Rwanda - Rwanda Seasonal Agriculture Survey 2014

National Institute of Statistics of Rwanda,

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Overview

Identification

ID NUMBER
RWA_2014_RSAS_v01_EN_M_v01_A_OCS

Version

VERSION DESCRIPTION
Version 1.1 Edited anonymized dataset for public use

PRODUCTION DATE
2017-04-17

Overview

ABSTRACT
The main objective of the Rwanda Seasonal Agriculture Survey (RSAS) is to provide timely, accurate, reliable and comprehensive agricultural statistics that describe the structure of agriculture in Rwanda in terms of land use, crop production and livestock to monitor current agricultural and food supply conditions and to facilitate evidence based decision making for the development of Agriculture sector.

In this regard, the National Institute of Statistics of Rwanda (NISR) conducted the Seasonal Agriculture Survey (SAS) from November 2013 to October 2014 to gather up-to-date information for monitoring progress on agriculture programs and policies in Rwanda, including the Second Economic Development and Poverty Reduction Strategy (EDPRS II) and Vision 2020. This 2014 RSAS covered three agricultural seasons (A, B and C) and provides data on background characteristics of the agricultural operators, farm characteristics (area, yield and production), agricultural practices, agricultural equipments, use of crop production by agricultural operators and by large scale farmers.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Agricultural holdings

Scope

NOTES
The scope of the 2014 Rwanda Seasonal Agriculture Survey (RSAS) concerned demographic and social characteristics of agricultural operators and large scale farmers, as well as, their farm characteristics (area, yield and production; agricultural practices; small agricultural equipments; and use of crop production).

Coverage

GEOGRAPHIC COVERAGE
National coverage

UNIVERSE
The RSAS 2014 targeted agricultural operators and large scale farmers operating in Rwanda.

Producers and Sponsors

Metadata Production

Sampling

Sampling Procedure

For the 2014 Rwanda Seasonal Agricultural Survey (RSAS), the National Institute of Statistics of Rwanda (NISR) used as sampling method a dual frame sampling design, combining selected area frame sample3 segments and a list of Large Scale Farmers (LSFs). NISR also used imagery from Rwanda National Resource Authority (RNRA) with a very high resolution of 25 centimeters to divide the total land of the country into twelve strata.

A total number of 540 segments were spread throughout the country as coverage of the survey with 24,475 and 25,167 agricultural operators in Season A and Season B respectively. From these numbers of agricultural operators, sub-samples were selected during the Second Phases.

Furthermore, enumerated Large Scale Farmers were 498 in 2014 Season A and 502 in Season B. Season C considered 152 segments counting 7,684 Agricultural Operators from which 609 Agricultural Operators were selected for survey interviews.

During Phase I, a complete enumeration of all farmers having agricultural land and operating within the 540 selected Segments was undertaken and counted 24,475 and 25,167 agricultural operators respectively in Season A and B. Season C considered only 152 segments counting 7,684 Agricultural Operators.

Response Rate

The response rate for Seasonal Agriculture Survey is 98%.

Weighting

The sample weights were calculated for each district considering the total number of segments in each district and the sample size in the specific districts.

Questionnaires

Overview

There were two types of questionnaires used for this survey namely Screening questionnaire and farm questionnaires.

A Screening Questionnaire was used to collect information that enabled identification of an Agricultural Operator or Large Scale Farmer and his or her land use.
Farm questionnaires were of two types:
a) Phase I Farm Questionnaire was used to collect data on characteristics of Agricultural Operators, crop identification and area, inputs (seeds, fertilizers, labor, ...) for Agricultural Operators and large scale farmers.
b) Phase 2 Farm questionnaire was used in the collection of data on crop production and use of production.

It is important to mention that all these Farm Questionnaires were subjected to two/three rounds of data quality checking. The first round was conducted by the enumerator and the second round was conducted by the team leader to check if questionnaires had been well completed by enumerators.

For season C, after screening, an interview was conducted for each selected tract/Agricultural Operator using one consolidated Farm questionnaire.
All the surveys questionnaires used were published in both English and Kinyarwanda languages.

Data Collection

Data Collection Dates

Start	End	Cycle
2013-11-14	2014-03-22	Season A
2014-04-15	2014-07-05	Season B
2014-09-15	2014-10-07	Season C

Data Collection Mode

Face-to-face paper [f2f]

Data Collection Notes

The 2014 SAS used 120 enumerators grouped in 40 field teams and 43 Team leaders, i.e one Team leader to 3 Enumerators. All field work staff in 2014 possess a degree in Agronomy Science and were trained before starting data collection. Higher level supervision staff from NISR visited the field teams during each phase of data collection to ensure quality control. Enumerators and Team leaders had adequate materials composed of Enumerator's Instruction manual, Screening questionnaire, Farm questionnaires, Measuring tapes, Ruler, Pens, Pencils, Calculator, Weighing scales, Global Positioning System (GPS), Personal Data System (PDA), Maps, Rain coats, Boots, Umbrella, First aid equipment, etc. Each team was assigned a vehicle.

Before proceeding to the field, enumerators and their team leaders checked if they had all required materials for their fieldwork. All staff was required to arrive early on the field (Segment or LSF). Upon arrival in the field, the enumerators and their team Leaders took the related geographical coordinates that were used by supervisors to know the real starting time of the fieldwork.

The next step was the segment delineation or LSF and taking of geographical coordinates for the identified landmarks to allow supervisors to check if the segment was delineated appropriately and to ensure the collected data related to the plots inside the appropriate segment or LSF.

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Data Collectors

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

Supervision

The survey used 120 Enumerators organised around 40 field teams and 43 team leaders giving a ratio of one team leader to 3 Enumerators.

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 by completing the fieldwork forms, which track the status of completion of the work in the field, document problems in the field and solutions taken to resolve these problems, and track the data entry process. Specifically, his/her tasks included:

1. Introduce the survey and interviewers at local level where the survey is administered.
2. Review questionnaires and check that it has been correctly filled in.
3. Monitor and attend some interviews and make comments on the worker's performance.
4. Meet frequently with each member of the group to discuss, improve and organize work.
5. Check the availability of all the necessary items before going on field.
6. Help workers to solve the problems they encounter in dealing with respondents who are not responsive to questions or refuse to be interviewed.
7. Manage the team's work schedule, including tracking questionnaires completed in the field, questionnaires assigned to the data entry team, and questionnaires that require correction by interviewers.
8. Make sure all the big farmers are identified and surveyed.
9. Communicate with NISR/MINAGRI staff, regarding field issues, as necessary.
He/she was responsible for helping the interviewers to identify the segments and tracts that have been allocated to them, resolving any problems with reluctant operators observing interviews and making checks by visiting the operators after the survey to verify data.

Data Processing

Data Editing

Data editing took place at different stage. Firstly, the filled questionnaires were repatriated at NISR for office editing and coding before data entry started. Data entry of the completed and checked questionnaires was undertaken at the NISR office by 20 staff trained in using the CSPro software. To ensure appropriate matching of data in the completed questionnaires and plot area measurements from the GIS unit, a LOOKUP file was integrated in the CSPro data entry program to confirm the identification of each agricultural operator or LSF before starting data entry. Thereafter, data were entered in computers, edited and summarized in tables using SPSS and Excel.

Data Appraisal

Other forms of Data Appraisal

All Farm questionnaires were subjected to two/three rounds of data quality checking. The first round was conducted by the enumerator and the second round was conducted by the team leader to check if questionnaires had been well completed by enumerators. And in most cases, questionnaires completed by one enumerator were peer-reviewed by another enumerator before being checked by the Team leader.