# Rwanda - Rwanda Season Agriculture Survey 2020

#### National Institute of Statistics of Rwanda - Ministry of Finance and Economic Planning

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## Overview

#### Identification

ID NUMBER RWA-NISR-SAS-2020-v0.1

#### Version

VERSION DESCRIPTION Edited, anonymous dataset for public use

PRODUCTION DATE 2021-02-10

#### **Overview**

#### ABSTRACT

The main objective of the Seasonal Agricultural Survey is to provide timely, accurate, reliable and comprehensive agricultural statistics that describe the structure of agriculture in Rwanda mainly in terms of land use, crop area, yield and crop production to monitor current agricultural and food supply conditions and to facilitate evidence-based decision making for the development of the agricultural sector.

The National Institute of Statistics of Rwanda (NISR) has been conducting an annual agricultural survey since November 2012 for the estimation of the national agricultural crop area and production estimates. In 2019/2020 agricultural year, the NISR conducted the second edition of theUpgraded Seasonal Agricultural Survey (USAS) covering the three agricultural seasons. The USAS incorporated an increased sample size to provide more precise estimates. The USAS allows information for monitoring progress on agriculture programs and policies in Rwanda.

KIND OF DATA Sample survey data [ssd]

#### UNITS OF ANALYSIS

This seasonal agriculture survey focused on the following units of analysis: Small scale agricultural farms and large scale farms

#### Scope

#### NOTES

The scope of 2019 Seasonal Agriculture Survey concerned farm characteristics (Area, yield, production; use of production, agricultural practices; agriculture inputs and land tenure).

#### Coverage

#### GEOGRAPHIC COVERAGE National coverage allowing district-level estimation of key indicators

**GEOGRAPHIC UNIT** 

National coverage allowing district-level estimation of key indicators

## **Producers and Sponsors**

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Institute of Statistics of Rwanda	Ministry of Finance and Economic Planning

OTHER PRODUCER(S)

Name	Affiliation	Role
National Institute of Statistics of Rwanda	Ministry of Finance and Economic Planning	Main producer
Ministry of Agriculture and Animal Resources	Government of Rwanda	Technical partner
Rwanda Agricultural Board	Ministry of Agriculture and Animal Resources	Technical partner
National Agriculture Export Board	Ministry of Agriculture and Animal Resources	Technical partner

FUNDING

Name	Abbreviation	Role
Government of Rwanda	GoR	Funder

## **Metadata Production**

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
National Institute of Statistics of Rwanda	NISR	Ministry of Finance and Economic Planning	Producer of the study

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# Sampling

## **Sampling Procedure**

Out of 5 defined agricultural strata, only dominant hill crop land stratum, dominant wetland crops stratum, dominant rangeland stratum and mixed stratum were considered as land potential for agriculture. The remaining stratum is the non-agricultural land. Note that clusters covered by tea plantations were not considered in the area sample frame due to reasons stated above. Thus, SAS is conducted on 4 above mentioned strata to cover other major crops. In 2020 agricultural year, the sample of segments was increased in order to improve agriculture statistics where sample increased from 780 (sample used from 2018 to 2019) to 1200 segments. At first stage,1200 segments were selected and allocated at district level based on the power allocation approach (Bankier3, 1988). Sampled segments inside each district were distributed among strata with a proportional-to-area criterion.

At second stage, 25 sample points were systematically selected, following a special distance of 60 meters between points. Sample points are reporting units within each segment, where enumerators go to every point, locate and delineate plots in which the sample points fall, and collect records of land use and related information. The recorded information represents the characteristics of the whole segment which are extrapolated to the stratum level and hence the combination of strata within each district provides district area related statistics.

