REPUBLIC OF RWANDA

NATIONAL INSTITUTE OF STATISTICS OF RWANDA
P.O. Box 6139 KIGALI - RWANDA

May 2017

Seasonal Agricultural Survey (SAS)–2017 Season A

I. Introduction

The National Institute of Statistics of Rwanda (NISR) has carried out the Upgraded Seasonal Agricultural Survey (USAS) 2017 Season A from September 2016 to February 2017. This is the preliminary report highlighting the key results obtained from the survey related to farm characteristics (crop area under cultivation, plot size, cropping system, production and yield), agricultural inputs (seeds, fertilizers and pesticides), and agricultural practices (irrigation and anti-erosion activities) at district level. An annual comprehensive USAS Survey report is to be published after covering all the three agricultural seasons.

The sampling method used was a dual frame sampling design combining selected area frame sample[1] segments and a list of Large Scale Farmers. Coverage of 960 segments of an average of 10 Ha each for strata 1 and 2 and 50 Ha for stratum 3 was spread throughout the country, with one segment composed by around 1,000 grids. A grid is a geographical located landmark in the segment having a distance of 10meters with the following grid. A sample of 5% of the total grids was selected for screening in each segment making a total of 51,390 grids countrywide. At least one or more grids were supposed to be in a plot while determining the boundaries of the plot. From a total number of 32,980 plots countrywide, a sample of 13,325 plots was selected during Phase 2 mostly designed for inputs and production data collection. Furthermore, enumerated Large Scale Farmers in screening phase were 183 in 2017 Season A and all of them were selected during Second Phase.

[1] Area frame sampling: A method in which an area to be sampled is sub-divided into smaller blocks that are then selected at random and then again sub-sampled or fully surveyed. This method is typically used when a complete frame of reference is not available to be used.

II. Agricultural land

Using satellite imagery, the whole country was stratified into homogeneous strata according to crop intensity and other land-use characteristics as follows:

Table 1. Stratified physical land use for agriculture per district (Ha)

District Name	Tea plantation	Intensive cropland on hillsides	Intensive cropland in marshlands	Rangeland	Total
Nyarugenge	-	5,894.6	1,698.0	-	7,592.6
Gasabo	-	25,561.9	3,190.7	-	28,752.7
Kicukiro	-	7,597.3	2,686.2	-	10,283.5
Nyanza	-	53,698.6	6,302.5	-	60,001.1
Gisagara	-	48,939.5	11,095.9	-	60,035.4
Nyaruguru	3,531.7	43,598.2	3,674.0	-	50,803.9
Huye	-	39,249.1	6,358.0	1,051.5	46,658.6
Nyamagabe	6,217.8	50,410.8	3,402.8	-	60,031.4
Ruhango	-	52,253.8	4,985.6	-	57,239.4
Muhanga	-	49,946.6	1,955.5	-	51,902.1
Kamonyi	-	52,483.8	5,816.4	-	58,300.2
Karongi	6,682.8	55,904.7	799.4	-	63,386.8
Rutsiro	1,652.2	50,755.4	505.1	3,613.3	56,526.0
Rubavu	411.7	26,886.6	-	822.2	28,120.5
Nyabihu	1,780.3	37,199.4	801.9	2,691.3	42,473.0
Ngororero	1,472.3	51,198.6	914.3	3,910.9	57,496.1
Rusizi	953.5	38,535.1	3,069.1	-	42,557.7
Nyamasheke	7,549.0	44,064.1	2,371.1	-	53,984.2
Rulindo	1,528.5	41,718.2	1,861.0	-	45,107.7
Gakenke	-	56,044.5	1,489.5	-	57,534.0
Musanze	7.5	33,596.6	1,096.9	-	34,701.0
Burera	-	44,013.0	1,459.7	-	45,472.7
Gicumbi	2,475.5	61,872.1	1,674.2	-	66,021.8
Rwamagana	-	55,324.6	3,235.5	-	58,560.2
Nyagatare	-	62,330.9	8,108.5	91,762.0	162,201.3
Gatsibo	-	71,583.4	4,786.9	12,813.8	89,184.1
Kayonza	-	64,327.7	3,156.7	46,806.1	114,290.4
Kirehe	-	66,696.0	10,604.4	15,350.6	92,650.9
Ngoma	-	68,594.0	8,088.6	-	76,682.6
Bugesera	-	87,766.1	21,253.1	-	109,019.2
Total Agricultural land	**34262.8**	**1448045.5**	**126441.3**	**178821.6**	**1787571.2**

2017 Seasonal Agricultural Survey - Season A

III. Farm characteristics

Crop Land

The main crops grown in 2017 Season A were tubers and roots (29.9%) followed by legumes and pulses (25.5%) then cereals (21.9%).

Crop Production

In 2017 Season A, crop production increased for paddy rice and Irish potatoes by respectively 33.6% and 8.8% while maize production decreased by 9.8% by comparing with 2016 season A production (see Table 10).

IV. Agricultural Inputs

Use of seeds

For segment plots, 93.8% were used with traditional seeds while 6.2% of them were used with improved seeds. For Large Scale Farmers, 48% used traditional seeds whereas 52% used improved seeds.

Use of fertilizers

For segment plots, 49.9% were used with organic fertilizers while inorganic fertilizers were used by 18.9%. For LSF, the use of organic fertilizers and inorganic fertilizers was 43.6% and 43.7% respectively.

Use of pesticides

The percentage of segment plots which were used with pesticides is 10.1% and 38.0% for Large Scale Farmers.

The percentage of different type of pesticides used is led by Cypermethrin both for segment plots and Large Scale Famers using a share of 42.4% and 31.4% respectively.

V. Agricultural practices

Irrigation practices

In 2017 season A, irrigation was practised in 4% of all segment plots while it was 27.8% of all Large Scale Farmers.

Anti-erosion activities

For segment plots, 67.6 % practised anti-erosion activities. On the hand, the Large Scale Farmers who practised anti-erosion activities were 69.2 %.

ANNEX
MAIN TABLES

Table 2: Share (in percentage) of area occupied by strata within districts

District	Tea plantation	Intensive cropland on hillsides	Intensive cropland in marshlands	Rangeland	Total
Nyarugenge	-	77.6	22.4	-	100.0
Gasabo	-	88.9	11.1	-	100.0
Kicukiro	-	73.9	26.1	-	100.0
Nyanza	-	89.5	10.5	-	100.0
Gisagara	-	81.5	18.5	-	100.0
Nyaruguru	7.0	85.8	7.2	-	100.0
Huye	-	84.1	13.6	2.3	100.0
Nyamagabe	10.4	84.0	5.7	-	100.0
Ruhango	-	91.3	8.7	-	100.0
Muhanga	-	96.2	3.8	-	100.0
Kamonyi	-	90.0	10.0	-	100.0
Karongi	10.5	88.2	1.3	-	100.0
Rutsiro	2.9	89.8	0.9	6.4	100.0
Rubavu	1.5	95.6	-	2.9	100.0
Nyabihu	4.2	87.6	1.9	6.3	100.0
Ngororero	2.6	89.0	1.6	6.8	100.0
Rusizi	2.2	90.5	7.2	-	100.0
Nyamasheke	14.0	81.6	4.4	-	100.0
Rulindo	3.4	92.5	4.1	-	100.0
Gakenke	-	97.4	2.6	-	100.0
Musanze	-	96.8	3.2	-	100.0
Burera	-	96.8	3.2	-	100.0
Gicumbi	3.7	93.7	2.5	-	100.0
Rwamagana	-	94.5	5.5	-	100.0
Nyagatare	-	38.4	5.0	56.6	100.0
Gatsibo	-	80.3	5.4	14.4	100.0
Kayonza	-	56.3	2.8	41.0	100.0
Kirehe	-	72.0	11.4	16.6	100.0
Ngoma	-	89.5	10.5	-	100.0
Bugesera	-	80.5	19.5	-	100.0
Total	1.9	81.0	7.1	10.0	100.0

2017 Seasonal Agricultural Survey - Season A

Table 3: Sampled segments per stratum

Stratum	Number of segments	Total area_Ha	Percentage
Intensive cropland on hillsides	702	7,029.2	54.08
Intensive cropland in marshlands	174	1,743.8	13.42
Rangelands	84	4,224.2	32.50
Total	960	12,997.2	100.00

2017 Seasonal Agricultural Survey - Season A

Table 4: National agricultural land use per stratum (Ha)

Stratum	Cultivated land	Pasture	Fallow	Non-agricultural land	Total
Intensive cropland on hillsides	836,802	34,797	189,507	379,522	1,440,627
Intensive cropland in marshlands	37,592	4,639	22,800	43,121	108,151
Rangelands	23,257	126,297	5,941	21,112	176,607
LSF	16,749	3,401	2,440	960	23,551
Total	914,399	169,134	220,687	444,715	1,748,936

2017 Seasonal Agricultural Survey - Season A

Table 5: Agricultural land use per district (Ha)

Districts	Cultivated land	Pasture	Fallow	Non-agricultural land	Total
Nyarugenge	4,083.5	226.4	769.7	2,513.1	7,592.6
Gasabo	17,178.7	352.7	3,230.9	7,428.3	28,190.6
Kicukiro	4,152.4	340.7	2,403.4	3,187.7	10,084.3
Nyanza	27,140.5	232.4	15,345.9	16,502.2	59,221.1
Gisagara	29,842.5	410.4	10,474.1	14,164.1	54,891.0
Nyaruguru	13,590.8	3,037.3	10,007.1	20,598.5	47,233.7
Huye	16,272.3	1,096.9	9,093.9	19,075.1	45,538.2
Nyamagabe	19,922.2	-	9,369.8	24,445.2	53,737.1
Ruhango	28,472.0	632.8	13,204.9	14,150.6	56,460.3
Muhanga	30,671.3	142.0	9,096.9	11,572.6	51,482.8
Kamonyi	36,381.5	-	9,871.0	11,429.8	57,682.3
Karongi	21,360.8	3.5	9,128.1	26,191.8	56,684.1
Rutsiro	22,829.9	6,087.8	4,988.3	20,967.8	54,873.8
Rubavu	17,152.5	1,463.7	1,862.7	7,160.9	27,639.8
Nyabihu	24,419.7	3,624.4	5,027.9	7,620.7	40,692.7
Ngororero	29,119.3	3,419.1	4,516.2	18,969.1	56,023.8
Rusizi	27,494.6	1,023.9	2,266.9	9,118.3	39,903.8
Nyamasheke	24,650.0	276.5	3,872.4	17,245.3	46,044.1
Rulindo	25,146.5	-	3,136.5	15,208.4	43,491.4
Gakenke	38,124.7	-	4,504.6	14,880.7	57,510.0
Musanze	23,164.2	928.5	2,528.0	8,054.7	34,675.4
Burera	28,100.4	45.7	3,697.2	13,629.5	45,472.7
Gicumbi	39,338.0	700.7	12,328.3	11,077.8	63,444.8
Rwamagana	34,845.1	4,777.9	4,637.0	13,160.3	57,420.2
Nyagatare	68,031.3	77,357.7	3,277.0	9,653.4	158,319.5
Gatsibo	53,147.6	18,103.2	3,360.1	12,106.0	86,717.0
Kayonza	49,557.3	31,301.4	10,106.3	21,656.8	112,621.8
Kirehe	53,744.3	5,871.8	8,067.6	24,024.2	91,707.9
Ngoma	42,138.1	3,856.3	6,281.0	23,325.3	75,600.7
Bugesera	47,578.3	419.6	31,793.4	24,636.4	104,427.7
Total	897,650.4	165,733.2	218,247.1	443,754.6	1,725,385.0

2017 Seasonal Agricultural Survey - Season A

Table 6: Cultivated area by crop type by stratum (Ha)

