

FRANCE¹ – AGRICULTURAL CENSUS 2020 – METADATA REVIEW

1. Historical outline

The metadata review and data here presented refer to the last agricultural census (AC) conducted in France and overseas territories, in 2020. Previous agricultural censuses were conducted in 1929/1930, 1955, 1970/1971, 1979, 1988, 1999/2000 and 2010. The first AC was carried out only in France mainland. In French territories, ACs were conducted starting from 1970.

2. Legal basis and organization

Legal framework

The legal basis for the AC 2020 was provided by:

- Order of 4 June 2020, supplementing the order of 24 October 2019, approving the national and regional statistical survey program for 2020 (business and farm surveys) among businesses and farms;
- Approval of the National council of statistical information, for AC 2020, as a mandatory survey of general interest;
- Regulation (EU) 2018/1091 of the European Parliament and of the Council of 18 July 2018 on integrated farm statistics and repealing Regulations (EC) No 1166/2008 and (EU) No 1337/2011; and
- Commission Implementing Regulation (EU) 2018/1874 of 29 November 2018 on the data to be provided for 2020 under Regulation (EU) 2018/1091 of the European Parliament and of the Council on integrated farm statistics and repealing Regulations (EC) No 1166/2008 and (EU) No 1337/2011, as regards the list of variables and their description.

Institutional framework and international collaboration

The AC 2020 was carried out by Statistics and Prospective Department (SSP) under the Ministry of Agriculture and Food (MAF). The Department of agricultural, forest and agrifood statistics, and the Unit of structural, environmental and forestry statistics were in charge of the census. The regional services of the SSP were in charge of the practical organisation. The organisation was the same throughout France including the overseas territories. The committees met periodically once a month and were made up of staff from the MAF.

Census staff

The AC 2020 involved 1 000 enumerators hired to collect data in person and by telephone, of which 200 were for overseas territories; 100 staff in regional departments, of which 20 were for the overseas territories; and approximately 30 in the central administration.

3. Reference date and period

Reference day:

- 1 November 2020, for livestock and for all other variables;
- 15 May 2020, for crops reported by holdings in the Integrated Administration and Control System (IACS) 2020.

Reference periods:

- from 1 November 2019 to 31 October 2020, for crop, irrigation and soil management practices, manure management, labour force, and animal housing; and
- from 1 January 2018 to 31 December 2020, for rural development measures.

4. Enumeration period

The AC fieldwork was conducted from 1 October 2020 to 15 May 2021, and it was reported a response rate of 98 percent. Census preparation activities were not affected in 2020 by the COVID-19 pandemic as the census enumeration was undertaken mainly through remote or electronic self-response.

¹ Only the following French territories have been included in the AC 2020: French Guiana, Guadeloupe, Martinique, Réunion, and Mayotte.

Subcontractors took care of CAWI and CATI collection (about 400 000 farmers, for only core data) while a team took care of CAPI collection (about 100 000 farmers, asked to answer module and core data). An e-learning training module was used for enumerators (CAPI, CATI and CAWI) as planned. The IACS administrative data was used to pre-fill some variables in the questionnaire and to draw the definitive sample for the modules. There were some delays in training (limited number of participants per session) and data collection.

5. Scope of the census and definition of the statistical unit

The **census scope** covered agricultural (crop and livestock production) activities.

The **statistical unit** was the agricultural holding, defined as a single unit, both technically and economically, that has a single management and that undertakes economic activities in agriculture in accordance with Regulation (EC) No 1893/2006 belonging to groups A.01.1, A.01.2, A.01.3, A.01.4, A.01.5 or to the "maintenance of agricultural land in good agricultural and environmental condition" of group A.01.6 within the economic territory of the Union, either as its primary or secondary activity, as it is stated in the Regulation (EU) No. 2018/1091 of the European Parliament and of the Council on integrated agricultural statistics. Regarding activities of class A.01.49, only the activities "Raising and breeding of semi-domesticated or other live animals" (except for raising of insects) and "Bee-keeping and production of honey and beeswax" were included.

Community-level data

There were no community-level data collected along with the census.

