor, nurseries - outdoor	GE	0.20	HA
Fruits, berries, and nuts (excluding citrus fruits, grapes and strawberries) - outdoor, other permanent crops including other permanent crops for human consumption - outdoor	GE	0.30	HA
Grapes - outdoor	GE	0.10	HA
Utilised agricultural area - under glass or high accessible cover	GE	0.01	HA
Cultivated mushrooms	GE	0.01	HA
Total livestock units	GE	1.70	LSU

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

25.2.3. Geographical area

The entire territory of the country.

25.2.4. Criteria used to establish the geographical location of the holding

The main building for production.

25.3. Reference period

25.3.1. Land variables

The 12-month period for the land variables ending on 31 October 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

25.3.2. Irrigation

The 12-month period for the total irrigable area ending on 31 October 2020.

25.3.3. Livestock and animal housing

The reference day 31 October 2020.

25.3.4. Manure management

The 12-month period ending on 31 October 2020. This period includes the reference day used for livestock and animal housing.

25.3.5. Labour force

The 12-month period ending on 31 October 2020.

25.3.6. Rural development measures

The three-year period ending on 31 December 2020.

25.3.7. All other variables

The reference day 31 October 2020.

25.4. Coverage and data collection

25.4.1. Frame

Type of frame: List frame.

Name of frame: The Farm Register.

Update frequency: Continuous.

25.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 36%.

25.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Census.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Census.

25.4.4. Methods of data collection

The data collection methods are the following:

- Paper, self-administered questionnaire,
- Postal, non-electronic version,

- Telephone, non-electronic version,
- Use of Internet.

25.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 16.8%.

Reasons: Failure to contact the unit, refusal to participate, inability to participate (e.g., illness, absence).

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

25.4.6. Average duration of farm interview

Core, module “Labour force and other gainful activities” and module “Animal housing and manure management”: 1 hour and 32 minutes for the whole questionnaire.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

25.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System.

25.5. Data compilation

Only one data file was worked with. Compilation of multiple data files was not applied.

Tools used for data validation: We used tools incorporated in the electronic data collection system (controls, control questions, colour highlighting etc.) and the manual validation of the staff (at the headquarters and in the regional branches). For this purpose, we used the documents and datasets received from the Ministry of Agriculture of the Slovak Republic, Agricultural Paying Agency, State veterinary and food service, Central control and testing institute in agriculture as well as the data from the previous FSS surveys.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

25.6. Data quality

25.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data collection for core and modules for the year 2020 was carried out as a census, therefore there are no cases where the estimated RSEs are above thresholds.

25.6.2. Variables mostly affected by measurement errors

Measurement errors may concern the employment characteristics of farms.

These are mainly items related to hours worked in the LAFO module.

The elimination of such errors was ensured in two ways. In the first place, we embedded control algorithms to the software for recording data in order to detect the most important errors arising from relationships between workers on the farm. During the creation of the file for Eurostat, we built in further algorithms in order to help detect also other possible errors.

All data errors have been corrected, but the error rate cannot be documented.

26

FINLAND

26. Finland

26.1. Background

26.1.1. Coverage - Time

Farm structure statistics in our country cover the period from 1995 onwards.

26.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between.

26.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

26.1.4. Efficiency gains since the last data transmission to Eurostat

Increased use of administrative data.

26.2. Target population

26.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

26.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 30.

Variable	SIGN	VALUE	UNIT
Standard output	GE	2,000	EUR

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: No.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The same population of agricultural holdings of the module “Labour force and other gainful activities”.

26.2.3. Geographical area

The entire territory of the country.

26.2.4. Criteria used to establish the geographical location of the holding

The residence of the farmer (manager) not further than 5 km straight from the farm.

26.3. Reference period

26.3.1. Land variables

The use of land refers to the reference year 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown. For land variables, it is the 12-month reference period ending 31 December 2020.

26.3.2. Irrigation

The 12-month period ending on 31 December 2020.

26.3.3. Livestock and animal housing

The reference day for the number of animals is 1 April 2020.

26.3.4. Manure management

The 12-month period ending on 31 December 2020. This period includes the reference day used for livestock and animal housing.

26.3.5. Labour force

The 12-month period ending on 31 December 2020.

26.3.6. Rural development measures

The three-year period ending on 31 December 2020.

26.3.7. All other variables

Not applicable.

26.4. Coverage and data collection

26.4.1. Frame

Type of frame: List frame.

