Republic
of Rwanda

NATIONAL INSTITUTE OF
STATISTICS OF RWANDA

SEASONAL AGRICULTURAL SURVEY

Annual Report

2024

Contents

Figures, Maps and Tables

Acronyms and Abbreviations

%:   Percentage

Cs Entry: Census and Survey Processing data collection application

CSPro: Census and Survey Processing System

DAP: Diammonium Phosphate

GIS: Geographic Information System

GPS: Global Positioning System

Ha: Hectares

KCL/MOP: Potassium Chloride or Muriate of Potash

Kg: Kilograms

LSF: Large-Scale Farmer

MINAGRI: Ministry of Agriculture and Animal Resources

MFS: Multiple-Frame Sampling

MT: Metric Tones

NAEB: National Agricultural Export Development Board

NGOs: Non- Governmental Organization

NISR: The National Institute of Statistics of Rwanda

NPK: Nitrogen, Phosphorus and Potassium

PSTA: Strategic Plan for Agriculture Transformation
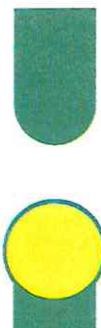
RAB: Rwanda Agriculture and Animal Resources Development Board

SAS: Seasonal Agricultural Survey

Sqm: Square meter

SSF: Small Scale Farmer

STATA: Software for Statistics and data Science

FOREWORD

Since 2012, the National Institute of Statistics of Rwanda (NISR) has been conducting the Seasonal Agricultural Survey (SAS) to provide timely and accurate estimates on national crop production, cultivated and harvested areas, crop yields, agricultural inputs, and farming practices. These data are crucial for monitoring the progress of agricultural programs and policies in Rwanda. The survey is carried out in close collaboration with the Ministry of Agriculture and Animal Resources (MINAGRI), the National Agricultural Export Development Board (NAEB), and the Rwanda Agriculture and Animal Resources Development Board (RAB).

This report highlights the significance of the Seasonal Agricultural Survey as a vital tool for monitoring national agricultural programs. By providing essential data, the SAS enables policymakers and stakeholders to identify priority intervention areas and address critical agricultural challenges effectively.

NISR values the feedback from all data users on this publication. In this regard, we are committed to continuously enhancing the variety of our analyses and the presentation of results to better support the effective use of our findings. NISR congratulates all those who contributed to this exercise.

In particular, NISR expresses its gratitude to the survey coordinators, supervisors, analysts, team leaders, interviewers, drivers, and respondents for making this survey possible.

NISR also encourages stakeholders, government agencies, researchers, partners, and the general public to make optimal use of the findings of this report for evidence-based decision-making and to drive the development of Rwanda's agricultural sector.

MURENZI Ivan

Director General, NISR

EXECUTIVE SUMMARY

This is the annual report for the Seasonal Agricultural Survey (SAS) conducted by the National Institute of Statistics of Rwanda (NISR) for the agricultural year 2023/2024, which covers three primary agricultural seasons in Rwanda. The main agricultural seasons include Season A, spanned from September 2023 to February 2024, Season B which started from March to June 2024, and Season C which started from July to September 2024.

Key findings

A comprehensive summary of the primary indicators assessed during SAS 2024 is presented in Table 0. It includes crop production, yield estimates, land use, use of agricultural inputs and agricultural practices.

Land use

In 2024 Season A, the total country land area is estimated at 2.376 million of hectares for which 1.372 million hectares (approximately 58% of total country land) is used for agriculture. 1 million hectares were used for Seasonal crops, 0.511 million hectares were covered by permanent crops, while 0.124 million hectares were used for permanent pasture. Likewise, in season B, the total country land area is estimated at 2.376 million of hectares for which 1.350 million hectares (approximately 57% of total country land) is used for agriculture. In addition, 0.987 million hectares were used for seasonal crops, 0.513 million hectares were covered by permanent crops, while 0.116 million hectares were used for permanent pasture.

Use of inputs

Common agricultural inputs include improved seeds, organic and chemical fertilizers, as well as pesticides and fungicides. In 2024, 39.7% of farmers used improved seeds in season A, 18% in season B, and 18.8% in season C. The use of organic fertilizers was higher, with 89.1% of farmers applying them in season A, 80.1% in season B, and 78.8 % in season C. In contrast, the use of inorganic fertilizers varied, with 64.5% of farmers using them in season A, 52% in season B, and 60.4 % in season C. Regarding pesticides and fungicides, 39.8% of farmers applied them in season A, 30.2% in season B, and 59.8 % in season C.

Agricultural practices

In season A of 2024, 7.5 percent of farmers practiced irrigation compared to 12.1 percent of farmers in season B and 58.2 percent in season C. In 2024 Season A, 90.6 percent of farmers practiced anti-erosion activities, compared to 89.2 percent of farmers in season B and 92.9 percent of farmers in season C.

Table 0. Summary of Seasonal Agricultural Survey main indicators

SAS main indicators	SAS 2022			SAS 2023			SAS 2024		
	Season			Season			Season		
	A	B	C	A	B	C	A	B	C
Cultivated area for major crops (Ha)									
Maize	219,683	81,339	-	226,982	93,927	-	249,435	92,944	
Sorghum	37,469	139,793	-	38,979	121,079	-	34,720	120,005	
Paddy rice	15,840	16,517	-	16,135	16,678	-	17,173	17,994	
Wheat	3,495	8,482	-	2,975	10,375	-	2,618	10,294	
Cassava	186,204	152,470	-	239,221	159,089	-	251,019	172,596	
Sweet potato	97,771	92,056	5,079	106,670	96,231	4,235	95,683	97,289	4,429
Irish potato	56,442	52,858	10,458	55,613	48,210	10,540	54,048	41,836	8,846
Yams & Taro	40,424	19,245	-	21,066	16,015	-	24,766	16,725	
Banana	259,505	213,322	-	255,290	258,094	-	273,223	258,564	
Cooking banana	96,434	73,554	-	96,262	87,735	-	102,458	90,123	
Dessert banana	36,598	37,511	-	37,009	54,000	-	44,094	48,809	
Banana for beer	126,472	102,257	-	122,019	116,359	-	126,671	119,632	
Bean	362,439	268,634	3,292	312,279	309,489	3,476	329,001	329,112	2,892
Pea	10,872	7,034	581	10,475	8,383	459	10,245	8,248	527
Groundnut	15,144	19,545	-	11,191	17,745	-	9,563	21,085	
Soybean	26,996	37,251	1,034	29,778	40,235	759	31,515	40,059	576
Vegetables	18,721	16,473	5,097	16,758	19,164	5,233	19,142	20,161	5,738
Fruits	10,914	10,373	-	10,131	10,507	-	10,332	10,463	
Harvested area for major crops (Ha)									
Maize	218,689	81,282	-	224,976	93,816	-	249,276	92,749	
Sorghum	37,469	139,792	-	38,935	121,054	-	34,719	120,005	
Paddy rice	15,779	16,474	-	16,070	16,603	-	16,973	17,578	
Wheat	3,495	8,482	-	2,891	10,375	-	2,617	10,294	
Cassava	45,418	48,494	-	45,182	49,655	-	38,833	54,679	
Sweet potato	97,767	86,589	5,079	90,657	83,212	4,235	88,708	86,580	4,429
Irish potato	56,442	52,844	10,458	55,583	48,205	10,540	53,957	41,716	8,846
Yams & Taro	13,231	15,928	-	13,371	13,621	-	13,482	15,334	
Banana	108,476	83,314	-	107,411	88,361	-	109,985	92,501	
Cooking banana	39,729	24,565	-	39,234	28,294	-	40,365	30,323	
Dessert banana	15,927	12,513	-	15,459	13,068	-	15,503	13,442	
Banana for beer	52,820	46,236	-	52,718	46,998	-	54,118	48,737	
Beans	362,438	268,628	3,292	312,160	309,410	3,476	328,961	328,858	2,892
Pea	10,872	7,034	581	10,472	8,383	459	10,244	8,245	527
Groundnut	15,118	19,545	-	11,191	17,745	-	9,563	21,086	
Soybean	26,996	37,229	1,034	29,701	40,231	759	31,513	39,999	576
Vegetables	18,298	15,777	5,097	16,382	17,854	5,233	18,322	19,842	5,738
Fruits	3,402	4,213	-	3,579	4,625	-	5,378	5,346	

Table 0. Summary of Seasonal Agricultural Survey main indicators(cont'd)

SAS main indicators	2022			2023			2024		
	Season			Season			Season		
	A	B	C	A	B	C	A	B	C
Production for major crops (MT)									
Maize	348,907	109,615	-	390,879	117,613	-	507,985	119,101	
Sorghum	45,016	147,411	-	46,296	139,425	-	47,452	140,314	
Paddy Rice	67,002	68,072	-	63,688	69,940	-	69,098	72,834	
Wheat	4,019	9,858	-	3,527	13,129	-	3,371	13,045	
Cassava	637,856	737,284	-	608,693	736,686	-	518,044	783,294	
Sweet potato	694,320	649,445	28,980	667,598	620,185	24,595	692,945	666,814	38,293
Irish potato	486,075	331,016	90,916	454,355	326,677	83,981	460,830	285,596	80,929
Yams & Taro	85,245	117,647	-	85,259	106,665	-	91,306	112,370	
Banana	1,192,331	1,016,137	-	1,219,408	1,089,377	-	1,294,683	1,142,552	
Cooking banana	545,588	450,427	-	555,973	493,865	-	587,981	515,798	
Dessert banana	126,838	145,753	-	129,371	149,266	-	133,317	152,891	
Banana for beer	519,904	419,956	-	534,065	446,246	-	573,386	473,863	
Beans	235,818	210,290	3,381	197,212	244,194	3,485	233,142	242,239	3,046
Pea	8,247	5,373	445	6,834	4,822	461	7,042	4,628	549
Groundnut	5,445	10,172	-	4,687	8,509	-	5,328	9,062	
Soybean	13,741	19,530	785	11,771	17,288	563	19,171	17,051	483
Vegetables	142,604	175,205	55,355	132,699	171,530	73,504	145,933	177,549	65,980
Fruits	21,261	26,872	-	22,556	26,084	-	25,250	27,219	
Yield for major crops (MT/ha)									
Maize	1.6	1.3	-	1.7	1.3	-	2.0	1.3	
Sorghum	1.2	1.1	-	1.2	1.2	-	1.4	1.2	
Paddy Rice	4.2	4.1	-	4.0	4.2	-	4.1	4.1	
Wheat	1.2	1.2	-	1.2	1.3	-	1.3	1.3	
Cassava	14.0	15.2	-	13.5	14.8	-	13.3	14.3	
Sweet potato	7.1	7.5	5.7	7.4	7.5	5.8	7.8	7.7	8.6
Irish potato	8.6	6.3	8.7	8.2	6.8	8.0	8.5	6.8	9.1
Yams & Taro	6.4	7.4	-	6.4	7.8	-	6.8	7.3	
Banana	11.0	12.2	-	11.4	12.3	-	11.8	12.4	
Cooking banana	13.7	18.3	-	14.2	17.5	-	14.6	17.0	
Dessert banana	8.0	11.6	-	8.4	11.4	-	8.6	11.4	
Banana for beer	9.8	9.1	-	10.1	9.5	-	10.6	9.7	
Beans	0.7	0.8	1.0	0.6	0.8	1.0	0.7	0.7	1.1
Pea	0.8	0.8	0.8	0.7	0.6	1.0	0.7	0.6	1.0
Groundnut	0.4	0.5	-	0.4	0.5	-	0.6	0.4	
Soybean	0.5	0.5	0.8	0.4	0.4	0.7	0.6	0.4	0.8
Vegetables	7.8	11.1	10.9	8.1	9.6	14.0	8.0	8.9	11.5
Fruits	6.3	6.4	-	6.3	5.6	-	4.7	5.1	

Table 0. Summary of Seasonal Agricultural Survey main indicators(contd')

| | SAS 2022 | | | SAS 2023 | | | SAS 2024 | | |
| | Season | | | Season | | | Season | | |
	A	B	C	A	B	C	A	B	C
Agricultural inputs: % of farmers who used									
Improved seeds	33.1	8.7	26.1	37.1	20.8	20.7	39.7	18	18.8
Organic fertilizer	69.7	57.9	82.3	87.9	83.4	83.7	89.1	80.1	78.8
Inorganic fertilizers	38.6	27.5	71.5	59.6	51.6	74.5	64.5	52	60.4
Pesticides	19.8	15.9	70.1	34.5	29.7	69.3	39.8	30.2	59.8
Agricultural practices: % of farmers who practiced									
Irrigation	8.2	8.0	62.9	10.3	9.6	64.6	7.5	12.1	58.2
Anti-erosion	92.1	91.4	95.9	92.1	91.6	94.8	90.6	89.2	92.9
Agricultural area (,000Ha)									
Total land area	2,377.1	2,377.1	-	2,377.1	2,377.1	-	2,376.3	2,376.3	-
Agriculture land	1,402.0	1,393.2	-	1,367.5	1,344.6	-	1,372.0	1,349.7	-
Area under permanent crops	555.9	544.6	-	542.5	540.0	-	511.2	513.3	-
Area under permanent pasture	135.2	133.0	-	126	124.3	-	124.5	115.9	-
Area under seasonal crops	1,067.2	1,013.9	-	1,000	982.7	-	1,049.1	987.0	-
Temporary fallow land	94.7	125.1	-	112	117.6	-	103.5	127.9	-
Temporarily meadow and pasture	10.1	12.8	-	11	10.2	-	9.8	11.0	-

INTRODUCTION

Agriculture continues to be one of the most important pillars of economic growth for Rwanda, and a much emphasis for agriculture transformation has been underpinned under the new national development strategy (NST 2). In recognition of its potential in economic development, food security and poverty reduction, the government has set an ambitious agricultural agenda under the new strategy for transformation of agriculture (PSTA 5) aiming at transformation of Rwandan agriculture from a sector characterised by low productivity to a sector using knowledge to increase productivity and investing in value addition and commercialization.

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.

Every three years, SAS undergoes an upgrade to revise the sample frame based on changes in land classes and subsequently select new sample segments to be surveyed over the subsequent three-years. This report outlines the third upgrade of the Seasonal Agriculture Survey, detailing enhancements to the area frame, data collection activities, and key findings for three Seasons.

1.1 Objective of Seasonal Agricultural Survey

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, pastureland, 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

SURVEY METHODOLOGY

2.1. Sample 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.

2.1.1. 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).
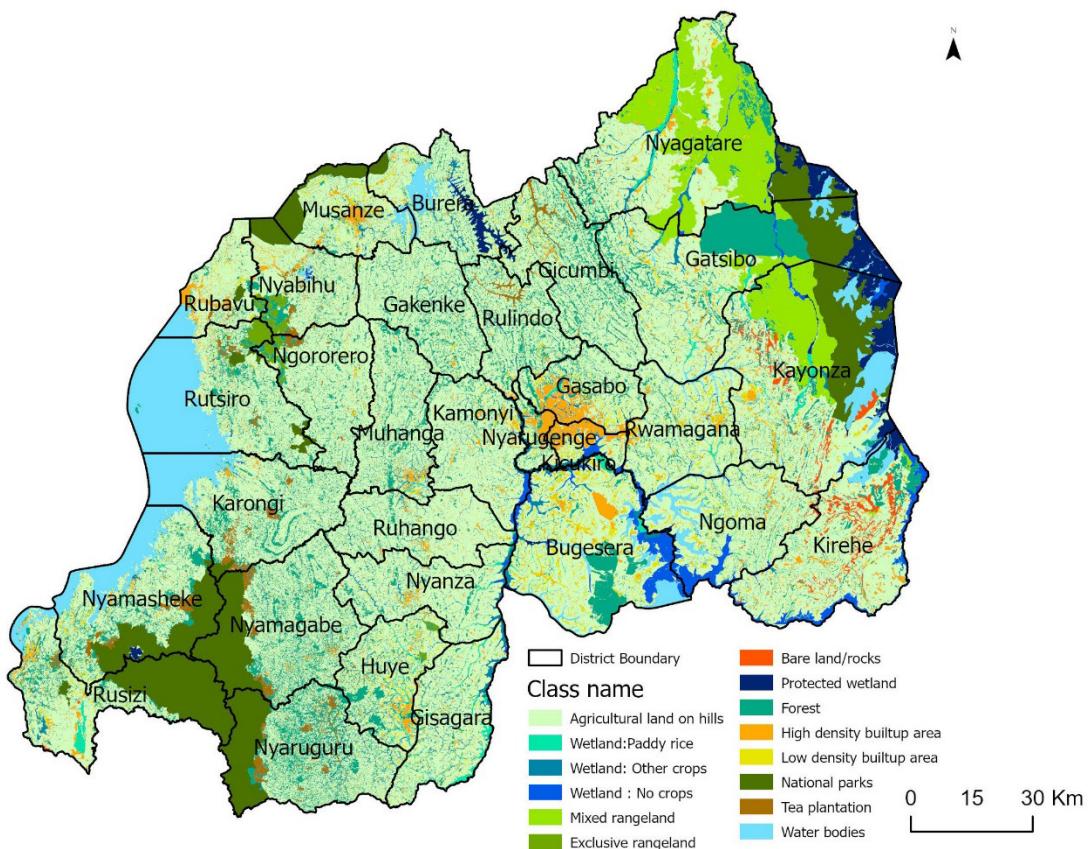
Table 1: List of Rwanda land cover classes

No	Class name	Area (Ha)	Percentage 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 2024

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

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

2.1.2. 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:
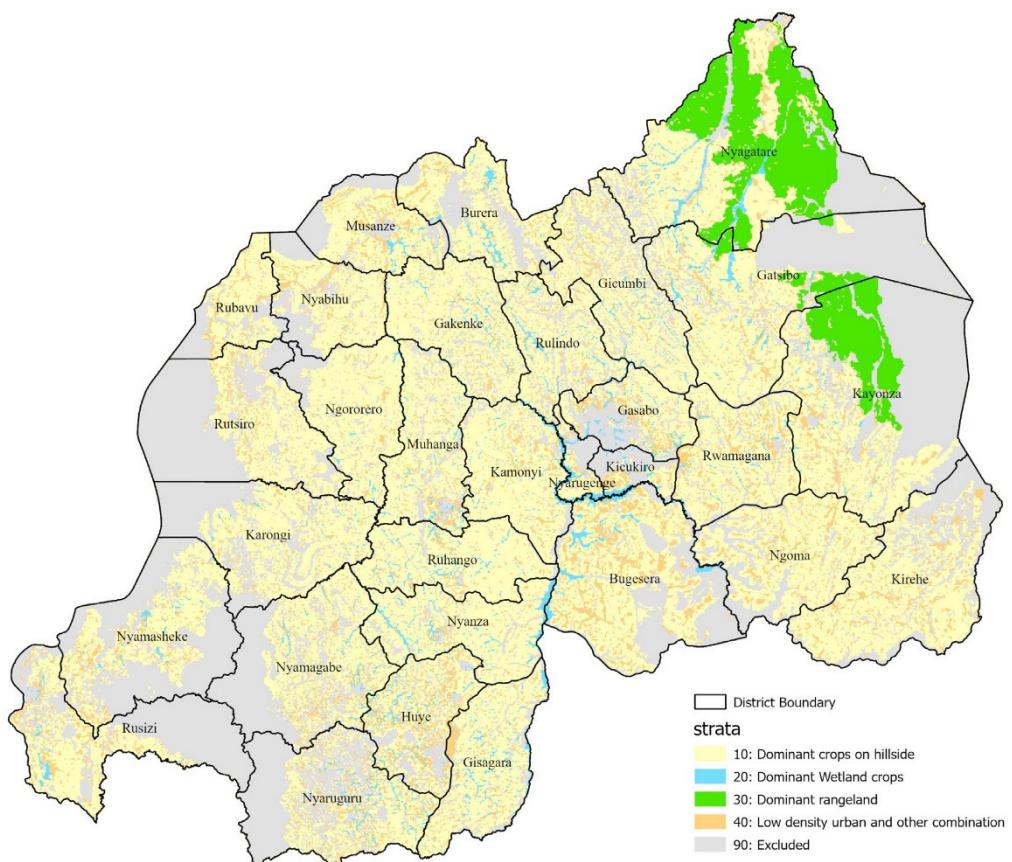
Table 2: List of strata

Stratum code	Stratum name	Definition
1.0	Dominant hill crop land	Clusters with Hillside agricultural land cover class greater or equal to 60 percent of the total area of the cluster
2.0	Dominant Wetland crops	Clusters with non-rice wetland land cover class greater than 25 percent of total area of the cluster
3.0	Dominant rangeland	Clusters with mixed rangeland land cover class greater or equal to 60 percent 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 percent of the total area of the cluster

Source: NISR, SAS 2024

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 2024

2.1.3. 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) for season A and B and 144,915 square units (clusters) for season C. 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 2024

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

District	Stratum						
	Dominant hill crop land	Dominant wetland crops	Dominant rangeland	Mixed stratum	Excluded stratum	Total A & B	Season C
Nyarugenge	534	238	-	168	524	1,464	852
Gasabo	2,165	283	-	697	1,632	4,777	4,138
Kicukiro	461	179	-	233	1,000	1,873	1,075
Nyanza	5,688	520	-	500	744	7,452	8,952
Gisagara	5,197	397	-	824	1,077	7,495	10,326
Nyaruguru	3,568	343	-	1,300	6,027	11,238	10,020
Huye	3,160	346	-	1,466	1,496	6,468	7,817
Nyamagabe	5,344	263	-	1,154	5,352	12,113	6,031
Ruhango	5,663	336	-	489	487	6,975	6,106
Muhanga	4,983	237	-	760	1,200	7,180	5,586
Kamonyi	5,530	320	-	704	777	7,331	5,857
Karongi	5,757	117	-	726	2,159	8,759	3,986
Rutsiro	4,511	-	-	776	2,083	7,370	1,774
Rubavu	2,516	-	-	446	843	3,805	2,560
Nyabihu	3,481	-	-	671	1,896	6,048	3,914
Ngororero	5,580	134	-	461	1,276	7,451	2,068
Rusizi	3,731	155	-	886	5,500	10,272	3,679
Nyamasheke	4,584	134	-	953	4,839	10,510	2,908
Rulindo	4,144	304	-	625	1,219	6,292	4,039
Gakenke	5,934	249	-	671	966	7,820	4,759
Musanze	3,111	126	-	769	1,869	5,875	4,304
Burera	4,256	260	-	667	1,976	7,159	6,763
Gicumbi	5,883	208	-	950	2,176	9,217	3,578
Rwamagana	5,060	163	-	1,194	1,122	7,539	1,591
Nyagatare	6,591	516	9,112	1,112	4,050	21,381	10,679
Gatsibo	7,362	435	788	1,100	7,781	17,466	6,907
Kayonza	6,471	149	3,825	1,293	9,730	21,468	6,808
Kirehe	7,704	-	-	1,501	3,972	13,177	5,395
Ngoma	6,293	-	-	1,201	2,154	9,648	2,850
Bugesera	6,957	612	-	2,341	4,456	14,366	8,685
National	142,219	7,024	13,725	26,638	80,383	269,989	144,915

Source: NISR, SAS 2024

2.1.4. 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

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

distributed among strata with a proportional-to-area criterion. Specifically, for Season C, a shorter season that does not cover the entire land potential for agriculture, the sample was selected only from three sub-strata: Dominant Wetland, Season A and B frames in the volcanic agro-ecological zone with consistent rainfall, and special sites with irrigation infrastructure. For Season C, 946 segments were selected and allocated at the district level.

Table 4: Allocation of sampled segments per district by stratum
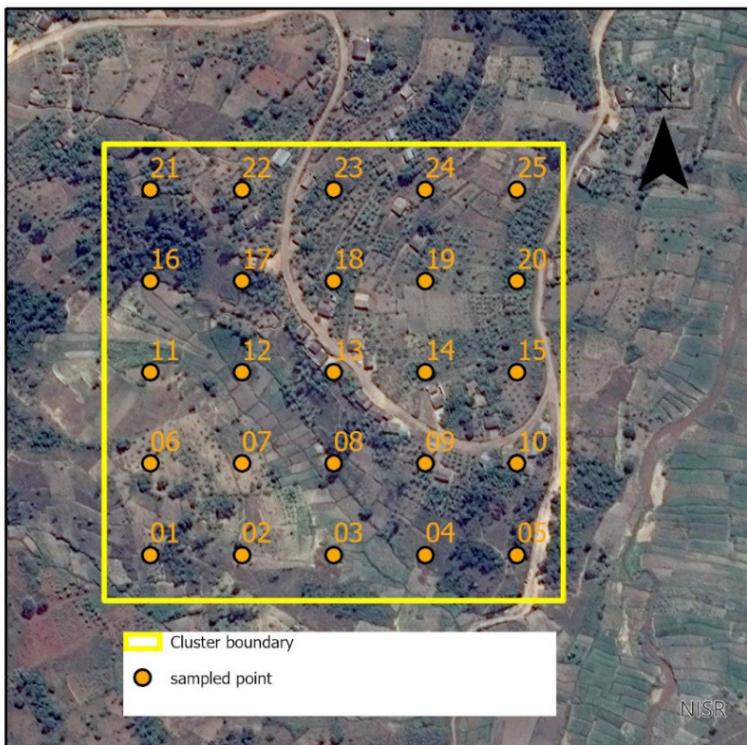
District	Stratum				Total A & B	Season C
	Dominant hill crop land	Dominant wetland crops	Dominant rangeland	Mixed stratum		
Nyarugenge	12	6	-	2	20	12
Gasabo	22	4	-	3	29	21
Kicukiro	13	5	-	2	20	16
Nyanza	37	4	-	2	43	40
Gisagara	33	5	-	3	41	48
Nyaruguru	25	3	-	7	35	36
Huye	27	3	-	5	35	37
Nyamagabe	36	2	-	6	44	33
Ruhango	36	3	-	3	42	31
Muhanga	33	3	-	4	40	34
Kamonyi	36	3	-	4	43	34
Karongi	38	2	-	3	43	25
Rutsiro	34	-	-	4	38	15
Rubavu	21	-	-	4	25	24
Nyabihu	29	-	-	3	32	38
Ngororero	38	2	-	3	43	18
Rusizi	27	2	-	5	34	25
Nyamasheke	31	2	-	5	38	21
Rulindo	28	3	-	4	35	29
Gakenke	37	2	-	4	43	27
Musanze	24	2	-	4	30	42
Burera	30	2	-	3	35	56
Gicumbi	37	2	-	5	44	24
Rwamagana	34	2	-	6	42	16
Nyagatare	31	5	25	7	68	52
Gatsibo	38	3	5	5	51	41
Kayonza	32	2	13	5	52	42
Kirehe	45	-	-	9	54	39
Ngoma	39	-	-	6	45	23
Bugesera	45	3	-	8	56	47
Total	948	75	43	134	1,200	946

Source: NISR, SAS 2024

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 2024

2.1.5 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

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:

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

Where:

p2h = 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

2.1.6. 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 2024 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:

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

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:

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

Variance Estimator for a Total

Where:

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

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

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

The survey estimate of a ratio is defined as follows:

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

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:

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

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

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

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

Variance Estimator for a Ratio

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

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

$V(\hat{Y})$ 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 percent confidence interval, the design effect (DEFF), and number of unweighted observation (n of sample plots)) from the SAS 2024 data are presented in Tables 76, 77 and 78 on the Annexes.

2.2. Data collection approach

2.2.1 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 for. 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.

2.2.2.Time frame and coverage

During the 2024 data collection for the Seasonal Agricultural Survey (SAS), the survey was conducted across all 30 districts of Rwanda. For Season A, data were collected from 1,200 segments and 370 large-scale farmers

between December 3, 2023, and March 28, 2024. Similarly, during Season B, data were gathered from 1,200 segments and 384 large-scale farmers, with the collection period spanning from April 21 to August 15, 2024. Additionally, data collection for Season C took place from September 8 to October 17, 2024, covering 946 segments identified as suitable for growing Season C crops. The survey achieved a 100% response rate, with complete coverage of all sampled segments. This included full participation from operators of the sampled plots and all large-scale farmers across all seasons.

2.2.3 Field staff

During this agricultural year, experienced fieldworkers conducted the field data collection following a comprehensive refresher training. In Season A, 155 enumerators and 29 team leaders were deployed, while 147 enumerators and 28 team leaders served in Season B and Season C involved 140 enumerators and 28 team leaders. To ensure the highest data quality, rigorous supervision was maintained throughout the data collection activities across all three seasons.

2.2.4 Data collection tools

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.

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.

2.3. 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.

2.3.1. Training of enumerators

Prior to data collection, enumerators underwent training at the start of each season. The training for Season A took place from November 13 to 30, 2024, for Season B from April 15 to 19, 2024, and for Season C from September 2 to 6, 2024. All training sessions were conducted at the NISR Training Center. The sessions covered an overview of the latest updates to the SAS, data collection procedures and ethics, screening protocols, the content of the plot interview questionnaire, and the use of data collection applications, including Survey 123, ArcGIS Field Map, and CSEntry.

2.3.2. Fieldwork monitoring

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 2024 SAS 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.

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 percent sub-meter measurement accuracy and addressing precision challenges.

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.

Field supervision

In the 2024, intensive field supervision was carried out to ensure data quality across all survey seasons. During Season A, the first field supervision visit, involving 25 NISR staff members, took place from December 10 to 24, 2023. Subsequently, during the harvesting phase from January 14 to 27, 2024, a team of 15 NISR staff conducted field supervision.

For Season B, the first supervision visit, comprising 30 NISR staff, was conducted from May 2 to 15, 2024. During the harvesting phase, from June 17 to 28, 2024, a team of 21 NISR staff participated in supervision activities. In Season C, the initial supervision visit, involving 23 NISR staff, occurred from September 15 to 21, 2024. During the harvesting phase, from October 8 to 14, 2024, a team of 24 NISR staff conducted field supervision.

Throughout all supervision phases, staff were deployed to every district to provide continuous oversight and support to field personnel. Their responsibilities included offering technical guidance, monitoring the implementation of data collection activities, ensuring adherence to data collection ethics, verifying the completeness of workloads, and addressing any challenges encountered in the field.

Data Editing

During the SAS 2024, 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.

2.4. 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.

2.4.1. 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.

2.4.2 Detecting outliers and dealing with missing values

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.

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.

2.4.5 Methods for Estimating Area and Yield

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.

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.

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.

Data Analysis
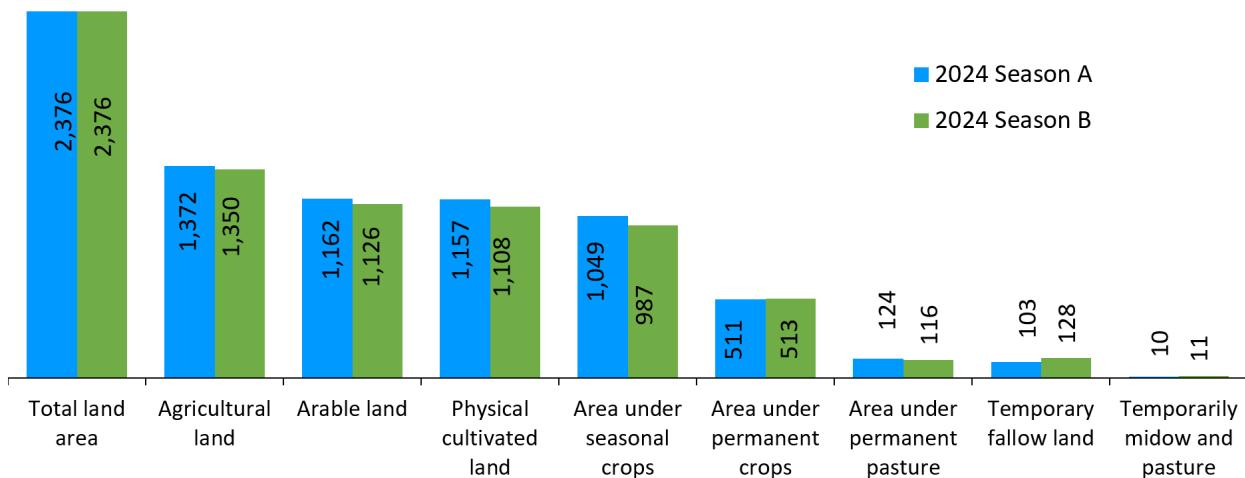
The survey data are analysed using STATA software, which offers robust capabilities for data management, including importing, cleaning, merging, and manipulating datasets. These features facilitate data preparation for analysis. Additionally, STATA enables the development of tabulation commands and the 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.

SURVEY FINDINGS

This section highlights key results of SAS 2024 related to crop area (physical land use, cultivated area, and harvested area), yield, production, agricultural inputs, and agricultural practices in Rwanda.

3.1. Agricultural land use (,000Ha) for 2024 Season A and B

Figure 1: Agricultural land use for Season A and B 2024 (in thousands of hectares)

Source: NISR, SAS 2024

The total land area of the country is about 2.376 million hectares. For Season A, 1.372 million hectares (58% of the total land) is used for agriculture. Of this, 1 million hectares are planted with seasonal crops, 0.511 million hectares with permanent crops, and 0.124 million hectares are used for permanent pasture. In Season B, 1.350 million hectares (57% of the total land) is used for agriculture, including 0.987 million hectares for seasonal crops, 0.513 million hectares for permanent crops, and 0.116 million hectares for permanent pasture.