	Stratum						
	Intensive cropland on hillsides	Intensive cropland Marshland	Rangelands	S/Total	LSF	TOTAL	Percent
Cereals	**217,360**	**21,186**	**20,852**	**259,398**	***15,133***	***274,532***	**21.9**
Maize	185,011	11,235	13,193	209,440	2,645	212,085	16.8
Sorghum	20,977	1,858	7,202	30,037	69	30,106	2.4
Paddy rice	1,375	7,999	-	9,374	12,389	21,763	1.9
Wheat	3,155	15	42	3,212	30	3,242	0.2
Other Cereals	6,843	80	414	7,336	0	7,336	0.6
Tubers and Roots	**361,233**	**12,611**	**7,731**	**381,575**	***159***	***381,734***	**29.9**
Cassava	208,978	3,066	6,750	218,794	59	218,853	17.1
Sweet potatoes	81,067	6,420	357	87,844	10	87,854	6.9
Irish potatoes	38,123	662	521	39,306	90	39,396	3.0
Yams & Taro	33,066	2,462	103	35,631	0	35,631	2.8
Bananas	**230,242**	**1,869**	**5,927**	**238,038**	***127***	**238,164**	**18.6**
Cooking Banana	91,261	489	4,861	96,611	89	96,699	7.6
Dessert banana	34,721	427	304	35,452	17	35,470	2.8
Banana for beer	104,259	952	763	105,975	21	105,995	8.3
Legumes and Pulses	**309,915**	**5,370**	**9,968**	**325,253**	***473***	**325,725**	**25.5**
Beans	256,390	4,068	8,122	268,581	296	268,877	21.0
Bush bean	176,320	3,522	7,808	187,650	281	187,931	14.8
Climbing bean	80,070	546	314	80,930	15	80,945	6.3
Peas	9,240	52	105	9,397	1	9,398	0.7
Ground nuts	23,162	295	1,568	25,025	14	25,039	2.0
Soya beans	21,123	954	173	22,250	161	22,411	1.8
Vegetables and Fruits	**23,736**	**2,669**	**109**	**26,514**	***340***	**26,854**	**2.1**
Vegetables	18,039	2,076	92	20,207	75	20,282	1.6
Fruits	5,698	593	17	6,307	265	6,573	0.5
Other crops	24,082	1,086	109	25,277	673	25,950	2.0
Developed land	**1,166,568**	**44,791**	**44,696**	**1,256,055**	**16,905**	**1,272,959**	**100.00**
Agricultural Physical land	836,802	37,592	23,257	897,650	16,749	914,399	
Fallow land	189,507	22,800	5,941	218,247	2,440	220,687	

2017 Seasonal Agricultural Survey - Season A

Table 7: Cultivated area by crop type by district (Ha)

Crop/Crop category	Nyarugenge	Gasabo	Kicukiro	Nyanza	Gisagara	Nyaruguru	Huye	Nyamagabe	Ruhango	Muhanga	Kamonyi	Karongi	Rutsiro
Cereals	**446**	**3,924**	**927**	**6,095**	**8,501**	**2,488**	**3,649**	**3,283**	**3,756**	**2,256**	**6,118**	**3,997**	**7,844**
Maize	446	3,854	925	4,978	6,114	2,427	1,359	3,219	2,974	1,834	5,945	3,829	7,490
Sorghum	-	-	-	643	464	-	-	17	52	15	5	67	77
Paddy rice	-	25	-	168	795	-	2,040	-	234	200	78	-	-
Wheat	-	-	-	-	-	44	-	-	-		-	-	265
Other cereals	-	45	2	306	1,128	16	250	47	496	207	90	101	12
Tubers and Roots	**1,339**	**6,490**	**1,327**	**10,209**	**10,867**	**11,794**	**7,856**	**14,552**	**15,774**	**19,430**	**15,101**	**15,778**	**10,494**
Cassava	1,031	4,541	764	6,126	7,306	4,216	5,167	4,617	11,634	11,000	9,800	7,814	2,847
Sweet potato	240	1,053	375	2,520	1,777	4,551	1,712	7,394	2,501	4,251	3,340	5,284	3,262
Irish potato	**11**	301	23	298	511	1,576	373	1,125	228	110	153	562	2,877
Yarms & Taro	56	596	165	1,265	1,274	1,451	603	1,415	1,410	4,069	1,808	2,118	1,508
Bananas	**1,339**	**4,380**	**1,108**	**6,496**	**9,814**	**2,708**	**5,212**	**5,411**	**6,882**	**13,452**	**11,695**	**8,465**	**4,295**
Cooking banana	249	2,096	488	1,315	2,147	607	599	805	384	1,797	2,003	797	860
Dessert banana	154	1,372	281	2,169	1,444	703	1,190	678	1,230	2,585	1,928	875	1,075
Banana for beer	936	911	339	3,012	6,224	1,397	3,423	3,929	5,268	9,070	7,764	6,793	2,360
Legumes and Pulses	**1,462**	**6,769**	**1,428**	**11,963**	**15,674**	**4,601**	**9,040**	**9,008**	**13,561**	**9,804**	**15,559**	**6,044**	**4,739**
Beans	1,364	6,008	1,258	10,045	13,463	3,560	7,585	7,160	10,379	6,533	12,178	5,058	3,829
Bush bean	1,255	5,920	1,230	9,038	12,436	872	6,468	2,035	9,419	3,908	11,284	1,756	246
Climbing bean	109	88	28	1,007	1,027	2,688	1,117	5,125	960	2,625	894	3,302	3,583
Pea	6	73	1	213	104	285	332	840	133	130	160	374	270
Groundnut	46	423	57	727	584	190	246	-	1,424		1,375	-	-
Soybean	46	266	113	977	1,522	566	877	1,008	1,625	3,141	1,846	613	640
Vegetables and Fruits	**589**	**694**	**366**	**921**	**661**	**324**	**808**	**593**	**560**	**591**	**826**	**1,013**	**1,252**
vegetables	183	651	236	804	608	324	808	420	464	571	789	573	398
Fruits	407	43	130	118	53	-	-	173	96	20	37	441	854
Other crops	**390**	**1,929**	**454**	**439**	**463**	**478**	**408**	**452**	**905**	**880**	**1,395**	**501**	**2,088**
Developed land	5,565	24,186	5,609	36,122	45,980	22,393	26,972	33,300	41,439	46,412	50,693	35,799	30,712
Agricultural physical land	4,083	17,179	4,152	27,141	29,842	13,591	16,272	19,922	28,472	30,671	36,381	21,361	22,830
Fallow land	770	3,231	2,403	15,346	10,474	10,007	9,094	9,370	13,205	9,097	9,871	9,128	4,988

2017 Seasonal Agricultural Survey - Season A

Table 7: Cultivated area by crop type by district (Ha) (cont'd)

Crop/Crop category	Rubavu	Nyabihu	Ngororero	Rusizi	Nyamasheke	Rulindo	Gakenke	Musanze	Burera	Gicumbi	Rwamagana	Nyagatare	Gatsibo	Kayonza
Cereals	**4,320**	**3,738**	**4,763**	**6,005**	**4,015**	**5,453**	**10,025**	**7,300**	**10,352**	**5,399**	**9,039**	**43,507**	**20,844**	**17,049**
Maize	4,212	2,490	3,759	5,144	3,461	5,299	9,683	4,749	6,697	5,246	8,657	29,117	16,791	13,252
Sorghum	**27**	716	654	88	53	-	2	1,655	3,039	-	4	11,817	2,874	2,053
Paddy rice	-	-	131	768	477	-		-	-	-	271	1,493	324	530
Wheat	81	532	218	-	-	154	112	896	585	123	-	-	201	-
Other celeals	-	-	-	4	24	-	227	-	31	30	106	1,079	654	1,214
Tubers and Roots	**5,364**	**10,679**	**20,151**	**19,253**	**19,591**	**11,733**	**17,747**	**7,924**	**8,779**	**11,679**	**12,270**	**15,307**	**12,548**	**16,651**
Cassava	116	447	8,410	16,204	13,586	6,919	7,001	589	634	5,456	7,449	13,191	9,692	12,895
Sweet potato	802	2,698	7,477	946	4,147	3,380	6,935	1,953	3,810	3,537	2,519	1,493	1,306	1,876
Irish potato	**4,345**	7,401	1,156	210	35	553	1,516	4,869	4,008	2,015	1,145	320	550	1,092
Yarms & Taro	101	134	3,108	1,893	1,822	882	2,294	514	328	671	1,157	303	1,000	787
Bananas	**956**	**1,091**	**9,618**	**3,905**	**4,465**	**7,835**	**10,182**	**2,028**	**2,341**	**8,694**	**10,769**	**13,789**	**16,348**	**15,373**
Cooking banana	685	237	609	1,029	1,287	1,613	1,849	375	806	3,399	7,249	9,671	8,396	11,577
Dessert banana	84	147	1,434	357	344	2,040	2,858	635	218	1,939	1,456	1,055	2,722	1,282
Banana for beer	187	706	7,575	2,519	2,834	4,182	5,476	1,018	1,317	3,356	2,065	3,063	5,230	2,514
Legumes and Pulses	**4,266**	**7,064**	**7,562**	**8,222**	**8,522**	**11,167**	**11,076**	**4,828**	**11,122**	**20,216**	**13,846**	**25,652**	**20,203**	**17,798**
Beans	4,007	5,971	6,219	7,397	5,172	10,459	9,658	4,540	9,710	18,057	11,950	18,254	17,020	16,141
Bush bean	62	194	886	6,560	1,579	8,169	1,760	121	1,045	6,652	11,637	17,229	15,885	16,040
Climbing bean	3,945	5,777	5,333	837	3,594	2,290	7,898	4,419	8,665	11,405	314	1,025	1,135	101
Pea	156	1,069	533	5	20	313	586	164	1,303	1,250	155	243	160	328
Groundnut	-	-	-	198	639	162	138	-	-	580	1,328	6,478	2,296	1,038
Soybean	103	25	810	622	2,691	233	694	125	108	329	413	677	727	291
Vegetables and Fruits	**1,366**	**764**	**904**	**1,164**	**662**	**631**	**1,076**	**1,278**	**798**	**1,864**	**2,063**	**1,258**	**480**	**849**
vegetables	1,262	421	796	950	441	582	674	950	670	1,534	1,586	964	339	653
Fruits	104	343	108	215	221	49	402	328	128	331	477	294	141	196
Other crops	**650**	**2,657**	**599**	**906**	**1,238**	**506**	**1,351**	**1,873**	**1,070**	**766**	**707**	**188**	**240**	**539**
Developed land	16,923	25,993	43,596	39,455	38,492	37,326	51,457	25,231	34,462	48,619	48,694	99,701	70,663	68,259
Agricultural physical land	17,153	24,420	29,119	27,495	24,650	25,146	38,125	23,164	28,100	39,338	34,845	68,031	53,148	49,557
Fallow land	1,863	5,028	4,516	2,267	3,872	3,137	4,505	2,528	3,697	12,328	4,637	3,277	3,360	10,106

2017 Seasonal Agricultural Survey - Season A

Table 7: Cultivated area by crop type by district (Ha) (cont'd)

Crop/Crop category	Kirehe	Ngoma	Bugesera	S/Total	LSF	Total
Cereals	**23,370**	**16,844**	**14,094**	**259,398**	**15,133**	**274,532**
Maize	20,392	15,364	9,731	209,440	2,645	212,085
Sorghum	**1,307**	272	4,137	30,037	69	30,106
Paddy rice	1,435	405	-	9,374	12,389	21,763
Wheat	-	-	-	3,212	30	3,242
Other celeals	236	803	226	7,336	0	7,336
Tubers and Roots	**15,213**	**16,483**	**19,191**	**381,575**	**159**	**381,734**
Cassava	11,976	12,822	14,545	218,794	59	218,853
Sweet potato	1,089	2,031	3,586	87,844	10	87,854
Irish potato	**1,137**	806		39,306	90	39,396
Yarms & Taro	1,012	825	1,061	35,631	0	35,631
Bananas	**18,657**	**16,590**	**14,140**	**238,038**	**127**	**238,164**
Cooking banana	14,297	13,372	6,014	96,611	89	96,699
Dessert banana	419	763	2,015	35,452	17	35,470
Banana for beer	3,942	2,455	6,112	105,975	21	105,995
Legumes and Pulses	**17,122**	**13,312**	**13,620**	**325,253**	**473**	**325,725**
Beans	15,386	9,940	10,280	268,581	296	268,877
Bush bean	14,389	9,418	10,158	187,650	281	187,931
Climbing bean	997	522	122	80,930	15	80,945
Pea	191	-	-	9,397	1	9,398
Groundnut	1,290	2,856	2,950	25,025	14	25,039
Soybean	255	516	391	22,250	161	22,411
Vegetables and Fruits	**354**	**867**	**938**	**26,514**	**340**	**26,854**
vegetables	294	593	671	20,207	75	20,282
Fruits	60	274	268	6,307	265	6,573
Other crops	**296**	**470**	**439**	**25,277**	**673**	**25,950**
Developed land	75,013	64,566	62,423	1,256,055	16,905	1,272,959
Agricultural physical land	53,744	42,138	47,578	897,650	16,749	914,399
Fallow land	8,068	6,281	31,793	218,247	2,440	220,687

