Republic of Rwanda

NISR
NATIONAL INSTITUTE OF STATISTICS OF RWANDA

SEASONAL AGRICULTURAL SURVEY

SEASON A

2025

The Seasonal Agricultural Survey report is produced by the National Institute of Statistics of Rwanda (NISR):

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INTRODUCTION

1. Background

High-quality agricultural statistics plays a vital role in assessing the performance of national agricultural programs and hence, imperative for evidence-based decision making. While the use of statistics in decision-making processes continues to grow, the demand for agriculture data is also increasing. In this regard, the National Institute of Statistics of Rwanda (NISR) in collaboration with the Ministry of Agriculture and Animal Resource (MINAGRI) conducts the Seasonal Agricultural Survey (SAS) to gather agriculture information mainly related to potential agricultural land use, crop area, yield, and production, agricultural inputs, agricultural practices as well as other agricultural statistics.

The survey data are supplemented by administrative records collected by the National Agricultural Export Development Board (NAEB) through routine activities of monitoring coffee and tea production. NISR conducts the Seasonal Agricultural Survey (SAS) following three main agricultural seasons. Season A (September to February of the following year), Season B (March to June) while Season C (July-September) is a shorter season mainly for vegetables and sweet potato grown in swamps and Irish potato grown in the volcanic agro-ecological zone.

2. Objectives of the Seasonal Agricultural Survey (SAS)

The main objective of SAS 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. The survey results are useful to monitor the current agricultural and food supply conditions to facilitate evidence-based decision making for the development of the agricultural sector.

The survey specifically captures data related to land use, including agricultural land, arable land, physical crop cultivated area, crop land, pasture land, and fallow land. It also gathers information on crop production, measuring the quantity of harvested crop in kilograms or tons. Additionally, the survey assesses crop yield, indicating the quantity of crop harvested per unit of land area in kilograms per hectare. Moreover, it examines the use of inputs such as improved seeds, fertilizers, and pesticides. Finally, the survey delves into various agricultural practices, including irrigation, soil erosion protection, agroforestry, and agriculture mechanisation

3. Sample frame design

To provide the basis for conducting probability surveys that comprehensively cover farm-level data and to enhance the precision of survey estimates, SAS uses a Multiple Frame Sampling (MFS) methodology. This approach involves constructing an area frame from which the survey sample is drawn. In addition, a list frame of Large-Scale Farmers (LSF), with at least 10 hectares of agricultural land, is done to complement the area frame. This ensures coverage of crops predominantly cultivated by large-scale farmers, which may not be adequately represented in the area frame alone. The construction of an area frame involves several steps, including land cover classification, land stratification and sampling of segments.

Chapter

2

SURVEY DESIGN

1.1. Land cover classification

Land classification is the first step in the designing of the sampling frame of the Seasonal Agriculture Survey. This process involves categorizing the total available land in the country into different land use or land cover types with the purpose of enhancing sampling precision by targeting the adequate land. With a combination of different spatial layers available in the country, plus a photo interpretation of a series (2010 to 2023) of high-resolution (50 to 30 cm) satellite images the total land of the country was divided into 14 land cover classes (as shown in Table 1).

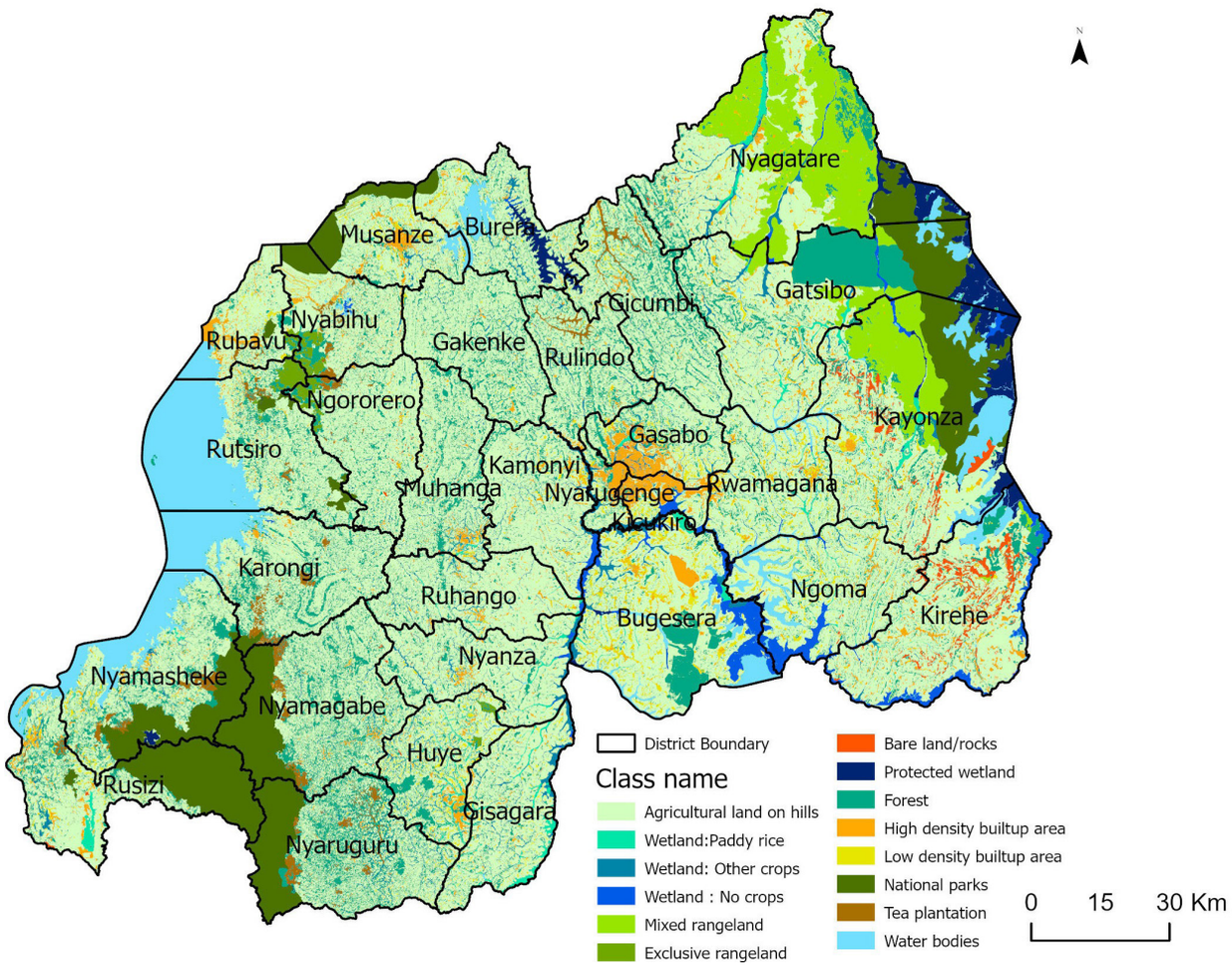
Table 1: List of Rwanda land cover classes

No	Class name	Area (Ha)	%age share
1	Agricultural land on hills	1,307,956	51.7
2	Non-rice Agricultural Wetland	56,905	2.2
3	Mixed rangeland	127,640	5.0
4	Low-density built-up area	95,740	3.8
5	Paddy rice wetland	22,825	0.9
6	Tea plantation	23,732	0.9
7	Non cropped wetlands	36,846	1.5
8	Forest	381,391	15.1
9	National parks	190,247	7.5
10	Water bodies	155,030	6.1
11	High-density built-up area	58,657	2.3
12	Protected wetland	45,883	1.8
13	Bare land/rocks	15,412	0.6
14	Exclusive rangeland	13,064	0.5

Source: NISR, SAS 2025

Among 14 land cover classes, only 6 are related to agricultural activities include Agricultural land on hillside, non-rice agricultural Wetland, mixed rangeland, Low-density built-up area, wetlands designated for Paddy rice and Tea plantation.

Map 1: Rwanda land classification map done in 2023



Source: NISR, SAS 2025

The subsequent step involves constructing the area frame which includes grouping the land cover classes linked to agricultural activities into strata to identify agricultural strata to be considered in the sampling frame

1.2. Land stratification.

The stratification is a result of a combination of sampling units (clusters) and land use/land cover. The stratification assigns each cluster a stratum based on the predominant land class type. Among the fourteen land cover classes, four are included in the agricultural survey frame, while the others are excluded.

The included land cover classes comprise hillside agricultural land, non-rice agricultural land, mixed rangeland, and Low-density built-up area (with potential for agricultural production, including kitchen gardens, fruit trees, and livestock). Certain agricultural land classes are excluded from the sampling frame. For instance, tea plantations are omitted due to regular monitoring by the National Agricultural Export Development Board (NAEB), and wetlands designated for paddy rice cultivation are typically considered in Large-Scale Farmers, making them another component of the survey frame. Moreover, Since the 2024 SAS, a new land cover class called Exclusive Rangeland has been introduced specifically for areas used for pastoral activities. This class is also excluded from the sampling frame.

By overlapping the clusters layer with land cover classes layer, each cluster is assigned a dominant land cover class as a stratum definition, basing on a defined threshold as follow:

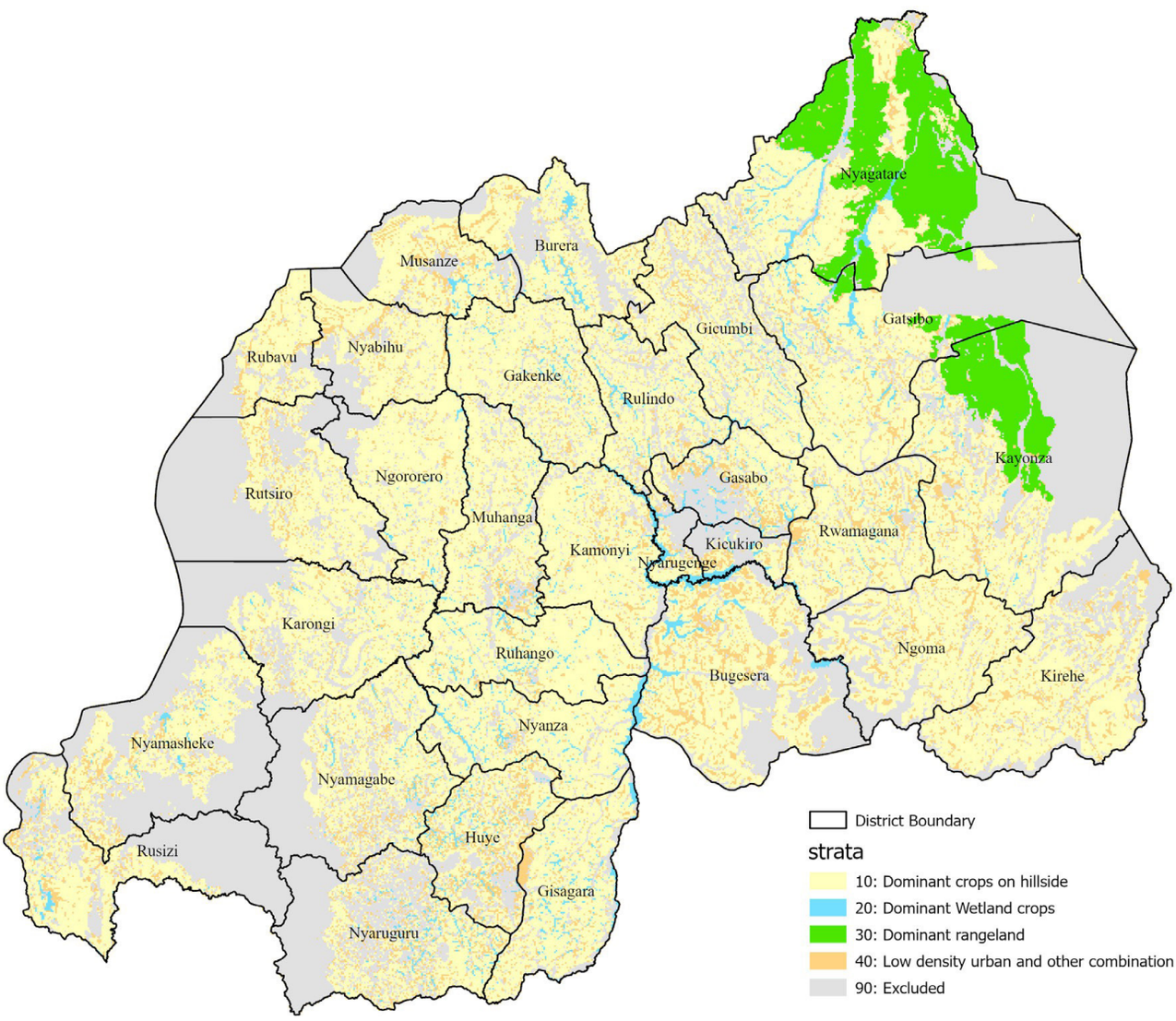
Table 2: List of strata

Stratum code	Stratum name	Definition
1.0	Dominant hill crop land	Clusters with Hillside agricultural land cover class greater or equal to 60 % of the total area of the cluster
2.0	Dominant Wetland crops	Clusters with non-rice wetland land cover class greater than 25 % of total area of the cluster
3.0	Dominant range-land	Clusters with mixed rangeland land cover class greater or equal to 60 % of the total area of the cluster
4.0	Mixed	The rest of other possible combinations
9.0	Excluded	All clusters with excluded land cover classes greater or equal to 50 % of the total area of the cluster

Source: NISR, SAS 2025

The SAS sample is drawn from four main strata: dominant hill crop land, dominant wetland crops, dominant rangeland, and mixed land strata.

Map 2: Distribution of stratified clusters by district



Source: NISR, SAS 2025

1.3. Sampling Units

The Seasonal Agricultural Survey is an area-based sample survey. It uses land sampling units, small square land units of 300 by 300 meters (9ha). Geographic Information System (GIS) technology is used to create the units covering the whole country. In total the sampling frame has 269,989 square units (clusters). Each one of the clusters is identified with a unique cluster number as shown on the map below.

Map 3: SAS Sampling Units

Source: NISR, SAS 2025

Table 3: Population size per district by stratum (Number of segments)

	Stratum					
District	**Dominant hill crop land**	**Dominant wetland crops**	**Dominant Rangeland**	**Mixed stratum**	**Excluded stratum**	**Total**
Nyarugenge	534	238	-	168	524	1,464
Gasabo	2,165	283	-	697	1,632	4,777
Kicukiro	461	179	-	233	1,000	1,873
Nyanza	5,688	520	-	500	744	7,452
Gisagara	5,197	397	-	824	1,077	7,495
Nyaruguru	3,568	343	-	1,300	6,027	11,238
Huye	3,160	346	-	1,466	1,496	6,468

	Stratum					
District	Dominant hill crop land	Dominant wetland crops	Dominant Rangeland	Mixed stratum	Excluded stratum	Total
Nyamagabe	5,344	263	-	1,154	5,352	12,113
Ruhango	5,663	336	-	489	487	6,975
Muhanga	4,983	237	-	760	1,200	7,180
Kamonyi	5,530	320	-	704	777	7,331
Karongi	5,757	117	-	726	2,159	8,759
Rutsiro	4,511	-	-	776	2,083	7,370
Rubavu	2,516	-	-	446	843	3,805
Nyabihu	3,481	-	-	671	1,896	6,048
Ngororero	5,580	134	-	461	1,276	7,451
Rusizi	3,731	155	-	886	5,500	10,272
Nyamasheke	4,584	134	-	953	4,839	10,510
Rulindo	4,144	304	-	625	1,219	6,292
Gakenke	5,934	249	-	671	966	7,820
Musanze	3,111	126	-	769	1,869	5,875
Burera	4,256	260	-	667	1,976	7,159
Gicumbi	5,883	208	-	950	2,176	9,217
Rwamagana	5,060	163	-	1,194	1,122	7,539
Nyagatare	6,591	516	9,112	1,112	4,050	21,381
Gatsibo	7,362	435	788	1,100	7,781	17,466
Kayonza	6,471	149	3,825	1,293	9,730	21,468
Kirehe	7,704			1,501	3,972	13,177
Ngoma	6,293		-	1,201	2,154	9,648
Bugesera	6,957	612	-	2,341	4,456	14,366
National	142,219	7,024	13,725	26,638	80,383	269,989

Source: NISR, SAS 2025

1.4. Sampling procedures

Out of Five defined strata, only dominant hill crop land stratum, dominant wetland crops stratum, dominant rangeland stratum and mixed stratum are considered as land potential for agriculture. The remaining stratum is the non-agricultural land. Note that clusters covered by tea plantations and wetlands designated for paddy rice cultivation are not considered in the area sample frame due to reasons stated above. Thus, SAS is conducted on 4 above mentioned strata. At first stage,1200 segments are selected and allocated at district level based on the power allocation approach (Bankier, 1988[1]). Sampled segments inside each district are distributed among strata with a proportional-to-area criterion.

Table 4: Allocation of 1200 sampled segments per district by stratum

District	Agricultural land on hillside	Agricultural land in marshland	Rangeland	Mixed	Total
Nyarugenge	12	6		2	20
Gasabo	22	4		3	29
Kicukiro	13	5		2	20
Nyanza	37	4		2	43
Gisagara	33	5		3	41
Nyaruguru	25	3		7	35
Huye	27	3		5	35
Nyamagabe	36	2		6	44
Ruhango	36	3		3	42
Muhanga	33	3		4	40
Kamonyi	36	3		4	43
Karongi	38	2		3	43

1 Bankier M.D. (1988) Power allocations: determining sample sizes for subnational areas. The American Statistician, Vol. 42, n. 3 pp. 174-177.

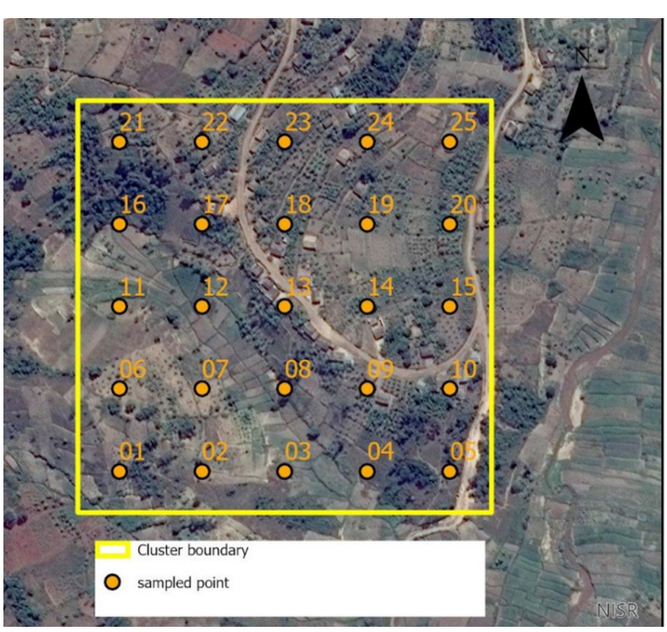
District	Agricultural land on hillside	Agricultural land in marshland	Rangeland	Mixed	Total
Rutsiro	34			4	38
Rubavu	21			4	25
Nyabihu	29			3	32
Ngororero	38	2		3	43
Rusizi	27	2		5	34
Nyamasheke	31	2		5	38
Rulindo	28	3		4	35
Gakenke	37	2		4	43
Musanze	24	2		4	30
Burera	30	2		3	35
Gicumbi	37	2		5	44
Rwamagana	34	2		6	42
Nyagatare	31	5	25	7	68
Gatsibo	38	3	5	5	51
Kayonza	32	2	13	5	52
Kirehe	45			9	54
Ngoma	39			6	45
Bugesera	45	3		8	56
Total	948	75	43	134	1,200

Source: NISR, SAS 2025

At the second stage, 25 sample points are systematically selected, following a special distance of 60 meters between points. Sample points serve as reporting units within each segment. Enumerators visit each point, identify and delineate the plots in which the sample point falls, 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.