3.2. Crop area, production and yield for major crops

Maize:

- The cultivated area for maize in Season A 2024 was estimated at 249,435 hectares, an increase of 10 percent from season A of 2023. In season B 2024, the cultivated area for maize was estimated at 92,944 hectares, a decrease of 1 percent from season B of 2023.

- The production of maize in Season A 2024 was estimated at 507,985 metric tons, an increase of 30 percent from season A of 2023. In season B 2024, the production of maize was estimated at 119,101 metric tons, an increase of 1 percent from season B of 2023.

- The average yield of maize was 2 tons per hectare, with an average yield of 2 tons and 4.6 tons for small

scale farmers and large-scale farmers respectively in season A of 2024. In season B 2024, the national average maize yield was 1.3 tons per hectare, with an average yield of 1.2 tons and 4.3 tons for small scale farmers and large-scale farmers respectively (See Tables 10-23)

Beans:

- In Season A 2024 the cultivated area for beans was estimated at 329,001 hectares, an increase of 5 percent season A of 2023. In season B 2024, the cultivated area for beans was estimated at 329,112 hectares, an increase of 6 percent from season B of 2023. In season C 2024, the cultivated area for beans was 2,892 hectares, a decrease of 17 percent when compared to season C of 2023.

- The production of beans in Season A 2024 was estimated at 233,142 metric tons, an increase of 18 percent when compared to season A of 2023. In season B 2024, the production of beans was estimated at 242,239 metric tons, a decrease of 1 percent when compared to season B of 2023, while in season C 2024, the production of beans was estimated at 3,046 metric tons, a decrease of 13 percent when compared to the same season of 2023.

- The average yield of beans was 709 kilograms per hectare in season A, with an average yield of 709 per hectare for small scale farmers and 817 kilograms per hectare large-scale farmers. In season B, the average yield of beans was 737 kilograms per hectare, with an average of 737 kilograms per hectare for small scale farmers and 735 kilograms per hectare for large-scale farmers. In season C, the average yield was estimated at 1,054 kilograms per hectare. (see district details in Tables 10-23).

Paddy rice:

- The cultivated area for paddy rice in Season A 2024 was estimated at 17,173 hectares, an increase of 6 percent from season A of 2023 In season B 2024, the cultivated area for paddy rice was 17,994 hectares, an increase of 8 percent from season B of 2023.

- In Season A 2024, the production of paddy rice was estimated at 69,098 metric tons, an increase of 8 percent from season A of 2023. In season B 2024, the production of paddy rice was estimated 72,834 metric tons, an increase of 4 percent from season B of 2023.

- The average yield of paddy rice was 4.1 tons per hectare, in season A of 2024, with small scale farmers harvesting 2.6 tons per hectares and Large-Scale Farmers harvesting 4.1 tons per hectare. In season B 2024, the average yield of paddy rice was 4.1 tons per hectare, with small scale farmers harvesting 3.1 tons per hectares and Large-Scale Farmers harvesting 4.2 tons per hectare (See district details in Tables 10-23).

Irish potatoes:

- The cultivated area of Irish potatoes was estimated at 54,048 hectares in season A of 2024, a decrease of 3 percent when compared to the same season of 2023. In season B 2024, the cultivated area of Irish potatoes was estimated at 41,836 hectares, a decrease of 13 percent from season B of 2023. In season C 2024, the cultivated area under Irish potatoes was 8,846 hectares, a decrease of 16 percent when compared to the same season of 2023.

- The production of Irish potato was estimated at 460,830 metric tons in season A of 2024, an increase of 1 percent from season A of 2023. In season B 2024, the production of Irish potato was estimated at 285,596 metric tons, a decrease of 13 percent from season B of 2023. In season C 2024, the production of Irish potato was estimated at 80,929 metric tons, a decrease of 4 percent when compared to the same season in 2023.

- The average yield of Irish potato was 8.5 tons per hectare in season A of 2024, with small scale farmers harvesting 8.5 tons per hectares and Large-Scale Farmers harvesting 12.9 tons per hectare. In season B

2024, the average yield of Irish potato was 6.8 tons per hectare, with small scale farmers harvesting 6.8 tons per hectares and Large-Scale Farmers harvesting 14.9 tons per hectare. In season C, the average yield for Irish potatoes was estimated at 9.1 tons per hectare. (See district details in Tables 10-23).

Sweet potato:
- The cultivated area for sweet potato was 95,683 hectares in season A of 2024, a decrease of 10 percent from season A of 2023. In season B 2024, sweet potato cultivated area was 97,289 hectares, an increase of 1 percent from season B of 2023. In season C 2024, sweet potato cultivated area 4,429 hectares, an increase of 5 percent when compared to the same season of 2023.
- The production of sweet potato was estimated at 692,945 metric tons, an increase of 4 percent from season A of 2023. In season B, the production of sweet potato was estimated at 666,814 metric tons, an increase of 8 percent from season B of 2023. In season C, the production sweet potato was estimated at 38,293 hectares, an increase of 56 percent when compared to the same season of 2023.
- The average yield of sweet potato was 7.8 tons per hectares in season A of 2024, 7.7 tons per hectares in season B 2024 and 8.6 tons per hectares in season C (See district details in Tables 10-23).

Cassava:
- The cultivated area for cassava was estimated at 251,019 hectares in season A of 2024, an increase of 5 percent from season A of 2023. In season B 2024, the cultivated area for cassava was estimated at 172,596 hectares, an increase of 8 percent from season B of 2023.
- The harvested area was estimated at 38,833 hectares in season A of 2024 and 54,679 hectares in season B of 2024.
- The production of cassava in season A 2024 was 518,044 metric tons, a decrease of 15 percent when compared to season A of 2023. In season B 2024, the production of cassava was estimated at 783,294 metric tons, an increase of 6 percent when compared to season B of 2023.
- The average yield of cassava was 13.3 tons per hectare in season A of 2024 and 14.3 tons per hectare in season B of 2024. (See district details in Tables 10-23)
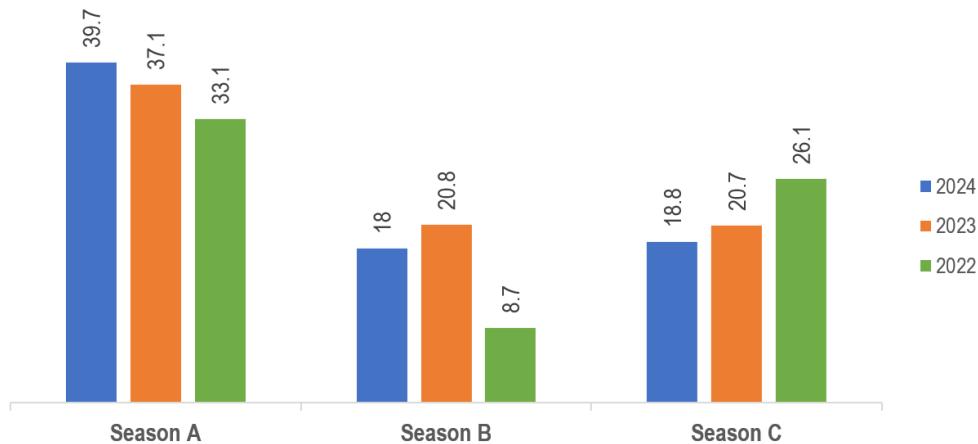
Banana:
- The cultivated area for banana was estimated at 273,223 hectares in season A of 2024, an increase of 7 percent from season A of 2023. In the same season, the harvested area was estimated at 109,985 hectares. In season B 2024, the cultivated area for banana was estimated at 258,564 hectares, an increase of 0.2 percent from season B of 2023. In the same season, the harvested area was estimated at 92,501 hectares.
- The production of banana was estimated at 1,294,683 metric tons in season A of 2024, an increase of 6 percent when compared to 2023 season A. In season B 2024, the production of banana was estimated at 1,142,552 metric tons, an increase of 5 percent when compared to 2023 season B.
- The average yield of banana was 11.8 tons per hectare in season A 2024 and 12.4 tons per hectare in season B 2024 (See district details in Tables 10-23).

3.3. Agricultural inputs

This section highlights the use of agricultural inputs. Agricultural inputs include seeds, organic and inorganic fertilizers, and pesticides/fungicides. The survey results are presented in terms of percentage of farmers who applied such agricultural inputs throughout the agricultural year.

3.3.1.Use of seeds

Figure 2: Use of improved seeds (%)
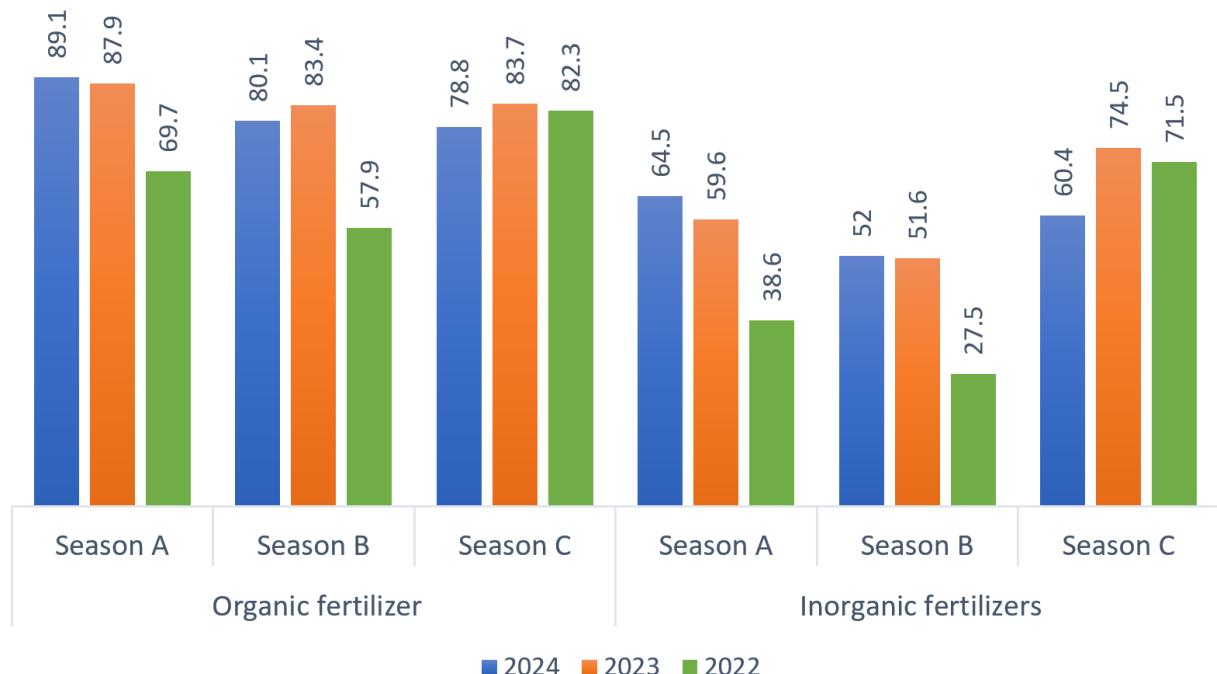
Source: NISR, SAS 2024

Figure 2 shows that 39.7 percent of farmers used improved seeds in season A of 2024 compared to 18 percent in season B, and 18.8 percent in season C. In terms of farmer categories, 38.4 percent of small-scale farmers (SSF) and 87.3 percent of large-scale farmers (LSF) used improved seeds in season A. In season B 2024, 16.6 percent of small-scale farmers and 72.6 percent of large-scale farmers used improved seeds. Agro-dealers and NGOs/companies were the primary sources for improved seeds across seasons of 2024. (See district details in table 30-39).

3.3.2.Use of fertilizers

Figure 3: Percentage of farmers who used fertilizers.
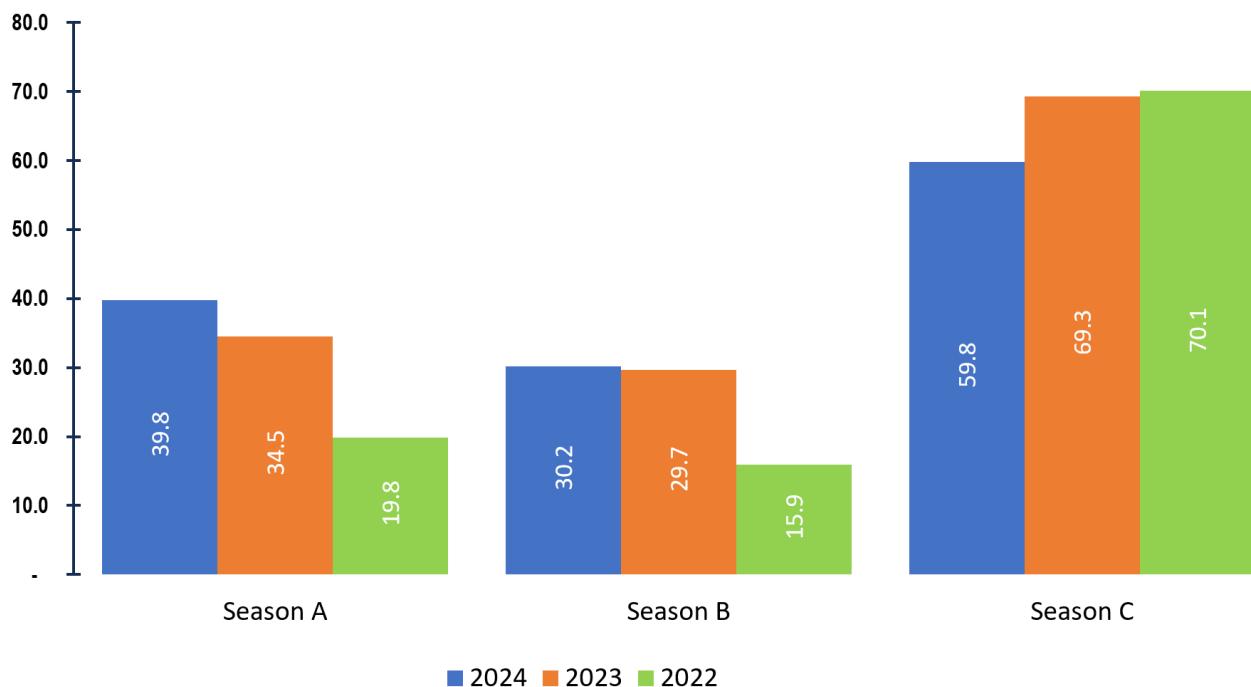
Source: NISR, SAS 2024

In season A of 2024, 89.1 percent of farmers used organic fertilizers, with 89.5 percent of small-scale farmers and 76.4 percent of large-scale farmers. In season B 2024, 80.1 percent of farmers used organic fertilizers, with 80.5 percent of small-scale farmers and 64.9 percent of large-scale farmers, whereas 78.8 percent of farmers used organic fertilizers in season C of 2024.

In regard to inorganic fertilizers, in season A of 2024, 64.5 percent of famers used inorganic fertilizers with 63.8 percent of small-scale farmers and 90.8 percent of large-scale farmers. In season B 2024, 52 percent of famers used inorganic fertilizers with 51.2 percent of small-scale farmers and 82.9 percent of large-scale farmers, whereas 60.4 percent of farmers used inorganic fertilizers in season C of 2024 (See district details in table 40-54)

3.3.3.Use of pesticides

Figure 4: Percentage of farmers who used pesticides

Source: NISR, SAS 2024
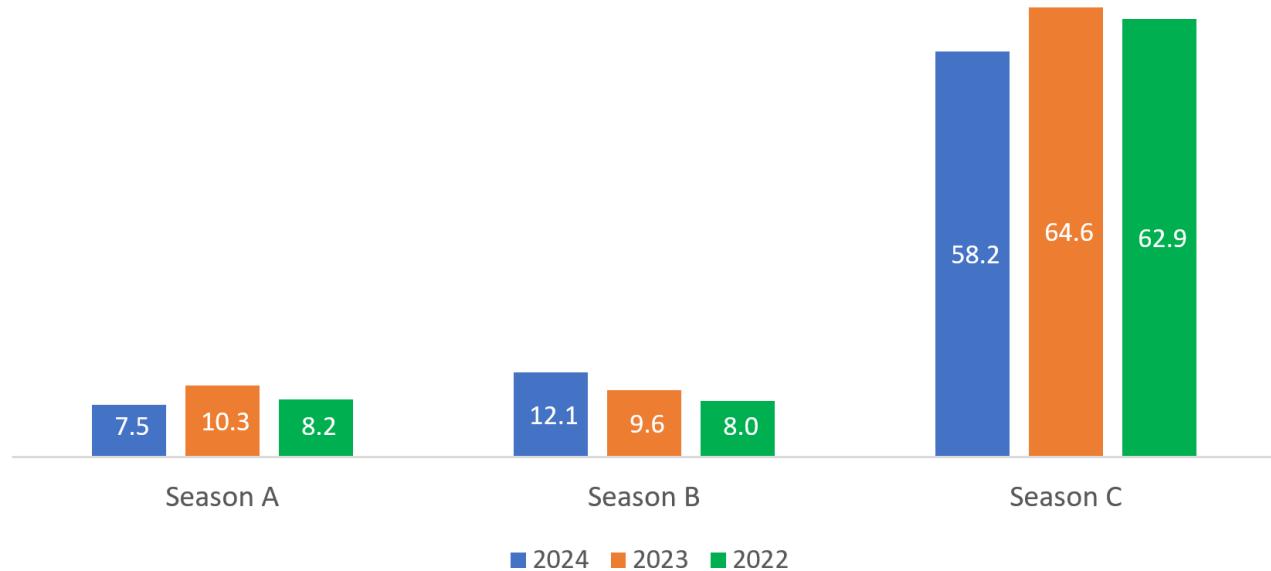
In Season A of 2024, 39.8% of farmers applied pesticides, including 38.6% of small-scale farmers and 82.9% of large-scale farmers. In Season B 2024, pesticide usage decreased to 30.2% of farmers, with 29.1% of small-scale farmers and 74.9% of large-scale farmers using pesticides. Pesticide usage was highest in Season C 2024, with 59.8% of farmers applying them (see details in Tables 55–60).

3.4. Agricultural practices

Agricultural practices assessed include irrigation, mechanisation, erosion control measures and agroforestry adopted by farmers during the SAS 2024. The results are presented in terms of the percentage of farmers who applied such practices.

3.4.1. Irrigation practices

Figure 5: Farmers who practiced irrigation (%)
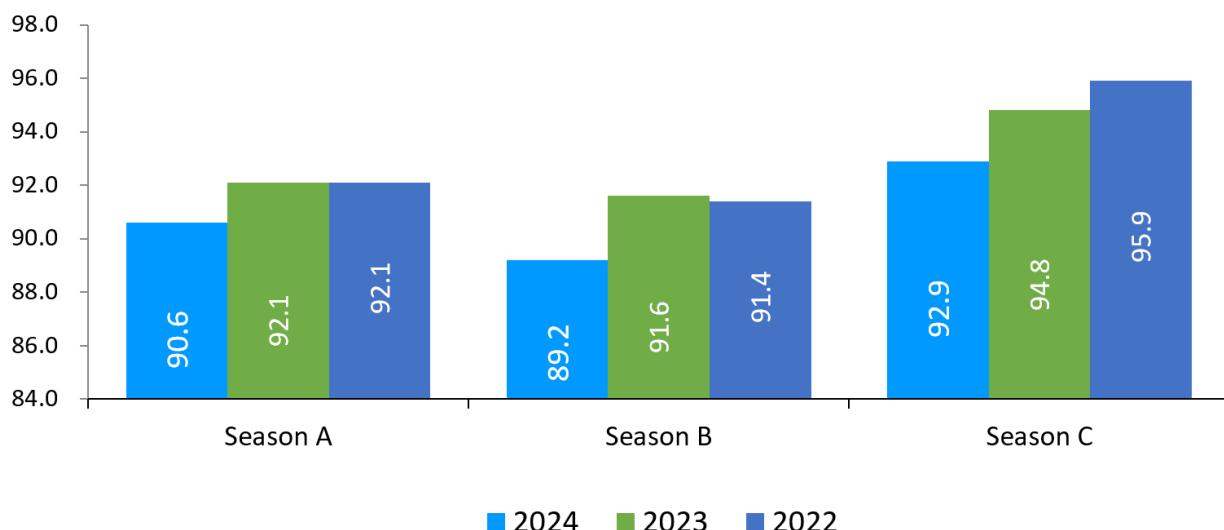
Source: NISR, SAS 2024

In season A of 2024, 7.5 percent of farmers practiced irrigation, compared to 12.1 percent of farmers in season B and 58.2 in season C. During season A, irrigation was practiced by 6.4 percent of small-scale farmers and 48 percent for large-scale farmers, while in season B, irrigation was practiced by 10.8 percent of small-scale farmers and 67 percent for large-scale farmers. In terms of irrigation types, 57percent practiced the modern irrigation in season A, 62.9 percent in season B while traditional techniques were predominantly used during season C with 77.1 percent (See details in Tables 61-72)

3.4.2. Erosion control measures

Figure 6: Farmers who protected land against erosion (%)

Source: NISR, SAS 2024

In Season A of 2024, 90.6% of farmers applied anti-erosion activities, compared to 89.2% in Season B and 92.9% in Season C. Cover plants were the most commonly used anti-erosion method across all seasons of 2024, adopted by 60.3% of farmers in Season A, 61.5% in Season B, and 40.7% in Season C. Additionally, 45.6% of farmers practiced agroforestry in Season A, rising to 47% in Season B but dropping to 25.9% in Season C of 2024. The use of mechanical equipment in agricultural activities remained minimal in 2024, with 1% of farmers in Season A, 0.8% in Season B, and 0.3% in Season C utilizing it (see details in Tables 61–72).

3.5. 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 5: 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
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

Source: NISR, SAS 2024

MAIN TABLES

Table 6: 2024 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	5.2	39.7	3.72	4.67	3.21	2.84	0.52	0.01	0.02
Gasabo	42.7	21.3	49.9	19.09	19.05	17.35	10.53	1.39	0.09	0.87
Kicukiro	16.6	5.8	34.8	5.15	5.28	4.71	2.53	0.41	0.03	0.07
Nyanza	67.0	45.5	67.9	43.22	41.91	39.68	14.02	3.19	0.39	0.40
Gisagara	67.5	47.4	70.2	45.20	40.37	38.75	14.41	6.44	-	0.59
Nyaruguru	101.0	34.2	33.8	30.57	30.07	26.08	9.40	4.10	0.39	-
Huye	58.1	34.4	59.3	32.52	29.37	28.04	11.19	4.43	0.05	1.48
Nyamagabe	109.1	44.1	40.4	38.40	36.89	31.11	13.27	7.17	0.12	0.01
Ruhango	62.6	44.6	71.3	39.70	38.90	33.33	14.57	5.72	0.70	-
Muhanga	64.1	39.3	61.4	36.42	33.93	30.29	17.02	5.42	0.76	-
Kamonyi	65.8	47.0	71.4	41.21	42.23	37.03	17.76	4.12	-	0.62
Karongi	78.8	43.1	54.6	35.80	38.76	30.99	19.54	4.09	0.60	0.25
Rutsiro	66.1	32.7	49.6	26.19	29.57	22.62	13.81	2.91	0.66	3.77
Rubavu	33.9	22.9	67.6	21.45	20.83	19.86	4.13	1.41	0.32	1.67
Nyabihu	54.0	29.6	54.8	28.73	28.02	27.18	2.99	1.41	0.14	4.80
Ngororero	66.7	42.5	63.8	39.59	38.57	35.12	15.43	3.91	0.72	3.08
Rusizi	91.6	37.6	41.1	33.73	36.02	32.01	11.32	1.61	-	-
Nyamasheke	94.8	36.2	38.2	30.66	33.66	28.04	14.55	2.44	0.12	0.06
Rulindo	56.6	33.3	58.7	27.85	30.84	25.66	14.16	2.07	0.24	0.35
Gakenke	70.0	43.8	62.6	39.68	40.29	36.01	15.85	3.48	0.31	0.06
Musanze	50.9	29.6	58.2	28.52	28.25	27.04	4.52	1.15	0.43	0.25
Burera	58.4	37.5	64.1	36.89	35.73	34.62	4.55	1.72	0.43	-
Gicumbi	82.5	48.2	58.4	45.81	41.90	39.30	13.09	5.81	0.40	0.45
Rwamagana	65.1	44.6	68.4	40.36	39.58	36.51	17.25	3.30	0.63	1.70
Nyagatare	191.5	145.1	75.8	81.60	81.09	76.25	79.53	5.18	0.17	58.87
Gatsibo	153.3	76.9	50.2	63.09	66.86	61.34	34.47	1.52	0.30	8.55
Kayonza	180.0	93.6	52.0	64.46	60.56	58.08	43.88	5.81	0.57	27.26
Kirehe	114.2	74.6	65.3	66.38	69.52	63.09	28.18	3.23	0.07	1.82
Ngoma	80.3	56.2	70.1	49.38	51.09	47.36	26.76	1.82	0.20	3.32
Bugesera	120.2	75.2	62.6	67.06	63.34	58.46	19.63	7.66	0.94	4.19
National	2,376	1,372	57.7	1,162	1,157	1,049		511	10	124

Source: NISR, SAS 2024

Table 7: 2024 Season B_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	5.4	41.3	3.75	5.03	3.32	2.86	0.37	-	-
Gasabo	42.7	20.7	48.5	18.09	18.34	16.39	10.35	1.28	0.36	0.74
Kicukiro	16.6	5.3	32.0	4.82	4.81	4.40	2.21	0.39	0.02	0.07
Nyanza	67.0	45.7	68.2	44.49	40.99	40.12	13.77	4.03	0.34	0.35
Gisagara	67.5	45.6	67.6	43.84	38.48	36.94	14.19	6.90	-	0.24
Nyaruguru	101.0	34.4	34.1	30.80	28.64	25.00	9.63	5.57	0.24	-
Huye	58.1	34.1	58.7	32.69	29.78	28.97	11.90	3.62	0.05	1.48
Nyamagabe	109.1	44.1	40.4	38.53	37.77	32.16	13.83	6.18	0.12	0.01
Ruhango	62.6	43.9	70.1	39.31	38.66	34.15	15.10	4.38	0.84	-
Muhanga	64.1	39.1	61.0	35.01	32.74	28.65	17.60	5.60	0.76	-
Kamonyi	65.8	46.7	71.1	41.18	43.36	37.92	17.57	3.26	0.06	0.06
Karongi	78.8	43.0	54.5	36.39	37.28	30.40	19.25	5.05	0.63	0.06
Rutsiro	66.1	33.3	50.4	26.80	26.23	20.25	14.36	5.97	0.63	3.97
Rubavu	33.9	22.1	65.3	20.29	19.73	18.55	3.98	1.51	0.32	1.58
Nyabihu	54.0	29.9	55.3	28.75	24.00	23.05	3.08	5.52	0.18	4.80
Ngororero	66.7	42.5	63.8	37.82	35.88	31.20	16.40	6.34	0.22	3.08
Rusizi	91.6	36.1	39.4	32.16	34.80	30.59	12.48	1.34	-	-
Nyamasheke	94.8	36.7	38.7	30.62	34.63	28.54	14.88	1.88	0.14	0.06
Rulindo	56.6	32.7	57.8	26.87	28.81	23.03	14.92	3.72	0.18	-
Gakenke	70.0	44.1	63.0	38.02	37.49	31.48	17.16	6.28	0.37	-
Musanze	50.9	29.2	57.3	27.70	23.37	22.10	4.14	5.60	0.10	0.10
Burera	58.4	36.9	63.2	36.28	32.25	31.68	4.82	4.07	0.59	-
Gicumbi	82.5	48.5	58.8	44.60	43.67	40.25	14.14	3.48	0.92	0.45
Rwamagana	65.1	46.2	70.9	39.57	38.72	33.53	17.38	4.81	1.17	1.48
Nyagatare	191.5	140.3	73.3	77.32	77.57	71.40	77.33	5.75	0.17	56.81
Gatsibo	153.3	75.0	49.0	60.96	62.87	56.11	33.59	4.62	0.23	7.32
Kayonza	180.0	89.5	49.7	60.02	56.94	52.43	40.80	6.91	0.77	24.92
Kirehe	114.2	72.1	63.2	59.67	66.72	55.89	28.32	3.71	0.07	1.60
Ngoma	80.3	55.3	69.0	46.11	49.38	42.77	27.92	3.07	0.19	2.70
Bugesera	120.2	71.1	59.1	63.74	59.42	55.71	19.33	6.69	1.34	4.07
National	2,376	1,350	57	1,126	1,108	987	513	128	11	116

Source: NISR, SAS 2024

Table 8: 2024 Season A_Area under agricultural practices

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	-	2,870	1,609	477	1,811
Gasabo	335	14,556	7,653	5,599	13,723
Kicukiro	113	3,004	3,340	1,344	2,908
Nyanza	761	34,127	21,229	9,078	26,061
Gisagara	2,750	30,228	15,636	15,661	29,322
Nyaruguru		27,613	11,108	13,531	21,386
Huye	1,038	26,312	9,592	8,653	19,687
Nyamagabe	61	34,725	15,652	14,613	25,198
Ruhango	949	32,892	13,033	6,838	24,367
Muhanga	191	35,399	11,619	6,837	24,604
Kamonyi	205	36,227	25,429	8,409	27,705
Karongi	240	32,940	16,185	12,614	25,167
Rutsiro	-	27,522	14,380	9,407	20,361
Rubavu	-	17,571	7,427	10,040	7,521
Nyabihu	-	25,474	9,952	14,487	21,488
Ngororero	112	37,728	19,049	14,077	31,328
Rusizi	1,516	20,550	22,237	21,459	23,855
Nyamasheke	470	28,562	22,252	13,593	22,901
Rulindo	268	26,797	12,517	11,908	23,794
Gakenke	20	40,901	15,351	20,248	32,085
Musanze	-	22,176	11,056	13,181	18,113
Burera	-	31,332	15,269	17,020	28,771
Gicumbi	-	43,925	19,338	13,311	34,998
Rwamagana	625	31,988	25,758	17,618	29,409
Nyagatare	2,841	43,123	71,790	43,597	37,223
Gatsibo	2,539	59,585	40,562	32,477	46,171
Kayonza	2,562	43,978	27,275	25,705	32,891
Kirehe	2,529	46,878	42,478	35,691	45,010
Ngoma	976	38,015	31,049	19,466	33,132
Bugesera	1,652	31,600	40,724	17,392	26,782
National	22,753	928,599	600,549	454,331	757,769

Source: NISR, SAS 2024

Table 9: 2024 Season B_Area under agricultural practices

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	-	2,306	2,495	322	1,988
Gasabo	390	13,854	9,222	4,957	11,935
Kicukiro	114	2,378	3,455	744	2,276
Nyanza	799	33,968	25,291	5,396	18,967
Gisagara	3,180	31,880	16,111	8,880	25,497
Nyaruguru	250	28,843	12,377	10,448	17,497
Huye	1,052	26,242	11,373	5,119	18,290
Nyamagabe	90	35,375	16,017	12,228	23,086
Ruhango	965	34,806	15,207	4,385	22,523
Muhanga	197	36,386	10,419	4,268	21,204
Kamonyi	306	38,988	26,139	4,897	21,370
Karongi	105	39,472	16,471	9,582	23,596
Rutsiro	-	28,369	15,613	7,565	16,977
Rubavu	-	18,324	7,788	9,837	7,097
Nyabihu	-	25,289	10,864	12,397	15,714
Ngororero	223	37,561	18,776	12,279	25,696
Rusizi	1,561	22,061	21,405	11,974	15,294
Nyamasheke	413	31,073	21,885	11,736	19,901
Rulindo	852	25,545	15,710	8,188	20,305
Gakenke	81	41,747	15,676	14,944	26,885
Musanze	60	23,145	13,676	9,767	15,550
Burera	-	29,861	14,471	13,889	24,675
Gicumbi	127	45,379	19,450	13,133	33,646
Rwamagana	1,818	31,516	24,238	11,440	19,289
Nyagatare	3,190	46,896	90,030	41,255	29,102
Gatsibo	2,642	58,008	40,795	21,299	34,599
Kayonza	2,165	40,765	16,369	16,180	19,226
Kirehe	2,503	45,152	44,648	15,942	21,253
Ngoma	1,160	38,740	35,320	5,991	12,120
Bugesera	2,125	33,354	36,203	16,635	25,226
National	26,367	947,284	627,499	325,679	590,784