2017 Seasonal Agricultural Survey - Season A

Table 8: Yield of main crops by Stratum (kg/Ha)

Crop	Intensive cropland on hillsides	Intensive cropland in marshland	Rangelands	Total
Maize	1,245	1,778	1,551	1,524
Sorghum	1,209	1,337	1,153	1,233
Paddy rice	3,385	3,520		3,452
Wheat	1,224	85	773	694
Cassava	2,059	2,130	2,027	2,072
Sweet potato	6,001	8,734	2,241	5,659
Irish potato	10,269	5,763	6,254	7,429
Taro&Yarms	2,730	3,353	1,324	2,469
Cooking banana	4,775	2,428	2,794	3,332
Dessert banana	3,364	3,377	962	2,568
Banana for beer	4,889	3,178	1,256	3,107
Bush bean	797	930	827	851
Climbing bean	963	1,718	1,365	1,349
Pea	720	42	574	445
Groundnut	447	202	620	423
Soybean	432	791	332	519
vegetables	7,854	9,200	1,919	6,324
Fruits	17,380	38,665	7,904	21,316

2017 Seasonal Agricultural Survey - Season A

Table 9: Yield of main crops by district (Kg/Ha)

District	Maize	Sorghum	Paddy rice	Wheat	Cassava	Sweet potato	Irish potato	Yams & Taro	Cooking Banana	Dessert banana	Banana for beer	Bush bean	Climbing bean	Peas	Ground nuts
Nyarugenge	661	-	-	-	2,403	3,156	1,508	1,504	3,127	2,337	3,285	738	802	1,471	473
Gasabo	754	-	3,981	-	2,466	5,791	6,411	2,128	2,206	4,258	2,669	1,018	826	544	331
Kicukiro	1,624	-	-	-	2,472	11,104	2,128	2,121	2,299	4,911	2,644	773	1,096	-	219
Nyanza	926	639	2,512	-	2,488	4,566	1,797	2,396	2,877	2,668	5,720	858	1,074	618	209
Gisagara	1,215	334	2,402	-	2,220	3,742	2,537	1,357	2,078	1,322	3,217	670	681	262	182
Nyaruguru	1,468	-	-	1,074	2,479	12,282	6,626	4,119	3,711	2,722	3,992	625	848	1,054	1,347
Huye	1,021	-	3,252	-	3,548	2,970	1,892	1,817	2,407	1,281	3,851	529	568	266	215
Nyamagabe	1,308	1,278	-	-	1,593	9,595	4,321	3,351	3,229	1,507	2,365	689	857	685	-
Ruhango	599	550	1,539	-	2,780	5,865	1,762	4,356	2,294	2,606	4,800	862	874	800	480
Muhanga	923	2,578	2,142	-	2,425	6,807	5,230	2,827	3,939	2,946	3,993	669	1,001	5,588	-
Kamonyi	892	368	-	-	2,341	6,789	2,892	4,266	3,121	3,255	4,053	751	748	1,136	258
Karongi	1,626	289	-	-	1,866	6,256	4,712	11,133	3,696	3,696	3,249	842	918	647	-
Rutsiro	1,451	366	-	191	1,850	6,192	10,444	3,951	3,357	7,258	3,333	1,036	851	146	-
Rubavu	1,280	939	-	148	928	8,477	18,629	8,132	2,112	8,448	9,142	686	1,101	1,047	-
Nyabihu	1,460	685	-	1,028	1,123	4,742	16,746	3,438	1,937	2,408	3,132	432	1,087	838	-
Ngororero	1,228	1,738	-	923	1,245	5,559	3,195	3,935	2,974	3,344	2,764	786	816	420	-
Rusizi	1,041	1,272	4,300	-	1,547	5,072	3,321	3,489	5,169	2,459	2,453	594	1,277	1,095	1,232
Nyamasheke	1,097	1,639	2,278	-	2,281	4,338	5,202	3,943	3,113	3,340	4,249	840	825	941	589
Rulindo	1,259	-	-	787	1,521	3,239	4,448	1,601	2,260	2,222	4,080	755	736	969	1,124
Gakenke	1,409	1,365	-	489	1,302	4,790	4,395	3,821	3,030	3,907	3,050	782	845	634	607
Musanze	1,505	2,743	-	1,771	1,024	9,781	9,346	6,093	3,237	5,070	6,076	1,465	1,545	725	-
Burera	1,432	2,630	-	1,063	2,619	9,419	7,441	3,743	5,270	3,634	7,130	772	1,065	674	-
Gicumbi	1,401	-	-	250	1,557	10,523	6,374	2,561	3,638	4,734	3,667	1,143	1,009	731	874
Rwamagana	1,182	738	2,075	-	2,513	6,456	4,290	2,443	4,605	3,002	6,528	965	1,240	509	544
Nyagatare	1,970	1,373	1,923	-	2,284	5,742	4,799	1,575	4,869	4,668	6,602	853	957	317	413
Gatsibo	1,666	1,159	2,573	1,305	2,201	8,924	3,206	1,138	4,613	1,602	8,124	1,087	1,782	390	580
Kayonza	817	663	5,630	-	2,623	3,516	2,632	2,594	5,089	3,125	6,445	631	583	350	316
Kirehe	597	365	3,372	-	1,460	3,417	1,891	1,530	4,792	1,489	3,620	546	529	328	322
Ngoma	1,223	453	2,690	-	1,888	3,066	3,685	4,565	4,674	5,252	4,988	647	709	-	972
Bugesera	834	1,017	-	-	1,513	5,109	-	1,940	3,076	2,741	5,710	620	931	-	157
LSF	2,983	1,948	3,150	1,280	1,277	4,997	12,268	5,924	2,403	3,072	9,097	639	1,061	158	487
Overall	1,284	1,360	3,053	1,103	2,058	6,515	9,595	3,665	4,230	3,172	4,277	778	975	719	475

2017 Seasonal Agricultural Survey- Season A

Table 9: Yield of main crops by district (Kg/Ha) *(cont'd)*

District	Soybean	Vegetables	Fruits
Nyarugenge	318	13,416	908
Gasabo	703	5,013	13,950
Kicukiro	483	2,080	15,385
Nyanza	243	5,613	4,833
Gisagara	224	15,838	19,428
Nyaruguru	343	11,359	-
Huye	264	2,174	-
Nyamagabe	481	12,557	1,314
Ruhango	356	2,577	4,819
Muhanga	434	4,384	2,203
Kamonyi	446	3,667	2,123
Karongi	686	17,723	16,101
Rutsiro	815	4,656	145
Rubavu	924	-	46
Nyabihu	1,779	9,561	6,927
Ngororero	369	18,252	524
Rusizi	366	5,231	26,066
Nyamasheke	608	3,644	55
Rulindo	630	4,276	8,054
Gakenke	613	7,218	9,131
Musanze	500	4,638	1,441
Burera	218	2,513	374
Gicumbi	857	5,842	14,987
Rwamagana	500	9,823	12,054
Nyagatare	518	12,260	3,736
Gatsibo	555	1,791	14
Kayonza	384	5,777	11,545
Kirehe	316	1,728	11,305
Ngoma	208	2,510	18,916
Bugesera	1,446	3,519	36,693
LSF	1,423	8,019	2,367
Overall	480	6,603	8,460

2017 Seasonal Agricultural Survey- Season A

Table 10: Production of main crops by district (MT)

Crop	Nyarugenge	Gasabo	Kicukiro	Nyanza	Gisagara	Nyaruguru	Huye	Nyamagabe	Ruhango	Muhanga	Kamonyi	Karongi	Rutsiro	Rubavu
Maize	295	2,905	1,502	4,608	7,427	3,562	1,388	4,212	1,780	1,693	5,304	6,225	10,866	5,390
Sorghum	-	-	-	411	155	-	-	22	28	38	2	19	28	26
Paddy rice	-	101	-	421	1,909	-	6,634	-	361	428	-	-	-	-
Wheat	-	-	-	-	-	48	-	-	-	-	-	-	51	12
Cassava	2,478	11,200	1,887	15,243	16,221	10,449	18,331	7,354	32,345	26,677	22,945	14,585	5,267	108
Sweet potato	759	6,097	4,159	11,504	6,648	55,900	5,087	70,945	14,669	28,935	22,678	33,054	20,199	6,795
Irish potato	17	1,929	49	536	1,296	10,446	706	4,863	402	575	442	2,648	30,050	80,953
Yams & Taro	85	1,267	351	3,032	1,729	5,975	1,096	4,743	6,144	11,503	7,712	23,580	5,959	824
Cooking Banana	780	4,623	1,121	3,783	4,461	2,254	1,442	2,598	882	7,077	6,251	2,945	2,888	1,448
Dessert banana	359	5,843	1,381	5,788	1,909	1,914	1,524	1,022	3,205	7,614	6,277	3,235	7,800	706
Banana for beer	3,073	2,432	897	17,229	20,018	5,577	13,180	9,292	25,284	36,222	31,469	22,068	7,865	1,712
Bush bean	926	6,025	950	7,752	8,329	545	3,424	1,402	8,119	2,614	8,470	1,479	255	42
Climbing bean	87	73	31	1,081	700	2,279	634	4,391	839	2,628	669	3,030	3,051	4,345
Peas	9	39	-	131	27	300	88	575	106	728	182	242	39	163
Ground nuts	22	140	12	152	106	256	53	-	684	-	355	-	-	-
Soya beans	15	187	54	237	341	194	231	485	579	1,362	823	420	522	95
Vegetables	2,452	3,263	491	4,510	9,632	3,678	1,756	5,276	1,195	2,501	2,893	10,149	1,853	-
Fruits	369	606	1,994	569	1,023	-	-	228	464	44	78	7,097	124	5

2017 Seasonal Agricultural Survey - Season A

Table 10: Production of main crops by district (MT) (*cont'd)*

Crop	Nyabihu	Ngororero	Rusizi	Nyamasheke	Rulindo	Gakenke	Musanze	Burera	Gicumbi	Rwamagana	Nyagatare	Gatsibo	Kayonza
Maize	3,635	4,618	5,358	3,796	6,672	13,648	7,145	9,591	7,349	10,230	57,357	27,972	10,821
Sorghum	490	1,137	112	86	-	3	4,541	7,992	-	3	16,229	3,332	1,362
Paddy rice	-	-	3,301	1,085	-	-	-	-	-	563	2,872	833	2,986
Wheat	547	201	-	-	121	55	1,587	622	31	-	-	262	-
Cassava	502	10,473	25,073	30,989	10,526	9,116	603	1,660	8,494	18,721	30,124	21,334	33,827
Sweet potatoes	12,792	41,566	4,799	17,990	10,947	33,224	19,100	35,884	37,216	16,264	8,575	11,656	6,595
Irish potatoes	123,926	3,693	697	182	2,461	6,661	45,508	29,820	12,845	4,911	1,537	1,763	2,875
Yams & Taro	462	12,231	6,603	7,185	1,412	8,766	3,132	1,226	1,718	2,828	476	1,138	2,043
Cooking Banana	460	1,811	5,319	4,008	3,645	5,601	1,215	4,249	12,366	33,384	47,086	38,731	58,912
Dessert banana	354	4,796	878	1,148	4,534	11,167	3,218	793	9,179	4,369	4,925	4,360	4,006
Banana for beer	2,212	20,937	6,179	12,040	17,062	16,700	6,184	9,388	12,307	13,478	20,220	42,486	16,204
Bush bean	84	696	3,896	1,327	6,165	1,376	177	807	7,601	11,228	14,689	17,270	10,127
Climbing bean	6,278	4,352	1,069	2,966	1,685	6,672	6,826	9,230	11,502	389	980	2,022	59
Peas	895	224	6	19	303	372	119	879	914	79	77	62	115
Ground nuts	-	-	244	376	182	83	-	-	507	722	2,672	1,332	328
Soya beans	45	299	227	1,636	147	426	62	24	282	206	351	403	112
Vegetables	4,024	14,532	4,967	1,608	2,489	4,863	4,407	1,684	8,961	15,577	11,815	607	3,770
Fruits	2,375	56	5,598	12	393	3,672	473	48	4,954	5,756	1,098	2	2,263

