



The Republic of Rwanda



SEASONAL AGRICULTURAL SURVEY 2020 SEASON A REPORT



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SEASON A 2020 REPORT

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I. INTRODUCTION

To evaluate the performance of National agricultural programs, agriculture statistics are needed. Therefore, the National Institute of Statistics of Rwanda (NISR) in collaboration with the Ministry of Agriculture and Animal Resource (MINAGRI) conduct Seasonal Agricultural Survey (SAS) to cover various information mainly related to potential agricultural land use, crop area, yield, production, agricultural inputs, agricultural practices and other agricultural items. Survey data are supplemented by administrative records on tea and coffee from National Agriculture Export Board (NAEB) collected through routine activities of monitoring coffee and tea production, as well as coffee and tea censuses. Other agriculture related information is obtained from MINAGRI working closely with Rwanda Agriculture Board (RAB), District agronomists and other partners working in Agriculture sector.

(NISR) conducts Seasonal Agricultural Survey (SAS) following Rwanda agricultural seasons. Main agricultural seasons are Season A (which starts from September to February of the following year) and Season B (which starts from March to June). Season C is the small agricultural season mainly for vegetables and sweet potato grown in swamps and Irish potato grown in volcanic agro-ecological zone.

1.1. Objectives of SAS 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 to monitor current agricultural and food supply conditions and to facilitate evidence-based decision making for the development of the agricultural sector.

This report presents 2020 Seasonal Agricultural Survey (SAS), Season A findings related to:

1. Land use:
 - Agricultural land: includes land already used for farming and land that can be brought back into cultivation (fallow or pasture land). Agricultural land indicates land potential for agriculture.
 - Arable land: land able to be grown and produce crops for food and feeds supply purpose. This area excludes land under permanent crops¹ and permanent pasture.
 - Physical crop cultivated area: area occupied with crops.
 - Pasture land: area under natural grasses reserved for livestock or occupied with fodder crops;
 - Fallow land: cultivable land free for cultivation in a temporal period (less than 5 years);
2. Crop land: Cultivated land devoted to each cultivated crop.
3. Crop production: Quantity of harvested crop produce used for food/livestock (quantified into kilograms or tons.)
4. Crop yield: It is a measurement of the quantity of crop harvested per unit of land area (kg per hectare). It is used to determine the efficiency of food production at a certain period.
5. Use of inputs (this assesses the level of use of improved seeds, fertilizers and pesticides)
6. Agricultural practices (practice of irrigation and soil protected against erosion) and others.

¹ Permanent crops are crops produced from plants which last for many seasons, rather than being replanted after each harvest. Those crops are fruit trees, sugar cane, coffee, tea, banana, tree plantations, nuts trees...).

II. SURVEY DESIGN

2.1 Sample frame design

In order to provide the basis for conducting probability surveys based on complete coverage of the farm level, and as a better way of collecting agricultural data and find better precise survey estimates, SAS uses a Multiple-Frame Sampling (MFS) methodology by which, area frame is constructed and survey sample is drawn from it. In addition, a list frame of large-scale farmers (LSF), with at least 10 hectares of agricultural holdings is done to complement the area frame in order to cover crops mostly grown by large scale farmers which are not easily covered in area frame. To construct area frame, the process involves the following two steps: land cover classification, land stratification and sampling of segment.

2.1.1 Land classification

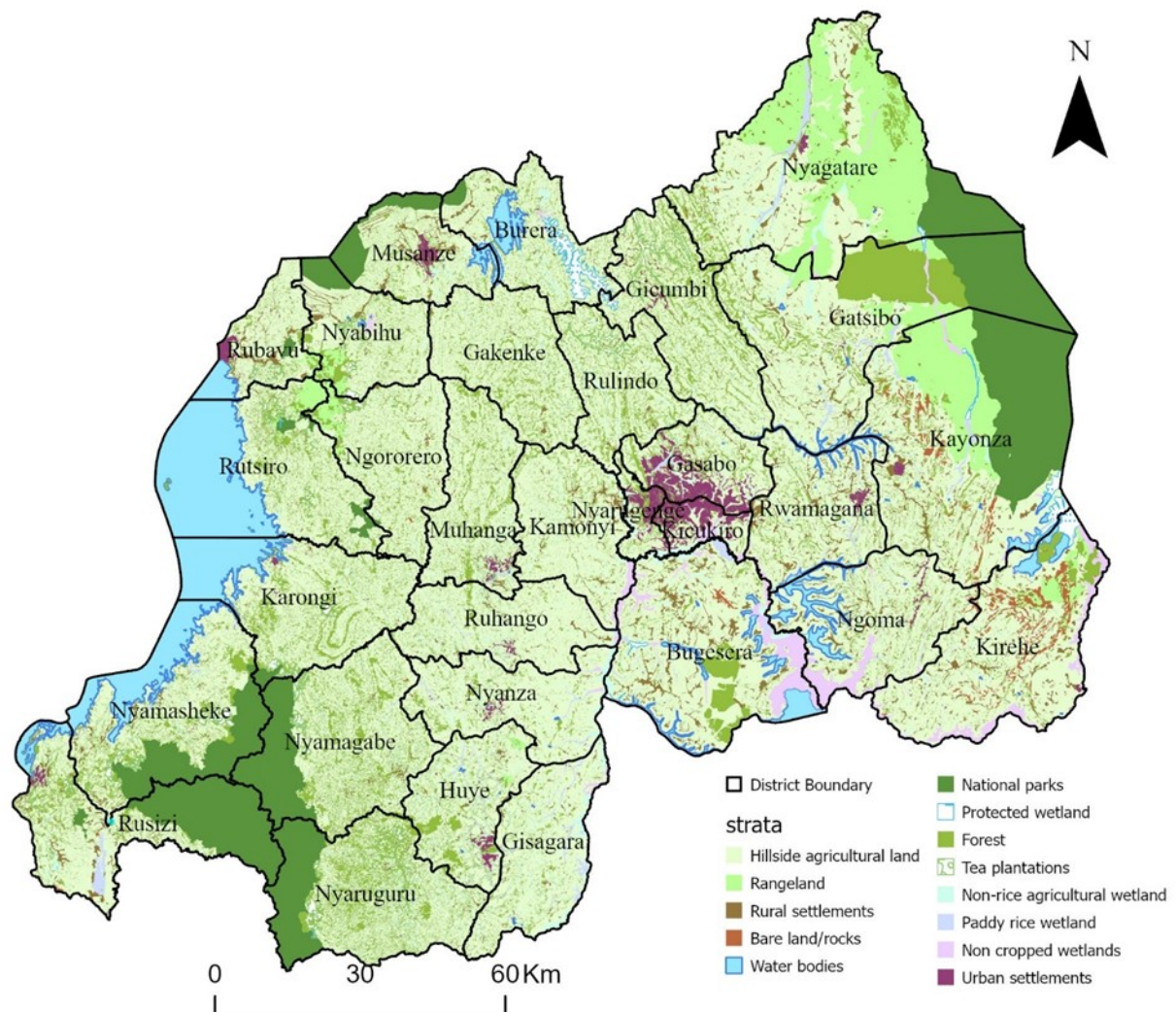
Land classification was done using Rwanda land cover map which is a combination of different layers available in the country, plus a photo interpretation of a series (2010 to 2019) of high-resolution satellite images from Worldview. The Rwanda land cover map has been divided into 13 land cover classes (as shown in Table 1).

Table 1: List of Rwanda land cover classes

Code	Land cover class name	Area (Ha)	Percentage share
1.0	Consolidated tea plantations	17,821	0.7
1.1	Hillside agricultural land	1,343,933	53.1
2.1	Non-rice agricultural wetland	55,807	2.2
2.2	Paddy rice wetland	21,848	0.9
2.3	Non cropped wetlands	37,743	1.5
3.0	Rangeland	144,490	5.7
4.1	Urban settlements	31,612	1.2
4.2	Rural settlements	78,928	3.1
5.0	Bare land/rocks	15,404	0.6
6.0	Water bodies	135,295	5.3
7.0	National parks	241,455	9.5
8.0	Protected wetland	12,201	0.5
9.0	Forest plantations	395,001	15.6

Source: NISR, SAS, 2020

Map 1: Rwanda land classification map done in 2019



Source: NISR, SAS 2020

Among 13 land cover classes, some of them are related to agricultural activities. The next step of building the area sample frame was to group land cover classes into strata in order to identify agricultural strata to be considered in sample frame.

2.1.2 Stratification

Out of 13 land cover classes, 5 of them are considered for the agricultural survey frame. These classes are tea plantation, hillside agricultural land, non-rice agricultural land, paddy rice agricultural wetland, and rural settlement (potential for agricultural production of kitchen gardens crops, fruit trees, and livestock). The remaining land cover classes are considered as excluded for agricultural from the frame of land potential for agriculture. The sampling frame is made of a set of square clusters (segments) of 9 hectares each covering the whole country. By overlapping the clusters layer with land cover classes layer, each cluster was 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 stratum	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 stratum	Clusters with non-rice wetland land cover class greater than 25 percent of total area of the cluster
3.0	Dominant rangeland	Clusters with rangeland land cover class greater or equal to 60 percent of the total area of the cluster
4.0	Mixed stratum	The rest of other possible combinations
9.0	Excluded stratum	All clusters with excluded land cover classes greater or equal to 50 percent of the total area of the cluster

Source: NISR, SAS, 2020

In addition, tea plantation class data are recorded by National Agriculture export Board and large-scale farms which are completely enumerated during the Seasonal Agricultural Survey, were not considered in the agricultural strata taken in sample frame. This means that only dominant hill crop land stratum, dominant wetland crops stratum, dominant rangeland stratum and mixed stratum were considered as area frame from which a sample segment was selected.

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

Stratum	Dominant hill crop land	Dominant wetland crops	Dominant rangeland	Mixed stratum	Excluded stratum	Total
District						
Nyarugenge	515	238	-	114	605	1,472
Gasabo	2,111	296	-	405	1,959	4,771
Kicukiro	517	148	-	90	1,099	1,854
Nyanza	5,847	522	-	418	678	7,465
Gisagara	5,485	684	-	520	858	7,547
Nyaruguru	3,783	388	-	1,290	5,757	11,218
Huye	3,869	369	-	837	1,375	6,450
Nyamagabe	5,577	226	-	1,194	5,134	12,131
Ruhango	5,631	338	-	475	508	6,952
Muhanga	5,003	340	-	662	1,177	7,182
Kamonyi	5,605	406	-	679	636	7,326
Karongi	6,039	114	-	675	1,924	8,752
Rutsiro	4,673	-	353	691	1,639	7,356
Rubavu	2,668	-	-	574	525	3,767
Nyabihu	3,766	-	272	607	1,324	5,969
Ngororero	5,630	112	359	545	872	7,518
Rusizi	3,866	159	-	839	5,322	10,186
Nyamasheke	4,849	137	-	923	4,640	10,549
Rulindo	4,209	312	-	622	1,167	6,310
Gakenke	5,919	255	-	669	986	7,829
Musanze	3,241	120	-	634	1,859	5,854
Burera	4,437	259	-	510	1,965	7,171
Gicumbi	5,919	214	-	868	2,202	9,203
Rwamagana	5,130	173	-	1,098	1,162	7,563
Nyagatare	6,688	532	9,057	1,160	3,869	21,306
Gatsibo	7,358	434	1,048	1,074	7,675	17,589
Kayanza	7,376	280	3,857	1,262	8,694	21,469
Kirehe	7,874	-	548	1,337	3,445	13,204
Ngoma	6,379	-	-	1,035	2,244	9,658
Bugesera	8,155	452	-	1,626	4,135	14,368
National	148,119	7,508	15,494	23,433	75,435	269,989

Source: NISR, SAS, 2020

2.1.3 Sampling procedures

Out of 5 defined agricultural strata, only dominant hill crop land stratum, dominant wetland crops stratum, dominant rangeland stratum and mixed stratum were considered as land potential for agriculture. The remaining stratum is the non-agricultural land. Note that clusters covered by tea plantations were not considered in the area sample frame due to reasons stated above. Thus, SAS is conducted on 4 above mentioned strata to cover other major crops. In 2020 agricultural year, NISR increased the sample of segments in order to improve agriculture statistics where sample increased from 780 (sample used in 2018 to 2019) to 1200 segments.

At first stage, 1200 segments were selected and allocated at district level based on the power allocation approach (Bankier, 1988²). Sampled segments inside each district were distributed among strata with a proportional-to-area criterion.

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

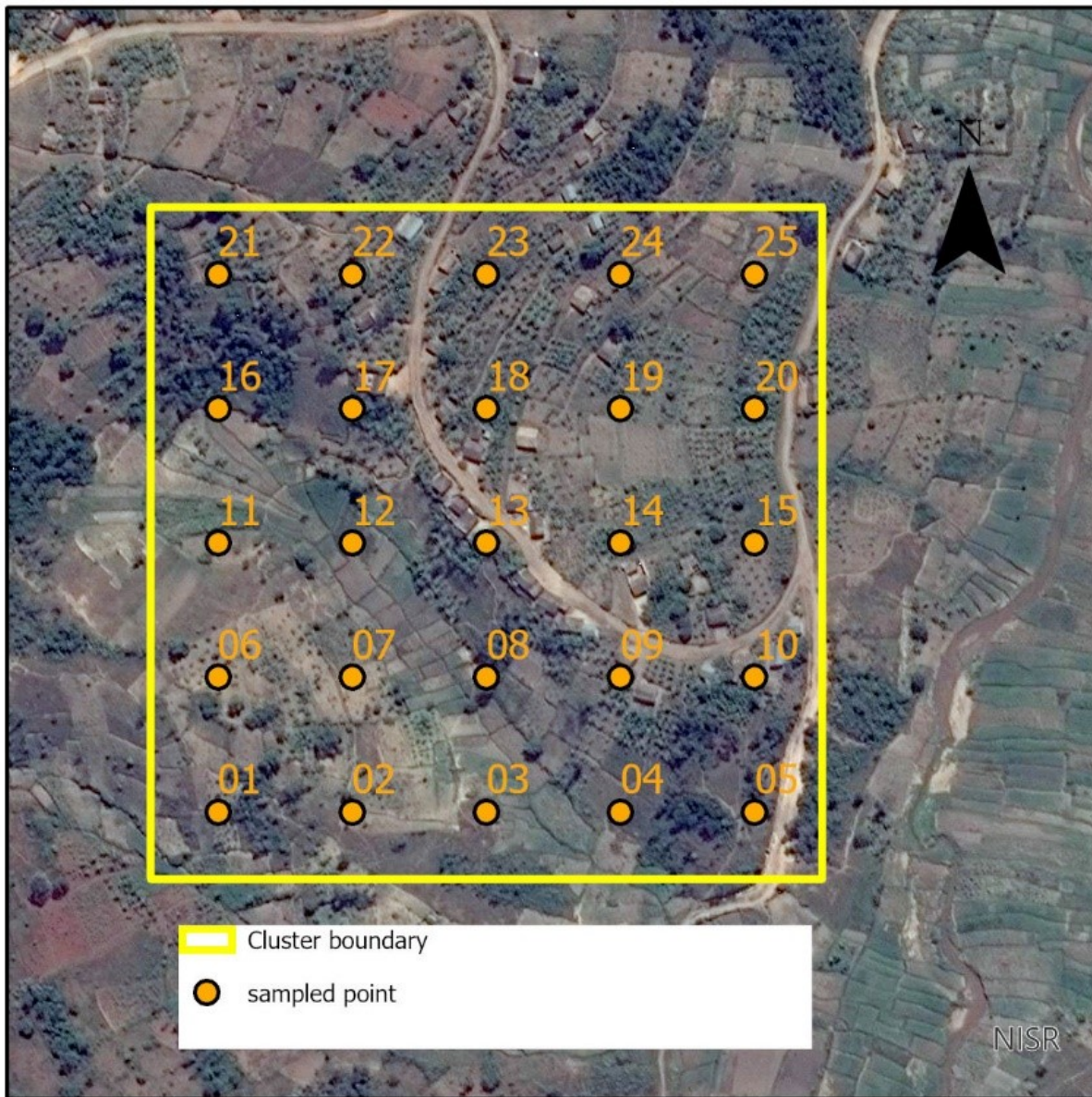
District	Dominant hill crop land	Dominant wetland crops	Dominant rangeland	Mixed stratum	Total
Nyarugenge	12	6	-	2	20
Gasabo	22	4	-	3	29
Kicukiro	13	5	-	2	20
Nyanza	37	4	-	2	43
Gisagara	33	5	-	3	41
Nyaruguru	25	3	-	7	35
Huye	27	3	-	5	35
Nyamagabe	36	2	-	6	44
Ruhango	36	3	-	3	42
Muhanga	33	3	-	4	40
Kamonyi	36	3	-	4	43
Karongi	38	2	-	3	43
Rutsiro	32	-	2	4	38
Rubavu	21	-	-	4	25
Nyabihu	27	-	2	3	32
Ngororero	36	2	2	3	43
Rusizi	27	2	-	5	34
Nyamasheke	31	2	-	5	38
Rulindo	28	3	-	4	35
Gakenke	37	2	-	4	43
Musanze	24	2	-	4	30
Burera	30	2	-	3	35
Gicumbi	37	2	-	5	44
Rwamagana	34	2	-	6	42
Nyagatare	31	5	25	7	68
Gatsibo	38	3	5	5	51
Kayonza	32	2	13	5	52
Kirehe	45	-	3	6	54
Ngoma	39	-	-	6	45
Bugesera	45	3	-	8	56
Total	942	75	52	131	1200

Source: NISR, SAS, 2020

² Bankier M.D. (1988) Power allocations: determining sample sizes for subnational areas. The American Statistician, Vol. 42, n. 3 pp. 174-177.

