



LESOTHO –AGRICULTURAL CENSUS 2019/2020 – METADATA REVIEW

1. Historical outline

Lesotho has been conducting decennial Agriculture Censuses (ACs) since 1949. The AC 1949/1950 and the AC 1960 were both organized by the Ministry of Agriculture, while the ACs for 1969/1970, 1979/1980, 1989/1990, 1999/2000, 2009/2010 and the latest, AC 2019/2020, to which the metadata review and data presented here refer, were organized by the Bureau of Statistics (BoS).

2. Legal basis and organization

Legal framework

The legal basis of the AC 2019/2020 is the Lesotho Bureau of Statistics (BoS) Act No. 8 of 2001, which replaced the Statistics Act of 1965 used for the censuses conducted until 1999/2000. The article 15 stipulates that the mandate of the Minister of Finance and Development Planning at the recommendation of the Council, establish the timing and data content of the AC.

Institutional framework and international collaboration

The Ministry of Finance and Development Planning (MoDP) was the executing agency for the 2019/2020 AC, while the Bureau of Statistics (BoS) the implementing agency, in collaboration with the Ministry of Agriculture and Food Security (MAFS). The MoDP appointed the Director of BoS as Census Commissioner who had the overall responsibility to implement the agricultural census. The Minister also established the Collaborators' Committee with responsibilities to provide policy guidelines, mobilize the necessary resources for the census and, act as the link between the Government and the implementing organs on the advice of the Census Commissioner. The Government of Lesotho funded the 2019/2020 AC, while FAO provided technical assistance.

Census staff

The number of staff involved in the census operation was 337 field staff, including 50 field supervisors, 12 census coordinators, 250 enumerators, 19 Information technology personnel and 6 data processing personnel.

3. Reference date and period

Reference day: the day of enumeration for inventory items such as livestock numbers.

Reference period: the agricultural year 2019/2020 (from 1 August 2019 to 31 July 2020). This reference period applied for the rest of the variables.

4. Enumeration period

The data collection was carried out in phases, namely: (i) the household listing phase, from 31 October to 29 November 2020; (ii) the household and commercial farms phase (mixed holdings both from the household and non-household sectors producing mainly for commercial purposes), from 7 March to 13 April 2021.

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

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

The **statistical unit** for the AC 2019/2020 was the agricultural holding, defined as “an economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for own account agricultural production purposes, without regard to title, legal form, or size”.

Community-level data

Community-level data were collected in the AC 2019/2020. The questionnaire was designed to collect village level data and the operation was conducted from 7 March to 13 April 2021 along with the AC 2019/2020.

Census coverage

Geographic coverage

The AC 2019/2020 covered rural areas of the entire country.

Cut-off threshold and other exclusions

For the purpose of AC 2019/2020, agricultural holdings were restricted to those that met one or more of the following conditions: at least three sheep or three mixed herd of sheep/goats or two pigs or five poultry. The holdings with no agricultural land and no cattle were excluded in the AC 2019/2020.

6. Methodology

Methodological modality for conducting the census

The AC 2019/2020 was conducted on sample basis using the classical approach. A community survey was conducted along with the census.

Relation to other censuses

The sampling frame used for AC 2019/2020 was the Lesotho Population and Housing Census (PHC) 2016. The frame was updated during the listing phase.

Frame

The AC 2019/2020 frame consisted of a list of enumeration areas (EAs) maintained by the Survey Methods and Cartography Division (SMCD) of BoS. Group of two or more EAs constituted the primary sampling unit (PSU). The listing of households at EA level (within each PSU) was conducted from 31 October to 29 November 2020 to provide an updated sampling frame for the selection of sample households. Community survey was conducted in all PSUs that were selected for the AC. All villages in the selected PSUs on the ten administrative districts were covered. Village chiefs, headmen or councilors responded on behalf of their communities.