2017 Seasonal Agricultural Survey - Season A

Table 10: Production of main crops by district (MT) (*cont'd)*

Crop	Kirehe	Ngoma	Bugesera	S/Total	LSF	Total (2017 A)	Total (2016 A)	Percentage change
Maize	12,164	18,787	8,113	264,413	7,891	272,303	300,330	-9.8
Sorghum	476	123	4,208	40,824	135	40,959	47,522	-14.8
Paddy rice	4,839	1,089	-	27,422	39,026	66,448	49,430	33.6
Wheat	-	-	-	3,537	39	3,575	4,365	-18.1
Cassava	17,489	24,204	22,003	450,230	76	450,305	405,961	5.3
Sweet potatoes	3,719	6,226	18,322	572,301	50	572,350	503,760	14.7
Irish potatoes	2,150	2,968	-	376,907	1,100	378,008	369,691	8.8
Yams & Taro	1,547	3,764	2,058	130,590	0	130,590	82,244	58.8
Cooking Banana	68,507	62,503	18,502	408,850	213	409,063	379,196	6.9
Dessert banana	623	4,010	5,522	112,460	53	112,514	97,304	13.6
Banana for beer	14,273	12,246	34,897	453,132	189	453,321	529,434	-15.0
Bush bean	7,859	6,096	6,297	146,027	180	146,207	151,715	-6.8
Climbing bean	527	370	113	78,877	16	78,893	97,230	-19.8
Peas	63	-	-	6,758	0	6,758	11,673	-42.1
Ground nuts	415	2,775	463	11,882	7	11,889	6,054	96.4
Soya beans	81	107	565	10,520	229	10,749	12,346	-12.9
Vegetables	509	1,489	2,360	133,311	599	133,910	137,608	-2.7
Fruits	673	5,177	9,826	54,976	628	55,604	34,438	61.5

2017 Seasonal Agricultural Survey - Season A

Table 11: Average plot size per crop type by stratum (Ha/100)

Crop Name	Intensive cropland on hillsides	Intensive cropland in marshlands	Rangelands	Overall	LSF
Fruits	3.3	34.4	3.2	5.5	2.5
vegetables	2.8	2.7	4.1	2.8	0.7
Other crops	7.6	25.9	18.4	9.5	4.4
Other cereals	2	2.5	5	2.3	0.1
Maize	6.2	8.9	31.3	8.1	7.6
Paddy rice	7.1	9.9	-	9.1	11.4
Sorghum	11.3	10.4	46.9	18	2.6
Wheat	7.3	53.6	7	8.7	3.8
Bush bean	5.5	4.6	28.4	6.9	3.1
Climbing bean	4.1	3.2	59.2	5.7	1.1
Pea	1.7	4.8	3.6	1.9	0.3
Irish potato	3.4	2.2	8.2	3.4	4.3
Sweet potato	2.8	3.4	3.4	2.9	0.4
Soybean	2.7	2.2	3.1	2.6	6.4
Groundnut	4.8	4.1	11.8	5.3	1
Taro	1.9	1.8	2.5	1.9	0
Yams	0.9	0.5	1.2	0.9	-
Cassava	4.5	2.3	7.4	4.4	1.4
Cooking banana	4.1	3	29.5	5.5	1.3
Dessert banana	2.5	2.4	5.1	2.6	0.5
Banana for beer	4.9	4.5	10.3	5.1	1
Overall average plot size/ crop	4.2	6	19.9	5.1	7.7

2017 Seasonal Agricultural Survey - Season A

Table 12: Average plot size per crop type by district (Ha/100)

District	Maize	Paddy rice	Sorghum	Wheat	Other cereals	Cassava	Irish potato	Sweet potato	Taro	Yams	Bush bean	Climbing bean	Pea	Groundnut	Soybean
Nyarugenge	2.3	-	-	-	-	4.8	1.4	3.4	1.1	0.5	6.2	3.3	0.6	1.7	1.5
Gasabo	7.3	5.0	-	-	0.6	4.2	1.3	5.9	3.4	-	9.0	3.4	0.8	2.5	3.1
Kicukiro	4.7	-	-	-	0.3	4.2	4.1	2.9	2.0	1.7	6.5	3.5	0.3	5.1	3.1
Nyanza	1.6	6.0	6.4	-	1.9	10.4	1.1	2.3	0.9	1.7	2.7	2.9	1.0	5.6	2.6
Gisagara	3.3	13.9	16.8	-	1.6	2.3	1.8	2.3	0.8	0.2	2.5	3.1	0.6	3.0	2.4
Nyaruguru	2.1	-	2.2	2.3	1.4	2.2	1.0	3.5	1.6	-	1.5	4.2	0.7	3.1	1.7
Huye	0.9	4.1	-	-	2.4	2.4	1.1	2.1	0.9	-	5.1	12.3	0.6	2.2	2.4
Nyamagabe	1.5	-	1.6	-	1.4	2.6	1.4	2.2	0.8	0.9	2.4	2.4	0.8	-	1.3
Ruhango	1.5	6.6	5.5	-	1.3	4.7	1.2	2.4	1.8	0.2	3.6	4.8	0.9	4.2	2.1
Muhanga	2.0	0.8	0.6	-	1.7	2.1	1.6	1.6	2.2	0.2	1.7	2.4	0.8	-	2.1
Kamonyi	1.6	2.1	0.5	-	1.6	4.3	1.1	2.0	2.0	1.0	4.3	4.3	0.6	2.9	2.3
Karongi	3.0	-	4.4	-	1.9	3.1	1.3	2.3	1.4	-	1.5	3.1	0.5	-	2.3
Rutsiro	7.8	-	4.0	16.5	1.5	1.9	3.8	2.9	4.8	-	2.6	2.6	4.5	-	2.8
Rubavu	16.8	-	3.2	10.0	-	3.3	21.7	4.2	2.8	-	3.4	11.7	13.3	-	16.8
Nyabihu	2.6	-	4.8	11.2	-	1.3	5.0	3.3	2.2	-	1.4	3.5	1.3	-	1.4
Ngororero	1.6	2.6	3.8	2.5	-	1.7	1.5	2.8	2.1	-	1.4	3.1	0.7	-	1.9
Rusizi	3.5	11.8	7.2	-	0.6	8.8	0.4	2.6	2.1	0.8	6.0	2.8	0.3	6.5	4.7
Nyamasheke	1.6	4.6	1.9	-	0.2	3.2	0.7	4.4	0.9	0.8	2.3	2.4	0.2	3.1	3.2
Rulindo	3.1	-	-	16.5	-	3.6	2.0	2.2	1.3	-	4.9	7.3	2.3	3.5	1.7
Gakenke	4.2	-	0.7	2.9	2.7	1.9	1.8	1.9	1.9	-	1.4	5.2	1.9	1.3	1.3
Musanze	3.3	-	5.4	8.4	-	0.8	11.0	2.7	0.5	-	1.3	2.3	2.2	-	1.8
Burera	3.0	-	7.4	7.4	1.5	1.2	4.1	1.9	0.8	-	1.5	5.2	3.2	-	1.1
Gicumbi	8.8	-	4.5	3.7	0.3	4.2	3.2	3.0	1.2	-	4.5	5.1	1.7	2.1	1.7
Rwamagana	4.5	4.8	0.3	-	2.3	2.8	2.3	3.1	2.8	-	8.7	9.8	0.9	4.2	1.8
Nyagatare	35.1	12.6	18.6	-	4.2	7.5	2.9	3.9	2.2	-	15.6	6.2	2.4	8.6	4.4
Gatsibo	21.4	21.9	39.3	2.5	2.8	4.7	3.9	2.5	3.8	0.2	14.1	29.9	1.6	7.8	3.9
Kayonza	8.8	28.4	25.9	-	2.6	4.7	3.7	3.4	2.9	1.3	14.2	4.7	2.7	5.2	2.3
Kirehe	9.1	3.9	6.7	-	1.2	6.6	2.4	2.9	2.2	-	8.2	6.5	3.8	5.5	2.0
Ngoma	5.0	2.9	34.7	-	1.0	4.3	1.6	1.6	1.3	1.0	3.9	5.3	-	4.1	3.4
Bugesera	5.6	3.5	17.3	-	1.6	6.4	-	4.8	1.1	1.5	7.9	1.5	-	5.3	2.7
Total	8.1	9.1	18.0	8.7	2.3	4.4	3.4	2.9	1.9	0.9	6.9	5.7	1.9	5.3	2.6

2017 Seasonal Agricultural Survey - Season A

Table 12: Average plot size per crop type by district (Ha/100) *(Cont.)*

District	Cooking banana	Dessert banana	Banana for beer	vegetables	Fruits	Other crops	Total
Nyarugenge	3.7	2.8	15.7	4.3	41.3	37.2	10.6
Gasabo	4.9	4.4	3.8	3.0	5.3	25.4	6.6
Kicukiro	4.5	3.9	4.8	5.4	7.5	30.5	6.4
Nyanza	1.2	3.0	5.7	1.7	1.9	29.6	4.6
Gisagara	2.3	2.1	4.9	1.2	1.1	6.9	3.0
Nyaruguru	1.6	1.4	2.0	1.0	4.0	2.9	2.1
Huye	3.5	2.4	2.8	1.3	0.3	5.7	2.8
Nyamagabe	1.0	1.2	4.8	1.4	2.0	6.0	2.2
Ruhango	2.2	2.7	4.3	2.3	17.1	3.4	3.4
Muhanga	1.4	1.4	4.5	0.9	1.7	3.2	2.0
Kamonyi	1.6	2.6	7.2	3.3	5.7	3.8	3.1
Karongi	1.8	1.3	7.2	0.8	1.4	5.2	2.5
Rutsiro	2.2	2.1	2.1	2.0	2.7	7.6	4.2
Rubavu	9.9	4.2	2.7	7.8	3.2	5.8	10.2
Nyabihu	1.6	1.3	2.5	2.5	3.6	11.1	3.9
Ngororero	1.6	2.6	5.1	1.0	1.3	16.3	2.8
Rusizi	1.3	1.2	3.4	3.5	2.5	7.5	4.0
Nyamasheke	1.3	1.0	2.9	1.7	1.7	6.1	2.5
Rulindo	2.2	2.4	6.1	1.9	1.0	2.4	3.0
Gakenke	2.4	2.0	2.6	1.1	1.7	3.7	2.4
Musanze	1.2	0.7	1.2	2.4	2.5	7.1	3.3
Burera	1.2	1.8	1.9	2.1	11.5	5.3	3.2
Gicumbi	2.9	3.2	3.4	2.5	3.2	4.9	3.7
Rw amagana	6.5	2.2	2.6	3.4	4.8	7.7	4.2
Nyagatare	13.4	3.8	5.7	8.8	5.0	3.5	11.2
Gatsibo	10.7	2.6	6.2	4.2	3.2	9.7	10.7
Kayonza	11.7	2.7	5.1	3.1	3.2	6.1	6.7
Kirehe	10.6	2.0	6.6	2.8	1.7	8.1	5.5
Ngoma	4.8	1.6	2.3	1.8	1.7	2.9	3.1
Bugesera	7.4	6.4	10.1	2.7	7.2	8.2	6.4
Total	5.5	2.6	5.1	2.8	5.5	9.5	5.1

2017 Seasonal Agricultural Survey - Season A

Table 13: Average number of crop types per plot (in case of mix cropping) by stratum

Stratum	Average number
Intensive cropland on hillsides	3.8
Intensive cropland in marshlands	3.1
Rangelands	3.5
Overall average number of crops/plot	3.7

2017 Seasonal Agricultural Survey - Season A

Table 14: Average number of crop types per plot (in case of mix cropping) by district

