Rwanda - Rwanda Season Agriculture Survey 2023

National Institute of Statistics of Rwanda

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Identification

SURVEY ID NUMBER
RWA_2023_RSAS_v01_EN_M_v01_A_ESS

TITLE
Rwanda Season Agriculture Survey 2023

COUNTRY

Name	Country code
Rwanda	RWA

STUDY TYPE
Agricultural Survey [ag/oth]

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 seasonal agricultural survey since 2012 for the estimation of the national agricultural crop area and production estimates. In 2022/2023 agricultural year, the NISR conducted Seasonal Agricultural Survey (SAS) covering the three agricultural seasons. The SAS provides information used as a tool to assist in addressing key agricultural issues and information needs that will inform policymakers and other stakeholders and allow more effective identification of priority intervention needs.

KIND OF DATA
Sample survey data [ssd]

UNIT OF ANALYSIS
Small scale agricultural farms and large scale farms

Scope

NOTES
GENERAL INFORMATION
MAIN CROP GROWN, SEEDS USED, CROP PRODUCTION, USE OF PRODUCTION AND LOSSES
INPUTS USED
AGRICULTURAL PRACTICES
PLOT INFORMATION
MAIN CROPS GROWN

Coverage

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

UNIVERSE
The SAS 2023 targeted potential agricultural land and large-scale farmers

Producers and sponsors

PRIMARY INVESTIGATORS

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

PRODUCERS

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

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Government of Rwanda	GoR	Funder

Sampling

SAMPLING PROCEDURE

The total country land was classified into five strata, of which four are agricultural, while the remaining stratum is designated for land not suitable for agriculture. The four agricultural strata are: dominant hill crop land, dominant wetland crops, dominant rangeland, and mixed stratum, all considered suitable for agriculture. The fifth stratum comprises non-agricultural land, including areas occupied by water bodies, forestry plantations, settlements, parks, and protected marshland not utilized for agriculture. The sampling frame excludes land areas covered by tea plantation farms.

In 2023 agricultural year, the total sample used was 1200 segments. At first stage,1200 segments were selected and allocated at district level based on the power allocation approach (Bankier, 1988). Sampled segments inside each district were distributed among strata with a proportional-to-size criterion.

At the second stage, 25 sample points were systematically selected, following a special distance of 60 meters between points. For every sample point, a corresponding farm or plot is identified, and the operator is interviewed. The farms therefore constitute the sampling units within each segment. Enumerators locate every sample point, delineate plots in which the sample points fall using high accurate GPS devices and then collect information on land use and other related information. Sampling weights are calculated and applied to the sample data to obtain stratum-level estimates. District estimates are then derived by aggregating the estimates from all strata within the district.

Data collection was done in 1200 segments and 345 large scale farmers holdings for Season A and B, whereas in Season C data was collected in 1769 sites potential to grow season C crops in addition to 513 segments, response rate was 100% of the sample.

During the SAS 2023 exercise, data collection covered three main agricultural seasons A, B and C and was conducted into two separate phases in each season:

A. The first phase, known as screening activity (post-planting phase), consists of visiting all sampled segments and demarcating all plots with sampled points with the aim of covering the information related to land area, planted crops and land use.

B. The second phase involves capturing of production data by visiting sampled agricultural plots identified from screening activity as well as all large-scale farmers.

To ensure the smooth completion of the SAS workload, NISR employed 137 Enumerators and 23 Team Leaders. All fieldwork staff hold a degree in agriculture sciences and were consistently trained by NISR headquarter staff before starting data collection in each season. Moreover, higher-level supervision was organized and done by staff from NISR who frequently visited the field teams during each phase of data collection to ensure the quality of collected data.

For Season A, data collection started on 4th December 2022 and ended on 16th February 2023.

For Season B, data collection started on 2nd May 2023 and ended on 30th June 2023.

For Season C, data collection started on 10th September 2023 and ended on 30th September 2023.

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.

Data Collection

DATES OF DATA COLLECTION

Start	End	Cycle
2022-12-04	2023-02-16	Season A
2023-05-02	2023-06-30	Season B
2023-09-10	2023-09-30	Season C

DATA COLLECTION MODE
Computer Assisted Personal Interview [capi]

Access policy

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Metadata production

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PRODUCERS

Name	Abbreviation	Affiliation	Role
National Institute of Statistics of Rwanda	NISR		Metadata Producer
Alessia Marcobelli		Food and Agriculture Organization	Metadata adapted for FAM

DDI DOCUMENT VERSION
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Data Dictionary

Data file	Cases	Variables
rwa-sas-seasonA_Crop production	39039	103
rwa-sas-SeasonA_PartIII_Fertilizers_Pesticides	16896	87
rwa-sas-SeasonA_PartIV_Agricultural practice	16831	56
rwa-sas-seasonA_Screening_Agroforestry	31779	15
rwa-sas-seasonA_Screening_Antierosion_land consolidation	34766	16
rwa-sas-seasonA-Screening_crops	53692	30
rwa-sas-seasonB_Crop production	36547	103
rwa-sas-SeasonB_PartIII_Fertilizers_Pesticides	16865	84
rwa-sas-SeasonB_PartIV_Agricultural practice	16865	54
rwa-sas-seasonB_Screening_Agroforestry	26392	15
rwa-sas-seasonB_Screening_Antierosion_land consolidation	29372	16
rwa-sas-seasonB-Screening_crops	49338	30
rwa-sas-seasonC_Crop production	3567	88
rwa-sas-SeasonC_PartIII_Fertilizers_Pesticides	2984	84
rwa-sas-SeasonC_PartIV_Agricultural practice	2984	53
rwa-sas-seasonC_Screening_Agroforestry	4931	18
rwa-sas-seasonC_Screening_Antierosion_land consolidation	4931	17
rwa-sas-seasonC-Screening_crops	10306	28