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# REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the implementation of 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

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## 1 BACKGROUND

The Commission (Eurostat) collects statistics on farms under Regulation (EU) 2018/1091 of the European Parliament and of the Council<sup>1</sup>. Under Article 18 of the Regulation, by 31 December 2024 the Commission is required, after consulting the European Statistical System Committee, to report to Parliament and the Council on the implementation and achievement of the Regulation's objectives.

The Regulation applies to Member States and to Iceland, Liechtenstein and Norway (EEA relevance). However, Liechtenstein is exempted from the data reporting obligation under Article 23 of <u>Annex XXI (Statistics)</u> to the EEA Agreement. Switzerland also sent data and a quality report to Eurostat. Candidate countries intend to produce and send to Eurostat integrated farm statistics and quality reports. However, none has done this so far.

This report is based on Eurostat's analysis and on the quality reports submitted by the abovementioned reporting countries. Eurostat analysed the 2020 agricultural census data delivered by the reporting countries and assessed the completeness, user satisfaction, accuracy and reliability, timeliness and punctuality, coherence and comparability, confidentiality, accessibility and clarity and the cost and burden of the data collection exercise.

This report covers the data and metadata of the EEA States and the declared costs of the Member States corresponding to the agricultural census 2020<sup>2</sup>.

## 2 MAIN FINDINGS

The reporting countries collect information from individual agricultural holdings and, observing strict rules of confidentiality, forward the data to Eurostat. The information collected in 2020 makes it possible to publish data on:

- the number of farms;
- land use and land tenure;
- livestock numbers;
- rural development measures,
- farm management and farm labour input (including the age and training level of the holder and manager, their gender and relationship of the workers to the holder of the agricultural holding);
- other gainful activities; and
- animal housing and manure management.

The data can then be aggregated by different geographic levels (countries, regions) and arranged by size class, legal status of the holding, standard output classes and farm type. The information is made available for free online, either in tabular form (in <u>Eurobase</u>), or as a complement to <u>publications</u> such as *Statistics Explained* articles or <u>Key Figures</u> booklets.

<sup>&</sup>lt;sup>1</sup> 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 (Text with EEA relevance), OJ L 200, 7.8.2018, p. 1–29..

<sup>&</sup>lt;sup>2</sup> For Portugal, the reference period for the agricultural census is 2019 (derogation requested and accepted under Article 19 of Regulation (EU) 2018/1091); for all the other reporting countries, the reference period is 2020.

Eurostat strives to continually improve the quality and availability of European statistics. It is also committed to reducing the burden on Member States and respondents. Through Regulation (EU) 2018/1091, several measures were taken to reduce the burden on respondents in farm statistics:

- use of the modular approach, where the variables to be collected are allocated to different collection groups (core data and modules) varying in frequency or representativeness, or both:
- allowing the core data on small farms to be collected from the sample in the 2020 census year and no longer requiring module data on small farms in the intermediate survey years;
- promoting the use of already-existing administrative data sources (mostly registers) and innovative approaches.

The overall quality for the census is good. A quality management system is in place in 22 Member States and in Iceland. 19 Member States and Iceland reported improvements in quality procedures, while 25 Member States, Iceland and Norway have reported efficiency gains since the last data transmission to Eurostat. These include further automation, increased use of administrative data, use of online surveys, and improved training. However, the dissemination of aggregated tables by Eurostat is progressing at a slow pace and the underlying IT systems are being analysed to improve the timeliness.

The agricultural census and the related surveys on the structure of agricultural holdings provide reliable data on the structure of agricultural holdings in the EU. The data are commonly used by policymakers to monitor the implementation of EU policies such as the common agricultural policy (CAP). Data are also used to determine Sustainable Development Goals indicators, while anonymised microdata are provided to researchers, in agreement with the national data providers, in accordance with Commission Regulation (EU) No 557/2013<sup>3</sup>.

The total EU contributions paid to the Member States were EUR 35 495 889.00, a financing rate of 13.25% of the estimated total eligible costs.

#### 2.1 RELEVANCE

The agricultural census and the related surveys on the structure of agricultural holdings form the backbone of the current European Agricultural Statistical System. These provide reliable data on the structure of agricultural holdings in the EU, which can be used to assess the state of agriculture and to monitor trends. Since 1966, farm structure data have been used as a benchmark and basis (especially a sampling basis) for other agricultural statistics, and are commonly used by policymakers to monitor implementation of EU policies such as the CAP.