Map 4: Map showing square cluster (segment) with 25 sampled points



Source: NISR, SAS 2025

1.5. Weighting Procedures

Based on the stratified two-stage sample design used with the new area frame, the first stage sampling probability for the sample segments in each stratum is calculated as:

$$p_{1h} = \frac{n_h}{N_h}$$

Where:

p_{1h} = probability of selection of sample segments in stratum h (district by stratum)

n_h = number of sample segments selected in stratum h

N_h = total number of segments in the area frame for stratum h in each stratum

$$p_{2hi} = \frac{g_{hi} \times A_{hij}}{A_{hi} \times g_{hij}}$$

The second stage probability was calculated at the plot level based on the assumption that the plots within each sample segment were implicitly selected with PPS using the area of the plot as the measure of size. Therefore, the second stage probability of selection can be expressed as follows:

Where:

$p2_h$ = Probability of selection of the plot in segment h

ghi = Number of grid squares selected in the i-th sample segment of stratum h;

Ahij = Area of the j-th sample plot selected in the i-th sample segment of stratum h

Ahi = Area of the i-th sample segment of stratum h;

ghij = Number of selected grid squares in the j-th sample plot of the i-th sample segment of stratum h

The weight of a sample plot is equal to the inverse of the first and second stage probabilities of selection:

$$W_{Phij} = \frac{1}{p_{1h} \times p_{2hi}} = \frac{N_h \times A_{hi} \times g_{hij}}{n_h \times g_{hi} \times A_{hij}}$$

Where:

W_{Phij} = weight for the j-th sample plot in the i-th sample segment in stratum h

1.6. Sampling errors computation

The sample survey results can be subject to two types of errors: (i) sampling errors and (ii) non-sampling errors. Non-sampling errors encompass all sources of errors unrelated to sampling, occurring throughout all aspects of the survey process during data collection and processing. They are categorized into four types: coverage errors, measurement errors, non-response errors, and processing errors. While researchers take steps to minimize these errors during the survey design and implementation phases, it's practically impossible to eliminate them. Non-sampling errors, in particular, can be extremely challenging to identify and quantify accurately. Despite our best efforts, there's always some degree of uncertainty associated with survey results due to the presence of these errors.

Sampling errors are associated with the sampling selection process, arising from observing a sample instead

of the entire population. They denote the disparity between the estimate derived from a sample survey and the true value that would result if a census of the whole population were conducted under the same conditions.

In order to examine the precision of the most important estimates from the SAS 2025 Season A data and the statistical efficiency of the agricultural area frame and sample design, it is important to calculate the sampling errors and corresponding coefficients of variation (CVs) for these estimates, such as the total area in each major crop. The sampling error of each estimate is measured by the standard error, which is the square root of the variance. The Complex Samples module of SPSS and Stata use a linearized Taylor series variance estimator that considers the stratification and clustering in the sample design.

The SPSS Complex Samples software had been used to calculate the sampling errors and CVs for estimates of the total area of major crops from the SAS data.

The formula for the estimate of a total can be expressed as follows:

$$\hat{Y} = \sum_{h=1}^{L} \sum_{i=1}^{n_h} \sum_{j=1}^{m_h} W'_h \; y_{hij} \;,$$

Where:

L = number of strata

yhij = value of variable y for the j-th sample household in the i-th sample segment in stratum h

The variance estimator for a total used by the Complex Samples module of SPSS and Stata can be expressed as follows:

Variance Estimator for a Total :

$$v(\hat{Y}) = \sum_{h=1}^{L} \left[\frac{n_h}{n_h - 1} \times \sum_{i=1}^{n_h} \left(\hat{Y}_h - \frac{\hat{Y}_h}{n_h} \right)^2 \right],$$

Where

$$\hat{Y}_{hi} = \sum_{j=1}^{m_h} W'_h \; y_h$$

yhij = value of variable y for the j-th sample plot in the i-th sample segment of stratum h

The survey estimate of a ratio is defined as follows:

$$\hat{Y}_h = \sum_{i=1}^{n_h} \hat{Y}_h$$

$$\hat{R} = \frac{\hat{Y}}{\hat{X}},$$

Where $\hat{Y}$ and $\hat{X}$ are estimates of totals for variables y and x, respectively, calculated as specified previously.

In the case of a stratified two-stage sample design, means and proportions are special types of ratios. In the case of the mean, the variable X, in the denominator of the ratio, is defined to equal 1 for each unit so that the denominator is the sum of the weights. For a proportion, the variable X in the denominator is also defined to equal 1 for all units; the variable Y in the numerator is binomial and is defined to equal either 0 or 1, depending on the absence or presence, respectively, of a specified characteristic for the unit.

The variance estimator for a ratio used by SPSS Complex Samples and Stata can be expressed as follows:
Variance Estimator for a Total

$$V(\hat{Y}) = \sum_{h=1}^{L} \left[(1 - f_h) \times \frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left(\hat{Y}_{hi} - \frac{\hat{Y}_h}{n_h} \right)^2 \right],$$

Where:

$$\hat{Y}_{hi} = \sum_{j=1}^{m_h} W'_{hi}\, y_{hij}$$

Fh = first stage probability for stratum h; (1- fh) is the finite population correction (fpc) factor

$$\hat{Y}_h = \sum_{i=1}^{n_h} \hat{Y}_{hi}$$

yhij = value of variable y for the j-th sample plot in the i-th sample segment of stratum h

$$V(\hat{R}) = \frac{1}{\hat{X}^2} \left[V(\hat{Y}) + \hat{R}^2\, V(\hat{X}) - 2\, \hat{R}\, COV(\hat{X}, \hat{Y}) \right],$$

Variance Estimator for a Ratio

$$COV(\hat{X}, \hat{Y}) = \sum_{h=1}^{L} \left[(1 - f_h) \times \frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left(\hat{X}_{hi} - \frac{\hat{X}_h}{n_h} \right) \left(\hat{Y}_{hi} - \frac{\hat{Y}_h}{n_h} \right) \right]$$

Where:
$V(\hat{Y})$ and $V(\hat{X})$ are calculated according to the formula for the variance of a total.

In addition to calculating the standard error, the program also computes the Design Effect (DEFF) for the main indicator, which is the area under cultivation. The Design Effect is defined as the variance of an estimate based on the actual complex sample design divided by the corresponding variance from a simple random sample of the same size. It serves as a measure of the relative statistical efficiency of the sample design, taking into account both the stratification and clustering present in the sample design.

The presence of clustering typically increases the design effect, owing to the intra-cluster correlation of plots within the segments. Simultaneously, the land-use stratification of the segments tends to decrease the design effects, as it proves to be more efficient than a simple random sample. This dual consideration of both factors provides a comprehensive assessment of the efficiency of the sample design in capturing the nuances of the area under cultivation. The estimates of the total area of major crops at the national level and the corresponding measures of precision (standard error (SE), the coefficient of variation (CV), the 95 % confidence interval, the design effect (DEFF), and number of unweighted observation (n of sample plots) from the SAS 2025 Season A data are presented in Table 5

Table 5: 2025 Season A_ Sampling Errors for major crops at the national level

Crop name	Estimate	SE	CV	95% Confidence Interval		DEFF	No. observations (plots)
				Lower	Upper		
Maize	244,095	6,391	0.026	231,555	256,635	0.159	8,368
Sorghum	40,353	3,833	0.095	32,832	47,874	0.821	624
Beans	327,147	7,167	0.022	313,084	341,210	1.537	8,331
Paddy rice	17,312	86	0.005	17,142	17,481	0.000	2,544
Irish potato	54,485	3,432	0.063	47,750	61,220	1.144	1,559
Sweet potato	82,458	2,828	0.034	76,909	88,007	2.372	1,627
Soybean	29,361	1,588	0.054	26,245	32,478	0.175	909
Vegetables	20,780	1,396	0.068	17,875	23,352	0.543	766
Cooking banana	104,232	4,333	0.042	95,730	112,735	1.308	3,137
Dessert banana	40,540	1,771	0.044	37,066	44,014	1.740	3,136
Banana for beer	123,780	4,474	0.036	115,002	132,558	1.321	3,574
Cassava	247,839	6,240	0.025	235,595	260,083	1.290	5,155
Pea	9,882	1,191	0.121	7,545	12,218	2.583	393
Groundnut	10,832	826	0.076	9,211	12,454	1.234	468
Fruits	14,021	2,760	0.197	8,605	19,436	0.411	612

Source: NISR, SAS 2025

2. Data collection procedures

SAS data collection is carried out into two distinct phases: the first phase, known as screening, is done during the planting period. It consists of delineating all plots containing the sampled points in all sampled segments all Large-Scale Farmers (LSF) who have grown crops in the current season and recording information related to agricultural land use, grown crops and crop area, and expected harvesting period. The second phase involves collecting data in the agricultural plots identified during screening activity, which relates to crop production, agricultural inputs, and the agricultural practices.

2.1. Time frame and coverage

During the data collection for Season A 2025, the SAS was carried out across all 30 districts of the country, gathering data from 1,200 segments and 382 large-scale farmers. The season's data collection started on December 1st, 2024, and was concluded on February 15th, 2025. Specifically, the screening phase took place from December 1st, to December 30th, 2024, while the harvesting period started on January 12th ,2025 and ended on February 15th, 2025. The survey achieved a 100% response rate, with full coverage of all sampled segments and active participation from all operators of the sampled plots as well as all sample large scale farmers.

2.2. Field staff

During this season, experienced 148 enumerators and 29 team leaders served in the field data collection after a refresher training. To ensure data quality, high-level supervision was conducted throughout the data collection activities.

2.3. Data collection tools

2.3.1. Survey questionnaires

SAS utilizes two main questionnaires: The Screening questionnaire and the Plot interview questionnaire. The Screening Questionnaire is designed to gather information on the plot, focusing primarily on

aspects such as land use, plot area, and the crops grown. On the other hand, the Plot Interview

questionnaire is specifically designed to collect detailed information about the sampled plots, including crop production, agricultural inputs used, and agricultural practices applied.

2.3.2. Data collection applications

The SAS data collection applications were based on three main software applications:

- Arc GIS field map, which utilizes GIS software and external GPS linked to tablets via Bluetooth to accurately measure crop areas.
- CSPro software, known for its efficiency in census and survey administration, facilitating data collection, entry, and management processes. Csentry data collection tool has been developed by an IT staff specialized for the SAS survey, enabling data collection from sampled plots and large- scale farmers.
- Survey123 is used to collect screening data for large-scale farmers.

3. Data quality assurance

Data quality assurance is achieved through a comprehensive approach, involving enumerator training, continuous data monitoring, supervision of data collection activities, and data editing throughout the season.

3.1. Training of enumerators

Prior to data collection, enumerators underwent training from 4th to 22nd November 2024, at the NISR training center, which covered the overview of the SAS, data collection procedures and ethics, screening procedures, plot interview questionnaire content, and the use of data collection applications such as Survey 123, Arc GIS field map, and CSEntry.

3.2. Fieldwork monitoring

3.2.1 Monitoring attendance and performance of enumerators

Effective monitoring of enumerator attendance and performance is vital for ensuring task efficiency and contribution. The monitoring system used during 2025 SAS season A relies on capturing GPS

metadata, including location and GPS time, which differs from the device time and cannot be modified

by the user. Whenever the enumerator sent data to the server, the metadata accompanies it, enabling analysis of attendance (starting and ending time), location during data collection, and performance metrics such as the number of completed tasks.

3.2.2. Attending the sample location and Use of high precision GPS

The SAS collects data from observation points grouped into square segments of 300 by 300 meters. Enumerators were required to collect data within a one-meter distance buffer around each observation point, enforced to ensure accuracy. Any observation outside this buffer is marked as an error and rejected by the central database. To measure plot areas, high-precision GPS units are employed, along with correction services, achieving 95 % sub-meter measurement accuracy and addressing precision challenges.

3.2.3 Field Monitoring Dashboard

A field monitoring dashboard used is an online web application offering a visual representation of real- time data collected from various field operations. It provides a centralized and accessible platform for monitoring and managing activities, resources, and performance in the field.

3.2.4. Field supervision

In the 2025 Season A, intensive field supervision was conducted to ensure the data quality. The first supervision field visit comprising 37 NISR staff took place from December 15th to 24th, 2024. Subsequently, during the harvesting phase, which took place, from January 19th to February 2nd, 2025 a team of 40 NISR staff was involved in the field supervision. Throughout both phases, supervisors were dispatched to all districts to provide continuous oversight and support to field personnel. Their responsibilities included providing technical guidance, monitoring the execution of data collection activities, and ensuring compliance with the data collection ethics and completeness of the workload, among others.

3.2.5. Data Editing

During the 2025 season A, a monitoring system involving the GIS tools and data editors was used to ensure quality assurance. The data collection is monitored using dashboard and Google Sheets. Editors conduct daily follow-ups to clean data, identifying and rectifying discrepancies using STATA do files based on logical patterns and feedback from training sessions, aiming to provide a cleaned raw dataset for further analysis.

4. Data processing and analysis process

The analysis involved several steps from organization of raw dataset, data management, cleaning, checking for outliers and dealing with missing data to ensure the quality and cleaned dataset before tabulation.

4.1. Data management process

SAS data are collected electronically using tablets and are then transmitted directly to the NISR servers. The data analyst team downloads and imports the data from CSPro into STATA software for further examination, including checking, cleaning, and tabulation.

Exploratory analysis of the dataset is conducted for all variables to assess the sample's completeness, identifying missing data or incomplete observations. Any identified cases are sent back to the field for verification and completion. Exploratory techniques such as descriptive statistics (summary statistics, frequency tables) and graphical methods (histograms, box plots, etc.) are employed to detect missing values, incomplete data, and

potential abnormalities or outliers within the dataset.

4.2. Detecting outliers and dealing with missing values

4.2.1. Missing values and duplicates observation

During data collection, the CSPRo application's built-in validation rules detect missing, omitted, or skipped variables. Error messages appear on the tablet's screen during interviews when enumerators

skip questions that require responses. After completing the interview but before sending data to the

servers, an error message notifies users if any questions have been left unanswered or if duplicate questionnaire IDs are identified.

Once data is downloaded and imported into STATA from the servers, the data analyst merges the area dataset with the crop dataset and conducts preliminary checks, cleaning, and necessary transformations before analysis. A do file is developed to check the completeness of data for screening and plot/harvest datasets.

A team of data analysts checks the data on a daily basis, and any inconsistencies found are communicated to field workers for correction and clarification.

4.2.2. Detecting and dealing with outliers

Outliers are checked for all quantitative variables, including crop production, fertilizer quantity, seed quantity, agricultural input prices, irrigation costs, and other related expenses. Two approaches are

employed to detect outliers for variables such as crop production and input quantities, while a single

approach is applicable for the remaining variables.

The first approach involves comparing the value per hectare of land to the standard quantity optimum provided in the guidelines from the Ministry of Agriculture, known as "AGENDA AGRICOLE," for the same land size. Any values found to be 1.5 times greater than the standard values are flagged as potential outliers and subsequently sent back to field workers for verification and confirmation.

The second approach utilizes statistical processes to detect outliers. In SAS, various statistical methods such as standard deviation and graphical methods like normal box plots are utilized in combination to identify possible outliers within the dataset.

4.3. Methods for Estimating Area and Yield

4.3.1. Estimation of area Approach

NISR adheres to and applies methodologies and guidelines outlined by (FAO, 2017) and (EAC, 2022) regarding area and yield estimation. Among several methods proposed, NISR has opted for the use of high precision GPS to measure crop area due to its high accuracy and efficiency compared to alternative methods. For yield measurement, NISR relies on farmer estimations.

4.3.2. Process of measuring the area

After the identification of the plot boundaries, the enumerators mark GPS points location in approximately every three meters and at each corner of the plot while moving around its perimeter.

Then a polygon is obtained when the starting and final points connect. The area is finally computed automatically by GIS software linked to the enumerator's GPS and based on the resulting shape.

4.3.3. Process of measuring the yield

Yield data are calculated by considering both the plot and crop areas, alongside the crop production reported by the farmer within the sampled plot. This calculation involves dividing the total production, converted into kilograms, by the estimated crop areas measured in hectares.

4.4. Data analysis

The survey data are analyzed using STATA software, which offers robust capabilities for data management, including importing, cleaning, merging, and manipulating datasets. These features facilitate data preparation for analysis. Additionally, STATA enables the development of tabulation commands and the generation of survey tables, graphs, and charts for inclusion in survey reports. Furthermore, SPSS and STATA softwares are utilized for estimating survey sampling errors, ensuring the accuracy and reliability of the survey results.

Annex

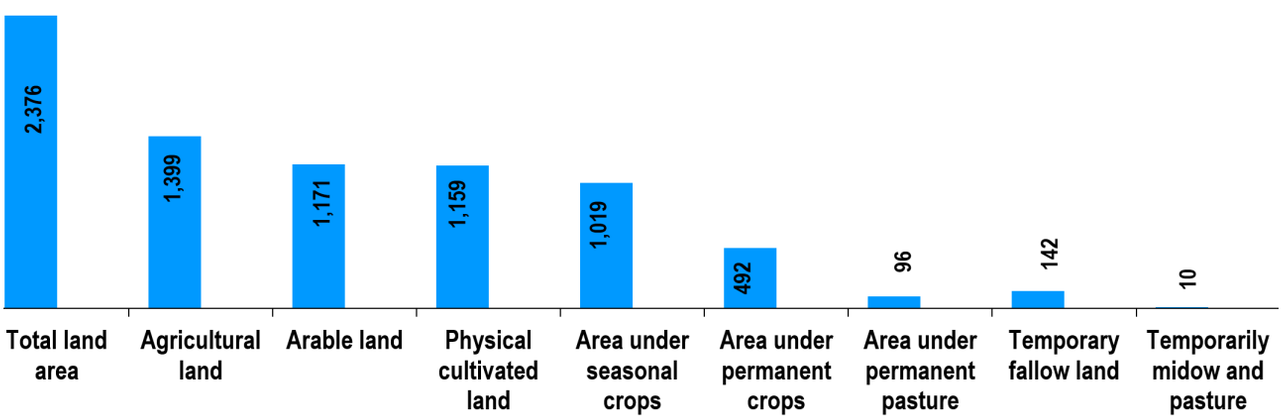
3

SURVEY FINDINGS

This section highlights key results of SAS 2025 Season A related to crop area (physical land use, cultivated area, and harvested area), yield, production, agricultural inputs, and agricultural practices in Rwanda.

1. Agricultural land use

Figure 1: 2025 Season A - Agricultural land use (in thousands of hectares)



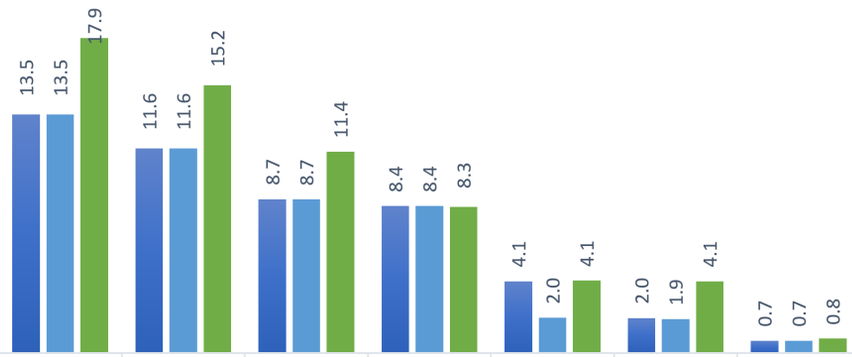
Source: NISR, SAS 2025

The total land area of the country is estimated to be 2.376 million hectares, with 1.399 million hectares (approximately 59% of the total land area) used for agricultural purposes. In 2025 Season A, 1.019 million hectares were allocated to Seasonal crops, 0.492 million hectares were allocated to permanent crops, while 0.096 million hectares were allocated to permanent pasture. (See district details in Table 8).

2. Crop area, yield and production estimates for major crops

2.1. Yield and Crop area for major crops

Figure 2: 2025 Season A - Yield of major crops (MT/ha)



	Cassava	Banana	Irish potato	Sweet potato	Paddy rice	Maize	Bean
National	13.5	11.6	8.7	8.4	4.1	2.0	0.7
Small scale Farmer	13.5	11.6	8.7	8.4	2.0	1.9	0.7
Larger scale Farmer	17.9	15.2	11.4	8.3	4.1	4.1	0.8

Source: NISR, SAS 2025

Maize: The national average yield was 2 tons per hectare, with small scale farmers harvesting 1.9 tons per hectares and Large-Scale Farmers harvesting 4.1 tons per hectares; the cultivated area was estimated at 244,095 hectares, a decrease of 2 % from season A of 2024

Beans: The national average yield of was 705 kilograms per hectare, with small scale farmers harvesting 704 kilograms per hectare and Large-Scale Farmers harvesting 830 kilograms per hectare; the cultivated area was estimated at 327,147 hectares, a decrease of 0.6 % from season A of 2024.