District	Stratum			
	Intensive cropland on hillsides	Intensive cropland in marshlands	Rangelands	Overall average
Nyarugenge	3.6	3.3	-	3.6
Gasabo	3.9	3.9	-	3.9
Kicukiro	3.9	3	-	3.9
Nyanza	3.5	2.9	-	3.4
Gisagara	4.3	3	-	4.1
Nyaruguru	3.8	2.4	-	3.6
Huye	4	2.8	2	3.9
Nyamagabe	3.4	2.5	-	3.3
Ruhango	3.2	2.9	-	3.2
Muhanga	3.8	3.1	-	3.7
Kamonyi	3.6	2.9	-	3.6
Karongi	3.8	2.7	-	3.7
Rutsiro	3.4	2.6	2.1	3.3
Rubavu	2.5	-	2	2.5
Nyabihu	2.7	2.4	-	2.6
Ngororero	3.3	2.6	2	3.2
Rusizi	3.9	3.6	-	3.9
Nyamasheke	3.8	3.5	-	3.8
Rulindo	3.9	2.7	-	3.8
Gakenke	3.6	3	-	3.5
Musanze	3.2	2.6	-	3.1
Burera	3	2.6	-	2.9
Gicumbi	3.5	3.1	-	3.4
Rwamagana	4.4	3.9	-	4.4
Nyagatare	3.5	3.1	3.3	3.4
Gatsibo	3.9	3.3	4	3.8
Kayonza	4.4	3.9	2.9	4.1
Kirehe	3.8	2.6	3.7	3.8
Ngoma	4.4	-	-	4.4
Bugesera	3.3	3.2	-	3.3
Overall average number of crops/plot	3.8	3.1	3.5	3.7

2017 Seasonal Agricultural Survey - Season A

Table 15: Share of pure and mixed crop agricultural land per stratum (in percentage)

Stratum	Pure cropping	Mixed cropping	Total
Intensive cropland on hillsides	15.4	84.6	100.0
Intensive cropland in marshlands	54.3	45.7	100.0
Rangelands	12.9	87.1	100.0
Total	16.8	83.2	100.0
LSF	94.8	5.2	100.0

2017 Seasonal Agricultural Survey - Season A

Table 16: Share of pure and mixed crop agricultural land per district (in percentage)

District	Pure cropping	Mixed cropping	Total
Nyarugenge	24.6	75.4	100.0
Gasabo	11.4	88.6	100.0
Kicukiro	20.0	80.0	100.0
Nyanza	12.3	87.7	100.0
Gisagara	12.1	87.9	100.0
Nyaruguru	30.5	69.5	100.0
Huye	17.1	82.9	100.0
Nyamagabe	18.3	81.7	100.0
Ruhango	16.5	83.5	100.0
Muhanga	13.8	86.2	100.0
Kamonyi	19.8	80.2	100.0
Karongi	21.3	78.7	100.0
Rutsiro	33.0	67.0	100.0
Rubavu	47.8	52.2	100.0
Nyabihu	32.1	67.9	100.0
Ngororero	21.0	79.0	100.0
Rusizi	15.0	85.0	100.0
Nyamasheke	12.3	87.7	100.0
Rulindo	14.7	85.3	100.0
Gakenke	12.8	87.2	100.0
Musanze	38.7	61.3	100.0
Burera	36.7	63.3	100.0
Gicumbi	31.9	68.1	100.0
Rwamagana	5.4	94.6	100.0
Nyagatare	14.1	85.9	100.0
Gatsibo	8.1	91.9	100.0
Kayonza	11.3	88.7	100.0
Kirehe	11.3	88.7	100.0
Ngoma	3.6	96.4	100.0
Bugesera	14.1	85.9	100.0
Total	16.8	83.2	100.0

2017 Seasonal Agricultural Survey - Season A

Table 17: Sowing dates per crop (Percentage) in segments

Crop	Before 01/09	Between 01-15 /09	Between 16- 30/09	Between 01-15/10	Between16-31/10	After 31/10	Not applicable	Total
Maize	4.3	20.3	28.4	34.2	8.7	4.0	0.1	100.0
Paddy rice	100.0	-	-	-	-	-	-	100.0
Sorghum	20.2	29.4	23.1	12.9	2.9	3.2	8.3	100.0
Wheat	11.1	21.1	14.4	23.3	17.8	10.0	2.2	100.0
Bush bean	0.8	15.2	26.7	43.4	10.2	3.1	0.6	100.0
Climbing bean	5.3	31.1	31.5	26.3	4.5	1.0	0.5	100.0
Pea	4.3	24.4	26.2	33.7	6.2	4.7	0.6	100.0
Irish potato	8.9	14.9	15.4	17.5	7.4	12.6	23.3	100.0
Sweet potato	17.8	13.5	11.2	17.4	10.0	26.7	3.4	100.0
Soybean	0.8	18.0	26.1	38.0	10.8	6.1	0.3	100.0
Groundnut	1.4	17.8	32.0	38.6	7.1	0.7	2.4	100.0
Taro	21.3	17.8	13.7	15.7	3.6	5.4	22.5	100.0
Yam	7.1	16.7	21.4	28.6	7.1	16.7	2.4	100.0
Cassava	11.9	18.0	17.0	19.5	4.7	5.3	23.6	100.0
Cooking banana	12.2	1.0	0.4	0.8	0.2	0.3	85.1	100.0
Dessert banana	10.1	0.8	0.4	0.8	0.3	0.4	87.3	100.0
Banana for beer	7.5	0.9	0.4	0.7	0.2	0.5	89.8	100.0
Fruits	16	3	2	1	1	4	73	100.0
vegetables	19.7	17.8	11.0	16.6	7.7	18.4	8.7	100.0
Other crops	7.9	0.6	0.8	1.5	0.8	1.3	87.3	100.0
Other cereals	0.8	11.9	20.4	47.7	11.5	2.7	5.0	100.0
Overall	9.9	14.0	16.5	21.1	5.7	5.2	27.7	100.0

2017 Seasonal Agricultural Survey - Season A

Table 18: Sowing dates per crop (Percentage) for Large Scale farmers

crop	Before 01/09	Between 01-15 /09	Between 16- 30/09	Between 01-15/10	Between1 6- 31/10	After 31/10	Not applicable	Total
Maize	3.0	30.1	28.3	32.5	4.2	1.2	0.6	100
Paddy rice	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Sorghum	0.0	52.2	26.1	4.4	8.7	0.0	8.7	100
Wheat	0.0	14.3	28.6	42.9	14.3	0.0	0.0	100
Bush bean	0.0	18.5	28.4	44.4	7.4	1.2	0.0	100
Climbing bean	0.0	71.4	14.3	14.3	0.0	0.0	0.0	100
Pea	0.0	0.0	66.7	33.3	0.0	0.0	0.0	100
Irish potato	43.8	6.3	25.0	6.3	18.8	0.0	0.0	100
Sweet potato	29.4	0.0	17.7	17.7	0.0	23.5	11.8	100
Soybean	0.0	11.8	41.2	5.9	35.3	0.0	5.9	100
Groundnut	0.0	7.1	14.3	71.4	7.1	0.0	0.0	100
Taro	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100
Cassava	11.1	0.0	0.0	0.0	0.0	11.1	77.8	100
Cooking banana	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100
Dessert banana	4.8	0.0	0.0	0.0	0.0	0.0	95.2	100
Banana for beer	0.0	10.0	0.0	0.0	0.0	0.0	90.0	100
Fruits	17.1	2.9	8.6	0.0	5.7	0.0	65.7	100
vegetables	13.0	2.6	14.3	9.1	5.2	55.8	0.0	100
Other crops	41.0	1.0	11.4	9.5	3.8	1.0	32.4	100
Other cereals	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100
Overall	22.9	12.4	16.5	17.5	4.8	7.0	19.0	100

2017 Seasonal Agricultural Survey - Season A

Table 19: Sowing dates per district (Percentage)

District	Before 01/09	Between 01-15 /09	Between 16- 30/09	Between 01-15/10	Between16-31/10	After 31/10	Not applicable	Total
Nyarugenge	8.7	9.7	19.0	19.8	2.2	3.5	37.1	100.0
Gasabo	8.1	13.8	15.1	22.8	2.9	4.7	32.7	100.0
Kicukiro	12.4	11.2	14.5	28.2	3.4	3.9	26.3	100.0
Nyanza	4.0	9.2	6.6	25.3	15.5	9.8	29.7	100.0
Gisagara	8.4	8.8	7.6	36.2	9.9	4.3	24.8	100.0
Nyaruguru	13.7	8.6	8.1	20.3	7.2	12.7	29.4	100.0
Huye	10.6	3.8	7.4	37.2	8.5	6.8	25.7	100.0
Nyamagabe	14.2	19.4	16.8	15.3	2.7	7.8	23.8	100.0
Ruhango	3.8	9.8	15.0	22.5	11.7	12.0	25.3	100.0
Muhanga	3.9	16.3	15.0	11.1	2.4	8.2	43.3	100.0
Kamonyi	8.2	7.6	18.1	28.5	4.8	4.4	28.4	100.0
Karongi	11.4	18.6	21.5	10.6	5.1	4.1	28.7	100.0
Rutsiro	18.7	21.2	16.1	8.0	4.5	9.5	22.0	100.0
Rubavu	32.9	28.6	13.0	6.0	3.1	3.6	12.7	100.0
Nyabihu	22.0	18.7	16.9	19.1	3.7	5.9	13.7	100.0
Ngororero	12.3	22.3	13.1	8.9	5.0	7.7	30.6	100.0
Rusizi	8.8	6.9	14.5	29.2	6.7	4.0	29.8	100.0
Nyamasheke	5.3	22.1	23.1	15.6	4.0	4.7	25.3	100.0
Rulindo	3.8	10.1	29.7	7.9	2.0	1.7	44.8	100.0
Gakenke	11.6	15.3	18.8	13.5	3.2	4.7	32.8	100.0
Musanze	19.7	23.2	10.8	10.4	4.0	8.5	23.4	100.0
Burera	17.7	22.7	11.3	12.6	4.7	10.8	20.3	100.0
Gicumbi	11.1	12.1	19.9	17.3	5.3	4.7	29.7	100.0
Rwamagana	8.3	9.8	15.1	26.9	7.1	4.1	28.7	100.0
Nyagatare	13.6	25.0	25.8	14.2	2.4	1.2	17.9	100.0
Gatsibo	5.7	7.7	20.6	30.5	3.8	2.2	29.6	100.0
Kayonza	4.6	13.6	17.6	21.5	5.6	5.0	32.2	100.0
Kirehe	8.9	11.2	10.9	22.9	11.8	5.2	29.2	100.0
Ngoma	4.0	7.2	24.4	21.1	4.8	2.6	35.9	100.0
Bugesera	15.0	19.7	14.4	26.1	6.9	7.2	10.7	100.0
Overall	9.9	14.0	16.5	21.1	5.7	5.2	27.7	100.0

2017 Seasonal Agricultural Survey - Season A

Table 20: Type of seeds used by stratum (Percentage)

Stratum	Traditional seeds	Improved	Total
Intensive cropland on hillsides	95.0	5.0	100.0
Intensive cropland in marshlands	80.4	19.6	100.0
Rangelands	96.0	4.0	100.0
Total	93.8	6.2	100.0
LSF	48.0	52.0	100.0

2017 Seasonal Agricultural Survey - Season A

Table 21: Type of seeds used by district (Percentage)

District	Traditional seeds	Improved	Total
Nyarugenge	97.5	2.5	100.0
Gasabo	96.4	3.6	100.0
Kicukiro	93.7	6.3	100.0
Nyanza	93.4	6.6	100.0
Gisagara	91.5	8.5	100.0
Nyaruguru	88.2	11.8	100.0
Huye	96.9	3.1	100.0
Nyamagabe	96.0	4.0	100.0
Ruhango	97.4	2.6	100.0
Muhanga	98.4	1.6	100.0
Kamonyi	93.1	6.9	100.0
Karongi	92.1	7.9	100.0
Rutsiro	85.3	14.7	100.0
Rubavu	91.1	8.9	100.0
Nyabihu	90.9	9.1	100.0
Ngororero	96.5	3.5	100.0
Rusizi	91.4	8.6	100.0
Nyamasheke	98.1	1.9	100.0
Rulindo	95.9	4.1	100.0
Gakenke	89.3	10.7	100.0
Musanze	92.6	7.4	100.0
Burera	92.7	7.3	100.0
Gicumbi	95.6	4.4	100.0
Rwamagana	93.2	6.9	100.0
Nyagatare	94.2	5.8	100.0
Gatsibo	95.0	5.0	100.0
Kayonza	94.2	5.8	100.0
Kirehe	93.6	6.4	100.0
Ngoma	93.3	6.7	100.0
Bugesera	93.8	6.2	100.0
Overall	93.8	6.2	100.0