## **Response Rate**

Data collection was done in 780 segments and 222 large scale farmers holdings for Season A, whereas in Season C data was collected in 232 segments, response rate was 100% of the sample

## Weighting

Sampling weights were calculated for each stratum in each district considering the total number of segments in the stratum and the sample size in the specific stratum

# Questionnaires

## **Overview**

There were two types of questionnaires used for this survey namely screening questionnaire and plot questionnaire. A Screening questionnaire was used to collect information that enabled identification of a plot and its land use using the plot questionnaire. For point-sampling, the plot questionnaire is concerned with the collection of data on characteristics of crop identification, crop production and use of production, inputs (seeds, fertilizers and pesticides), agricultural practices and land tenure. All the surveys questionnaires used were published in English

# Data Collection

#### **Data Collection Dates**

Start	End	Cycle	
2019-09-01	2020-08-31	N/A	

#### **Time Periods**

Start	End	Cycle
2019-09-01	2020-08-31	N/A

#### **Data Collection Mode**

Face-to-face [f2f]

#### **Data Collection Notes**

Data collection is done in two distinct phases: The first Phase, known as screening activity, consists of visiting all sampled segments and delineating all plots in which the sampled grids points are fallen and thereafter recording the related information using screening questionnaire. The second phase consists of visiting the sub-sampled agricultural plots from screened plots in phase one as well as all Large- Scale Farmers having cultivated plots in the season the survey is being conducted. This phase is conducted in the period of harvesting where farmers are requested to provide information about sowing period and harvesting period, inputs used, agricultural practices done on the plots, the crop production and its use.

For SAS 2019 the NISR employed around 153 field workers and 22 team leaders. Training was provided to all fieldwork personnel on the data collection methodologies associated with the use of GPS for point-sampling and computer tablet questionnaires used for plot data collection and farmer interviews. The tablet computer assisted data collection and interview allowed for very fast and efficient uploading and transfer of the enumerated data from the field to NISR headquarters for processing. The tablet software instruments (electronic version of the paper questionnaires) allowed for instantaneous checking of the respondent data and automatically directed the enumerator questioning to reduce non-sampling errors within the data collection.

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#### **Data Collectors**

Name	Abbreviation	Affiliation
National Institute of Statistics of Rwanda	NISR	Ministry of Finance and Economic Planning

#### **Supervision**

The 2019 SAS used 153 fieldworkers and 22 team leaders. All fieldwork staff in 2019 held a degree in Agricultural Sciences and was trained by NISR headquarters staff before starting data collection. Higher level supervision of staff from NISR visited the field teams during each phase of data collection to ensure data quality control. At the bottom of the hierarchy, there are enumerators who would be assisted by a team leader also known as a controller. His/ her main function is to introduce the enumerators to the various key people from the sector to the villages leaders up to operators in the Secondary Sampling Unit (known as Segment), and assist enumerators during the whole course of the survey .

A higher level supervision staff from NISR visited the field teams during each phase of data collection to ensure quality control. Responsibilities of a Team Leader is to manage the interviewers to ensure successful completion and quality of data collected in a given time period for the fieldwork. He/she was expected to record information about the fieldwork, which tracks the status of completion of the work in the field, document problems in the field and solutions taken to resolve these problems. Specifically, his/her tasks included:

- 1. Introduce the survey and interviewers at local level where the survey is administered;
- 2. Monitor and attend some interviews and make comments on the worker's performance;
- 3. Meet frequently with each member of the group to discuss, improve and organize work;
- 4. Check the availability of all the necessary items before going on field;
- 5. Help workers to solve the problems they encounter;
- 6. Manage the team's work schedule;
- 7. Make sure all the big farmers are identified and surveyed;
- 8. Communicate with NISR, regarding field issues, as necessary.

# Data Processing

## **Data Editing**

The CAPI method of data collection allows the enumerators in the field to collect and enter data with their tablets and then synchronize to the server at headquarters where data are received by NISR staff, checked for consistency at NISR and thereafter transmitted to analysts for tabulation using STATA software, and reporting using office Excel and word as well

# Data Appraisal

No content available