Paddy rice: The national average yield was 4.1 tons per hectare, with small scale farmers harvesting 2 tons per hectares and Large-Scale Farmers harvesting 4.1 tons per hectare; the cultivated area was estimated at 17,312 hectares, an increase of 0.8 % from season A of 2024.

Irish potato: The average yield was 8.7 tons per hectare, with small scale farmers harvesting 8.7 tons per hectares and Large-Scale Farmers harvesting 11.4 tons per hectare. the cultivated area was estimated at 54,485 hectares, an increase of 0.8 % from season A of 2024.

Sweet potato: The national average yield was 8.4 tons per hectare; the cultivated area was estimated at 82,458 hectares, a decrease of 13.8 % from season A of 2024.

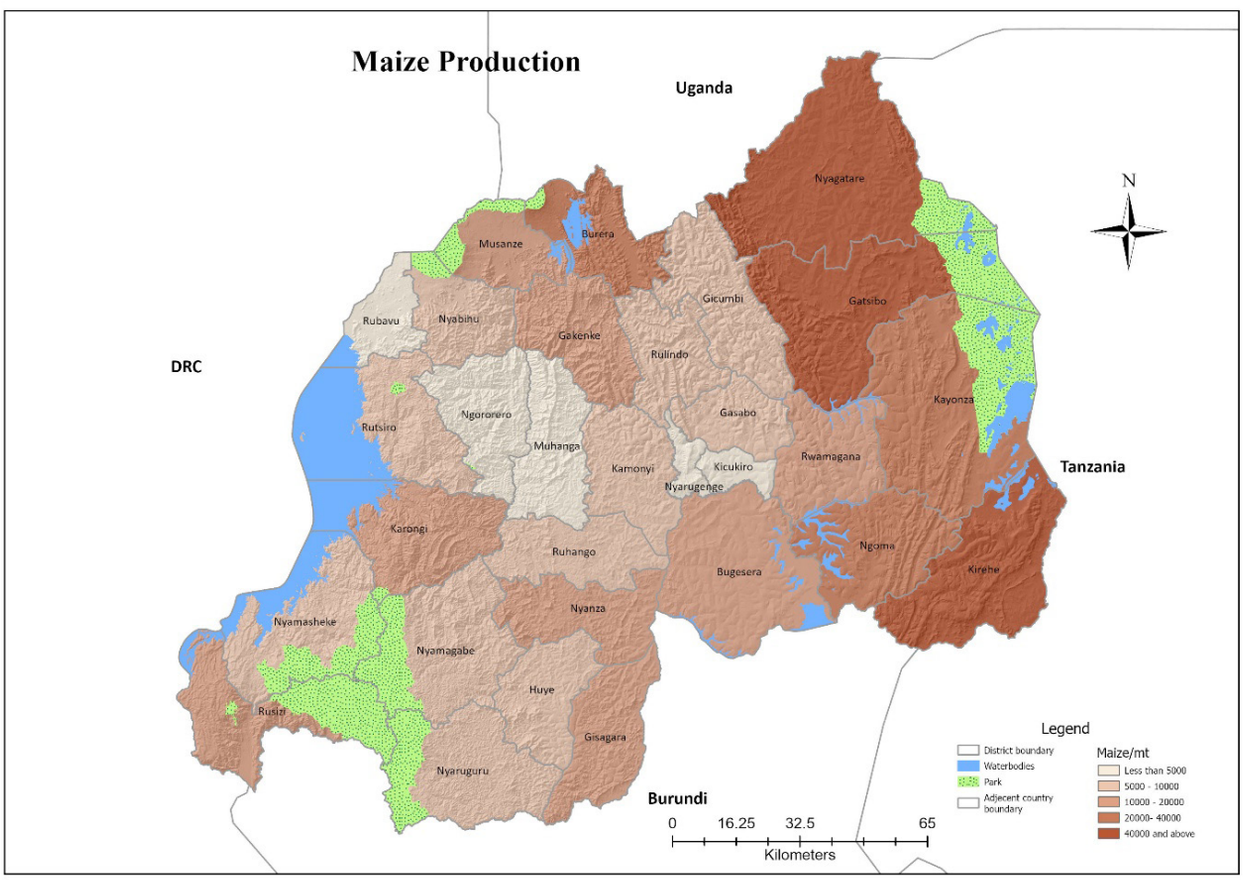
Cassava: The national average yield was 13.5 tons per hectare, with an average yield of 13.5 tons per hectare for small scale farmers and 17.9 tons per hectare for large-scale farmers. The harvested area was estimated at 40,090 hectares while the cultivated area was estimated at 247,839 hectares, a decrease of 1.3 % from season A of 2024.

Banana: The average yield was 11.6 tons per hectare, with an average yield of 11.6 tons per hectare for small scale farmers and 15.2 tons per hectare for large-scale farmers. The harvested area was estimated at 109,994 hectares while the cultivated area was estimated at 268,552 hectares, a decrease of 1.7 % from season A of 2024.

2.2. Production of major crops

Maize: Production was estimated at 481,246 metric tons, representing a 5% decrease compared to Season A of 2024. The highest maize production was recorded in the Eastern Province, particularly in the districts of Nyagatare, Kirehe, Gatsibo, and Kayonza, as illustrated in Map 5 (see district-level details in Tables 6 and 10–14).

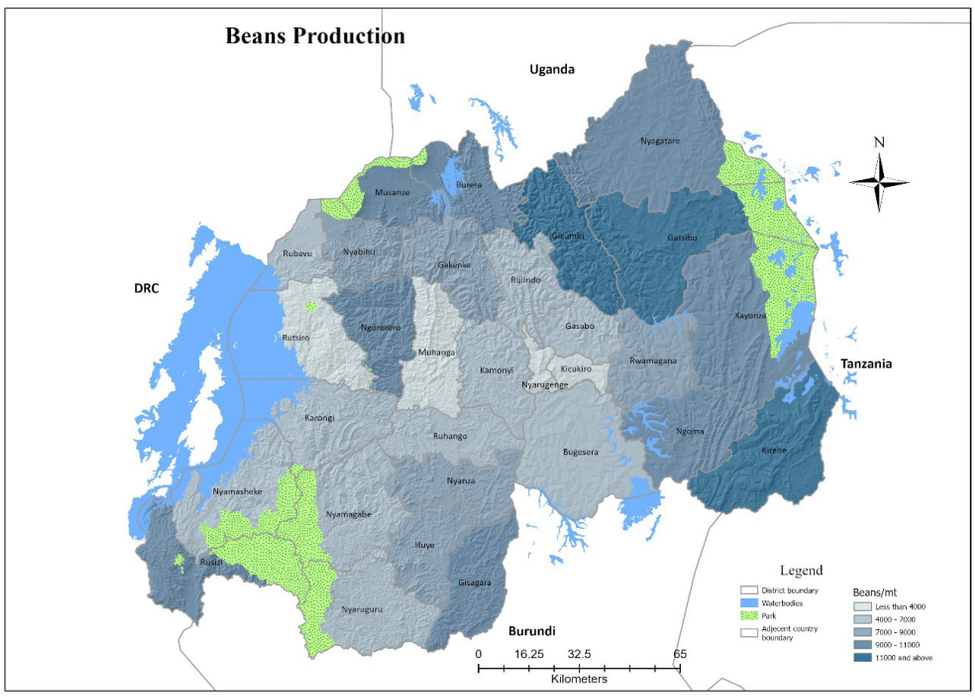
Map 5: Distribution of Maize Production by District, Season A 2025



Source: NISR, SAS 2025

Beans: Production was estimated at 230,456 metric tons, representing a 1% decrease compared to Season A of 2024. The highest levels of bean production were recorded in the districts of Gatsibo, Gicumbi, Kirehe, and Ngoma, as illustrated in Map 6 (see district-level details in Tables 6 and 10–14)

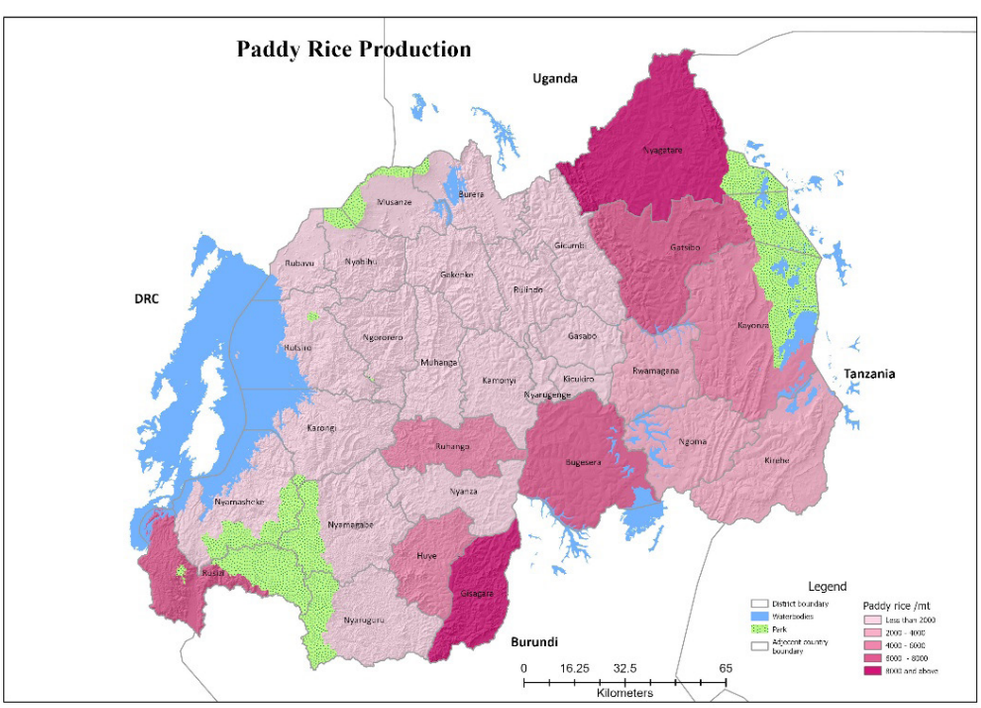
Map 6: Distribution of Beans Production by District, Season A 2025



Source: NISR, SAS 2025

Paddy rice: Production was estimated at 69,680 metric tons, marking a 1% increase compared to Season A of 2024. The highest production was recorded in the districts of Nyagatare, Gisagara, Gatsibo, and Bugesera, as shown in Map 7 (see district-level details in Tables 6 and 10–14).

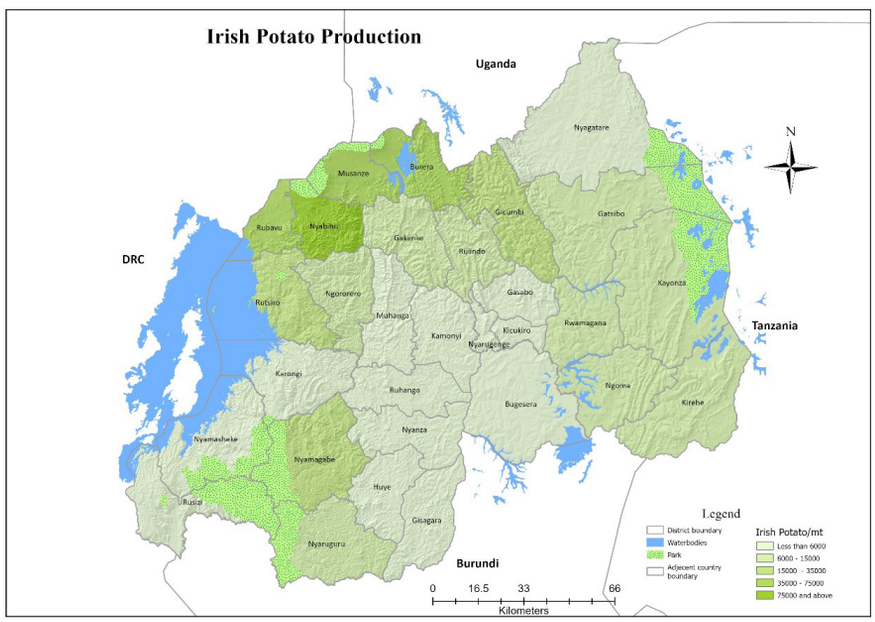
Map 7: Distribution of Paddy Rice Production by District, Season A 2025



Source: NISR, SAS 2025

Irish potato: The production was estimated at 475,785 metric tons, an increase of 3 % from season A of 2024. The highest production was recorded in the districts of Nyabihu, Rubavu, Musanze, and Burera, as shown in Map 8 (see district-level details in Tables 6 and 10–14).

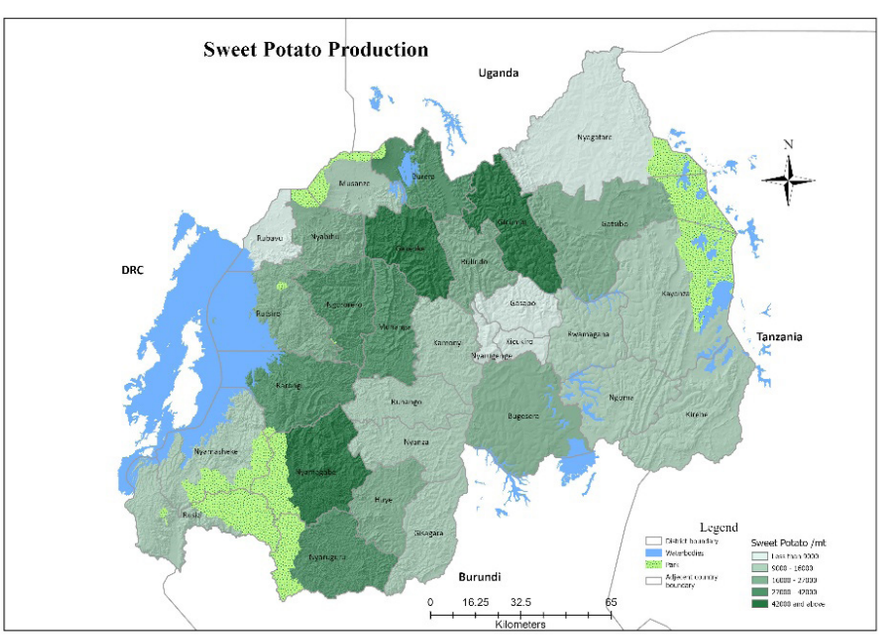
Map 8: Distribution of Irish Potato Production by District, Season A 2025



Source: NISR, SAS 2025

Sweet potato: The production was estimated at 656,320 metric tons, a decrease of 5 % from season A of 2024. The highest production was recorded in the districts of Gicumbi, Gakenke, Nyamagabe, and Nyaruguru, as shown in Map 9 (see district-level details in Tables 6 and 10–14).

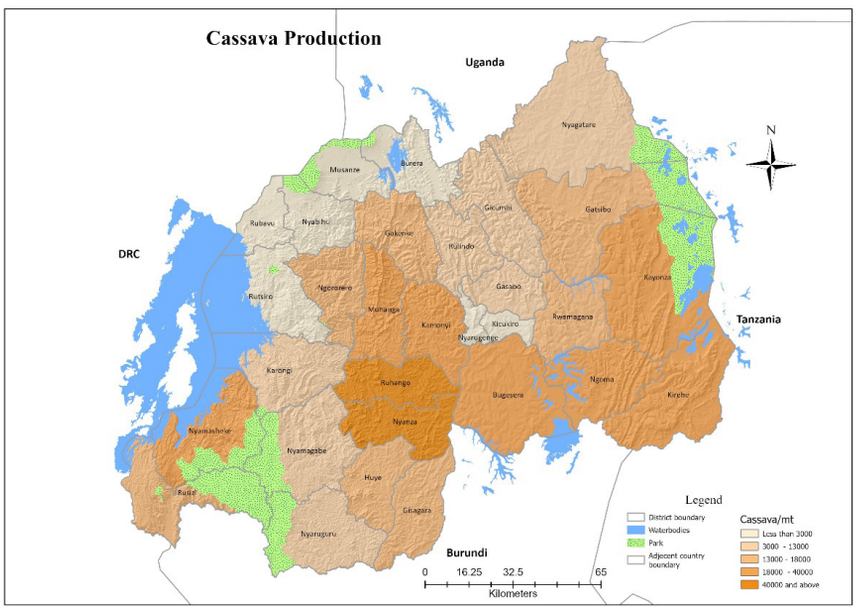
Map 9: Distribution of Sweet Potato Production by District, Season A 2025



Source: NISR, SAS 2025

Cassava: The production of cassava was at 542,874 metric tons, an increase of 5 % when compared to season A of 2024. The highest production was recorded in the districts of Ruhango, Nyanza, Ngoma, Kamonyi, and Kayonza, as shown in Map 10 (see district-level details in Tables 6 and 10–14).

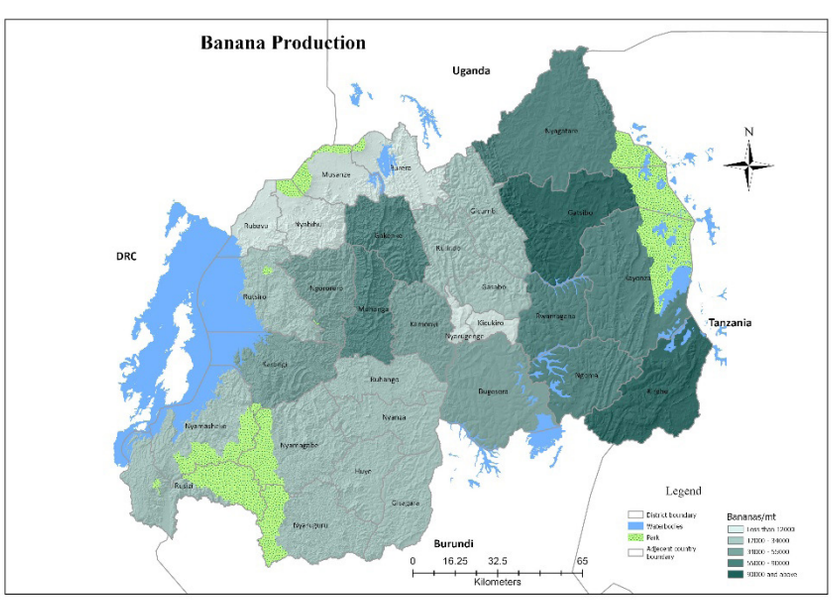
Map 10: Distribution Cassava Production by District, Season A 2025



Source: NISR, SAS 2025

Banana: The production of banana was estimated at 1,278,234 metric tons, a decrease of 1.3 % when compared to 2024 season A. The highest levels of banana production were recorded in the Eastern Province, particularly in the districts of Gatsibo, Kirehe, Ngoma, and Nyagatare, as shown in Map 11 (see district-level details in Tables 6 and 10–14).

Map 11: Distribution Banana Production by District, Season A 2025



Source: NISR, SAS 2025

Table 6: 2025 Season A Cultivated area, harvested area, production, and yield by crop.