Source: NISR, SAS 2024

Table 10: 2024 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	748		-	-	-	1,257	456	70	120	1,727	606	307	814	1,874	1,853	21	-	4	88	146	-	-	960	7,450
Gasabo	3,522	-	303	-	4	5,633	1,253	557	284	5,533	2,484	1,270	1,779	6,963	6,450	513	50	134	905	819	306	358	299	26,924
Kicukiro	1,253	-	85			850	460	14	512	1,462	651	238	573	1,366	1,354	12	-	8	59	106	36	33	387	6,629
Nyanza	5,974	618	456		44	17,206	2,494	281	777	9,844	2,682	2,006	5,156	12,778	10,892	1,887	184	353	2,342	404	69	301	1,165	55,291
Gisagara	6,058	931	2,950		104	13,454	2,303	274	958	13,245	3,771	2,795	6,679	14,265	13,523	742	9	228	1,860	242	24	-	1,135	58,038
Nyaruguru	4,498	-	-		52	7,811	5,392	2,194	1,041	4,842	1,495	1,018	2,329	7,929	1,413	6,516	309	32	921	196	49	392	3,554	39,210
Huye	4,721		998		102	8,460	2,793	525	257	7,029	2,102	1,808	3,119	11,488	7,923	3,565	149	51	2,051	750	2,346	85	1,128	42,932
Nyamagabe	5,877	-	23	41	12	5,666	6,439	3,615	1,169	7,578	2,178	893	4,508	9,297	2,727	6,570	1,099	-	1,418	361	67	183	4,605	47,450
Ruhango	4,163	58	895			16,275	2,413	119	1,598	8,552	1,579	1,752	5,221	9,671	7,874	1,797	26	256	3,530	468	60	596	1,529	50,208
Muhanga	1,913	114	181	-	199	8,813	4,024	360	2,826	18,128	3,519	2,298	12,310	7,432	3,402	4,030	104	13	2,474	429	299	691	905	48,904
Kamonyi	5,737	-	203	-	36	13,350	2,561	475	501	11,380	1,519	1,745	8,116	12,412	10,664	1,748	60	851	3,294	799	173	60	2,412	54,304
Karongi	6,516			-		9,254	4,950	651	1,704	11,490	2,700	1,870	6,920	7,010	1,693	5,317	132	33	1,555	678	223	699	2,787	47,683
Rutsiro	5,922	-		-		2,555	3,109	3,449	1,396	7,325	1,943	1,272	4,110	3,380	605	2,775	524	-	825	369	97	657	3,182	32,789
Rubavu	2,246	127	-			187	717	6,287	113	2,389	928	373	1,087	7,815	770	7,045	436	-	169	1,387	132	232	1,542	23,779
Nyabihu	3,077	354	-	412	5	781	2,566	8,402	21	1,370	306	328	736	8,519	251	8,269	709	-	-	998	290	132	1,988	29,624
Ngororero	3,792	228	-	374	6	8,375	6,333	2,033	1,901	11,013	1,721	2,014	7,278	11,727	1,190	10,537	516	-	1,674	744	85	523	1,317	50,639
Rusizi	7,922	50	1,481	-		20,154	1,835	242	1,541	5,936	2,268	591	3,078	11,716	10,110	1,606	44	288	447	770	1,163	48	3,356	56,994
Nyamasheke	5,632	15	377	-	143	17,268	4,025	-	2,795	6,924	2,198	1,238	3,488	6,736	1,851	4,885	119	443	832	826	199	178	5,154	51,665
Rulindo	5,011	-	17	95	20	4,151	3,998	1,414	205	6,091	1,811	1,383	2,897	10,064	4,188	5,876	405	41	572	940	121	49	3,831	37,023
Gakenke	9,171	-	16	-	599	8,353	6,802	1,275	1,552	14,767	3,071	2,345	9,351	9,733	1,759	7,974	698	186	753	534	571	132	2,167	57,309
Musanze	6,148	1,528	-	792		393	2,015	3,867	235	2,372	964	544	863	8,655	442	8,213	246	-	60	1,176	410	431	1,481	29,808
Burera	10,181	1,056	-	507	51	490	4,317	4,959	140	2,409	993	188	1,227	10,738	584	10,154	1,690	-	27	491		559	279	37,895
Gicumbi	6,072	337	-	395	29	2,617	7,828	3,309	122	6,110	2,544	1,568	1,999	16,827	4,334	12,493	1,646	369	295	798	218	665	1,210	48,847
Rwamagana	10,678	-	502	-	85	9,576	2,301	1,028	195	12,603	7,609	2,101	2,893	14,448	14,379	69	32	885	773	1,050	702	544	1,423	56,826
Nyagatare	32,303	11,421	1,980	-	1,049	5,953	1,747	710	298	12,540	6,805	1,582	4,153	16,650	14,943	1,707	243	1,147	810	647	52	145	694	88,389
Gatsibo	22,179	4,659	1,664	-	144	5,328	2,349	2,357	218	21,324	11,621	2,716	6,988	20,962	18,676	2,286	269	571	893	711	0	237	2,185	86,049
Kayonza	17,432	3,778	1,694	-	450	16,591	1,839	2,278	458	11,737	7,357	1,563	2,817	17,623	17,282	341	117	292	749	1,076	190	514	695	77,513
Kirehe	25,064	2,506	941	1	43	10,487	1,707	1,496	985	20,390	12,259	1,480	6,651	21,297	19,651	1,646	299	337	752	473	67	67	4,409	91,322
Ngoma	15,963	681	876	-	309	17,515	2,092	1,495	635	16,396	9,045	2,561	4,791	16,340	14,869	1,471	121	537	594	404	2,065	205	1,468	77,696
Bugesera	9,661	6,260	1,533	-	58	12,217	4,569	314	211	10,719	3,729	2,247	4,742	13,286	13,180	106	6	2,503	794	351	319	851	890	64,541
National	249,435	34,720	17,173	2,618	3,544	251,019	95,683	54,048	24,766	273,223	102,458	44,094	126,671	329,001	208,831	120,170	10,245	9,563	31,515	19,142	10,332	9,567	58,137	1,483,731
SSF	242,339	34,711	232	2,537	3,536	250,973	95,662	53,862	24,764	273,062	102,322	44,081	126,659	328,378	208,225	120,154	10,232	9,562	30,933	18,986	9,857	9,010	57,136	1,455,774
LSF	7,096	9	16,941	81	7	46	21	186	2	161	136	13	12	623	606	17	13	1	582	156	475	557	1,001	27,957

Source: NISR, SAS 2024

Table 11: 2024 Season B_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	411	388	-	-	-	496	299	13	82	1,628	465	314	849	1,611	1,546	65	-	53	193	178		59	898	6,309
Gasabo	1,284	3,724	300	-	-	1,761	1,374	372	106	3,873	1,198	1,198	1,477	4,104	3,713	391	22	274	688	828	220	382	340	19,653
Kicukiro	552	698	84	-	2	299	201	-	249	982	308	247	428	1,483	1,462	21	-	50	164	154	19	32	83	5,053
Nyanza	2,575	5,125	704	-	119	7,161	2,363	269	669	7,564	2,428	2,113	3,023	13,236	10,998	2,238	186	945	2,447	778	157	319	1,309	45,926
Gisagara	2,524	4,222	3,301	-	427	7,060	3,443	27	345	9,603	2,351	2,877	4,375	13,242	11,386	1,856	-	695	3,603	479	139		1,189	50,299
Nyaruguru	230	3,424	31	279	10	4,371	5,070	1,858	459	3,460	948	814	1,698	7,336	974	6,362	285	-	935	634	128	245	3,641	32,394
Huye	1,070	5,932	983	39	129	7,599	3,162	186	151	6,307	2,173	1,849	2,286	8,975	5,691	3,284	281	118	2,492	582	1,086	98	1,151	40,341
Nyamagabe	950	4,282	29	2,651	122	7,491	6,839	1,700	622	6,085	918	985	4,183	7,001	827	6,174	1,024	-	773	261	122	263	4,825	45,043
Ruhango	1,018	2,642	911	-	41	18,706	3,224	25	801	7,130	979	1,527	4,625	10,851	7,986	2,865	110	2,225	4,199	439	8	687	1,569	54,585
Muhanga	1,008	67	202	58	-	12,459	5,617	191	2,834	19,448	3,395	2,993	13,059	6,544	2,345	4,198	179	65	2,258	480	317	673	1,038	53,437
Kamonyi	2,190	3,237	247	-	-	11,837	4,053	382	957	12,647	2,032	2,313	8,302	10,332	8,620	1,711	108	1,020	4,353	964	97	34	2,434	54,893
Karongi	803	2,213	-	180	-	7,226	4,053	360	1,051	9,190	1,291	1,675	6,223	7,803	1,733	6,069	379	154	1,668	925	268	858	2,300	39,431
Rutsiro	1,535	142	-	205	-	1,896	2,769	3,205	537	6,843	1,606	1,893	3,344	5,327	675	4,652	472	-	1,289	196	95	528	3,477	28,516
Rubavu	1,760	138	-	-	-	396	1,796	5,669	78	2,427	721	542	1,164	5,107	732	4,375	600	-	470	2,201	68	436	1,821	22,966
Nyabihu	3,700		-	1,662	-	639	3,292	6,709	40	1,195	449	323	423	2,841	79	2,762	562	-	132	712	684	174	1,997	24,339
Ngororero	3,900		-	1,899	-	3,268	7,007	1,190	1,443	11,005	1,220	1,869	7,917	5,116	559	4,557	443	-	1,375	457	276	241	1,506	39,127
Rusizi	980	55	1,441		-	18,418	2,668	70	548	4,084	1,411	573	2,100	11,725	8,861	2,864	37	277	1,148	443	1,178	194	2,992	46,258
Nyamasheke	564	24	371	-	-	10,852	4,503	91	624	6,074	1,547	1,068	3,459	6,680	1,327	5,353	77	935	1,318	552	372	195	4,987	38,220
Rulindo	1,289	4,167	17	51	18	4,416	3,898	1,039	267	6,680	2,031	1,644	3,005	9,301	3,399	5,902	371	103	575	949	96	68	3,909	37,212
Gakenke	1,426	436	17	122	-	6,000	5,410	1,097	1,618	14,759	3,128	2,770	8,861	12,150	1,098	11,052	309	61	758	278	474	157	2,153	47,225
Musanze	2,629	1,665	-	1,339	-	89	2,859	3,931	132	2,449	1,265	561	623	7,943	318	7,626	286	-	8	1,115	576	84	1,110	26,214
Burera	2,432	6,085	-	1,004	16	113	4,954	4,276	27	2,527	1,068	311	1,148	11,698	506	11,191	1,129	-	52	933	181	507	229	36,163
Gicumbi	2,290	11,968	-	802	19	3,214	6,396	2,061	144	6,945	2,582	1,761	2,602	14,594	3,517	11,078	861	459	165	487	378	802	1,064	52,651
Rwamagana	4,072	9,348	489	-	7	5,131	1,712	683	143	12,719	6,803	2,581	3,335	11,144	10,837	306	88	1,585	505	1,068	674	1,133	1,320	51,822
Nyagatare	24,520	4,736	2,222	-	17	1,881	1,537	589	108	12,861	6,904	1,826	4,131	30,934	29,406	1,528		2,186	1,173	977	50	136	895	84,823
Gatsibo	8,847	7,531	1,711	-	162	1,832	2,851	1,943	578	21,826	11,236	3,906	6,684	19,610	17,098	2,512	74	2,774	2,007	875	310	230	2,565	75,726
Kayonza	7,018	13,300	1,724	-	250	7,446	1,637	1,554	422	12,303	7,379	2,135	2,789	19,598	19,319	279	86	1,054	615	801	433	623	866	69,729
Kirehe	2,488	10,441	999	2	395	8,439	1,168	1,288	1,110	19,163	10,345	1,956	6,862	22,868	15,162	7,705	229	1,038	1,360	343	226	67	4,274	75,898
Ngoma	2,058	7,843	890	-	660	4,195	1,438	726	252	16,471	8,259	2,249	5,963	18,963	16,098	2,865	50	1,167	1,493	355	1,491	270	1,703	60,027
Bugesera	6,820	6,171	1,321	-	130	7,906	1,694	332	329	10,318	3,683	1,939	4,696	20,995	20,838	157	0	3,848	1,843	715	338	836	993	64,590
National	92,944	120,005	17,994	10,294	2,523	172,596	97,289	41,836	16,725	258,564	90,123	48,809	119,632	29,112	207,112	122,000	8,248	21,085	40,059	20,161	10,463	10,331	58,639	1,328,868
SSF	91,063	119,946	411	10,210	2,505	172,549	97,265	41,499	16,724	258,417	90,011	48,789	119,617	328,079	206,092	121,987	8,241	21,081	39,215	19,964	10,006	9,900	57,618	1,304,693
LSF	1,881	59	17,583	84	18	47	24	337	2	147	113	20	15	1,033	1,020	13	7	5	843	197	457	432	1,021	24,176

Source: NISR, SAS 2024

Table 12: 2024 Season C _Cultivated area by crop type per district (ha)

District/Crop	Sweet potato	Irish potato	Bean	Bush bean	Climbing bean	Pea	Soybean	Groundnut	vegetables	Developed land
Nyarugenge	23	2	25	25	-	-	15	-	59	125
Gasabo	4	-	-	-	-	-	-	-	250	254
Kicukiro	48	-	85	85	-	-	6	6	34	179
Nyanza	117	-	101	92	9	308	193	-	351	1,070
Gisagara	374	19	368	368	-	30	42	-	344	1,176
Nyaruguru	387	107	190	190	-	-	2	-	86	772
Huye	469	26	226	226	-	24	10	-	258	1,014
Nyamagabe	179	283	51	51	-	16	26	-	21	576
Ruhango	248	5	38	38	-	6	-	-	129	427
Muhanga	241	91	104	104	-	33	57	-	195	721
Kamonyi	200	-	167	167	-	14	26	7	293	707
Karongi	88	58	-	-	-	21	-	-	91	258
Rutsiro	49	134	-	-	-	14	-	-	48	245
Rubavu	223	368	47	17	30	4	-	-	623	1,265
Nyabihu	-	3,142	15	-	15	-	-	-	480	3,637
Ngororero	101	34	-	-	-	-	56	-	15	206
Rusizi	76	33	41	41	-	-	-	-	202	352
Nyamasheke	77	-	-	-	-	-	-	-	40	117
Rulindo	111	98	3	3	-	-	16	2	169	400
Gakenke	128	33	-	-	-	-	40	-	167	369
Musanze	127	1,874	61	9	51	26	-	-	172	2,259
Burera	200	2,233	102	51	51	8	-	-	72	2,615
Gicumbi	141	188	80	80	-	-	6	-	37	451
Rwamagana	68	5	28	28	-	-	-	-	270	370
Nyagatare	109	5	12	12	-	-	-	-	200	326
Gatsibo	155	11	-	-	-	-	-	-	271	438
Kayonza	89	-	19	19	-	-	-	-	172	280
Kirehe	105	54	15	14	1	3	-	-	188	366
Ngoma	61	11	251	251	-	10	-	-	126	460
Bugesera	233	29	860	860	-	10	80	-	375	1,588
National	4,429	8,846	2,892	2,734	157	527	576	15	5,738	23,023

Source: NISR, SAS 2024

Table 13: 2024 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	Total Developed land
Nyarugenge	748	-	-	-	-	189	317	70	13	719	222	122	375	1,848	1,827	21	-	4	88	146	-	-	371	4,513
Gasabo	3,523	-	299	-	4	850	1,035	557	65	2,065	880	431	754	6,962	6,449	513	50	134	905	819	149	360	38	17,814
Kicukiro	1,253	-	85	-	-	49	439	14	54	492	202	71	220	1,366	1,354	12	-	8	59	106	27	33	30	4,014
Nyanza	5,974	618	445	-	44	4,454	2,394	281	303	3,573	1,223	575	1,775	12,778	10,892	1,887	184	353	2,342	404	11	300	95	34,554
Gisagara	6,484	931	2,896	-	104	1,005	2,270	274	272	3,757	1,005	707	2,045	14,265	13,523	742	9	228	1,860	236	24	-	-	34,613
Nyaruguru	4,415	-	-	-	52	817	4,706	2,188	501	1,779	666	323	790	7,929	1,413	6,516	309	32	921	196	-	392	65	24,302
Huye	4,727	-	987	-	102	1,108	2,779	525	179	2,947	852	708	1,387	11,488	7,923	3,565	149	51	2,051	708	887	85	-	28,775
Nyamagabe	5,696	-	23	41	12	1,027	6,090	3,554	376	2,924	545	317	2,062	9,297	2,727	6,570	1,098	-	1,418	336	61	183	-	32,135
Ruhango	4,163	58	854	-	-	3,591	1,515	119	571	3,352	514	547	2,291	9,671	7,874	1,797	26	256	3,530	454	-	539	142	28,840
Muhanga	1,912	114	180	-	199	2,066	4,024	360	1,947	7,405	1,128	831	5,446	7,432	3,402	4,030	104	13	2,474	403	240	574	160	29,608
Kamonyi	5,717	-	203	-	36	1,920	2,435	475	307	4,526	603	652	3,271	12,412	10,664	1,748	60	851	3,293	799	53	60	15	33,163
Karongi	6,480	-	-	-	-	1,100	4,406	651	1,065	4,902	829	584	3,489	7,010	1,693	5,317	132	33	1,555	504	54	603	388	28,884
Rutsiro	5,922	-	-	-	-	74	3,109	3,423	1,145	3,095	743	425	1,927	3,380	605	2,775	524	-	825	343	52	480	219	22,592
Rubavu	2,246	127	-	-	-	-	680	6,287	113	1,099	431	130	539	7,815	770	7,045	436	-	169	1,387	42	232	621	21,255
Nyabihu	3,077	354	-	412	5	200	2,548	8,402	7	488	105	100	283	8,519	251	8,269	709	-	-	998	114	132	1,472	27,438
Ngororero	3,792	228	-	374	6	1,252	5,708	2,033	1,062	5,335	770	799	3,766	11,727	1,190	10,537	516	-	1,674	547	29	361	298	34,942
Rusizi	7,927	50	1,478	-	-	834	1,835	242	1,440	2,355	870	199	1,286	11,716	10,110	1,606	44	288	447	759	677	48	235	30,376
Nyamasheke	5,632	15	376	-	143	2,462	3,448	-	1,481	2,830	875	333	1,622	6,736	1,851	4,885	119	443	832	801	164	119	124	25,726
Rulindo	4,982	-	17	95	20	667	3,998	1,413	70	2,446	655	488	1,303	10,064	4,188	5,876	405	41	572	899	62	49	1,305	27,105
Gakenke	9,172	-	16	-	599	1,170	6,802	1,275	1,419	6,124	1,040	792	4,292	9,733	1,759	7,974	698	186	753	528	522	132	581	39,710
Musanze	6,098	1,528	-	792	-	24	2,015	3,868	137	896	307	241	348	8,654	442	8,212	246	-	60	1,176	131	380	1,399	27,405
Burera	9,964	1,056	-	507	51	46	2,748	4,959	46	892	316	40	537	10,738	584	10,154	1,690	-	27	485	-	559	97	33,867
Gicumbi	6,056	337	-	395	29	600	7,585	3,307	35	2,294	930	562	802	16,827	4,334	12,493	1,646	369	295	797	8	665	71	41,316
Rwamagana	10,683	-	503	-	85	941	2,179	1,028	111	5,227	3,260	835	1,132	14,448	14,379	69	32	885	773	1,050	286	508	579	39,320
Nyagatare	32,300	11,421	1,968	-	1,049	832	1,568	710	81	5,307	2,944	649	1,714	16,618	14,911	1,707	243	1,147	808	482	37	129	65	74,765
Gatsibo	22,183	4,659	1,659	-	144	1,091	2,242	2,357	74	9,405	5,543	1,331	2,531	20,966	18,681	2,286	269	571	893	711	-	235	43	67,503
Kayonza	17,429	3,778	1,682	-	450	3,469	1,839	2,278	221	4,957	3,214	616	1,127	17,623	17,282	341	117	292	749	1,076	28	513	73	56,575
Kirehe	25,096	2,506	922	1	43	1,802	1,677	1,496	166	7,601	4,275	566	2,760	21,317	19,671	1,646	299	337	751	433	-	67	39	64,553
Ngoma	15,963	680	873	-	309	3,638	1,901	1,495	150	6,915	3,847	846	2,222	16,340	14,869	1,471	121	537	594	391	1,604	205	-	51,717
Bugesera	9,661	6,259	1,508	-	58	1,552	4,414	314	70	4,276	1,572	685	2,019	13,279	13,173	107	6	2,503	794	351	116	851	158	46,172
National	249,276	34,719	16,973	2,617	3,544	38,833	88,708	53,957	13,482	109,985	40,365	15,503	54,118	328,961	208,790	120,170	10,244	9,563	31,513	18,322	5,378	8,795	8,684	1,033,552
SSF	241,591	34,711	245	2,578	3,536	38,822	88,689	53,775	13,482	109,923	40,312	15,498	54,112	328,321	208,168	120,154	10,232	9,562	30,933	18,175	5,181	8,292	8,043	1,006,094
LSF	7,685	9	16,727	39	7	11	19	181	-	62	52	4	6	639	623	17	12	1	580	147	196	503	640	27,458

Source: NISR, SAS 2024

Table 14: 2024 Season B_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	411	388	-	-	-	235	270	13	82	693	156	116	421	1,611	1,546	65	-	53	193	174	-	59	843	5,025
Gasabo	1,283	3,724	311	-	-	530	1,374	372	99	1,356	416	408	532	4,104	3,713	391	22	274	692	808	63	364	230	15,606
Kicukiro	552	698	85	-	2	133	107	-	247	403	112	86	205	1,483	1,462	21	-	50	165	154	8	32	21	4,141
Nyanza	2,575	5,125	709	-	119	2,072	2,177	269	664	1,743	476	440	827	13,236	10,998	2,238	186	945	2,447	720	22	318	854	34,181
Gisagara	2,524	4,222	3,259	-	427	3,238	3,075	27	345	2,053	372	612	1,069	13,242	11,386	1,856	-	695	3,549	479	95	-	785	38,016
Nyaruguru	230	3,424	32	279	10	1,723	4,026	1,871	282	901	239	228	434	7,336	974	6,362	285	-	935	634	24	245	740	22,975
Huye	1,070	5,932	1,020	39	129	1,341	3,116	186	132	1,358	395	337	626	8,974	5,691	3,284	281	118	2,492	582	420	95	708	27,993
Nyamagabe	953	4,282	20	2,651	122	1,403	6,004	1,712	538	2,046	167	151	1,728	7,001	827	6,174	1,024	-	773	255	122	202	1,271	30,379
Ruhango	1,018	2,642	891	-	41	4,777	3,059	25	781	2,126	164	296	1,666	10,851	7,986	2,865	110	2,225	4,199	439	8	608	826	34,625
Muhanga	1,008	67	203	58	-	2,720	5,483	188	2,828	7,178	678	668	5,831	6,544	2,345	4,198	179	65	2,258	480	239	673	532	30,702
Kamonyi	2,190	3,237	251	-	-	1,913	3,984	382	906	5,294	671	731	3,891	10,332	8,620	1,711	108	1,020	4,353	964	59	-	1,422	36,414
Karongi	803	2,213	-	180	-	2,128	3,726	218	941	4,350	393	363	3,594	7,803	1,733	6,069	379	154	1,668	925	153	777	630	27,049
Rutsiro	1,535	142	-	205	-	985	2,680	3,205	537	2,528	427	614	1,487	5,327	675	4,652	472	-	1,289	196	95	449	1,332	20,977
Rubavu	1,698	138	-	-	-	242	1,750	5,669	78	1,078	300	160	618	5,107	732	4,375	600	-	470	2,201	46	436	944	20,458
Nyabihu	3,700	-	-	1,662	-	85	2,728	6,709	31	322	90	115	117	2,828	79	2,749	562	-	132	712	195	174	533	20,373
Ngororero	3,900	-	-	1,899	-	579	6,346	1,190	1,307	3,863	212	469	3,182	5,116	559	4,557	443	-	1,375	449	214	241	621	27,544
Rusizi	980	55	1,458	-	-	10,580	2,030	70	502	1,623	626	198	800	11,730	8,867	2,864	37	277	1,148	443	221	148	2,231	33,533
Nyamasheke	564	24	335	-	-	4,441	4,200	91	602	1,757	448	238	1,072	6,680	1,327	5,353	77	935	1,318	545	150	119	2,943	24,781
Rulindo	1,289	4,167	17	51	18	1,090	3,012	1,038	157	2,523	582	621	1,320	9,301	3,399	5,902	371	103	575	949	96	68	611	25,434
Gakenke	1,426	436	20	122	-	1,466	5,082	1,097	1,495	6,182	898	1,196	4,089	12,150	1,098	11,052	309	61	758	278	404	157	1,645	33,090
Musanze	2,629	1,665	-	1,339	-	36	2,791	3,927	132	725	315	206	204	7,943	318	7,626	286	-	8	1,115	229	83	657	23,565
Burera	2,432	6,085	-	1,004	16	40	3,864	4,276	21	757	362	45	350	11,698	506	11,191	1,129	-	52	933	126	452	214	33,099
Gicumbi	2,290	11,971	-	802	19	743	5,083	2,062	102	2,491	687	603	1,200	14,595	3,517	11,079	858	459	165	487	144	802	380	43,455
Rwamagana	4,070	9,344	493	-	7	1,759	1,529	684	114	4,839	2,909	794	1,136	11,128	10,822	306	88	1,585	505	1,044	362	1,009	659	39,218
Nyagatare	24,507	4,736	1,987	-	-	854	1,517	588	91	5,366	2,846	455	2,065	30,899	29,371	1,528	-	2,186	1,174	896	13	129	436	75,381
Gatsibo	8,747	7,531	1,732	-	162	666	2,441	1,943	372	6,738	3,541	997	2,199	19,596	17,084	2,512	74	2,774	1,997	766	217	227	1,072	57,052
Kayonza	6,995	13,300	1,740	-	250	3,396	1,578	1,558	402	4,121	2,819	384	917	19,517	19,238	279	86	1,054	615	803	180	623	696	56,915
Kirehe	2,495	10,441	927	2	395	1,825	1,091	1,288	1,022	5,970	3,406	430	2,134	22,780	15,075	7,705	229	1,038	1,360	343	165	67	2,474	53,911
Ngoma	2,059	7,844	898	-	660	1,805	1,254	726	195	6,747	3,909	601	2,238	18,966	16,101	2,865	50	1,167	1,493	355	1,228	266	883	46,597
Bugesera	6,818	6,171	1,190	-	130	1,875	1,202	331	329	5,371	1,706	883	2,783	20,979	20,823	156	0	3,848	1,840	714	46	849	314	52,010
National	92,749	120,005	17,578	10,294	2,506	54,679	86,580	41,716	15,334	92,501	30,323	13,442	48,737	328,858	206,871	121,987	8,245	21,086	39,999	19,842	5,346	9,674	27,508	993,910
SSF	91,001	119,946	411	10,210	2,505	54,667	86,563	41,357	15,332	92,436	30,270	13,434	48,732	328,066	206,092	121,974	8,241	21,081	39,162	19,668	5,171	9,298	26,880	971,994
LSF	1,748	59	17,167	84	2	12	17	359	2	66	53	8	5	792	779	13	4	5	837	175	175	376	627	22,505

Source: NISR, SAS 2024

Table 15: 2024 Season C _Harvested area by crop type per district (ha)

District/Crop	Sweet potato	Irish potato	Bean	Bush bean	Climbing bean	Pea	Soybean	Groundnut	vegetables	Developed land
Nyarugenge	23	2	25	25	-	-	15	-	59	125
Gasabo	4	-	-	-	-	-	-	-	250	254
Kicukiro	48	-	85	85	-	-	6	6	34	179
Nyanza	117	-	101	92	9	308	193	-	351	1,070
Gisagara	374	19	368	368	-	30	42	-	344	1,176
Nyaruguru	387	107	190	190	-	-	2	-	86	772
Huye	469	26	226	226	-	24	10	-	258	1,014
Nyamagabe	179	283	51	51	-	16	26	-	21	576
Ruhango	248	5	38	38	-	6	-	-	129	427
Muhanga	241	91	104	104	-	33	57	-	195	721
Kamonyi	200	-	167	167	-	14	26	7	293	707
Karongi	88	58	-	-	-	21	-	-	91	258
Rutsiro	49	134	-	-	-	14	-	-	48	245
Rubavu	223	368	47	17	30	4	-	-	623	1,265
Nyabihu	-	3,142	15	-	15	-	-	-	480	3,637
Ngororero	101	34	-	-	-	-	56	-	15	206
Rusizi	76	33	41	41	-	-	-	-	202	352
Nyamasheke	77	-	-	-	-	-	-	-	40	117
Rulindo	111	98	3	3	-	-	16	2	169	400
Gakenke	128	33	-	-	-	-	40	-	167	369
Musanze	127	1,874	61	9	51	26	-	-	172	2,259
Burera	200	2,233	102	51	51	8	-	-	72	2,615
Gicumbi	141	188	80	80	-	-	6	-	37	451
Rwamagana	68	5	28	28	-	-	-	-	270	370
Nyagatare	109	5	12	12	-	-	-	-	200	326
Gatsibo	155	11	-	-	-	-	-	-	271	438
Kayonza	89	-	19	19	-	-	-	-	172	280
Kirehe	105	54	15	14	1	3	-	-	188	366
Ngoma	61	11	251	251	-	10	-	-	126	460
Bugesera	233	29	860	860	-	10	80	-	375	1,588
National	4,429	8,846	2,892	2,734	157	527	576	15	5,738	23,023

Source: NISR, SAS 2024

Table 16: 2024 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	1,390	-	-	-	-	12,689	6,431	2,624	3,442	11,901	11,955	10,048	12,472	549	542	1,105	-	498	431	6,872	-	-	47,339
Gasabo	1,688	-	3,867	-	683	12,037	8,066	5,355	4,292	11,093	12,602	7,968	11,116	651	627	947	611	690	656	9,879	9,234	12,008	880
Kicukiro	1,590	-	3,870	-	-	12,077	8,197	4,696	5,354	11,039	11,567	10,946	10,584	586	584	723	-	261	514	3,191	3,527	22,136	4,406
Nyanza	1,895	1,403	4,367	-	610	13,871	6,561	5,313	5,401	8,980	7,716	8,262	10,084	559	559	557	1,038	383	383	5,674	4,467	49,777	43,276
Gisagara	2,221	1,087	3,665	-	2,372	13,065	6,632	2,785	2,716	9,295	7,095	9,275	10,383	579	583	500	405	581	616	6,833	3,526	-	-
Nyaruguru	1,865	-	-	-	441	12,925	10,269	5,050	7,639	11,628	14,265	8,534	10,669	731	602	759	651	249	482	7,942	-	12,127	1,415
Huye	1,864	-	3,534	-	622	14,136	7,343	3,986	7,659	10,733	12,515	8,977	10,535	614	599	646	913	649	699	7,585	2,457	12,370	-
Nyamagabe	1,715	-	1,706	1,159	134	13,169	8,681	6,725	5,482	9,752	8,968	8,113	10,212	625	584	642	489	-	490	7,705	5,530	6,876	-
Ruhango	1,619	740	4,545	-	-	14,880	8,280	3,360	4,411	9,875	9,370	6,612	10,768	489	466	589	880	323	520	7,698	-	11,532	4,683
Muhanga	2,037	2,266	1,995	-	804	14,637	7,407	4,139	11,258	10,859	12,700	9,276	10,720	516	429	589	1,176	159	506	7,708	9,546	15,475	15,335
Kamonyi	1,891	-	3,502	-	371	13,915	5,536	3,879	10,683	10,238	13,196	7,512	10,237	443	423	567	807	523	636	7,043	4,886	13,485	66
Karongi	1,739	-	-	-	-	8,849	8,621	7,062	4,366	12,035	14,433	11,443	11,565	1,003	758	1,081	909	160	801	6,948	3,798	8,248	20,217
Rutsiro	1,377	-	-	-	-	13,658	8,463	7,379	4,825	12,007	13,616	8,667	12,122	848	545	914	673	-	710	8,234	6,892	22,414	15,420
Rubavu	1,906	620	-	-	-	-	7,807	12,923	2,608	11,299	12,872	6,745	11,139	753	486	783	538	-	368	10,215	6,076	15,208	3,043
Nyabihu	1,833	1,170	-	1,215	656	9,442	7,083	12,287	2,396	9,329	12,308	6,723	9,137	995	638	1,006	798	-	-	8,102	8,985	24,019	272
Ngororero	1,552	708	-	738	868	14,614	7,197	5,505	6,439	8,545	9,042	8,407	8,473	801	695	813	626	-	685	9,377	6,041	10,287	39,481
Rusizi	1,849	899	4,628	-	-	13,048	7,350	5,903	3,534	11,102	11,055	8,475	11,541	775	752	919	621	569	775	7,306	5,934	13,532	306
Nyamasheke	1,642	831	3,926	-	619	11,646	5,006	-	7,218	9,319	10,369	7,738	9,077	804	654	860	622	558	803	6,051	8,988	26,456	101,711
Rulindo	1,910	-	3,367	898	726	12,334	7,389	5,759	6,930	10,157	12,447	8,928	9,466	709	617	775	674	1,496	636	8,809	3,256	11,848	23,670
Gakenke	1,841	-	4,877	-	845	13,318	7,684	5,932	10,241	11,221	14,008	8,009	11,139	726	533	768	611	805	567	6,187	4,649	7,173	17,653
Musanze	1,763	1,495	-	1,521	-	4,072	8,271	12,472	6,004	10,717	13,601	8,193	9,918	1,007	1,008	1,007	976	-	971	9,919	3,898	20,719	5,863
Burera	1,952	1,453	-	1,531	498	12,902	8,911	10,165	2,269	10,639	12,982	7,043	9,525	837	671	846	745	-	1,409	7,479	-	15,189	16,786
Gicumbi	1,697	1,252	-	1,213	1,100	12,809	9,569	8,727	6,899	11,019	14,216	6,636	10,381	754	723	765	704	308	483	8,421	5,379	11,468	7,881
Rwamagana	1,748	-	3,719	-	672	14,519	8,280	6,679	13,431	14,806	17,631	9,708	10,432	605	606	463	225	636	644	8,492	5,614	13,518	3,513
Nyagatare	2,984	1,634	4,257	-	770	12,952	5,769	5,468	5,463	14,267	17,182	8,900	11,294	883	857	1,116	601	635	915	7,693	9,087	62,045	2,227
Gatsibo	1,971	1,190	4,298	-	1,017	12,790	8,937	5,147	5,850	13,506	15,892	8,762	10,775	716	700	845	905	761	426	7,824	-	27,000	14,534
Kayonza	1,945	1,079	3,173	-	509	12,440	6,533	3,224	244	13,817	16,209	9,157	9,543	734	730	920	713	442	373	5,873	3,328	18,326	16,112
Kirehe	2,376	1,036	4,901	1,777	771	14,455	6,015	4,791	4,206	13,752	15,948	8,582	11,410	729	736	652	582	492	1,506	9,872	-	4,011	72
Ngoma	2,002	1,171	4,461	-	1,113	12,640	8,042	4,076	4,082	13,922	16,397	8,595	11,664	768	761	838	276	489	609	4,989	3,103	15,612	-
Bugesera	1,527	1,380	4,643	-	553	15,133	7,071	2,856	4,506	12,042	15,844	8,444	10,303	489	487	771	551	546	301	8,113	7,504	4,151	4,281
National	2,038	1,367	4,071	1,288	808	13,340	7,812	8,541	6,772	11,771	14,567	8,599	10,595	709	648	814	687	557	608	7,965	4,695	15,469	13,731
SSF	1,955	1,367	2,568	1,284	808	13,341	7,812	8,526	6,772	11,768	14,562	8,598	10,595	709	648	814	688	557	580	7,968	4,637	15,846	14,523
LSF	4,632	2,144	4,093	1,567	727	11,839	6,740	12,895	-	17,231	18,020	13,937	12,454	817	799	1,500	571	1,384	2,096	7,512	6,223	9,248	3,788