At second stage, 25 sample points were systematically selected, following a special distance of 60 meters between points. Sample points are reporting units within each segment, where enumerators go to every point, locate 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 2 : Map showing square cluster(segment) with 25 sampled points



Source: NISR, SAS, 2020

2.1.4 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:

p_{2h} = Probability of selection of the plot in segment h

g_{hi} = Number of grid squares selected in the i-th sample segment of stratum h;

A_{hij} = Area of the j-th sample plot selected in the i-th sample segment of stratum h

A_{hi} = Area of the i-th sample segment of stratum h;

g_{hij} = 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

2.2 Data Collection design

Data collection was done in two distinct phases: The first phase, known as screening activity, consists of visiting all sampled segments and delineating all plots in which the sampled points are fallen and thereafter recording the related information. The second phase consists of visiting the agricultural plots identified from screening activity in first phase as well as all Large-Scale Farmers (LSF) who have cultivated their plots in the season the survey is being conducted. SAS 2020 used 152 fieldworkers and 31 Team leaders. All fieldwork staff held a degree in agriculture sciences and were trained by NISR headquarter staff before starting data collection. Higher level supervision staff from NISR visited the field teams during each phase of data collection to ensure data quality.

2.2.1 Time frame

Season A data collection was done from 02nd December 2019 to 04th February 2020. Data collection was done in 1200 segments and 308 large scale farmers' holdings.

2.2.2 Data collection tools and materials

Seasonal agricultural survey uses two main questionnaires:

- **Screening Questionnaire:** Screening questionnaire is a form used to collect information on the delineated plot. This information is mainly related to land use, plot area and crop cultivated.
- **Plot Questionnaire:** Plot questionnaire is a form used to collect information on the sampled plot mainly related to crop production, inputs used (seeds, fertilizers ...), and agricultural practices.

The computer assisted personal interview (CAPI) data collection methodology was used based on three different software applications:

- **Collector:** which is GIS based application, is used to identify and navigate the enumerator team to the exact GPS sample-point location and for mapping the plot boundary for GIS area determination,
- **Survey 123:** which is an electronic instrument, used to collect screening data for Large-scale farmers.
- **CS Entry application,** which is a CSPro data entry application used on Android tablets, was used to collect data for interview of plot questionnaire.

Each enumerator and team leader had adequate materials composed of enumerator's instruction manual, android tablet, charger, Power banks, pens, notebooks, pencils, calculator, weighing scales, Global Positioning System (GPS), boots, etc. Teams were given vehicles for transport facilitation.

2.2.3 Field data collection procedures

Before proceeding to the field, enumerators and their team leaders have to check if they have required materials for their fieldwork. Field workers use Explorer software to direct them to sampled segment. Data are collected as follows:

- **Screening Activity of the Segment:** Arriving at the segment, field workers use GPS to direct them to the sampled point inside the segment. Arriving at the point, enumerators identify plot boundary with the guide of the farmer and delineate the plot using collector with GPS connected to the tablet. For large scale farmers, complete enumeration of plots with at least 10 hectares is done.
- **Farm Interview:** After screening activity, only agricultural plots are given to enumerators to collect information provided in the plot questionnaire.

2.3 Data processing and analysis

CAPI data collection method allows the enumerators in the field to collect and enter data with their tablets and synchronize them to the server at headquarter where data are received by NISR staff, checked for consistency and thereafter transmitted to analysts for tabulation and reporting using STATA and Excel software.

2.4 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

Agricultural area includes arable land, land under permanent 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 actually irrigated refers to physical areas. Irrigated land that is cultivated more than once a year is counted only once.

7. Physical area

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

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 together in same plot, due to the fact that 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 has 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.

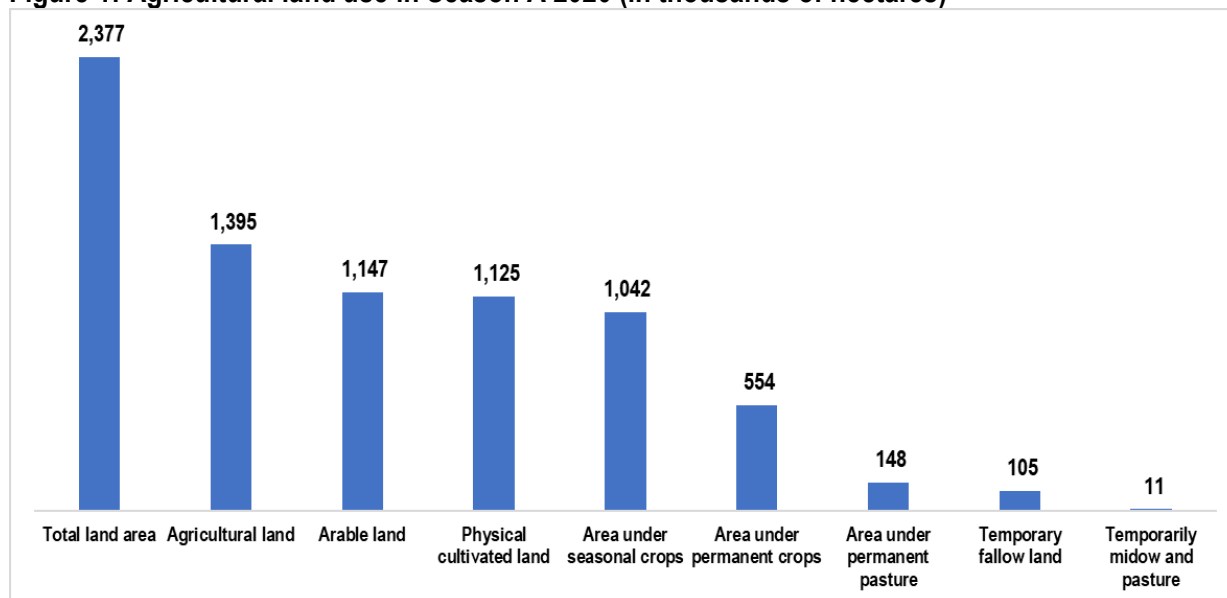
III. SURVEY FINDINGS

This section highlights the key results for SAS 2020 Season related to area (physical land use, cultivated area, and harvested area), crop yield and production, agricultural inputs, and agricultural practices in Rwanda.

3.1 Agricultural land use

In Season A of 2020, the Rwanda agricultural land was estimated at 1.39 million hectares (59% of total country land). Out of the total agricultural land, 1.04 million hectares was used for Seasonal crops in season A, 0.5 million hectares are area under permanent crops, 0.15 million ha under permanent pasture. (See district details in Table 6).

Figure 1: Agricultural land use in Season A 2020 (in thousands of hectares)



Source: NISR, SAS 2020

3.2 Crop area, yield and production estimates for major crops

In Season A of 2020, there was an increase of 8% in the cultivated area in general when compared to season A of 2019. Production and yield trend for selected crops are as follows:

- **Maize:** In 2020 Season A, maize cultivated area was estimated at 221,521 ha. This is a 3% increase when compared to 2019 season A. Maize production was 353,999 MT, an increase of 7% compared to 2019 season A. The maize average yield was 1,598 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).
- **Sweet potato:** In 2020 Season A, sweet potato cultivated area was estimated at 89,427 ha, a decrease of 8 % when compared to 2019 season A. Sweet potato production was 635,007 MT, a decrease of 6 % compared to 2019 season A production estimates. Sweet potato average yield was 7,224 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).
- **Irish potatoes:** In 2020 Season A, Irish potato cultivated area was estimated at 51,516 ha, an and had an increase of 4% when compared to 2019 season A estimates. Irish potato production was 427,471 MT with a decrease of

9% compared to 2019 season A. The average yield of Irish potato was 8,298 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).

- **Cassava:** In 2020 Season A, cassava cultivated area was 190,441 ha, a decrease of 2 % when compared to 2019 season A. Cassava production was 578,545 MT, an increase of 11% when compared to 2019 season A. The average yield of cassava was 14,056 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).
- **Paddy rice:** In 2020 Season A, paddy rice cultivated area was estimated at 14,507 ha, a slight decrease of 1 % compared to 2019 season A. Paddy rice production was 52,225 MT with a decrease 12 % from the 2019 season A. The average paddy rice yield was 3,600 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).
- **Banana:** In 2020 Season A, banana cultivated area was estimated at 272,500 ha, an increase of 7 % compared to 2019 season A. Banana production was 1,100,082 an increase of 8 % when compared to 2019 season A.. The average yield of banana was 10,195 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).
- **Beans:** In 2020 Season A, beans cultivated area was estimated at 362,199 ha, and had an increase of 21 % compared to 2019 season A records. Beans production was 226,570 MT, down 10 % change from 2019 season A estimates. The average yield of beans was 626 kilograms per hectare (See district details in Tables 5 ,8,9,10 and 11).

Table 5: Cultivated area, harvested area, production and yield by crop in Season A 2020

Crop/Crop Group Year/Season	Cultivated Crop area (Ha)		Harvested Crop area (Ha)		Production (MT)		Yield (MT/ha)	
	2019 A	2020 A	2019 A	2020 A	2019 A	2020 A	2019 A	2020 A
Cereals	269,863	276,592	269,864	276,592	437,662	454,522		
Maize	215,159	221,521	215,159	221,521	331,090	355,999	1.5	1.6
Sorghum	30,467	33,295	30,467	33,295	37,584	42,231	1.2	1.3
Paddy rice	14,671	14,507	14,671	14,507	59,286	52,225	4	3.6
Wheat	5,487	4,187	5,487	4,187	7,082	4,138	1.3	1
Other cereals	4,079	3,082	4,079	3,082	2,620	1,930	0.6	0.6
Tubers and Roots	355,197	349,447	197,022	196,552	1,737,409	1,726,437		
Cassava	195,135	190,447	36,960	41,160	523,117	578,545	14.2	14.1
Sweet potato	97,639	89,427	97,639	89,427	674,257	635,007	6.9	7.1
Irish potato	49,728	51,516	49,728	51,516	468,931	427,471	9.4	8.3
Taro & Yams	12,695	18,058	12,695	14,450	71,104	85,414	5.6	5.9
Banana	253,995	272,500	82,523	99,876	1,020,141	1,100,082	12.4	10.9
Cooking banana	86,707	106,409	25,340	35,735	456,351	502,972	18	13.8
Dessert banana	32,036	39,688	8,342	14,980	112,937	120,868	13.5	7.9
Banana for beer	135,252	126,403	48,841	49,161	450,853	476,241	9.2	9.6
Legumes and Pulses	365,623	412,016	365,623	412,016	365,623	252,550		
Beans	299,443	362,199	299,443	362,199	252,569	226,570	0.7	0.6
Bush bean	210,767	240,157	211,167	240,157	164,163	142,983	1.1	0.6
Climbing bean	88,676	122,042	88,276	122,042	88,406	83,588	1.4	0.7
Pea	17,658	10,530	17,658	10,530	9,115	7,933	0.5	0.8
Groundnut	23,929	14,609	23,929	14,609	9,362	5,762	0.4	0.4
Soybean	24,593	24,677	24,593	24,677	13,638	12,284	0.6	0.5
Vegetables and Fruits	23,395	25,502	23,024	23,024	207,718	183,657		
Vegetables	15,012	18,246	14,801	18,246	158,927	160,114	10.7	8.8
Fruits	8,383	7,256	6,585	4,778	48,791	23,542	7.4	4.9
Fodder crops	9,104	157,920	6,419	9,988	72,597	129,651	11.3	13
Other crops	43,405	54,732	9,943	12,455	54,721	176,592	5.5	14.2
Total Developed Crop area	1,320,582	1,548,710	1,000,811	982,473	(NA)	(NA)	(NA)	(NA)

Source: NISR, SAS, 2020

3.3 Use of inputs

Findings related to use of agricultural inputs (seeds, fertilizers and pesticides) in 2020 Season A, are presented in terms of percentage of farmers who used such agricultural inputs.

3.3.1 Use of seeds

In Season A of 2020, 35.2 % of farmers used improved seeds. According to farmer type, 34.0 % of small-scale farmers (SSF) and 87.0% of Large-scale farmers (LSF) used improved seeds (See Figure 2). Improved seeds came from agro-dealers (36.6%), NGO/companies (28.8%), government (16.5%), cooperatives (6.1%), market (5.4%) and seeds multipliers (5.4%). Improved seeds were used mostly for crops such as paddy rice, maize, vegetables, fruits and wheat (See details in Tables,16,17,18 and 19).

3.3.2 Use of fertilizers

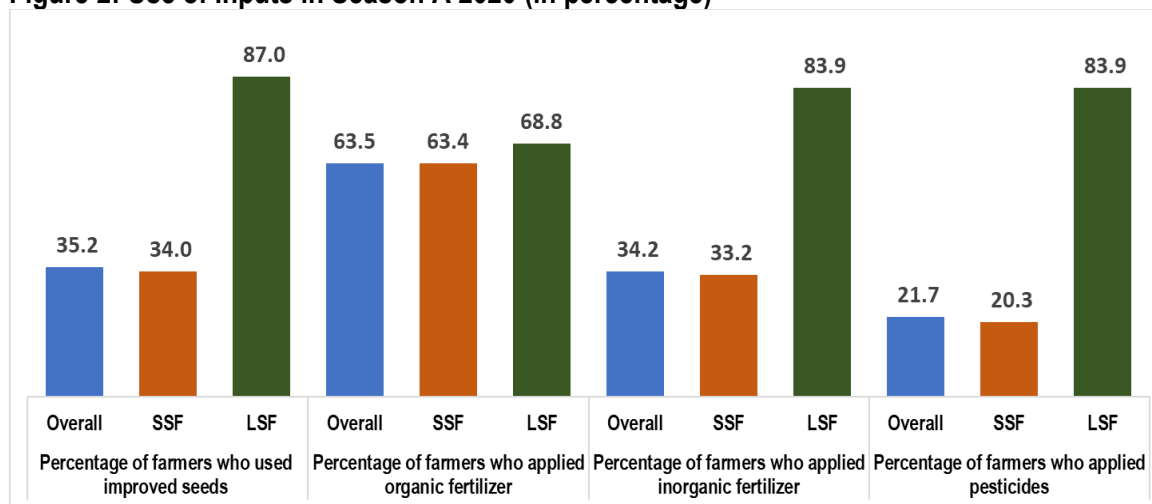
Results show that in season A of 2020, 63.5 % of farmers applied organic fertilizer in their farms. According to farmer type, 63.4 % of small-scale farmers and 68.8% of Large-scale farmers applied organic fertilizer. (See Figure 2 and Table 19).

