



National agricultural census operations and COVID-19

INTRODUCTION

As the COVID-19 pandemic continues to spread across the world's regions, countries have increasingly declared states of emergency and implemented physical distancing, restrictions on movement and other safety practices. These measures have had a clear and direct impact on agricultural census activities that involve gatherings and human contact, such as recruitment of field staff, training, listing operations, census enumeration and so on. In addition, the closure of businesses (including restaurants and hotels), transport and other support services is preventing the implementation of field operations.

The Food and Agriculture Organization of the United Nations (FAO) coordinates the **World Programme for the Census of Agriculture 2020 (WCA 2020)**, which supports national agricultural censuses conducted during the 2016–2025 round. The extent to which the COVID-19 crisis affects national census activities in this round depends on the stage reached in the census process. Census stages commence with planning activities (budgeting, methodology, legislation, publicity, staffing, procurement, preparation of frames, questionnaires and processing systems), and then proceed to fieldwork operations (recruitment and training of enumerators, and census enumeration), processing, analysis and, finally, publication of census results.

THE IMPACT OF THE COVID-19 CRISIS ON CENSUS ACTIVITIES

The census of agriculture seeks to collect data on seasonal agricultural activities. Accordingly, countries schedule census enumeration periods to ensure that the required data is collected at the right time. While a delay in census activities may not be critical for the population and housing census and household surveys, it can result in the loss of a full year's data for the census of agriculture if the agricultural season is missed.

Currently, 62 countries are preparing (45 countries) or have conducted (17 countries) censuses of agriculture in the WCA 2020 round. A rapid appraisal and informal consultations with national agricultural census authorities reveal that some 34 countries reported delays or suspension of several census activities, involving mainly planning, preparation of census instruments, staff recruitment and fieldwork (see **Table 1**). Countries that have started (4 countries) or were about to start (16 countries) fieldwork and census enumeration have put these activities on hold until the crisis is over. Most countries agreed that the full impact on the preparation and implementation of national censuses will depend on the evolution of the crisis.

TABLE 1 | Countries undergoing delays and suspension in agricultural census activities

STAGE OF CENSUS IMPLEMENTATION	AFRICA	ASIA-PACIFIC	AMERICA	NEAR EAST	EUROPE*
Delayed/Postponed					
Planning	Cameroon, Guinea, Madagascar	Indonesia, Nepal, Niue	Chile (publicity), Haiti (funding), Honduras (budget, cartography) Panama		Cyprus, Greece (teleworking, tablets), Italy, Spain (contractors)
Preparation of questionnaires, pilot census	Congo, Lesotho	Niue	Canada, Honduras	Palestine	Romania
Recruitment of field staff & training	Angola	Niue	Chile	Palestine	Cyprus, Croatia, Italy, United Kingdom of Great Britain and Northern Ireland
Listing and census enumeration	Angola, Lesotho	Niue	Chile (to Aug.)	Palestine (to Oct. 21)	Austria (CAWI/CATI affected), Croatia (to Sep.), Germany (ongoing), Hungary (to Oct.), Italy, Ireland (from June), Japan (ongoing), Malta (to Sep.), Spain, Sweden, United Kingdom of Great Britain and Northern Ireland (possibly 2021)
Data processing/analysis		Fiji	Argentina		
Suspended					
Census enumeration	Gabon, Kenya (80% done)				Portugal (50% done), Samoa (5% done)

*In addition, the European Union sources some census data from Common Agricultural Policy (CAP) administrative records, which have been affected by the crisis.

IMPLICATIONS FOR THE SUCCESSFUL COMPLETION OF CENSUS OPERATIONS

The delay in census activities caused by the COVID-19 crisis have brought about uncertainties and concerns regarding the successful completion of this round of censuses of agriculture.

These include the following:

- The agricultural census may be postponed to the next agricultural season.
- Continued financing of the census and other statistical operations may no longer be a government priority after the COVID-19 crisis.
- If the financial year ends before census work is resumed, budgetary allocations would need to be shifted to the next financial year, introducing uncertainty.
- Once census enumeration is resumed, there may be quality repercussions due to increased distancing from the original census reference period.
- Census data collected before the COVID-19 crisis may have little adherence to the new reality and may bias the samples of future agricultural surveys. This is due to the effect that the novel coronavirus may have on economies and the resulting bankruptcy of agricultural activities.
- Postponing the census may imply changing national legislation on the agriculture census for 2020.
- Current delays in population census activities are likely to result in the postponement of the subsequent census of agriculture (e.g. Cameroon, Indonesia, Nepal, Panama). This is explained by the fact that population censuses are normally used as a listing operation of households involved in own-account agricultural activities.