Source: NISR, SAS 2024

Table 17: 2024 Season B_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	928	840	-	-	-	11,080	5,706	3,106	8,396	11,116	16,830	8,518	9,718	614	615	584	-	411	468	5,729	-	45,254	12,757
Gasabo	1,311	1,058	3,979	-	-	11,628	6,663	3,538	4,202	12,843	16,607	13,354	9,512	664	661	693	490	377	348	9,393	4,935	4,242	10,227
Kicukiro	799	1,254	5,282	-	193	12,250	7,638	-	5,419	12,667	17,512	12,736	9,986	707	707	669	-	266	455	10,943	5,347	3,650	2,286
Nyanza	1,254	1,061	3,414	-	259	14,427	7,561	3,650	6,171	9,773	11,029	9,445	9,224	585	578	620	882	417	334	6,981	10,310	11,878	2,328
Gisagara	1,057	961	3,784	-	659	16,820	6,894	3,777	9,321	10,734	15,321	9,747	9,701	664	622	919	-	359	452	6,715	22,629	-	1,277
Nyaruguru	1,064	693	2,101	609	564	13,514	9,388	8,006	9,375	9,968	14,007	9,171	8,162	755	496	795	726	-	379	9,766	5,720	14,740	2,466
Huye	995	994	3,586	-	440	18,094	7,589	3,674	7,275	10,264	11,979	11,578	8,475	628	560	747	462	502	340	5,514	3,921	5,588	1,331
Nyamagabe	1,165	938	2,289	1,218	229	12,958	7,863	7,085	7,900	6,713	9,475	11,851	5,998	631	427	658	536	-	448	8,613	4,086	3,850	1,621
Ruhango	1,088	966	4,303	-	997	18,179	5,344	2,548	7,920	9,659	15,271	12,171	8,661	632	638	616	490	420	378	6,330	5,358	6,803	2,690
Muhanga	949	1,171	3,024	1,160	-	15,188	7,515	3,846	7,070	10,001	14,650	11,453	9,294	640	614	655	536	378	443	9,602	7,043	9,404	4,685
Kamonyi	1,194	1,111	3,673	-	-	14,348	6,336	5,201	8,496	10,006	14,485	10,564	9,129	560	545	632	419	555	371	5,584	6,713	-	9,025
Karongi	1,028	1,122	-	657	-	14,574	8,242	3,288	9,874	11,256	16,002	12,735	10,587	908	669	976	608	558	459	8,559	4,917	12,527	1,354
Rutsiro	1,074	756	-	699	-	14,631	7,162	4,479	9,011	11,876	16,718	13,952	9,628	797	613	824	456	-	380	7,862	2,951	5,777	6,789
Rubavu	1,393	729	-	-	-	12,324	7,735	8,781	5,926	12,346	16,587	11,800	10,426	745	539	779	503	-	613	11,735	6,179	16,080	7,370
Nyabihu	1,218	-	-	1,472	-	10,354	7,100	8,915	8,023	10,164	15,149	8,586	7,865	995	673	1,004	844	-	684	13,441	4,709	8,738	332
Ngororero	1,140	-	-	1,199	-	11,706	6,968	5,233	7,635	11,148	15,026	12,031	10,759	980	528	1,036	575	-	460	8,567	5,415	9,731	6,571
Rusizi	986	894	5,188	-	-	10,627	8,209	6,250	8,723	12,978	16,575	12,307	10,331	755	709	900	511	618	421	8,174	7,240	12,118	2,501
Nyamasheke	972	1,022	4,459	-	-	12,312	7,917	2,772	6,742	11,386	13,639	11,359	10,452	771	542	828	620	444	390	7,743	5,431	1,303	2,175
Rulindo	1,068	1,122	3,617	1,100	467	15,817	8,811	4,627	4,676	12,246	16,914	12,112	10,250	880	659	1,007	382	534	487	8,181	3,302	12,685	7,968
Gakenke	934	1,095	3,848	937	-	15,707	10,015	5,174	7,494	11,656	17,876	14,065	9,585	821	683	835	453	395	392	12,505	5,592	4,990	9,168
Musanze	1,537	1,299	-	1,650	-	11,658	9,609	8,980	9,409	9,953	12,261	7,769	8,595	1,071	748	1,084	608	-	484	9,734	5,084	4,756	9,316
Burera	1,297	1,498	-	1,366	447	12,512	8,082	7,300	7,811	12,845	17,027	13,351	8,460	1,080	573	1,103	456	-	297	9,761	5,057	13,367	9,776
Gicumbi	1,062	1,459	-	1,041	134	14,672	7,852	6,430	6,496	12,096	17,964	9,821	9,878	846	637	912	644	279	519	8,363	4,179	10,364	7,060
Rwamagana	867	1,124	4,520	-	494	16,688	6,986	3,536	5,943	14,597	18,245	10,146	8,365	594	594	593	567	389	532	8,945	4,226	17,813	2,344
Nyagatare	1,602	1,360	4,676	-	-	19,072	5,467	4,725	8,012	14,381	18,051	9,170	10,469	744	734	922	-	479	504	9,729	4,838	20,617	1,306
Gatsibo	1,292	1,345	3,719	-	1,249	18,005	9,150	4,760	7,462	14,116	16,408	12,061	11,357	671	632	932	584	366	493	7,961	5,438	10,977	1,323
Kayonza	1,183	1,225	3,322	-	580	15,731	6,421	4,215	5,285	15,597	18,222	12,322	8,904	652	647	978	497	247	460	9,045	5,248	1,670	8,369
Kirehe	2,199	1,139	4,560	2,553	650	15,535	6,570	3,975	4,468	15,258	19,116	10,421	10,077	708	647	826	666	388	791	5,136	4,919	3,565	1,437
Ngoma	844	1,179	4,402	-	663	15,350	6,551	5,170	3,950	14,896	18,069	8,418	11,091	769	745	904	371	447	418	7,776	3,768	23,790	1,644
Bugesera	934	972	5,159	-	794	13,250	5,843	2,712	6,017	11,693	14,159	12,091	10,056	654	655	512	343	508	382	9,689	2,897	13,985	1,423
National	1,284	1,169	4,143	1,267	622	14,325	7,702	6,846	7,328	12,352	17,010	11,375	9,723	737	652	880	561	430	426	8,948	5,092	11,128	4,263
SSF	1,226	1,169	3,115	1,268	622	14,324	7,702	6,776	7,329	12,352	17,019	11,375	9,723	737	652	880	561	430	408	8,987	5,129	10,537	4,289
LSF	4,306	2,109	4,168	1,205	255	20,451	5,458	14,919	5,573	12,141	12,172	11,164	13,355	735	725	1,314	395	504	1,299	4,588	4,003	25,748	3,170

Source: NISR, SAS 2024

Table 18: 2024 Season C _Average yield by crop type per district (Kg/Ha)

District/Crop	Sweet potato	Irish potato	Bean	Bush bean	Climbing bean	Pea	Soybean	Groundnut	vegetables
Nyarugenge	7,835	6,827	901	901	-	-	854	-	12,246
Gasabo	7,302	-	-	-	-	-	-	-	14,723
Kicukiro	5,822	-	1,222	1,222	-	-	1,310	703	9,498
Nyanza	6,049	-	1,010	1,044	679	1,243	1,097	-	13,246
Gisagara	8,578	3,824	955	955	-	758	555	-	10,890
Nyaruguru	8,663	5,934	1,004	1,004	-	-	873	-	8,430
Huye	9,789	2,249	1,132	1,132	-	602	673	-	10,629
Nyamagabe	6,033	9,156	1,238	1,238	-	955	471	-	5,979
Ruhango	8,595	4,512	1,067	1,067	-	503	-	-	6,481
Muhanga	8,287	5,591	980	980	-	914	752	-	10,735
Kamonyi	8,472	-	1,100	1,100	-	543	797	-	11,804
Karongi	8,809	7,859	-	-	-	723	-	-	7,614
Rutsiro	8,429	8,226	-	-	-	379	-	-	8,320
Rubavu	7,658	11,139	914	438	1,186	637	-	-	13,331
Nyabihu	-	9,094	649	-	649	-	-	-	5,618
Ngororero	9,315	6,790	-	-	-	-	866	-	4,416
Rusizi	9,830	8,311	1,086	1,086	-	-	-	-	10,485
Nyamasheke	7,449	-	-	-	-	-	-	-	5,826
Rulindo	7,359	7,181	347	347	-	-	793	-	13,582
Gakenke	8,282	4,513	-	-	-	-	478	-	10,385
Musanze	11,155	10,032	343	1,163	194	908	-	-	9,895
Burera	7,876	8,948	1,151	1,602	699	441	-	-	22,521
Gicumbi	12,168	9,396	925	925	-	-	817	-	15,027
Rwamagana	9,222	12,408	974	974	-	-	-	-	12,706
Nyagatare	4,403	9,773	469	469	-	-	-	-	16,909
Gatsibo	10,550	10,697	-	-	-	-	-	-	15,144
Kayonza	10,415	-	397	397	-	-	-	-	13,417
Kirehe	10,004	8,387	1,197	1,169	1,848	1,132	-	-	12,770
Ngoma	11,669	4,889	1,463	1,463	-	842	-	-	11,396
Bugesera	8,090	4,895	1,037	1,037	-	1,110	714	-	9,047
National	8,645	9,149	1,054	1,078	627	1,042	839	263	11,498

Source: NISR, SAS 2024

Table 19: 2024 Season A_Average yield of Large-Scale Farmers 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
Gasabo	3,304	-	3,867	-	-	-	10,112	2,025	-	15,562	15,885	13,326	16,003	587	587	-	-	-	-	6,782	1,691	21,365	1,640
Kicukiro	4,288	-	3,870	-	-	-	-	-	-	13,721	13,721	-	-	406	406	-	-	-	1,810	-	5,902	22,301	-
Nyanza	2,269	-	4,567	-	-	-	-	-	-	9,921	11,125	9,724	9,709	979	979	-	-	-	-	4,533	1,901	-	5,237
Gisagara	3,392	-	3,675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nyaruguru	3,875	-	-	-	-	-	15,037	34,474	-	8,009	15,538	5,518	13,056	-	-	-	-	-	-	-	-	28,009	-
Huye	3,696	-	3,567	-	-	-	-	-	-	-	-	-	-	529	529	-	-	-	-	11,715	-	20,504	-
Nyamagabe	3,274	-	-	-	-	-	-	17,500	-	-	-	-	-	2,271	-	2,271	1,979	-	-	-	-	-	-
Ruhango	1,742	-	4,545	-	-	13,513	-	-	-	12,123	-	8,960	15,930	931	931	-	-	-	-	-	-	91,489	-
Muhanga	2,847	-	1,950	-	-	-	-	14,284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kamonyi	5,322	-	3,502	-	-	-	-	-	-	-	-	-	-	482	482	-	-	-	2,215	-	-	-	66
Karongi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,242
Rubavu	2,280	-	-	-	-	-	-	14,978	-	15,178	15,215	9,534	-	685	-	685	553	-	-	-	-	37,371	556
Rusizi	3,655	-	4,636	-	-	-	-	-	-	-	-	-	-	1,067	1,067	-	-	-	-	-	10,484	-	105
Nyamasheke	-	-	3,926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	963
Rulindo	3,537	-	3,367	1,763	-	-	-	13,054	-	-	-	-	-	1,381	-	1,381	776	-	-	9,016	-	-	1,649
Gakenke	3,292	-	4,877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Musanze	-	-	-	1,169	-	-	-	12,740	-	-	-	-	-	-	-	-	434	-	-	-	-	10,295	-
Gicumbi	2,650	-	-	1,924	-	-	4,386	8,413	-	10,564	10,564	-	-	1,122	-	1,122	463	-	-	13,540	-	4,839	392
Rwamagana	4,238	-	3,718	-	-	-	5,070	5,138	-	17,848	18,481	12,019	-	1,129	1,086	2,731	-	-	-	9,152	3,835	22,587	5,355
Nyagatare	6,506	977	4,258	-	713	-	22,149	9,523	-	19,703	19,913	21,755	15,006	1,351	1,351	-	-	-	1,767	13,337	9,087	40,248	967
Gatsibo	4,064	-	4,304	-	1,362	-	8,586	-	-	18,761	18,325	25,256	-	535	535	-	-	-	2,459	6,546	-	9,395	6,342
Kayonza	4,922	-	3,210	-	-	6,961	4,619	6,737	-	18,791	18,791	-	-	1,159	1,159	-	-	-	-	4,936	1,947	14,034	16,112
Kirehe	6,514	-	4,914	1,777	-	-	-	11,045	-	-	-	-	-	850	850	-	-	-	2,121	2,058	-	-	72
Ngoma	3,149	-	4,461	-	-	1,599	7,010	-	-	16,547	17,817	12,082	12,477	1,511	1,511	-	-	-	157	3,830	3,140	11,050	-
Bugesera	3,032	2,791	4,669	-	-	-	13,812	7,015	-	15,525	17,253	15,342	13,203	1,095	1,097	1,021	1,589	1,384	-	9,411	15,364	2,537	4,268
National	4,632	2,144	4,093	1,567	727	11,839	6,740	12,895	-	17,231	18,020	13,937	12,454	817	799	1,500	571	1,384	2,096	7,512	6,223	9,248	3,788

Source: NISR, SAS 2024

Table 20: 2024 Season B_Average yield of Large-Scale Farmers 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
Gasabo	3,159	2,216	3,979	-	-	-	8,752		-	12,518	10,903	18,681	15,920	582	582	-	-	-	855	7,480	3,322	10,842	5,403
Kicukiro	-	-	5,282	-	-	-	-		-	5,584	5,584		-	854	854	-	-	-	589	-	4,682	5,009	-
Nyanza	-	-	3,457	-	-	-	-		-	7,885	3,318	9,173	13,020	338	338	-	-	-	-	7,749	1,578	-	16,227
Gisagara	2,353	-	3,806	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nyaruguru	-	-	2,101	-	-	-	8,773	17,362	-	13,775	9,311	14,371	6,273	-	-	-	-	-	250	-	-	-	29,106
Huye	1,268	-	3,592	-	-	-	-	-	-	-	-	-	-	508	508	-	-	-	-	13,157	-	45,384	-
Nyamagabe	2,653	-	2,289	1,485	-	-	-	10,200	-	-	-	-	-	224	-	224	408	-	-	-	-	-	-
Ruhango	2,903	-	4,303	-	-	35,528	-	-	-	11,886	6,259	11,703	13,933	982	982	-	-	358	-	-	-	41,329	2,883
Muhanga	-	-	3,078	-	-	-	-	16,446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kamonyi	4,281	-	3,552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43
Karongi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,507	-	-	1,618
Rubavu	2,801	-	-	-	-	-	-	10,377	-	7,308	7,346	4,763	-	-	-	-	-	-	-	-	-	3,069	267
Rusizi	3,545	2,648	5,196	-	-	13,316	6,742	-	-	-	-	-	-	844	844	-	-	-	640	-	5,052	-	134
Nyamasheke	-	-	4,459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,675
Rulindo	4,067	-	3,617	1,179	-	-	-	9,339	7,462	10,200	8,596	12,336	-	2,075	-	2,075	750	-	-	1,528	-	-	9,430
Gakenke	-	-	3,848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Musanze	-	-	-	1,497	-	-	15,518	-	-	-	-	-	-	-	-	-	-	-	-	-	645	18,782	1,468
Gicumbi	-	82	-	479	-	-	-	4,580	-	12,199	12,215	11,681	-	998	-	998	136	-	-	13,597	4,260	33,781	33,968
Rwamagana	3,188	2,706	4,520	-	255	-	4,385	3,460	-	17,419	18,535	10,208	-	679	679	-	-	80	350	6,603	2,781	37,411	14,000
Nyagatare	4,016	-	4,681	-	-	-	-	4,633	-	16,080	16,527	14,756	10,415	706	706	-	-	-	1,900	2,689	4,838	6,127	553
Gatsibo	3,338	2,774	3,735	-	-	-	-	2,703	-	16,087	16,642	13,226	12,055	499	499	-	-	892	792	5,705	-	15,164	12,997
Kayonza	6,590	1,016	3,292	-	-	4,681	2,220	8,572	-	5,872	5,732	9,766	11,751	895	895	-	-	248	-	1,732	2,459	8,019	8,003
Kirehe	5,533	-	4,715	2,553	-	-	-	-	-	-	-	-	-	814	814	-	-	-	1,448	6,458	-	-	3,050
Ngoma	2,605	1,077	4,402	-	-	7,413	6,857	-	-	7,766	6,992	6,205	15,050	588	587	1,361	-	391	704	3,898	5,063	8,139	14,806
Bugesera	3,249	701	5,234	-	-	14,516	6,760	3,335	5,526	15,312	18,287	10,865	13,849	800	795	1,242	343	808	184	11,741	4,058	30,371	1,136
National	4,306	2,109	4,168	1,205	255	20,451	5,458	14,919	5,573	12,141	12,172	11,164	13,355	735	725	1,314	395	504	1,299	4,588	4,003	25,748	3,170

Source: NISR, SAS 2024

Table 21: 2024 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	1,040	-	-	-	-	2,400	2,039	182	43	8,556	2,650	1,226	4,680	1,014	991	23	-	2	38	1,002	-	-	17,546
Gasabo	5,945	-	1,155	-	3	10,228	8,345	2,983	280	22,907	11,091	3,431	8,385	4,529	4,043	486	31	93	594	8,093	1,374	4,324	33
Kicukiro	1,993	-	327	-	-	591	3,596	66	288	5,430	2,331	775	2,324	800	791	9	-	2	30	338	95	728	133
Nyanza	11,319	867	1,944	-	27	61,788	15,708	1,495	1,634	32,090	9,437	4,753	17,900	7,143	6,092	1,051	191	135	897	2,291	47	14,928	4,133
Gisagara	14,399	1,011	10,613	-	246	13,128	15,054	762	739	34,924	7,131	6,558	21,235	8,255	7,884	371	4	133	1,146	1,613	84	-	-
Nyaruguru	8,235	-	-	-	23	10,565	48,326	11,053	3,825	20,691	9,504	2,757	8,430	5,794	851	4,944	201	8	444	1,556	-	4,750	92
Huye	8,812	-	3,488	-	63	15,664	20,406	2,094	1,371	31,636	10,663	6,356	14,617	7,049	4,747	2,302	136	33	1,434	5,371	2,180	1,052	-
Nyamagabe	9,770	-	39	47	2	13,523	52,872	23,902	2,064	28,518	4,890	2,575	21,053	5,812	1,592	4,220	537	-	695	2,590	337	1,258	-
Ruhango	6,741	43	3,881	-	-	53,437	12,545	400	2,521	33,101	4,816	3,619	24,665	4,728	3,670	1,058	23	83	1,835	3,492	-	6,212	665
Muhanga	3,895	257	359	-	160	30,240	29,809	1,491	21,921	80,408	14,323	7,711	58,375	3,832	1,459	2,373	123	2	1,251	3,107	2,295	8,886	2,458
Kamonyi	10,812	-	712	-	13	26,721	13,479	1,843	3,282	46,339	7,955	4,897	33,487	5,498	4,507	991	49	445	2,093	5,629	258	812	1
Karongi	11,269	-	-	-	-	9,737	37,988	4,596	4,652	58,997	11,961	6,685	40,351	7,034	1,284	5,750	120	5	1,245	3,501	205	4,976	7,834
Rutsiro	8,155	-	-	-	-	1,015	26,309	25,257	5,526	37,165	10,119	3,681	23,365	2,865	330	2,536	353	-	586	2,823	361	10,760	3,374
Rubavu	4,281	79	-	-	-	-	5,307	81,253	295	12,423	5,546	876	6,001	5,887	374	5,513	235	-	62	14,166	252	3,529	1,891
Nyabihu	5,642	414	-	501	3	1,893	18,048	103,239	17	4,549	1,296	670	2,584	8,479	160	8,319	566	-	-	8,083	1,027	3,161	400
Ngororero	5,886	161	-	276	5	18,294	41,081	11,192	6,839	45,590	6,960	6,718	31,911	9,389	827	8,563	323	-	1,147	5,126	176	3,716	11,781
Rusizi	14,655	45	6,840	-	-	10,887	13,485	1,430	5,090	26,144	9,617	1,685	14,842	9,078	7,601	1,477	27	164	347	5,548	4,016	651	72
Nyamasheke	9,250	12	1,478	-	88	28,679	17,263	-	10,686	26,375	9,071	2,577	14,727	5,413	1,210	4,203	74	247	668	4,848	1,478	3,144	12,603
Rulindo	9,519	-	58	85	15	8,231	29,544	8,139	484	24,843	8,153	4,355	12,336	7,140	2,586	4,554	273	61	364	7,917	201	581	30,900
Gakenke	16,889	-	77	-	507	15,583	52,269	7,561	14,533	68,720	14,569	6,340	47,812	7,063	938	6,126	427	150	427	3,264	2,426	948	10,265
Musanze	10,754	2,285	-	1,205	-	99	16,668	48,242	823	9,605	4,177	1,972	3,456	8,719	446	8,273	240	-	58	11,663	510	7,867	8,205
Burera	19,448	1,535	-	776	25	594	24,485	50,403	105	9,493	4,100	278	5,115	8,986	392	8,594	1,259	-	38	3,630	-	8,498	1,636
Gicumbi	10,276	422	-	479	31	7,683	72,585	28,866	241	25,274	13,225	3,728	8,322	12,687	3,135	9,552	1,159	114	143	6,715	41	7,632	558
Rwamagana	18,669	-	1,869	-	57	13,669	18,042	6,867	1,489	77,399	57,480	8,107	11,812	8,741	8,709	32	7	563	497	8,915	1,607	6,872	2,035
Nyagatare	96,373	18,667	8,377	-	809	10,774	9,045	3,881	443	75,716	50,576	5,778	19,362	14,681	12,777	1,905	146	729	740	3,706	336	8,024	144
Gatsibo	43,730	5,544	7,130	-	147	13,958	20,036	12,132	435	127,017	88,089	11,658	27,270	15,015	13,084	1,931	244	435	381	5,561	-	6,334	623
Kayonza	33,902	4,076	5,338	-	229	43,150	12,017	7,343	54	68,487	52,091	5,638	10,757	12,928	12,614	314	84	129	280	6,319	95	9,407	1,176
Kirehe	59,621	2,596	4,517	2	33	26,042	10,087	7,168	698	104,520	68,171	4,857	31,492	15,548	14,475	1,073	174	166	1,131	4,271	-	269	3
Ngoma	31,952	797	3,893	-	344	45,990	15,291	6,094	612	96,271	63,085	7,269	25,917	12,543	11,310	1,233	33	263	361	1,949	4,979	3,195	-
Bugesera	14,752	8,640	7,003	-	32	23,484	31,215	898	316	51,495	24,905	5,787	20,802	6,491	6,409	82	3	1,368	239	2,847	871	3,532	675
National	507,985	47,452	69,098	3,371	2,862	518,044	692,945	460,830	91,306	1,294,683	587,981	133,317	573,386	233,142	135,287	97,856	7,042	5,328	19,171	145,933	25,250	136,047	119,236

Source: NISR, SAS 2024

Table 22: 2024 Season B_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	381	326	-	-	-	2,606	1,540	40	693	7,701	2,621	985	4,095	988	951	38	-	22	90	997	-	2,673	10,750
Gasabo	1,682	3,938	1,239	-	-	6,161	9,153	1,317	415	17,420	6,902	5,454	5,064	2,724	2,453	271	11	103	241	7,585	310	1,545	2,353
Kicukiro	441	876	450	-	0	1,630	817	-	1,339	5,101	1,965	1,090	2,046	1,048	1,034	14	-	13	75	1,690	42	117	48
Nyanza	3,229	5,436	2,419	-	31	29,896	16,464	982	4,095	17,034	5,252	4,152	7,630	7,742	6,354	1,388	164	394	817	5,029	229	3,780	1,987
Gisagara	2,669	4,058	12,330	-	281	54,463	21,202	101	3,218	22,041	5,704	5,963	10,374	8,792	7,085	1,707	-	250	1,604	3,215	2,144	-	1,002
Nyaruguru	244	2,371	68	170	5	23,292	37,791	14,978	2,640	8,981	3,347	2,092	3,542	5,538	483	5,055	207	-	354	6,188	137	3,609	1,824
Huye	1,064	5,897	3,659	-	57	24,263	23,644	683	962	13,934	4,728	3,901	5,305	5,638	3,187	2,451	130	59	848	3,210	1,645	533	941
Nyamagabe	1,110	4,018	45	3,230	28	18,179	47,211	12,128	4,248	13,731	1,581	1,784	10,365	4,416	353	4,063	549	-	346	2,200	498	777	2,061
Ruhango	1,108	2,551	3,834	-	40	86,845	16,348	64	6,184	20,534	2,500	3,600	14,434	6,859	5,094	1,764	54	934	1,585	2,776	46	4,140	2,221
Muhanga	956	79	615	68	-	41,308	41,209	724	19,993	71,785	9,938	7,651	54,196	4,188	1,439	2,748	96	25	1,000	4,607	1,683	6,332	2,492
Kamonyi	2,615	3,597	922	-		27,448	25,240	1,985	7,695	52,971	9,725	7,726	35,520	5,782	4,701	1,081	45	566	1,614	5,383	397	-	12,837
Karongi	825	2,484	-	118	-	31,020	30,704	717	9,295	48,962	6,294	4,616	38,051	7,082	1,159	5,923	230	86	766	7,920	753	9,738	853
Rutsiro	1,648	107	-	143	-	14,406	19,195	14,355	4,838	30,021	7,135	8,572	14,314	4,248	414	3,833	215	-	490	1,543	280	2,595	9,043
Rubavu	2,366	101	-	-	-	2,985	13,536	49,776	462	13,314	4,984	1,885	6,446	3,802	395	3,407	302	-	288	25,823	285	7,016	6,957
Nyabihu	4,505	-	-	2,448	-	884	19,372	59,814	245	3,269	1,366	985	918	2,813	53	2,760	474	-	91	9,564	916	1,521	177
Ngororero	4,446	-	-	2,278	-	6,778	44,222	6,226	9,976	43,064	3,190	5,645	34,229	5,015	295	4,720	255	-	632	3,846	1,160	2,348	4,083
Rusizi	966	49	7,563	-	-	112,426	16,667	439	4,382	21,070	10,373	2,431	8,265	8,861	6,285	2,576	19	171	483	3,623	1,603	1,792	5,578
Nyamasheke	548	25	1,494	-	-	54,676	33,250	253	4,058	20,011	6,104	2,707	11,200	5,154	720	4,434	47	415	514	4,216	813	155	6,401
Rulindo	1,376	4,677	63	56	8	17,237	26,536	4,802	735	30,900	9,848	7,521	13,531	8,186	2,240	5,946	142	55	280	7,763	315	860	4,865
Gakenke	1,332	477	77	114	-	23,034	50,902	5,677	11,204	72,057	16,054	16,816	39,187	9,980	750	9,230	140	24	297	3,476	2,262	784	15,079
Musanze	4,039	2,163	-	2,209	-	417	26,818	35,270	1,240	7,211	3,859	1,599	1,753	8,507	237	8,270	174	-	4	10,850	1,166	396	6,125
Burera	3,154	9,118	-	1,372	7	499	31,227	31,218	166	9,720	6,157	602	2,961	12,638	290	12,347	514	-	15	9,108	637	6,048	2,089
Gicumbi	2,432	17,462	-	835	3	10,897	39,910	13,260	661	30,127	12,349	5,919	11,858	12,344	2,241	10,102	553	128	86	4,075	603	8,312	2,685
Rwamagana	3,529	10,504	2,229	-	4	29,349	10,680	2,418	678	70,629	53,076	8,051	9,502	6,615	6,433	182	50	617	269	9,340	1,529	17,967	1,544
Nyagatare	39,272	6,441	9,291	-	-	16,286	8,294	2,781	731	77,169	51,380	4,170	21,618	22,979	21,569	1,409	-	1,046	592	8,721	65	2,652	570
Gatsibo	11,303	10,126	6,440	-	176	11,991	22,339	9,247	2,774	95,110	58,102	12,028	24,980	13,144	10,802	2,342	43	1,017	984	6,094	1,181	2,487	1,418
Kayonza	8,272	16,296	5,781	-	117	53,429	10,133	6,567	2,127	64,276	51,371	4,736	8,169	12,725	12,452	273	43	260	283	7,260	947	1,041	5,826
Kirehe	5,486	11,887	4,225	5	242	28,345	7,170	5,121	4,564	91,097	65,110	4,479	21,509	16,122	9,757	6,365	153	402	1,075	1,762	811	239	3,555
Ngoma	1,737	9,249	3,952	-	430	27,705	8,216	3,756	772	100,507	70,634	5,056	24,816	14,591	12,000	2,591	19	521	624	2,764	4,628	6,320	1,452
Bugesera	6,365	6,000	6,138	-	103	24,841	7,024	898	1,982	62,806	24,149	10,673	27,984	13,718	13,638	80	0	1,954	704	6,923	134	11,878	447
National	119,101	140,314	72,834	13,045	1,532	783,294	666,814	285,596	112,370	1,142,552	515,798	152,891	473,863	242,239	134,866	107,373	4,628	9,062	17,051	177,549	27,219	107,654	117,267

Source: NISR, SAS 2024

Table 23: 2024 Season C_Crop production by crop type and district (MT)

District/Crop	Sweet potatoes	Irish potatoes	Beans	Bush bean	Climbing bean	Peas	Soya beans	Groundnut	Vegetables
Nyarugenge	181	17	23	23	-	-	13	-	720
Gasabo	29	-	-	-	-	-	-	-	3,675
Kicukiro	279	-	104	104	-	-	8	4	326
Nyanza	710	-	102	96	6	382	212	-	4,648
Gisagara	3,204	73	352	352	-	23	23	-	3,742
Nyaruguru	3,355	636	191	191	-	-	2	-	723
Huye	4,592	59	256	256	-	15	7	-	2,745
Nyamagabe	1,081	2,589	63	63	-	15	12	-	124
Ruhango	2,134	22	41	41	-	3	-	-	834
Muhanga	1,995	509	102	102	-	30	43	-	2,098
Kamonyi	1,696	-	184	184	-	8	20	-	3,455
Karongi	774	454	-	-	-	15	-	-	696
Rutsiro	414	1,100	-	-	-	5	-	-	399
Rubavu	1,705	4,095	43	8	36	3	-	-	8,309
Nyabihu	-	28,573	10	-	10	-	-	-	2,695
Ngororero	942	233	-	-	-	-	49	-	65
Rusizi	747	276	45	45	-	-	-	-	2,117
Nyamasheke	571	-	-	-	-	-	-	-	235
Rulindo	818	707	1	1	-	-	13	-	2,294
Gakenke	1,062	151	-	-	-	-	19	-	1,736
Musanze	1,413	18,800	21	11	10	23	-	-	1,706
Burera	1,574	19,984	118	82	36	3	-	-	1,624
Gicumbi	1,712	1,763	74	74	-	-	5	-	553
Rwamagana	624	62	27	27	-	-	-	-	3,427
Nyagatare	479	53	6	6	-	-	-	-	3,380
Gatsibo	1,638	118	-	-	-	-	-	-	4,108
Kayonza	922	-	8	8	-	-	-	-	2,306
Kirehe	1,048	456	18	17	1	4	-	-	2,403
Ngoma	710	55	368	368	-	9	-	-	1,440
Bugesera	1,884	144	892	892	-	11	57	-	3,394
National	38,293	80,929	3,046	2,948	99	549	483	4	65,980