Results also show that 34.2 % of famers applied inorganic fertilizer. According to farmer type, 33.2 % of small-scale farmers and 83.9 % of Large-scale farmers applied inorganic fertilizer (See Figure 2). 47.6% of famers bought inorganic fertilizers from agro-dealers, 32.2 % of farmers gained inorganic fertilizers from NGOs. DAP, UREA and NPK are inorganic fertilizers mostly used in 2020 Season A with 41.4 %, 36.2 % and 18.2% respectively (See details in Tables 7,20,21,22, 23 and 24).

3.3.3 Use of pesticides

In season A of 2020, 21.7 % of farmers applied pesticides. According to farmer type, 20.3 % of small-scale farmers and 83.9 % of Large-scale farmers applied pesticides (See Figure 2 and 3). Rocket, Dithane and Cypermethrin were the most used pesticides, with 36.0 % of farmers, 23.9% and 19.4% respectively (See details in Tables 25 and 26).

Figure 2: Use of inputs in Season A 2020 (in percentage)



Source: NISR, SAS 2020

3.4 Agricultural practices

Findings related to use of agricultural practices (anti-erosion activities, irrigation, mechanization...) in 2020 Season A, are presented in terms of percentage of farmers.

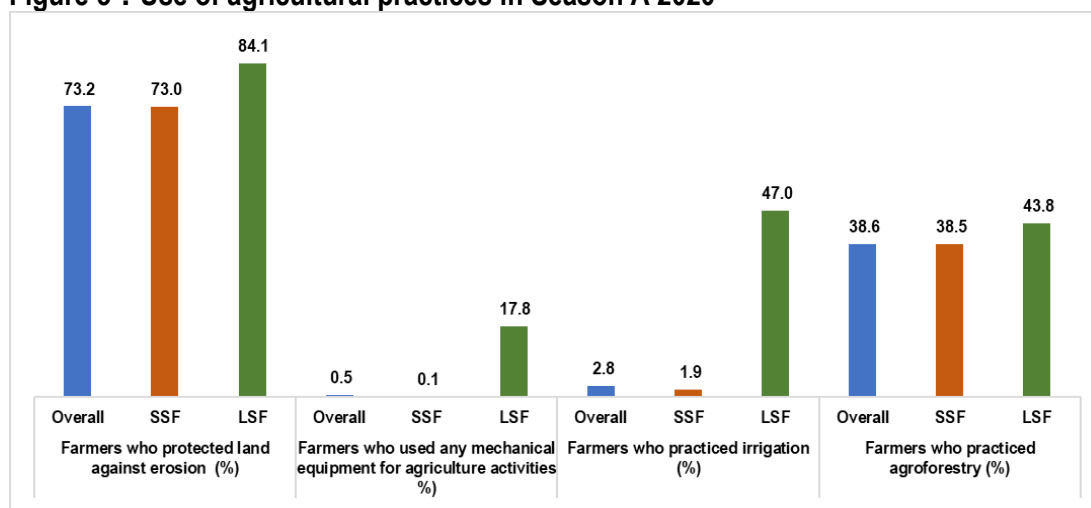
3.4.1 Irrigation practices

In season A of 2020, 6.8% of farmers practiced irrigation. Traditional irrigation technique was applied by 71.5% of farmers. Underground water and lakes/stream were most sources of water used for irrigation with 47.2% and 43.2 % respectively (See details in Tables 7,27,28 and 29).

3.4.2 Erosion control measures

In season A of 2020, 73.2 % of farmers practiced anti-erosion activities, while 38.6 % of farmers practiced agroforestry. Cover plants was the mostly type of anti-erosion used with 58.5% of farmers. The Low degree of erosion (splash erosion, wind erosion) appeared most with 84.8% (See details in Tables 7,27,30 and 31).

Figure 3 : Use of agricultural practices in Season A 2020



Source: NISR, SAS 2020

MAIN TABLES

Table 6: Season A 2020_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 midow and pasture	Area under permanent pasture
Nyarugenge	13.1	6.2	47.2	4.9	5.6	4.3	3.3	0.6	0.0	0.0
Gasabo	42.7	19.3	45.2	17.9	17.7	16.6	7.4	1.2	0.7	0.4
Kicukiro	16.6	5.3	32.0	4.5	4.4	4.2	2.4	0.3	0.0	0.6
Nyanza	67.1	44.1	65.7	41.8	39.8	38.1	15.4	3.8	0.4	0.5
Gisagara	67.3	44.4	65.9	41.4	36.4	35.5	17.4	5.9	0.1	2.2
Nyaruguru	100.7	37.8	37.6	32.0	30.7	27.7	11.0	4.3	0.7	-
Huye	58.1	32.4	55.8	30.7	29.7	28.4	13.8	2.3	0.1	0.4
Nyamagabe	109.1	46.8	42.9	41.0	40.8	36.8	13.2	4.2	0.4	-
Ruhango	62.6	45.1	72.1	42.3	40.5	37.8	12.6	4.4	0.7	0.2
Muhanga	64.4	38.8	60.3	33.9	33.7	28.8	17.7	5.1	0.6	-
Kamonyi	65.8	44.0	66.8	37.1	40.2	33.4	19.2	3.6	0.5	0.1
Karongi	78.9	45.1	57.2	37.0	37.8	32.0	15.7	5.1	0.5	0.4
Rutsiro	66.0	41.5	62.9	30.0	30.2	26.0	17.2	4.0	0.4	6.2
Rubavu	33.8	23.8	70.5	22.2	22.3	21.2	5.8	1.0	0.5	0.1
Nyabihu	53.6	36.3	67.8	30.7	28.2	28.1	6.1	2.6	0.1	4.2
Ngororero	67.5	44.3	65.7	38.3	37.0	35.2	18.9	3.1	0.3	3.2
Rusizi	91.4	36.0	39.3	33.4	34.1	32.1	13.2	1.3	0.1	-
Nyamasheke	94.8	43.6	46.0	34.3	38.7	32.2	18.0	2.1	0.8	-
Rulindo	56.7	37.6	66.4	33.1	32.8	30.9	12.6	2.2	0.2	1.1
Gakenke	70.1	49.0	69.9	43.6	46.9	41.6	20.6	2.0	0.2	0.1
Musanze	50.9	29.8	58.5	29.1	28.4	27.8	4.1	1.3	0.2	-
Burera	58.4	36.8	62.9	36.4	33.8	33.5	5.3	3.0	0.2	-
Gicumbi	82.5	50.4	61.2	45.6	42.7	40.3	9.6	5.4	1.0	-
Rwamagana	65.3	45.9	70.2	40.5	40.3	37.6	23.1	2.9	0.4	2.7
Nyagatare	191.1	145.9	76.3	70.0	70.6	68.0	89.7	2.0	0.3	73.3
Gatsibo	153.6	73.5	47.9	59.2	62.4	56.8	37.7	2.3	0.1	8.8
Kayonza	179.2	93.3	52.1	62.3	55.1	53.0	47.0	9.2	0.1	29.0
Kirehe	114.9	70.2	61.1	62.4	60.7	57.7	28.7	4.8	0.1	4.8
Ngoma	80.5	53.6	66.5	48.3	47.1	44.2	23.8	4.1	0.2	2.3
Bugesera	120.4	74.1	61.5	62.7	56.1	52.2	23.4	10.6	0.6	7.4
National	2,377.1	1,394.9	58.7	1,146.6	1,124.6	1,042.1	554.1	104.5	10.6	147.9

Source: NISR, SAS 2020

Table 7: 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	133	2,773	2,677	400	2,977
Gasabo	265	13,326	6,745	3,227	7,927
Kicukiro	36	2,343	1,829	1,437	2,364
Nyanza	563	31,796	15,686	6,334	18,767
Gisagara	1,616	23,797	15,007	10,770	19,751
Nyaruguru	310	30,390	11,330	14,163	21,008
Huye	1,077	25,454	9,612	5,798	16,942
Nyamagabe	-	40,854	18,831	12,987	24,866
Ruhango	914	33,706	12,990	4,386	20,089
Muhanga	158	35,747	15,280	3,078	22,260
Kamonyi	518	36,126	8,485	4,048	20,920
Karongi	-	28,244	12,080	10,128	20,394
Rutsiro	-	27,397	12,992	9,350	18,335
Rubavu	-	17,934	3,575	10,015	6,973
Nyabihu	-	24,439	14,825	16,025	18,407
Ngororero	-	35,232	16,893	14,707	28,647
Rusizi	1,572	21,639	19,117	17,080	20,061
Nyamasheke	342	32,974	21,188	14,962	22,020
Rulindo	76	30,476	12,756	8,029	23,796
Gakenke	122	43,075	12,998	20,490	37,735
Musanze	23	21,966	13,050	11,444	17,405
Burera	-	31,276	7,164	12,206	24,570
Gicumbi	-	40,575	9,930	10,595	30,962
Rwamagana	475	32,059	19,103	12,517	23,057
Nyagatare	3,040	38,837	53,009	20,709	23,311
Gatsibo	1,144	51,457	34,551	18,716	33,493
Kayonza	718	24,285	30,116	10,784	18,693
Kirehe	3,035	41,247	32,248	19,739	33,781
Ngoma	989	33,285	27,951	17,140	26,950
Bugesera	1,934	29,674	23,937	12,101	15,940
National	19,058	882,384	495,956	333,368	622,402

Source: NISR, SAS 2020

Table 8: Season A 2020_Cultivated area by crop type and district (Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Other cereals	Cassava	Sweet potato	Irish potato	Yams & 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	643	-	-	-	-	1,052	295	82	59	1,973	674	400	899	2,335	2,294	41	-	42	202	296	57	48	849	7,933
Gasabo	2,844	-	242	-	11	4,156	1,286	471	138	4,724	1,947	969	1,808	7,394	7,143	251	76	423	306	843	42	1,211	756	24,922
Kicukiro	1,098	-	17	-	4	370	538	14	146	1,076	503	169	405	1,730	1,692	38	7	94	115	110	16	608	137	6,082
Nyanza	5,486	300	404	-	26	12,980	2,228	250	798	9,519	3,047	1,954	4,518	17,846	15,782	2,064	71	891	1,518	627	15	866	2,085	55,910
Gisagara	6,501	438	2,379	-	276	7,209	2,341	295	308	9,426	2,651	2,082	4,693	14,840	13,837	1,002	57	507	2,234	283	309	2,326	876	50,605
Nyaruguru	6,799	-	-	16	7	5,037	4,415	1,367	549	5,551	1,914	1,183	2,454	8,325	1,952	6,373	261	92	1,058	401	150	900	3,808	38,736
Huye	4,094	-	1,009	-	341	9,358	2,675	654	564	7,402	2,379	1,639	3,385	12,542	9,866	2,675	193	277	1,837	402	133	438	1,614	43,534
Nyamagabe	4,529	-	-	44	25	7,743	6,885	2,470	616	6,896	1,592	856	4,449	10,219	2,953	7,266	1,340	6	1,290	442	169	294	3,310	46,277
Ruhango	2,964	71	1,019	-	55	16,724	1,501	471	882	8,481	1,556	1,736	5,188	14,355	11,146	3,209	96	1,151	2,154	372	17	776	1,204	52,293
Muhanga	1,715	6	150	-	11	8,528	3,778	356	2,485	16,282	3,269	2,257	10,756	6,906	3,012	3,894	68	50	1,634	345	128	435	857	43,734
Kamonyi	3,549	-	183	-	11	10,845	2,200	539	524	12,234	2,298	1,796	8,140	14,387	12,666	1,720	66	849	2,516	705	984	478	3,349	53,420
Karongi	7,802	-	-	71	28	8,508	5,153	986	1,292	10,050	2,341	1,640	6,069	5,896	2,039	3,857	494	-	1,007	612	63	951	3,103	46,016
Rutsiro	7,033	-	-	320	-	2,343	3,274	3,059	1,118	6,721	1,654	1,239	3,828	4,206	369	3,837	463	-	659	263	639	6,539	2,851	39,489
Rubavu	1,534	127	-	-	-	686	538	6,175	94	3,136	1,034	295	1,807	9,320	650	8,670	108	-	216	1,664	86	582	1,337	25,602
Nyabihu	2,875	972	-	1,021	-	857	2,630	8,961	105	1,475	461	257	757	7,657	79	7,579	771	-	-	677	120	4,227	539	32,889
Ngororero	5,539	907	-	464	-	4,272	4,753	2,182	1,288	12,196	2,374	2,019	7,803	11,212	1,930	9,281	613	-	941	293	183	3,362	919	49,123
Rusizi	7,632	89	1,386	-	-	14,315	1,759	239	1,085	6,261	2,382	562	3,317	11,574	9,530	2,044	113	339	1,070	850	391	54	4,160	51,316
Nyamasheke	4,993	51	328	35	191	10,973	4,083	111	1,838	7,263	2,401	994	3,869	7,764	2,397	5,367	127	229	1,455	381	171	815	7,087	47,895
Rulindo	4,185	-	17	47	17	4,394	5,146	1,359	105	7,477	2,402	1,253	3,822	11,459	5,025	6,434	701	124	264	956	196	1,386	1,257	39,091
Gakenke	11,525	-	122	119	296	6,559	6,022	1,219	1,590	13,860	2,803	1,805	9,252	8,987	1,404	7,583	439	110	502	441	223	220	1,995	54,230
Musanze	8,107	1,901	-	868	29	93	2,057	4,024	128	2,297	973	437	888	7,691	281	7,410	832	-	65	661	458	191	902	30,304
Burera	8,504	1,606	-	890	-	197	2,730	5,251	81	3,234	1,587	74	1,573	11,461	497	10,964	1,130	-	23	263	90	221	17	35,697
Gicumbi	4,694	298	-	277	8	3,479	6,308	2,874	133	6,433	2,634	1,584	2,214	18,148	5,450	12,699	1,374	178	101	448	588	870	1,175	47,385
Rwamagana	9,070	26	298	-	78	4,494	1,922	1,004	286	13,953	8,714	2,079	3,161	18,395	17,786	609	203	1,496	215	1,006	551	3,008	1,630	57,637
Nyagatare	26,033	12,432	1,552	-	306	4,103	2,043	419	50	11,080	6,697	1,083	3,300	18,542	16,393	2,149	436	1,656	797	1,004	165	73,590	215	154,422
Gatsibo	16,441	4,108	1,222	14	217	5,856	2,373	2,349	422	22,219	11,912	3,227	7,080	19,814	18,162	1,652	74	1,991	570	781	390	8,879	3,122	90,840
Kayonza	12,320	3,436	641	-	561	13,824	2,475	1,540	386	12,050	7,689	1,311	3,050	19,641	19,426	214	89	906	410	1,321	319	29,090	1,034	100,043
Kirehe	19,984	1,918	1,057	-	205	7,268	1,814	1,077	648	20,070	11,470	1,377	7,223	24,031	21,848	2,183	222	337	734	778	107	4,892	1,146	86,288
Ngoma	12,842	182	825	-	215	7,443	2,446	1,355	211	18,034	10,599	1,796	5,639	17,738	16,904	834	50	652	493	468	340	2,646	961	66,901
Bugesera	10,186	4,428	1,656	-	165	6,779	3,757	363	131	11,125	4,455	1,614	5,056	17,785	17,645	140	59	2,208	292	553	156	8,018	2,436	70,096
National	221,521	33,295	14,507	4,187	3,082	190,447	89,427	51,516	18,058	272,500	106,409	39,688	126,403	362,199	240,157	122,042	10,530	14,609	24,677	18,246	7,256	157,920	54,732	1,548,710

