RWANDA - Enquête Nationale Agricole 2008 - Explanatory notes

1. Historical Outline

The National Agricultural Survey 2008 (NAS 2008) was designed to provide a picture with reliable and updated agriculture sector figures, in order to serve as a baseline based on the facts and to set up development strategies that are most appropriate for the rural sector. This will steer progress towards the goals of Vision 2020, while having the fittest tools for measuring, monitoring and evaluation. Indeed in the context of Vision 2020 adopted by the highest authorities of the country, the transformation of agriculture is one of the pillars of that vision.

The 2008 National Agricultural Survey (NAS) of Rwanda was undertaken from September 2007 to August 2008. As a result of the 1994 genocide, lives were lost, people were displaced or exiled. Without accurate measurements, it was not possible to evaluate objectively the performance of the agricultural sector and to know the real contribution of agriculture to the economy. Prior to the 2008 National Agricultural Survey, annual agricultural production was estimated using projections of an agricultural survey conducted in 1990, a methodology that was both inaccurate and unreliable.

2. Legal Basis and Organization

The National Institute of Statistics of Rwanda, in collaboration with the Ministry of Agriculture and its conventional partners and with the support of donors, all concerned with development of Rwanda, conducted a nationwide agricultural survey.


3. Reference Period or Date

The data are all for the calendar year 2008 or the crop season September 2007 through August 2008. The specific reference date for livestock is the beginning of each season, for a crop it is the season in which it is grown, for the register of inputs and equipment it is the end of each month in the crop season, and for the harvest and storage characteristics it is a daily record during the season plus an end of the month summary.

4. Enumeration Period

The 2008 National Agricultural Survey (NAS 2008) of Rwanda has been undertaken from September 2007 to August 2008 and covered the whole two agricultural seasons of the year 2008 (from September 2007 to February 2008 for the first season and from March to August 2008 for the second season).

5. Definition of the Statistical Unit

The unit of observation was the agricultural household. This was defined as the household where at least one member was engaged in any of the following; agricultural activities, livestock, fisheries, forestry or bee-keeping. A form for listing was used to identify this type of household. The unit of analysis was the holding (large-farm) or agricultural household. The agriculture sample frame consists of all agricultural households residing in the enumeration area.

6. Geographic Coverage

The 2008 National Agricultural Survey covers all rural areas of the country and some areas of Kigali City with agro-pastoral activities (urban and peri-urban agriculture).

7. Exclusions and Cut-Off Thresholds
8. Methodology

**FAO Modular Approach**

The Census of Agriculture used a modular approach with 18 questionnaires and surveying in both the first and second growing seasons.

**Frame**

The sampling frame and cartography for the National Agricultural Survey 2008 came from the 2002 General Census of Population and Housing (RGPH). The RGPH included an agricultural module that was administered to all households to identify the agricultural households.

**Complete or sample enumeration methods**

The 2008 National Agricultural Survey (NAS 2008) covered a sample of 10,080 agricultural households spread out in all 30 Districts and the data are representative at the District level.

**Sample Design**

The sample was a two-stage stratified sample design. The number of agricultural households identified in the 2002 General Census of Population and Housing was used as a measure of the size of the enumeration area (EAs).

In order to have reliable survey estimates at the District level, the first stage of stratification was down at the District level. The Districts of Kigali City (Nyarugenge, Gasabo, Kicukiro) were grouped into one stratum because of the small number of agricultural EA’s in each District. At the first stage of stratification, there were 28 strata. The second stage of stratification was to further divide the EAs in each District into the particular bio-climatic zone in which they were situated. Thus, each agricultural EA was classified into one of the Rwanda’s ten agro-climatic zones. The analysis of the agricultural sample frame showed that most Districts (19) had two agro-climatic zones, six Districts had three agro-climatic zones, two (Musanze and Nyamasheke) had four zones and three Districts were in a single-agro climatic zone.