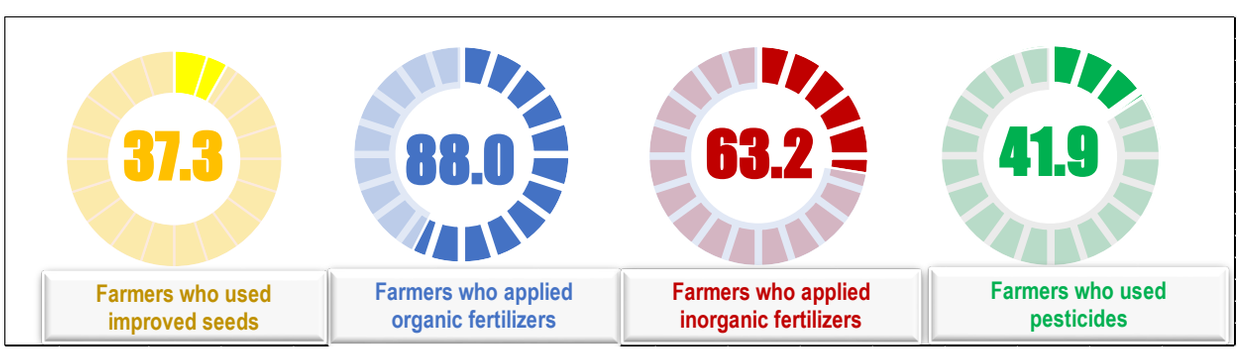
Crop/crop groups	Cultivated area (Ha)		Harvested area (Ha)		Production (MT)		Yield (MT/ha)	
	2025 A	2024 A	2025 A	2024 A	2025 A	2024 A	2025 A	2024 A
Cereals	307,721	307,489	305,770	307,128	611,547	630,768	(NA)	(NA)
Maize	244,095	249,435	242,439	249,276	481,246	507,985	2.0	2.0
Sorghum	40,353	34,720	40,298	34,719	54,994	47,452	1.4	1.4
Paddy rice	17,312	17,173	17,078	16,973	69,680	69,098	4.1	4.1
Wheat	2,391	2,618	2,384	2,617	3,144	3,371	1.3	1.3
Other cereals	3,571	3,544	3,571	3,544	2,483	2,862	0.7	0.8
Tubers and Roots	407,932	425,516	186,089	194,980	1,757,286	1,763,124	(NA)	(NA)
Cassava	247,839	251,019	40,090	38,833	542,874	518,044	13.5	13.3
Sweet potato	82,458	95,683	78,583	88,708	656,320	692,945	8.4	7.8
Irish potato	54,485	54,048	54,465	53,957	475,785	460,830	8.7	8.5
Taro &Yams	23,150	24,766	12,951	13,482	82,307	91,306	6.4	6.8
Banana	268,552	273,223	109,994	109,985	1,278,234	1,294,683	(NA)	(NA)
Cooking banana	104,232	102,458	41,198	40,365	590,252	587,981	14.3	14.6
Dessert banana	40,540	44,094	15,455	15,503	125,014	133,317	8.1	8.6
Banana for beer	123,780	126,671	53,341	54,118	562,968	573,386	10.6	10.6
Legumes and Pulses	377,222	380,325	377,163	380,280	256,774	264,682	(NA)	(NA)
Beans	327,147	329,001	327,090	328,961	230,456	233,142	0.7	0.7
Bush bean	202,513	208,831	202,492	208,790	126,606	135,287	0.6	0.6
Climbing bean	124,635	120,170	124,598	120,170	103,851	97,856	0.8	0.8
Pea	9,882	10,245	9,880	10,244	5,984	7,042	0.6	0.7
Groundnut	10,832	9,563	10,832	9,563	4,678	5,328	0.4	0.6
Soybean	29,361	31,515	29,361	31,513	15,657	19,171	0.5	0.6
Vegetables & Fruits	34,801	29,474	25,519	23,700	178,247	171,183	(NA)	(NA)
Vegetables	20,780	19,142	19,815	18,322	149,806	145,933	7.6	8.0
Fruits	14,021	10,332	5,705	5,378	28,440	25,250	5.0	4.7
Fodder crops	9,813	9,567	8,298	8,795	147,011	136,047	17.7	15.5
Other crops	64,132	58,137	8,832	8,684	65,658	119,236	7.4	13.7
Total	1,470,174	1,483,731	1,021,666	1,033,552	(NA)	(NA)	(NA)	(NA)

Source: NISR, SAS 2025

3. Use of inputs

The results related to the use of agricultural inputs (seeds, fertilizers, and pesticides) are presented in terms of %age of farmers who applied such agricultural inputs throughout the season.

Figure 3: 2025 Season A_Use of inputs by farmers (in %age)



Source: NISR, SAS 2025

3.1. Use of seeds

In season A of 2025, 37.3 % of farmers used improved seeds. In regard to farmer type2[2], 35.9 % of small-scale farmers (SSF) and 85.4 % of Large-Scale Farmers (LSF) used improved seeds (See Figure 3). The major sources of improved seed were NGO/companies accounting for 41.8 % and agro-dealers, accounting 33.2 %, (See details in Tables 9, 19-22).

3.2. Use of fertilizers

In the 2025 Season A:

- 88 % of farmers applied organic fertilizer, with 88.3 % of small-scale farmers and 77.5 % of Large-Scale Farmers utilizing it.
- 63.2 % of farmers applied inorganic fertilizer, with 62.4 % of small-scale farmers and 91.9 % of Large-Scale Farmers using it (See Figure 3).
- The main sources of inorganic fertilizers were NGOs/companies and agro-dealers, accounting for 45.9 % and 42.8 %, respectively.
- The most commonly used inorganic fertilizers in this season were DAP, UREA, and NPK, comprising 45 %, 39.5 %, and 13.3 %, respectively (See details in Tables 9, 23-27).

3.3. Use of pesticides

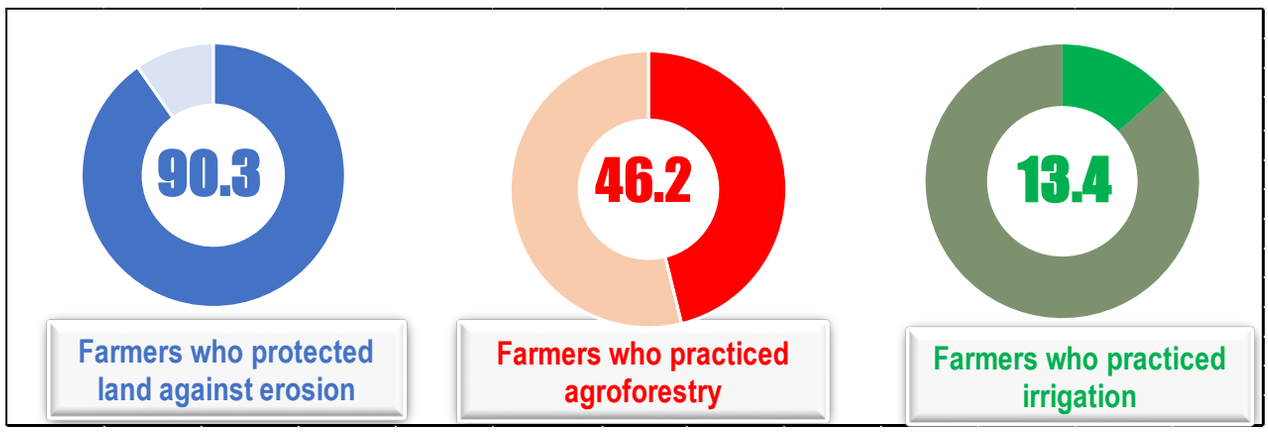
In season A of 2025, 41.9 % of farmers applied pesticides. According to farmer type, 40.6 % of small-scale farmers and 86.9 % of Large-Scale Farmers applied pesticides respectively (See Figure 3). Rocket, Dithane and Cypermethrin were the most used pesticides with 41.7 %, 18.6 % and 16.3 % respectively (See details in Tables 28 & 29).

4. Agricultural practices

The survey covered information related to agricultural practices used by farmers (irrigation, anti-erosion activities mechanization and agroforestry). Results are presented in terms of %age of farmers involved in such practices throughout the 2025 Season A.

2 Farmer type refers to category of farmers as defined in the survey; a farmer is either a small scale or a large scale

Figure 4: 2025 Season A - Use of agricultural practices



Source: NISR, SAS 2025

4.1. Irrigation practices

In season A of 2025, 13.4 % of farmers practiced irrigation. This included 12 % of small-scale farmers and 64.1 % of Large-Scale Farmers (See Figure 4). Out of farmers who practiced irrigation 55.5 % practiced the modern irrigation. In regard to source of water, Lakes/stream and underground water were the most used sources of water for irrigation with 47.3 % and 30.3 % respectively (See details in Tables 9,30-32).

4.2. Erosion control measures

In 2025 Season A 90.3 % of farmers practiced anti-erosion activities where 90.1 % of small-scale farmers and 97.4 % were Large-Scale Farmers protected their land against erosion (See Figure 4). Cover plants was the most used type of anti-erosion with 56.7 %. The farmland experienced less erosion where the predominant erosion types were those with a low degree of erosion (splash and wind erosion, which accounted for 53.3 % and 32.3 % respectively. 46.2 % of farmers practiced agroforestry, while 0.9 % of farmers used mechanical equipment in their agricultural activities. (See details in Tables 9, 30, 33 and 34).

5. Gross Value Added (GVA)

The Gross Value-Added value of different crops is shown in constant 2017 prices. Results show the Gross Value Added per hectare for crops such as Maize, Paddy rice, Irish potato, Beans, Pea and Soybean, have increased in 2024 compared to 2023.

Table 7: Main crops GVA in constant 2017 prices (Frw /ha)

Crops								
	2017	2018	2019	2020	2021	2022	2023	2024
Maize	309,457	365,527	373,066	389,059	387,754	390,303	407,284	468,156
Sorghum	296,000	298,689	274,485	280,068	299,996	302,122	323,073	337,745
Paddy rice	1,633,520	1,492,544	1,718,397	1,691,890	1,799,480	1,799,248	1,757,086	1,764,837
Wheat	282,068	306,210	329,278	289,132	303,795	321,878	348,790	353,248
Cassava	305,145	1,377,459	1,629,739	1,642,935	1,653,322	1,648,255	1,597,292	1,566,447
Sweet potato	784,244	899,497	890,254	932,227	903,969	950,888	966,903	1,020,942
Irish potato	1,713,831	1,444,199	1,700,490	1,544,227	1,551,234	1,425,235	1,421,940	1,487,821

Crops								
	2017	2018	2019	2020	2021	2022	2023	2024
Cooking banana	199,565	3,715,919	3,623,122	3,180,479	3,089,892	3,119,720	3,130,968	3,144,537
Dessert banana	117,981	2,163,072	1,481,763	1,162,979	1,162,822	1,132,818	1,154,426	1,168,674
Banana for beer	102,332	1,122,757	879,672	931,198	958,935	974,510	1,009,727	1,043,529
Beans	391,605	410,264	391,121	318,642	334,063	333,464	334,969	340,775
Pea	1,060,761	964,611	1,049,992	1,365,309	1,355,647	1,284,987	1,059,662	1,085,232
Groundnut	187,362	221,069	183,218	187,008	186,608	185,329	187,590	193,099
Soybean	52,694	48,631	61,358	57,232	55,754	60,963	48,952	59,482
Overall GVA	906,817	965,556	1,013,106	1,039,414	1,105,663	1,114,229	1,150,316	1,210,112

Source: NISR, SAS 2025

Annexes

Annex 1: Main Tables

Table 8: 2025 Season A_Agricultural land use per district (,000Ha)

District	Total land area	Agricultural land	% of agricultural land	Arable land	Physical cultivated land	Area under seasonal crops	Area under permanent crops	Temporary fallow land	Temporarily meadow and pasture	Area under permanent pasture
Nyarugenge	13.1	5.7	43.5	3.82	4.74	2.92	3.07	0.83	0.08	0.13
Gasabo	42.7	21.7	50.7	18.93	18.10	15.08	9.32	3.37	0.54	0.20
Kicukiro	16.6	5.4	32.5	4.82	4.71	4.18	2.18	0.61	0.04	0.07
Nyanza	67.0	45.5	67.8	42.86	41.09	38.48	12.00	4.11	0.32	0.29
Gisagara	67.5	47.4	70.2	45.70	39.95	38.88	13.73	6.82	-	0.59
Nyaruguru	101.0	35.9	35.5	31.26	27.73	23.41	8.78	7.16	0.69	0.55
Huye	58.1	34.6	59.5	32.56	30.68	28.58	9.78	3.89	0.10	0.00
Nyamagabe	109.1	45.7	41.9	39.37	37.77	31.53	13.33	7.60	0.18	-
Ruhango	62.6	44.4	70.9	38.17	38.61	32.07	13.18	5.75	0.23	-
Muhanga	64.1	39.7	61.9	34.23	33.50	27.64	15.41	6.13	0.40	0.05
Kamonyi	65.8	48.5	73.8	41.81	44.23	37.56	17.46	4.14	0.11	0.17
Karongi	78.8	43.2	54.8	34.82	37.95	29.38	19.11	4.93	0.45	-
Rutsiro	66.1	34.3	51.9	26.50	29.66	21.94	13.86	4.16	0.40	0.31
Rubavu	33.9	24.4	71.9	22.62	20.91	19.76	4.49	2.72	0.15	0.70
Nyabihu	54.0	31.4	58.0	29.89	29.11	28.03	3.22	1.72	0.10	0.37
Ngororero	66.7	43.7	65.6	38.66	37.43	32.22	14.64	6.17	0.22	-
Rusizi	91.6	39.0	42.6	34.41	36.89	32.12	12.97	2.07	0.21	-
Nyamasheke	94.8	39.4	41.5	32.44	36.75	30.07	13.52	2.17	0.12	0.06
Rulindo	56.6	33.3	58.9	27.44	28.96	23.11	13.28	4.22	0.12	-
Gakenke	70.0	45.7	65.2	40.36	39.47	33.92	15.68	6.19	0.25	-
Musanze	50.9	30.7	60.3	29.67	29.02	27.75	4.13	1.53	0.35	0.15
Burera	58.4	36.1	61.9	35.32	32.22	30.81	2.93	3.92	0.60	-
Gicumbi	82.5	52.0	63.1	47.53	46.24	41.80	15.59	5.01	0.72	0.51
Rwamagana	65.1	45.8	70.4	38.35	40.53	34.26	17.85	3.30	0.82	2.02
Nyagatare	191.5	146.8	76.7	87.77	82.79	75.94	72.95	11.20	0.63	52.85
Gatsibo	153.3	80.0	52.2	64.01	68.12	60.24	37.09	3.39	0.23	8.45
Kayonza	180.0	92.2	51.2	65.31	60.09	54.11	42.02	10.22	1.01	21.90
Kirehe	114.2	73.8	64.7	66.10	68.18	61.05	26.70	4.85	0.20	0.77
Ngoma	80.3	56.1	69.9	49.97	50.81	46.46	24.28	3.30	0.21	1.97
Bugesera	120.2	76.6	63.8	66.52	62.34	55.76	19.24	10.27	0.33	4.14
National	2,376	1,399	59	1,171	1,159	1,019	492	142	10	96

Source: NISR, SAS 2025

Table 9: 2025 Season A_Area under agricultural practices (In Hectares)

District	Modern irrigated agricultural land (Ha)	Agricultural area under erosion control	Agricultural area under agroforestry trees	Agricultural area under fertilizer application	
				Inorganic fertilizer	Organic fertilizer
Nyarugenge	16	3,415	1,330	488	1,582
Gasabo	618	13,765	9,886	4,960	10,383
Kicukiro	189	2,452	2,788	1,363	2,333
Nyanza	648	38,225	20,699	7,318	23,051
Gisagara	2,883	29,178	18,940	15,371	24,772
Nyaruguru	46	30,454	9,262	13,876	19,340
Huye	1,208	25,697	9,488	8,353	20,531
Nyamagabe	30	35,146	18,501	14,104	24,754
Ruhango	1,220	32,398	13,445	5,236	19,168
Muhanga	529	30,652	18,051	5,614	23,894
Kamonyi	429	40,481	23,797	6,587	23,837
Karongi		33,512	16,111	11,665	21,953
Rutsiro	105	26,548	14,385	10,064	19,237
Rubavu		19,096	8,489	9,480	7,702
Nyabihu		28,705	12,019	13,831	19,427
Ngororero		38,573	16,386	13,177	26,641
Rusizi	1,816	28,182	16,987	20,160	20,738
Nyamasheke	799	27,578	15,938	15,785	22,961
Rulindo	1,295	28,617	14,258	9,726	19,952
Gakenke	315	43,070	16,060	18,227	31,633
Musanze	3	19,751	14,456	14,312	19,643
Burera		30,748	10,140	13,868	24,004
Gicumbi	384	45,429	24,224	13,858	34,845
Rwamagana	2,392	32,947	25,369	16,914	25,555
Nyagatare	3,989	83,580	94,744	42,293	38,036
Gatsibo	2,441	60,814	36,758	30,815	44,465
Kayonza	2,855	43,189	29,816	21,725	31,782
Kirehe	2,904	44,688	45,622	33,559	42,908
Ngoma	1,135	35,618	28,516	18,020	31,947
Bugesera	2,040	40,981	43,761	14,920	23,488
National	30,290	993,486	630,226	425,667	700,563

Source: NISR, SAS 2025

Table 10: 2025 Season A_Cultivated area by crop type and district (Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Other cereals	Cassava	Sweet potato	Irish potato	Yams & Taro	Banana	Cooking banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Pea	Groundnut	Soybean	Vegetables	Fruits	Fodder Crops	Other crops	Total developed land
Nyarugenge	679	-	-	-	-	1,001	358	60	117	1,755	599	306	850	1,705	1,664	41	-	9	78	152	-	76	1,033	7,025
Gasabo	3,298	-	305	-	4	3,790	952	527	180	5,501	2,378	1,370	1,753	6,631	6,479	152	41	129	224	845	632	443	496	23,998
Kicukiro	1,168	-	85	-	-	912	489	-	67	1,185	531	155	499	1,370	1,351	20	-	10	62	75	124	34	86	5,668
Nyanza	5,698	554	480	-	63	17,925	2,106	311	330	8,665	2,488	1,451	4,726	13,514	11,822	1,692	208	391	1,970	414	45	278	1,180	54,131
Gisagara	6,832	1,048	2,595	-	212	11,527	2,170	285	779	12,054	3,102	2,531	6,421	15,111	13,571	1,540	12	223	1,750	642	155	-	996	56,391
Nyaruguru	4,235	37	45	188	16	5,505	4,361	2,526	1,109	4,915	1,597	999	2,319	8,375	1,600	6,775	266	-	596	154	91	631	3,329	36,378
Huye	4,607	-	980	-	107	10,967	2,358	441	210	6,335	1,939	1,963	2,433	12,972	8,866	4,106	169	50	2,017	489	1,636	95	869	44,301
Nyamagabe	6,188	-	29	56	-	9,282	5,715	3,324	1,472	7,602	2,157	934	4,511	10,330	2,628	7,702	989	-	1,272	519	88	277	4,998	52,141
Ruhango	4,093	154	971	-	52	17,642	2,012	171	993	7,762	1,291	1,295	5,176	9,850	7,822	2,028	27	288	3,120	411	58	348	2,028	49,981
Muhanga	2,162	-	135	-	96	11,491	3,904	409	3,133	17,040	3,372	2,240	11,427	7,198	3,745	3,453	115	12	2,571	311	209	332	965	50,084
Kamonyi	5,532	-	208	-	6	13,154	1,949	465	803	10,888	1,457	1,742	7,689	12,996	10,991	2,005	60	983	3,065	1,101	217	80	2,481	53,986
Karongi	6,945	-	-	-	-	9,921	3,926	753	2,170	11,085	2,979	1,441	6,666	6,549	1,882	4,668	137	39	1,516	811	210	398	2,827	47,286
Rutsiro	6,120	16	-	-	-	1,902	2,615	2,951	1,439	7,365	2,086	1,265	4,013	4,005	561	3,444	469	-	870	319	122	436	3,716	32,346
Rubavu	2,304	-	-	-	-	330	774	5,477	245	2,519	1,090	295	1,134	8,384	871	7,512	396	-	257	1,850	15	183	2,071	24,806
Nyabihu	3,148	495	-	181	-	708	2,446	8,713	29	1,335	357	276	702	8,715	275	8,440	631	-	14	648	238	107	2,374	29,782
Ngororero	3,581	335	-	190	-	6,816	4,893	1,736	2,282	10,943	1,904	1,907	7,132	12,047	1,060	10,987	452	-	1,666	743	72	223	1,741	47,718
Rusizi	7,740	250	1,491	-	-	15,025	1,364	290	1,137	6,824	2,765	635	3,424	12,577	11,106	1,471	51	272	482	1,151	2,156	118	3,070	53,998
Nyamasheke	5,698	21	379	-	172	16,573	4,070	149	2,529	6,639	2,091	915	3,633	7,316	1,766	5,551	76	487	916	860	458	172	5,687	52,202
Rulindo	4,592	-	17	2	-	4,270	2,970	1,497	138	6,391	1,823	1,341	3,227	9,268	4,118	5,150	352	46	395	1,183	217	73	3,888	35,299
Gakenke	8,533	-	17	-	440	8,521	6,198	1,168	2,000	14,043	2,966	2,017	9,060	10,228	1,946	8,282	655	202	695	522	418	212	1,810	55,662
Musanze	5,884	1,423	-	562	-	174	1,539	4,822	46	2,298	829	589	880	9,136	281	8,855	198	-	51	824	323	373	1,196	28,849
Burera	9,651	1,419	-	645	-	108	3,836	4,357	33	2,024	934	137	954	10,502	549	9,953	1,706	-		310	54	564	135	35,343
Gicumbi	5,842	725	-	408	170	3,446	7,494	3,712	223	6,365	2,807	1,477	2,081	17,275	3,955	13,320	1,824	365	304	953	273	681	1,810	51,869
Rwamagana	10,449	6	503	-	20	6,553	1,862	1,172	260	12,451	7,068	1,795	3,587	13,726	13,447	279	28	1,087	557	1,350	703	1,431	1,899	54,060
Nyagatare	30,096	15,085	2,237	-	572	3,945	1,498	753	89	11,461	6,209	1,557	3,695	13,836	12,381	1,455	223	1,254	1,140	513	158	480	891	84,230
Gatsibo	22,199	5,552	1,697	74	191	9,467	2,073	2,431	84	22,828	12,821	2,902	7,105	19,282	16,724	2,558	299	686	855	971	102	333	3,242	92,366
Kayonza	17,773	5,279	1,806	25	431	21,305	1,673	2,415	447	12,824	8,663	1,757	2,404	14,530	14,212	318	112	327	667	1,166	2,541	590	1,281	85,192
Kirehe	23,652	3,536	964	62	96	6,249	1,487	1,655	557	19,337	11,903	1,230	6,204	19,241	17,695	1,546	277	436	887	610	88	175	4,565	83,871
Ngoma	15,801	775	892	-	900	19,020	1,758	1,607	170	18,210	10,421	2,337	5,451	15,628	14,395	1,233	99	660	601	642	1,946	208	1,642	80,559
Bugesera	9,597	3,644	1,475	-	23	10,308	3,606	308	82	9,909	3,604	1,680	4,624	14,849	14,752	98	9	2,875	765	241	671	462	1,826	60,652
National	244,095	40,353	17,312	2,391	3,571	247,839	82,458	54,485	23,150	268,552	104,232	40,540	123,780	327,147	202,513	124,635	9,882	10,832	29,361	20,780	14,021	9,813	64,132	1,470,174
SSF	236,890	40,320	318	2,349	3,537	247,793	82,444	54,282	23,150	268,423	104,130	40,523	123,771	326,808	202,229	124,580	9,854	10,830	28,610	20,577	13,499	9,431	63,153	1,442,268
LSF	7,206	33	16,994	42	33	46	13	203	-	129	103	17	9	339	284	55	27	3	752	203	522	382	979	27,906