Name of frame: Statistical register of agricultural and horticultural enterprises.

Update frequency: Annual.

26.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 0%.

26.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization.

26.4.4. Methods of data collection

The data collection method is the telephone, electronic version.

26.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 0%.

Actions to minimise or address it: None.

26.4.6. Average duration of farm interview

Core: The duration of collecting the core variables from farms by telephone was 13 minutes. A big part of core variables was taken from the registers.

Module “Labour force and other gainful activities” and module “Animal housing and manure management”: Not available.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

26.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Organic farming register, Genetically modified crops register, Rural development measures, Sheep and goat register, Pig register, Register of Completed Education and Degrees (Statistics Finland), Finnish Farmers' Social Insurance Institution (Mela), Register of animal keepers (Finnish Food Authority), Incomes Register (Finnish Tax Administration).

26.5. Data compilation

Neyman's optimal allocation was used.

Tools used for data validation: SAS and Eurostat's validation through eDamis.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

26.6. Data quality

26.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

Only LAFO and AHMM modules were not census variables in the IFS 2020. All the land and animal variables are from the administrative registers, and they are census variables in the IFS 2020 data. There are four variables which do not meet the RSE thresholds set in the Regulation. The reason is that there are quite a few pig and poultry farms in Finland and there are big variations between them. Because animal variables were census variables, we did not use number of animals as stratification variable. Because of lack of resources, we were not able to work more with post-stratification.

Table 31.

Number	NUTS 2	Variable Code	_LABEL_	RSE
1	FI19	A3110_3130_LSU	Piglets and other pigs (LSU)	5.17
2	FI1C	A3120_LSU	Breeding sows (LSU)	6.78
3	FI19	A5000X5120_5130_LSU	Poultry (LSU)	5.68
4	FI1C	A5000X5120_5130_LSU	Poultry (LSU)	6.10

26.6.2. Variables mostly affected by measurement errors

The most important administrative source of data for farm structure statistics is Integrated Administration and Control System (IACS), where the date from farm subsidy applications is recorded. Farmers almost invariably fill in their subsidy applications meticulously, as they may

otherwise face sanctions. Errors in land areas and livestock figures are usually minor and result from misunderstandings, lack of time, or inaccurate data entry. Information from other animal registers (bovine, pig, sheep, and goat) is used as a source of animal number data. Farmers must inform the record keeper of any changes in their farm's animal numbers by the due date. These registers are therefore largely comprehensive.

Farmers found questions concerning their labour force and the farm's other business activities quite difficult. Calculating working hours retrospectively was a problem, as most farms do not keep an account of working hours. In these cases, calculating the annual number of hours spent on farm work was sometimes challenging. In Finland, agricultural workers – and livestock farmers in particular – work more than 1800 hours per year, that is, more than one person-year. In previous surveys, forestry work may have been partially included in farm work. From 2005 onwards until 2016, the number of hours spent on forestry work has been a separate item in the questionnaire. This time there was not any separate category for forestry work. However, there was an instruction that working hours do not include forestry work. Even now, the classification of certain tasks is open to various interpretations. In some cases, it is not always clear at what point the farm or horticultural production becomes further processing, that is, other gainful activity.

Other questions for which farmers' responses may contain measurement errors include irrigation, arable farming, horticulture, and livestock production. As this information may not be directly obtainable from registers, farmers may find it difficult to provide completely accurate information. This does not, however, have a significant effect on the final results.

27

SWEDEN

27. Sweden

27.1. Background

27.1.1. Coverage - Time

The records of agricultural statistics in Sweden date back to the beginning of the nineteenth century. In the first half of the twentieth century, established statistical methods were introduced for production of statistics on agricultural holdings, crop areas, crop production, livestock etc. In 1968, in order to improve the coordination of the statistics within the agricultural sector, Sweden established a farm register which was updated annually. Since its establishment, the farm register has been used as a sample frame for both farm structure surveys and other agricultural statistical surveys.

During the 1990s, the farm structure surveys were subject to a few methodological and technical changes. The substitution of some censuses with sample surveys, together with the processing of statistics in PC-environment, led to a reduction of the costs for producing agricultural statistics. However, the substitution of some censuses with sample surveys inevitably led to lack of agricultural statistics on municipality level for the years the substitution occurred.