2017 Seasonal Agricultural Survey - Season A

Table 22: Type of seeds used by crop (Percentage)

Crop	Traditional seeds	Improved seeds	Total
Maize	76.4	23.6	100.0
Paddy rice	42.6	57.4	100.0
Sorghum	99.8	0.3	100.0
Wheat	70.0	30.0	100.0
Bush bean	98.7	1.3	100.0
Climbing bean	98.1	1.9	100.0
Pea	100.0	-	100.0
Irish potato	98.0	2.0	100.0
Sweet potato	99.8	0.2	100.0
Soybean	98.3	1.7	100.0
Groundnut	100.0	-	100.0
Taro	100.0		100.0
Yam	100.0		100.0
Cassava	99.3	0.7	100.0
Cooking banana	99.2	0.8	100.0
Dessert banana	97.5	2.5	100.0
Banana for beer	99.2	0.8	100.0
Fruits	97.1	2.9	100.0
vegetables	88.1	11.9	100.0
Other crops	74.4	25.6	100.0
Other cereals	100.0	-	100.0
Overall	93.8	6.2	100.0

2017 Seasonal Agricultural Survey - Season A

Table 23: Source of improved seeds by district (Percentage)

District	RAB/ SECTOR	Recognize seed multipliers/ NGO	Shops of improved seeds	Other sources	Total
Nyarugenge	47.8	13.0	34.8	4.4	100.0
Gasabo	23.7	21.1	52.6	2.6	100.0
Kicukiro	56.9	17.2	13.8	12.1	100.0
Nyanza	75.8	16.1	8.1	-	100.0
Gisagara	30.6	26.2	29.5	13.7	100.0
Nyaruguru	63.5	10.4	20.8	5.2	100.0
Huye	36.1	22.2	33.3	8.3	100.0
Nyamagabe	59.0	15.4	20.5	5.1	100.0
Ruhango	39.1	8.7	52.2	-	100.0
Muhanga	5.0	25.0	60.0	10.0	100.0
Kamonyi	46.2	9.0	29.5	15.4	100.0
Karongi	24.3	54.1	20.3	1.4	100.0
Rutsiro	30.8	49.3	11.0	8.9	100.0
Rubavu	43.2	24.3	32.4	-	100.0
Nyabihu	9.4	-	90.6	-	100.0
Ngororero	59.5	29.7	10.8	-	100.0
Rusizi	43.4	43.4	4.4	8.9	100.0
Nyamasheke	50.0	29.2	8.3	12.5	100.0
Rulindo	34.5	-	65.5	-	100.0
Gakenke	51.1	6.8	39.1	3.0	100.0
Musanze	93.9	1.5	4.6	-	100.0
Burera	90.8	1.5	6.2	1.5	100.0
Gicumbi	28.6	4.1	67.4	-	100.0
Rwamagana	70.2	7.8	22.0	-	100.0
Nyagatare	35.8	7.4	51.1	5.8	100.0
Gatsibo	30.6	26.1	27.6	15.7	100.0
Kayonza	47.3	12.7	38.2	1.8	100.0
Kirehe	12.0	13.3	28.0	46.7	100.0
Ngoma	18.4	39.1	37.9	4.6	100.0
Bugesera	35.9	24.5	28.3	11.3	100.0
Overall	42.2	19.3	30.0	8.5	100.0

2017 Seasonal Agricultural Survey - Season A

Table 24: Source of improved seeds by crop (Percentage) in segments

Crop	RAB/ SECTOR	Recognize seed multipliers /NGO	Shops of improved seeds	Other sources	Total
Maize	49.2	17.4	30.9	2.5	100.0
Paddy rice	9.9	7.9	45.6	36.5	100.0
Sorghum	100.0	-	-	-	100.0
Wheat	85.2	-	14.8	-	100.0
Bush bean	25.8	45.2	25.8	3.2	100.0
Climbing bean	45.2	41.9	6.5	6.5	100.0
Irish potato	13.3	63.3	23.3	-	100.0
Sweet potato	80.0	20.0	-	-	100.0
Soybean	50.0	27.8	16.7	5.6	100.0
Cassava	50.0	25.0	17.5	7.5	100.0
Cooking banana	30.8	61.5	-	7.7	100.0
Dessert banana	24.1	46.3	-	29.6	100.0
Banana for beer	12.0	48.0	12.0	28.0	100.0
Fruits	25.0	-	25.0	50.0	100.0
vegetables	6.6	6.6	83.6	3.3	100.0
Other crops	49.6	22.1	4.6	23.7	100.0
Overall	42.2	19.3	30.0	8.5	100.0

2017 Seasonal Agricultural Survey - Season A

Table 25: Source of improved seeds by crop (Percentage) for Large Scale Farmers

crop	RAB / SECTOR	Recognized seed multipliers/ NGO	Shops of improved seeds	Other sources	Total
Maize	55.83	13.33	26.67	4.17	100
Paddy rice	20.34	69.49	3.39	6.78	100
Wheat	40	0	20	40	100
Bush bean	35	35	15	15	100
Climbing bean	75	25	0	0	100
Irish potato	75	25	0	0	100
Sweet potato	0	100	0	0	100
Soybean	77.78	11.11	11.11	0	100
Groundnut	0	100	0	0	100
Cassava	100	0	0	0	100
Cooking banana	50	50	0	0	100
Dessert banana	63.64	27.27	0	9.09	100
Banana for beer	40	40	20	0	100
Fruits	55.56	25.93	14.81	3.7	100
vegetables	0	6.78	84.75	8.47	100
Other crops	47.22	11.11	41.67	0	100
Overall	39.95	25.66	28.84	5.56	100

2017 Seasonal Agricultural Survey-Season A

Table 26: Percentage of plots with organic fertilizers use per stratum

Stratum	Used	Not used	Total
Intensive cropland on hillsides	51.8	48.2	100
Intensive cropland in marshlands	45.1	54.9	100
Rangelands	26.2	73.8	100
Total	49.9	50.1	100
LSF	43.6	56.5	100

2017 Seasonal Agricultural Survey - Season A

Table 27: Percentage of plots with organic fertilizer use per district

District	Used	Not used	Total
Nyarugenge	35.2	64.8	100
Gasabo	57.4	42.6	100
Kicukiro	45.2	54.8	100
Nyanza	41.8	58.2	100
Gisagara	54.2	45.8	100
Nyaruguru	78.7	21.3	100
Huye	58.1	41.9	100
Nyamagabe	72.5	27.5	100
Ruhango	45.5	54.5	100
Muhanga	72	28	100
Kamonyi	61.2	38.8	100
Karongi	61.5	38.6	100
Rutsiro	67.4	32.7	100
Rubavu	24.3	75.7	100
Nyabihu	60.1	39.9	100
Ngororero	70.8	29.2	100
Rusizi	41	59	100
Nyamasheke	64.7	35.3	100
Rulindo	62	38	100
Gakenke	82.6	17.4	100
Musanze	52.5	47.5	100
Burera	55.7	44.3	100
Gicumbi	70.6	29.4	100
Rwamagana	45.8	54.2	100
Nyagatare	23	77	100
Gatsibo	41.2	58.8	100
Kayonza	26.1	73.9	100
Kirehe	42.9	57.1	100
Ngoma	44.4	55.6	100
Bugesera	23.1	77	100
Total	49.9	50.1	100

2017 Seasonal Agricultural Survey - Season A

Table 28: Percentage of plots with inorganic fertilizer use per stratum

Stratum	Used	Not used	Total
Intensive cropland on hillsides	15.1	84.9	100
Intensive cropland in marshland	48.8	51.2	100
Rangelands	7.8	92.3	100
Overall	18.9	81.1	100
LSF	43.7	56.3	100.0

2017 Seasonal Agricultural Survey - Season A

Table 29: Table Percentage of plots with inorganic fertilizer use per district

District	Used	Not used	Total
Nyarugenge	3.3	96.7	100
Gasabo	2.6	97.4	100
Kicukiro	10.7	89.3	100
Nyanza	7.1	92.9	100
Gisagara	25	75	100
Nyaruguru	43.2	56.8	100
Huye	21.4	78.6	100
Nyamagabe	25.6	74.4	100
Ruhango	4.5	95.5	100
Muhanga	4	96	100
Kamonyi	3.3	96.7	100
Karongi	26.5	73.5	100
Rutsiro	25.8	74.2	100
Rubavu	35.8	64.2	100
Nyabihu	35.5	64.5	100
Ngororero	14	86	100
Rusizi	43.5	56.5	100
Nyamasheke	25	75	100
Rulindo	9.5	90.5	100
Gakenke	41.7	58.3	100
Musanze	26.1	73.9	100
Burera	23.4	76.6	100
Gicumbi	10.8	89.2	100
Rwamagana	21.5	78.5	100
Nyagatare	16.6	83.4	100
Gatsibo	10.3	89.7	100
Kayonza	12.1	87.9	100
Kirehe	19.2	80.8	100
Ngoma	17.7	82.3	100
Bugesera	8.1	91.9	100
Overall	18.9	81.1	100

2017 Seasonal Agricultural Survey - Season A

Table 30: Types of inorganic fertilizers use per stratum (in percentage)

	NPK 17-17	NPK 20-10	NPK 25-5	Urea	Liquid urea	DAP	TSP	KCL/MOP	Other Fertilizers	Total
Intensive cropland on hillsides	26.2	1.4	0.1	29.1	0.6	42.1	0.0	-	0.4	100
Intensive cropland in marshlands	29.4	0.1	-	40.7	2.5	23.2	0.1	1.3	2.8	100
Rangelands	24.2	3.2	-	32.3	-	40.3	-	-	-	100
Overall	27.3	0.9	0.1	33.3	1.3	35.3	0.1	0.5	1.3	100
LSF	29.5	0.8	0.3	38.2	1.3	23.7		1.1	5.1	100

2017 Seasonal Agricultural Survey - Season A

Table 31: Types of inorganic fertilizers use per district (in percentage)

Districts	NPK 17-17	NPK 20-10	NPK 25-5	Urea	Liquid urea	DAP	TSP	KCL/MOP	Other Fertilizers	Total
Nyarugenge	14.3	-	-	57.1	-	28.6	-	-	-	100
Gasabo	30	-	-	50	-	20	-	-	-	100
Kicukiro	20.9	-	-	37.2	2.3	37.2	-	-	2.3	100
Nyanza	5.7	-	-	37.1	-	54.3	-	-	2.9	100
Gisagara	27.1	0.4	-	44.3	-	28.2	-	-	-	100
Nyaruguru	23.9	0.6	-	14.7	-	60.7	-	-	-	100
Huye	44.1	-	-	48.7	-	7.2	-	-	-	100
Nyamagabe	15.8	-	-	32.3	-	51.9	-	-	-	100
Ruhango	40.9	-	4.6	31.8	-	22.7	-	-	-	100
Muhanga	9.1	-	-	22.7	-	68.2	-	-	-	100
Kamonyi	4.4	-	-	47.8	-	47.8	-	-	-	100
Karongi	15.2	-	-	35.8	0.7	47.7	-	-	0.7	100
Rutsiro	50.6	3.5	-	21.3	-	24.7	-	-	-	100
Rubavu	71.4	1.2	-	11.2	6.2	9.9	-	-	-	100
Nyabihu	59.5	-	-	21.6	0.5	18.5	-	-	-	100
Ngororero	7	-	-	24	-	68	-	-	1	100
Rusizi	27	0.6	-	37.8	-	30.8	-	-	3.8	100
Nyamasheke	11.3	5.7	-	21	-	62.1	-	-	-	100
Rulindo	3.1	3.1	-	46.9	-	46.9	-	-	-	100
Gakenke	6.2	-	-	42.2	0.7	50.5	0.4	-	-	100
Musanze	50	-	-	21.5	0.8	26.2	-	-	1.5	100
Burera	53.7	-	-	15.7	-	30.6	-	-	-	100
Gicumbi	23.7	-	-	44.1	1.7	30.5	-	-	-	100
Rwamagana	15.6	3.3	0.6	35	-	42.2	-	-	3.3	100
Nyagatare	23.3	-	-	46.3	8.6	19.6	-	-	2.1	100
Gatsibo	17.7	1.3	0.7	39.9	-	39.9	-	-	0.7	100
Kayonza	30.8	3.1	-	34	-	27	0.6	-	4.4	100
Kirehe	5.2	1.3	-	28.5	0.4	51.7	-	8.2	4.7	100
Ngoma	12.8	2.3	-	39.5	-	45.4	-	-	-	100
Bugesera	59.5	-	-	21.4	-	19.1	-	-	-	100
Overall	27.3	0.9	0.1	33.3	1.3	35.3	0.1	0.5	1.3	100