In consideration of the financial and operational constraints, and in order to have reliable estimates at district level, the methodologists recommended the selection of 840 EAs as the primary sampling units (PSU’s). The PSU’s were geographical areas with clearly identifiable boundaries so that an enumerator could conduct the listing of households during a fixed period of time. The sample EAs were drawn using probability proportional to size (PPS). The size of each PSU was the number of households. The sample was then divided into 4 sub-samples (replicates) of 210 EA’s each that could be used for post-census surveys.

Households were listed within sample EA’s in order to establish an up-to-date list of households in the EA. The listing led to the identification of agricultural households - the secondary sampling units. These lists of agricultural households allowed for the random selection of 15 agricultural households by EA with equal probability of selection. Among these 15 households, 12 participated in interviews and 3 served as replacements should a selected household be a no-contact or a refusal.

In the second stage, 12 households were interviewed in each sample EA. For the National Agricultural Survey 2008, there were a total of 10,080 households sampled.

**Collection Method**

Data collection was done using printed questionnaires, which were filled by enumerators according to a harmonized calendar in all selected EA’s. Each enumerator had to first list the households in two EA’s and then visit 12 households per EA, or 24 households per enumerator. Because of the number of growing seasons, it was necessary for the interviewers to visit each sample household several times.
over the year to collect the annual crop area and production data.

**Questionnaire(s)**

There were 18 separate Forms or Questionnaires. The Census of Agriculture collects the core data as recommended by the FAO. The Census collected information on the following characteristics: household members, identification of the holdings, field descriptions, crops (including horticulture), agricultural inputs, Register for daily harvest, monthly record of daily harvest, inventory of livestock, animal production, crop-cutting (yield estimates), Register for daily fishery products, fishing activities, beekeeping, forestry activities, storage of harvest, nutrition and household foods.

**Controls to Minimize Non-Sampling Errors**

No specific references.

**Innovative Methodologies**

Measurement accuracy was a priority, and to address the issue, enumerators and heads of households were provided with standard measurement equipment. This was done in order to break the tradition of approximation of quantities and distances as used in previous surveys. Each enumerator was equipped with a measuring tape to get data regarding the dimensions of fields and farms, and a spring balance and calculator to measure the weights of harvested crops. In addition, each household received a bucket calibrated in liters to measure liquid products, a spring balance and a sack to measure the weight of solid products, and pencils and a printed register to record the measured production. These items then became the property of the household.

9. **Data Entry, Edits, Imputation and Tabulation**

The data entry operation was programmed in CSPro. In total, this operation mobilized 184 data entry clerks, 10 controllers, 3 checkers, 3 coding supervisors and used 92 computers. One team of data entry clerks, controllers and checkers worked in the morning while a second team worked through the evening shift.

10. **Data Dissemination and Use**

The data have been made available in printed publications, on the website of the Rwanda National Institute for Statistics and CountrySTAT-Rwanda, and upon request.

11. **Census Data Quality.**

The 2008 National Agricultural Survey results were compared to other pre-existing routine data (according to their availability and reliability). The comparable data was mainly from the Ministry of Agriculture - particularly data on agricultural production, yield and area, livestock numbers, and production. There was also some data on, for example, coffee and tea from the “Office des Cultures Industrielles du Rwanda”, that were in line with that from the NAS 2008 (with discrepancies explained by exclusions and differences noticed in the methodology).

12. **Data Sources**

National Agricultural Survey 2008


CountrySTAT-Rwanda Website: http://countrystat.org/home.aspx?c=RWA

13. **Contact**
Focal point

Jean Marie Vianney NYABYENDA
Statistician and FNSM System Coordinator
National Coordinator of CountrySTAT
Ministry of Agriculture and Animal Resources
Address: P.O Box 621 Kigali-Rwanda. Tel. +250 788 46 36 84. Email: jema_ern@yahoo.com

Website

http://www.statistics.gov.rw/