Source: NISR, SAS 2025

Table 11: 2025 Season A_Harvested area by crop type and district (Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Other cereals	Cassava	Sweet potato	Irish potato	Yarms & Taro	Bananas	Cooking banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Pea	Groundnut	Soybean	vegetables	Fruits	Fodder crops	Other crops	All crops
Nyarugenge	679	-	-	-	-	187	286	60	-	774	217	151	406	1,705	1,664	41	-	9	78	123	-	76	28	4,005
Gasabo	3,298	-	306	-	4	949	940	527	88	2,209	882	427	900	6,631	6,479	152	41	129	224	845	125	372	95	16,783
Kicukiro	1,168	-	85	-	-	44	446	-	51	539	199	77	263	1,370	1,351	20	-	10	62	71	58	34	45	3,984
Nyanza	5,659	554	466	-	63	4,299	2,105	311	330	3,240	1,125	505	1,610	13,514	11,822	1,692	208	391	1,970	415	2	278	-	33,803
Gisagara	6,772	1,048	2,621	-	212	1,086	2,164	285	257	3,718	1,024	643	2,051	15,111	13,571	1,540	12	223	1,750	642	23	-	-	35,923
Nyaruguru	4,152	37	45	188	16	903	4,015	2,526	442	1,585	456	296	833	8,375	1,600	6,775	266	-	596	154	13	575	16	23,904
Huye	4,388	-	972	-	107	1,111	2,305	441	156	2,371	754	654	962	12,933	8,853	4,080	169	50	2,017	436	1,117	49	-	28,623
Nyamagabe	5,182	-	29	51	-	912	5,376	3,324	319	2,888	547	388	1,953	10,329	2,628	7,701	988	-	1,272	442	81	216	277	31,688
Ruhango	3,891	154	971	-	52	4,177	1,604	171	614	3,272	509	501	2,263	9,850	7,822	2,028	27	288	3,120	406	-	232	343	29,172
Muhanga	2,141	-	135	-	96	1,673	3,904	409	2,149	6,628	1,125	701	4,802	7,198	3,745	3,453	115	12	2,571	238	198	280	278	28,025
Kamonyi	5,533	-	205	-	6	2,426	1,949	465	280	4,570	526	637	3,407	12,996	10,991	2,005	60	983	3,065	1,030	56	80	468	34,169
Karongi	6,901	-	-	-	-	1,096	3,786	753	1,014	4,752	828	585	3,340	6,549	1,882	4,668	137	39	1,516	648	178	338	211	27,918
Rutsiro	6,120	16	-	-	-	178	2,615	2,951	1,007	2,840	650	447	1,743	4,005	561	3,444	469	-	870	319	52	436	571	22,450
Rubavu	2,235	-	-	-	-	-	572	5,478	126	1,061	397	130	534	8,384	871	7,512	396	-	257	1,798	9	133	1,398	21,846
Nyabihu	3,089	495	-	181	-	225	2,374	8,713	-	501	98	112	291	8,715	275	8,440	631	-	14	648	108	107	1,808	27,609
Ngororero	3,581	335	-	190	-	1,261	4,868	1,736	916	4,916	726	732	3,458	12,047	1,060	10,987	452	-	1,666	737	-	117	36	32,857
Rusizi	7,740	250	1,470	-	-	945	1,364	290	1,063	2,286	835	181	1,270	12,577	11,106	1,471	51	272	482	1,151	508	118	163	30,730
Nyamasheke	5,698	21	370	-	172	2,824	2,806	149	1,488	2,768	860	320	1,588	7,316	1,766	5,551	76	487	916	801	116	77	335	26,420
Rulindo	4,551	-	17	2	-	688	2,970	1,495	62	2,765	649	491	1,625	9,267	4,118	5,150	352	46	395	1,160	63	26	82	23,942
Gakenke	8,495	-	17	-	440	1,134	6,198	1,168	1,516	6,081	1,097	735	4,249	10,228	1,946	8,282	655	202	695	522	297	212	394	38,254
Musanze	5,884	1,423	-	560	-	24	1,532	4,805	-	925	278	249	398	9,129	281	8,847	199	-	51	814	151	373	1,053	26,922
Burera	9,599	1,419	-	645	-	65	3,668	4,357	33	738	311	42	385	10,502	549	9,953	1,706	-	-	310	5	482	108	33,637
Gicumbi	5,835	725	-	408	170	701	7,379	3,710	48	2,487	991	575	921	17,274	3,955	13,318	1,824	365	304	861	109	493	127	42,818
Rwamagana	10,480	6	509	-	20	1,009	1,861	1,172	124	5,379	3,255	910	1,213	13,725	13,446	279	28	1,087	557	1,352	187	1,319	424	39,239
Nyagatare	30,132	15,085	2,238	-	572	908	1,490	754	89	5,648	2,999	763	1,886	13,837	12,383	1,455	223	1,254	1,140	499	36	256	4	74,166
Gatsibo	22,286	5,552	1,688	74	191	1,222	1,973	2,431	84	10,621	6,222	1,469	2,930	19,281	16,723	2,558	299	685	855	816	15	331	-	68,405
Kayonza	17,798	5,278	1,806	25	431	2,882	1,673	2,415	283	5,084	3,450	664	970	14,529	14,211	318	112	327	667	1,123	379	588	120	55,521
Kirehe	23,719	3,483	962	62	96	1,921	1,440	1,655	220	8,254	4,756	601	2,897	19,241	17,695	1,546	277	436	886	574	52	54	-	63,332
Ngoma	15,804	775	894	-	900	3,130	1,667	1,607	117	6,852	3,889	808	2,155	15,628	14,395	1,233	99	660	601	642	1,533	208	3	51,120
Bugesera	9,630	3,643	1,271	-	23	2,109	3,253	308	76	4,244	1,545	661	2,038	14,845	14,747	98	9	2,875	765	237	231	438	445	44,401
National	242,439	40,298	17,078	2,384	3,571	40,090	78,583	54,465	12,951	109,994	41,198	15,455	53,341	327,090	202,492	124,598	9,880	10,832	29,361	19,815	5,705	8,298	8,832	1,021,666
SSF	234,954	40,266	302	2,349	3,537	40,066	78,572	54,275	12,951	109,943	41,155	15,449	53,338	326,757	202,185	124,572	9,854	10,830	28,610	19,629	5,490	7,965	8,326	994,676
LSF	7,485	32	16,776	36	33	23	11	191	-	51	43	6	3	333	308	25	26	2	751	186	214	334	506	26,991

Table 12: 2025 Season A_Average yield by crop type and district (Kg/Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Other cereals	Cassava	Sweet potatoes	Irish potatoes	Yams & Taro	Bananas	Cooking Banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Peas	Ground nuts	Soya beans	Vegetables	Fruits	Fodder crops	Other crops
Nyarugenge	1,338	-	-	-	-	11,627	5,916	2,508	-	11,274	12,200	10,046	11,234	557	545	1,047	-	312	440	5,107	-	7,348	5,042
Gasabo	1,582	-	4,186	-	1,329	12,694	8,436	5,689	6,815	10,654	12,461	7,286	10,482	637	631	915	600	465	530	9,477	9,555	10,731	11,603
Kicukiro	1,559	-	4,598	-	-	10,267	7,862	-	5,993	11,095	11,254	10,503	11,147	537	535	649	-	254	421	5,953	5,720	26,923	1,801
Nyanza	1,868	1,029	4,263	-	500	14,301	7,034	5,561	5,740	8,722	8,005	7,309	9,666	603	604	596	817	356	366	7,150	6,766	27,656	-
Gisagara	1,932	841	3,162	-	985	13,552	6,844	2,872	5,115	9,028	7,178	7,653	10,383	632	639	569	455	429	537	6,486	4,952	-	-
Nyaruguru	1,839	1,408	3,658	1,279	568	12,683	10,227	5,699	6,647	11,583	14,851	9,337	10,593	681	667	684	522	-	464	7,730	1,821	13,165	161
Huye	1,833	-	4,176	-	659	14,634	8,425	4,233	5,998	10,807	12,793	9,009	10,472	612	605	627	879	549	550	7,182	3,350	13,435	-
Nyamagabe	1,567	-	3,956	1,040	-	13,879	9,317	7,362	7,524	9,648	8,247	7,092	10,548	649	597	667	449	-	517	6,121	6,698	9,003	2,457
Ruhango	1,402	1,334	4,542	-	1,000	15,971	8,087	3,326	4,497	10,008	9,116	6,610	10,960	476	462	533	619	245	459	10,366	-	22,348	1,315
Muhanga	2,047	-	3,510	-	805	15,823	7,690	3,782	11,226	10,830	12,962	8,211	10,714	522	425	628	933	213	440	8,093	3,845	27,768	6,163
Kamonyi	1,702	-	5,275	-	775	14,695	6,385	3,981	7,333	10,214	13,143	6,427	10,470	451	437	532	635	452	556	8,631	7,501	29,064	-
Karongi	1,486	-	-	-	-	8,100	10,283	6,743	4,589	11,501	13,979	10,436	11,073	942	694	1,042	667	221	625	6,486	5,504	13,829	2,184
Rutsiro	1,471	824	-	-	-	14,579	9,396	7,519	5,494	11,403	13,582	7,918	11,486	806	610	838	553	-	556	9,189	4,446	45,341	23,581
Rubavu	1,741	-	-	-	-	-	7,573	13,429	4,477	10,864	12,078	6,635	10,991	708	507	731	447	-	371	8,774	6,997	23,047	6,509
Nyabihu	1,692	838	-	1,293	-	8,922	8,102	12,628	-	8,977	11,771	6,267	9,078	1,028	630	1,041	596	-	211	8,348	10,604	3,497	1,911
Ngororero	1,351	1,258	-	594	-	13,760	7,727	5,610	4,623	8,135	7,966	7,190	8,371	859	601	884	568	-	543	7,790	-	14,248	5,401
Rusizi	1,978	1,317	4,422	-	-	14,114	7,156	5,546	4,266	11,178	11,029	7,959	11,736	781	766	892	622	531	547	6,559	10,477	11,738	431
Nyamasheke	1,677	445	4,151	-	840	11,855	5,476	4,406	5,494	9,360	11,046	7,720	8,777	769	587	827	630	401	577	4,751	5,371	19,262	25,527
Rulindo	1,962	-	3,519	636	-	11,819	7,519	6,043	5,886	10,002	11,767	8,647	9,706	720	586	827	528	416	567	7,572	3,109	13,342	386
Gakenke	1,656	-	3,002	-	554	13,005	8,432	6,075	6,252	11,085	13,203	7,699	11,124	773	579	818	476	673	536	8,765	5,403	6,788	21,297
Musanze	1,905	1,566	-	1,654	-	5,233	9,017	12,183	-	10,550	13,281	7,797	10,367	1,111	906	1,117	661	-	863	8,655	4,011	16,077	7,720
Burera	2,097	1,930	-	1,469	-	12,891	9,411	10,515	4,262	9,964	12,021	7,261	8,596	953	717	967	655	-	-	7,609	15,091	18,866	17,695
Gicumbi	1,480	1,339	-	1,065	630	13,850	9,844	9,025	3,977	11,025	14,187	6,120	10,688	772	651	808	682	370	428	6,695	4,624	13,154	26,385
Rwamagana	1,701	1,021	3,946	-	298	13,292	8,076	6,327	12,808	14,010	16,934	7,955	10,706	627	627	610	301	443	535	8,220	2,318	20,554	4,378
Nyagatare	2,834	1,627	4,248	-	903	13,229	5,774	5,475	4,990	14,064	16,973	8,849	11,548	777	749	1,015	897	451	648	7,609	4,002	20,627	2,009
Gatsibo	1,841	963	4,347	1,486	729	12,888	8,965	5,399	4,646	13,352	15,689	8,223	10,960	725	704	861	684	517	402	7,014	10,376	17,279	-
Kayonza	1,925	1,288	3,320	913	615	11,976	6,932	3,300	3,303	13,959	15,892	10,368	9,541	684	680	848	554	334	344	6,987	2,479	11,029	6,542
Kirehe	2,571	1,144	4,112	1,020	491	14,948	6,536	4,827	3,738	13,650	15,810	8,445	11,186	674	677	648	542	462	1,529	6,916	5,606	5,486	-
Ngoma	1,932	1,790	4,071	-	598	12,679	8,153	4,359	5,238	13,076	14,953	8,577	11,377	693	684	800	302	409	466	6,587	3,721	19,218	52
Bugesera	1,611	1,124	5,376	-	769	13,045	8,077	3,019	4,268	12,061	15,993	8,149	10,349	470	468	816	416	422	350	3,973	9,747	8,434	3,893
National	1,985	1,365	4,080	1,319	695	13,542	8,352	8,736	6,355	11,621	14,327	8,089	10,554	705	625	833	606	432	533	7,560	4,986	17,716	7,434
SSF	1,918	1,364	2,007	1,315	700	13,539	8,352	8,726	6,355	11,619	14,326	8,087	10,554	704	625	833	606	432	496	7,527	5,073	17,686	7,682
LSF	4,076	2,182	4,117	1,519	-	17,892	8,293	11,423	-	15,206	15,591	14,021	11,923	830	803	1,153	565		1,954	11,130	2,748	18,416	

Table 13: 2025 Season A_Average yield of Large-Scale Farmers by crop type and district (Kg/Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Cassava	Sweet potatoes	Irish potatoes	Yams & Taro	Bananas	Cooking Banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Peas	Soya beans	Vegetables	Fruits	Fodder crops
Nyarugenge	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Gasabo	2,962	-	4,214	-		-	7,046	-	-	14,232	14,232	14,436	13,921		685	685	-	-	706	16,742
Kicukiro	2,847	-	4,598	-		-	-	-	-	15,205	16,304	14,409	-		-	-	-	-	-	53,710
Nyanza	2,435	-	4,403	-		-	-	-	-	11,963	15,587	11,366	11,047		-	-	-	-	-	32,453
Gisagara	3,367	-	3,162	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Nyaruguru	4,746	-	3,658	-		-	7,210	8,473	-	10,465	16,299	9,189	-		-	-	-	-	-	528,855
Huye	3,973	-	4,207	-		-	-	-	-	12,928	13,071	11,502	-		800	800	-	-	-	126,987
Nyamagabe	2,980	-	3,956	-		-	-	12,366	-	-	-	-	-		746	-	746	606	-	-
Ruhango	2,409	-	4,637	-		33,085	-	-	-	-	-	-	-		649	649	-	-	-	10,351
Muhanga	2,910	-	3,510	-		-	8,848	10,179	-	-	-	-	-		800	-	800	589	-	-
Kamonyi	4,722	-	5,275	-		-	-	-	-	-	-	-	-		-	-	-	-	1,642	-
Karongi	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Rutsiro	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Rubavu	2,468	-	-	-		-	-	14,545	-	14,847	15,746	11,227	12,089		-	-	-	-	-	164,813
Nyabihu	-	-	-	-		-	-	8,605	-	-	-	-	-		-	-	-	-	-	-
Ngororero	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Rusizi	3,051	-	4,435	-		-	-	-	-	-	-	-	-		995	995	-	-	-	-
Nyamasheke	-	-	4,151	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Rulindo	2,254	-	3,519	636		-	-	9,385	-	7,243	-	-	7,243		1,198	-	1,198	810	-	-
Gakenke	3,175	-	3,002	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Musanze	-	-	-	1,564		-	-	13,845	-	-	-	-	-		-	-	-	537	-	16,019
Burera	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-
Gicumbi	2,515	-	-	1,593		-	7,421	8,848	-	13,610	13,610	-	-		1,328	-	1,328	374	-	22,679
Rwamagana	2,364	-	3,996	-		-	7,331	6,822	-	15,901	16,307	13,444	9,326		698	698	-	-	3,153	12,948
Nyagatare	5,387	2,066	4,272	-		15,962	13,820	9,087	-	18,145	18,435	12,237	14,321		815	815	-	-	1,442	19,778
Gatsibo	2,854	2,314	4,365	-		-	-	5,301	-	15,777	16,508	11,947	11,686		995	995	-	-	2,065	26,761
Kayonza	4,161	-	3,402	-		-	6,799	7,092	-	14,095	14,201	12,022	10,172		690	690	-	-	224	12,040
Kirehe	6,061	-	4,189	-		-	-	-	-	-	-	-	-		655	655	-	-	2,041	-
Ngoma	2,264	-	4,071	-		-	-	-	-	14,111	14,927	13,828	10,875		956	956	-	-	616	3,537
Bugesera	1,588	2,680	5,410	-		17,323	7,119	8,144	-	13,377	11,323	16,924	13,107		822	816	1,246	-	1,245	13,550
National	4,076	2,182	4,117	1,519		17,892	8,293	11,423	-	15,206	15,591	14,021	11,923		830	803	1,153	565	1,954	18,416

Source: NISR, SAS 2025.