2017 Seasonal Agricultural Survey - Season A

Table 32: Percentage of plots with pesticides use per stratum

Stratum	Used	Not used	Total
Intensive cropland on hillsides	7.8	92.3	100
Intensive cropland in marshlands	29.1	71	100
Rangelands	3.2	96.8	100
Overall	10.1	89.9	100
LSF	38	62	100

2017 Seasonal Agricultural Survey - Season A

Table 33: Percentage of plots with pesticides use per district

District	Used	Not used	Total
Nyarugenge	3.3	96.7	100
Gasabo	3.6	96.5	100
Kicukiro	7.2	92.8	100
Nyanza	5.3	94.7	100
Gisagara	21.7	78.3	100
Nyaruguru	19.8	80.2	100
Huye	9.4	90.6	100
Nyamagabe	8.1	91.9	100
Ruhango	5.3	94.7	100
Muhanga	2.3	97.8	100
Kamonyi	3.3	96.7	100
Karongi	9	91	100
Rutsiro	15.2	84.8	100
Rubavu	34.2	65.8	100
Nyabihu	27	73	100
Ngororero	5.2	94.8	100
Rusizi	16.4	83.6	100
Nyamasheke	4.5	95.5	100
Rulindo	4.5	95.5	100
Gakenke	10.5	89.5	100
Musanze	21.2	78.8	100
Burera	22.6	77.4	100
Gicumbi	3.1	96.9	100
Rwamagana	10.6	89.5	100
Nyagatare	13	87	100
Gatsibo	3.2	96.8	100
Kayonza	2.4	97.6	100
Kirehe	8.7	91.3	100
Ngoma	5.4	94.6	100
Bugesera	3.6	96.4	100
Overall	10.1	89.9	100

2017 Seasonal Agricultural Survey - Season A

Table 34: Type of pesticides used by stratum (in percentage)

Stratum	Dithane	Ridomil	Dimethoate	Cypermethrine	Dursiban	Tilt	Rocket	Other Pesticides	Total
Intensive cropland on hillsides	29.0	9.8	6.6	39.5	1.2	0.2	-	13.7	100
Intensive cropland in marshlands	7.8	0.8	13.7	48.7	2.1	-	-	27.0	100
Rangelands	30.8	15.4	-	26.9	-	-	-	26.9	100
Overall	21.8	6.9	8.9	42.4	1.5	0.1	-	18.4	100
LSF	8.7	1.8	3.9	31.4	-	-	8.9	45.4	100

2017 Seasonal Agricultural Survey - Season A

Table 35: Type of pesticides used by District (in percentage)

District	Dithane	Ridomil	Dimethoate	Cypermethrine	Dursiban	Tilt	Rocket	Other Pesticides	Total
Nyarugenge	36.4	-	-	-	-	-	-	63.6	100.0
Gasabo	26.7	-	-	20.0	-	-	-	53.3	100.0
Kicukiro	10.7	7.1	-	21.4	-	-	-	60.7	100.0
Nyanza	9.5	4.8	14.3	66.7	-	-	-	4.8	100.0
Gisagara	8.8	-	8.8	63.5	0.6	-	-	18.2	100.0
Nyaruguru	29.2	-	-	43.1	-	-	-	27.7	100.0
Huye	8.9	2.2	4.4	64.4	-	-	-	20.0	100.0
Nyamagabe	29.4	-	2.9	67.7	-	-	-	-	100.0
Ruhango	15.0	15.0	-	65.0	-	-	-	5.0	100.0
Muhanga	20.0	-	-	70.0	10.0	-	-	-	100.0
Kamonyi	13.3	-	-	60.0	-	-	-	26.7	100.0
Karongi	3.3	-	10.0	70.0	-	3.3	-	13.3	100.0
Rutsiro	21.5	20.3	7.6	30.4	5.1	-	-	15.2	100.0
Rubavu	34.5	26.9	1.0	37.6	-	-	-	-	100.0
Nyabihu	40.7	20.9	9.9	28.6	-	-	-	-	100.0
Ngororero	8.7	4.4	-	78.3	-	-	-	8.7	100.0
Rusizi	10.6	-	32.9	24.7	12.9	-	-	18.8	100.0
Nyamasheke	10.0	5.0	-	60.0	5.0	-	-	20.0	100.0
Rulindo	27.3	-	27.3	45.5	-	-	-	-	100.0
Gakenke	9.1	4.6	4.6	79.6	-	-	-	2.3	100.0
Musanze	54.8	2.4	12.1	27.4	-	-	-	3.2	100.0
Burera	45.6	2.4	6.4	44.8	-	-	-	0.8	100.0
Gicumbi	53.9	15.4	-	23.1	7.7	-	-	-	100.0
Rwamagana	15.9	1.5	15.9	29.0	7.3	-	-	30.4	100.0
Nyagatare	3.0	-	15.5	38.6	0.9	0.4	-	41.6	100.0
Gatsibo	2.1	-	-	44.7	-	-	-	53.2	100.0
Kayonza	25.0	-	29.2	16.7	-	-	-	29.2	100.0
Kirehe	-	-	6.5	50.0	-	-	-	43.5	100.0
Ngoma	10.5	-	-	68.4	-	-	-	21.1	100.0
Bugesera	-	7.7	-	7.7	15.4	-	-	69.2	100.0
Overall	21.8	6.9	8.9	42.4	1.5	0.1	-	18.4	100.0

2017 Seasonal Agricultural Survey - Season A

Table 36: Use of Irrigation per stratum (Percentage)

Stratum	Used	Not used	Total
Intensive cropland on hillsides	1.0	99.0	100.0
Intensive cropland in marshlands	26.2	73.8	100.0
Rangelands	0.4	99.7	100.0
Overall	4.0	96.0	100.0
LSF	27.8	72.2	100.0

2017 Seasonal Agricultural Survey - Season A

Table 37: Use of Irrigation per district (Percentage)

District	Used	Not used	Total
Nyarugenge	2.0	98.1	100.0
Gasabo	2.3	97.7	100.0
Kicukiro	4.1	95.9	100.0
Nyanza	4.5	95.6	100.0
Gisagara	9.8	90.2	100.0
Nyaruguru	3.8	96.2	100.0
Huye	19.0	81.0	100.0
Nyamagabe	0.5	99.5	100.0
Ruhango	2.5	97.5	100.0
Muhanga	0.8	99.3	100.0
Kamonyi	0.8	99.2	100.0
Karongi	0.3	99.7	100.0
Rutsiro	0.2	99.8	100.0
Rubavu	-	100.0	100.0
Nyabihu	0.3	99.7	100.0
Ngororero	0.3	99.8	100.0
Rusizi	18.0	82.0	100.0
Nyamasheke	1.1	99.0	100.0
Rulindo	1.5	98.5	100.0
Gakenke	1.5	98.5	100.0
Musanze	0.3	99.8	100.0
Burera	0.5	99.5	100.0
Gicumbi	1.7	98.3	100.0
Rwamagana	2.5	97.6	100.0
Nyagatare	8.9	91.1	100.0
Gatsibo	2.6	97.4	100.0
Kayonza	4.7	95.3	100.0
Kirehe	3.7	96.3	100.0
Ngoma	1.8	98.2	100.0
Bugesera	0.7	99.4	100.0
Overall	4.0	96.0	100.0

2017 Seasonal Agricultural Survey - Season A

Table 38: Types of irrigation used by stratum (in percentage)

Stratum	Surface irrigation	Drip irrigation	Sprinkler irrigation	Traditional irrigation	Total
Intensive cropland on hillsides	38.2	0.0	4.6	57.3	100.0
Intensive cropland in marshlands	85.6	0.5	0.9	13.0	100.0
Rangelands	0.0	0.0	0.0	100.0	100.0
Overall	75.4	0.4	1.7	22.5	100.0
LSF	90.18	0.89	8.04	0.89	100.0

2017 Seasonal Agricultural Survey - Season A

Table 39: Types of irrigation used by district (in percentage)

District	Surface irrigation	Drip irrigation	Sprinkler irrigation	Traditional irrigation	Total
Nyarugenge	0	0	0	100	100
Gasabo	14.29	0	14.29	71.43	100
Kicukiro	53.85	0	7.69	38.46	100
Nyanza	6.67	0	0	93.33	100
Gisagara	77.27	0	0	22.73	100
Nyaruguru	0	0	0	100	100
Huye	92.21	1.3	0	6.49	100
Nyamagabe	0	0	0	100	100
Ruhango	88.89	0	0	11.11	100
Muhanga	25	0	0	75	100
Kamonyi	33.33	0	0	66.67	100
Karongi	100	0	0	0	100
Rutsiro	0	0	100	0	100
Nyabihu	0	0	0	100	100
Ngororero	0	0	0	100	100
Rusizi	95.06	0	0	4.94	100
Nyamasheke	50	0	0	50	100
Rulindo	0	0	25	75	100
Gakenke	0	0	28.57	71.43	100
Musanze	0	0	0	100	100
Burera	0	0	0	100	100
Gicumbi	14.29	0	0	85.71	100
Rwamagana	30.77	0	7.69	61.54	100
Nyagatare	90.2	0	1.96	7.84	100
Gatsibo	86.36	4.55	0	9.09	100
Kayonza	92.31	0	0	7.69	100
Kirehe	85.71	0	0	14.29	100
Ngoma	83.33	0	0	16.67	100
Bugesera	100	0	0	0	100
Overall	75.42	0.37	1.68	22.53	100

2017 Seasonal Agricultural Survey - Season A

Table 40: Types of irrigation used by crop type (in percentage) in segments

Crop	Surface irrigation	Drip irrigation	Sprinkler irrigation	Traditional irrigation	Total
Maize	17.1	-	14.6	68.3	100
Paddy rice	99.7	0.3	-	-	100
Bush bean	16.7	-	-	83.3	100
Climbing bean	33.3	-	-	66.7	100
Irish potato	-	-	-	100	100
Sweet potato	23.1	3.9	3.9	69.2	100
Soybean	25	-	-	75	100
Taro	-	-	-	100	100
Cooking banana	-	-	-	100	100
Dessert banana	-	-	-	100	100
Fruits	50	-	12.5	37.5	100
Vegetables	15.6	-	1.6	82.8	100
Other crops	50	-	-	50	100
Overall	75.7	0.4	1.7	22.3	100

2017 Seasonal Agricultural Survey - Season A

Table: 41: Types of irrigation used by crop type (in percentage) for Large Scale Farmers

Crop name	Surface irrigation	Drip irrigation	Sprinkler irrigation	Traditional irrigation	Total
Maize	70.8	4.2	20.8	4.2	100.0
Paddy rice	99.2	0.0	0.0	0.8	100.0
Wheat	0.0	0.0	100.0	0.0	100.0
Bush bean	0.0	0.0	100.0	0.0	100.0
Soybean	0.0	0.0	100.0	0.0	100.0
Cassava	100.0	0.0	0.0	0.0	100.0
Cooking banana	100.0	0.0	0.0	0.0	100.0
Banana for beer	100.0	0.0	0.0	0.0	100.0
Fruits	83.3	0.0	16.7	0.0	100.0
vegetables	95.5	0.0	4.6	0.0	100.0
Other crops	28.6	14.3	57.1	0.0	100.0
Overall	90.2	0.9	8.0	0.9	100.0

2017 Seasonal Agricultural Survey - Season A

Table 42: Source of used water for irrigation per stratum (in percentage)