Farm structure data are also used to determine some Sustainable Development Goals indicators; these are then provided to the Food and Agriculture Organization of the United Nations (FAO). Anonymised microdata are provided to researchers, in agreement with national data providers.

<sup>&</sup>lt;sup>3</sup> Commission Regulation (EU) No 557/2013 of 17 June 2013 implementing Regulation (EC) No 223/2009 of the European Parliament and of the Council on European Statistics as regards access to confidential data for scientific purposes and repealing Commission Regulation (EC) No 831/2002 (Text with EEA relevance), OJ L 164, 18.6.2013, p. 16.

# 2.1.1 Completeness

The automated validation procedures guarantee that the microdata sets that are transmitted to Eurostat are complete.

## 2.1.2 User satisfaction

User satisfaction surveys have been conducted in 8 Member States. The surveys found that users were satisfied in 7 Member States and highly satisfied in 1 Member State.

## 2.2 ACCURACY AND RELIABILITY

The COVID-19 pandemic had a major impact on the census in several EU countries. This mainly took the form of delays to various activities, especially printing questionnaires, training interviewers and supervisors, contracting, data collection and access to administrative registers. In response, the European Statistical System Working Group on Structure of Agricultural Holdings set up a task force to discuss the practices used in Europe to minimise these difficulties. The task force prepared a report entitled 'Minimising the impact of COVID-19 on data quality in the agricultural census', which presents the best of these practices. Although the practices apply to the COVID-19 pandemic, they are also applicable in any other similar situation of general restrictions, and even in normal situations.

Eurostat collects quality reports on integrated farm statistics corresponding to each data transmission. The reports describe the methods and quality aspects of data collection based on self-assessments by the countries; they are drawn up under <a href="Implementing Regulation">Implementing Regulation</a> (EU) 2020/405 specifying the arrangements for, and contents of, the quality reports to be transmitted under Regulation (EU) 2018/1091 of the European Parliament and of the Council on integrated farm statistics. Eurostat used the national quality reports to compile an <a href="EU-level quality report">EU-level quality report</a>.

A quality management system is in place in 22 Member States and in Iceland. 19 Member States and Iceland reported improvements in quality procedures, while 25 Member States, Iceland and Norway reported efficiency gains since the last data transmission to Eurostat. These included further automation and increased use of administrative data sources such as the Integrated Administration and Control System (EU Regulation 1306/2013 and Regulation 2021/2116), animal registers, organic farming registers or vineyards registers<sup>4</sup>. The use of online surveys and further training were also indicated as improvements. Most EEA reporting countries found that sampling errors had no impact on data quality and that the impact of coverage errors, non-response errors, measurement errors and processing errors on data quality is low or absent.

21 Member States, Iceland and Norway complied with all precision requirements in Regulation (EU) 2018/1091, while in 6 Member States the rate of non-compliance with precision requirements was lower than 10%. The overall quality for the census is good.

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<sup>&</sup>lt;sup>4</sup> For details on the use of administrative data sources by countries for each collected variable, metadata is available on Eurostat website under <a href="https://ec.europa.eu/eurostat/web/agriculture/data/ancillary-data">https://ec.europa.eu/eurostat/web/agriculture/data/ancillary-data</a> (use of administrative data sources)

## 2.3 TIMELINESS AND PUNCTUALITY

Article 12(1) of Regulation (EU) 2018/1091 set a deadline of 15 months for the data and quality reports to be transmitted to Eurostat, from the end of the reference year 2020.

Most EEA States have met the data and quality report submission deadlines.