6. Census coverage

Geographic coverage

The geographical scope covers all of France in Europe and the overseas territories of French Guiana, Guadeloupe, Martinique, Réunion, and Mayotte.

Cut-off threshold and other exclusions

The following thresholds for agricultural holdings were applied in the AC 2020: (i) one ha of UAA; (ii) 0.2 ha of specialised crops (tobacco, hops, aromatic or medicinal plants, seeds, fresh vegetables, flowers and ornamental plants, permanent crops, nurseries), cabbage for sauerkraut, or asparagus; (iii) 0.05 ha of potatoes or fresh vegetables; (iv) 0.15 ha of strawberries; (v) 0.05 ha of flowers and ornamental plants, vineyards for champagne, or nurseries; (vi) 0.1 ha of vineyards; (vii) 0.01 ha of crops under glass or high accessible cover; (viii) one breeding male; (ix) 4 births of Equidae animals; (x) one cow; (xi) two cattle over two years old; (xii) one breeding sow; (xiii) 1 fattening activity (for bovine animals or pigs or sheep or goats or rabbits); (xiv) six breeding female sheep or goats; (xv) ten breeding female rabbits; (xvi) 100 laying poultry; (xvii) 1000 eggs of incubation capacity; (xviii) 50 beehives; (xix) one other animal production not elsewhere classified; (xx) 500 broiler poultry; (xxi) 50 fat poultry; (xxii) 10 000 eggs; (xxiii) two tons of envies; or (xxiv) one ton of mushroom. The animal housing and manure management module covered the subset of the population of agricultural holdings defined before with at least one cattle, pig, sheep, goat, or poultry. It could happen that there was no animal present on the holding at the reference date but there was a breeding activity at certain moments of the year. In those cases, these holdings were surveyed on manure management. For overseas territories two threshold were modified: two cows and 0.3 ha of fresh vegetables.

7. Methodology

Methodological modality for conducting the census

The AC 2020 used the modular approach combined with the use of administrative registers. It comprised a core module and three thematic modules on labour force and other gainful activities, rural development, and animal housing and manure management. Some census data for the core and all census data related to the thematic module rural development were collected directly from administrative registers.

Relation to other censuses

No relationship with other censuses.

Frames

The Survey Database for Agricultural Statistics² was the list frame used in the AC 2020. The register is continually updated and was built with the maximum of available administrative data sources: the Sirene register (business register); common agricultural policy subsidies register; customs administration vineyard (CVI) register; bovine identification national database (BDNI) and other animal species databases; Mutuelle Sociale Agricole; fiscal information; and other datasets for poorly covered activities with above administrative formalities, such as market gardening, horticulture, organic farming, horse farming and beekeeping.

Complete or/and sample enumeration methods

The AC 2020 used a combination of complete and sample enumeration. The core and the rural development modules were collected using complete enumeration, while data for the supplementary thematic modules referred to labour force and other gainful activities, and animal housing and manure management were collected using sample enumeration. In the French territories and Corsica, a complete enumeration of the four modules was carried out.

Sample design

In the AC 2020, the sample was selected using a one-stage stratified random sample of size 55 334 for both supplementary thematic modules. The stratification variables were NUTS2, NUTS3, standard output and farm type. In total, there were 1 986 strata (without full coverage strata) with a minimum of 50 units in each stratum. The R tool Palourde (INSEE) was used to optimize the allocation of the overall stratified simple random sample size with multiple objectives of published data. A minimum of six units was selected in each stratum and the minimum sampling rate per stratum was 1/50. The resulting sample for France, excluding geographic exhaustiveness, included 55 334 units to meet local constraints. The allocations per stratum were calculated to optimise the RSE on standard output variable with the constraint of the total allocation of 70 000 surveys. The full coverage strata were determined for: units with standard output above EUR 500 000 (or EUR 250 000 for poultry type farm); units with ten permanent salaried people; units in some regions; units in the Farm Sustainability Data Network sample; and units with the same business register identifier (SIREN).

Data collection methods

In the AC 2020, data was collected using CAPI, CATI and CAWI methods. The core module was collected through CAWI; CATI was used for those who were unwilling or unable to respond online. For thematic modules and overseas territories, the CAPI method was used for data collection. Also, the following administrative registers were used for data collection: IACS, bovine register, and rural development measures.