NATIONAL CENSUSES NOT (YET) AFFECTED

However, not all censuses of agriculture have been affected by the crisis, at least not yet. Eighteen countries reported that they have so far coped with the challenges posed by the crisis (see **Table 2**). Eight of these countries, all with developed statistical systems and information and communication technology (ICT), reported that preparation activities such as publicity strategy and training have continued through teleworking and e-learning, while data collection is moving ahead through IT solutions such as computer-assisted web interviewing (CAWI) and computer-assisted telephone interviewing (CATI). Another country has avoided delays in data collection through the use of administrative records to source census data, as initially planned.

Eight more countries acknowledged that census activities have not yet been affected by the COVID-19 crisis because the census enumeration period is scheduled for later this year or subsequent years. Some of these countries indicated that contingency plans are being developed to cope with potential delays. Three other countries reported that they were already in the analysis and reporting stage and therefore did not expect significant delays in the dissemination of census results.

TABLE 2 | Countries that report not being yet affected

REASON WHY NOT AFFECTED YET	COUNTRIES
Preparation of communication/publicity strategy through teleworking, audioconference	France
Use of e-learning to train enumerators	France
Census enumeration undertaken mainly through remote or electronic self-response (CATI, CAWI)	Canada, Denmark, Luxembourg, Latvia, Lithuania, Norway, Slovenia
Use of administrative records to source census data	Denmark
Census enumeration scheduled for September or later	Czech Republic, Bulgaria, Poland (Sep.), France, Switzerland (Oct.), Slovak Republic (Nov.), Finland (early 2021), United States of America (2022)
Finalizing census data processing, analysis and report	Belarus, Bhutan, Timor-Leste

MEASURES TO MITIGATE THE EFFECTS OF COVID-19 IN CENSUS ACTIVITIES

Despite the travel restrictions introduced to address the pandemic, FAO has continued to provide remote technical support to countries undertaking agricultural censuses through videocalls (Skype, Zoom) and email. More and more countries have been moving away from door-to-door data collection modalities and towards the use of IT-based modalities. A stocktaking of lessons learned from the current crisis highlights some mitigation measures, which are in line with the recommendations presented in the WCA 2020 guidelines (FAO 2015, 2018):

- Use e-learning tools to train trainers, supervisors and enumerators.
- Reduce reliance on face-to-face interviewing and encourage respondents to self-respond through CAWI and CATI data collection modalities.
- Explore the broader use of more administrative records to source census data.

CONCLUSIONS

The lockdown has forced ministries of agriculture and national statistics offices involved in implementing censuses of agriculture to telework and rely on ICT infrastructures in order to continue with essential work. Most of the countries that responded to the FAO rapid appraisal stated that the lockdown has caused delays in preparatory activities such as budgeting and cartography, recruitment of field staff and training, and even fieldwork operations. This situation has been witnessed to a greater or lesser extent in both developed and developing countries.

Any delay occurring along any line of activity that forms part of the implementation process for the census of agriculture will have a knock-on effect on subsequent activities, both in terms of work plans and budgets. Even countries that reported no delays cautioned that they would need to rethink their strategies if the lockdown period is prolonged. Countries that rely heavily on IT for data collection and training are faring better so far, and have been able to maintain their planned activities. Likewise, countries that use administrative records to source a substantial part of their census needs, such as the Nordic countries, are coping better.

However, ICT and methodological capability takes time to build. While the COVID-19 crisis may have alerted countries to the need to depend less on face-to-face data collection and training in future censuses, some countries may not be able to benefit fully from ICTs due to poor connectivity, high cost of access and lack of necessary skills. Conversely, other countries may be able to leapfrog into the use of more recent technologies, but adequate time for testing and training prior to adoption should not be underestimated.

FAO has developed and widely disseminated guidelines encouraging the use of alternative census methodologies and ICTs for various stages of census implementation. Many of the countries listed in this paper have remained in close contact with FAO and are receiving guidance on how to proceed tailored to their statistical development and available infrastructure.

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