- 20 countries met the reporting deadlines laid down in Regulation (EU) 2018/1091 and, for the Member States, in their grant agreements signed with Eurostat.
- At the request of 3 Member States, their grant agreements with Eurostat were amended on the grounds of *force majeure* in the context of the COVID-19 pandemic (under explicit provisions foreseen in Article II.15 of the grant agreements). The amended grant agreements set extended deadlines for data and quality reporting that exceeded the deadline in Regulation (EU) 2018/1091. The 3 Member States have met the extended deadlines laid down in the amended grant agreements. The coronavirus crisis was considered an exceptional situation justifying the extension of the deadline.
- Minor delays of up to 13 days in transmitting the microdata (2 countries) or quality report (2 countries) compared to the deadlines laid down in either the grant agreements or Regulation (EU) 2018/1091 were observed. These minor delays are acceptable given the complexity of the data collections and in some cases the substantial number of records and exceptional circumstances caused by the pandemic. These delays did not affect the dissemination of the data.
- 1 Member State delivered the data on the 'animal housing and manure management' module with a delay of 1 month compared to the deadline in the grant agreement. Eurostat accepted the delay on the grounds of *force majeure* related to the COVID-19 pandemic. The data (and the quality report) met the deadline in Regulation (EU) 2018/1091 and the dissemination of the animal housing data was not affected.
- 1 country met the deadline set in Regulation (EU) 2018/1091 for the quality report but not for the data. The data was sent to Eurostat 2 months after the deadline.

Automatic validation of structure and content is applied to the data, and countries receive a report indicating whether there are any errors. If required, countries re-submit the data until no errors are reported. Under the post-validation procedure, if Eurostat identifies any inconsistencies, reporting countries are requested to check the data and the quality report and to submit corrected datasets and quality reports. Feedback and revisions were mostly sent within an appropriate timeframe.

After countries transmit the microdata, Eurostat needs to process it and apply confidentiality methods before publishing the aggregated indicator tables in Eurobase. This is a complex and lengthy procedure that can take up to several months for each of the published datasets. The data may be revised at any time; in the current campaign Eurostat is attempting to revise published data dating back to 2005.

Out of 250 existing farm structure related tables on Eurostat public database, 30 priority tables were selected for revision. The selection was made on the basis of relevance for data users<sup>5</sup>. One year after data validation ended, only 10 of the priority tables are published. Due to the specificity

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<sup>&</sup>lt;sup>5</sup> <u>https://www.iweps.be/wp-content/uploads/2023/03/2023March\_NTTS-New-Techniques-and-Technologies-for-Statistics-Eurostat-book\_of\_abstracts.pdf</u> (Lampach, N. (2023) Strategy to Modernise Agricultural Statistics: New Pathways for the Future (abstract), p. 484-487)

of the datasets and particularly the volume of data to be handled, the underlying IT infrastructure was not able to process the data and perform the necessary calculations in a reasonable time, adding unforeseen delays. Moreover, the instability of the hosting datacentre services provided by DG DIGIT for SAS (the IT system used to perform the calculations) provoked several interruptions in the long calculation process, forcing restarts and adding additional delays. Currently Eurostat and DIGIT are in the process of attempting to solve this situation in the shortest delay possible. A detailed assessment of the IT system is being performed to define an action plan to improve the performance and the response time of the system during the coming months.

# 2.4 COHERENCE AND COMPARABILITY

Eurostat published a <u>handbook for the 2020 integrated farm statistics</u>, which has further improved the coherence and the comparability of data between countries.

For the period covered by this report, the *core data* can be considered as comparable across countries. However, the *module data* are not always comparable across countries, because Regulation (EU) 2018/1091 decreased the burden by not requiring module data on small farms. In countries where the main frame does not cover agricultural holdings accounting for at least 98% of the total utilised agricultural area (without kitchen gardens) and at least 98% of the country's total livestock units, it was possible (but not mandatory) to send module data for the farms in what is known as a 'frame extension'.

The length of the farm structure time series varies between countries. In some countries, the online time series go back to 1990, while other countries started only in 2013. The core data are comparable in the time series mainly as long as the country did not change the coverage thresholds between years. As for the module data, these are comparable in the time series mainly as long as the country did not change the coverage thresholds between years and as long as the 2020 module data cover agricultural holdings accounting for at least 98% of the total utilised agricultural area (without kitchen gardens) and at least 98% of the country's total livestock units.

The <u>EU-level quality report</u> includes information about the coverage, possibilities and limitations of comparability across countries and comparability over time for each group of countries.

For the 2020 agricultural census data collection, a derogation was accepted for Portugal (under Article 19 of Regulation (EU) 2018/1091), allowing the reference period to be 2019. Greece did not request a derogation.

The 2020 agricultural census is part of the World Programme for the Census of Agriculture 2020. This enhances comparability with countries outside Europe, including the USA and Japan.