Source: NISR, SAS, 2020

Table 9: Season A 2020_Harvested area by crop type and district (Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Other cereals	Cassava	Sweet potato	Irish potato	Yams & Taro	Bananas	Cooking banana	Dessert banana	Banana for beer	Beans	Bush bean	Climbing bean	Pea	Groundnut	Soybean	vegetables	Fruits	Fodder crops	Other crops	Developed land
Nyarugenge	643	-	-	-	-	171	295	82	59	1,060	288	213	559	2,335	2,294	41	-	42	202	296	33	16	847	6,081
Gasabo	2,844	-	242	-	11	875	1,286	471	138	1,805	761	305	739	7,394	7,143	251	76	423	306	843	38	768	197	17,716
Kicukiro	1,098	-	17	-	4	40	538	14	33	460	162	82	215	1,730	1,692	38	7	94	115	110	9	-	104	4,374
Nyanza	5,486	300	404	-	26	3,650	2,228	250	184	3,345	1,003	654	1,687	17,846	15,782	2,064	71	891	1,518	627	6	381	141	37,354
Gisagara	6,501	438	2,379	-	276	998	2,341	295	308	3,752	998	768	1,987	14,840	13,837	1,002	57	507	2,234	283	-	169	181	35,559
Nyaruguru	6,799	-	-	16	7	1,041	4,415	1,367	549	1,903	588	331	984	8,325	1,952	6,373	261	92	1,058	401	123	900	2	27,258
Huye	4,094	-	1,009	-	341	2,587	2,675	654	564	2,721	948	585	1,188	12,542	9,866	2,675	193	277	1,837	402	-	56	9	29,962
Nyamagabe	4,529	-	-	44	25	1,705	6,885	2,470	190	2,592	584	330	1,678	10,219	2,953	7,266	1,340	6	1,290	442	137	294	70	32,237
Ruhango	2,964	71	1,019	-	55	3,935	1,501	471	275	2,472	310	397	1,765	14,355	11,146	3,209	96	1,151	2,154	372	-	606	506	32,003
Muhanga	1,715	6	150	-	11	1,524	3,778	356	2,485	6,114	1,136	727	4,252	6,906	3,012	3,894	68	50	1,634	345	106	435	291	25,974
Kamonyi	3,549	-	183	-	11	1,729	2,200	539	524	4,193	670	556	2,967	14,387	12,666	1,720	66	849	2,516	705	904	384	1,884	34,623
Karongi	7,802	-	-	71	28	1,593	5,153	986	1,292	3,997	769	588	2,640	5,896	2,039	3,857	494	-	1,007	612	57	555	320	29,863
Rutsiro	7,033	-	-	320	-	177	3,274	3,059	1,118	2,846	617	381	1,849	4,206	369	3,837	463	-	659	263	497	361	1,636	25,914
Rubavu	1,534	127	-	-	-	-	538	6,175	94	1,499	531	147	821	9,320	650	8,670	108	-	216	1,664	23	483	988	22,768
Nyabihu	2,875	972	-	1,021	-	109	2,630	8,961	105	387	92	101	194	7,657	79	7,579	771	-	-	677	42	73	419	26,700
Ngororero	5,539	907	-	464	-	949	4,753	2,182	1,288	3,799	775	649	2,376	11,212	1,930	9,281	613	-	941	293	173	141	538	33,792
Rusizi	7,632	89	1,386	-	-	1,508	1,759	239	1,085	2,797	985	229	1,583	11,574	9,530	2,044	113	339	1,070	850	208	54	452	31,155
Nyamasheke	4,993	51	328	35	191	2,473	4,083	111	826	2,218	651	295	1,272	7,764	2,397	5,367	127	229	1,455	381	65	815	512	26,657
Rulindo	4,185	-	17	47	17	693	5,146	1,359	105	2,280	756	412	1,112	11,459	5,025	6,434	701	124	264	956	140	265	800	28,558
Gakenke	11,525	-	122	119	296	938	6,022	1,219	1,590	6,334	1,208	783	4,343	8,987	1,404	7,583	439	110	502	441	178	97	396	39,315
Musanze	8,107	1,901	-	868	29	27	2,057	4,024	128	726	326	101	298	7,691	281	7,410	832	-	65	661	254	191	902	28,463
Burera	8,504	1,606	-	890	-	42	2,730	5,251	81	594	285	35	275	11,461	497	10,964	1,130	-	23	263	84	221	-	32,879
Gicumbi	4,694	298	-	277	8	547	6,308	2,874	133	1,669	733	386	550	18,148	5,450	12,699	1,374	178	101	448	447	870	-	38,373
Rwamagana	9,070	26	298	-	78	1,002	1,922	1,004	286	5,572	3,074	1,029	1,469	18,395	17,786	609	203	1,496	215	1,006	380	355	354	41,665
Nyagatare	26,033	12,432	1,552	-	306	1,341	2,043	419	50	4,887	2,780	635	1,473	18,542	16,393	2,149	436	1,656	797	1,004	157	270	163	72,088
Gatsibo	16,441	4,108	1,222	14	217	1,618	2,373	2,349	46	8,901	4,192	1,450	3,259	19,814	18,162	1,652	74	1,991	570	781	168	66	74	60,825
Kayonza	12,320	3,436	641	-	561	4,747	2,475	1,540	386	4,018	2,357	604	1,057	19,641	19,426	214	89	906	410	1,321	188	131	170	52,980
Kirehe	19,984	1,918	1,057	-	205	1,404	1,814	1,077	188	7,309	3,968	668	2,673	24,031	21,848	2,183	222	337	734	778	74	133	81	61,345
Ngoma	12,842	182	825	-	215	2,842	2,446	1,355	211	6,824	3,436	970	2,418	17,738	16,904	834	50	652	493	468	181	297	167	47,788
Bugesera	10,186	4,428	1,656	-	165	895	3,757	363	131	4,216	1,484	837	1,896	17,785	17,645	140	59	2,208	292	553	104	600	252	47,649
National	221,521	33,295	14,507	4,187	3,082	41,160	89,427	51,516	14,450	99,876	35,735	14,980	49,161	362,199	240,157	122,042	10,530	14,609	24,677	18,246	4,778	9,988	12,455	1,031,918

Source: NISR, SAS, 2020

Table 10: Season A 2020_Average yield by crop type and district (Kg/Ha)

District	Cereals	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	1,856	1,856	-	-	-	-	9,931	6,979	5,407	6,226	10,403	8,836	8,596	11,900	662	666	476	-	413	520	9,405	5,304	14,766	43,394
Gasabo	1,373	1,170	-	3,790	-	646	11,192	6,790	4,981	4,005	10,745	12,106	8,987	10,069	587	581	747	1,259	483	475	7,665	937	9,860	1,396
Kicukiro	1,767	1,742	-	3,621	-	554	10,188	8,016	2,321	5,309	10,045	10,516	11,038	9,311	629	634	421	211	350	496	9,265	5,560	-	4,066
Nyanza	1,326	1,148	720	4,245	-	509	15,652	6,219	4,588	2,070	8,174	6,940	7,471	9,181	590	584	640	787	305	351	8,499	-	19,347	927
Gisagara	1,945	1,587	1,106	3,243	-	527	15,904	6,516	3,754	6,906	7,586	6,245	7,078	8,457	519	521	483	884	279	473	6,912	-	31,921	1,160
Nyaruguru	1,610	1,613	-	-	971	174	9,749	9,558	5,114	6,088	9,979	10,729	8,297	10,096	569	525	583	820	196	404	10,555	1,155	6,210	24,752
Huye	1,841	1,475	-	3,744	-	605	18,587	6,086	4,153	2,423	10,119	9,359	8,217	11,662	769	740	874	1,115	490	571	8,400	-	14,756	18,003
Nyamagabe	1,445	1,458	-	-	743	195	8,633	6,544	5,330	6,653	8,159	6,671	7,241	8,857	519	444	549	1,238	428	418	7,748	1,818	12,586	458
Ruhango	1,816	1,436	1,009	3,038	-	713	22,875	7,128	3,008	4,772	8,956	10,512	7,248	9,068	552	531	627	550	263	519	7,516	-	13,537	14,954
Muhanga	1,156	1,077	527	2,117	-	737	13,088	6,990	3,438	8,354	9,096	10,134	8,649	8,895	490	413	549	1,149	310	464	7,920	1,828	12,219	5,992
Kamonyi	1,506	1,378	-	4,077	-	260	13,847	5,095	3,704	2,114	9,772	11,148	7,585	9,870	495	494	503	405	287	452	8,704	6,179	15,354	415
Karongi	1,914	1,930	-	-	435	1,158	8,195	6,832	8,127	6,131	12,273	13,180	12,735	11,905	797	742	826	1,063	-	553	11,821	-	5,186	4,968
Rutsiro	1,592	1,652	-	-	266	-	11,853	8,033	8,679	7,933	11,221	13,884	8,192	10,956	685	550	698	891	-	499	11,064	4,989	9,649	9,226
Rubavu	1,814	1,891	888	-	-	-	8,074	9,803	3,444	11,759	10,428	7,168	13,441	810	597	826	532	-	1,035	10,243	9,266	13,701	13,019	
Nyabihu	1,149	1,243	907	-	1,114	-	10,398	7,853	12,170	-	8,192	10,421	7,066	7,728	645	694	644	763	-	-	24,975	2,418	3,716	220
Ngororero	723	747	690	-	499	-	16,803	6,060	4,085	7,001	7,711	7,484	7,057	7,964	490	294	530	864	-	334	8,093	10,557	14,780	20,347
Rusizi	1,678	1,182	376	4,493	-	-	10,197	5,786	4,114	7,154	9,094	8,181	7,494	9,893	568	588	475	549	761	756	5,764	5,075	2,966	13,445
Nyamasheke	1,454	1,313	1,060	4,331	515	464	9,871	3,548	4,651	5,856	7,715	7,894	7,554	7,661	638	606	653	831	299	560	8,255	784	8,201	8,552
Rulindo	1,463	1,474	-	1,616	567	1,017	11,623	6,927	3,929	4,513	9,781	10,624	8,778	9,579	586	525	633	440	476	760	12,496	5,898	9,137	66,787
Gakenke	1,579	1,621	-	1,112	532	533	14,392	8,230	6,454	4,574	10,282	11,783	8,816	10,130	553	426	577	638	718	468	8,094	11,706	8,965	6,091
Musanze	1,805	1,884	1,773	-	1,161	979	5,541	8,075	11,797	1,756	12,588	15,433	7,865	11,078	764	529	773	567	-	593	7,225	6,286	13,948	13,909
Burera	1,881	2,000	1,548	-	1,351	-	11,707	9,575	9,825	3,520	11,098	13,932	5,124	8,917	840	484	856	785	-	435	8,285	2,624	4,549	-
Gicumbi	1,190	1,260	263	-	1,032	550	13,290	9,509	10,642	3,627	10,406	12,586	7,804	9,326	680	526	746	526	619	562	7,022	2,359	23,899	-
Rwamagana	1,849	1,794	47	3,945	-	808	19,063	8,061	5,375	1,300	12,535	16,414	7,564	7,898	544	543	585	699	353	380	4,568	2,285	13,346	16,543
Nyagatare	1,701	1,640	1,567	3,970	-	765	14,902	3,876	6,910	484	14,667	18,189	8,155	10,825	697	688	762	234	519	597	5,557	4,726	11,673	260
Gatsibo	1,575	1,638	879	3,287	-	423	12,662	8,679	4,259	546	11,839	15,915	7,066	8,718	614	610	653	518	492	602	3,420	2,322	10,952	56
Kayonza	1,396	1,509	718	3,475	-	693	12,553	5,175	3,136	7,637	13,618	17,366	8,263	8,320	685	685	695	387	423	499	8,772	3,796	49,397	7,187
Kirehe	1,759	1,685	1,430	3,998	-	521	14,803	4,996	4,530	3,014	12,924	15,846	7,500	9,941	631	594	1,004	695	306	524	6,953	15,420	14,548	101
Ngoma	2,041	1,982	548	3,605	-	809	10,617	7,400	6,216	3,607	12,960	16,559	7,308	10,113	579	569	782	705	425	301	9,247	5,206	14,450	2,240
Bugesera	1,681	1,652	1,223	3,189	-	678	16,965	7,199	2,833	3,790	10,475	14,757	7,218	8,563	712	712	770	501	304	458	10,070	7,794	13,774	6,004
National	1,643	1,598	1,268	3,600	988	626	14,056	7,101	8,298	5,911	10,861	13,794	7,927	9,606	626	595	685	753	394	498	8,775	4,927	12,981	14,178

Source: NISR, SAS 2020

Table 11: Season A 2020_Crop production by crop type and district (MT)