Table 14: 2025 Season A_Crop production by crop type and district (MT)

District	Maize	Sorghum	Paddy rice	Wheat	Other Cereals	Cassava	Sweet potatoes	Irish potatoes	Yams & Taro	Banana	Cooking banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Pea	Ground nuts	Soya bean	Vegetables	Fruits	Fodder crops	Other crops
Nyarugenge	909	-	-	-	-	2,169	1,692	151	-	8,722	2,652	1,515	4,555	950	907	43	-	3	34	627	-	555	142
Gasabo	5,216	-	1,281	-	5	12,052	7,933	2,996	599	23,532	10,988	3,111	9,433	4,226	4,087	139	25	60	119	8,006	1,198	3,989	1,107
Kicukiro	1,821	-	392	-	-	452	3,505	-	303	5,979	2,242	805	2,933	735	723	13	-	2	26	424	335	925	81
Nyanza	10,568	570	1,986	-	32	61,476	14,809	1,729	1,892	28,261	9,006	3,691	15,564	8,150	7,141	1,009	170	139	722	2,964	14	7,696	-
Gisagara	13,087	881	8,288	-	208	14,711	14,807	818	1,316	33,563	7,350	4,918	21,296	9,548	8,671	877	5	96	940	4,162	115	-	-
Nyaruguru	7,636	52	165	240	9	11,451	41,064	14,392	2,939	18,354	6,767	2,765	8,823	5,703	1,067	4,636	139	-	276	1,192	23	7,569	3
Huye	8,042	-	4,058	-	70	16,262	19,423	1,867	936	25,620	9,650	5,892	10,078	7,914	5,355	2,560	149	28	1,109	3,134	3,743	658	-
Nyamagabe	8,119	-	116	53	-	12,660	50,085	24,473	2,401	27,861	4,508	2,754	20,599	6,705	1,569	5,136	444	-	657	2,708	543	1,943	682
Ruhango	5,456	205	4,412	-	52	66,711	12,974	570	2,762	32,745	4,637	3,309	24,798	4,693	3,611	1,082	17	70	1,431	4,205	-	5,187	451
Muhanga	4,381	-	473	-	78	26,474	30,024	1,545	24,121	71,786	14,580	5,757	51,450	3,760	1,592	2,168	108	3	1,131	1,930	760	7,774	1,714
Kamonyi	9,419	-	1,079	-	4	35,647	12,443	1,849	2,051	46,676	6,914	4,094	35,667	5,866	4,799	1,067	38	444	1,704	8,886	422	2,333	-
Karongi	10,252	-	-	-	-	8,874	38,934	5,077	4,655	54,651	11,568	6,101	36,982	6,168	1,306	4,862	91	9	947	4,206	980	4,668	460
Rutsiro	9,003	13	-	-	-	2,598	24,575	22,191	5,534	32,382	8,824	3,543	20,015	3,227	342	2,886	259	-	484	2,934	233	19,778	13,456
Rubavu	3,890	-	-	-	-	-	4,331	73,561	565	11,523	4,792	862	5,868	5,934	442	5,492	177	-	95	15,774	65	3,064	9,096
Nyabihu	5,225	415	-	234	-	2,009	19,231	110,026	-	4,494	1,150	700	2,644	8,956	173	8,782	376	-	3	5,412	1,149	374	3,455
Ngororero	4,838	421	-	113	-	17,355	37,613	9,740	4,233	39,993	5,781	5,262	28,949	10,346	637	9,709	257	-	905	5,741	-	1,669	196
Rusizi	15,312	330	6,501	-	-	13,331	9,761	1,606	4,534	25,551	9,205	1,441	14,905	9,824	8,512	1,312	32	145	263	7,547	5,319	1,390	70
Nyamasheke	9,553	9	1,535	-	145	33,481	15,363	655	8,175	25,908	9,500	2,470	13,938	5,624	1,036	4,588	48	195	528	3,806	625	1,475	8,541
Rulindo	8,930	-	61	2	-	8,130	22,336	9,036	363	27,659	7,642	4,247	15,770	6,672	2,411	4,261	186	19	224	8,784	195	350	32
Gakenke	14,068	-	50	-	244	14,752	52,262	7,099	9,480	67,402	14,479	5,658	47,265	7,902	1,127	6,775	312	136	373	4,574	1,605	1,436	8,388
Musanze	11,208	2,229	-	926	-	128	13,811	58,546	-	9,757	3,687	1,942	4,128	10,138	255	9,883	131	-	44	7,046	604	5,996	8,130
Burera	20,130	2,739	-	947	-	838	34,521	45,817	139	7,356	3,743	306	3,306	10,013	393	9,620	1,118	-	-	2,355	82	9,099	1,918
Gicumbi	8,634	971	-	434	107	9,715	72,635	33,482	190	27,424	14,060	3,521	9,842	13,340	2,575	10,765	1,244	135	130	5,766	505	6,489	3,355
Rwamagana	17,832	6	2,008	-	6	13,411	15,030	7,417	1,593	75,356	55,127	7,242	12,987	8,606	8,436	170	9	481	298	11,109	433	27,116	1,856
Nyagatare	85,407	24,542	9,509	-	516	12,019	8,604	4,125	442	79,430	50,899	6,755	21,776	10,754	9,277	1,477	200	566	738	3,797	146	5,286	9
Gatsibo	41,037	5,344	7,339	110	139	15,745	17,683	13,123	389	141,810	97,612	12,084	32,114	13,983	11,780	2,203	205	354	343	5,725	160	5,717	-
Kayonza	34,261	6,798	5,997	22	265	34,512	11,596	7,969	935	70,972	54,836	6,880	9,256	9,934	9,665	269	62	109	229	7,848	938	6,488	788
Kirehe	60,970	3,985	3,957	63	47	28,713	9,410	7,990	824	112,675	75,193	5,075	32,406	12,972	11,970	1,002	150	201	1,355	3,972	294	295	-
Ngoma	30,531	1,387	3,641	-	538	39,686	13,595	7,005	611	89,603	58,147	6,932	24,524	10,829	9,843	986	30	270	280	4,229	5,703	4,000	0
Bugesera	15,513	4,096	6,834	-	18	27,512	26,269	930	326	51,190	24,711	5,385	21,095	6,984	6,905	80	4	1,212	267	942	2,253	3,693	1,731
National	481,246	54,994	69,680	3,144	2,483	542,874	656,320	475,785	82,307	1,278,234	590,252	125,014	562,968	230,456	126,606	103,851	5,984	4,678	15,657	149,806	28,440	147,011	65,658

Source: NISR, SAS 2025.

Table 15: 2025 Season A_the Use of production by farmers (in %age)

Crops	Sold	Own consumption	Wages for hired labour	Farm rent	Offered as gift	Barter trade / Exchanged with other things	Seeds	Fodder purpose	Stored	Post harvesting losses	Other usage
Maize	41.0	44.9	1.5	2.2	6.3	0.1	0.9	0.7	1.9	0.3	0.5
Sorghum	67.3	17.4	1.4	6.0	4.3	0.1	2.3	0.0	0.7	0.9	0.6
Paddy rice	84.8	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.2
Wheat	56.4	22.8	0.5	0.0	6.1	0.0	11.6	0.0	0.0	0.9	2.6
Other cereals	44.7	37.2	0.4	1.0	6.5	0.0	7.9	0.0	1.7	0.4	0.5
Sweet potato	40.6	46.7	2.2	0.7	6.7	0.1	0.1	2.7	0.0	0.1	0.2
Irish potato	53.5	23.6	1.3	0.6	4.5	0.1	15.5	0.2	0.2	0.3	0.5
Yam & Taro	39.7	46.8	0.6	0.8	8.4	0.0	3.3	0.0	0.1	0.1	0.4
Cassava	68.4	24.9	1.4	0.8	3.5	0.0	0.0	0.2	0.3	0.1	0.5
Bush bean	22.8	47.9	1.7	2.6	6.3	0.2	15.5	0.0	2.4	0.5	0.6
Climbing bean	17.5	52.5	1.6	0.7	9.2	0.3	16.0	0.0	2.0	0.4	0.4
Pea	43.2	35.1	0.1	0.1	4.3	0.4	15.7	0.0	0.3	0.6	0.8
Groundnut	44.7	27.5	0.3	0.2	4.3	0.0	20.9	0.0	0.4	0.6	1.8
Soybean	37.4	35.4	0.5	1.1	4.3	0.2	19.0	0.1	1.5	0.5	0.5
Cooking banana	71.0	25.3	0.7	0.0	2.5	0.1	0.0	0.1	0.0	0.0	0.4
Dessert banana	72.0	24.2	0.1	0.4	2.7	0.0	0.0	0.1	0.0	0.1	0.5
Banana for beer	83.1	10.2	0.1	0.0	5.0	0.0	0.0	0.1	0.0	0.1	1.5
Vegetables	79.4	12.8	0.1	0.4	4.8	0.0	1.5	0.0	0.0	0.5	0.9
Fruits	84.3	10.4	0.3	0.0	4.0	0.3	0.0	0.0	0.0	0.5	0.6
Fodder crops	4.9	0.0	0.8	0.1	0.6	1.0	0.9	82.8	8.2	0.0	0.7
Other crops	77.5	11.2	0.0	0.0	2.1	0.0	0.8	0.0	0.0	0.4	8.3

Source: NISR, SAS 2025

Table 16: 2025 Season A_Cultivated area by cropping system and district (%age)

District	Cropping system	
	Pure Cropping	Mixed Cropping
Nyarugenge	41.81	58.19
Gasabo	25.21	74.79
Kicukiro	22.49	77.51
Nyanza	34.65	65.35
Gisagara	24.01	75.99
Nyaruguru	49.22	50.78
Huye	36.55	63.45
Nyamagabe	48.31	51.69
Ruhango	46.24	53.76
Muhanga	38.69	61.31
Kamonyi	37.47	62.53
Karongi	35.82	64.18
Rutsiro	48.03	51.97
Rubavu	53.47	46.53
Nyabihu	64.01	35.99
Ngororero	49.94	50.06
Rusizi	31.33	68.67
Nyamasheke	44.08	55.92
Rulindo	46.14	53.86
Gakenke	45.65	54.35
Musanze	62.54	37.46
Burera	63.33	36.67
Gicumbi	43.38	56.62
Rwamagana	32.66	67.34
Nyagatare	38.67	61.33
Gatsibo	29.79	70.21
Kayonza	33.64	66.36
Kirehe	38.93	61.07
Ngoma	26.54	73.46
Bugesera	36.36	63.64
National	40.09	59.91
SSF	38.60	61.40
LSF	96.47	3.53

Source: NISR, SAS 2025

Table 17: 2025 Season A_Sowing dates by district (%age)

District	Before September	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between 16-31/10	After November	Other season	Total
Nyarugenge	0.39	9.48	15.5	43.27	18.4	12.32	0.62	100
Gasabo	8.94	18.35	24.46	29.53	9.45	6.85	2.43	100
Kicukiro	1.07	3.85	24.13	43.21	19.74	7.87	0.13	100
Nyanza	4.41	9.58	8.49	45.56	16.63	14.84	0.49	100
Gisagara	2.49	9	25.71	42.31	11.85	6.74	1.89	100
Nyaruguru	16.17	7.21	15.2	32.75	9.56	11.87	7.24	100
Huye	2.51	7.56	14.82	37.47	25.8	10.91	0.94	100
Nyamagabe	8.59	23.99	13.86	23.33	9.63	20.22	0.38	100
Ruhango	5.06	8.36	14.42	35.03	15.71	21.42	0	100
Muhanga	5.31	16.57	23.57	26.19	7.35	20.33	0.67	100
Kamonyi	2.75	7.52	24.69	43.01	11.18	8.19	2.66	100
Karongi	5.42	16.26	28.3	27.09	7.99	14.22	0.72	100
Rutsiro	23.93	30.61	18.48	19.7	1.47	5.12	0.68	100
Rubavu	28.04	46.38	8.81	8.69	1.43	6.64	0	100
Nyabihu	19.61	30.85	23.46	8.2	3.15	14.61	0.12	100
Ngororero	9.52	33.17	19.93	15.27	7.08	13.79	1.23	100
Rusizi	3.99	7.45	18.46	56.71	8.45	4.95	0	100
Nyamasheke	6.76	15.21	28.6	22.38	12.69	12.33	2.03	100
Rulindo	11.86	31.29	24.03	16.81	6.57	8.3	1.14	100
Gakenke	7.69	33.42	19.41	19.96	5.09	14.04	0.4	100
Musanze	28.22	40.96	14.02	8.5	1.49	6.62	0.18	100
Burera	25.46	29.23	24.38	11.41	4.76	4.76	0	100
Gicumbi	7.88	43.63	26.95	10.47	3.57	6.87	0.64	100
Rwamagana	3.15	10.41	17.76	40.25	18.29	9.68	0.46	100
Nyagatare	15.09	42.76	24.57	12.43	0.81	3.65	0.69	100
Gatsibo	2.7	26.5	29.49	23.76	12.09	3.64	1.82	100
Kayonza	1.22	16.1	31.32	36.89	8.1	5.9	0.47	100
Kirehe	0.4	12.82	19.68	42.86	11.73	9.74	2.77	100
Ngoma	1.02	16.55	30.12	36.83	8.36	4.4	2.72	100
Bugesera	0.18	4.91	17.93	58.15	9.83	7.01	1.99	100
National	8.1	20.2	21.5	29.2	9.4	10.3	1.3	100

Source: NISR, SAS 2025

Table 18: 2025 Season A_Sowing date by crops (%age)

Crops	Before September	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between 16-31/10	After November	Other season	Total
Maize	6.9	22.0	24.7	33.4	9.4	3.7	0.0	100
Sorghum	22.4	27.9	28.1	16.9	3.9	0.8	0.0	100
Paddy rice	85.4	10.0	1.2	0.4	1.1	1.9	0.0	100
Wheat	10.4	13.9	24.3	21.8	22.8	6.8	0.0	100
Other cereals	5.2	10.3	31.3	36.9	11.0	5.3	0.0	100
Sweet potato	19.7	9.4	6.3	16.6	9.2	38.9	0.0	100
Irish potato	17.3	27.8	17.8	19.8	6.5	10.8	0.0	100
Taro & Yams	13.4	16.9	15.3	18.8	9.1	26.5	0.0	100
Cassava	6.5	18.9	20.7	24.2	8.2	14.6	6.9	100
Bush bean	1.4	14.1	23.0	46.1	12.8	2.7	0.0	100
Climbing bean	6.3	32.5	29.2	24.8	6.5	0.7	0.0	100
Pea	10.2	30.6	24.0	21.7	8.4	5.2	0.0	100
Groundnut	0.4	13.1	23.0	49.6	12.4	1.5	0.0	100
Soybean	1.2	16.3	27.0	34.1	15.1	6.4	0.0	100
Cooking banana	1.7	19.4	14.7	15.5	8.9	11.4	28.5	100
Dessert banana	0.0	7.0	9.0	13.5	7.0	35.3	28.3	100
Banana for beer	0.3	21.9	18.8	20.7	4.3	9.3	24.8	100
Vegetables	15.8	17.8	10.8	15.9	11.8	27.9	0.0	100
Fruits	37.3	4.7	6.1	15.6	0.0	26.5	9.9	100
Fodder crops	2.9	24.7	8.6	25.4	6.1	32.3	0.0	100
Other crops	3.2	11.9	11.4	30.2	11.2	30.3	1.8	100

Source: NISR, SAS 2025

Table 19: 2025 Season A_Use of seeds by farmer type per district (%age)

District	%age of farmers who used improved seeds			%age of sampled plots in which improved seeds was used			%age of land size in which improved seeds were used		
	Overall	SSF		Overall	SSF		Overall	SSF	
Nyarugenge	26.8	26.8		23.5	23.5		26.1	26.1	
Gasabo	42.5	40.5	85.7	37.0	34.2	52.4	38.7	37.1	89.6
Kicukiro	46.0	44.7	100.0	35.4	34.6	55.6	34.7	32.8	94.6
Nyanza	40.5	39.8	80.0	38.3	37.5	64.7	39.3	38.8	59.8
Gisagara	54.0	52.3	94.7	48.3	46.6	87.0	52.7	48.9	94.7
Nyaruguru	27.1	23.9	100.0	20.3	16.7	84.2	18.9	17.8	81.9
Huye	43.1	39.7	92.6	39.1	35.0	83.7	38.7	35.7	92.4
Nyamagabe	26.5	26.1	60.0	19.5	19.0	44.4	20.6	20.3	69.6
Ruhango	31.8	30.6	88.9	27.4	26.3	57.1	27.5	25.2	97.6
Muhanga	20.6	19.1	88.9	17.6	16.1	71.4	17.2	15.3	92.1
Kamonyi	47.1	45.6	100.0	39.5	37.8	94.7	39.8	38.4	99.4
Karongi	32.3	32.4	-	27.2	27.3	-	27.3	27.4	-
Rutsiro	21.8	21.8		18.2	18.2		17.6	17.6	
Rubavu	25.9	25.6	50.0	24.6	24.6	28.6	24.1	24.1	60.3
Nyabihu	20.7	20.5	100.0	17.7	17.5	100.0	17.5	17.5	100.0
Ngororero	11.1	11.1		9.7	9.7		9.7	9.7	
Rusizi	49.2	49.0	60.0	46.1	45.3	68.8	47.2	44.7	87.0
Nyamasheke	26.0	25.3	71.4	21.4	20.4	77.8	19.4	18.5	88.8
Rulindo	32.9	32.2	80.0	28.9	27.9	61.5	27.6	27.4	78.8
Gakenke	24.6	24.4	50.0	21.5	21.3	50.0	21.2	20.8	89.1
Musanze	24.5	23.8	100.0	22.7	20.2	94.7	20.5	20.2	92.3
Burera	29.9	29.9		24.7	24.7		24.7	24.7	
Gicumbi	28.3	27.7	83.3	23.5	21.7	62.1	20.4	20.3	74.7
Rwamagana	54.3	52.0	87.5	47.1	46.3	49.7	47.9	46.9	83.2
Nyagatare	55.2	52.1	87.0	49.7	46.2	66.7	52.4	50.3	91.2
Gatsibo	49.2	46.7	100.0	42.7	39.0	73.3	43.5	40.6	98.9
Kayonza	47.2	44.6	87.1	44.6	41.3	62.3	45.4	42.8	94.1
Kirehe	52.7	52.0	100.0	45.9	45.0	100.0	47.5	45.3	100.0
Ngoma	52.1	51.0	85.7	47.0	45.2	65.2	46.4	45.6	79.8
Bugesera	40.2	38.8	63.2	34.3	34.3	34.5	35.5	33.3	86.5
National	37.3	35.9	85.4	33.0	31.1	60.8	34.4	32.8	91.1

Source: NISR, SAS 2025

Table 20: 2025 Season A Seed type by crops (%age

Crop	Traditional seeds	Improved seeds	Total
Maize	36.9	63.2	100
Paddy rice	90.0	10.0	100
Wheat	78.4	21.6	100
Irish potato	95.4	4.6	100
Cassava	97.4	2.6	100
Bush bean	98.3	1.7	100
Climbing bean	98.2	1.8	100
Pea	96.5	3.5	100
Soybean	98.3	1.7	100
Cooking banana	99.8	0.2	100
Dessert banana	97.5	2.5	100
Banana for beer	98.7	1.3	100
Vegetables	63.9	36.1	100
Fruits	83.6	16.4	100
Fodder crops	99.5	0.5	100
Other crops	87.8	12.2	100
National	85.6	14.4	100

Source: NISR, SAS 2025

Table 21: 2025 Season A_%age of farmers by source of improved seeds per district

District	Sources of improved seeds							
	Government (MINAGRI/ RAB/NAEB)	Recognized seed multipliers	Agro-dealers	NGOs/ Companies	Market	Agriculture cooperative	Other source	Total
Nyarugenge	-	-	60.0	40.0	-	-	-	100
Gasabo	-	6.3	82.8	1.6	6.3	3.1	-	100
Kicukiro	-	11.4	77.1	8.6	-	-	2.9	100
Nyanza	2.4	4.8	59.5	27.4	-	4.8	1.2	100
Gisagara	4.7	12.3	34.0	26.4	9.4	7.6	5.7	100
Nyaruguru	8.3	10.4	41.7	37.5	2.1	-	-	100
Huye	4.1	7.1	19.4	54.1	4.1	10.2	1.0	100
Nyamagabe	6.4	14.3	27.0	46.0	1.6	4.8	-	100
Ruhango	2.2	37.8	8.9	42.2	1.1	7.8	-	100
Muhanga	13.2	13.2	23.7	36.8	-	10.5	2.6	100
Kamonyi	3.0	5.0	52.5	22.8	7.9	8.9	-	100
Karongi	3.1	1.5	43.1	44.6	1.5	3.1	3.1	100
Rutsiro	2.2	8.7	28.3	50.0	4.4	2.2	4.4	100
Rubavu	8.2	6.6	24.6	21.3	32.8	6.6	-	100
Nyabihu	16.7	13.3	30.0	23.3	11.7	5.0	-	100
Ngororero	-	-	40.0	50.0	10.0	-	-	100
Rusizi	8.9	1.3	51.9	36.7	-	1.3	-	100
Nyamasheke	3.4	5.1	30.5	52.5	3.4	5.1	-	100
Rulindo	-	1.4	38.4	42.5	6.9	5.5	5.5	100
Gakenke	1.5	16.7	39.4	24.2	13.6	3.0	1.5	100
Musanze	7.8	2.2	51.1	32.2	5.6	1.1	-	100
Burera	3.7	8.4	30.8	38.3	14.0	3.7	0.9	100
Gicumbi	8.2	4.1	19.2	61.6	4.1	-	2.7	100
Rwamagana	2.9	6.5	16.7	71.7	1.5	0.7	-	100
Nyagatare	1.1	9.2	45.1	36.4	1.1	7.1	-	100