The frame for the commercial sector (mixed holdings both from the household and non-household sectors producing mainly for commercial purposes) was a list provided by the MAFS through extension officers for ten administrative districts and compiled by the BoS.

Complete and/or sample enumeration methods

The AC was conducted using sample enumeration for holdings in the household sector and complete enumeration for all commercial farms (mixed holdings both from the household and non-household sectors) in the country. A complete enumeration of households within the selected 500 PSUs from rural areas which engaged in agricultural activity was conducted to identify agricultural households.

Sample design

The AC 2019/2020 adopted a stratified two-stage sampling design. The PSUs were first stratified according to the ten administrative districts. Then within each district, the PSUs were grouped into the four agro-ecological zones: Lowlands, Foothills, Mountains and Senqu River Valley (SRV). Each PSU is made up of two or more enumeration areas (EAs) and agricultural households were the secondary sampling units (SSUs). A total sample size of 8 000 agricultural households were selected in 500 PSUs from rural areas and all the four ecological zones were covered.

Data collection method(s)

Face-to-face interviewing was applied to collect information from holdings, using the CAPI method (tablets).

Questionnaire(s) and items covered

Four questionnaires were used for AC 2019/2020 data collection: (i) household listing form; (ii) household questionnaire; (iii) commercial farms questionnaire; and (iv) community questionnaire. The AC 2019/2020 questionnaire covered all 23 essential items recommended in the WCA 2020.

The community questionnaire was designed to collect data at village level on the following items: proximity of village to basic services and service institutions such as education, health, services and agricultural facilities. In addition, data on public transport, road network, community water supply, electricity, groups or cooperative societies and credit institutions, source of employment, land tenure, village programmes and services.

7. Use of technology

The CAPI method (tablets) was used for census data collection. All necessary information for selected PSUs including maps was uploaded into the CAPI application.

8. Data processing

The data was collected using CAPI in CSPro (Census and Surveys Processing System). All captured data was first consolidated into one data file. SPSS was preferred for further cleaning (checking for missing data, duplicates, invalid data values and consistency checking) and production of tables. The SPSS output tables were exported into Excel for formatting and further analysis.

During interviews data was simultaneously validated for consistency for each interviewer tablet. This later paid dividend as data from almost all the sections of the census were found to be consistent, except for small cases of inconsistency found between age, relationship, marital status and educational level. These inconsistencies were later resolved at the data cleaning stage.

9. Quality assurance

A Post-enumeration Survey (PES) was carried out from 12 May to 19 June 2021 to assess the quality of the census data and particularly to measure the magnitude of non-sampling errors in terms of coverage and content errors. A one-stage stratified sampling design was used in the PES. A sample of 30 PSUs were selected from the list of 500 PSUs used in the main AC 2019/2020. In the selected PSUs, all the agricultural households selected in the AC 2019/2020 were re-enumerated and then coverage and content errors were estimated for the total agricultural household population. The results indicate a coverage rate of 94.8 percent, omission rate of 5.2 percent and net coverage error of 5.1 percent. Sampling errors, confidence intervals of the estimated indicators and coefficient of variation were computed for several variables.

10. Data and metadata archiving

The data and metadata have not been archived by the date of finalization of the current methodological review.

11. Data reconciliation

There was no reconciliation process of AC 2019/2020 data.

12. Dissemination of census results and microdata

The AC 2019/2020 results were disseminated through printed publications in six volumes in December 2022: Household characteristics and crops statistics report (Volume 1), Livestock statistics report (Volume 2), Commercial farming statistics report (Volume 3), Community profile report (Volume 4), Technical report (Volume 5), and Post Enumeration Survey (Volume VI). The access of external users to the microdata was not provided.

13. Data sources

Ministry of Finance and Development Planning, Bureau of Statistics. December 2022. Publications. In: Ministry of Finance and Development Planning, Bureau of Statistics [online]. Maseru, Lesotho. bos.gov.ls

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