Source: NISR, SAS 2024

Table 24: 2024 Season A_the Use of production by farmers (in percentage)

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	43.4	43.8	1.5	2.7	5.2	0.0	0.6	0.4	1.5	0.4	0.3
Sorghum	64.8	21.2	2.1	3.2	4.1	0.0	2.2	0.0	1.0	0.9	0.6
Paddy rice	81.7	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Wheat	49.3	32.6	0.0	0.0	4.5	0.0	12.1	0.3	0.0	0.0	1.2
Other cereals	34.7	41.3	1.7	3.2	8.5	0.0	6.7	0.0	2.1	1.7	0.0
Sweet potato	36.6	54.1	1.6	0.7	5.3	0.0	0.0	1.5	0.1	0.0	0.2
Irish potato	58.3	25.7	0.7	0.4	3.6	0.1	10.5	0.1	0.0	0.5	0.1
Yam & Taro	20.1	68.8	1.9	0.1	6.0	0.4	2.5	0.0	0.0	0.0	0.2
Cassava	71.2	24.1	0.9	1.0	2.4	0.0	0.0	0.1	0.1	0.2	0.2
Bush bean	24.2	50.9	1.7	2.2	5.0	0.1	12.7	0.0	2.1	0.7	0.4
Climbing bean	15.7	61.1	1.1	0.7	7.3	0.1	11.8	0.0	1.5	0.5	0.2
Pea	41.0	42.7	0.4	0.0	3.3	0.1	11.5	0.0	0.5	0.4	0.1
Groundnut	29.8	36.9	0.6	0.9	4.9	0.1	25.2	0.1	1.2	0.1	0.2
Soybean	26.0	47.2	0.7	1.4	4.4	0.2	17.3	0.0	1.4	0.3	0.8
Cooking banana	65.6	30.4	0.7	0.1	2.7	0.0	0.0	0.0	0.0	0.0	0.4
Dessert banana	70.2	26.2	0.1	0.1	2.6	0.0	0.0	0.0	0.0	0.2	0.6
Banana for beer	83.9	10.7	0.2	0.0	3.8	0.0	0.0	0.1	0.0	0.7	0.5
Vegetables	76.7	16.9	0.3	0.3	3.9	0.0	0.6	0.0	0.0	0.9	0.3
Fruits	86.3	8.7	0.3	0.3	3.9	0.0	0.0	0.0	0.0	0.2	0.2
Fodder crops	2.4	0.0	2.3	0.0	0.6	0.1	0.0	93.9	0.0	0.0	0.7
Other crops	84.0	7.7	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.3	5.8

Source: NISR, SAS 2024

Table 25: 2024 Season B_the Use of production by farmers (in percentage)

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	33.1	54.3	1.6	2.4	5.1	0.0	0.7	0.9	1.4	0.2	0.3
Sorghum	56.7	30.7	0.5	2.2	5.6	0.0	3.1	0.0	0.6	0.3	0.3
Paddy rice	81.3	16.2	0.1	0.1	0.2	0.0	0.5	0.0	0.0	1.5	0.3
Wheat	56.6	29.9	0.2	0.0	4.2	0.4	6.3	1.0	1.5	0.0	0.1
Other cereals	37.2	47.8	0.9	1.5	4.1	0.0	6.8	0.1	0.3	0.5	0.8
Sweet potato	27.7	59.5	1.8	0.7	6.1	0.0	0.0	3.6	0.2	0.1	0.2
Irish potato	55.4	26.7	0.6	0.3	3.2	0.1	12.8	0.1	0.2	0.4	0.1
Yam & Taro	33.0	54.2	1.6	0.6	6.6	0.1	3.8	0.0	0.0	0.0	0.2
Cassava	58.2	35.3	1.0	1.6	3.3	0.1	0.0	0.0	0.4	0.0	0.2
Bush bean	22.9	53.5	1.6	2.5	4.1	0.1	13.2	0.0	1.4	0.3	0.5
Climbing bean	17.2	57.3	1.0	0.9	7.4	0.1	14.4	0.0	1.3	0.2	0.2
Pea	33.4	49.1	0.0	0.1	2.3	0.1	14.6	0.0	0.2	0.1	0.1
Groundnut	31.8	38.7	0.5	1.7	5.5	0.1	20.7	0.0	0.8	0.1	0.1
Soybean	28.3	49.0	0.4	1.0	3.8	0.1	15.5	0.7	0.9	0.2	0.1
Cooking banana	53.4	40.8	1.0	0.1	4.1	0.0	0.0	0.0	0.0	0.1	0.4
Dessert banana	72.2	23.6	0.1	0.1	3.3	0.0	0.0	0.0	0.0	0.3	0.5
Banana for beer	80.7	11.6	0.1	0.1	6.0	0.0	0.0	0.0	0.0	1.0	0.4
Vegetables	83.7	10.8	0.1	0.1	3.0	0.0	1.2	0.2	0.1	0.6	0.1
Fruits	90.5	6.6	0.1	0.0	2.4	0.0	0.0	0.0	0.0	0.2	0.1
Fodder crops	2.9	0.0	1.9	0.0	0.9	0.0	0.0	92.7	1.1	0.0	0.5
Other crops	93.8	3.6	0.0	0.0	0.8	0.0	0.6	0.0	0.0	0.1	1.1

Source: NISR, SAS 2024

Table 26: 2024 Season C_ Use of production by farmers (in percentage)

Crops	Sold	Auto consumption	Wages for hired labour	Farm rent	Offered as gift	Barter trade / Exchanged with other things	Seeds	Fodder purposes	Stored	Post harvesting losses	Other usage
Sweet potato	31.65	54.59	2.28	0.57	6.56	0.01	-	3.98	-	0.16	0.22
Irish potato	58.70	24.64	0.41	-	5.07	0.01	10.52	0.20	0.07	0.33	0.04
Bush bean	19.46	56.43	1.57	0.05	5.46	0.04	15.49	-	1.22	0.17	0.11
Climbing bean	14.10	75.17	-	-	-	-	10.73	-	-	-	-
Pea	67.17	24.99	-	-	2.81		4.78	0.23	-	0.02	-
Groundnut	50.00	25.00	-	25.00	0.00		-	-	-	-	-
Soybean	36.08	44.58	1.98	0.63	4.01	-	12.35	0.10	0.07	0.13	0.06
Vegetables	81.26	11.45	0.43	0.40	4.55	0.02	0.56	0.07	-	0.94	0.32
Other crops	99.16	0.42	-	-	0.42	-	-	-	-	0.01	-

Source: NISR, SAS 2024

Table 27:Sowing date per Season and District in 2024 (%)

District	Season A							Season B									Season C				
	Before 01/09	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between16-31/10	After 31/10	Other season	Before 01/01	Between 01-15/01	Between 16-31/01	Between 01-15/02	Between 16-28/02	Between 01-15/03	Between16-31/03	After 31/03	Other season	Before 01/05	Between 01-31/05	Between 01-30/06	Between 01-31/07	After 31/07
Nyarugenge	2.14	13.23	15.48	30.83	9.7	6.1	22.51	7.45	4.22	3.05	7.56	20.44	11.61	2.23	3.22	40.21	2	22	42	24	10
Gasabo	3.62	31.18	28.22	6.56	1.32	2.67	26.42	3.59	8.78	3.29	17.89	16.65	8.76	2.92	2.01	36.11	16.67	33.33	38.89	11.11	0
Kicukiro	3.2	7.73	25.72	33.4	8.09	8.83	13.02	11.84	4.7	3.77	8.49	21.36	8.2	1.05	0.69	39.91	1.82	5.45	50.91	38.18	3.64
Nyanza	6.89	8.4	17.35	30.9	10.31	9.6	16.54	7.65	8.38	8.62	27.59	12.76	3.15	1.36	3.26	27.23	1.11	16.67	51.11	23.33	7.78
Gisagara	2.54	23.4	24	24.56	4.97	4.09	16.43	3.84	3.57	6.78	22.51	19.59	5.94	1.34	4.98	31.44	9.09	25.76	38.64	25.76	0.76
Nyaruguru	14.54	17.5	15.97	18.95	5	13.77	14.25	7.17	5.45	5.46	16.04	12.73	8.54	3.94	7.69	32.98	15.07	31.51	27.4	23.29	2.74
Huye	1.79	23.07	13.81	25.45	10.98	9.04	15.86	3.17	8.24	1.76	30.72	11.73	9.66	2.21	5.31	27.2	15.31	31.63	23.47	22.45	7.14
Nyamagabe	11.23	33.28	16.38	14.36	3.85	11.06	9.83	14.12	8.26	4.82	10.75	20.08	11.1	4.7	8.99	17.19	22.67	22.67	29.33	24	1.33
Ruhango	5.64	15.09	18.77	23.82	9.07	9.16	18.44	9.68	12.15	5.42	24.74	11.98	4.04	1.99	4.07	25.94	8.22	16.44	39.73	34.25	1.37
Muhanga	6.94	17.16	16.71	8.37	3.65	15.28	31.88	16.71	6.37	3.76	17.49	8.87	5.92	1.39	4.25	35.25	1.96	32.35	50	15.69	0
Kamonyi	3.42	23	24.59	17.2	3.68	4.79	23.32	5.6	8.54	4.4	26.68	15.66	3.43	1.27	3.7	30.73	6.33	58.23	24.05	7.59	3.8
Karongi	5.36	37.34	15.12	9.28	1.88	5.99	25.03	10.33	4.93	2.66	20.57	17.73	4.01	2.63	6.77	30.37	14.29	40.48	33.33	7.14	4.76
Rutsiro	17.41	27.04	20.59	7.37	2.64	1.89	23.07	5.1	3.97	2.73	11.66	12.07	10.54	3.42	10.47	40.03	23.81	33.33	38.1	0	4.76
Rubavu	20.53	30.35	18.03	4.8	2.29	6.87	17.12	3.1	7.31	2.55	14.51	16.3	19.18	9.62	8.66	18.77	15.38	25.64	28.21	23.08	7.69
Nyabihu	15.57	38.8	17.58	7.61	2.68	10.01	7.75	11.08	4.55	3.91	15.95	17.22	14.65	8.23	14.65	9.76	1.15	32.18	36.78	25.29	4.6
Ngororero	15.18	23.76	18.12	11.92	3.63	7.81	19.57	12.51	6.9	3.19	20.07	12.89	11.94	2.66	4.61	25.23	23.68	55.26	21.05	0	0
Rusizi	3.34	22.53	47.43	7.62	0.93	2.3	15.85	7.04	1.3	1.37	10.4	15.67	6.79	1.26	2.84	53.33	12.5	26.56	39.06	14.06	7.81
Nyamasheke	9.42	37.87	17.15	7.86	2.35	4.42	20.93	8.44	3.17	2.89	17.92	12.97	9.47	1.02	3.58	40.55	21.74	26.09	43.48	4.35	4.35
Rulindo	11.47	39.86	15.65	6.59	2.85	6.96	16.62	5.98	9.52	5.63	6.76	11.88	20.46	6.76	8.54	24.47	24.62	35.38	23.08	15.38	1.54
Gakenke	12.71	36.88	12.42	6.37	2.1	5.77	23.76	12.53	5.01	3.18	4.07	13.29	15.75	5.78	5.64	34.75	22.45	24.49	40.82	10.2	2.04
Musanze	23.28	37.57	14.33	5.13	0.49	4.72	14.5	8.1	11.33	4.13	12.16	7.09	21.34	11	9.93	14.93	13.48	20.22	42.7	23.6	0
Burera	16.59	29.63	19.02	12.64	5.77	8.16	8.19	10.78	12.9	4.39	12.99	7.95	16.75	12.88	9.39	11.99	14.75	31.97	30.33	19.67	3.28
Gicumbi	8.25	32.57	22.05	9.64	2.52	5.8	19.18	5.91	8.82	5.73	12.09	12.39	17.89	7.14	6.26	23.77	16.67	29.63	22.22	22.22	9.26
Rwamagana	1.94	35.58	27.1	10.79	1.7	2.97	19.93	3.27	6.09	5.06	20.58	17.4	5.7	2.3	2.95	36.64	17.39	19.57	19.57	41.3	2.17
Nyagatare	5.69	51.22	18.07	2.31	0.28	1.05	21.38	2.2	1.58	1.99	13.01	30.39	22.58	2.91	0.89	24.45	13.16	50	23.68	13.16	0
Gatsibo	1.66	40.79	21.48	7.52	1.01	1.46	26.09	2.33	6.5	2.52	8.14	18.98	17	3.61	3.01	37.91	29.69	37.5	20.31	7.81	4.69
Kayonza	0.31	15.01	32.15	22.38	3.66	2.9	23.6	8.42	7.83	1.92	3.98	7.68	24.37	3.99	3.67	38.13	23.08	25.64	28.21	20.51	2.56
Kirehe	0.92	19.33	28.09	21.68	2.68	3.26	24.03	4.63	3.87	2.97	14.05	19.42	9.91	1.52	0.88	42.75	18.84	31.88	26.09	17.39	5.8
Ngoma	2.16	35.57	21.67	8.8	1.4	0.77	29.63	2.61	2.85	0.92	9.43	20.03	11.23	1.83	0.56	50.53	15.79	28.07	24.56	26.32	5.26
Bugesera	1.96	16.94	25.9	25.99	5.99	5.39	17.84	2.39	2.89	4.43	10.8	21.76	22.7	4.35	0.54	30.14	2.04	6.12	32.65	53.06	6.12
National	7.68	28.41	20.77	13.63	3.68	6.02	19.82	7.29	6.38	3.88	15.77	15.39	11.73	3.69	4.94	30.91	12.57	28.27	33.5	21.86	3.8

Source: NISR, SAS 2024

Table 28:Sowing dates per Season and crop type in 2024 (%)

Crops	Before 01/09	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between16-31/10	After 31/10	Other season	Before 01/01	Between 01-15/01	Between 16-31/01	Between 01-15/02	Between 16-28/02	Between 01-15/03	Between16-31/03	After 31/03	Other season	Before 01/05	Between 01-31/05	Between 01-30/06	Between 01-31/07	After 31/07
Maize	4.4	40.4	30.4	17.5	4.9	2.5	0.0	0.62	4.25	5.56	33.39	35.71	16.38	2.55	1.52	0.02					
Sorghum	17.8	44.9	25.4	10.7	0.8	0.5	0.0	7.36	52.34	22.58	13.22	2.75	1.62	0.00	0.01	0.12					
Paddy rice	76.3	12.6	0.0	0.2	0.0	10.9	0.0	8.65	20.68	14.65	15.72	24.96	5.80	0.00	9.53	0.00					
Wheat	2.6	23.3	17.4	33.1	11.0	12.6	0.0	0.34	0.00	1.06	1.93	8.82	20.53	31.93	35.38	0.00					
Other cereals	7.7	54.7	26.2	9.9	1.4	0.0	0.0	0.97	0.72	2.07	39.38	36.16	15.36	2.74	2.28	0.32					
Sweet potato	30.7	13.7	7.3	13.8	6.1	28.4	0.0	23.87	12.79	6.47	14.90	9.77	10.39	5.00	16.77	0.04	20.12	33.94	31.99	13.15	0.8
Irish potato	15.2	33.9	21.7	13.0	5.3	11.0	0.0	0.80	4.17	5.09	15.99	16.59	25.82	13.04	18.49	0.00	10.37	23.05	36.71	26.34	3.53
Taro & Yams	18.8	35.0	15.4	10.2	5.1	15.5	0.0	77.22	5.38	1.32	4.84	2.24	3.92	0.55	4.52	0.00					
Cassava	5.9	33.3	19.6	11.1	3.4	6.7	20.1	2.03	4.39	1.37	4.59	3.29	2.38	0.98	3.61	77.37					
Bush bean	1.3	32.3	34.7	26.1	4.5	1.2	0.0	0.04	0.90	1.88	29.16	34.01	27.58	4.82	1.41	0.18	0	6.03	38.16	45.81	10.01
Climbing bean	3.4	47.7	33.1	13.7	1.5	0.7	0.0	0.08	1.02	1.78	27.53	31.79	26.55	8.74	2.48	0.04	0	86.97	2.22	0	10.81
Pea	10.7	40.9	24.0	16.2	3.0	5.2	0.0	0.01	1.39	1.34	20.73	23.32	21.78	15.37	16.07	0.00	2.13	7.64	64.86	22.35	3.01
Groundnut	1.6	39.1	38.8	18.4	1.9	0.3	0.0	0.17	2.08	10.76	37.97	31.36	15.27	2.07	0.32	0.00	0	0	0	100	0
Soybean	1.1	33.5	30.5	23.8	8.3	2.9	0.0	0.31	4.74	4.88	37.12	34.51	14.13	3.20	0.55	0.57	0.04	12.93	27.01	59.82	0.2
Cooking banana	0.3	2.1	1.0	0.2	0.2	0.7	95.5	0.00	0.06	0.08	0.05	0.17	0.07	0.01	0.71	98.86					
Dessert banana	0.2	1.1	0.6	0.0	0.1	0.4	97.6	0.05	0.13	0.07	0.25	0.00	0.12	0.00	0.36	99.02					
Banana for beer	0.0	0.9	0.1	0.1	0.0	0.5	98.4	0.07	0.05	0.07	0.10	0.08	0.02	0.00	0.43	99.18					
Vegetables	21.4	23.0	11.4	16.8	7.6	19.9	0.0	17.88	6.17	3.62	11.50	10.92	17.29	11.66	20.97	0.00	12.65	33.13	33.98	14.61	5.62
Fruits	0.0	17.1	0.6	2.3	0.4	2.7	76.9	3.48	0.00	0.15	1.25	0.00	4.39	5.04	0.83	84.85					
Fodder crops	0.5	2.9	1.4	2.0	1.3	2.2	89.8	0.00	0.53	0.05	1.27	1.14	0.50	0.10	8.51	87.90					
Other crops	67.5	12.7	3.6	5.1	1.1	7.3	2.7	16.62	0.22	0.48	0.25	1.38	0.95	0.78	2.16	77.18					

Source: NISR, SAS 2024

Table 29:Cultivated area by cropping system, per season and district (%) in 2024

District	Pure			Mixed		
	Season A	Season B	Season C	Season A	Season B	Season C
Nyarugenge	42.09	43.42	72.72	57.91	56.58	27.28
Gasabo	24.53	30.96	80.76	75.47	69.04	19.24
Kicukiro	23.61	21.69	43.56	76.39	78.31	56.44
Nyanza	25.98	25.82	69.07	74.02	74.18	30.93
Gisagara	24.16	22.30	70.95	75.84	77.70	29.05
Nyaruguru	46.55	47.35	89.97	53.45	52.65	10.03
Huye	31.15	30.82	81.38	68.85	69.18	18.62
Nyamagabe	46.83	53.08	82.80	53.17	46.92	17.20
Ruhango	38.54	35.41	69.44	61.46	64.59	30.56
Muhanga	33.78	29.24	78.71	66.22	70.76	21.29
Kamonyi	30.37	32.86	75.18	69.63	67.14	24.82
Karongi	39.92	42.83	87.07	60.08	57.17	12.93
Rutsiro	41.58	50.62	81.38	58.42	49.38	18.62
Rubavu	60.95	66.47	89.16	39.05	33.53	10.84
Nyabihu	60.86	62.52	87.23	39.14	37.48	12.77
Ngororero	36.41	40.24	73.51	63.59	59.76	26.49
Rusizi	29.84	37.62	64.34	70.16	62.38	35.66
Nyamasheke	41.46	41.04	82.18	58.54	58.96	17.82
Rulindo	37.73	42.79	82.66	62.27	57.21	17.34
Gakenke	42.76	45.81	80.00	57.24	54.19	20.00
Musanze	62.14	67.37	89.34	37.86	32.63	10.66
Burera	47.28	51.73	94.40	52.72	48.27	5.60
Gicumbi	39.64	47.70	90.00	60.36	52.30	10.00
Rwamagana	21.24	39.32	68.47	78.76	60.68	31.53
Nyagatare	31.96	57.76	92.86	68.04	42.24	7.14
Gatsibo	30.74	43.19	90.43	69.26	56.81	9.57
Kayonza	26.97	56.30	80.59	73.03	43.70	19.41
Kirehe	31.49	43.05	81.92	68.51	56.95	18.08
Ngoma	24.27	32.72	48.23	75.73	67.28	51.77
Bugesera	31.58	23.55	60.64	68.42	76.45	39.36
National	35.42	43.24	83.43	64.58	56.76	16.57
Small scale farmers	33.84	43.11	-	66.16	56.89	-
Large scale farmers	95.67	75.42	-	4.33	24.58	-

Source: NISR, SAS 2024

Table 30: 2024 Season A_Use of seeds by farmer type per district (Percentage)

District	Percentage of farmers who used improvedseeds			Percentage of sampled plots in which improved seeds was used			Percentage of land size in which improved seeds were used		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	SSF
Nyarugenge	37.82	37.82		32.95	32.95		34.66	34.66	
Gasabo	47.18	45.31	82.35	42.89	40.67	54.93	42.14	40.74	88.89
Kicukiro	48.02	47.13	100.00	39.06	37.50	77.78	43.57	41.94	97.85
Nyanza	45.14	44.11	100.00	40.38	39.19	78.95	41.54	40.32	89.50
Gisagara	46.79	45.40	80.00	42.37	41.14	70.83	46.25	43.49	72.16
Nyaruguru	25.38	23.03	100.00	22.51	20.37	84.62	21.96	20.90	99.27
Huye	44.34	41.13	92.31	39.19	35.60	80.00	42.64	39.91	91.89
Nyamagabe	26.74	26.64	50.00	22.42	22.13	42.86	22.80	22.79	30.22
Ruhango	35.58	34.85	85.71	30.97	29.66	76.47	30.28	28.52	92.54
Muhanga	18.26	17.05	77.78	15.53	14.15	81.82	14.97	13.35	91.58
Kamonyi	47.19	46.36	83.33	40.00	39.44	62.50	40.26	39.60	72.11
Karongi	33.47	33.33	100.00	29.42	29.30	100.00	29.47	29.37	100.00
Rutsiro	19.67	19.67		17.56	17.56		17.75	17.75	
Rubavu	24.67	24.13	75.00	22.84	22.36	44.44	22.84	22.78	50.40
Nyabihu	24.66	24.66		21.88	21.88		23.58	23.58	
Ngororero	17.08	17.08		14.48	14.48		14.48	14.48	
Rusizi	51.49	51.30	60.00	44.99	44.79	54.55	46.44	44.13	86.52
Nyamasheke	24.01	23.46	57.14	20.29	19.75	57.14	18.79	17.95	78.56
Rulindo	41.22	40.72	80.00	35.71	35.76	34.78	35.31	35.30	37.20
Gakenke	26.87	26.69	50.00	22.17	21.99	50.00	22.12	21.77	89.76
Musanze	27.33	26.89	100.00	23.41	22.37	80.00	23.94	23.69	86.01
Burera	38.62	38.62		33.60	33.60		33.78	33.78	
Gicumbi	29.43	28.78	100.00	25.00	23.23	66.67	22.95	22.83	77.44
Rwamagana	60.25	58.77	81.25	52.09	55.56	42.13	59.17	58.75	75.60
Nyagatare	60.03	57.40	88.46	52.31	48.95	68.89	55.84	54.07	91.28
Gatsibo	54.38	52.22	100.00	47.34	45.05	71.43	51.12	48.74	98.63
Kayonza	54.84	52.56	96.30	46.31	45.55	50.00	51.41	49.56	91.58
Kirehe	53.21	52.62	100.00	50.82	48.71	97.30	52.67	50.71	99.86
Ngoma	50.83	49.92	80.00	43.81	42.56	57.81	42.98	41.91	86.27
Bugesera	46.57	43.58	91.11	46.10	39.28	77.51	41.83	39.36	95.45
National	39.69	38.44	87.30	35.47	33.62	62.78	37.71	36.30	88.77

Source: NISR, SAS 2024

Table 31: 2024 Season B_Use of seeds by farmer type per district (Percentage)

District	Percentage of farmers who used improved seeds			Percentage of sampled plots in which improved seeds was used			Percentage of land size in which improved seeds were used		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	SSF
Nyarugenge	15.3	15.3		13.0	13.0		15.5	15.5	
Gasabo	23.0	21.2	64.3	20.5	18.5	35.9	22.3	20.8	80.8
Kicukiro	18.0	15.9	100.0	16.7	14.4	75.0	15.2	12.6	97.7
Nyanza	24.2	23.7	71.4	22.7	22.0	58.3	23.9	22.8	82.4
Gisagara	17.0	15.0	81.3	16.0	14.2	81.3	22.6	14.8	97.9
Nyaruguru	5.7	4.9	27.3	4.2	3.6	20.0	3.8	3.6	17.1
Huye	17.5	14.3	85.0	15.6	12.7	73.1	17.2	14.6	85.9
Nyamagabe	9.3	9.0	40.0	8.0	7.5	37.5	8.5	8.4	31.1
Ruhango	11.0	8.8	92.9	9.5	7.5	62.5	9.8	7.5	94.4
Muhanga	9.2	8.4	80.0	7.4	6.8	80.0	7.0	6.4	93.2
Kamonyi	19.0	18.2	100.0	15.1	14.4	100.0	15.4	14.9	100.0
Karongi	5.7	5.5	100.0	4.7	4.4	50.0	4.7	4.7	4.4
Rutsiro	8.3	8.3		7.6	7.6		7.3	7.3	
Rubavu	25.0	24.7	50.0	24.2	23.8	42.9	25.1	25.0	38.5
Nyabihu	33.7	33.7		28.0	28.0		28.4	28.4	
Ngororero	18.1	18.1		16.0	16.0		15.8	15.8	
Rusizi	6.7	5.6	60.0	5.9	5.0	33.3	9.5	5.3	85.2
Nyamasheke	8.4	7.7	44.4	7.6	6.9	44.4	6.7	5.9	68.5
Rulindo	15.7	15.1	60.0	14.4	13.6	31.6	13.5	13.3	58.3
Gakenke	9.9	10.0	-	8.6	8.6	-	8.4	8.4	-
Musanze	14.3	13.3	100.0	14.2	11.2	100.0	12.9	12.6	100.0
Burera	15.6	15.6		14.8	14.8		15.8	15.8	
Gicumbi	16.6	16.2	50.0	14.0	13.1	40.9	13.0	12.9	50.9
Rwamagana	18.7	15.1	73.3	18.7	13.4	33.8	16.9	15.5	76.8
Nyagatare	57.3	55.6	79.1	49.3	47.5	59.0	54.6	53.3	92.3
Gatsibo	24.1	21.7	84.6	21.6	17.8	58.2	22.9	20.1	91.3
Kayonza	20.5	17.4	72.4	19.2	16.0	38.5	19.6	16.5	87.9
Kirehe	4.4	3.5	87.5	4.5	3.2	78.6	6.6	3.2	97.7
Ngoma	7.7	5.8	66.7	9.1	5.0	51.4	6.7	4.9	81.3
Bugesera	43.0	41.5	69.2	38.5	36.4	50.0	38.4	36.4	84.4
National	18.0	16.6	72.6	16.5	14.5	48.5	18.2	16.5	88.3

Source: NISR, SAS 2024

Table 32: 2024 Season C_Use of seeds by farmer type per district (Percentage)

District	Percentage of farmers who used improved seeds	Percentage of sampled plots in which improved seeds was used	Percentage of land size in which improved seeds were used
Nyarugenge	20.59	80.56	19.44
Gasabo	75	21.43	78.57
Kicukiro	11.11	89.47	10.53
Nyanza	17.33	82.67	17.33
Gisagara	12.75	87.5	12.5
Nyaruguru	12.5	90.91	9.09
Huye	17.39	81.25	18.75
Nyamagabe	9.09	91.18	8.82
Ruhango	13.73	87.27	12.73
Muhanga	18.07	81.18	18.82
Kamonyi	31.67	68.25	31.75
Karongi	20.59	79.41	20.59
Rutsiro	10.53	89.47	10.53
Rubavu	27.27	72.73	27.27
Nyabihu	19.48	81.18	18.82
Ngororero	5.88	94.12	5.88
Rusizi	31.37	70.91	29.09
Nyamasheke	20	80	20
Rulindo	19.61	80.77	19.23
Gakenke	7.5	92.86	7.14
Musanze	6.1	94.19	5.81
Burera	20.18	80.34	19.66
Gicumbi	9.76	91.3	8.7
Rwamagana	41.18	62.16	37.84
Nyagatare	20.69	80.65	19.35
Gatsibo	27.27	73.68	26.32
Kayonza	31.03	68.97	31.03
Kirehe	30.43	70	30
Ngoma	17.39	81.25	18.75
Bugesera	19.72	79.45	20.55
National	18.8	81.5	18.5

Source: NISR, SAS 2024

Table 33: Seed use by crop type and season in 2024 (%)

Crop	Traditional seeds			Improved seeds		
	Season A	Season B	Season C	Season A	Season B	Season C
Maize	35.36	45.45		64.64	54.55	
Paddy rice	87.27	79.58		12.73	20.42	
Wheat	94.23	89.79		5.77	10.21	
Irish potato	95.78	98.43	92.58	4.22	1.57	7.42
Cassava	99.71	99.60		0.29	0.40	
Bush bean	99.72	99.87	99.91	0.28	0.13	0.09
Climbing bean	99.78	99.71	100	0.22	0.29	0
Pea	99.86	100.00	100	0.14	-	
Soybean	99.09	99.54	98.96	0.91	0.46	1.04
Cooking banana	99.38	99.94		0.62	0.06	
Dessert banana	98.71	99.54		1.29	0.46	
Banana for beer	99.50	99.73		0.50	0.27	
Vegetables	66.06	63.54	47.6	33.94	36.46	52.4
Fruits	89.75	97.77		10.25	2.23	
Fodder crops	98.98	99.14		1.02	0.86	
Other crops	87.51	86.52		12.49	13.48	
National	85.83	93.60	86.14	14.17	6.40	13.86

Source: NISR, SAS 2024

Table 34: 2024 Season A_Percentage 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	14.29	4.76	80.95	-	-	-	-	100
Gasabo	-	4.00	70.67	9.33	10.67	5.33	-	100
Kicukiro	2.70	5.41	89.19	-	-	2.70	-	100
Nyanza	0.90	3.60	23.42	55.86	11.71	3.60	0.90	100
Gisagara	-	7.37	29.47	49.47	7.37	5.26	1.05	100
Nyaruguru	-	5.77	26.92	51.92	9.62	5.77	-	100
Huye	-	4.95	52.48	29.70	0.99	11.88	-	100
Nyamagabe	5.77	7.69	23.08	61.54	-	1.92	-	100
Ruhango	2.60	11.69	37.66	36.36	6.49	3.90	1.30	100
Muhanga	4.88	12.20	14.63	41.46	19.51	4.88	2.44	100
Kamonyi	6.60	3.77	40.57	24.53	8.49	12.26	3.77	100
Karongi	7.58	1.52	19.70	63.64	6.06	-	1.52	100
Rutsiro	-	-	33.33	57.58	9.09	-	-	100
Rubavu	3.45	17.24	41.38	13.79	15.52	5.17	3.45	100
Nyabihu	3.33	15.00	36.67	21.67	16.67	3.33	3.33	100
Ngororero	10.81	-	29.73	43.24	8.11	-	8.11	100
Rusizi	8.79	1.10	21.98	64.84	-	3.30	-	100
Nyamasheke	-	7.41	22.22	62.96	3.70	1.85	1.85	100
Rulindo	1.56	9.38	40.63	40.63	1.56	4.69	1.56	100
Gakenke	2.60	-	48.05	38.96	2.60	7.79	-	100
Musanze	5.43	6.52	38.04	39.13	6.52	3.26	1.09	100
Burera	2.31	7.69	46.15	37.69	3.85	0.77	1.54	100
Gicumbi	2.60	2.60	53.25	25.97	14.29	-	1.30	100
Rwamagana	1.56	14.06	42.19	39.84	0.78	1.56	-	100
Nyagatare	3.47	13.37	46.53	33.17	0.99	1.49	0.99	100
Gatsibo	1.63	1.09	37.50	50.00	2.72	6.52	0.54	100
Kayonza	8.40	5.88	47.06	25.21	7.56	5.88	-	100
Kirehe	2.69	3.23	18.28	58.06	-	16.13	1.61	100
Ngoma	12.86	4.29	10.00	64.29	-	7.14	1.43	100
Bugesera	1.44	10.79	41.73	29.50	12.23	4.32	-	100
National	3.70	6.54	37.15	40.92	5.40	5.18	1.11	100