Questionnaire(s) and items covered

Two questionnaires were used in the AC 2020: one for the core module for mainland France excluding Corsica, and a complete questionnaire comprising the core module and the thematic modules on labour force and other gainful activities, and animal housing and manure management for a sample of holdings in mainland France, Corsica, and the overseas territories. For farms in which the holder is not the farmer, the questionnaires covered 17 out of 23 essential items recommended in the WCA 2020³.

8. Use of technology

CAWI, CAPI and CATI were used for field data collection. Census data were collected directly from administrative registers to reduce the response burden. Census results were disseminated online.

9. Data processing

Direct data capture was ensured by the CAWI, CAPI and CATI methods. Interviewers, supervisors, and staff from local and central departments validated data through data format checks, completeness

² Agricultural Statistics Survey Database (BALSA).

³ The following essential item was not covered: (i) 0104 Sex of agricultural holder; (ii) 0105 Age of agricultural holder; (iii) 0203 Area of holding according to land tenure types; (iv) 0501 Type of livestock system; (v) 0601 Use of agricultural pesticides; and (vi) 0801 Household size by sex and age groups.

checks, range checks, relational checks, comparisons with previous rounds of the data collection, and comparisons with other domains in agricultural statistics. Validation checks were included within data collection tools. For data collected through sample enumeration, sampling weights were adjusted for non-response and calibrated. For unit non-response, imputation was carried out for variables of the core module. Imputations methods included deductive, mean, and random hot deck imputation. All corrections were done using R.

10. Quality assurance

The MAF has a quality management system. Quality assurance and assessment procedures include designated quality manager, quality unit and/or senior level committee. There is a quality committee of the Statistical and Foresight Department of the MAF. Improvements in quality procedures are reflected within the quality committee. A report was published in August 2020 about quality of statistical data published by the Statistical and Foresight Department and is available at <https://agriculture.gouv.fr/audit-qualistats>. Several actions were carried out to minimize non-sampling errors in the AC 2020: maintenance of ineligible units in the records with assignment of zero weights to minimize over-coverage errors; update of contact information, information collected from administrative data or direct information from respondents in thematic surveys, and update of information for units with no phone numbers and email addresses to minimize contact errors; pre-testing questionnaire, pre-filled questions, explanatory notes or handbooks for enumerators or respondents, and training of enumerators to minimize measurements errors; follow-up interviews, reminders, legal actions, imputation, and weighting to minimize non-response errors. Sampling errors were calculated using the function CALVA of R.

11. Data and metadata archiving

National reference metadata is available at <https://agreste.agriculture.gouv.fr/agreste-web/methodon/S-RA%202020/methodon/>. Online database was published with preliminary results in December 2021 and additional information during 2022, and is available at https://agreste.agriculture.gouv.fr/agreste-web/disaron/RA2020_001/detail/. Microdata was anonymized using reduction of information and is available for research purposes.

12. Data reconciliation

Only one reconciliation was carried out relative to the standard output. The AC 2010 values from the were re-processed with the 2017 coefficient to allow comparisons.

13. Dissemination of census results and microdata

Preliminary reports were published in December 2021. Final results were published during 2022 and are available at <https://agreste.agriculture.gouv.fr/agreste-web/>, with different dissemination methods: interactives tables, data visualization website, online maps, infographics, videos, among others. Some publications are also available in printed version. All publications, paper and on-line, are in French. The lowest geographical level for which data is in public domain is NUTS 2. National methodological report is available for researchers having access to microdata but is not available online. Microdata is available for research purposes. Researchers or institutes can ask for this access. If the request is approved, the data may be accessed only via a safe access centre (CASD) and the resulting tables are checked for the application of statistical confidentiality. Additionally, regional offices may provide some regionally specific publications. They are published on the Regional Agricultural Service website of each region.

14. Data sources

Eurostat. 2023. *Integrated Farm Statistics - National quality reports 2020: France* [online]. Luxembourg. [Cited 9 June 2023]. https://ec.europa.eu/eurostat/cache/metadata/en/ef_simsif_fr.htm.

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