District	Maize	Sorghum	Paddy rice	Wheat	Other Cereals	Cassava	Sweet potatoes	Irish potatoes	Yams & Taro	Bananas	Cooking Banana	Dessert banana	Banana for beer	Legumes and Pulses	Beans	Bush bean	Climbing bean	Peas	Ground nuts	Soya beans	Vegetables and Fruits	Vegetables	Fruits	Fodder crops	Other crops
Nyarugenge	1,193	-	-	-	-	1,697	2,060	442	367	11,027	2,543	1,834	6,650	1,669	1,546	1,527	20	-	17	105	2,961	2,785	176	238	36,770
Gasabo	3,327	-	917	-	7	9,797	8,732	2,345	554	19,390	9,209	2,740	7,441	4,785	4,340	4,153	188	95	204	145	6,495	6,459	36	7,568	276
Kicukiro	1,912	-	63	-	2	408	4,313	33	177	4,622	1,707	910	2,005	1,180	1,088	1,072	16	1	33	57	1,069	1,019	50	-	424
Nyanza	6,300	216	1,716	-	13	57,136	13,855	1,145	380	27,339	6,962	4,887	15,491	11,396	10,535	9,215	1,321	56	272	533	5,331	5,331	-	7,377	131
Gisagara	10,319	485	7,714	-	145	15,874	15,252	1,107	2,129	28,467	6,230	5,437	16,801	8,946	7,698	7,214	484	50	141	1,056	1,956	1,956	-	5,406	210
Nyaruguru	10,963	-	-	16	1	10,144	42,198	6,993	3,339	18,993	6,312	2,744	9,936	5,399	4,739	1,025	3,714	214	18	428	4,373	4,230	142	5,587	40
Huye	6,038	-	3,778	-	206	48,090	16,283	2,715	1,365	27,534	8,874	4,808	13,852	11,043	9,643	7,305	2,337	216	136	1,050	3,381	3,381	-	824	157
Nyamagabe	6,605	-	-	33	5	14,716	45,053	13,164	1,262	21,148	3,895	2,392	14,861	7,499	5,298	1,312	3,987	1,658	3	540	3,676	3,427	250	3,703	32
Ruhango	4,256	71	3,095	-	39	90,018	10,702	1,418	1,312	22,139	3,257	2,879	16,003	9,400	7,927	5,915	2,012	53	302	1,117	2,795	2,795	-	8,204	7,560
Muhanga	1,848	3	317	-	8	19,942	26,406	1,224	20,759	55,615	11,511	6,285	37,820	4,232	3,381	1,243	2,138	78	15	758	2,929	2,734	194	5,321	1,743
Kamonyi	4,891	-	745	-	3	23,946	11,209	1,998	1,108	40,971	7,473	4,214	29,284	8,531	7,124	6,259	866	27	243	1,136	11,723	6,140	5,583	5,890	782
Karongi	15,059	-	-	31	32	13,055	35,206	8,014	7,922	49,051	10,135	7,489	31,427	5,779	4,696	1,512	3,184	525	-	557	7,240	7,240	-	2,878	1,589
Rutsiro	11,617	-	-	85	-	2,100	26,301	26,549	8,871	31,937	8,565	3,119	20,253	3,622	2,880	203	2,677	413	-	329	5,392	2,910	2,482	3,482	15,097
Rubavu	2,901	112	-	-	-	-	4,342	60,538	323	17,624	5,533	1,054	11,037	7,833	7,552	388	7,165	57	-	224	17,258	17,041	217	6,615	12,865
Nyabihu	3,573	882	-	1,138	-	1,134	20,655	109,065	-	3,171	954	716	1,500	5,526	4,937	54	4,883	588	-	-	17,005	16,904	101	272	92
Ngororero	4,138	626	-	232	-	15,940	28,807	8,915	9,018	29,299	5,798	4,581	18,920	6,331	5,488	567	4,921	529	-	314	4,194	2,372	1,821	2,088	10,953
Rusizi	9,022	33	6,230	-	-	15,375	10,178	982	7,764	25,438	8,060	1,718	15,659	7,707	6,578	5,608	970	62	258	809	5,957	4,900	1,057	160	6,073
Nyamasheke	6,557	54	1,422	18	88	24,409	14,487	517	4,837	17,111	5,136	2,232	9,743	5,945	4,956	1,453	3,504	105	69	815	3,195	3,144	51	6,681	4,377
Rulindo	6,169	-	28	27	17	8,054	35,648	5,339	475	22,297	8,033	3,614	10,650	7,281	6,714	2,640	4,073	308	59	201	12,774	11,948	827	2,421	53,448
Gakenke	18,683	-	135	63	158	13,493	49,557	7,870	7,272	65,126	14,229	6,903	43,995	5,564	4,970	598	4,372	280	79	235	5,651	3,572	2,079	873	2,414
Musanze	15,272	3,371	-	1,007	29	151	16,610	47,471	225	9,137	5,037	796	3,304	6,385	5,875	149	5,727	472	-	38	6,376	4,778	1,598	2,666	12,539
Burera	17,007	2,487	-	1,203	-	486	26,139	51,591	285	6,597	3,966	177	2,454	10,519	9,623	240	9,382	887	-	10	2,400	2,179	221	1,003	-
Gicumbi	5,913	78	-	286	5	7,264	59,981	30,583	481	17,366	9,226	3,009	5,131	13,230	12,341	2,867	9,475	722	110	57	4,201	3,147	1,055	20,801	-
Rwamagana	16,269	1	1,177	-	63	19,106	15,497	5,394	372	69,846	50,460	7,784	11,602	10,767	10,015	9,658	356	142	528	82	5,465	4,596	868	4,739	5,860
Nyagatare	42,693	19,479	6,163	-	234	19,983	7,918	2,894	24	71,679	50,558	5,175	15,947	14,359	12,921	11,283	1,638	102	860	476	6,321	5,579	743	3,157	42
Gatsibo	26,930	3,609	4,015	-	92	20,490	20,598	10,003	25	105,374	66,715	10,243	28,416	13,524	12,163	11,084	1,078	38	980	344	3,060	2,670	390	721	4
Kayonza	18,585	2,466	2,227	-	389	59,586	12,809	4,828	2,945	54,717	40,932	4,991	8,794	14,073	13,451	13,302	149	34	383	205	12,300	11,585	715	6,492	1,218
Kirehe	33,675	2,742	4,225	-	107	20,788	9,061	4,878	566	94,458	62,874	5,012	26,572	15,802	15,161	12,969	2,191	154	103	384	6,541	5,406	1,135	1,938	8
Ngoma	25,459	100	2,976	-	174	30,174	18,102	8,425	761	88,441	56,897	7,086	24,457	10,725	10,264	9,612	652	35	277	148	5,266	4,323	943	4,289	374
Bugesera	16,823	5,415	5,281	-	112	15,189	27,050	1,030	496	44,169	21,892	6,038	16,238	13,498	12,664	12,556	108	29	671	134	6,372	5,564	807	8,258	1,512
National 2020 A	353,999	42,231	52,225	4,138	1,930	578,545	635,007	427,471	85,414	1,100,082	502,972	120,868	476,241	252,550	226,570	142,983	83,588	7,933	5,762	12,284	183,657	160,114	23,542	129,651	176,592
National 2019 A	331,090	37,584	59,286	7,082	2,620	523,117	674,257	468,931	71,104	1,020,141	456,351	112,937	450,853	284,683	252,569	164,163	88,406	9,115	9,362	13,638	207,718	158,927	48,791	72,597	54,721
Change	7%	12%	-12%	-42%	-26%	11%	-6%	-9%	20%	8%	10%	7%	6%	-11%	-10%	-13%	-5%	-13%	-38%	-10%	-12%	1%	-52%	79%	223%

Source: NISR, SAS, 2020

Table 12: The Use of production by farmers in 2020 Season A (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
Cereals											
Maize	25.0	61.1	1.0	1.4	6.8	0.1	2.0	0.3	1.7	0.3	0.3
Sorghum	41.2	41.4	1.2	2.3	6.9	0.1	4.1	0.0	1.7	0.9	0.2
Paddy rice	76.0	19.9	0.7	0.3	0.2	-	0.7	-	0.1	2.0	-
Wheat	35.5	42.8	0.1	-	6.2	0.3	15.0	0.0	0.0	0.0	-
Other cereals	10.5	69.0	0.4	1.5	6.8	0.1	8.7	-	1.6	1.1	0.3
Tubers and Roots											
Sweet potato	19.7	69.7	1.7	0.8	6.0	0.1	0.0	1.7	0.1	0.1	0.1
Irish potato	24.0	59.0	1.1	0.3	4.4	0.1	10.2	0.1	0.1	0.6	0.2
Yam & Taro	20.6	68.0	1.7	0.5	6.4	0.0	2.6	0.0	0.0	0.0	0.2
Cassava	24.5	65.6	1.7	1.2	5.2	0.0	0.0	0.4	0.3	0.6	0.4
Legumes and Pulses											
Bush bean	15.5	58.4	1.5	1.6	4.9	0.1	15.0	0.0	2.2	0.6	0.3
Climbing bean	8.3	65.8	0.8	0.7	6.2	0.1	16.1	0.0	1.5	0.1	0.3
Pea	15.6	62.6	0.0	0.2	3.5	-	17.1	0.2	0.3	0.3	0.2
Groundnut	12.8	50.7	0.6	1.2	4.2	-	28.9	-	0.7	0.7	0.1
Soybean	15.6	56.4	0.7	0.7	3.7	0.4	20.7	0.3	1.3	0.2	0.1
Banana											
Cooking banana	17.0	77.5	0.9	0.2	3.7	0.0	-	0.0	-	0.1	0.4
Dessert banana	56.4	39.2	0.2	0.3	2.7	0.0	-	0.1	-	0.5	0.6
Banana for beer	61.2	31.5	0.3	0.1	4.8	0.0	-	0.0	-	1.4	0.7
Vegetables and fruits											
Vegetables	63.2	28.3	0.5	0.1	3.9	0.0	1.8	0.3	-	1.6	0.3
Fruits	57.1	36.7	0.1	-	3.3	0.0	0.5	0.1	-	0.1	2.0
<i>Fodder crops</i>	4.7	1.4	1.0	-	1.9	1.0	0.8	81.2	1.2	0.0	6.7
<i>Other crops</i>	75.6	13.1	-	0.2	4.6	0.1	0.2	1.2	-	1.0	4.1

Source: NISR, SAS, 2020

Table 13: Percentage of cultivated area by cropping system and district in 2020 Season A

District	Pure	Mixed	Total
Nyarugenge	26.0	74.0	100.0
Gasabo	26.0	74.0	100.0
Kicukiro	16.6	83.4	100.0
Nyanza	27.6	72.4	100.0
Gisagara	28.2	71.8	100.0
Nyaruguru	38.5	61.5	100.0
Huye	20.2	79.8	100.0
Nyamagabe	27.6	72.4	100.0
Ruhango	32.3	67.7	100.0
Muhanga	28.4	71.6	100.0
Kamonyi	30.8	69.2	100.0
Karongi	40.7	59.3	100.0
Rutsiro	46.4	53.6	100.0
Rubavu	47.6	52.4	100.0
Nyabihu	51.8	48.2	100.0
Ngororero	24.1	75.9	100.0
Rusizi	22.3	77.7	100.0
Nyamasheke	36.1	63.9	100.0
Rulindo	31.2	68.8	100.0
Gakenke	31.1	68.9	100.0
Musanze	39.3	60.7	100.0
Burera	41.6	58.4	100.0
Gicumbi	41.7	58.3	100.0
Rwamagana	18.2	81.8	100.0
Nyagatare	29.7	70.3	100.0
Gatsibo	18.9	81.1	100.0
Kayonza	20.1	79.9	100.0
Kirehe	23.1	76.9	100.0
Ngoma	21.4	78.6	100.0
Bugesera	26.9	73.1	100.0
National	29.8	70.2	100.0

Source: NISR, SAS 2020

Table 14: Sowing dates by district in Season A 2020 (Percentage)

District	Before 01/09	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between 16-31/10	After 31/10	In previous seasons for perennial crops	Total
Nyarugenge	2.4	5.8	18.9	31.2	4.9	2.5	34.4	100.0
Gasabo	6.9	17.7	21.6	15.3	3.6	3.8	31.2	100.0
Kicukiro	0.8	4.8	11.1	45.3	10.3	6.2	21.5	100.0
Nyanza	4.4	3.9	5.5	30.2	16.4	7.9	31.7	100.0
Gisagara	6.3	6.3	13.1	36.0	5.8	4.2	28.5	100.0
Nyaruguru	12.1	10.6	19.0	16.9	8.8	7.4	25.3	100.0
Huye	5.9	13.2	10.3	29.0	6.5	4.7	30.4	100.0
Nyamagabe	7.9	16.8	16.6	15.5	10.6	10.1	22.5	100.0
Ruhango	3.3	4.9	9.4	36.9	11.6	4.9	29.0	100.0
Muhanga	5.2	6.4	13.7	15.4	4.6	8.9	45.9	100.0
Kamonyi	2.9	4.7	11.6	35.8	8.4	7.5	29.3	100.0
Karongi	7.2	19.8	18.1	14.0	5.8	6.9	28.3	100.0
Rutsiro	18.2	21.2	13.2	9.0	4.6	7.0	26.9	100.0
Rubavu	31.3	26.0	13.5	6.6	2.3	3.1	17.4	100.0
Nyabihu	27.0	21.2	22.4	9.8	3.1	8.8	7.8	100.0
Ngororero	12.3	25.1	12.2	8.9	1.9	7.3	32.4	100.0
Rusizi	4.5	7.4	18.9	36.0	9.4	3.2	20.5	100.0
Nyamasheke	3.9	19.7	24.4	16.0	4.1	5.9	26.0	100.0
Rulindo	7.4	30.6	13.9	8.9	4.1	6.2	29.0	100.0
Gakenke	6.3	20.7	19.2	8.9	2.8	5.5	36.5	100.0
Musanze	24.6	28.0	17.0	9.1	2.1	9.2	9.9	100.0
Burera	16.2	40.3	13.9	9.7	3.2	7.8	8.9	100.0
Gicumbi	7.3	27.2	21.8	10.4	4.6	6.5	22.2	100.0
Rwamagana	4.4	11.6	14.0	26.3	3.9	3.8	36.0	100.0
Nyagatare	5.5	41.5	19.2	9.4	1.7	1.6	21.1	100.0
Gatsibo	3.3	16.1	24.0	16.6	3.2	0.9	36.0	100.0
Kayonza	5.3	15.3	20.1	25.4	5.8	3.0	25.3	100.0
Kirehe	1.8	5.4	13.1	41.5	8.2	2.7	27.4	100.0
Ngoma	2.8	10.6	17.6	23.2	5.6	2.9	37.3	100.0
Bugesera	6.3	4.6	8.8	43.8	8.1	6.3	21.9	100.0
National	7.2	15.3	15.7	22.7	6.0	5.2	27.9	100.0

Source: NISR, SAS 2020

Table 15: Percentage of crops by sowing date in Season A 2020 (Percentage)

Crops	Before 01/09	Between 01-15/09	Between 16-30/09	Between 01-15/10	Between 16-31/10	After 31/10	Other seasons for perennial crops	Total
Fruits	6.1	4.6	1.8	6.4	3.1	8.8	69.2	100.0
Vegetables	18.0	17.6	12.7	20.7	9.1	22.0	0.0	100.0
Other crops	49.4	6.2	1.0	4.2	0.7	4.9	33.8	100.0
Other cereals	1.3	17.6	23.0	47.3	9.6	1.3	0.0	100.0
Taro & Yams	22.3	20.9	13.9	21.5	8.3	13.1	0.0	100.0
Fodder crops	79.0	6.9	2.6	3.4	2.6	5.2	0.4	100.0
Maize	6.7	23.9	24.1	35.1	7.9	2.4	0.0	100.0
Paddy rice	79.8	10.4	4.6	2.9	1.2	1.2	0.0	100.0
Sorghum	26.5	35.5	23.3	12.9	1.3	0.6	0.0	100.0
Wheat	5.6	12.2	16.8	29.9	18.7	16.8	0.0	100.0
Bush bean	1.1	15.3	23.9	46.7	11.5	1.5	0.0	100.0
Climbing bean	5.3	36.1	30.3	22.4	5.1	0.8	0.0	100.0
Pea	7.5	29.0	27.1	22.5	7.2	6.7	0.0	100.0
Irish potato	16.8	22.3	19.9	20.1	6.0	14.8	0.0	100.0
Sweet potato	19.5	10.6	8.7	14.9	10.3	36.1	0.0	100.0
Soybean	1.6	14.7	20.9	44.4	12.5	5.9	0.0	100.0
Groundnut	1.5	16.5	24.4	46.1	9.9	1.7	0.0	100.0
Cooking banana	1.3	1.1	0.4	0.4	0.3	0.4	96.2	100.0
Dessert banana	2.7	1.0	0.4	0.5	0.1	0.2	95.1	100.0
Banana for beer	1.4	0.6	0.2	0.5	0.2	0.3	96.8	100.0
Cassava	4.7	11.4	12.5	17.3	3.6	5.9	44.7	100.0