Source: NISR, SAS 2024

Table 35: 2024 Season B_Percentage 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	50.00	-	50.00	-	-	-	-	100
Gasabo	2.70	5.41	64.86	-	18.92	8.11	-	100
Kicukiro	6.67	20.00	60.00	6.67	-	6.67	-	100
Nyanza	10.64	4.26	17.02	34.04	23.40	6.38	4.26	100
Gisagara	5.13	5.13	30.77	33.33	2.56	15.38	7.69	100
Nyaruguru	20.00	10.00	20.00	30.00	20.00	-	-	100
Huye	11.63	18.60	16.28	27.91	4.65	16.28	4.65	100
Nyamagabe	27.27	4.55	27.27	27.27	4.55	9.09	-	100
Ruhango	2.94	14.71	23.53	23.53	8.82	26.47	-	100
Muhanga	13.33	26.67	6.67	20.00	20.00	6.67	6.67	100
Kamonyi	-	7.89	44.74	18.42	5.26	21.05	2.63	100
Karongi	25.00	8.33	33.33	25.00	8.33	-	-	100
Rutsiro	-	-	47.06	41.18	5.88	5.88	-	100
Rubavu	12.00	4.00	40.00	10.67	16.00	9.33	8.00	100
Nyabihu	5.32	11.70	32.98	31.91	12.77	5.32	-	100
Ngororero	5.88	-	38.24	47.06	8.82	-	-	100
Rusizi	16.67	11.11	22.22	22.22	11.11	11.11	5.56	100
Nyamasheke	33.33	-	33.33	4.76	9.52	19.05	-	100
Rulindo	-	9.52	47.62	23.81	14.29	-	4.76	100
Gakenke	16.67	-	29.17	54.17	-	-	-	100
Musanze	11.11	6.67	26.67	24.44	26.67	4.44	-	100
Burera	7.14	2.38	40.48	40.48	9.52	-	-	100
Gicumbi	8.00	4.00	32.00	20.00	24.00	2.00	10.00	100
Rwamagana	6.98	20.93	44.19	16.28	9.30	2.33	-	100
Nyagatare	2.33	4.07	51.74	37.21	0.58	2.91	1.16	100
Gatsibo	6.94	8.33	33.33	41.67	2.78	5.56	1.39	100
Kayonza	7.69	15.38	38.46	21.15	3.85	11.54	1.92	100
Kirehe	-	5.88	23.53	41.18	5.88	23.53	-	100
Ngoma	33.33	20.00	6.67	33.33	3.33	3.33	-	100
Bugesera	2.44	4.88	32.52	39.02	6.50	14.63	-	100
National	8.04	7.81	35.80	29.26	9.07	7.97	2.05	100

Source : NISR, SAS 2024

Table 36: 2024 Season C_Percentage of farmers by source of improved seeds per district

District	Sources of improved seeds							
	Government (MINAGRI/	Recognized multipliers	Agro-dealers	NGOs/	Market	Agriculture cooperative	Other source	Total
Nyarugenge	-	-	12.5	-	37.5	50.0	-	100.00
Gasabo	-	-	46.2	-	30.8	7.7	15.4	100.00
Kicukiro	-	-	75.0	-	-	25.0	-	100.00
Nyanza	-	-	40.0	-	46.7	13.3	-	100.00
Gisagara	-	-	23.1	15.4	53.9	-	7.7	100.00
Nyaruguru	-	-	11.1	-	66.7	-	22.2	100.00
Huye	-	-	87.5	6.3	6.3	-	-	100.00
Nyamagabe	-	42.9	28.6	-	28.6	-	-	100.00
Ruhango	-	11.1	66.7	-	22.2	-	-	100.00
Muhanga	-	11.1	77.8	5.6	-	5.6	-	100.00
Kamonyi	-	-	57.1	-	33.3	9.5	-	100.00
Karongi	25.0	-	50.0	-	25.0	-	-	100.00
Rutsiro	-	-	100.0	-	-	-	-	100.00
Rubavu	-	10.0	30.0	10.0	50.0	-	-	100.00
Nyabihu	22.2	33.3	16.7	-	11.1	16.7	-	100.00
Ngororero	-	-	50.0	-	-	50.0	-	100.00
Rusizi	11.8	-	58.8	-	29.4	-	-	100.00
Nyamasheke	-	-	20.0	-	80.0	-	-	100.00
Rulindo	8.3	-	16.7	-	66.7	-	8.3	100.00
Gakenke	-	-	-	-	100.0	-	-	100.00
Musanze	-	-	-	-	100.0	-	-	100.00
Burera	25.0	20.8	25.0	8.3	4.2	-	16.7	100.00
Gicumbi	-	25.0	25.0	-	50.0	-	-	100.00
Rwamagana	-	-	71.4	-	14.3	7.1	7.1	100.00
Nyagatare	-	-	57.1	-	42.9	-	-	100.00
Gatsibo	12.5	-	50.0	18.8	12.5	6.3	-	100.00
Kayonza	-	-	84.6	-	7.7	7.7	-	100.00
Kirehe	-	-	47.4	5.3	42.1	5.3	-	100.00
Ngoma	-	-	40.0	20.0	40.0	-	-	100.00
Bugesera	-	-	70.6	-	29.4	-	-	100.00
National	5.0	5.6	46.9	3.8	29.8	5.6	3.2	100.00

Source: NISR, SAS 2024

Table 37: 2024 Season A_Percentage of crops by source of seeds

Crop	Government (MINAGRI/ RAB/	Recognized seed multipliers	Agro dealers	NGOs/	Market	Agriculture cooperative	Other source	Total
Maize	3.04	2.16	40.18	47.42	3.88	2.66	0.67	100
Paddy rice	0.75	36.84	1.50	-	0.75	60.15	-	100
Wheat	31.58	10.53	15.79	36.84	-	-	5.26	100
Irish potato	10.20	52.04	10.20	7.14	18.37	-	2.04	100
Cassava	16.67	45.83	2.08	4.17	6.25	22.92	2.08	100
Bush bean	11.63	25.58	27.91	25.58	4.65	-	4.65	100
Climbing bean	57.14	7.14	7.14	28.57	-	-	-	100
Pea	50.00	-	25.00	-	25.00	-	-	100
Soybean	21.43	21.43	25.00	7.14	7.14	17.86	-	100
Cooking banana	15.15	21.21	-	15.15	45.45	-	3.03	100
Dessert banana	15.22	39.13	13.04	10.87	10.87	2.17	8.70	100
Banana for beer	23.08	38.46	11.54	-	26.92	-	-	100
Vegetables	2.69	8.38	47.60	6.29	29.34	0.90	4.79	100
Fruits	18.03	62.30	3.28	6.56	9.84	-	-	100
Fodder crops	18.60	6.98	39.53	2.33	32.56	-	-	100
Other crops	18.42	30.26	3.95	6.58	11.84	18.42	10.53	100

Source: NISR, SAS 2024

Table 38: 2024 Season B_Percentage of crops by source of seeds

Crop	Government (MINAGRI/RAB/	Recognized seed multipliers	Agro dealers	NGOs/	Market	Agriculture cooperative	Other source	Total
Maize	1.77	1.30	44.83	42.96	6.62	1.68	0.84	100.00
Paddy rice	2.50	34.17	0.83	-	-	56.67	5.83	100.00
Wheat	35.71	-	39.29	14.29	3.57	7.14	-	100.00
Irish potato	25.42	52.54	13.56	3.39	3.39	1.69	-	100.00
Cassava	33.33	50.00	-	-	6.67	6.67	3.33	100.00
Bush bean	41.46	7.32	19.51	21.95	7.32	-	2.44	100.00
Climbing bean	17.65	5.88	41.18	11.76	17.65	5.88	-	100.00
Pea	50.00	-	-	-	-	50.00	-	100.00
Soybean	33.33	3.70	44.44	7.41	7.41	3.70	-	100.00
Cooking banana	17.65	76.47	-	5.88	-	-	-	100.00
Dessert banana	19.23	30.77	7.69	3.85	7.69	3.85	26.92	100.00
Banana for beer	9.09	63.64	9.09	-	-	-	18.18	100.00
Vegetables	1.59	5.41	45.86	9.55	30.57	1.59	5.41	100.00
Fruits	26.83	51.22	12.20	2.44	7.32	-	-	100.00
Fodder crops	41.94	12.90	32.26	-	9.68	-	3.23	100.00
Other crops	60.12	13.29	1.16	0.58	2.31	17.92	4.62	100.00

Source: NISR, SAS 2024

Table 39: 2024 Season C_Percentage of crops by source of seeds

Crop	Government (MINAGRI/RAB/	Recognized seed multipliers	Agro dealers	NGOs/	Market	Agriculture cooperative	Other source	Total
Sweet potato	66.67	33.33	-	-	-	-	-	100
Irish potato	25.00	40.00	2.50	-	12.50	10.00	10.00	100
Bush bean	-	-	33.33	-	33.33	-	33.33	100
Soybean	-	-	-	100	-	-	-	100
Vegetables	1.72	0.69	54.14	4.14	32.41	5.17	1.72	100
Other crops	-	-	-	-	50.00	-	50.00	100
Total	5.01	5.60	46.90	3.83	29.79	5.60	3.24	100

Source: NISR, SAS 2024

Table 40: 2024 Season A_Use of organic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who applied organic fertilizer			Percentage of plots in which organic fertilizer was applied			Percentage of land size in which organic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	66.7	66.7		70.6	70.6		72.2	72.2	
Gasabo	85.2	85.3	82.4	82.1	82.1	87.1	85.4	85.0	96.0
Kicukiro	73.5	73.0	100.0	70.1	70.1	55.6	73.6	72.9	92.1
Nyanza	87.2	86.9	100.0	71.5	71.5	81.8	76.0	75.4	97.7
Gisagara	91.6	92.3	73.7	83.5	83.5	94.1	85.3	84.3	99.7
Nyaruguru	95.4	95.3	100.0	85.4	85.4	84.6	86.1	85.9	98.8
Huye	87.0	86.6	92.3	85.7	85.7	100.0	81.4	80.4	100.0
Nyamagabe	95.6	95.6	100.0	83.9	83.9	100.0	82.8	82.8	100.0
Ruhango	90.0	90.5	57.1	77.1	77.1	92.3	75.7	75.1	98.7
Muhanga	98.4	98.4	100.0	75.9	75.9	100.0	78.8	78.4	100.0
Kamonyi	92.5	92.3	100.0	74.3	74.3	82.4	76.0	75.5	96.2
Karongi	95.3	95.5	0.0	73.3	73.3	0.0	76.3	76.3	0.0
Rutsiro	91.9	91.9		80.4	80.4		82.9	82.9	
Rubavu	73.2	72.9	100.0	60.1	60.1	66.7	52.1	52.0	84.5
Nyabihu	96.4	96.4		80.9	80.9		81.9	81.9	
Ngororero	97.7	97.7		82.8	82.8		87.2	87.2	
Rusizi	89.8	91.3	20.0	88.4	88.4	100.0	85.8	85.6	100.0
Nyamasheke	94.6	95.3	57.1	86.9	86.9	100.0	84.8	84.6	100.0
Rulindo	97.7	97.7	100.0	88.2	88.2	95.5	89.5	89.5	95.4
Gakenke	97.9	98.1	75.0	81.9	81.9	100.0	85.7	85.6	100.0
Musanze	89.9	89.8	100.0	75.6	75.6	40.0	71.3	71.3	70.8
Burera	95.1	95.1		83.9	83.9		86.4	86.4	
Gicumbi	98.2	98.2	100.0	85.3	85.3	96.3	87.0	87.0	97.4
Rwamagana	88.5	89.0	81.3	88.0	88.0	74.4	89.5	89.6	84.3
Nyagatare	76.0	76.7	69.2	64.7	64.7	77.7	66.5	66.0	88.1
Gatsibo	88.8	88.8	90.0	73.1	73.1	80.7	80.3	80.0	87.9
Kayonza	78.3	79.1	63.0	70.0	70.0	76.8	73.9	73.9	73.3
Kirehe	85.3	85.6	66.7	77.2	77.2	100.0	80.4	79.5	100.0
Ngoma	89.1	89.4	80.0	71.7	71.7	87.5	74.5	74.0	96.2
Bugesera	72.9	73.9	57.8	59.1	59.1	100.0	60.4	59.1	100.0
National	89.1	89.5	76.4	79.2	79.2	84.0	79.1	78.8	94.8

Source: NISR, SAS 2024

Table 41: 2024 Season B_Use of organic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who applied organic fertilizer			Percentage of plots in which organic fertilizer was applied			Percentage of land size in which organic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	61.2	61.2		74.2	74.2		70.0	70.0	
Gasabo	90.2	91.6	57.1	66.4	66.4	78.7	70.6	70.1	91.7
Kicukiro	58.4	59.2	25.0	78.3	78.3	50.0	78.6	80.8	25.0
Nyanza	74.0	74.0	71.4	66.9	66.9	88.9	66.5	65.9	99.0
Gisagara	87.7	88.3	68.8	69.6	69.6	100.0	75.2	73.2	100.0
Nyaruguru	94.6	94.4	100.0	76.1	76.1	80.0	76.1	75.8	98.9
Huye	81.7	81.3	90.0	76.4	76.4	100.0	74.2	73.1	100.0
Nyamagabe	90.2	90.1	100.0	74.7	74.7	100.0	76.8	76.7	100.0
Ruhango	87.4	88.1	64.3	68.4	68.4	66.7	69.6	68.8	99.6
Muhanga	96.2	96.1	100.0	62.8	62.8	100.0	68.8	68.6	100.0
Kamonyi	87.1	87.2	80.0	61.8	61.8	75.0	62.3	62.3	59.9
Karongi	94.9	94.9	100.0	69.8	69.8	100.0	72.2	72.1	100.0
Rutsiro	92.5	92.5		70.7	70.7		77.3	77.3	
Rubavu	68.6	68.5	75.0	53.4	53.4	60.0	54.0	53.9	75.3
Nyabihu	95.6	95.6		77.8	77.8		78.2	78.2	
Ngororero	97.7	97.7		76.4	76.4		78.7	78.7	
Rusizi	75.0	76.1	20.0	67.2	67.2	22.2	64.6	64.6	42.7
Nyamasheke	93.6	94.2	66.7	73.9	73.9	100.0	69.2	69.0	100.0
Rulindo	96.7	96.9	80.0	86.4	86.4	71.4	85.7	85.7	67.6
Gakenke	97.8	98.0	50.0	73.7	73.7	100.0	76.8	76.8	100.0
Musanze	88.4	88.2	100.0	76.9	76.9	60.0	77.1	77.2	60.1
Burera	91.8	91.8		82.6	82.6		87.0	87.0	
Gicumbi	96.6	96.5	100.0	82.6	82.6	81.8	81.8	81.8	92.9
Rwamagana	69.2	67.6	93.3	71.3	71.3	55.1	74.9	74.6	82.3
Nyagatare	61.8	63.6	37.2	59.4	59.4	84.2	62.6	62.5	87.6
Gatsibo	80.0	80.5	69.2	67.1	67.1	75.0	69.7	69.1	92.3
Kayonza	60.2	61.3	41.4	51.0	51.0	51.0	59.7	59.6	68.8
Kirehe	41.8	41.9	37.5	77.6	77.6	100.0	79.6	78.9	100.0
Ngoma	51.0	51.2	47.6	46.2	46.2	61.3	48.7	48.3	87.3
Bugesera	70.1	70.1	71.8	66.3	66.3	70.0	63.0	61.7	93.1
National	80.1	80.5	64.9	71.2	71.2	69.8	71.4	71.1	93.3

Source: NISR, SAS 2024

Table 42: 2024 Season C_Use of organic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who applied organic fertilizer	Percentage of plots in which organic fertilizer was applied	Percentage of land size in which organic fertilizer was applied
Nyarugenge	73.5	85.6	72.7
Gasabo	100.0	100.0	100.0
Kicukiro	33.3	100.0	100.0
Nyanza	74.7	94.7	93.6
Gisagara	79.4	89.3	90.3
Nyaruguru	87.5	98.4	98.7
Huye	91.3	93.9	91.8
Nyamagabe	90.9	88.7	91.0
Ruhango	82.4	98.0	98.1
Muhanga	90.4	98.2	99.1
Kamonyi	86.7	95.9	93.5
Karongi	79.4	99.4	98.2
Rutsiro	79.0	95.3	98.6
Rubavu	36.4	83.9	77.7
Nyabihu	93.5	93.1	95.1
Ngororero	100.0	97.0	97.2
Rusizi	76.5	98.7	97.7
Nyamasheke	75.0	100.0	100.0
Rulindo	86.3	96.0	91.9
Gakenke	87.5	92.4	96.9
Musanze	91.5	98.9	99.7
Burera	97.4	87.7	92.1
Gicumbi	78.1	99.3	95.1
Rwamagana	52.9	96.8	87.6
Nyagatare	62.1	73.4	84.5
Gatsibo	83.6	91.9	87.5
Kayonza	82.8	68.5	85.9
Kirehe	78.3	72.8	92.2
Ngoma	45.7	93.2	93.4
Bugesera	28.2	95.5	83.3
National	78.8	92.9	93.9

Source: NISR, SAS 2024

Table 43: 2024 Season A Use of inorganic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who used inorganic fertilizers			Percentage of plots in which inorganic fertilizer was applied			Percentage of land under which inorganic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	24.4	24.4		10.1	10.1		12.3	12.3	
Gasabo	51.3	49.4	88.2	26.1	26.1	43.7	30.3	28.5	83.4
Kicukiro	53.7	52.9	100.0	18.3	18.2	77.8	27.5	25.4	97.7
Nyanza	45.3	44.3	100.0	17.2	17.2	50.0	23.0	21.1	96.6
Gisagara	60.6	59.0	100.0	30.4	30.4	100.0	40.5	34.4	100.0
Nyaruguru	85.3	84.9	100.0	41.7	41.7	84.6	52.1	51.4	98.8
Huye	54.2	51.2	100.0	27.3	27.3	85.0	31.6	27.9	97.7
Nyamagabe	68.1	68.0	100.0	39.9	39.9	100.0	45.9	45.8	100.0
Ruhango	42.7	41.9	100.0	14.2	14.2	58.8	19.1	16.9	98.8
Muhanga	56.4	55.6	100.0	19.6	19.6	100.0	21.5	19.9	100.0
Kamonyi	47.4	46.2	100.0	20.5	20.5	82.4	21.5	20.0	96.2
Karongi	66.5	66.7	0.0	33.5	33.5	0.0	36.2	36.2	0.0
Rutsiro	61.9	61.9		29.5	29.5		35.1	35.1	
Rubavu	69.8	69.4	100.0	42.2	42.2	44.4	50.4	50.4	40.2
Nyabihu	73.3	73.3		45.6	45.6		53.4	53.4	
Ngororero	70.5	70.5		32.7	32.7		38.2	38.2	
Rusizi	84.0	83.9	90.0	58.4	58.4	72.7	67.1	66.1	85.3
Nyamasheke	76.0	75.6	100.0	45.9	45.9	100.0	47.6	46.9	100.0
Rulindo	72.0	71.9	80.0	38.7	38.7	65.2	43.9	43.7	85.5
Gakenke	82.2	82.2	75.0	48.9	48.9	75.0	53.0	52.8	92.8
Musanze	78.4	78.3	100.0	40.2	40.2	60.0	47.1	47.0	83.5
Burera	74.6	74.6		40.8	40.8		48.2	48.2	
Gicumbi	60.2	59.8	100.0	26.5	26.5	66.7	32.5	32.4	87.4
Rwamagana	59.0	56.8	90.6	37.6	37.6	34.5	45.4	44.6	74.1
Nyagatare	73.9	71.7	98.1	36.3	36.3	77.0	54.6	52.3	96.7
Gatsibo	64.7	63.0	100.0	34.2	34.2	65.7	49.8	47.3	97.9
Kayonza	61.1	59.7	85.2	38.5	38.4	46.6	42.7	40.5	83.7
Kirehe	70.5	70.3	88.9	41.0	41.0	89.2	55.1	53.3	97.5
Ngoma	67.6	66.9	90.0	29.2	29.2	60.6	38.8	37.5	88.5
Bugesera	51.3	50.6	62.2	20.8	20.8	38.5	28.5	26.7	66.4
National	64.5	63.8	90.8	34.0	34.0	56.6	41.6	40.2	91.0

Source: NISR, SAS 2024

Table 44: 2024 Season B Use of inorganic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who used inorganic fertilizers			Percentage of plots in which inorganic fertilizer was applied			Percentage of land under which inorganic fertilizer was applied		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	14.1	14.1		5.2	5.2		7.4	7.4	
Gasabo	48.0	47.3	64.3	23.0	23.0	47.2	26.7	25.2	87.0
Kicukiro	32.3	31.2	75.0	10.8	10.8	62.5	16.2	13.8	94.6
Nyanza	31.7	31.0	85.7	11.4	11.4	54.6	13.9	12.3	98.6
Gisagara	40.6	38.7	100.0	15.9	15.9	100.0	22.6	14.4	100.0
Nyaruguru	72.8	71.9	100.0	32.5	32.5	73.3	43.1	42.5	98.1
Huye	45.2	42.6	100.0	13.4	13.4	76.9	17.3	14.2	98.9
Nyamagabe	59.6	59.1	100.0	33.0	33.0	100.0	36.9	36.7	100.0
Ruhango	30.1	28.4	92.9	9.9	9.9	52.2	11.7	9.2	98.9
Muhanga	40.3	39.9	80.0	12.3	12.3	80.0	13.5	12.9	93.2
Kamonyi	35.1	34.7	80.0	9.5	9.5	80.0	12.4	11.9	94.2
Karongi	59.5	59.6	0.0	27.9	27.9	0.0	27.8	27.9	0.0
Rutsiro	58.6	58.6		25.9	25.9		31.4	31.4	
Rubavu	69.4	69.3	75.0	46.8	46.8	42.9	51.7	51.7	62.7
Nyabihu	78.9	78.9		47.4	47.4		58.7	58.7	
Ngororero	70.3	70.3		35.7	35.7		36.8	36.8	
Rusizi	61.0	60.4	90.0	27.6	27.6	50.0	35.6	32.7	87.6
Nyamasheke	72.6	72.0	100.0	36.1	36.1	100.0	38.3	37.5	100.0
Rulindo	60.4	60.1	80.0	31.8	31.8	66.7	33.1	32.9	87.2
Gakenke	81.0	81.1	50.0	36.1	36.1	50.0	41.7	41.7	29.8
Musanze	72.1	71.8	100.0	36.1	36.1	73.3	43.0	42.8	96.9
Burera	65.5	65.5		37.9	37.9		44.8	44.8	
Gicumbi	58.1	57.8	83.3	26.5	26.5	40.9	31.0	30.9	68.1
Rwamagana	39.2	37.0	73.3	26.7	26.7	26.4	29.7	28.7	73.6
Nyagatare	70.5	69.3	86.1	31.8	31.8	58.2	52.3	50.9	92.7
Gatsibo	51.1	50.1	76.9	23.9	23.9	50.6	33.5	31.2	88.5
Kayonza	46.4	43.7	93.1	17.1	17.1	46.2	28.7	25.7	91.9
Kirehe	31.7	31.1	87.5	16.9	16.9	85.7	23.8	21.1	98.2
Ngoma	23.7	21.8	81.0	6.9	6.9	35.8	12.0	10.2	87.2
Bugesera	47.6	46.8	61.5	22.6	22.6	42.8	28.9	26.6	83.5
National	52.0	51.2	82.9	25.3	25.3	47.8	30.6	29.1	92.2

Source: NISR, SAS 2024

Table 45: 2024 Season C Use of inorganic fertilizer by farmer type per district (Percentage)

District	Percentage of farmers who applied Inorganic fertilizer	Percentage of plots in which Inorganic fertilizer was applied	Percentage of land size in which Inorganic fertilizer was applied
Nyarugenge	55.88	31.46	36.75
Gasabo	91.67	98.68	93.04
Kicukiro	55.56	35.83	51.29
Nyanza	52	46.11	47.76
Gisagara	51.96	42.04	44.72
Nyaruguru	40.62	26.15	32.65
Huye	53.62	33.09	41.86
Nyamagabe	54.55	38.55	57.56
Ruhango	29.41	23.85	30.03
Muhanga	50.6	38.07	49.66
Kamonyi	53.33	42.47	56.58
Karongi	50	65.48	61.01
Rutsiro	42.11	23.47	73.94
Rubavu	78.79	74.96	74.94
Nyabihu	96.1	93.25	96.92
Ngororero	20.59	12.93	17.09
Rusizi	74.51	67.24	65.64
Nyamasheke	35	27.64	33.33
Rulindo	66.67	59.34	62.65
Gakenke	45	28.03	46.32
Musanze	80.49	83.4	90.75
Burera	89.47	70.33	80.72
Gicumbi	56.1	28.15	48.39
Rwamagana	85.29	76.42	80.35
Nyagatare	72.41	58.1	66.80
Gatsibo	58.18	40.05	50.84
Kayonza	72.41	49.66	66.09
Kirehe	65.22	51.15	60.86
Ngoma	36.96	33.79	23.74
Bugesera	57.75	60.84	54.91
National	60.4	52.6	65.92

Source: NISR, SAS 2024

Table 46: 2024 Season A Percentage 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	**15.8**	**76.3**	**-**	**2.6**	**5.3**	**-**	**100.0**
Gasabo	0.6	65.5	11.3	13.6	8.5	0.6	100.0
Kicukiro	1.1	96.8	-	2.1	-	-	100.0
Nyanza	8.9	20.6	56.1	4.8	8.5	1.2	100.0
Gisagara	3.0	37.2	45.1	9.2	5.6	-	100.0
Nyaruguru	1.4	26.0	68.7	0.7	2.9	0.4	100.0
Huye	2.2	46.6	44.0	0.4	6.5	0.4	100.0
Nyamagabe	6.6	39.9	49.8	3.0	0.3	0.3	100.0
Ruhango	15.2	24.2	52.1	2.4	6.2	-	100.0
Muhanga	10.9	13.6	59.1	6.6	9.7	-	100.0
Kamonyi	2.3	46.5	33.5	4.6	11.2	1.9	100.0
Karongi	17.8	18.1	60.7	0.6	0.6	2.2	100.0
Rutsiro	6.0	48.1	39.9	4.9	-	1.1	100.0
Rubavu	1.5	86.7	10.3	1.1	0.4	-	100.0
Nyabihu	0.6	75.6	22.9	0.6	0.3	-	100.0
Ngororero	0.5	31.7	61.6	5.7	0.5	-	100.0
Rusizi	2.8	26.5	66.0	4.3	0.3	0.3	100.0
Nyamasheke	3.0	22.3	69.0	4.8	0.6	0.3	100.0
Rulindo	4.9	55.2	33.9	2.1	3.5	0.4	100.0
Gakenke	2.3	46.2	46.4	2.8	2.3	-	100.0
Musanze	9.1	52.5	34.6	3.5	0.3	-	100.0
Burera	12.4	46.2	37.8	1.9	0.9	0.7	100.0
Gicumbi	7.5	45.7	35.1	10.5	0.9	0.3	100.0
Rwamagana	3.7	42.8	50.2	0.3	2.7	0.3	100.0
Nyagatare	4.6	54.6	35.9	-	2.8	2.2	100.0
Gatsibo	2.8	45.9	46.6	0.5	3.5	0.7	100.0
Kayonza	14.1	46.9	31.3	6.6	0.6	0.6	100.0
Kirehe	9.9	17.9	54.5	2.5	12.8	2.3	100.0
Ngoma	14.5	21.2	56.8	2.9	4.0	0.7	100.0
Bugesera	0.5	39.3	47.6	7.8	4.8	-	100.0
National	6.2	40.8	45.3	3.6	3.4	0.6	100.0

Source: NISR, SAS 2024

Table 47: 2024 Season B Percentage 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	4.2	62.5	-	33.3	-	-	100.0
Gasabo	3.5	77.7	-	14.7	4.1	-	100.0
Kicukiro	3.9	96.2	-	-	-	-	100.0
Nyanza	6.9	24.0	52.6	5.7	10.9	-	100.0
Gisagara	1.0	34.8	42.0	10.1	12.1	-	100.0
Nyaruguru	1.7	30.3	64.9	0.4	2.2	0.4	100.0
Huye	3.4	54.4	28.4	0.5	12.8	0.5	100.0
Nyamagabe	3.4	38.7	48.0	8.2	1.9	-	100.0
Ruhango	11.3	34.6	42.1	2.5	9.4	-	100.0
Muhanga	3.9	17.7	65.2	6.1	7.2	-	100.0
Kamonyi	5.2	45.1	28.5	4.2	17.1	-	100.0
Karongi	2.1	46.7	47.4	2.5	1.4	-	100.0
Rutsiro	4.8	50.9	38.6	5.3	0.4	-	100.0
Rubavu	1.9	74.2	21.5	0.8	1.5	-	100.0
Nyabihu	0.7	73.3	24.9	1.1	-	-	100.0
Ngororero	1.1	45.1	46.2	6.3	1.4	-	100.0
Rusizi	2.9	25.2	64.4	6.5	1.0	-	100.0
Nyamasheke	7.4	17.9	63.7	8.6	2.1	0.3	100.0
Rulindo	12.7	59.7	16.7	3.2	7.7	-	100.0
Gakenke	1.7	55.3	40.1	2.2	0.7	-	100.0
Musanze	1.6	66.1	30.7	1.6	-	-	100.0
Burera	11.6	49.7	33.2	1.8	3.4	0.3	100.0
Gicumbi	10.9	43.5	34.5	11.2	-	-	100.0
Rwamagana	6.7	53.9	37.3	0.5	1.6	-	100.0
Nyagatare	1.4	60.2	33.7	0.9	3.0	0.7	100.0
Gatsibo	4.3	42.2	47.6	3.7	1.7	0.6	100.0
Kayonza	4.1	62.0	27.3	2.9	3.3	0.4	100.0
Kirehe	15.6	22.4	42.2	3.8	15.6	0.4	100.0
Ngoma	11.0	42.9	35.6	2.5	7.4	0.6	100.0
Bugesera	1.8	31.6	50.4	7.1	9.1	-	100.0
National	4.8	46.6	39.9	4.4	4.2	0.2	100.0

Source: NISR, SAS 2024

Table 48: 2024 Season C Percentage 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	-	52.63	0	5.26	42.11	-	100
Gasabo	-	81.82	0	-	9.09	-	100
Kicukiro	-	60	20	-	20	-	100
Nyanza	-	35.9	33.33	17.95	12.82	-	100
Gisagara	-	50.94	15.09	15.09	16.98	-	100
Nyaruguru	7.69	50	30.77	11.54	0	-	100
Huye	-	62.16	32.43	2.7	2.7	-	100
Nyamagabe	-	52.78	36.11	2.78	8.33	-	100
Ruhango	-	80	6.67	13.33	0	-	100
Muhanga	-	59.52	2.38	16.67	16.67	-	100
Kamonyi	-	65.62	6.25	15.62	9.38	3.12	100
Karongi	-	76.47	0	11.76	5.88	-	100
Rutsiro	12.5	62.5	25	-	0	-	100
Rubavu	-	80.77	7.69	11.54	0	-	100
Nyabihu	-	97.3	2.7	-	0	-	100
Ngororero	-	57.14	42.86	-	0	-	100
Rusizi	-	50	31.58	15.79	2.63	-	100
Nyamasheke	-	28.57	42.86	14.29	14.29	-	100
Rulindo	-	52.94	26.47	11.76	8.82	-	100
Gakenke	-	55.56	27.78	16.67	0	-	100
Musanze	-	72.73	24.24	1.52	1.52	-	100
Burera	-	64.71	20.59	3.92	10.78	-	100
Gicumbi	-	73.91	13.04	8.7	4.35	-	100
Rwamagana	-	86.21	10.34	3.45	0	-	100
Nyagatare	-	61.9	23.81	4.76	4.76	-	100
Gatsibo	3.12	59.38	34.38	-	3.12	-	100
Kayonza	4.76	61.9	14.29	9.52	9.52	-	100
Kirehe	3.33	23.33	30	36.67	6.67	-	100
Ngoma	-	52.94	29.41	11.76	5.88	-	100
Bugesera	-	68.29	19.51	2.44	9.76	-	100
National	0.64	63.12	19.55	8.4	7.55	0.11	100

Source: NISR, SAS 2024

Table 49: 2024 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;	2.4	58.8	28.0	5.3	4.0	1.5	100
NPK 20-10-10;	63.9	13.1	9.8	3.3	8.2	1.6	100
NPK 25-5-5;	84.2	5.3	10.5	-	-	-	100
NPK 22-6-12;	55.2	41.4	-	-	3.5	-	100
Other NPK;	18.4	69.4	8.2	-	4.1	-	100
Urea;	4.8	39.9	47.9	3.3	3.2	1.0	100
liquid urea (Mbonea M	3.4	42.4	37.3	5.1	11.9	-	100
DAP	4.4	38.1	51.3	3.0	2.6	0.6	100
KCL/MOP,	-	40.0	-	20.0	40.0	-	100
Omax;	-	66.7	33.3	-	-	-	100
Winner;	-	54.6	36.4	-	9.1	-	100
Yara Viva;	10.0	10.0	40.0	20.0	10.0	10.0	100
Amidas;	-	33.3	33.3	-	16.7	16.7	100
Cereal;	5.7	60.0	17.1	-	8.6	8.6	100
DI Grow;	6.8	64.4	11.9	6.8	8.5	1.7	100
Dyna gro;	-	100.0	-	-	-	-	100
Lime/Ishwagara	6.0	40.2	46.2	1.7	5.1	0.9	100
Other type of fertilizer	0.9	61.8	16.4	0.9	8.2	11.8	100