District	Sources of improved seeds							
	Government (MINAGRI/ RAB/NAEB)	Recognized seed multipliers	Agro-dealers	NGOs/ Companies	Market	Agriculture cooperative	Other source	Total
Gatsibo	16.0	0.6	22.7	54.0	2.5	4.3	-	100
Kayonza	17.7	9.2	31.9	34.5	5.0	1.7	-	100
Kirehe	1.5	3.5	18.8	56.9	0.5	16.8	2.0	100
Ngoma	3.3	8.6	11.3	55.6	7.3	4.6	9.3	100
Bugesera	1.0	2.9	36.2	43.8	3.8	11.4	1.0	100
National	5.2	7.6	33.2	41.8	5.0	5.7	1.6	100

Source: NISR, SAS 2025

Table 22: 2025 Season A_%age of crops by source of seeds

Crop	Government (MINAGRI/ RAB/	Recognized seed multipliers	Agro dealers	NGOs/	Market	Agriculture cooperative	Other source	Total
Maize	3.0	2.0	36.6	51.4	3.5	3.2	0.4	100
Paddy rice	5.0	38.3	1.7	-	1.7	51.7	1.7	100
Wheat	57.1	14.3	21.4	7.1	-	-	-	100
Irish potato	24.6	38.9	10.3	8.7	8.7	5.6	3.2	100
Cassava	25.4	41.8	11.9	6.0	3.0	2.2	9.7	100
Bush bean	15.6	14.7	9.2	22.9	22.0	7.3	8.3	100
Climbing bean	14.1	14.1	32.8	18.8	7.8	7.8	4.7	100
Pea	50.0	28.6	21.4	-	-	-	-	100
Soybean	19.2	11.5	34.6	15.4	3.9	7.7	7.7	100
Cooking banana	7.1	7.1	-	42.9	14.3	14.3	14.3	100
Dessert banana	12.8	25.5	19.2	19.2	2.1	4.3	17.0	100
Banana for beer	6.0	32.0	18.0	12.0	4.0	4.0	24.0	100
Vegetables	1.8	2.4	50.9	7.9	35.5	0.6	0.9	100
Fruits	34.1	33.0	4.6	15.9	8.0	3.4	1.1	100
Fodder crops	36.0	6.0	46.0	6.0	2.0	2.0	2.0	100
Other crops	25.0	26.9	-	9.6	5.8	28.9	3.9	100

Source: NISR, SAS 2025

Table 23: 2025 Season A_Use of organic fertilizer by farmer type per district (%age)

District	%age of farmers who applied organic fertilizer			%age of plots in which organic fertilizer was applied			%age of land size in which organic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	80.3	80.3		58.8	58.8		53.4	53.4	
Gasabo	85.7	86.4	71.4	71.0	71.0	60.7	72.1	72.2	65.6
Kicukiro	70.1	70.6	50.0	74.1	74.1	100.0	67.2	66.1	100.0
Nyanza	83.2	83.1	90.0	76.6	76.6	75.0	77.9	77.3	99.2
Gisagara	89.0	90.5	52.6	75.9	75.9	100.0	78.9	78.5	100.0
Nyaruguru	98.1	98.0	100.0	78.5	78.5	94.4	81.0	80.7	98.9
Huye	86.0	86.0	85.2	85.9	85.9	94.9	85.9	85.2	98.3
Nyamagabe	96.7	96.7	100.0	82.8	82.8	66.7	79.6	79.5	88.2
Ruhango	85.6	86.0	66.7	69.3	69.3	50.0	68.2	67.3	98.8
Muhanga	95.5	95.4	100.0	86.1	86.1	100.0	86.4	86.1	100.0
Kamonyi	89.4	89.1	100.0	71.3	71.3	79.0	70.1	69.4	97.6
Karongi	91.0	91.2	0.0	74.1	74.1		73.4	73.4	
Rutsiro	90.1	90.1		83.6	83.6		83.2	83.2	

District	%age of farmers who applied organic fertilizer			%age of plots in which organic fertilizer was applied			%age of land size in which organic fertilizer was applied		
Rubavu	65.9	65.8	75.0	58.9	58.9	75.0	59.1	59.1	74.2
Nyabihu	94.6	94.6	100.0	73.9	73.9	100.0	72.6	72.6	100.0
Ngororero	95.5	95.5		82.3	82.3		81.8	81.8	
Rusizi	87.3	88.8	20.0	82.1	82.1	100.0	80.8	80.4	101.7
Nyamasheke	96.5	96.9	71.4	79.8	79.8	85.7	75.8	75.6	105.2
Rulindo	98.1	98.1	100.0	82.3	82.3	100.0	82.0	82.0	100.4
Gakenke	96.4	96.6	75.0	88.1	88.1	100.0	89.4	89.4	98.5
Musanze	87.0	86.9	100.0	80.1	80.1	66.7	81.3	81.3	98.5
Burera	95.1	95.1		79.3	79.3		79.2	79.2	
Gicumbi	96.9	96.8	100.0	82.9	82.9	93.1	84.0	84.0	96.4
Rwamagana	88.6	88.7	87.5	69.5	69.5	66.3	76.5	76.3	89.9
Nyagatare	74.3	75.7	60.4	68.4	68.4	71.4	68.5	67.9	93.4
Gatsibo	89.0	88.8	93.6	80.7	80.7	68.3	81.2	80.6	95.5
Kayonza	79.2	80.1	64.5	74.1	74.1	57.6	75.8	76.0	72.2
Kirehe	92.2	92.4	80.0	65.6	65.6	100.0	72.6	71.4	100.0
Ngoma	85.7	85.7	85.7	73.9	73.9	76.6	76.8	76.3	96.2
Bugesera	69.2	68.5	81.6	66.0	66.0	73.8	62.4	60.7	88.4
National	88.0	88.3	77.5	77.9	77.9	73.0	76.9	76.5	94.1

Source: NISR, SAS 2025

Table 24: 2025 Season A Use of inorganic fertilizer by farmer type per district (%age)

District	%age of farmers who used inorganic fertilizers			%age of plots in which inorganic fertilizer was applied			%age of land under which inorganic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	31.7	31.7		45.3	45.3		41.1	41.1	
Gasabo	52.6	51.0	85.7	51.5	52.1	46.3	58.2	56.6	85.2
Kicukiro	60.3	59.4	100.0	59.2	59.2	100.0	54.7	52.1	100.0
Nyanza	33.4	32.1	100.0	59.6	59.5	64.7	63.4	60.1	99.1
Gisagara	61.4	59.9	100.0	54.4	54.4	100.0	64.5	59.2	100.0
Nyaruguru	86.3	85.7	100.0	56.5	57.5	84.2	67.2	66.5	98.4
Huye	49.1	45.8	96.3	61.5	61.7	94.1	64.8	60.4	99.0
Nyamagabe	74.2	73.9	100.0	53.0	52.5	100.0	57.8	57.5	100.0
Ruhango	33.3	32.0	100.0	47.1	47.1	47.6	46.1	40.8	98.7
Muhanga	45.0	43.8	100.0	42.1	42.5	100.0	43.6	40.2	100.0
Kamonyi	45.8	44.3	100.0	35.9	35.9	79.0	37.1	34.1	97.6
Karongi	62.5	62.7	0.0	51.2	51.4	0.0	55.5	55.5	0.0
Rutsiro	61.2	61.2		59.5	60.4		64.7	64.7	
Rubavu	68.7	68.6	75.0	64.9	63.5	75.0	70.0	70.0	86.5
Nyabihu	76.5	76.5	100.0	61.8	61.0	100.0	66.2	66.1	100.0
Ngororero	68.3	68.3		57.2	56.3		57.4	57.4	
Rusizi	84.2	84.1	90.0	69.9	70.5	88.9	79.3	77.9	100.0
Nyamasheke	81.7	81.4	100.0	60.6	61.3	88.9	61.7	61.1	99.8
Rulindo	69.6	69.4	80.0	58.1	57.3	90.9	57.2	57.1	99.4
Gakenke	80.2	80.2	75.0	56.3	57.0	100.0	62.5	62.3	100.0
Musanze	73.4	73.1	100.0	63.4	63.4	68.4	69.3	69.2	89.2
Burera	70.9	70.9		55.5	55.9		61.5	61.5	
Gicumbi	61.1	60.7	100.0	55.4	58.2	55.2	52.8	52.8	62.7
Rwamagana	66.1	65.3	78.1	61.9	62.8	56.1	68.1	67.3	90.8
Nyagatare	75.0	72.8	98.1	58.2	58.1	81.8	74.7	73.0	97.9
Gatsibo	67.4	65.8	100.0	60.9	60.9	60.7	69.6	67.5	98.6
Kayonza	56.0	54.0	87.1	63.6	63.6	73.1	74.3	72.3	93.6
Kirehe	75.2	75.0	90.0	52.3	52.7	100.0	69.4	67.7	100.0
Ngoma	61.4	60.6	85.7	52.9	53.3	62.3	59.5	58.2	94.1
Bugesera	45.0	42.9	81.6	59.6	59.7	57.1	62.8	59.8	91.9
National	63.2	62.4	91.9	56.5	56.5	69.0	64.0	62.5	97.2

Source: NISR, SAS 2025

Table 25: 2025 Season A_%age of farmers by source of inorganic fertilizers per district

District	Government (MINAGRI/ RAB/NAEB)	Agro dealers	NGOs/ Companies	Market	Agriculture cooperative	Other source	Total
Nyarugenge	2.2	44.4	46.7	6.7	-	-	100
Gasabo	1.2	90.7	3.1	-	4.9	-	100
Kicukiro	-	92.4	5.7	1.9	-	-	100
Nyanza	1.2	60.1	33.5	4.1	1.2	-	100
Gisagara	3.3	45.9	40.5	2.0	8.3	-	100
Nyaruguru	1.9	25.5	65.3	5.9	1.5	-	100
Huye	0.5	26.7	61.2	6.8	4.9	-	100
Nyamagabe	3.8	38.0	51.6	2.5	3.2	1.0	100
Ruhango	6.5	24.5	59.4	1.9	7.7	-	100
Muhanga	14.7	19.5	55.8	6.8	2.6	0.5	100
Kamonyi	2.1	34.2	41.8	10.6	11.4	-	100
Karongi	1.4	46.6	50.7	-	1.4	-	100
Rutsiro	5.8	40.7	48.6	4.2	0.8	-	100
Rubavu	0.8	59.1	23.8	14.7	1.6	-	100
Nyabihu	-	58.9	24.5	14.7	2.0	-	100
Ngororero	0.9	33.9	59.3	6.0	-	-	100
Rusizi	1.6	56.1	41.0	0.5	0.8	-	100
Nyamasheke	1.4	42.9	49.6	4.6	1.6	-	100
Rulindo	0.8	46.9	43.0	3.1	6.3	-	100
Gakenke	5.7	58.7	32.2	2.2	1.2	-	100
Musanze	0.6	69.4	27.3	1.9	0.3	0.6	100
Burera	1.1	49.4	37.8	8.9	2.8	-	100
Gicumbi	6.4	30.6	59.7	2.7	0.6	-	100
Rwamagana	1.8	21.5	71.3	3.3	2.1	-	100
Nyagatare	0.7	57.8	37.1	1.1	3.1	0.2	100
Gatsibo	12.0	29.2	51.1	5.2	2.5	-	100
Kayonza	6.7	47.4	39.7	4.6	1.8	-	100
Kirehe	1.5	23.7	55.0	4.5	13.9	1.3	100
Ngoma	4.1	14.6	72.3	4.4	3.9	0.8	100
Bugesera	0.3	43.1	46.1	3.0	7.6	-	100
National	3.0	42.8	45.9	4.6	3.5	0.2	100

Source: NISR, SAS 2025

Table 26: 2025 Season A_Source of inorganic fertilizer by type of fertilizer

Fertilizer name	Government (MINAGRI/ RAB/ NAEB)	Agro dealers	NGOs/ Companies	Market	Agriculture cooperative	Other source	Total
NPK 17-17-17	1.9	57.6	29.5	6.9	4.2	-	100
NPK 20-10-10;	51.4	22.9	11.4	-	14.3	-	100
NPK 25-5-5;	66.7	22.2	5.6	5.6	-	-	100
NPK 22-6-12;	42.9	20.0	31.4	-	2.9	2.9	100
Other NPK;	6.1	39.4	27.3	6.1	21.2	-	100
Urea;	2.0	42.3	48.4	3.9	3.2	0.2	100
liquid urea (Mbonea M	3.0	48.5	33.3	6.1	9.1	-	100

DAP	2.2	40.2	51.2	3.6	2.6	0.2	100
TSP	-	33.3	66.7	-	-	-	100
KCL/MOP,	-	66.7	33.3	-	-	-	100
Omax;	-	70.0	30.0	-	-	-	100
Winner;	-	60.0	20.0	-	20.0	-	100
Yara Viva;	14.3	42.9	14.3	28.6	-	-	100
Amidas;	-	40.0	33.3	-	26.7	-	100
Cereal;	-	53.6	28.6	-	17.9	-	100
DI Grow;	2.0	35.3	37.3	13.7	11.8	-	100
Dyna gro;	-	66.7	33.3	-	-	-	100
Lime/Ishwagara	1.9	53.9	39.4	2.9	1.9	-	100
Other type of fertilizer	-	47.6	40.6	3.5	8.4	-	100

Source: NISR, SAS 2025

Table 27: 2025 Season A %age of plots by type of inorganic fertilizer per district

District	NPK	Urea	DAP	KCL/MOP	Lime	Others	Total
Nyarugenge	21.4	52.4	26.2	-	-	-	100
Gasabo	20.8	46.2	33.0	-	-	-	100
Kicukiro	1.9	44.7	53.4	-	-	0.0	100
Nyanza	11.0	45.9	42.4	-	-	0.8	100
Gisagara	8.9	43.9	46.9	-	-	0.4	100
Nyaruguru	14.6	34.4	48.3	-	-	2.7	100
Huye	13.4	44.9	41.5	-	-	0.2	100
Nyamagabe	12.7	40.4	43.8	-	2.5	0.6	100
Ruhango	14.6	41.9	43.5	-	-	-	100
Muhanga	10.1	39.6	50.3	-	-	-	100
Kamonyi	10.5	53.3	33.2	-	0.3	2.7	100
Karongi	2.8	44.8	50.9	-	0.2	1.3	100
Rutsiro	19.9	29.6	42.4	-	7.6	0.5	100
Rubavu	33.8	35.0	30.1	-	-	1.2	100
Nyabihu	36.4	30.7	30.8	0.2	-	2.0	100
Ngororero	8.3	38.2	51.6	-	0.9	1.1	100
Rusizi	10.1	38.0	47.3	-	3.9	0.7	100
Nyamasheke	14.2	35.6	46.7	-	3.1	0.4	100
Rulindo	19.3	41.4	35.8	-	-	3.5	100
Gakenke	10.1	36.3	52.3	-	0.2	1.1	100
Musanze	21.3	31.2	44.7	-	-	2.9	100
Burera	14.7	36.5	48.5	-	-	0.4	100
Gicumbi	30.8	26.5	38.9	-	1.8	1.9	100
Rwamagana	10.9	43.2	43.6	-	0.2	2.1	100
Nyagatare	4.0	50.4	44.3	-	-	1.3	100
Gatsibo	10.5	47.4	40.2	-	0.2	1.7	100
Kayonza	6.3	46.2	46.9	-	-	0.6	100
Kirehe	4.8	39.8	53.6	-	-	1.8	100
Ngoma	7.3	46.1	44.9	-	0.1	1.7	100
Bugesera	7.2	36.1	56.0	-	-	0.7	100
National	13.3	39.5	45.0	0.0	1.0	1.3	100

Source: NISR, SAS 2025

Table 28: 2025 Season A_Use of pesticides by farmer type per district (%age)

District	%age of farmers who used pesticides			%age of plots in which pesticides were used			%age of land size in which pesticides were used		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	34.5	34.5		31.7	32.0		24.3	24.3	
Gasabo	44.2	41.8	92.9	47.6	48.3	52.5	50.9	48.1	88.5
Kicukiro	44.8	43.5	100.0	45.8	45.8	100.0	53.8	50.0	100.0
Nyanza	28.8	27.6	90.0	60.3	60.5	56.3	65.7	64.2	86.2
Gisagara	46.5	44.4	100.0	50.8	50.8	100.0	60.9	52.7	100.0
Nyaruguru	63.7	62.1	100.0	31.7	32.1	84.2	41.7	40.1	98.4
Huye	43.6	40.5	88.9	52.9	52.7	96.8	62.4	57.7	99.9
Nyamagabe	48.6	48.0	100.0	49.7	49.0	100.0	50.7	50.3	100.0
Ruhango	28.8	27.6	88.9	31.0	32.0	47.4	37.7	30.8	99.0
Muhanga	30.6	29.1	100.0	46.7	47.0	100.0	43.1	37.7	100.0
Kamonyi	44.8	43.5	92.9	38.4	38.4	100.0	42.5	39.5	100.0
Karongi	29.1	29.2	0.0	32.9	33.2	0.0	35.8	35.8	0.0
Rutsiro	29.7	29.7		63.3	63.8		62.1	62.1	
Rubavu	76.0	76.0	75.0	77.3	76.7	100.0	82.2	82.2	100.0
Nyabihu	74.4	74.3	100.0	62.6	61.8	100.0	69.5	69.5	100.0
Ngororero	30.0	30.0		50.5	48.0		57.0	57.0	
Rusizi	23.2	21.6	90.0	56.6	60.4	86.7	66.1	57.5	99.2
Nyamasheke	34.4	33.6	85.7	25.7	26.1	100.0	35.3	32.8	100.0
Rulindo	63.0	62.5	100.0	46.5	46.3	76.9	43.9	43.8	85.8
Gakenke	43.3	42.8	100.0	46.2	46.8	100.0	53.8	53.2	100.0
Musanze	67.3	67.1	100.0	77.4	77.4	73.7	79.4	79.4	90.0
Burera	63.0	63.0		53.3	53.3		57.1	57.1	
Gicumbi	48.5	47.9	100.0	50.1	52.1	58.6	50.2	50.1	79.2
Rwamagana	40.7	37.5	87.5	63.9	65.4	41.9	68.0	67.0	81.5
Nyagatare	30.5	26.5	71.7	50.1	49.7	73.3	61.5	55.3	96.3
Gatsibo	38.0	35.4	90.3	57.0	57.0	57.5	66.9	62.4	98.6
Kayonza	38.5	35.2	90.3	55.5	55.6	73.3	65.7	61.5	93.6
Kirehe	46.2	45.6	90.0	44.6	44.8	92.9	62.2	58.8	99.9
Ngoma	28.7	27.0	76.2	49.1	49.1	74.1	53.1	49.4	98.1
Bugesera	20.7	17.3	79.0	54.0	54.0	62.4	57.0	48.5	92.3
National	41.9	40.6	86.9	50.3	50.4	66.7	58.0	55.3	96.6

Source: NISR, SAS 2025

Table 29: 2025 Season A %age of plots by type of pesticides per district

		Type of pesticides								
District	**Dithane**	**Ridomil**	**Dimethoate**	**Cypermetrin**	**Dursiban**	**Pilkare**	**Rocket**	**Beam**	**Other pesticide**	**Total**
Nyarugenge	24.0	-	12.0	16.0	-	-	40.0	-	8.0	100
Gasabo	10.2	1.4	8.2	9.5	-	-	44.9	1.4	24.5	100
Kicukiro	8.6	-	1.7	10.3	-	-	67.2	1.7	10.3	100
Nyanza	7.8	0.8	-	5.4	-	-	79.1	3.1	3.9	100
Gisagara	4.1	-	1.2	11.8	-	0.6	71.0	5.3	5.9	100
Nyaruguru	17.5	1.8	0.9	9.7	0.9	-	45.6	0.9	22.8	100
Huye	5.4	-	3.0	19.2	-	-	60.5	8.4	3.6	100
Nyamagabe	23.7	2.6	2.6	28.2	-	-	41.7	-	1.3	100
Ruhango	4.1	1.4	2.7	8.1	-	-	74.3	8.1	1.4	100
Muhanga	12.8	9.0	1.3	10.3	-	-	59.0	2.6	5.1	100
Kamonyi	10.6	1.3	4.0	6.0	-	-	72.2	1.3	4.6	100
Karongi	4.9	1.6	6.6	19.7	-	-	59.0	-	8.2	100
Rutsiro	39.7	9.9	1.7	26.5	-	-	18.2	-	4.1	100
Rubavu	28.8	15.3	9.8	23.1	1.0	-	12.8	0.2	9.2	100
Nyabihu	33.0	8.1	5.2	28.3	-	-	13.5	-	12.0	100
Ngororero	15.9	3.7	2.8	15.9	-	-	56.1	-	5.6	100
Rusizi	21.6	0.8	13.6	16.0	-	-	31.2	0.8	16.0	100
Nyamasheke	12.5	-	6.8	30.7	1.1	-	36.4	6.8	5.7	100
Rulindo	26.8	2.6	4.6	9.2	-	-	44.4	0.7	11.8	100
Gakenke	4.0	-	2.0	43.4	-	-	43.4	-	7.2	100
Musanze	26.2	4.8	14.3	13.3	-	-	34.2	0.4	6.8	100
Burera	23.6	1.6	5.5	24.8	-	0.8	39.0	-	4.7	100
Gicumbi	28.1	2.4	4.4	4.8	-	-	51.8	0.4	8.0	100
Rwamagana	10.3	0.4	10.3	7.1	1.8	-	47.4	2.8	20.1	100
Nyagatare	8.3	-	9.5	17.4	-	-	37.2	5.5	22.1	100
Gatsibo	12.5	0.8	4.4	6.9	-	-	57.3	1.6	16.5	100
Kayonza	17.7	0.4	6.3	9.3	-	-	42.6	4.6	19.0	100
Kirehe	12.5	-	9.4	8.0	-	-	61.3	1.1	7.7	100
Ngoma	11.4	0.6	5.7	9.7	-	-	54.6	4.6	13.6	100
Bugesera	5.2	0.7	2.6	20.1	-	-	46.8	9.1	15.6	100
National	18.6	3.8	6.6	16.3	0.2	0.1	41.7	2.0	10.8	100

Source: NISR, SAS 2025

Table 30: 2025 Season A %age of farmers who practiced agricultural practices.