Source: NISR, SAS 2020

Table 15: Use of seeds by farmer type per district during Season A 2020 (in 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	24.9	24.9	-	21.3	21.3	-	24.4	24.4	-
Gasabo	30.3	28.3	90	25	25	63.3	30.6	29.2	91.6
Kicukiro	47.8	47.1	100	26.3	26.3	88.9	41.7	40.8	80.3
Nyanza	29	28	87.5	23	23	75	29	27.6	83.8
Gisagara	41.7	39.4	94.4	34.1	34.1	84	44.9	38.9	87.1
Nyaruguru	40.8	39.2	100	35.3	35.3	100	37.7	37.1	100
Huye	33.3	30.4	79.2	26.4	26.4	54.8	31.2	29	75
Nyamagabe	21.9	21.7	100	22.2	22.2	100	19.5	19.4	100
Ruhango	20.5	19.7	62.5	14.2	14.2	64.3	20	18.2	73.7
Muhanga	19.5	18.1	75	10.6	10.6	77.8	14.8	13.2	82.3
Kamonyi	27.9	26	100	26.8	26.8	88.9	24.6	22.6	99.8
Karongi	39.9	39.7	100	31.9	31.9	100	38.3	38.3	100
Rutsiro	21.8	21.8	-	18.9	18.9	-	19.5	19.5	-
Rubavu	18.7	17.9	100	14.1	14.1	85.7	17	16.9	98.6
Nyabihu	21.6	21.6	-	14.6	14.6	-	19.8	19.8	-
Ngororero	31.8	31.8	-	24.5	24.5	-	30.6	30.6	-
Rusizi	40.4	39.7	75	30.3	30.3	80	41.3	38.2	98.2
Nyamasheke	26.1	26	33.3	21.7	21.7	33.3	24.4	24.2	42.2
Rulindo	31.6	31.1	75	26.8	26.8	56.3	29.7	29.6	63.5
Gakenke	46.6	46.6	-	42.6	42.6	-	44.5	44.5	-
Musanze	30.3	30.3	-	25.2	25.2	-	30	30	-
Burera	38.3	38.3	-	30.6	30.6	-	36.1	36.1	-
Gicumbi	23.4	23.3	50	22	22	25	21.6	21.6	42.9
Rwamagana	46.6	44.6	84.6	35.2	35.2	56	43.4	43	68.9
Nyagatare	40.1	35.8	93.2	28.7	28.7	68.1	36.5	33.3	97.8
Gatsibo	38	36.3	94.4	27.1	27.1	74.4	39	36.5	99.1
Kayonza	41.9	40.7	76.9	33.5	33.5	31.3	41.1	40.3	79.9
Kirehe	43.6	42.9	90	37.9	37.9	91.3	42.6	39.9	98.3
Ngoma	57.8	57.5	72.7	50.9	50.9	69.2	56.1	56.2	51.7
Bugesera	47.2	44.3	100	40.7	40.7	78.7	44.3	42	98
National	35.2	34	87	27.8	27.8	64.6	34.3	32.9	88.8

Source: NISR, SAS 2020

Table 16: Percentage of crops by seed type in Season A 2020

Crop	Traditional seeds	Improved seeds	Total
Maize	47.3	52.7	100.0
Paddy rice	27.7	72.4	100.0
Sorghum	100.0	-	100.0
Wheat	73.1	26.9	100.0
Other cereal	100.0	-	100.0
Bush bean	98.4	1.6	100.0
Climbing bean	98.8	1.2	100.0
Pea	100.0	-	100.0
Irish potato	96.6	3.5	100.0
Sweet potato	99.9	0.1	100.0
Taro	100.0	-	100.0
Yams	100.0	-	100.0
Other tubers	100.0	-	100.0
Soybean	97.3	2.7	100.0
Groundnut	100.0	-	100.0
Cooking banana	98.8	1.2	100.0
Dessert banana	97.8	2.2	100.0
Banana for beer	99.3	0.7	100.0
Cassava	99.1	0.9	100.0
Vegetables	58.2	41.8	100.0
Fruits	61.4	38.6	100.0
Fodder	83.1	16.9	100.0
Other crops	77.8	22.2	100.0
National	87.0	13.0	100.0

Source: NISR, SAS 2020

Table 17: Percentage of farmers by source of improved seeds per district in Season A 2020

District	Government (MINAGRI/RAB/NAEB)	Recognized seed multipliers	Agro-dealers	NGOs/Companies	Market	Agriculture cooperative	Other source	Total
Nyarugenge	31.4	-	58.8	-	7.8	2.0	-	100.0
Gasabo	9.9	5.8	63.6	1.7	16.5	1.7	0.8	100.0
Kicukiro	16.9	2.3	63.1	1.5	15.4	-	0.8	100.0
Nyanza	11.5	5.8	13.6	62.3	1.6	1.6	3.7	100.0
Gisagara	9.3	1.8	15.0	57.7	7.9	7.9	0.4	100.0
Nyaruguru	13.5	3.7	30.1	44.2	3.7	3.7	1.2	100.0
Huye	3.4	9.5	17.7	59.9	2.7	6.8	-	100.0
Nyamagabe	6.3	2.7	34.2	43.2	9.9	3.6	-	100.0
Ruhango	14.8	4.1	45.9	9.8	14.8	9.8	0.8	100.0
Muhanga	15.2	1.0	39.4	1.0	3.0	20.2	20.2	100.0
Kamonyi	7.8	5.2	45.1	10.5	13.1	16.3	2.0	100.0
Karongi	15.5	4.3	29.4	48.7	1.1	1.1	-	100.0
Rutsiro	13.3	3.3	34.4	40.0	4.4	3.3	1.1	100.0
Rubavu	11.8	16.5	38.8	1.2	27.1	2.4	2.4	100.0
Nyabihu	13.9	7.4	50.0	13.0	13.9	1.9	-	100.0
Ngororero	1.8	17.1	21.2	58.8	0.6	-	0.6	100.0
Rusizi	16.1	2.9	17.1	61.0	1.5	0.5	1.0	100.0
Nyamasheke	13.7	4.8	12.1	63.7	4.0	0.8	0.8	100.0
Rulindo	7.8	2.6	38.3	0.7	15.6	29.9	5.2	100.0
Gakenke	0.4	1.2	86.7	-	8.2	3.5	-	100.0
Musanze	12.8	20.3	61.5	0.5	2.7	1.1	1.1	100.0
Burera	16.2	0.9	75.7	-	2.6	4.7	-	100.0
Gicumbi	14.2	7.1	68.1	-	7.8	2.1	0.7	100.0
Rwamagana	7.5	8.8	35.0	39.5	3.3	4.6	1.3	100.0
Nyagatare	27.2	9.7	40.3	7.1	2.0	12.8	1.0	100.0
Gatsibo	12.4	2.0	27.8	53.5	0.7	3.0	0.7	100.0
Kayonza	22.2	6.0	15.3	44.0	6.9	3.2	2.3	100.0
Kirehe	27.4	2.9	18.4	28.8	3.2	17.6	1.7	100.0
Ngoma	36.3	3.6	15.9	41.4	1.3	0.8	0.8	100.0
Bugesera	34.8	4.0	41.7	8.6	2.3	8.1	0.6	100.0
National	16.5	5.4	36.6	28.8	5.4	6.1	1.4	100.0

Source: NISR, SAS 2020

Table 18: Percentage of crops by source of seeds

Crop	Government (MINAGRI/RAB/NAEB)	Recognized seed multipliers	Agro dealers	NGOs/ Companies	Market	Agriculture cooperative	Other source	Total
Maize	15.6	2.4	40.1	32.3	4.0	4.8	0.8	100.0
Paddy rice	0.8	38.6	3.2	-	-	57.5	-	100.0
Wheat	20.6	5.9	67.7	2.9	-	2.9	-	100.0
Bush bean	10.9	9.7	22.3	49.1	4.0	3.4	0.6	100.0
Climbing bean	24.6	16.4	29.5	26.2	3.3	-	-	100.0
Irish potato	24.4	42.3	9.0	2.6	7.7	14.1	-	100.0
Sweet potato	-	50.0	-	25.0	12.5	-	12.5	100.0
Soybean	42.9	8.6	28.6	8.6	2.9	8.6	-	100.0
Cooking banana	26.8	46.3	-	4.9	4.9	2.4	14.6	100.0
Dessert banana	21.0	40.7	1.2	11.1	4.9	3.7	17.3	100.0
Banana for beer	31.8	27.3	2.3	2.3	-	2.3	34.1	100.0
Cassava	53.0	22.7	-	4.6	7.6	3.0	9.1	100.0
Vegetables	3.1	4.1	51.4	5.8	32.3	1.7	1.7	100.0
Fruits	31.7	37.4	15.1	1.4	10.1	3.6	0.7	100.0
Fodder	40.6	6.3	28.1	3.1	21.9	-	-	100.0
Other crops	42.5	31.5	1.4	13.7	2.7	6.9	1.4	100.0

Source: NISR, SAS 2020

Table 19: Season A 2020_Use of organic fertilizer by farmer type per district (in 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	61.3	61.3	-	60.8	60.8	-	63.3	63.3	-
Gasabo	51.2	50.8	63.6	47.5	47.0	51.0	47.3	46.3	86.0
Kicukiro	54.1	53.3	100.0	55.1	53.8	83.3	54.4	53.8	79.0
Nyanza	54.4	54.2	62.5	52.4	51.8	76.9	51.9	51.7	63.2
Gisagara	57.3	57.1	61.1	55.4	55.0	63.0	58.8	58.8	58.8
Nyaruguru	85.2	84.9	100.0	82.5	81.9	100.0	82.0	81.8	100.0
Huye	63.8	63.2	75.0	60.9	60.2	68.2	60.9	60.5	69.3
Nyamagabe	74.0	74.0	100.0	69.7	69.4	100.0	70.5	70.5	100.0
Ruhango	55.6	55.7	50.0	55.1	55.2	52.9	55.1	54.8	64.6
Muhanga	81.1	80.8	100.0	75.0	74.8	88.9	74.4	74.2	86.1
Kamonyi	66.3	65.7	91.7	62.2	61.6	83.3	61.4	60.6	97.9
Karongi	67.2	67.1	100.0	63.9	63.7	100.0	64.9	64.9	100.0
Rutsiro	69.7	69.7	-	67.9	67.9	-	67.8	67.8	-
Rubavu	35.7	35.3	75.0	33.9	33.7	40.0	32.5	32.5	82.0
Nyabihu	71.0	71.0	-	68.7	68.7	-	68.8	68.8	-
Ngororero	85.1	85.1	-	83.1	83.1	-	83.7	83.7	-
Rusizi	69.0	69.7	33.3	66.2	66.7	45.5	62.9	66.3	2.6
Nyamasheke	73.8	73.3	100.0	72.3	72.1	80.0	72.8	72.5	98.8
Rulindo	83.1	83.1	83.3	80.1	81.3	50.0	81.5	81.6	53.7
Gakenke	90.9	90.9	-	89.3	89.3	-	89.4	89.4	-
Musanze	64.4	64.4	-	64.4	64.4	-	63.9	63.9	-
Burera	75.8	75.8	-	74.7	74.7	-	73.8	73.8	-
Gicumbi	80.8	80.7	100.0	78.2	78.2	75.0	78.7	78.7	77.0
Rwamagana	61.2	60.2	79.3	55.3	57.0	48.0	59.3	59.7	39.7
Nyagatare	38.0	36.3	59.1	38.1	35.9	50.9	33.3	34.3	14.6
Gatsibo	59.2	58.8	72.2	56.6	56.8	53.8	56.2	57.4	24.4
Kayonza	37.4	36.8	53.3	33.5	34.4	30.0	34.8	35.2	12.2
Kirehe	55.8	55.4	80.0	54.5	54.0	69.6	57.2	56.3	76.5
Ngoma	59.2	59.2	58.3	56.8	56.7	59.4	58.3	58.4	54.4
Bugesera	33.8	32.4	55.3	32.5	30.2	44.1	30.2	29.2	51.9
Total	63.5	63.4	68.8	60.7	61.2	52.0	59.9	60.2	48.5

Source: NISR, SAS 2020

Table 20: Season A 2020 Use of organic fertilizer by farmer type per district (in 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	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Nyarugenge	9.3	90.7	9.3	90.7	-	-	7.9	92.1	7.9	92.1	-	-	8.5	91.5	8.5	91.5	-	-
Gasabo	19.6	80.4	17.8	82.2	72.7	27.3	17.8	82.2	17.0	83.0	24.5	75.5	19.3	80.7	17.8	82.2	72.6	27.4
Kicukiro	42.9	57.1	42.4	57.6	75.0	25.0	39.7	60.3	38.5	61.5	66.7	33.3	33.0	67.0	31.8	68.2	87.1	12.9
Nyanza	17.8	82.2	16.7	83.3	87.5	12.5	16.3	83.7	15.3	84.7	61.5	38.5	17.5	82.5	15.7	84.3	96.2	3.8
Gisagara	29.8	70.2	27.0	73.0	100.0	-	27.6	72.4	24.8	75.2	81.5	18.5	32.1	67.9	23.1	76.9	99.9	0.1
Nyaruguru	59.3	40.7	58.3	41.7	100.0	-	55.9	44.1	55.2	44.8	76.9	23.1	55.3	44.7	54.9	45.1	98.6	1.4
Huye	24.1	75.9	19.8	80.2	100.0	-	22.7	77.3	17.2	82.8	84.1	15.9	20.8	79.2	17.1	82.9	98.9	1.1
Nyamagabe	39.7	60.3	39.5	60.5	100.0	-	36.0	64.0	35.4	64.6	100.0	-	36.8	63.2	36.7	63.3	100.0	-
Ruhango	12.2	87.8	11.1	88.9	87.5	12.5	11.1	88.9	10.2	89.8	41.2	58.8	12.0	88.0	9.8	90.2	90.2	9.8
Muhanga	14.8	85.2	13.1	86.9	100.0	-	12.7	87.3	11.2	88.8	100.0	-	10.3	89.7	8.8	91.2	100.0	-
Kamonyi	14.4	85.6	12.5	87.5	91.7	8.3	13.3	86.7	11.3	88.7	77.8	22.2	11.9	88.1	10.0	90.0	97.8	2.2
Karongi	33.7	66.3	33.6	66.4	100.0	-	31.1	68.9	30.8	69.2	100.0	-	32.3	67.7	32.2	67.8	100.0	-
Rutsiro	37.7	62.3	37.7	62.3	-	-	34.1	65.9	34.1	65.9	-	-	34.6	65.4	34.6	65.4	-	-
Rubavu	46.8	53.2	46.8	53.2	50.0	50.0	45.9	54.1	46.3	53.7	30.0	70.0	46.8	53.2	46.7	53.3	48.2	51.8
Nyabihu	60.7	39.3	60.7	39.3	-	-	58.6	41.4	58.6	41.4	-	-	59.9	40.1	59.9	40.1	-	-
Ngororero	44.2	55.8	44.2	55.8	-	-	40.8	59.2	40.8	59.2	-	-	43.0	57.0	43.0	57.0	-	-
Rusizi	55.4	44.6	54.7	45.3	88.9	11.1	52.5	47.5	51.7	48.3	90.9	9.1	53.5	46.5	51.4	48.6	90.8	9.2
Nyamasheke	51.2	48.8	50.3	49.7	100.0	-	48.9	51.1	48.2	51.8	80.0	20.0	49.5	50.5	48.9	51.1	98.8	1.2
Rulindo	28.7	71.3	28.2	71.8	66.7	33.3	26.9	73.1	26.1	73.9	45.0	55.0	27.5	72.5	27.4	72.6	76.0	24.0
Gakenke	52.6	47.4	52.6	47.4	-	-	48.8	51.2	48.8	51.2	-	-	48.6	51.4	48.6	51.4	-	-
Musanze	41.2	58.8	41.2	58.8	-	-	41.6	58.4	41.6	58.4	-	-	42.0	58.0	42.0	58.0	-	-
Burera	38.8	61.2	38.8	61.2	-	-	37.5	62.5	37.5	62.5	-	-	36.7	63.3	36.7	63.3	-	-
Gicumbi	28.5	71.5	28.4	71.6	50.0	50.0	26.7	73.3	26.4	73.6	75.0	25.0	26.9	73.1	26.9	73.1	90.2	9.8
Rwamagana	36.1	63.9	33.8	66.2	75.9	24.1	31.2	68.8	30.6	69.4	33.8	66.2	32.2	67.8	31.4	68.6	72.8	27.2
Nyagatare	32.7	67.3	29.0	71.0	79.5	20.5	30.8	69.2	27.6	72.4	49.1	50.9	29.6	70.4	27.5	72.5	70.6	29.4
Gatsibo	31.0	69.0	29.2	70.8	94.4	5.6	28.6	71.4	27.1	72.9	50.0	50.0	31.4	68.6	28.9	71.1	98.4	1.6
Kayonza	21.6	78.4	19.8	80.2	73.3	26.7	19.3	80.7	18.7	81.3	21.7	78.3	20.1	79.9	18.9	81.1	82.7	17.3
Kirehe	35.3	64.7	34.4	65.6	90.0	10.0	34.0	66.0	32.1	67.9	95.7	4.3	33.4	66.6	30.5	69.5	98.4	1.6
Ngoma	39.1	60.9	38.1	61.9	91.7	8.3	36.3	63.7	35.5	64.5	53.1	46.9	37.1	62.9	35.9	64.1	94.1	5.9
Bugesera	26.1	73.9	23.4	76.6	68.4	31.6	26.0	74.0	21.1	78.9	50.7	49.3	22.9	77.1	20.2	79.8	84.7	15.3
Total	34.2	65.8	33.2	66.8	83.9	16.1	31.7	68.3	30.8	69.2	48.7	51.3	32.1	67.9	30.7	69.3	90.4	9.6