Source: NISR, SAS 2024

Table 50: 2024 Season B_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	3.1	64.8	24.3	3.9	3.7	0.2	100
NPK 20-10-10;	54.7	9.4	14.1	4.7	17.2	-	100
NPK 25-5-5;	45.0	20.0	25.0	5.0	5.0	-	100
NPK 22-6-12;	67.9	10.7	17.9	3.6	-	-	100
Other NPK;	4.0	76.0	10.0	4.0	6.0	-	100
Urea;	3.1	48.8	40.4	4.5	2.9	0.2	100
liquid urea (Mbonea M	-	82.9	17.1	-	-	-	100
DAP	4.2	45.5	43.8	4.3	1.9	0.3	100
KCL/MOP,	-	100.0	-	-	-	-	100
Omax;	-	86.7	6.7	-	6.7	-	100
Winner;	12.5	50.0	25.0	12.5	-	-	100
Yara Viva;	-	100.0	-	-	-	-	100
Amidas;	-	80.0	20.0	-	-	-	100
Cereal;	-	45.5	18.2	-	36.4	-	100
DI Grow;	1.5	45.5	30.3	1.5	21.2	-	100
Dyna gro;	-	100.0	-	-	-	-	100
Lime/Ishwagara	3.7	51.4	41.1	3.7	-	-	100
Other type of fertilizer	1.2	77.2	11.1	4.9	5.6	-	100

Source: NISR, SAS 2024

Table 51: 2024 Season C_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;	0.4	71.14	18.04	5.81	4.61	-	100
NPK 20-10-10;	-	50	25	25	-	-	100
NPK 25-5-5;	-	50	25	25	-	-	100
Other NPK;	11.11	77.78	11.11	0	-	-	100
Urea;	0.64	61.59	18.88	12.02	6.01	-	100
liquid urea (Mbonea M	-	71.43	23.81	4.76	-	-	100
DAP	0.54	60.6	18.75	9.51	9.51	0.27	100
Omax;	-	83.33	0	8.33	8.33	-	100
Winner;	-	100	0	0	-	-	100
Yara Viva;	-	50	25	25	-	-	100
Cereal;	-	-	50	50	-	-	100
DI Grow;	-	52.94	11.76	17.65	17.65	-	100
Lime/Ishwagara	-	47.37	47.37	5.26	-	-	100
Other type of fertilizer	-	67.74	18.55	4.84	8.87	-	100

Source: NISR, SAS 2024

Table 52: 2024 Season A Percentage of plots by type of inorganic fertilizer per district

District	NPK	Urea	DAP	KCL/MOP	Lime	Others	Total
Nyarugenge	10.5	57.9	29.0	-	-	2.6	100
Gasabo	19.3	48.7	31.9	-	-	-	100
Kicukiro	12.4	39.1	43.8	-	-	4.8	100
Nyanza	13.4	46.6	37.5	-	1.3	1.3	100
Gisagara	8.2	41.9	47.0	-	0.3	2.6	100
Nyaruguru	13.4	31.3	49.6	-	4.6	1.1	100
Huye	16.9	45.1	35.6	-	0.4	2.1	100
Nyamagabe	13.6	35.8	44.9	-	4.0	1.6	100
Ruhango	9.7	49.7	37.7	-	-	2.9	100
Muhanga	18.0	36.0	43.3	-	0.6	2.3	100
Kamonyi	8.8	46.3	39.2	-	1.7	4.2	100
Karongi	2.9	48.0	48.8	-	0.3	-	100
Rutsiro	26.2	25.9	37.6	-	9.1	1.1	100
Rubavu	49.1	22.7	25.8	-	-	2.4	100
Nyabihu	42.3	24.7	28.9	-	0.3	3.9	100
Ngororero	12.8	35.4	47.0	-	4.4	0.5	100
Rusizi	9.8	43.5	45.6	-	0.5	0.6	100
Nyamasheke	12.5	35.9	49.7	-	1.3	0.5	100
Rulindo	15.5	41.6	40.1	-	1.2	1.7	100
Gakenke	8.8	38.9	51.5	-	0.6	0.2	100
Musanze	26.6	33.3	36.5	-	-	3.7	100
Burera	13.7	38.9	45.8	-	-	1.5	100
Gicumbi	19.5	34.8	41.1	-	1.8	2.7	100
Rwamagana	8.7	45.2	45.6	-	-	0.5	100
Nyagatare	4.7	47.8	42.7	-	0.1	4.8	100
Gatsibo	6.2	46.6	44.7	0.3	0.2	2.0	100
Kayonza	9.1	40.9	46.6	0.2	0.8	2.4	100
Kirehe	6.4	40.5	49.7	0.1	0.3	3.1	100
Ngoma	5.0	45.7	46.8	-	-	2.5	100
Bugesera	10.2	38.1	50.2	0.2	0.7	0.7	100
National	12.9	40.3	43.7	0.0	1.0	2.0	100

Source: NISR, SAS 2024

Table 53: 2024 Season B Percentage of plots by type of inorganic fertilizer per district

District	NPK	Urea	DAP	KCL/MOP	Lime	Others	Total
Nyarugenge	7.1	64.3	14.3	-	-	14.3	100
Gasabo	18.0	43.1	35.1	-	-	3.8	100
Kicukiro	5.7	34.0	56.6	-	-	3.8	100
Nyanza	21.4	49.3	25.7	-	0.7	2.9	100
Gisagara	15.3	43.3	35.0	-	-	6.4	100
Nyaruguru	14.3	29.8	46.9	-	6.2	2.7	100
Huye	27.4	47.0	20.8	-	-	4.8	100
Nyamagabe	11.9	27.4	50.2	-	9.8	0.7	100
Ruhango	28.2	38.8	30.1	-	-	2.9	100
Muhanga	22.5	31.6	43.9	-	-	2.0	100
Kamonyi	16.8	44.5	35.8	-	-	2.9	100
Karongi	2.5	39.1	56.0	-	2.5	-	100
Rutsiro	29.6	29.1	31.5	0.5	8.9	0.5	100
Rubavu	48.2	24.5	22.1	-	-	5.2	100
Nyabihu	41.1	28.0	21.7	-	-	9.2	100
Ngororero	8.9	37.3	50.7	-	2.6	0.6	100
Rusizi	24.4	26.6	46.9	-	-	2.2	100
Nyamasheke	21.3	31.7	43.0	-	3.7	0.3	100
Rulindo	19.6	39.3	40.2	-	-	0.9	100
Gakenke	10.1	33.1	56.0	-	0.3	0.5	100
Musanze	33.5	32.1	26.5	-	0.4	7.7	100
Burera	20.8	20.1	56.0	-	0.7	2.4	100
Gicumbi	16.7	37.2	41.8	-	1.4	2.8	100
Rwamagana	12.6	42.9	41.0	-	1.0	2.5	100
Nyagatare	4.3	49.4	43.7	-	-	2.6	100
Gatsibo	11.1	46.1	38.7	0.2	0.2	3.7	100
Kayonza	15.8	42.2	33.3	0.3	0.3	7.9	100
Kirehe	14.1	38.3	44.1	-	1.2	2.3	100
Ngoma	20.0	43.9	29.7	-	0.7	5.8	100
Bugesera	11.5	34.0	48.7	-	0.2	5.5	100
National	17.9	36.8	40.6	0.0	1.4	3.3	100

Source: NISR, SAS 2024

Table 54: 2024 Season C Percentage of plots by type of inorganic fertilizer per district

District	NPK	Urea	DAP	KCL/MOP	Lime	Others	Total
Nyarugenge	14.98	36.15	27.36	1.91	19.6	-	100
Gasabo	20.54	28.98	29.38	2.6	18.49	-	100
Kicukiro	5.02	43.85	47.98	-	3.16	-	100
Nyanza	6.89	30.22	48.5	4.37	10.01	-	100
Gisagara	17.5	40.32	41.51	0.45	0.23	-	100
Nyaruguru	35.17	33.27	31.56	-	-	-	100
Huye	18.06	50.14	31.42	0.38	-	-	100
Nyamagabe	35.92	33.8	24.07	-	-	6.21	100
Ruhango	14.4	65.61	16.36	-	3.63	-	100
Muhanga	28.81	41.76	24.48	2.17	2.78	-	100
Kamonyi	27.46	50.11	20.32	1.07	1.04	-	100
Karongi	62.73	15.48	21.79	-	-	-	100
Rutsiro	29.31	37.84	29.08	-	-	3.77	100
Rubavu	40.05	28.28	11.11	3.87	16.7	-	100
Nyabihu	56.54	23.68	7.93	2.33	7.67	1.85	100
Ngororero	13.87	36.08	36.19	-	4.55	9.31	100
Rusizi	22.31	42.03	33.43	1.4	0.83	-	100
Nyamasheke	28.63	43.26	22.87	-	-	5.25	100
Rulindo	23.55	39.09	18.39	15.27	-	3.7	100
Gakenke	44.99	22.27	19.6	13.15	-	-	100
Musanze	60.88	9.42	22.71	5.69	1.3	-	100
Burera	73.78	7.72	5.31	10.84	1.64	0.72	100
Gicumbi	28.04	39.72	30.11	1.89	0.23	-	100
Rwamagana	26.43	26.68	41.94	2.06	2.61	0.29	100
Nyagatare	30.09	35.4	27.81	2.26	4.43	-	100
Gatsibo	44.21	28.35	17.59	2.88	5.92	1.05	100
Kayonza	43.26	21.81	23.63	6.81	4.49	-	100
Kirehe	15.06	44.64	28.11	10.06	1.51	0.61	100
Ngoma	5.09	48.79	41.03	1.78	3.3	-	100
Bugesera	6.59	45.75	41.99	4.73	0.93	-	100
National	38.33	29.78	23.08	4.24	3.78	0.79	100

Source: NISR, SAS 2024

Table 55: 2024 Season A_Use of pesticides by farmer type per district (Percentage)

District	Percentage of farmers who used pesticides			Percentage of plots in which pesticides were used			Percentage of land size in which pesticides were used		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	20.5	20.5		62.6	62.6		53.9	53.9	
Gasabo	40.7	38.4	82.4	42.7	42.7	40.4	53.3	50.8	83.7
Kicukiro	36.7	35.6	100.0	31.3	31.3	85.7	50.5	48.7	99.0
Nyanza	40.4	39.4	90.0	42.2	42.2	79.0	54.3	51.7	97.4
Gisagara	41.5	39.1	100.0	40.2	40.2	100.0	55.8	44.2	100.0
Nyaruguru	66.1	65.0	100.0	32.0	32.0	84.6	39.2	37.9	98.8
Huye	44.3	40.9	96.2	49.2	49.2	94.4	63.0	58.6	99.7
Nyamagabe	36.5	36.2	100.0	57.0	57.0	100.0	63.0	62.8	100.0
Ruhango	42.3	41.7	85.7	41.2	41.2	60.0	42.6	39.4	99.7
Muhanga	46.4	45.4	100.0	33.4	33.4	90.9	35.4	32.5	96.1
Kamonyi	44.9	44.3	75.0	48.6	48.6	71.4	45.2	43.5	90.6
Karongi	25.8	25.9	0.0	44.7	44.7	0.0	49.9	49.9	0.0
Rutsiro	34.1	34.1		36.9	36.9		47.8	47.8	
Rubavu	67.1	66.8	100.0	79.0	79.0	44.4	80.0	80.1	40.2
Nyabihu	55.6	55.6		72.7	72.7		75.4	75.4	
Ngororero	24.6	24.6		48.7	48.7		53.3	53.3	
Rusizi	24.9	23.7	80.0	32.9	32.9	88.9	58.6	50.1	99.8
Nyamasheke	26.6	25.6	85.7	35.2	35.2	100.0	38.3	34.9	100.0
Rulindo	59.0	58.5	100.0	36.5	36.5	90.0	48.8	48.7	75.6
Gakenke	50.7	50.5	75.0	42.3	42.3	100.0	47.1	46.6	100.0
Musanze	68.7	68.5	100.0	61.7	61.7	66.7	64.2	64.1	85.2
Burera	59.8	59.8		59.7	59.7		66.2	66.2	
Gicumbi	41.1	40.6	100.0	46.8	46.8	63.0	50.4	50.2	81.8
Rwamagana	33.2	29.8	81.3	70.7	70.7	55.6	81.0	80.5	87.2
Nyagatare	24.8	19.8	78.9	31.4	31.3	81.8	57.3	51.1	97.0
Gatsibo	28.4	25.8	83.3	52.4	52.4	68.0	68.1	64.4	88.9
Kayonza	36.1	33.3	85.2	45.6	45.6	52.4	64.8	61.7	85.8
Kirehe	37.4	36.6	100.0	55.2	55.2	97.2	70.7	68.2	93.6
Ngoma	28.7	26.8	90.0	42.6	42.6	85.2	56.9	53.3	98.3
Bugesera	25.5	23.6	53.3	34.1	34.1	98.2	41.2	33.6	99.3
National	39.8	38.6	82.9	47.6	47.6	73.3	57.0	54.5	94.6

Source : NISR, SAS 2024

Table 56: 2024 Season B_Use of pesticides by farmer type per district (Percentage)

District	Percentage of farmers who used pesticides			Percentage of plots in which pesticides were used			Percentage of land size in which pesticides were used		
	Overall	SSF	LSF	Overall	SSF	LSF	Overall	SSF	LSF
Nyarugenge	13.5	13.5		42.7	42.7		57.7	57.7	
Gasabo	29.8	28.0	71.4	49.4	49.4	52.3	62.9	60.2	91.5
Kicukiro	13.7	12.1	75.0	39.3	39.3	57.1	46.8	50.3	33.4
Nyanza	27.1	26.2	100.0	44.3	44.3	80.0	49.1	45.4	99.6
Gisagara	28.2	25.9	100.0	23.8	23.8	100.0	48.8	26.1	100.0
Nyaruguru	31.3	29.1	90.9	34.8	34.8	71.4	46.6	44.8	97.9
Huye	28.5	25.4	95.0	22.2	22.2	95.0	40.8	33.6	99.8
Nyamagabe	28.6	27.8	100.0	46.3	46.3	87.5	56.3	55.9	85.0
Ruhango	22.5	20.9	78.6	31.5	31.5	52.6	28.0	18.8	99.3
Muhanga	30.9	30.3	80.0	30.7	30.6	100.0	23.3	21.7	100.0
Kamonyi	33.3	32.8	80.0	28.7	28.7	100.0	30.6	29.3	100.0
Karongi	13.6	13.6	0.0	50.2	50.2	0.0	45.4	45.4	0.0
Rutsiro	27.9	27.9		52.6	52.6		64.4	64.4	
Rubavu	65.1	64.7	100.0	81.2	81.2	85.7	81.6	81.6	99.5
Nyabihu	55.6	55.6		77.5	77.5		82.0	82.0	
Ngororero	36.8	36.8		46.8	46.8		48.8	48.8	
Rusizi	20.0	19.0	70.0	44.3	44.3	100.0	55.1	42.1	100.0
Nyamasheke	18.9	17.5	88.9	32.3	32.3	100.0	46.7	42.4	100.0
Rulindo	44.0	43.5	80.0	38.2	38.2	78.6	38.1	37.8	83.4
Gakenke	44.3	44.0	100.0	39.3	39.3	100.0	45.6	45.5	100.0
Musanze	72.6	72.2	100.0	58.4	58.4	80.0	63.9	63.7	98.4
Burera	45.5	45.5		56.4	56.4		60.9	60.9	
Gicumbi	37.4	36.8	100.0	40.9	40.9	38.1	46.1	46.2	27.5
Rwamagana	18.5	15.5	63.3	68.3	68.3	44.0	63.8	61.7	83.3
Nyagatare	23.7	20.9	60.5	43.4	43.4	67.4	58.3	53.6	95.9
Gatsibo	31.6	30.2	65.4	47.6	47.6	67.4	61.5	57.2	97.5
Kayonza	27.7	24.4	82.8	28.5	28.5	61.7	46.9	38.2	98.1
Kirehe	15.1	14.6	62.5	48.4	48.4	100.0	63.7	56.6	100.0
Ngoma	14.6	12.5	81.0	22.2	22.1	74.3	42.4	33.1	97.3
Bugesera	22.3	20.4	53.9	33.8	33.8	77.6	46.0	38.9	94.3
National	30.2	29.1	74.9	44.2	44.2	66.9	52.4	49.0	97.0

Source: NISR, SAS 2024

Table 57: 2024 Season C_Use of pesticides by farmer type per district (Percentage)

District	Percentage of farmers who used pesticides	Percentage of plots in which pesticides were used	Percentage of land size in which pesticides were used
Nyarugenge	61.8	81.2	83.3
Gasabo	100.0	100.0	100.0
Kicukiro	69.4	100.0	100.0
Nyanza	66.7	90.9	86.2
Gisagara	81.4	88.2	87.9
Nyaruguru	31.3	52.9	77.3
Huye	40.6	56.9	62.5
Nyamagabe	40.9	74.9	87.4
Ruhango	31.4	90.7	90.5
Muhanga	49.4	69.2	89.4
Kamonyi	65.0	89.5	92.6
Karongi	29.4	92.1	94.9
Rutsiro	42.1	100.0	100.0
Rubavu	75.8	97.9	95.7
Nyabihu	96.1	99.5	99.0
Ngororero	14.7	65.4	36.9
Rusizi	58.8	83.2	87.0
Nyamasheke	20.0	100.0	100.0
Rulindo	58.8	79.5	85.1
Gakenke	37.5	90.8	97.1
Musanze	80.5	100.0	100.0
Burera	83.3	95.8	94.9
Gicumbi	46.3	74.7	83.9
Rwamagana	76.5	77.6	85.5
Nyagatare	51.7	89.9	92.2
Gatsibo	52.7	79.4	89.0
Kayonza	72.4	58.5	77.2
Kirehe	69.6	82.3	86.8
Ngoma	56.5	95.9	92.7
Bugesera	54.9	94.9	94.9
National	59.8	87.7	92.8

Source: NISR, SAS 2024

Table 58: 2024 Season A Percentage of plots by type of pesticides per district

District	Dithane	Ridomil	Dimethoate	Cypermetrin	Dursiban	Pilkare	Rocket	Beam	Other pesticide	Total
			Type of pesticides							
Nyarugenge	21.1	2.6	15.8	5.3	-	-	42.1	-	13.2	100
Gasabo	17.9	2.7	7.3	5.3	-	-	49.0	2.7	15.2	100
Kicukiro	7.7	3.9	3.9	9.6	-	-	57.7	-	17.3	100
Nyanza	5.7	-	2.6	4.5	-	-	80.9	1.9	4.5	100
Gisagara	4.3	-	2.1	9.2	-	-	73.1	8.5	2.8	100
Nyaruguru	22.5	0.9	-	10.8	-	-	51.4	-	14.4	100
Huye	6.4	-	-	16.3	-	-	60.5	9.3	7.6	100
Nyamagabe	28.7	3.5	-	33.6	-	-	32.9	-	1.4	100
Ruhango	1.7	-	0.8	8.3	1.7	0.8	81.8	4.1	0.8	100
Muhanga	13.5	8.4	0.8	12.6	0.8	-	55.5	1.7	6.7	100
Kamonyi	11.6	4.4	3.3	5.5	-	-	66.3	1.7	7.2	100
Karongi	3.9	-	6.4	34.6	-	-	47.4	-	7.7	100
Rutsiro	62.9	11.4	3.8	11.4	-	-	8.6	-	1.9	100
Rubavu	32.0	22.4	12.2	18.9	-	-	11.4	-	3.2	100
Nyabihu	36.0	7.6	9.4	14.2	-	-	16.6	-	16.2	100
Ngororero	22.5	3.1	6.1	18.4	-	-	43.9	-	6.1	100
Rusizi	16.7	-	22.2	19.4	-	-	26.9	1.9	13.0	100
Nyamasheke	13.6	1.5	13.6	16.7	-	-	43.9	3.0	7.6	100
Rulindo	22.5	5.6	6.1	5.1	-	-	50.0	0.5	10.2	100
Gakenke	6.1	6.1	-	40.0	-	-	38.8	-	9.1	100
Musanze	27.8	6.5	8.2	14.6	-	-	26.6	-	16.3	100
Burera	23.1	5.1	15.9	8.1	-	0.3	43.7	-	3.9	100
Gicumbi	37.0	2.4	1.4	3.4	-	-	41.8	-	13.9	100
Rwamagana	12.0	1.5	9.8	10.1	-	-	45.7	2.9	18.1	100
Nyagatare	12.2	2.1	7.1	14.3	-	-	31.1	5.9	27.3	100
Gatsibo	11.6	2.0	4.0	7.0	0.5	-	58.8	2.0	14.1	100
Kayonza	15.5	2.1	7.1	8.8	-	-	44.4	5.4	16.7	100
Kirehe	8.8	1.0	4.4	11.1	-	0.7	58.3	6.7	9.1	100
Ngoma	10.7	0.5	7.1	8.2	-	-	49.0	3.6	20.9	100
Bugesera	5.5	1.8	4.3	14.1	-	-	52.8	8.0	13.5	100
National	19.8	5.4	6.9	13.2	0.1	0.1	41.3	2.2	11.0	100

Source: NISR, SAS 2024

Table 59: 2024 Season B Percentage of plots by type of pesticides per district

District	Dithane	Ridomil	Dimethoate	Cypermetrin	Dursiban	Pilkare	Rocket	Beam	Other pesticide	Total
			Type of pesticides							
Nyarugenge	35.0	-	15.0	10.0	-	-	35.0	-	5.0	100
Gasabo	15.8	2.5	6.7	7.5	-	0.8	49.2	2.5	15.0	100
Kicukiro	14.8	-	7.4	7.4	-	-	51.9	-	18.5	100
Nyanza	15.0	2.8	1.9	10.3	0.9	-	59.8	4.7	4.7	100
Gisagara	6.4	-	3.9	25.6	-	-	48.7	14.1	1.3	100
Nyaruguru	28.1	1.6	1.6	18.8	-	-	29.7	-	20.3	100
Huye	10.1	-	2.5	26.6	-	-	38.0	12.7	10.1	100
Nyamagabe	32.1	1.8	-	39.3	-	-	23.2	-	3.6	100
Ruhango	2.2	-	-	13.3	-	-	71.1	13.3	-	100
Muhanga	7.8	9.8	-	21.6	-	-	52.9	5.9	2.0	100
Kamonyi	24.6	3.4	4.2	6.8	-	-	49.2	1.7	10.2	100
Karongi	18.4	-	13.2	26.3	-	-	39.5	-	2.6	100
Rutsiro	60.2	11.7	1.9	18.5	-	-	6.8	-	1.0	100
Rubavu	32.2	21.4	13.8	21.4	-	-	8.0	-	3.2	100
Nyabihu	38.0	5.3	5.1	29.3	-	-	13.0	-	9.3	100
Ngororero	19.3	3.4	0.8	14.3	-	-	59.7	-	2.5	100
Rusizi	18.7	-	15.4	27.5	-	-	24.2	1.1	13.2	100
Nyamasheke	10.5	3.5	7.0	42.1	-	-	21.1	3.5	12.3	100
Rulindo	28.9	1.9	8.7	9.6	-	-	37.5	1.0	12.5	100
Gakenke	3.9	0.8	-	56.3	-	-	28.1	-	10.9	100
Musanze	33.2	5.5	11.5	17.0	-	-	22.8	-	9.9	100
Burera	31.6	3.9	16.5	13.0	-	-	29.9	-	5.2	100
Gicumbi	40.1	2.6	0.7	11.2	-	-	42.1	0.7	2.6	100
Rwamagana	15.5	-	11.0	16.1	-	-	31.6	6.5	19.4	100
Nyagatare	7.0	0.5	16.3	14.0	-	-	33.5	6.5	22.3	100
Gatsibo	16.7	2.1	5.2	3.7	0.5	-	55.2	3.1	13.5	100
Kayonza	18.5	0.7	12.3	17.8	-	-	21.9	12.3	16.4	100
Kirehe	27.3	0.9	14.6	10.0	-	-	28.2	1.8	17.3	100
Ngoma	23.9	-	6.5	17.4	-	-	30.4	7.6	14.1	100
Bugesera	5.3	2.0	4.0	12.7	-	-	53.3	8.0	14.7	100
National	24.7	5.5	8.3	19.0	0.1	0.0	30.2	2.7	9.6	100

Source: NISR, SAS 2024

Table 60: 2024 Season C Percentage of plots by type of pesticides per district

District	Dithane	Ridomil	Dimethoate	Cypermethrin	Dursiban	Rocket	Others	Total
Nyarugenge	15.15	-	21.21	0	-	42.42	21.21	100
Gasabo	28.12	-	15.62	9.38	-	18.75	28.12	100
Kicukiro	15.62	-	9.38	6.25	-	56.25	12.5	100
Nyanza	17.39	2.9	2.9	11.59	-	53.62	11.59	100
Gisagara	13.85	-	10.77	16.92	-	50.77	7.69	100
Nyaruguru	10.53	-	0	26.32	-	47.37	15.79	100
Huye	10.71	-	7.14	7.14	-	64.29	10.71	100
Nyamagabe	34.62	-	3.85	11.54	-	50	-	100
Ruhango	10	-	5	5	-	75	5	100
Muhanga	15.91	-	9.09	18.18	-	52.27	4.55	100
Kamonyi	28.99	-	7.25	8.7	-	46.38	8.7	100
Karongi	30.77	7.69	7.69	15.38	-	30.77	7.69	100
Rutsiro	44.44	11.11	5.56	5.56	-	16.67	16.67	100
Rubavu	38.6	1.75	14.04	21.05	-	15.79	8.77	100
Nyabihu	46.99	2.41	24.7	5.42	-	16.27	4.22	100
Ngororero	50	-	-	-	-	50	-	100
Rusizi	22.92	2.08	18.75	12.5	-	27.08	16.67	100
Nyamasheke	28.57	14.29	0	28.57	-	28.57	-	100
Rulindo	34.21	5.26	5.26	23.68	-	21.05	10.53	100
Gakenke	25	5	5	15	-	40	10	100
Musanze	42.67	1.33	23.33	8.67	-	13.33	10.67	100
Burera	42.02	3.19	4.79	18.09	-	21.81	10.11	100
Gicumbi	21.74	0	0	4.35	-	43.48	30.43	100
Rwamagana	26	0	16	12	2	22	22	100
Nyagatare	30.77	0	23.08	10.26	-	15.38	20.51	100
Gatsibo	36.36	1.82	14.55	3.64	-	29.09	14.55	100
Kayonza	33.33	3.33	16.67	6.67	-	30	10	100
Kirehe	29.03	1.61	20.97	3.23	-	32.26	12.9	100
Ngoma	29.41	-	9.8	5.88	-	41.18	13.73	100
Bugesera	19.67	1.64	18.03	14.75	0	39.34	6.56	100
National	30.63	1.71	13.29	11.39	0.06	31.9	11.01	100

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Table 61: 2024 Season A Percentage 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	68.6	68.6	-	-	-	-	7.1	7.1	-	34.7	34.7	-
Gasabo	89.4	88.8	100.0	0.6	0.3	5.9	11.8	10.0	47.1	39.0	38.1	58.8
Kicukiro	71.0	70.5	100.0	-	-	-	6.7	6.3	33.3	62.6	62.8	50.0
Nyanza	94.1	94.0	100.0	1.1	1.1	-	15.1	13.8	80.0	48.7	48.5	60.0
Gisagara	93.0	92.7	100.0	-	-	-	12.4	10.0	73.7	39.8	40.9	9.5
Nyaruguru	97.9	97.8	100.0	0.3	-	10.0	7.3	7.3	10.0	37.5	37.2	50.0
Huye	91.8	91.3	100.0	0.5	0.3	3.9	18.6	15.2	69.2	23.3	24.0	11.5
Nyamagabe	94.2	94.2	100.0	-	-	-	2.6	2.6	-	37.9	37.9	50.0
Ruhango	93.9	93.8	100.0	0.2	0.2	-	10.2	9.1	85.7	33.2	33.2	33.3
Muhanga	96.9	96.8	100.0	0.4	0.5	-	4.9	3.6	66.7	32.4	32.4	33.3
Kamonyi	94.0	93.9	100.0	0.2	0.2	-	10.3	9.2	58.3	56.2	56.6	33.3
Karongi	96.3	96.3	100.0	-	-	-	7.2	7.2	-	39.8	39.7	100.0
Rutsiro	95.3	95.3	-	-	-	-	1.2	1.2	-	46.0	46.0	-
Rubavu	94.7	94.7	100.0	0.3	0.3	-	0.8	0.8	-	32.5	32.1	75.0
Nyabihu	97.1	97.1	-	0.5	0.5	-	0.5	0.5	-	33.1	33.1	-
Ngororero	98.1	98.1	-	-	-	-	3.0	3.0	-	46.7	46.7	-
Rusizi	85.6	85.3	100.0	0.2	0.2	-	9.3	8.0	70.0	60.5	61.0	30.0
Nyamasheke	96.7	96.7	100.0	0.2	0.2	-	3.5	1.9	100.0	62.8	63.3	33.3
Rulindo	91.6	91.5	100.0	0.3	-	20.0	18.1	18.0	20.0	42.3	42.4	40.0
Gakenke	98.5	98.5	100.0	0.4	0.2	25.0	2.5	2.1	50.0	37.7	37.6	50.0
Musanze	87.4	87.3	100.0	0.6	0.2	66.7	1.2	1.2	-	39.4	38.9	100.0
Burera	96.0	96.0	-	-	-	-	2.5	2.5	-	41.7	41.7	-
Gicumbi	97.1	97.1	100.0	0.4	0.2	20.0	7.3	7.2	20.0	41.2	40.8	100.0
Rwamagana	92.8	92.6	96.9	0.6	0.4	3.1	6.3	3.9	40.6	61.0	61.1	59.4
Nyagatare	70.9	68.5	96.2	7.5	2.0	67.3	8.8	6.9	28.9	51.1	51.4	47.3
Gatsibo	92.5	92.3	96.7	3.2	2.1	26.7	5.3	4.4	23.3	50.8	50.6	54.8
Kayonza	81.0	80.2	96.3	2.3	0.4	37.0	11.2	8.0	70.4	38.3	38.6	33.3
Kirehe	80.2	79.9	100.0	2.2	1.8	33.3	4.3	3.4	77.8	57.4	57.7	33.3
Ngoma	89.6	89.2	100.0	0.8	-	25.0	8.6	7.2	55.0	60.0	60.1	57.1
Bugesera	82.0	83.1	64.4	1.5	1.3	4.4	14.3	12.5	40.0	55.8	55.1	68.1
National	90.6	90.5	94.3	1.0	0.5	19.5	7.5	6.4	48.0	45.6	45.6	46.8

Source : NISR, SAS 2024

Table 62: 2024 Season B Percentage 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	60.0	60.0	-	1.2	1.2	-	2.9	2.9	-	45.9	45.9	-
Gasabo	92.2	91.9	100.0	0.6	-	14.3	12.1	9.9	64.3	45.3	44.3	71.4
Kicukiro	42.9	42.7	50.0	1.9	1.3	25.0	8.7	8.3	25.0	67.5	67.4	75.0
Nyanza	93.3	93.2	100.0	-	-	-	17.7	16.8	85.7	54.4	54.5	50.0
Gisagara	94.3	94.1	100.0	-	-	-	24.9	23.3	75.0	38.4	39.6	-
Nyaruguru	97.1	97.0	100.0	0.3	0.3	-	13.1	10.3	90.9	40.5	40.0	58.3
Huye	92.9	92.6	100.0	0.2	0.2	-	40.2	37.6	95.0	31.3	32.3	9.5
Nyamagabe	95.3	95.3	100.0	-	-	-	5.4	5.2	20.0	36.6	36.4	60.0
Ruhango	91.6	91.4	100.0	0.4	0.4	-	16.0	14.5	71.4	37.5	37.9	20.0
Muhanga	96.9	96.8	100.0	0.2	0.2	-	7.4	6.6	80.0	28.3	28.5	14.3
Kamonyi	93.4	93.7	60.0	0.2	0.2	-	15.4	14.8	80.0	56.0	56.2	44.4
Karongi	98.3	98.3	100.0	-	-	-	8.3	8.3	-	39.4	39.3	100.0
Rutsiro	95.8	95.8	-	0.3	0.3	-	3.4	3.4	-	47.6	47.6	-
Rubavu	90.6	90.5	100.0	-	-	-	2.4	2.5	-	34.5	34.1	75.0
Nyabihu	92.5	92.5	-	0.6	0.6	-	2.8	2.8	-	36.3	36.3	-
Ngororero	99.0	99.0	-	0.6	0.6	-	14.6	14.6	-	46.0	46.0	-
Rusizi	84.3	83.9	100.0	0.2	0.2	-	17.9	16.9	70.0	57.8	58.3	30.0
Nyamasheke	97.4	97.3	100.0	-	-	-	7.2	6.0	66.7	60.2	60.6	33.3
Rulindo	92.2	92.1	100.0	0.8	0.6	20.0	23.6	23.0	60.0	52.3	52.5	40.0
Gakenke	96.6	96.6	100.0	-	-	-	7.1	6.8	100.0	38.6	38.8	-
Musanze	90.9	90.8	100.0	0.5	-	40.0	4.9	4.7	20.0	48.9	48.4	100.0
Burera	97.4	97.4	-	0.2	0.2	-	2.2	2.2	-	40.1	40.1	-
Gicumbi	97.7	97.6	100.0	0.4	0.4	-	12.1	12.1	16.7	41.3	40.7	100.0
Rwamagana	90.8	90.6	93.3	0.6	0.4	3.3	13.1	9.4	70.0	56.8	56.2	65.6
Nyagatare	66.2	64.0	95.4	5.6	2.0	53.5	12.8	9.5	55.8	56.5	57.1	49.1
Gatsibo	92.7	92.4	100.0	1.5	0.3	30.8	10.7	8.7	61.5	54.9	54.1	72.4
Kayonza	77.4	77.3	79.3	2.3	0.4	34.5	13.1	9.2	79.3	24.6	24.6	24.2
Kirehe	79.4	79.2	100.0	0.4	0.1	25.0	8.4	7.5	87.5	60.4	60.9	22.2
Ngoma	83.9	83.5	95.2	0.7	0.3	14.3	6.8	4.6	76.2	65.7	66.1	54.6
Bugesera	75.6	75.8	71.8	2.1	0.9	23.1	17.1	14.5	61.5	54.1	53.6	63.0
National	89.2	89.1	92.3	0.8	0.3	18.3	12.1	10.8	67.0	47.0	47.0	47.4