District	Farmers who protected land against erosion (%)			Farmers who used any mechanical equipment for agriculture activities %)			Farmers who practiced irrigation (%)			Farmers who practiced agroforestry (%)		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	88.7	88.7		0.7	0.7		8.5	8.5		31.0	31.0	
Gasabo	86.0	85.4	100	1.0	0.3	14.3	28.6	26.5	71.4	46.1	44.3	75.0
Kicukiro	52.3	51.2	100	2.9	1.8	50.0	11.5	11.2	25.0	53.7	52.6	85.7
Nyanza	90.9	90.8	100	0.2	0.2	-	9.1	7.7	80.0	46.6	46.6	46.2
Gisagara	80.9	80.5	89.5	-	-	-	26.9	24.8	79.0	42.7	44.8	3.3
Nyaruguru	97.1	97.0	100	0.3	0.3	-	19.4	18.6	38.5	28.2	27.5	46.7
Huye	94.5	94.2	100	-	-	-	26.2	21.9	88.9	24.7	25.4	13.3
Nyamagabe	90.1	90.0	100	0.2	0.2	-	11.5	10.9	60.0	43.3	42.9	71.4
Ruhango	91.9	91.7	100	0.4	0.2	11.1	15.0	14.0	66.7	34.3	33.9	50.0
Muhanga	94.3	94.2	100	0.2	0.2	-	13.5	11.9	88.9	50.4	50.0	66.7
Kamonyi	96.3	96.2	100	0.4	0.2	7.1	25.3	24.0	71.4	53.1	53.3	47.1
Karongi	94.0	94.0	100	0.4	0.4	-	11.8	11.8	-	40.7	40.5	100.0
Rutsiro	92.4	92.4		-	-		4.8	4.8		44.0	44.0	
Rubavu	92.1	92.0	100	-	-	-	1.1	1.1	-	35.4	34.8	71.4
Nyabihu	98.9	98.9	100	-	-	-	1.7	1.7	-	39.3	39.1	100.0
Ngororero	96.9	96.9		-	-		7.8	7.8		39.8	39.8	
Rusizi	87.1	86.8	100	-	-	-	12.0	10.5	80.0	46.1	46.4	30.0
Nyamasheke	96.7	96.6	100	0.2	-	14.3	15.2	13.9	100.0	43.8	43.8	40.0
Rulindo	96.7	96.7	100	0.5	-	40.0	34.5	34.4	40.0	48.0	48.0	50.0
Gakenke	99.4	99.4	100	-	-	-	8.7	8.4	50.0	38.8	38.7	50.0
Musanze	83.8	83.8	75.0	0.4	-	50.0	7.8	7.7	25.0	48.5	48.1	75.0
Burera	95.9	95.9		0.2	0.2		3.9	3.9		30.0	30.0	
Gicumbi	98.5	98.5	100	0.2	-	16.7	10.2	10.3	-	47.9	47.6	70.0
Rwamagana	90.4	89.8	100	2.2	1.3	15.6	17.2	14.5	56.3	60.2	59.1	70.9
Nyagatare	84.0	82.5	96	7.8	2.0	67.9	15.3	11.7	52.8	63.2	64.5	48.4
Gatsibo	89.5	89.3	93.6	1.4	0.2	25.8	13.0	10.7	58.1	50.4	49.6	62.8
Kayonza	83.9	83.1	96.8	3.0	0.6	38.7	16.1	11.7	83.9	46.4	47.3	36.7
Kirehe	89.0	88.8	100	0.6	-	40.0	9.9	8.8	90.0	61.8	62.6	15.4
Ngoma	86.3	85.8	100	0.6	-	19.1	11.8	10.1	61.9	51.7	52.3	37.9
Bugesera	76.7	75.7	94.7	1.3	0.3	18.4	12.0	9.1	60.5	59.4	59.6	56.3
National	90.3	90.1	97.4	0.9	0.3	23.0	13.4	12.0	64.1	46.2	46.1	49.1

Source: NISR, SAS 2025

Table 31: 2025 Season A %age of plots by types of irrigation used.

District	Modern irrigation					Traditional techniques
	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Nyarugenge	33.3	-	-	-	-	66.7
Gasabo	12.2	10.2	2.0	4.1	-	71.4
Kicukiro	50.0	12.5	-	25.0	-	12.5
Nyanza	9.1	63.6	-	-	-	27.3
Gisagara	8.6	54.3	-	-	-	37.1
Nyaruguru	-	16.7	-	-	-	83.3
Huye	7.0	43.9	-	-	-	49.1
Nyamagabe	-	12.5	-	-	-	87.5
Ruhango	30.0	30.0	-	-	-	40.0
Muhanga	17.7	17.7	-	5.9	-	58.8
Kamonyi	10.3	10.3	-	-	-	79.5
Karongi	-	-	-	-	-	100.0
Rutsiro	25.0	-	-	-	25.0	50.0
Rubavu	-	-	-	-	-	100.0
Nyabihu						
Ngororero	-	-	-	-	-	100.0
Rusizi	18.2	31.8	-	-	-	50.0
Nyamasheke	32.1	25.0	-	-	-	42.9
Rulindo	45.7	2.2	-	8.7	-	43.5
Gakenke	35.7	14.3	-	-	-	50.0
Musanze	-	-	-	8.3	-	91.7
Burera	-	-	-	-	-	100.0
Gicumbi	44.4	-	-	-	-	55.6
Rwamagana	53.9	13.5	12.4	2.3	-	18.0
Nyagatare	17.1	28.6	2.9	-	11.4	40.0
Gatsibo	27.7	14.9	2.1	-	-	55.3
Kayonza	40.2	17.1	1.2	1.2	7.3	32.9
Kirehe	14.8	18.5	11.1	14.8	11.1	29.6
Ngoma	20.0	33.3	13.3	6.7	-	26.7
Bugesera	38.5	28.9	11.5	-	5.8	15.4
National	25.7	21.6	3.4	2.3	2.5	44.5

Source: NISR, SAS 2025

Table 32: 2025 Season A % age of plots by source of water used and district.

District	Source of water used				
	Rainwater	Water treatment	Underground	Lake / streams	Water catchment
Nyarugenge	-	-	-	100.0	-
Gasabo	4.0	16.0	24.0	50.0	6.0
Kicukiro	-	-	-	75.0	25.0
Nyanza	-	-	56.5	30.4	13.0
Gisagara	17.7	3.9	41.2	37.3	-
Nyaruguru	-	-	55.6	44.4	-
Huye	-	3.5	70.2	21.1	5.3
Nyamagabe	-	-	56.3	43.8	-
Ruhango	-	-	52.4	38.1	9.5
Muhanga	9.1	-	27.3	59.1	4.6
Kamonyi	-	-	30.0	62.5	7.5
Karongi	-	16.7	66.7	16.7	-
Rutsiro	-	25.0	25.0	50.0	-
Rubavu	-	100.0	-	-	-
Nyabihu					
Ngororero	-	-	71.4	28.6	-
Rusizi	-	9.1	31.8	45.5	13.6
Nyamasheke	-	9.1	39.4	51.5	-
Rulindo	-	6.0	24.0	48.0	22.0
Gakenke	7.1	-	14.3	78.6	-
Musanze	-	25.0	25.0	50.0	-
Ngororero	-	-	33.3	66.7	-
Gicumbi	-	5.6	61.1	33.3	-
Rwamagana	1.1	13.3	12.2	33.3	40.0
Nyagatare	5.4	-	28.4	59.5	6.8
Gatsibo	2.0	4.1	36.7	44.9	12.2
Kayonza	-	2.2	4.4	43.3	50.0
Kirehe	-	6.7	26.7	60.0	6.7
Ngoma	-	12.9	38.7	38.7	9.7
Bugesera	-	-	7.7	86.5	5.8
National	2.2	5.6	30.3	47.3	14.6

Source: NISR, SAS 2025

Table 33: 2025 Season A %age of plots by type of anti-erosion activities and district

District	Type of anti-erosion activities									
	Ditches	Trees/Windbreak/ shelterbelt	Bench terraces	Progressive terraces	Cover plants	Water drainage	Mulching	Beds/ridges	Water channels	Others
Nyarugenge	0.2	18.1	0.3	2.0	54.3	-	15.5	6.2	3.5	-
Gasabo	1.9	4.9	1.5	3.4	72.8	0.3	3.9	2.7	8.5	-
Kicukiro	0.6	12.1	1.9	1.0	41.6	0.1	13.4	29.3	0.0	-
Nyanza	9.0	5.7	4.9	21.4	40.5	0.8	1.0	5.4	11.4	-
Gisagara	13.9	5.4	1.3	21.4	37.9	0.7	1.7	4.5	13.2	-
Nyaruguru	5.1	2.9	6.6	15.8	47.2	-	0.8	3.4	18.0	-
Huye	7.9	2.8	1.4	24.3	42.6	0.1	1.0	10.5	9.6	-
Nyamagabe	3.4	8.5	13.5	7.3	54.1	-	0.5	3.0	9.7	-
Ruhango	9.4	3.1	0.1	14.3	57.9	0.6	1.1	0.8	12.7	-
Muhanga	4.4	1.0	2.0	5.9	71.3	0.4	4.7	1.7	8.3	0.3
Kamonyi	7.5	7.5	0.2	4.1	56.3	0.1	2.7	6.9	14.8	-
Karongi	5.3	12.7	2.4	9.0	65.0	0.4	1.7	1.2	2.3	-
Rutsiro	2.2	1.8	8.1	18.3	64.6	-	2.4	0.3	2.3	-
Rubavu	2.0	2.8	16.5	2.3	24.1	-	0.5	47.0	4.9	-
Nyabihu	3.8	7.6	13.1	8.8	54.9	-	0.3	10.3	1.2	-
Ngororero	4.5	3.4	5.0	4.3	75.7	-	2.1	0.3	4.8	-
Rusizi	4.4	12.5	-	3.0	63.1	0.5	5.8	5.5	5.2	0.0
Nyamasheke	4.2	10.6	7.5	4.9	55.9	0.6	7.4	4.0	4.9	0.1
Rulindo	3.9	5.7	5.2	11.7	61.2	-	1.8	2.8	7.6	-
Gakenke	0.9	7.7	4.7	6.7	75.8	0.3	1.2	1.1	1.8	-
Musanze	2.3	10.9	2.0	0.7	46.9	-	0.5	32.5	4.2	-
Burera	1.5	3.6	7.6	18.6	51.2	-	0.1	11.7	5.4	0.3
Gicumbi	2.0	10.4	14.3	19.7	50.3	0.9	0.5	0.2	1.7	-
Rwamagana	4.8	12.8	7.9	5.7	47.8	0.0	4.0	6.2	10.7	0.0
Nyagatare	4.0	13.0	-	5.0	55.6	0.1	11.5	4.3	6.5	-
Gatsibo	5.8	11.0	0.4	11.7	53.1	0.0	6.1	1.8	10.2	-
Kayonza	6.3	1.5	8.5	4.1	60.4	0.2	6.1	4.2	8.6	-
Kirehe	5.4	2.9	4.8	13.7	60.6	0.6	10.3	0.1	1.7	0.1
Ngoma	8.3	11.8	1.8	6.7	50.4	0.0	9.8	4.6	5.8	0.7
Bugesera	15.4	12.0	7.5	4.6	47.0	0.1	0.5	4.5	7.8	0.7
National	4.9	7.0	5.8	10.6	56.7	0.3	2.6	5.0	7.2	0.1

Source: NISR, SAS 2025

Table 34: 2025 Season A_%age of plots by degree of erosion per district

District	Degree of erosion			
	Severe (Rill erosion, Gully erosion, Mass movement/Landslides)	Moderate (Diffuse overland flow erosion, overland flow erosion)	Low (Wind erosion)	Very Low (Splash erosion)
Nyarugenge	2.0	15.8	79.9	2.3
Gasabo	0.8	9.8	40.0	49.5
Kicukiro	0.0	6.8	59.4	33.8
Nyanza	0.7	10.4	31.6	57.3
Gisagara	0.8	6.3	20.5	72.4
Nyaruguru	1.1	5.9	62.3	30.8
Huye	4.6	13.9	7.5	74.0
Nyamagabe	4.7	22.7	45.3	27.3
Ruhango	3.1	8.5	23.6	64.8
Muhanga	1.5	4.3	44.9	49.3
Kamonyi	2.3	15.4	46.7	35.6
Karongi	3.2	15.5	57.4	24.0
Rutsiro	6.0	16.5	17.3	60.3
Rubavu	0.3	3.8	28.2	67.8
Nyabihu	4.5	22.0	20.3	53.3
Ngororero	3.6	6.0	12.4	78.0
Rusizi	2.1	27.7	26.6	43.7
Nyamasheke	3.2	14.9	28.4	53.5
Rulindo	4.9	31.6	46.5	17.0
Gakenke	2.2	18.4	21.1	58.4
Musanze	2.1	9.8	26.3	61.9
Burera	0.3	7.6	44.8	47.3
Gicumbi	0.3	17.6	17.5	64.5
Rwamagana	0.4	2.6	22.4	74.7
Nyagatare	0.3	5.5	48.8	45.5
Gatsibo	0.2	5.0	28.7	66.2
Kayonza	0.8	6.3	24.9	68.0
Kirehe	1.2	2.8	2.8	93.2
Ngoma	0.7	10.1	54.0	35.3
Bugesera	0.2	1.4	41.9	56.5
National	2.2	12.3	32.3	53.3

Source: NISR, SAS 2025

Annex 2. Concepts, definitions, and estimation methods

1. Total land area

Total land area at district level is the district area excluding area under inland water bodies. The definition of inland water bodies generally includes major rivers and lakes.

2. Agricultural area

The agricultural area includes arable land, land under permanent[3] crops and permanent pasture.

3. Arable land

Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category. Data for arable land are not meant to indicate the amount of land that is potentially cultivable.

4. Permanent crop land

Permanent crops are sown or planted once and occupy the land for some years and do not need to be replanted after each annual harvest, such as cocoa, coffee and rubber. This category includes flowering shrubs, fruit trees, nut trees and vines, but excludes trees grown for wood or timber. The following crops are considered as permanent crops in SAS: Cooking banana, Dessert banana, Banana for beer, Avocado, Coffee, Sugar cane, Macadamia, Olive, Mango, Apple, Papaya, Orange, Lemon, Guava, Mulberry, Stevia, Jatropha, Palm, and Tea.

5. Permanent pasture land

Land used permanently (five years or more) for herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land).

6. Irrigated agricultural land

Area equipped for irrigation, which is actually irrigated, (sometimes expressed as a %age of the total land area). Part of the area equipped for irrigation refers to area equipped to provide water to crops and includes areas equipped for full/partial control irrigation, equipped lowland areas, and areas equipped for spate irrigation. Part of the area equipped for irrigation which is irrigated refers to physical areas. Irrigated land that is cultivated more than once a year is counted only once.

7. Physical area

Physical area refers to the total area of the plot as physically measured. The physical agricultural area in a district is estimated by aggregating all weighted individual agricultural plots area for that district.

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3 *For some plots, permanent crops are mixed with temporary crops which mean that same area is counted in both arable land area and area under permanent crop.*

8. Crop area (cultivated area)

Crop area refers to the area occupied by a given crop in a plot considering its density or occupation. In context of Rwanda as well as many African countries, mixed cropping system is a general practice in agriculture. This practice makes it complex to estimate area under crop cultivation. In case of pure stands (for crop completely covering a plot), crop area is equal or less to physical plot area (if a crop is partially covering the plot, the share is estimated then applied to the plot area). In case of mixed crops, the share of each crop in the plot is estimated by enumerator by eye estimation method and applied to the physical area of the plot to obtain area for each specific crop planted in plot. In this context, the crop share is eye estimation of crop density or occupation in a plot (in %) basing on spacing between plants. Cultivated area at district level is equal to the total weighted crop areas within plots in the whole district.

Examples

- In case of pure stands, crop area will be equal to the physical area if the crop entirely covers the whole plot. Otherwise, the crop area will be less than physical area. For example, a plot of 1 hectare in which maize was grown and completely occupies the whole plot (100 % occupied), it means that cultivated area for maize is 1 hectare. On the other side let us assume that the maize crop occupies 80 % of the total plot area. In that case the area of maize equals 0.8 hectares (1hectare times 0.8).
- In case of mixed cropping system, specifically seasonal crops the crop area is less than physical area. For example, a plot of 1 hectare grown with maize and beans which occupies 60 % and 40 % of total plot area respectively. The maize area will be 0.6 hectare (1hectare times 0.6), and beans area will be 0.4(1hectare times 0.4). It is important to note that sum of shares of seasonal crops do not exceed one hundred %.
- When seasonal and perennial crops are mixed in same plot, since perennial crops are permanent crops in nature, their shares are treated separately from seasonal crops. The sum of seasonal crops share does not exceed 100 %, while for perennial crops shares are given based on density (spacing between trees) and it may exceed 100 %. For example, a plot of 1 hectare grown with maize, bean, and cassava with 60 %, 40 % and 50% shares respectively. Maize area will be 0.6 hectare (1hectare times 0.6), beans area will be 0.4(1hectare times 0.4), while cassava area will be 0.5 hectare (1hectare times 0.5).

9. Developed area

Developed area is the land covered by crops. Due to mixed cropping (over exploitation of agriculture land or under exploitation in case pure cropping), developed area can be less or greater than the physical area. Basing on the example provided above of the plot in which maize, beans and cassava have been mixed, maize has 0.6, beans have 0.4 while cassava has 0.5 ha. The developed area equals the sum of the crops area equivalent to 1.5 ha.

10. Harvested area

Area harvested is defined as the total number of hectares for all crops that is harvested in a given agriculture season. In case of crops considered as seasonal, the harvested area is assumed to be equal to the cultivated area. For perennial crops a farmer can decide to harvest a portion of land and stores the remaining production in the farm or harvest the whole plot for commercial or other purposes. In this case, the proportion of harvested area is estimated and applied to the plot area to obtain actual harvested area. For example, cassava which occupies 0.5 hectare has 5,000 trees of cassava. In agriculture Season A, if the farmer only harvested 1,250 trees. In this case, the farmer harvested only a quarter (0.125hectares) of the cultivated area.

11. Crop yield

Crop yield is defined as total reported quantity of harvested crop over the harvested area of that crop.

12. Crop production

Crop production is the product of crop yield and crop area (harvested). At district level, crop production is estimated by taking crop yield of crop produce times total harvested area in the district.

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