The Swedish accession to the European Union in 1995 created the need for adapting national agricultural statistics to the EU legislation. Until 2001, Sweden conducted farm structure surveys annually, switching every year between the EU and the national legislation. The main difference between these two surveys, consisted of the number of the characteristics surveyed. The national farm structure surveys met primarily national requirements and therefore were far less extensive than the ones based on the EU legislation. In 2001, national farm structure surveys were abandoned, thus embracing the surveys based on EU legislation as the sole farm structure survey.

27.1.2. Frequency of data collection

The agricultural census is conducted every 10 years. The decennial agricultural census is complemented by sample or census-based data collections organised every 3-4 years in-between, according to the EU legislation. Farm structure censuses/surveys have been conducted annually

in Sweden.

27.1.3. Legal obligation for respondents

Yes, the respondents are obliged by law to reply to the survey.

27.1.4. Efficiency gains since the last data transmission to Eurostat

Further automation, increased use of administrative data, other.

The questionnaires include only variables that cannot be obtained from administrative registers. Further, Sweden has adjusted the questionnaires to the different types of the holdings surveyed. We have three different questionnaires. The small questionnaire (L) is sent to 41 000 agricultural holdings. It includes pre-printed general information on the holding, and questions on agricultural area and on livestock that cannot be obtained from registers. The bigger questionnaires (SJ) and (SF) are sent to the rest of the population and include questions on labour force and other gainful activities. The SJ questionnaire is sent to 3 400 legal agricultural holdings and SF to 19 600 larger agricultural holdings.

Further, Sweden has developed a statistical model for calculating the variables within the module "Animal housing and manure management". No questions from this module were sent to agricultural holdings during the IFS 2020. The statistical model was developed based on register data from different organisations in Sweden. In 2010, these variables were included in the questionnaire and were sent to 8 700 agricultural holdings.

Sweden has further developed the IT-system used for statistical surveys making it easier for holdings to answer the questionnaires electronically on the website of the Swedish Board of Agriculture.

27.2. Target population

27.2.1. Statistical Unit

The agricultural holding as defined in Article 2(a) of Regulation (EU) 2018/1091.

27.2.2. Thresholds for agricultural holdings

Core: The core data are representative for the agricultural holdings and common land agricultural units that meet at least one of the thresholds listed in the following table:

Table 32.

Variable	SIGN	VALUE	UNIT
Utilised agricultural area	GE	5.00	HA
Arable land – outdoor, fruits, berries and nuts (excluding citrus fruits, grapes and strawberries) – outdoor, nurseries – outdoor, short rotation coppice areas	GT	2.00	HA
Fresh vegetables (including melons) and strawberries - outdoor, flowers and ornamental plants (excluding nurseries)	GE	0.25	HA

Variable	SIGN	VALUE	UNIT
– outdoor, permanent crops (including young and temporarily abandoned plantations, excluding areas producing for own consumption only) - outdoor			
Utilised agricultural area - under glass or high accessible cover	GE	0.02	HA
Cattle	GE	10.00	HD
Breeding sows, live weight 50 kg or over	GE	10.00	HD
Pigs	GE	50.00	HD
Sheep	GE	20.00	HD
Poultry	GE	1,000.00	HD

Thresholds for core data are raised compared to those set in Regulation (EU) 2018/1091: Yes.

Thresholds for core data are lowered and/or added compared to those set in Regulation (EU) 2018/1091: No.

Modules “Labour force and other gainful activities” and “Rural development”: The same population of agricultural holdings defined for core data.

Module “Animal housing and manure management”: The subset of the population of agricultural holdings of the module “Labour force and other gainful activities” with at least one of the following: bovine animals, pigs, sheep, goats, poultry.

27.2.3. Geographical area

The entire territory of the country.

27.2.4. Criteria used to establish the geographical location of the holding

The majority of the area of the holding.

27.3. Reference period

27.3.1. Land variables

The use of land refers to the period from 1 November 2019 to 31 October 2020. In the case of successive crops from the same piece of land, the land use refers to a crop that is harvested during the reference year, regardless of when the crop in question is sown.

27.3.2. Irrigation

The 12-month period from 1 June 2019 to 31 May 2020.

27.3.3. Livestock and animal housing

The reference day is 4 June 2020.

27.3.4. Manure management

The 12-month period starting on 1 June 2019 and ending on 31 May 2020. This period includes the reference day used for livestock and animal housing.

27.3.5. Labour force

The 12-month period starting on 1 June 2019 and ending on 31 May 2020.