Source : NISR, SAS 2024

Table 63: 2024 Season C Percentage 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 (%)
Nyarugenge	88.24	-	61.76	4.08
Gasabo	91.67	-	91.67	22.92
Kicukiro	55.56	-	58.33	13.56
Nyanza	97.33	-	90.67	10.33
Gisagara	96.08	-	54.9	6.3
Nyaruguru	93.75	-	64.06	2.1
Huye	94.2	-	78.26	13.7
Nyamagabe	90.91	-	48.48	12.82
Ruhango	94.12	-	68.63	14.11
Muhanga	96.39	-	75.9	14.19
Kamonyi	100	-	90	21.55
Karongi	97.06	-	58.82	17.86
Rutsiro	73.68	-	26.32	37.84
Rubavu	100	-	24.24	41.52
Nyabihu	98.7	-	5.19	40.08
Ngororero	100	-	26.47	41.58
Rusizi	100	3.92	72.55	26.67
Nyamasheke	100	-	50	23.42
Rulindo	94.12	-	62.75	26.76
Gakenke	95	-	65	30.16
Musanze	97.56	1.22	18.29	26.89
Burera	99.12	-	28.95	37.07
Gicumbi	100	-	73.17	16.51
Rwamagana	88.24	-	100	24.32
Nyagatare	86.21	-	75.86	38.79
Gatsibo	100	-	81.82	17.96
Kayonza	100	-	89.66	23.49
Kirehe	97.83	-	89.13	35.33
Ngoma	65.22	-	52.17	22.96
Bugesera	66.2	1.41	42.25	15.43
National	92.9	0.26	58.2	25.91

Source: NISR, SAS 2024

Table 64: 2024 Season A Percentage of plots by types of irrigation used

District	Modern irrigation					Traditional techniques
	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Nyarugenge	-	-	-	-	-	100.0
Gasabo	8.0	12.0	-	-	-	80.0
Kicukiro	33.3	33.3	-	-	-	33.3
Nyanza	26.8	31.7	-	-	-	41.5
Gisagara	27.6	34.5	-	-	-	37.9
Nyaruguru	-	-	-	-	-	100.0
Huye	4.8	59.5	-	-	-	35.7
Nyamagabe	25.0	-	-	-	-	75.0
Ruhango	-	42.9	-	-	-	57.1
Muhanga	15.4	23.1	-	-	-	61.5
Kamonyi	-	15.8	-	-	-	84.2
Karongi	44.4	-	-	-	-	55.6
Rutsiro						
Rubavu						
Nyabihu						
Ngororero	40.0	-	-	-	-	60.0
Rusizi	20.0	50.0	-	-	-	30.0
Nyamasheke	16.7	50.0	-	-	-	33.3
Rulindo	16.0	-	4.0	-	-	80.0
Gakenke	-	25.0	-	-	-	75.0
Musanze						
Burera	-	-	-	-	-	100.0
Gicumbi	-	-	-	-	-	100.0
Rwamagana	8.8	29.4	35.3	2.9	-	23.5
Nyagatare	3.0	36.4	-	-	21.2	39.4
Gatsibo	75.0	25.0	-	-	-	-
Kayonza	11.1	30.6	5.6	-	16.7	36.1
Kirehe	6.7	66.7	-	3.3	13.3	10.0
Ngoma	12.0	32.0	4.0	36.0	-	16.0
Bugesera	10.6	38.3	-	21.3	4.3	25.5
National	14.1	31.8	3.2	4.2	3.8	43.1

Source: NISR, SAS 2024

Table 65: 2024 Season B Percentage of plots by types of irrigation used

District	Modern irrigation					Traditional techniques
	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Nyarugenge	-	-	-	-	-	100.0
Gasabo	30.8	11.5	-	-	-	57.7
Kicukiro	20.0	20.0	-	-	-	60.0
Nyanza	13.5	43.2	-	-	-	43.2
Gisagara	39.1	52.2	-	-	-	8.7
Nyaruguru	50.0	12.5	-	-	-	37.5
Huye	6.8	52.3	-	-	-	40.9
Nyamagabe	14.3	14.3	-	-	-	71.4
Ruhango	-	52.6	-	-	-	47.4
Muhanga	7.1	42.9	-	-	-	50.0
Kamonyi	28.0	12.0	-	-	-	60.0
Karongi	-	-	-	-	-	100.0
Rutsiro						
Rubavu						
Nyabihu	-	-	66.7	-	-	33.3
Ngororero	-	-	-	-	-	100.0
Rusizi	36.4	-	-	-	-	63.6
Nyamasheke	26.7	20.0	-	-	-	53.3
Rulindo	7.1	42.9	-	-	-	50.0
Gakenke	42.3	3.9	3.9	3.9	-	46.2
Musanze	12.5	25.0	-	-	-	62.5
Burera	20.0	-	-	40.0	-	40.0
Gicumbi	9.1	-	-	-	-	90.9
Rwamagana	31.3	14.1	14.1	12.5	1.6	26.6
Nyagatare	19.0	27.6	1.7	-	20.7	31.0
Gatsibo	55.0	15.0	-	10.0	2.5	17.5
Kayonza	12.0	38.0	-	4.0	8.0	38.0
Kirehe	11.8	23.5	-	35.3	11.8	17.7
Ngoma	51.5	24.2	-	15.2	3.0	6.1
Bugesera	17.7	16.1	11.3	32.3	-	22.6
National	24.1	25.0	3.1	7.5	3.3	37.1

Source: NISR, SAS 2024

Table 66: 2024 Season C Percentage of plots by types of irrigation used

District	Modern irrigation					Traditional techniques
	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Nyarugenge	-	-	-	-	5.56	94.44
Gasabo	7.69	-	-	-	15.38	76.92
Kicukiro	13.04	-	-	8.7	-	78.26
Nyanza	4.69	-	-	-	-	95.31
Gisagara	33.33	-	-	-	-	66.67
Nyaruguru	29.73	-	-	-	-	70.27
Huye	-	-	-	-	-	100
Nyamagabe	7.14	-	-	-	-	92.86
Ruhango	-	-	-	-	-	100
Muhanga	20.69	-	-	-	-	79.31
Kamonyi	18.87	-	-	-	-	81.13
Karongi	36.84	-	5.26	-	10.53	47.37
Rutsiro	75	-	-	-	-	25
Rubavu	-	-	-	-	-	100
Nyabihu	-	-	-	-	-	100
Ngororero	40	-	-	-	-	60
Rusizi	5.56	-	-	2.78	-	91.67
Nyamasheke	62.5	-	-	-	-	37.5
Rulindo	66.67	-	-	3.33	-	30
Gakenke	4.55	-	-	-	-	95.45
Musanze	41.67	-	-	-	-	58.33
Burera	-	-	-	-	-	100
Gicumbi	3.33	-	-	-	-	96.67
Rwamagana	77.78	-	-	-	-	22.22
Nyagatare	50	-	-	-	-	50
Gatsibo	10	-	-	-	-	90
Kayonza	17.39	-	-	-	-	82.61
Kirehe	61.36	-	-	4.55	-	34.09
Ngoma	4	-	-	-	-	96
Bugesera	12.9	-	-	-	6.45	80.65
National	21.28	-	0.12	0.7	0.81	77.09

Source: NISR, SAS 2024

Table 67: 2024 Season A Percentage of plots by source of water used and district

District	Source of water used				
	Rainwater	Water treatment	Underground	Lake / streams	Water catchment
Nyarugenge	-	25.0	25.0	50.0	-
Gasabo	-	3.9	26.9	61.5	7.7
Kicukiro	-	-	-	33.3	66.7
Nyanza	-	-	24.4	65.9	9.8
Gisagara	-	2.6	46.2	46.2	5.1
Nyaruguru	-	33.3	33.3	33.3	-
Huye	-	6.5	30.4	56.5	6.5
Nyamagabe	-	-	-	100.0	-
Ruhango	-	-	50.0	44.4	5.6
Muhanga	-	-	14.3	78.6	7.1
Kamonyi	5.3	-	21.1	73.7	-
Karongi	11.1	33.3	-	55.6	-
Rutsiro					
Rubavu					
Nyabihu					
Ngororero	20.0	-	40.0	40.0	-
Rusizi	-	-	10.0	90.0	-
Nyamasheke	5.3	5.3	47.4	42.1	-
Rulindo	-	3.9	46.2	38.5	11.5
Gakenke	11.1	-	11.1	77.8	-
Musanze					
Ngororero	-	-	66.7	33.3	-
Gicumbi	-	9.1	9.1	81.8	-
Rwamagana	8.8	-	11.8	58.8	20.6
Nyagatare	5.9	-	26.5	29.4	38.2
Gatsibo	-	6.3	43.8	18.8	31.3
Kayonza	-	2.6	7.7	51.3	38.5
Kirehe	-	-	64.7	26.5	8.8
Ngoma	3.2	-	29.0	54.8	12.9
Bugesera	-	2.0	26.0	64.0	8.0
National	2.0	3.1	29.5	52.9	12.6

Source: NISR, SAS 2024

Table 68: 2024 Season B Percentage 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	-	-	42.9	46.4	10.7
Kicukiro	-	-	-	100.0	-
Nyanza	-	2.7	18.9	73.0	5.4
Gisagara	-	-	51.7	41.4	6.9
Nyaruguru	-	6.3	6.3	87.5	-
Huye	2.2	2.2	53.3	40.0	2.2
Nyamagabe	12.5	-	25.0	62.5	-
Ruhango	-	8.0	24.0	60.0	8.0
Muhanga	-	-	35.7	50.0	14.3
Kamonyi	-	-	16.0	76.0	8.0
Karongi	-	12.5	87.5	-	-
Rutsiro					
Rubavu					
Nyabihu	-	50.0	50.0	-	-
Ngororero	6.3	-	18.8	75.0	-
Rusizi	-	-	53.3	40.0	6.7
Nyamasheke	-	3.3	36.7	33.3	26.7
Rulindo	-	12.5	37.5	50.0	-
Gakenke	20.0	20.0	-	60.0	-
Musanze	-	-	-	100.0	-
Ngororero	-	-	54.6	45.5	-
Gicumbi	-	8.3	50.0	41.7	-
Rwamagana	3.1	12.5	10.9	42.2	31.3
Nyagatare	5.1	-	35.6	40.7	18.6
Gatsibo	2.4	2.4	31.7	39.0	24.4
Kayonza	-	6.0	18.0	24.0	52.0
Kirehe	-	-	36.8	63.2	-
Ngoma	13.3	20.0	24.4	35.6	6.7
Bugesera	1.6	3.2	6.5	85.5	3.2
National	2.6	5.0	28.3	50.2	13.9

Source: NISR, SAS 2024

Table 69: 2024 Season C Percentage of plots by source of water used and district

District	Rainwater	Water treatment	Underground	Lake / streams	Water catchment	Other sources
Nyarugenge	-	-	55.56	27.78	5.56	11.11
Gasabo	-	-	61.54	38.46	-	-
Kicukiro	-	-	-	100	-	-
Nyanza	-	-	28.79	68.18	3.03	-
Gisagara	-	-	55.1	42.86	2.04	-
Nyaruguru	-	-	43.59	56.41	0	-
Huye	1.82	-	23.64	74.55	0	-
Nyamagabe	-	-	7.14	92.86	0	-
Ruhango	-	-	41.67	58.33	0	-
Muhanga	-	-	55.93	44.07	0	-
Kamonyi	-	-	67.27	32.73	0	-
Karongi	-	-	42.11	42.11	15.79	-
Rutsiro	-	-	50	50	0	-
Rubavu	-	33.33	22.22	44.44	0	-
Nyabihu	-	-	66.67	33.33	0	-
Ngororero	-	-	80	20	0	-
Rusizi	2.7	-	18.92	78.38	0	-
Nyamasheke	-	-	12.5	87.5	0	-
Rulindo	-	-	16.13	74.19	9.68	-
Gakenke	-	-	30.43	69.57	0	-
Musanze	-	8.33	8.33	83.33	0	-
Burera	-	-	51.61	48.39	0	-
Gicumbi	-	-	6.67	93.33	0	-
Rwamagana	-	-	-	86.49	13.51	-
Nyagatare	-	-	22.73	63.64	13.64	-
Gatsibo	-	12.5	52.5	32.5	2.5	-
Kayonza	4.35	-	39.13	43.48	13.04	-
Kirehe	-	-	23.91	52.17	23.91	-
Ngoma	-	-	34.48	48.28	17.24	-
Bugesera	-	-	33.33	55.56	11.11	-
National	0.34	1.02	34.54	59.14	4.74	0.23

Source: NISR, SAS 2024

Table 70: 2024 Season A Percentage of plot 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	13.4	16.4	-	-	59.7	-	4.0	0.6	5.8	-
Gasabo	12.3	3.6	1.4	5.8	66.7	2.4	1.8	2.8	3.3	-
Kicukiro	3.2	24.1	5.9	2.7	36.9	0.1	8.4	18.0	0.4	0.4
Nyanza	7.8	5.2	3.2	5.5	49.3	2.8	0.8	10.1	15.3	-
Gisagara	16.8	11.6	0.7	2.4	41.3	0.3	2.3	3.0	21.5	-
Nyaruguru	7.4	14.3	3.6	4.9	53.8	0.0	0.7	0.8	14.7	-
Huye	8.4	0.8	0.4	23.4	44.3	3.8	1.6	0.6	16.7	-
Nyamagabe	4.1	5.1	11.5	9.4	50.2	0.4	0.5	0.6	18.2	-
Ruhango	4.2	8.4	-	1.0	67.7	0.0	0.2	6.7	11.7	0.1
Muhanga	3.6	7.1	1.5	14.1	62.4	0.0	1.7	2.5	7.2	-
Kamonyi	8.4	7.9	0.2	2.1	68.5	0.0	1.5	5.5	5.6	0.2
Karongi	5.1	3.7	4.5	3.2	78.7	0.2	1.9	-	2.8	-
Rutsiro	2.9	4.7	8.9	4.5	74.3	0.2	0.8	-	3.7	-
Rubavu	0.3	16.4	20.2	0.0	21.9	-	0.6	39.8	0.8	-
Nyabihu	4.0	1.1	11.2	4.2	67.5	-	0.3	11.2	0.5	-
Ngororero	6.5	9.4	3.6	4.1	66.9	-	1.3	0.6	7.6	0.1
Rusizi	3.8	8.1	0.7	4.8	64.7	3.2	5.3	2.3	7.3	-
Nyamasheke	6.0	5.7	7.5	3.3	60.8	0.4	8.5	3.0	4.6	0.3
Rulindo	2.3	1.8	9.4	13.2	63.5	0.1	0.2	1.7	7.9	-
Gakenke	0.6	4.0	4.0	10.0	75.7	-	2.4	0.4	3.0	-
Musanze	4.7	8.2	2.8	1.4	44.4	-	0.5	37.4	0.5	-
Burera	1.8	7.0	6.4	12.9	55.7	-	0.2	14.9	1.0	-
Gicumbi	0.7	4.4	10.4	23.8	57.0	-	0.4	0.6	2.7	-
Rwamagana	18.9	4.7	9.1	4.9	54.6	2.1	0.5	0.3	4.9	-
Nyagatare	9.5	1.8	-	6.2	63.7	1.6	7.6	2.6	7.1	-
Gatsibo	1.0	4.7	1.5	18.3	63.8	0.2	1.2	3.0	6.4	0.1
Kayonza	4.6	0.4	8.4	0.6	60.0	0.2	2.0	9.1	14.7	-
Kirehe	8.9	2.2	1.8	0.9	80.7	0.0	5.3	-	0.1	-
Ngoma	3.0	16.5	2.9	6.8	66.4	0.1	1.9	0.6	1.7	-
Bugesera	10.2	14.1	2.4	10.4	49.0	0.1	2.1	10.4	1.2	-
National	5.2	6.5	5.2	8.2	60.3	0.5	1.7	5.1	7.4	0.03

Source: NISR, SAS 2024

Table 71: 2024 Season B percentage of plots per 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	10.8	16.8	-	-	66.1	1.6	1.2	1.6	1.9	-
Gasabo	2.6	2.4	-	0.9	84.2	0.0	0.4	3.5	6.0	-
Kicukiro	1.2	23.5	2.5	5.2	52.5	0.1	10.3	4.7	0.0	-
Nyanza	6.1	6.4	5.4	3.0	61.6	0.2	1.3	2.6	13.4	-
Gisagara	25.4	7.2	1.0	0.1	47.5	0.0	1.1	3.7	14.2	-
Nyaruguru	5.3	7.0	6.1	1.8	61.0	0.0	0.7	0.4	17.7	-
Huye	6.0	6.2	2.5	20.5	44.8	3.9	2.0	2.0	12.1	-
Nyamagabe	2.1	6.0	12.6	7.8	55.2	-	0.1	0.9	15.3	-
Ruhango	5.9	9.5	0.2	0.4	66.6	0.0	0.4	1.9	15.2	-
Muhanga	3.0	8.7	1.3	7.2	69.7	0.0	2.8	1.8	5.5	-
Kamonyi	14.3	9.0	0.2	0.1	59.9	0.0	1.3	5.8	9.4	-
Karongi	2.6	2.0	3.0	1.8	80.2	0.1	2.4	0.5	7.4	0.1
Rutsiro	1.3	4.8	7.0	4.9	78.0	0.1	1.6	-	2.5	-
Rubavu	0.3	19.6	16.6	0.2	20.1	-	1.5	41.0	0.7	-
Nyabihu	6.4	2.4	9.7	4.5	65.7	-	-	10.8	0.5	-
Ngororero	1.4	9.5	4.0	4.5	72.5	-	1.3	0.8	6.0	-
Rusizi	7.0	11.4	0.1	7.8	58.2	0.0	6.0	0.9	8.5	0.0
Nyamasheke	3.3	6.3	4.2	4.1	61.7	0.0	11.0	0.8	8.5	0.2
Rulindo	2.5	2.1	6.6	13.6	63.5	1.5	0.4	0.3	9.5	-
Gakenke	0.4	6.9	4.6	11.9	70.2	-	2.6	0.1	3.4	-
Musanze	4.5	18.9	1.3	0.5	42.5	-	0.5	30.0	1.8	-
Burera	2.3	7.6	5.2	18.0	53.0	-	0.2	10.0	3.8	-
Gicumbi	0.7	2.8	6.0	30.5	54.5	-	1.1	-	4.4	-
Rwamagana	6.8	2.0	6.3	5.4	65.9	2.2	-	10.6	0.8	-
Nyagatare	6.9	2.3	-	4.5	75.6	0.1	5.5	3.0	2.1	-
Gatsibo	1.0	2.9	0.9	18.0	61.6	0.0	4.0	2.8	8.9	-
Kayonza	2.8	1.3	6.3	2.8	54.2	0.1	4.8	11.1	16.6	-
Kirehe	11.1	5.0	3.9	0.6	64.8	0.3	12.9	-	1.4	0.2
Ngoma	2.4	11.2	2.4	2.3	72.3	0.1	7.2	0.0	2.0	0.1
Bugesera	7.1	9.4	2.5	25.1	50.4	0.1	3.5	1.2	0.8	-
National	4.6	6.7	4.4	8.2	61.5	0.3	2.3	4.2	7.8	0.02

Source: NISR, SAS 2024

Table 72: 2024 Season C percentage of plots per type of anti-erosion activities and district

Disrtict	Ditches	Trees/ Windbreak/ shelterbelt	Bench/ Radical terraces	Progressive terraces	Cover plants	Water drainage	Mulching	Beds/ ridges	Water channels
Nyarugenge	-	4.12	-	0.82	10.65	-	1.26	17.33	65.82
Gasabo	1.24	0.58	-	14.06	28.22	-	7.75	22.03	26.13
Kicukiro	0	-	-	-	0.52	-	4.67	-	94.81
Nyanza	2.28	1.92	0.61	4.32	9.6	2.77	0.46	12.93	65.11
Gisagara	1.45	1.21	0.27	1.03	5.39	8.53	1.18	27.16	53.77
Nyaruguru	0.67	0	1.4	-	1.66	1.78	-	23.29	71.2
Huye	1.39	0.72	-	2.16	7.06	-	0.58	14.14	73.95
Nyamagabe	3.23	4.37	7.71	4.04	30.5	3.83	0.3	4.11	41.9
Ruhango	0.51	0.11	-	3.98	18.16	0	3.57	28.44	45.24
Muhanga	2.23	1.75	-	1.81	25.98	0.36	0.74	8.66	58.46
Kamonyi	4.3	3.76	-	1.83	22.13	10.12	3.03	9.63	45.19
Karongi	1.47	-	25.46	0.62	41.92	-	2.65	2.97	24.92
Rutsiro	2.12	15.94	6.31	4.43	37.17	13.6	4.53	-	15.9
Rubavu	0.43	3.85	18.02	4.7	32.12	-	3.82	35.73	0.36
Nyabihu	3.76	3	15.77	2.82	58.85	-	0.83	13.6	0.97
Ngororero	8.06	1.47	3.84	13.47	56.3	0.75	1.48	7.28	7.35
Rusizi	0.77	8.47	-	-	25.14	6.43	1.08	6.34	48.83
Nyamasheke	-	1.03	5.14	3.1	19.03	-	3.58	9.92	58.19
Rulindo	0.96	4.73	8.09	0.63	43.69	-	0.7	2.79	38.41
Gakenke	0.61	1.63	2.63	4.34	50.93	3.86	4.26	16.65	15.07
Musanze	6.34	3.59	2.03	7.24	33.93	-	3.31	39.26	4.31
Burera	2.99	3.1	4.55	18.08	57.69	0.28	0.29	8.55	4.38
Gicumbi	0.62	2.41	0.55	0.99	36.9	1.04	0.35	13.99	43.15
Rwamagana	3.5	2.05	9.6	8.85	26.81	0.51	5.5	8.78	34.4
Nyagatare	0.39	16.06	-	10.74	9.71	6.26	3.23	5.52	48.09
Gatsibo	1.64	0.81	-	0.5	17.71	14.64	1.92	22.68	40.11
Kayonza	3.6	1.25	6.37	1.49	6.33	9.26	6.2	12.78	51.05
Kirehe	1.27	0.81	-	3.76	16.05	1.66	8.35	2.95	64.83
Ngoma	0.06	-	7.21	0.99	19.91	14.97	3.46	19.77	33.63
Bugesera	1.91	0.6	-	6.78	10.29	1.53	7.55	20.11	51.23
National	2.85	3	7.47	7.65	40.72	1.33	1.71	17.78	17.23

Source: NISR, SAS 2024

Table 73: 2024 Season A_Percentage 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	0.0	13.0	22.0	65.0
Gasabo	0.0	0.3	32.4	67.3
Kicukiro	0.2	18.7	35.1	46.0
Nyanza	0.9	15.9	70.2	13.0
Gisagara	1.3	5.1	28.5	65.1
Nyaruguru	2.3	9.2	58.4	30.2
Huye	0.0	1.2	16.5	82.3
Nyamagabe	1.7	18.6	56.9	22.8
Ruhango	1.6	18.3	44.9	35.3
Muhanga	0.9	11.1	42.6	45.4
Kamonyi	1.2	4.8	28.2	65.9
Karongi	8.5	27.5	11.2	52.9
Rutsiro	2.5	31.9	29.8	35.9
Rubavu	0.1	6.6	22.5	70.9
Nyabihu	0.5	17.8	26.5	55.2
Ngororero	7.2	22.7	37.8	32.3
Rusizi	1.6	22.2	20.6	55.6
Nyamasheke	3.5	19.9	18.4	58.2
Rulindo	5.1	27.2	22.5	45.2
Gakenke	2.1	20.8	49.3	27.8
Musanze	0.1	4.0	50.9	45.1
Burera	1.5	10.3	41.0	47.2
Gicumbi	0.4	8.3	48.4	42.9
Rwamagana	0.9	0.0	49.0	50.1
Nyagatare	0.8	19.9	36.1	43.3
Gatsibo	0.0	7.7	12.1	80.3
Kayonza	0.0	3.8	43.0	53.2
Kirehe	0.2	8.2	16.9	74.8
Ngoma	0.1	3.4	2.8	93.7
Bugesera	0.0	3.5	45.0	51.5
National	1.9	13.3	34.9	49.9

Source: NISR, SAS 2024

Table 74: 2024 Season B_Percentage 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	5.2	14.5	16.8	63.5
Gasabo	0.8	2.1	47.7	49.4
Kicukiro	0.0	3.9	22.1	74.0
Nyanza	3.3	14.0	63.2	19.6
Gisagara	0.1	9.1	24.4	66.4
Nyaruguru	1.7	14.2	50.4	33.7
Huye	0.0	3.4	23.0	73.6
Nyamagabe	9.7	12.5	44.3	33.5
Ruhango	4.2	13.6	48.6	33.5
Muhanga	0.4	10.9	47.8	41.0
Kamonyi	3.2	5.9	14.1	76.8
Karongi	2.2	26.8	7.0	63.9
Rutsiro	7.3	25.8	25.5	41.5
Rubavu	1.4	3.7	22.2	72.7
Nyabihu	1.4	6.4	53.0	39.2
Ngororero	6.5	26.6	26.2	40.7
Rusizi	0.9	14.0	15.0	70.1
Nyamasheke	3.3	10.2	13.1	73.4
Rulindo	1.6	35.3	18.5	44.7
Gakenke	4.3	21.4	47.7	26.5
Musanze	2.0	7.0	31.7	59.3
Burera	3.5	9.3	55.9	31.3
Gicumbi	0.9	9.1	41.8	48.2
Rwamagana	0.1	0.0	83.4	16.4
Nyagatare	0.7	15.7	30.5	53.1
Gatsibo	1.1	4.3	10.2	84.5
Kayonza	0.0	12.1	43.0	44.8
Kirehe	0.2	15.9	9.4	74.6
Ngoma	0.1	0.9	4.4	94.6
Bugesera	0.0	2.9	31.6	65.5
National	2.5	12.5	32.5	52.6

Source: NISR, SAS 2024

Table 75: 2024 Season C_Percentage of plots by degree of erosion per district

District	Severe (Rill erosion, Gully erosion, Mass movement/Landslides)	Moderate (Diffuse overland flow erosion, overland flow erosion)	Low (wind erosion)	Very Low (splash erosion)
Nyarugenge	-	28.74	53.52	17.74
Gasabo	-	-	54.3	45.7
Kicukiro	5.9	-	20.63	73.47
Nyanza	3.49	10.04	29.92	56.55
Gisagara	6.8	29.57	28.65	34.98
Nyaruguru	-	5.32	56.91	37.76
Huye	-	6.2	5.51	88.29
Nyamagabe	-	7.63	10.89	81.48
Ruhango	-	-	21.9	78.1
Muhanga	-	9.25	16.8	73.95
Kamonyi	-	2.88	40.23	56.89
Karongi	-	5.22	3.3	91.48
Rutsiro	-	-	-	100
Rubavu	-	12.76	42.74	44.5
Nyabihu	1.52	1.24	66.8	30.43
Ngororero	-	6.3	19.68	74.02
Rusizi	-	1.67	11.41	86.93
Nyamasheke	-	-	1.43	98.57
Rulindo	2.28	20.42	26.6	50.7
Gakenke	5.8	0.9	56.89	36.41
Musanze	0.24	1.73	6.65	91.38
Burera	1.86	6.61	19.15	72.39
Gicumbi	-	-	10.54	89.46
Rwamagana	-	16.16	41.98	41.87
Nyagatare	-	11.72	44.99	43.29
Gatsibo	-	1.97	59.82	38.22
Kayonza	-	1.07	29.57	69.36
Kirehe	-	3.03	23.66	73.31
Ngoma	-	3.35	34.16	62.49
Bugesera	18.13	8.74	16.31	56.82
National	2.01	7.35	29.46	61.18

Source: NISR, SAS 2024

District	Severe (Rill erosion, Gully erosion, Mass movement/Landslides)	Moderate (Diffuse overland flow erosion, overland flow erosion)	Low (wind erosion)	Very Low (splash erosion)

ANNEX

Annex 1: 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 permanent2 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 percentage 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.

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2   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.

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.

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 percent.

- 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 percent. 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 B, 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.

Annex 2: SAMPLING ERRORS

Table 76: Sampling Errors for major crops at the national level Season A 2024 data

Crop name	Estimate	SE	CV	95% Confidence Interval		DEFF	No. observations (plots)
				Lower	Upper		
Maize	249,435	6,234	0.025	237,203	261,667	0.166	9,128
Sorghum	34,720	3,305	0.095	28,236	41,204	0.806	651
Bean	329,001	7,044	0.021	315,180	342,823	1.448	9,200
Paddy rice	17,173	73	0.004	17,029	17,316	0.000	2,180
Irish potato	54,048	3,201	0.059	47,768	60,329	1.397	1,564
Sweet potato	95,683	2,894	0.030	90,006	101,361	1.969	2,630
Soybean	31,515	1,539	0.049	28,496	34,534	0.237	1,353
Vegetables	19,142	1,380	0.072	16,434	21,849	0.402	781
Cooking banana	102,458	4,124	0.040	94,366	110,550	1.348	3,424
Dessert banana	44,094	1,871	0.042	40,423	47,765	1.541	3,199
Banana for beer	126,671	4,427	0.035	117,984	135,358	1.412	3,700
Cassava	251,019	6,223	0.025	238,808	263,230	1.156	5,119
Pea	10,245	938	0.092	8,405	12,086	1.228	528
Groundnut	9,563	816	0.085	7,962	11,164	1.246	399
Fruits	10,332	2,684	0.260	5,067	15,598	0.656	487

Table 77: Sampling Errors for major crops at the national level Season B 2024 data

Crop name	Estimate	SE	CV	95% Confidence Interval		DEFF	No. observations (plots)
				Lower	Upper		
Maize	92,944	3,485	0.037	86,106	99,781	0.249	3,844
Sorghum	120,005	5,297	0.044	109,611	130,399	1.360	2,407
Paddy rice	17,994	124	0.007	17,750	18,238	0.000	2,335
Sweet potato	97,289	2,939	0.030	91,522	103,055	2.454	3,322
Irish potato	41,836	2,994	0.072	35,960	47,711	1.571	1,225
Cassava	172,596	4,757	0.028	163,263	181,929	1.536	5,376
Bush bean	207,112	6,003	0.029	195,334	218,890	0.784	4,898
Climbing bean	122,000	4,529	0.037	113,112	130,887	2.726	3,229
Pea	8,248	761	0.092	6,755	9,741	1.262	340
Groundnut	21,085	1,424	0.068	18,292	23,879	1.567	778
Cooking banana	90,123	3,668	0.041	82,927	97,320	1.363	3,621
Dessert banana	48,809	1,911	0.039	45,059	52,558	1.599	3,547
Banana for beer	119,632	4,166	0.035	111,458	127,806	1.336	3,941

Table 78 :Sampling Errors for major crops at the national level Season C 2024 data

Crop name	Estimate	SE	CV	95% Confidence Interval		DEFF	No. observations (plots)
				Lower	Upper		
Sweet potato	4,429	333	0.075	3,775	5,084	1.852	634
Irish potato	8,846	1,228	0.139	6,433	11,259	2.835	362
Bush bean	2,734	356	0.130	2,034	3,434	1.139	267
Pea	527	159	0.301	215	839	3.888	63
Soybean	576	214	0.371	157	996	2.309	67
Vegetables	5,738	536	0.093	4,685	6,792	0.451	594

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