Source: NISR, SAS 2020

Table 21: Season A 2020_Use of inorganic fertilizer by farmer type per district (in 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	9.3	9.3	-	7.9	7.9	-	8.5	8.5	-
Gasabo	19.6	17.8	72.7	17.8	17.0	24.5	19.3	17.8	72.6
Kicukiro	42.9	42.4	75.0	39.7	38.5	66.7	33.0	31.8	87.1
Nyanza	17.8	16.7	87.5	16.3	15.3	61.5	17.5	15.7	96.2
Gisagara	29.8	27.0	100.0	27.6	24.8	81.5	32.1	23.1	99.9
Nyaruguru	59.3	58.3	100.0	55.9	55.2	76.9	55.3	54.9	98.6
Huye	24.1	19.8	100.0	22.7	17.2	84.1	20.8	17.1	98.9
Nyamagabe	39.7	39.5	100.0	36.0	35.4	100.0	36.8	36.7	100.0
Ruhango	12.2	11.1	87.5	11.1	10.2	41.2	12.0	9.8	90.2
Muhanga	14.8	13.1	100.0	12.7	11.2	100.0	10.3	8.8	100.0
Kamonyi	14.4	12.5	91.7	13.3	11.3	77.8	11.9	10.0	97.8
Karongi	33.7	33.6	100.0	31.1	30.8	100.0	32.3	32.2	100.0
Rutsiro	37.7	37.7	-	34.1	34.1	-	34.6	34.6	-
Rubavu	46.8	46.8	50.0	45.9	46.3	30.0	46.8	46.7	48.2
Nyabihu	60.7	60.7	-	58.6	58.6	-	59.9	59.9	-
Ngororero	44.2	44.2	-	40.8	40.8	-	43.0	43.0	-
Rusizi	55.4	54.7	88.9	52.5	51.7	90.9	53.5	51.4	90.8
Nyamasheke	51.2	50.3	100.0	48.9	48.2	80.0	49.5	48.9	98.8
Rulindo	28.7	28.2	66.7	26.9	26.1	45.0	27.5	27.4	76.0
Gakenke	52.6	52.6	-	48.8	48.8	-	48.6	48.6	-
Musanze	41.2	41.2	-	41.6	41.6	-	42.0	42.0	-
Burera	38.8	38.8	-	37.5	37.5	-	36.7	36.7	-
Gicumbi	28.5	28.4	50.0	26.7	26.4	75.0	26.9	26.9	90.2
Rwamagana	36.1	33.8	75.9	31.2	30.6	33.8	32.2	31.4	72.8
Nyagatare	32.7	29.0	79.5	30.8	27.6	49.1	29.6	27.5	70.6
Gatsibo	31.0	29.2	94.4	28.6	27.1	50.0	31.4	28.9	98.4
Kayonza	21.6	19.8	73.3	19.3	18.7	21.7	20.1	18.9	82.7
Kirehe	35.3	34.4	90.0	34.0	32.1	95.7	33.4	30.5	98.4
Ngoma	39.1	38.1	91.7	36.3	35.5	53.1	37.1	35.9	94.1
Bugesera	26.1	23.4	68.4	26.0	21.1	50.7	22.9	20.2	84.7
National	34.2	33.2	83.9	31.7	30.8	48.7	32.1	30.7	90.4

Source: NISR, SAS 2020

Table 22: Percentage of farmers by source of inorganic fertilizers per district in Season A 2020

District	Government (MINAGRI/RAB/NAEB)	Agro dealers	NGOs/Companies	Market	Agriculture cooperative	Other source	Total
Nyarugenge	10.3	71.8	-	5.1	10.3	2.6	100.0
Gasabo	3.7	85.3	1.5	6.6	0.7	2.2	100.0
Kicukiro	2.5	79.8	-	16.8	0.8	-	100.0
Nyanza	16.6	13.2	65.5	0.9	2.1	1.7	100.0
Gisagara	7.7	10.1	69.8	6.7	5.4	0.3	100.0
Nyaruguru	6.5	33.0	50.7	6.8	2.7	0.3	100.0
Huye	8.3	25.0	55.6	2.8	7.9	0.4	100.0
Nyamagabe	4.3	39.8	45.3	6.7	3.5	0.4	100.0
Ruhango	27.5	43.1	10.8	9.0	9.6	-	100.0
Muhanga	9.6	55.9	7.5	4.8	21.8	0.5	100.0
Kamonyi	19.2	42.8	5.8	10.6	21.2	0.5	100.0
Karongi	4.3	34.7	55.2	4.0	1.8	-	100.0
Rutsiro	13.2	48.3	31.1	6.1	0.9	0.4	100.0
Rubavu	6.9	83.1	0.4	4.8	4.0	0.8	100.0
Nyabihu	4.1	83.2	11.3	0.9	0.6	-	100.0
Ngororero	0.7	27.0	67.4	4.9	-	-	100.0
Rusizi	10.4	24.1	58.0	6.3	-	1.2	100.0
Nyamasheke	5.1	8.8	80.7	4.2	1.2	-	100.0
Rulindo	4.4	51.7	-	5.4	37.4	1.0	100.0
Gakenke	3.1	85.2	0.4	9.7	1.5	-	100.0
Musanze	1.7	97.3	-	0.3	0.7	-	100.0
Burera	9.2	84.2	-	3.2	3.5	-	100.0
Gicumbi	10.4	81.1	0.8	6.4	1.2	-	100.0
Rwamagana	2.3	42.1	46.0	3.9	3.9	1.9	100.0
Nyagatare	8.9	66.7	8.9	2.0	12.2	1.2	100.0
Gatsibo	17.4	28.3	48.1	1.1	3.3	1.9	100.0
Kayonza	4.1	22.4	59.4	11.2	2.4	0.6	100.0
Kirehe	11.5	27.5	33.1	3.6	21.9	2.4	100.0
Ngoma	16.0	23.6	52.9	3.8	2.8	1.0	100.0
Bugesera	12.5	57.7	12.8	4.3	10.0	2.9	100.0
National	8.6	47.6	32.2	5.0	5.8	0.8	100.0

Source: NISR, SAS 2020

Table 23: Source of inorganic fertiliser by type of fertilizer in Season A 2020

Fertilizer name	Government (MINAGRI/RAB/NAEB)	Agro - dealers	NGOs/Companies	Market	Agriculture cooperative	Other source	Total
NPK 17-17-17	3.1	69.5	13.3	6.9	5.5	1.7	100.0
NPK 20-10-10	22.2	38.9	16.7	22.2	-	-	100.0
NPK 25-5-5	75.0	-	12.5	12.5	-	-	100.0
NPK 22-6-12	61.9	23.8	-	4.8	9.5	-	100.0
Other NPK	2.6	50.0	15.8	18.4	7.9	5.3	100.0
Urea	5.4	46.8	37.4	4.3	4.9	1.2	100.0
liquid urea (Mbonea M	-	86.4	3.4	4.6	5.7	-	100.0
DAP	5.0	45.7	40.4	3.9	4.3	0.7	100.0
TSP	-	100.0	-	-	-	-	100.0
KCL/MOP	16.7	16.7	-	-	66.7	-	100.0
Omax	-	70.0	-	10.0	10.0	10.0	100.0
Winner	-	62.5	12.5	-	12.5	12.5	100.0
Yara Viva	15.4	30.8	15.4	7.7	30.8	-	100.0
Amidas	4.6	63.6	13.6	-	13.6	4.6	100.0
Cereal	4.6	50.0	18.2	-	13.6	13.6	100.0
Boaster	-	100.0	-	-	-	-	100.0
DI Grow	-	50.0	-	30.0	10.0	10.0	100.0
Other type	3.7	59.3	11.1	25.9	-	-	100.0

Source: NISR, SAS 2020

Table 24: Percentage of plots by type of inorganic fertilizer, per district in Season A 2020 (in percentage)

District	NPK 17-17-17	NPK 20-10-10	NPK 25-5-5	Urea	Liquid urea	DAP	KCL/MOP	Others
Nyarugenge	7.4	-	-	66.7	3.7	18.5	-	3.7
Gasabo	25.9	-	-	49.4	4.9	17.3	-	2.5
Kicukiro	17.6	-	-	35.3	-	42.4	-	4.7
Nyanza	15.7	-	0.7	41.8	-	41	-	0.7
Gisagara	11.7	-	-	42.1	-	42.4	-	3.8
Nyaruguru	8.4	2	-	32.7	-	56.9	-	-
Huye	27.8	-	-	41.7	-	26.4	-	4.2
Nyamagabe	17.4	-	-	32.2	-	50.4	-	-
Ruhango	29.8	-	2.1	31.9	2.1	27.7	-	6.4
Muhanga	7.4	-	1.1	35.1	-	24.5	1.1	30.9
Kamonyi	7.5	-	-	55.2	-	35.8	-	1.5
Karongi	4.6	0.5	-	42.2	1.4	51.4	-	-
Rutsiro	11.2	0.8	0.8	32.8	-	53.1	-	1.2
Rubavu	59.1	-	-	13	2	15.8	-	10.1
Nyabihu	53.1	-	-	25	1.5	385	-	0.8
Ngororero	15.3	-	-	34.2	-	50.5	-	-
Rusizi	8.9	0.2	-	38	-	50.9	-	1.9
Nyamasheke	11.4	0.9	-	32.8	-	54.2	-	0.6
Rulindo	9.4	0.3	0.7	47.7	0.3	39.4	1	1
Gakenke	5.1	0.3	-	43.3	-	51.4	-	-
Musanze	34.6	-	-	31.9	0.4	31.1	-	1.9
Burera	36.3	-	-	21.5	-	35	-	7.2
Gicumbi	29.3	-	-	38.3	-	32.3	-	-
Rwamagana	25.4	0.7	-	37.1	0.7	33.9	-	2.1
Nyagatare	11.8	-	-	41.1	-	39.6	0.7	6.8
Gatsibo	9.4	2.2	-	43.3	0.4	42.6	0.4	1.8
Kayanza	19.7	-	0.8	27	2.5	33.6	-	16.4
Kirehe	4.5	1.9	-	26	-	64.9	0.6	1.9
Ngoma	4.5	-	-	42.1	-	52.5	-	0.9
Bugesera	22.9	-	-	39.1	0.5	31.8	-	5.7
National	18.2	0.4	0.1	36.2	0.4	41.4	0.1	3.1

Source: NISR, SAS 2020

Table 25: Season A 2020_Use of pesticides by farmer type per district (in 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	16.2	16.2	-	14.6	14.6	-	14.6	14.6	-
Gasabo	13.7	11.5	81.8	13.0	10.3	34.7	13.1	11.5	72.7
Kicukiro	31.8	31.0	75.0	31.3	30.0	58.3	25.2	23.8	84.8
Nyanza	15.5	14.1	100.0	13.5	12.3	69.2	14.3	12.3	96.3
Gisagara	20.9	17.8	100.0	19.5	16.5	77.8	24.3	14.3	99.9
Nyaruguru	34.3	32.7	100.0	31.7	30.1	76.9	30.6	30.0	99.0
Huye	14.7	10.6	87.5	13.2	9.3	56.8	13.0	9.5	87.0
Nyamagabe	20.2	20.0	100.0	18.1	17.3	100.0	18.6	18.5	100.0
Ruhango	15.1	13.8	100.0	14.0	12.7	58.8	15.1	12.8	99.5
Muhanga	15.3	13.6	100.0	13.2	11.7	100.0	11.1	9.6	100.0
Kamonyi	16.7	14.9	91.7	15.2	13.3	77.8	13.8	12.0	97.8
Karongi	14.1	13.9	100.0	12.4	12.3	50.0	13.0	13.0	98.5
Rutsiro	20.8	20.8	-	19.3	19.3	-	20.0	20.0	-
Rubavu	48.4	48.1	75.0	48.2	48.4	40.0	49.3	49.3	51.8
Nyabihu	53.4	53.4	-	50.9	50.9	-	52.8	52.8	-
Ngororero	14.7	14.7	-	13.6	13.6	-	14.1	14.1	-
Rusizi	11.8	10.5	77.8	11.8	10.4	81.8	13.3	10.0	72.5
Nyamasheke	10.4	8.7	100.0	9.4	7.9	80.0	8.2	7.0	98.8
Rulindo	22.6	21.9	66.7	20.3	19.3	45.0	20.2	20.0	64.8
Gakenke	29.6	29.6	-	27.5	27.5	-	27.4	27.4	-
Musanze	45.8	45.8	-	46.3	46.3	-	47.0	47.0	-
Burera	39.4	39.4	-	38.0	38.0	-	37.4	37.4	-
Gicumbi	18.1	18.0	50.0	16.6	16.4	50.0	16.2	16.1	67.2
Rwamagana	25.3	22.7	72.4	22.3	20.4	30.4	21.3	20.8	50.1
Nyagatare	18.2	12.8	86.4	19.4	12.2	61.1	15.1	11.1	94.7
Gatsibo	16.2	14.5	77.8	14.8	13.2	38.5	17.7	14.8	94.8
Kayonza	12.6	10.5	73.3	12.5	10.3	21.7	11.7	10.3	81.8
Kirehe	17.6	16.4	100.0	17.9	15.5	95.7	17.2	13.5	99.6
Ngoma	15.0	13.5	91.7	15.8	13.1	75.0	15.4	13.7	94.2
Bugesera	16.2	12.8	68.4	18.3	11.3	53.7	12.5	9.8	74.1
Total	21.7	20.3	83.9	20.4	18.9	49.4	19.6	17.9	90.2

Source: NISR, SAS 2020

Table 26: Percentage of plots by type of pesticides, per district in Season A 2020