Stratum	Rainfall	Rain- harvesting water	WASAC water	Underground water	Lake water	Stream water	Recycled water	Other source	Total
Intensive cropland on hillsides	4.4	0.9	7.0	36.8	7.0	32.5	0.9	10.5	100.0
Intensive cropland in marshlands	2.4	7.5	-	42.1	0.7	44.9	0.9	1.4	100.0
Rangelands	-	-	-	-	-	100.0	-	-	100.0
Overall	2.8	6.1	1.5	40.8	2.0	42.6	0.9	3.3	100.0
LSF	1.3	2.2	22.8	42.4	28.1	3.1	-	-	100.0

2017 Seasonal Agricultural Survey - Season A

Table 43: Source of used water for irrigation per district (in percentage)

District	Rainfall	Rain-harvesting water	WASAC water	Underground water	Lake water	Stream water	Recycled water	Other source	Total
Nyarugenge	-	-	-	-	-	42.9	-	57.1	100.0
Gasabo	-	-	14.3	57.1	-	28.6	-	-	100.0
Kicukiro	-	-	30.8	15.4	-	46.2	-	7.7	100.0
Nyanza	-	-	-	81.3	-	6.3	12.5	-	100.0
Gisagara	7.6	4.6	-	74.2	-	4.6	-	9.1	100.0
Nyaruguru	-	-	-	25.0	-	50.0	16.7	8.3	100.0
Huye	1.3	-	-	46.8	-	52.0	-	-	100.0
Nyamagabe	-	-	-	-	-	100.0	-	-	100.0
Ruhango	66.7	22.2	-	11.1	-	-	-	-	100.0
Muhanga	-	-	-	-	-	100.0	-	-	100.0
Kamonyi	-	-	-	66.7	-	33.3	-	-	100.0
Karongi	-	-	-	100.0	-	-	-	-	100.0
Rutsiro	-	-	-	-	-	100.0	-	-	100.0
Nyabihu	-	-	-	-	-	100.0	-	-	100.0
Ngororero	-	-	-	100.0	-	-	-	-	100.0
Rusizi	-	32.1	-	19.8	-	43.2	1.2	3.7	100.0
Nyamasheke	20.0	-	-	-	40.0	40.0	-	-	100.0
Rulindo	-	-	20.0	-	-	60.0	-	20.0	100.0
Gakenke	-	14.3	-	28.6	-	57.1	-	-	100.0
Musanze	-	-	-	-	-	100.0	-	-	100.0
Burera	-	-	-	-	100.0	-	-	-	100.0
Gicumbi	14.3	-	-	42.9	-	42.9	-	-	100.0
Rwamagana	7.7	-	7.7	46.2	23.1	7.7	-	7.7	100.0
Nyagatare	-	1.0	-	27.5	-	71.6	-	-	100.0
Gatsibo	-	-	-	4.6	-	95.5	-	-	100.0
Kayonza	-	-	-	85.0	2.5	10.0	-	2.5	100.0
Kirehe	-	-	-	50.0	-	50.0	-	-	100.0
Ngoma	-	-	16.7	83.3	-	-	-	-	100.0
Bugesera	-	-	-	-	100.0	-	-	-	100.0
Overall	2.8	6.1	1.5	40.8	2.0	42.6	0.9	3.3	100.0

2017 Seasonal Agricultural Survey - Season A

Table 44: Percentage of plot with Anti-erosion activities use per stratum

Stratum	Used	Not used	Total
Intensive cropland on hillsides	68.9	31.1	100.0
Intensive cropland in marshlands	74.8	25.2	100.0
Rangelands	23.2	76.8	100.0
Overall	67.6	32.4	100.0
LSF	69.2	30.8	100.0

2017 Seasonal Agricultural Survey - Season A

Table 45: Percentage of plot with Anti-erosion activities use per District

District	Used	Not used	Total
Nyarugenge	58.0	42.0	100.0
Gasabo	71.9	28.1	100.0
Kicukiro	51.7	48.3	100.0
Nyanza	72.1	27.9	100.0
Gisagara	84.0	16.1	100.0
Nyaruguru	86.0	14.0	100.0
Huye	73.4	26.6	100.0
Nyamagabe	85.7	14.3	100.0
Ruhango	89.9	10.1	100.0
Muhanga	66.3	33.8	100.0
Kamonyi	83.8	16.2	100.0
Karongi	78.6	21.4	100.0
Rutsiro	77.3	22.7	100.0
Rubavu	51.9	48.2	100.0
Nyabihu	63.6	36.4	100.0
Ngororero	60.3	39.7	100.0
Rusizi	51.2	48.8	100.0
Nyamasheke	70.8	29.2	100.0
Rulindo	81.5	18.5	100.0
Gakenke	97.3	2.7	100.0
Musanze	77.4	22.6	100.0
Burera	80.1	20.0	100.0
Gicumbi	90.8	9.2	100.0
Rwamagana	73.1	26.9	100.0
Nyagatare	48.4	51.6	100.0
Gatsibo	51.6	48.4	100.0
Kayonza	55.4	44.6	100.0
Kirehe	48.3	51.7	100.0
Ngoma	68.8	31.2	100.0
Bugesera	51.0	49.0	100.0
Overall	67.6	32.4	100.0

2017 Seasonal Agricultural Survey - Season A

Table 46: Type of anti-erosion activities by stratum (Percentages)

Stratum	Ditches	Trees / Wind break/Shelterbelt	Bench terraces	Progressive terraces	Cover plants/glasses	Water drainage	Mulching	Beds/ridges	Others	Total
Intensive cropland on hillsides	13.6	2.9	4.5	9.7	59.2	0.8	3.7	5.3	0.4	100.0
Intensive cropland in marshlands	7.8	1.2	0.2	1.1	22.4	45.3	0.4	20.5	1.1	100.0
Rangelands	24.5	16.3	-	5.4	34.0	0.7	17.7	0.7	0.7	100.0
Overall	13.0	2.8	3.9	8.6	54.4	6.2	3.5	7.1	0.5	100.0
LSF	27.7	5.5	5.1	2.7	18.4	28.2	6.7	4.5	1.3	100.0

2017 Seasonal Agricultural Survey - Season A

Table 47: Types of anti-erosion activities by district (Percentages)

District	Ditches	Trees / Wind break/Shelterbelt	Bench terraces	Progressive terraces	Cover plants/glasses	Water drainage	Mulching	Beds/ridges	Others	Total
Nyarugenge	16.4	1.9	1.4	16.0	58.2	-	4.2	1.4	0.5	100.0
Gasabo	2.6	2.2	0.7	13.8	75.5	3.0	0.7	1.5	-	100.0
Kicukiro	32.0	-	4.6	12.4	43.8	0.5	2.6	4.1	-	100.0
Nyanza	7.0	3.0	0.4	-	68.2	0.4	1.5	19.6	-	100.0
Gisagara	33.7	0.3	5.0	6.0	33.9	13.0	0.8	7.1	0.3	100.0
Nyaruguru	11.2	1.9	4.5	14.9	58.9	0.8	0.3	6.9	0.5	100.0
Huye	15.5	0.6	-	0.3	58.5	22.7	0.9	1.2	0.3	100.0
Nyamagabe	4.5	0.8	7.9	5.3	66.7	3.4	1.1	7.1	3.2	100.0
Ruhango	7.8	1.0	-	2.9	67.4	9.7	2.6	8.6	-	100.0
Muhanga	31.3	0.8	5.7	4.6	53.3	0.8	0.3	3.0	0.3	100.0
Kamonyi	11.4	0.4	-	26.2	55.6	3.2	2.0	1.0	0.2	100.0
Karongi	7.8	0.3	4.7	23.8	55.3	4.1	3.1	0.6	0.3	100.0
Rutsiro	9.8	1.6	7.8	18.4	46.6	8.3	4.7	1.0	1.8	100.0
Rubavu	3.5	22.9	-	14.6	13.9	-	1.4	43.8	-	100.0
Nyabihu	2.9	4.2	15.8	10.0	53.9	-	1.2	12.0	-	100.0
Ngororero	9.9	1.4	2.8	29.3	49.5	2.5	2.2	2.2	0.3	100.0
Rusizi	10.0	7.0	-	8.9	39.4	31.3	2.3	0.8	0.4	100.0
Nyamasheke	18.2	4.8	11.0	2.1	55.3	0.7	4.5	2.8	0.7	100.0
Rulindo	-	1.0	3.1	10.4	80.3	1.6	1.0	2.6	-	100.0
Gakenke	2.9	7.1	4.4	2.7	76.5	2.9	2.9	0.2	0.4	100.0
Musanze	2.6	5.4	4.4	6.7	25.6	3.1	0.3	51.7	0.5	100.0
Burera	2.0	1.4	6.3	7.1	37.6	2.9	-	42.5	0.3	100.0
Gicumbi	1.9	1.5	10.5	7.5	75.8	2.2	0.2	0.4	-	100.0
Rwamagana	6.6	3.7	6.6	3.0	66.0	3.4	8.2	2.3	0.2	100.0
Nyagatare	11.2	5.2	-	8.6	54.5	12.5	5.7	1.2	1.1	100.0
Gatsibo	15.8	3.2	-	1.4	62.7	6.8	5.6	3.6	1.0	100.0
Kayonza	17.9	4.5	5.6	0.4	37.7	9.5	20.0	4.5	-	100.0
Kirehe	28.7	4.3	0.5	1.3	45.4	11.4	6.9	1.5	-	100.0
Ngoma	6.4	0.8	-	2.8	81.2	2.8	5.2	0.8	-	100.0
Bugesera	48.2	1.5	1.5	11.2	33.0	2.0	-	2.5	-	100.0
Overall	13.0	2.8	3.9	8.6	54.4	6.2	3.5	7.1	0.5	100.0

2017 Seasonal Agricultural Survey - Season A

Table 48: Degree of erosion per stratum (Percentage)

Stratum	Severe (Rill erosion, Gully erosion, Mass movement/landslides)	Moderate (Diffuse overland flow erosion, Overland flow erosion, erosion by infiltration)	Low (Splash erosion)	Total
Intensive cropland on hillsides	1.2	8.9	89.8	100.0
Intensive cropland in marshlands	0.1	4.3	95.6	100.0
Rangelands	1.4	5.5	93.1	100.0
Overall	1.1	8.2	90.7	100.0
LSF	5.0	8.5	86.5	100.0

2017 Seasonal Agricultural Survey - Season A

Table 49: Degree of erosion per district (Percentage)

District	Severe (Rill erosion, Gully erosion , Mass movement/landslides)	Moderate (Diffuse overland flow erosion, Overland flow erosion, erosion by infiltration)	Low (Splash erosion)	Total
Nyarugenge	0.3	6.5	93.2	100.0
Gasabo	0.7	7.7	91.6	100.0
Kicukiro	0.0	0.7	99.3	100.0
Nyanza	1.2	5.3	93.5	100.0
Gisagara	0.0	4.0	96.0	100.0
Nyaruguru	0.0	13.0	87.0	100.0
Huye	0.0	0.0	100.0	100.0
Nyamagabe	0.0	2.7	97.3	100.0
Ruhango	0.0	1.1	98.9	100.0
Muhanga	0.3	9.0	90.8	100.0
Kamonyi	1.3	15.9	82.8	100.0
Karongi	0.3	34.6	65.1	100.0
Rutsiro	1.8	29.0	69.2	100.0
Rubavu	0.4	11.1	88.5	100.0
Nyabihu	11.2	14.5	74.3	100.0
Ngororero	0.5	24.5	75.0	100.0
Rusizi	0.4	19.1	80.5	100.0
Nyamasheke	1.8	12.6	85.5	100.0
Rulindo	0.5	4.0	95.5	100.0
Gakenke	3.7	3.9	92.4	100.0
Musanze	0.3	2.5	97.3	100.0
Burera	4.9	13.6	81.5	100.0
Gicumbi	0.5	9.6	89.9	100.0
Rwamagana	0.0	3.8	96.2	100.0
Nyagatare	1.2	3.3	95.4	100.0
Gatsibo	0.4	3.4	96.3	100.0
Kayonza	0.1	3.4	96.5	100.0
Kirehe	2.5	3.4	94.1	100.0
Ngoma	0.3	5.4	94.3	100.0
Bugesera	0.0	3.6	96.4	100.0
Overall	1.1	8.2	90.7	100.0

2017 Seasonal Agricultural Survey - Season A