27.3.6. Rural development measures

The three-year period ending on 31 December 2020.

27.3.7. All other variables

The 12-month period starting on 1 June 2019 and ending on 31 May 2020.

27.4. Coverage and data collection

27.4.1. Frame

Type of frame: List frame.

Name of frame: The statistical farm register, which has been in use since 1968 as a frame for different agricultural surveys, was the frame for the IFS 2020.

The IFS 2020 frame population consisted of holdings from the FSS 2016 updated with information from holdings in the livestock survey for the years 2018 and 2019, and holdings applying for subsidies in 2018, 2019 and 2020 (IACS). The frame was also updated with information from the poultry-, sheep- and pig registers. The last update of the frame was conducted in April 2020.

The IACS is combined with the cattle register and the last known value for other animal and horticultural production.

Update frequency: Annual.

27.4.2. Over-coverage rate

Rate (unweighted, for the population of the core data): 7.7%.

27.4.3. Methods used to collect the data

Core on main frame (i.e., on holdings above at least one of the thresholds set in Regulation (EU) 2018/1091): Census.

Module “Labour force and other gainful activities” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

Module “Rural development” on main frame: Census.

Module “Animal housing and manure management” on main frame: Sample.

Sampling design: Stratified one-stage random sampling.

Stratification criteria: Unit size, unit location, unit specialization, unit legal status.

27.4.4. Methods of data collection

The data collection methods are the following:

- Paper, self-administered questionnaire,
- Postal, electronic version (email),
- Telephone, electronic version,
- Use of Internet.

27.4.5. Unit non-response

Rate (unweighted, for the population of the core data): 5.8%.

Reasons: Failure to contact the unit, refusal to participate, other.

Actions to minimise or address it: Follow-up interviews, reminders, imputation.

27.4.6. Average duration of farm interview

Core: We estimate it takes about 7 minutes for the farmers to fill in the questionnaire with all the core variables, including the time for them to send the questionnaire to the Swedish Board of Agriculture.

Module “Labour force and other gainful activities”: We estimate it takes about 9 minutes for the farmers to answer all the questions in the questionnaire on the module “Labour force and other gainful activities”.

Module “Rural development”: Not relevant; the data were taken from administrative sources.

Module “Animal housing and manure management”: Sweden has developed a statistical model for calculating the variables within this module. No data from this module is collected from the farmers. Thus, the answering time is 0 minutes.

27.4.7. Administrative sources

The administrative sources used are: IACS-Integrated Administration and Control System, Bovine register, Ovine register, Organic farming register, Rural development measures.

27.5. Data compilation

Methodology for determination of weights (extrapolation factors):

1. Design weights:

The extrapolation factor was calculated using Horvitz-Thompson estimation in each stratum. The extrapolation factor was N/n in each stratum.

2. Adjustment of weights for non-response:

The weighing scheme was produced on the units that responded. Weights are only used for those variables included in the sample survey.

3. Adjustment of weights to external data sources:

No adjustments of weights to external data sources have been done.

4. Any other applied adjustment of weights:

No other adjustments of weights.

Tools used for data validation: The software used in this part of the process was SAS and Excel. Data validation has been done at central collection centre.

The number of working days corresponding to a full-time job: 225.

The number of working hours corresponding to a full-time job: 1800.

[Annual working units](#) are used to calculate the farm work on the agricultural holdings.

27.6. Data quality

27.6.1. Reasons for possible non-compliant precision requirements in relation to Regulation (EU) 2018/1091

The data meet the precision requirements in the Regulation (EU) 2018/1091.

27.6.2. Variables mostly affected by measurement errors

The total measurement errors from the questionnaires are estimated to be of insignificant magnitude. Farm structure censuses/surveys have been conducted annually in Sweden and therefore most of the holders/respondents are well acquainted with these surveys and the questionnaires used.

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Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

Principal quality characteristics of EU countries' Agricultural Censuses for 2020

The publication describes the main characteristics of the 2020 agricultural census (integrated farm statistics) in the Member States of the European Union. The Member States provide Eurostat with micro-data (data at the level of each agricultural holding). Based on the micro-data, Eurostat computes and disseminates aggregates in the form of statistical tables. The aim of this publication is to provide users with the means to accurately interpret the agricultural census results by providing information regarding the technical features of the 2020 agricultural census carried out in the Member States.

For more information

<https://ec.europa.eu/eurostat/>