# 2.5 CONFIDENTIALITY

Microdata collected under integrated farm statistics are confidential.

Based on the microdata, Eurostat computes aggregates, which are disseminated in the form of statistical tables. For the aggregated results, Eurostat applies methods related to primary confidentiality and reliability. Eurostat flags and suppresses the confidential data (with too few units and/or dominant contributors) and the unreliable data (with high sampling errors) in table cells. For cell values that are published, Eurostat rounds all published cell values (be they number of holdings, hectares, animal heads, etc.) to the nearest multiple of 10.

Eurostat has not yet applied methods related to secondary confidentiality in farm structure statistics. This is because the results of a 1993 study showed that additional data are lost without realistic risk of disclosure and because of the large number of interlinked tables disseminated on Eurostat's website and following ad hoc requests from users. As the number of farms has been decreasing and more data cells are expected to become confidential, Eurostat has launched a project to renew the analysis made in 1993 and to identify a set of methods that ensures a good compromise between realistic risks of disclosure and the amount of data available to users. While the set of methods would include secondary confidentiality, there are also plans to explore alternatives to secondary confidentiality or at least to suppression of secondary confidential cell data. Alternatives include perturbation of cell values, implying smaller data loss.

## 2.6 ACCESSIBILITY AND CLARITY

#### 2.6.1 Online database

Eurostat's public database<sup>6</sup> provides European statistics on farms in more than 200 datasets. The main data tables are grouped under <u>farm structure (ef)</u>. Revision of these datasets is ongoing, to better respond to user needs. Access to the tables is public and free of charge.

#### 2.6.2 Publications

Eurostat publishes data and articles on farm structure in its online *Statistics Explained* collection and in statistical books. Farm structure data are also used by other dissemination products such as the <u>key figures</u> publication, Eurostat's regional yearbook and the <u>statistical atlas</u>.

## 2.6.3 Metadata

Eurostat collects and publishes <u>national quality reports</u> with detailed information on the quality of the data and on the methods used to collect them. The <u>EU level quality report</u> compiles the information given in the national quality reports.

## 2.6.4 Microdata access

Eurostat only grants access to <u>farm structure microdata</u> for scientific purposes, in accordance with the above-mentioned Commission Regulation (EU) No 557/2013 as regards access to confidential data for scientific purposes. Access to microdata is restricted to protect the anonymity of agricultural holdings. To access anonymised microdata (also known as scientific use files), research organisations need to go through the <u>eligibility procedure</u>. The organisations have to be recognised as research entities. All research projects submitted by researchers are scrutinised by Eurostat and national statistical bodies. Eurostat applies several conditions for research proposals to be accepted, namely: scientific content of the proposal, comparative analysis of several countries, proper data security measures in place and publication of results. In addition, each research proposal has to be accepted by the national statistical bodies. If access is not allowed by a national body, the data of that country are removed from the set.

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<sup>&</sup>lt;sup>6</sup> http://ec.europa.eu/eurostat/data/database

## 2.7 COST AND BURDEN

Regulation (EU) 2018/1091 further strengthened the use of administrative data sources and other methods or innovative approaches in addition to statistical surveys. The use of administrative data has increased markedly in recent years, causing the number of variables directly collected from farmers to decrease by 10% between 2013 and 2020. In contrast, the use of other administrative sources (such as those used for management of subsidies for CAP rural development measures, cadastral sources or other sources indicated by countries) increased from 2.1% in 2013 to 5.9% in 2020. Administrative data sources are mainly used to directly replace variables, to pre-fill questionnaires and in cases of non-response, decreasing the burden on respondents by using existing data sources multiple times.

Eurostat assessed the costs and cost-effectiveness of the 2020 agricultural census data collection under Regulation (EU) 2018/1091 using the grant applications from the Member States.

The estimated total costs to carry out the 2020 agricultural census reported by the Member States in the grant applications were EUR 278 128 426.97, while the estimated total eligible costs were EUR 267 872 491.16.

Eurostat does not know the real final costs for most of the Member States. For 2020, the national bodies no longer needed to identify the actual eligible costs covered or to provide supporting documents, such as accounting statements, to prove the amount declared. Member States only had to report the final costs if the final costs for at least one data collection component decreased by more than 20% compared to the estimated costs. Nevertheless, Eurostat aims to have a realistic picture of the entire costs of carrying out the data collection required under EU legislation. To that end, it encouraged the Member States to report the entire costs starting with the 2020 data collection<sup>7</sup>.