District	Dithane	Ridomil	Dimethoate	Cypermethrin	Dursiban	Rocket	Beam	Others
Nyarugenge	43.5	1.2	-	3.5	-	24.7	-	27.1
Gasabo	33.0	4.4	-	12.1	-	38.5	1.1	11.0
Kicukiro	12.5	1.6	-	18.8	-	45.3	-	21.9
Nyanza	8.2	-	-	17.6	-	67.1	4.7	2.4
Gisagara	7.2	-	-	14.9	-	65.6	6.2	6.2
Nyaruguru	10.3	3.4	-	19.0	-	55.2	-	12.1
Huye	11.4	1.1	-	27.3	-	36.4	12.5	11.4
Nyamagabe	39.6	1.0	-	27.1	4.2	28.1	-	-
Ruhango	16.3	2.0	2.0	22.4	-	49.0	8.2	-
Muhanga	17.9	4.5	-	16.4	-	53.7	3.0	4.5
Kamonyi	13.3	5.0	-	6.7	-	68.3	3.3	3.3
Karongi	15.0	1.7	5.0	43.3	-	35.0	-	-
Rutsiro	26.5	10.2	-	21.8	0.7	34.7	-	6.1
Rubavu	38.4	23.1	2.7	28.8	-	6.7	-	0.2
Nyabihu	38.3	19.7	8.0	18.1	-	385.0	-	1.9
Ngororero	21.1	10.5	-	11.8	-	55.3	-	1.3
Rusizi	8.0	1.1	5.7	13.8	-	47.1	1.1	23.0
Nyamasheke	10.5	8.8	7.0	17.5	-	28.1	1.8	26.3
Rulindo	15.6	0.6	2.2	7.8	-	71.7	-	2.2
Gakenke	10.6	2.1	-	19.9	-	66.0	-	1.4
Musanze	41.5	6.9	4.9	20.3	0.4	22.0	-	4.1
Burera	34.4	7.2	14.3	21.9	-	21.1	0.4	0.7
Gicumbi	33.1	0.8	-	23.6	-	41.7	-	0.8
Rwamagana	18.6	1.4	0.9	21.9	1.4	29.8	8.8	17.2
Nyagatare	7.7	1.5	1.5	13.8	-	31.1	3.6	40.8
Gatsibo	17.6	3.7	0.7	9.6	-	59.6	3.7	5.1
Kayonza	21.1	4.4	-	21.1	-	28.9	8.9	15.6
Kirehe	6.8	2.7	1.4	20.5	-	61.6	5.5	1.4
Ngoma	4.6	-	-	20.0	-	58.5	10.8	6.2
Bugesera	9.4	5.8	0.6	19.3	-	40.9	4.7	19.3
National	23.9	7.3	2.9	19.4	0.2	36.0	2.3	8.0

Source: NISR, SAS 2020

Table 27: Percentage of farmers who practiced agricultural practices in Season A 2020

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	52.4	52.4	-	-	-	-	4.4	4.4	-	49.8	49.8	-
Gasabo	73.0	72.7	83.3	1.5	0.6	27.3	2.9	1.5	45.5	35.3	34.6	58.3
Kicukiro	49.2	49.4	40.0	0.9	0.4	25.0	3.0	2.2	50.0	34.1	34.4	20.0
Nyanza	74.5	74.2	100.0	-	-	-	3.5	2.6	62.5	36.2	36.1	50.0
Gisagara	56.0	54.5	100.0	-	-	-	3.8	1.8	55.6	35.9	36.6	15.8
Nyaruguru	87.6	87.3	100.0	-	-	-	1.5	1.5	-	35.0	34.5	62.5
Huye	80.5	79.6	100.0	-	-	-	5.8	1.4	83.3	31.7	32.0	25.0
Nyamagabe	92.9	92.8	100.0	-	-	-	0.2	0.2	-	42.9	42.8	100.0
Ruhango	77.7	77.4	100.0	-	-	-	3.4	2.7	50.0	31.5	31.2	50.0
Muhanga	92.2	92.0	100.0	-	-	-	2.9	2.2	37.5	41.5	41.6	37.5
Kamonyi	82.7	82.3	100.0	-	-	-	4.3	3.4	41.7	19.9	20.0	16.7
Karongi	67.8	67.8	100.0	-	-	-	0.7	0.7	-	31.0	30.8	100.0
Rutsiro	74.8	74.8		-	-		0.8	0.8	-	40.2	40.2	-
Rubavu	78.1	77.9	100.0	-	-	-	-	-	-	16.6	16.3	50.0
Nyabihu	77.1	77.1		-	-	-	-	-	-	47.1	47.1	-
Ngororero	87.8	87.8		0.2	0.2	-	2.0	2.0	-	41.9	41.9	-
Rusizi	62.6	62.1	90.0	-	-	-	4.6	3.4	66.7	55.0	55.3	40.0
Nyamasheke	81.7	81.4	100.0	-	-	-	1.1	-	62.5	52.7	52.5	62.5
Rulindo	86.2	86.2	83.3	0.2	-	16.7	2.9	2.7	16.7	35.4	35.4	33.3
Gakenke	88.2	88.2	-	-	-	-	1.3	1.3	-	28.3	28.3	-
Musanze	74.7	74.7	-	-	-	-	0.8	0.8	-	44.8	44.8	-
Burera	85.8	85.8	-	-	-	-	-	-	-	20.2	20.2	-
Gicumbi	86.6	86.6	100.0	-	-	-	0.6	0.6	-	22.7	22.5	100.0
Rwamagana	75.5	74.8	89.7	0.4	-	6.9	6.4	4.0	48.3	43.2	42.3	62.1
Nyagatare	48.3	47.0	66.7	6.3	1.4	68.2	4.8	1.8	43.2	40.6	39.7	53.3
Gatsibo	79.2	79.3	79.0	1.4	0.8	22.2	2.0	1.7	11.1	56.2	56.2	57.9
Kayonza	40.5	39.6	68.8	0.7	-	20.0	4.1	2.8	40.0	42.8	43.8	12.5
Kirehe	61.1	60.9	70.0	0.6	0.2	30.0	3.6	2.4	80.0	46.6	46.9	30.0
Ngoma	64.8	64.3	92.3	0.5	0.2	16.7	2.9	1.6	75.0	55.7	56.3	23.1
Bugesera	47.5	46.1	72.5	0.7	-	10.5	7.6	5.4	42.1	38.1	37.1	55.0
National	73.2	73.0	84.1	0.5	0.1	17.8	2.8	1.9	47.0	38.6	38.5	43.8

Source: NISR, SAS 2020

Table 28: Percentage of plots by types of irrigation used in 2020 Season A

District	Modern irrigation					Traditional techniques
	Surface irrigation	Flood irrigation	Drip irrigation	Sprinkler irrigation	Pivot irrigation	
Nyarugenge	97.8	-	-	-	-	2.2
Gasabo	0.1	0.1	-	-	-	99.9
Kicukiro	34.1	0.1	0.1	-	-	65.7
Nyanza	6.7	14.9	-	-	-	78.4
Gisagara	-	6.0	0.0	-	-	94.0
Nyaruguru	100.0	-	-	-	-	-
Huye	0.1	0.7	-	-	-	99.2
Nyamagabe	-	-	-	-	-	100.0
Ruhango	8.0	12.8	-	-	-	79.2
Muhanga	-	0.0	-	-	-	100.0
Kamonyi	0.0	0.0	-	-	1.3	98.7
Karongi	-	-	-	-	-	100.0
Rutsiro	-	-	-	-	-	100.0
Rubavu						
Nyabihu						
Ngororero	-	-	-	-	-	100.0
Rusizi	8.2	0.0	-	-	-	91.7
Nyamasheke	20.0	80.0	-	-	-	-
Rulindo	6.4	0.0	-	-	-	93.6
Gakenke	14.1	-	-	-	12.1	73.7
Musanze	16.0	-	-	-	-	84.0
Burera						
Gicumbi	-	-	-	-	-	100.0
Rwamagana	8.2	0.1	0.1	-	-	91.6
Nyagatare	3.5	45.0	0.1	2.4	0.4	48.7
Gatsibo	64.1	0.0	-	-	-	35.9
Kayonza	80.5	0.0	-	-	0.0	19.4
Kirehe	99.6	0.1	-	0.1	0.2	0.0
Ngoma	19.7	0.2	0.0	-	-	80.2
Bugesera	1.2	15.4	0.0	0.1	-	83.2
National	23.0	4.9	0.0	0.0	0.7	71.5

Source: NISR, SAS 2020

Table 29: Percentage of plots by source of water used and district in 2020 Season A

District	Rainwater	Water treatment	Underground	Lake / streams	Water catchment
Nyarugenge	15.95	5.59	-	58.89	19.58
Gasabo	-	-	9.18	90.80	0.02
Kicukiro	-	-	-	99.88	0.12
Nyanza	-	4.45	84.79	10.76	0.01
Gisagara	-	5.32	42.01	52.66	0.01
Nyaruguru	-	-	-	100.00	-
Huye	0.03	-	39.03	60.83	0.12
Nyamagabe	-	-	-	100.00	-
Ruhango	2.38	4.68	64.82	28.12	0.01
Muhanga	-	-	72.78	27.19	0.03
Kamonyi	-	8.59	46.63	43.47	1.31
Karongi	-	-	43.49	28.35	28.16
Rutsiro	-	-	82.32	17.68	-
Rubavu	-	-	-	-	-
Nyabihu	-	-	-	-	-
Ngororero	-	-	7.48	83.31	9.21
Rusizi	5.72	8.13	45.62	40.54	-
Nyamasheke	-	-	20.00	80.00	-
Rulindo	-	-	11.60	88.40	-
Gakenke	-	-	30.23	69.77	-
Musanze	39.46	-	28.03	32.51	-
Burera	-	-	-	-	-
Gicumbi	46.54	-	53.46	-	-
Rwamagana	7.91	59.54	0.06	25.54	6.94
Nyagatare	0.32	9.59	4.44	61.52	24.12
Gatsibo	-	-	78.42	9.64	11.94
Kayonza	-	-	89.87	10.13	0.00
Kirehe	-	-	52.85	47.15	-
Ngoma	0.02	62.48	19.81	3.58	14.11
Bugesera	7.36	-	39.72	51.53	1.39
National	2.53	5.15	47.21	43.16	1.94

Source: NISR, SAS 2020

Table 30: Percentage of plots by type of anti-erosion activities and district in 2020 Season A

District	Ditches	Trees/Windbreak/ shelterbelt	Bench terraces	Progressive terraces	Cover plants	Water drainage	Mulching	Beds/ridges	Water channels	Others
Nyarugenge	12.5	15.6	-	4.9	44.8	-	3.9	14.2	1.9	2.2
Gasabo	5.6	6.2	0.2	2.2	70.0	1.9	0.5	8.6	4.8	0.0
Kicukiro	10.9	12.2	4.3	0.8	21.8	3.6	9.7	25.1	11.7	0.0
Nyanza	3.3	1.9	2.7	22.8	51.8	0.9	0.4	3.6	12.4	0.0
Gisagara	3.1	5.6	1.1	5.1	57.0	0.1	0.2	6.7	21.0	0.0
Nyaruguru	4.9	6.6	2.1	18.5	50.4	1.1	1.0	2.8	12.6	-
Huye	7.2	6.8	2.5	11.3	56.4	0.1	1.8	2.2	11.8	0.0
Nyamagabe	10.0	2.4	7.3	13.2	57.2	0.2	1.2	2.4	6.1	-
Ruhango	4.2	0.6	0.1	22.1	54.7	0.5	0.5	3.8	13.4	0.1
Muhanga	8.8	5.5	2.5	5.4	66.1	0.5	2.3	1.7	6.3	0.7
Kamonyi	5.5	2.1	0.5	14.3	55.8	0.9	1.8	5.6	13.5	0.0
Karongi	10.5	9.1	2.8	1.1	62.1	-	0.2	1.7	12.6	-
Rutsiro	7.1	10.2	3.9	4.1	62.4	1.1	6.1	0.3	4.7	-
Rubavu	2.0	5.1	3.7	4.1	33.2	-	-	51.9	-	-
Nyabihu	0.1	7.8	13.1	11.0	53.0	-	0.3	14.6	0.2	-
Ngororero	8.8	4.1	4.9	2.2	69.9	-	1.2	0.9	7.8	0.2
Rusizi	9.7	24.6	0.1	12.7	45.1	0.0	1.8	3.1	1.8	1.1
Nyamasheke	3.9	14.5	2.4	4.0	68.1	0.0	2.2	0.8	3.6	0.4
Rulindo	15.8	6.1	8.8	6.6	51.9	0.5	0.2	0.9	9.0	0.1
Gakenke	3.1	1.5	4.6	5.0	74.9	-	0.7	1.2	9.0	-
Musanze	0.6	6.7	10.7	1.8	35.1	1.5	0.5	41.6	1.5	-
Burera	0.2	5.8	2.8	16.2	53.2	-	0.4	18.7	2.6	0.0
Gicumbi	0.4	1.8	14.6	11.3	65.7	0.9	0.4	0.0	4.9	-
Rwamagana	9.5	6.2	6.7	3.0	69.2	1.9	3.4	0.0	0.1	0.0
Nyagatare	27.9	14.6	-	4.6	44.6	0.5	1.2	0.4	6.2	0.0
Gatsibo	1.2	4.3	1.8	4.8	78.7	0.5	1.2	2.5	5.0	0.0
Kayanza	7.9	2.8	16.3	1.3	40.9	0.1	1.0	5.3	24.3	-
Kirehe	17.9	11.0	1.2	10.6	44.7	0.8	7.8	2.6	2.3	1.1
Ngoma	4.3	5.1	4.5	10.5	64.4	0.7	5.6	0.8	4.1	0.0
Bugesera	15.2	5.5	0.2	3.9	55.2	1.5	4.3	8.0	6.3	0.0
National	6.5	6.0	4.6	9.3	58.5	0.5	1.5	5.6	7.5	0.1

Source: NISR, SAS 2020

Table 31: Percentage of plots by degree of erosion per district in Season A of 2020

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	0.7	8.9	35.6	54.8
Gasabo	1.7	5.2	10.4	82.7
Kicukiro	1.1	5.0	31.4	62.6
Nyanza	3.7	33.3	43.0	20.0
Gisagara	1.3	2.1	5.5	91.1
Nyaruguru	0.4	8.5	20.5	70.5
Huye	0.6	5.3	22.5	71.6
Nyamagabe	8.5	25.4	34.1	32.0
Ruhango	2.2	18.4	32.6	46.7
Muhanga	1.4	16.8	37.1	44.7
Kamonyi	1.1	14.6	40.0	44.3
Karongi	1.3	12.0	40.5	46.2
Rutsiro	3.9	13.9	41.6	40.6
Rubavu	2.6	5.5	31.1	60.7
Nyabihu	1.9	11.4	33.9	52.8
Ngororero	5.7	14.1	47.5	32.7
Rusizi	8.1	13.1	22.0	56.8
Nyamasheke	0.8	9.4	20.5	69.4
Rulindo	2.0	10.6	24.9	62.6
Gakenke	1.4	21.0	71.2	6.4
Musanze	0.0	6.0	38.7	55.2
Burera	1.5	18.6	44.3	35.6
Gicumbi	1.2	10.8	17.3	70.7
Rwamagana	0.0	1.1	25.2	73.7
Nyagatare	0.8	7.1	11.9	80.1
Gatsibo	1.2	14.2	28.6	56.0
Kayonza	2.2	14.7	26.2	57.0
Kirehe	0.4	6.5	38.7	54.3
Ngoma	0.0	6.0	54.3	39.6
Bugesera	0.8	17.2	13.9	68.0
National	2.1	12.9	32.9	51.9

Source: NISR, SAS 2020

Table 32: Agriculture Gross Value Added per hectare at constant 2017 prices (Rwf/ha)

Calendar Year	GVA per hectare	Percentage change from 2015
2015	822,766	
2016	853,218	4%
2017	906,817	10%
2018	965,556	17%
2019	1,013,106	23%

Source: NISR, SAS 2020