The total EU contributions paid to the Member States were EUR 35 495 889.00, representing a financing rate of 13.25% of the estimated total eligible costs.

Cost-effectiveness was one of the criteria for evaluating grant applications. For each country, cost-effectiveness was assessed by relating the estimated costs to the number of variables planned to be collected and to the number of agricultural holdings for which data were planned to be sent to Eurostat. This approach made it possible to compare cost-effectiveness across countries with very different numbers of agricultural holdings and collected variables. However, the pertinence of this approach was weakened by some countries not reporting the entire costs of data collection.

Moreover, the cost reduction between 2016 and 2020 cannot be quantified in a meaningful way, even if the 2020 costs are inflation adjusted. The form of financing changed between 2016 (reimbursement of the eligible costs of the action) and 2020 (single lump sum contribution)<sup>8</sup>. For 2020, countries were more inclined, since so encouraged, to report the entire costs of the data collection. Before 2020, countries tended to report only part of the costs, namely the part that was

<sup>&</sup>lt;sup>7</sup> Even if the 2020 grant application provided a good opportunity to report the entire costs, some national bodies did not do so.

<sup>&</sup>lt;sup>8</sup> European Commission, Eurostat, 'Decision authorising the use of a single lump sum contribution for the core structural data, frame extension and module data collections under the Integrated Farm Statistics Programme'.

easily supported by accounting statements and sufficient to obtain the maximum EU contribution laid down by the legislation).

## 3 CONCLUSIONS

Completeness of the data collections for integrated farm statistics and in particular for the 2020 agricultural census is guaranteed as automated procedures for validation are applied. User satisfaction surveys at national level indicate users are satisfied.

In terms of accuracy and reliability, the overall quality for the census is considered good.

The data collections were run in a timely way. However, timeliness for agricultural census data dissemination at European level needs to be improved.

The coherence and comparability of the data collection has been further improved by the new Eurostat data collection guidelines, the introduction of automated validation procedures, and the use of administrative data sources and innovative methodologies.

Microdata collected under integrated farm statistics are confidential, and confidentiality treatment is applied to the computed aggregates, which are disseminated in the form of statistical tables. Eurostat is investigating further improvements on confidentiality treatment.

Access to the statistical tables is public and free of charge and the data feeds a range of different publications. An EU level quality report compiles the metadata provided by the data providers. Access to microdata is restricted to protect the anonymity of agricultural holdings, but scientific use files are made available for researchers under certain conditions.

There have been measurable effects on reducing the reporting burden, thanks to the introduction of a modular approach, the collection of core data on small farms from a sample in the census year  $2020^9$  and the promotion of the use of already-existing administrative data sources (mostly registers). In some countries, qualitative efficiency gains were also observed, as mentioned in the national quality reports. Regulation (EU) 2018/1091 enabled countries to reduce burden.

However, a quantitative burden reduction in terms of costs or number of holdings cannot be meaningfully computed by comparing the 2020 data collection with the previous data collections. For one thing, the form of European financing changed in 2020 and countries were encouraged to report for 2020 the entire costs to Eurostat. For another, the number of holdings decreased over time, not only due to burden reduction but also to the concentration of agricultural activities, and the effects of these two factors cannot be clearly dissociated.

## 4 RECOMMENDATIONS

Eurostat strives to continuously improve the quality and availability of European statistics and is committed to reducing the burden on Member States and respondents. This effort is welcomed by data providers and should be continued in the future campaigns for farm structure data collection.

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<sup>&</sup>lt;sup>9</sup> In the 2023 and 2026 sample years, module data on small farms are not required.

The complexity associated with the post-processing of the datasets affects the timely publication of all aggregated indicator tables in Eurostat's public database. Eurostat is seeking further automation to improve the timeliness of the dissemination of results.

Integrated farm statistics data are widely used by policymakers to monitor the implementation of European policies such as the CAP. It is recommended that farm structure data collections are kept for the upcoming campaign, covering years 2030-2040.

The total EU contributions paid to the Member States represent a financing rate of 13.25% of the estimated total eligible costs. It is recommended that the EU support be maintained in upcoming data collection campaigns.