



Ministry of Agriculture and Animal Resources

Annual Report FY 2013-2014

Republic of Rwanda

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SECTION 1: INTRODUCTION AND SUMMARY OF SECTOR PERFORMANCE



1.1 Overview of the Agricultural Sector

The Rwandan economy exhibited impressive macroeconomic performance from 2001-2012. In this period the economy grew in real terms (GDP) at an annual average rate of 8 percent. This strong growth performance was accompanied by substantial improvements in living standards, significant progress toward the Millennium Development Goals (MDGs), rapid growth in household consumption levels and a fall in the poverty headcount ratio from 59 percent in 2001 to 45 percent in 2011. Agriculture was one of the main drivers of the socio-economic achievements in this period, significantly lifting rural households out of poverty. Although the share of agriculture in GDP decreased over this period from 37.3 percent to 31.2 percent, the sector remained the backbone of the Rwandan economy through the generation of employment and sources of income for the majority of households in the country (NISR, 2013). To illustrate, the sector contributed toward 28% of total economic growth and approximately 45% of the poverty reduction outcomes from 2001-2011.

The Rwandan agricultural sector is experiencing a period of transformation- this is evident in the significant sectorial progress achieved under its first and second strategic plans, PSTA I and PSTA II. Under PSTA II/CAADP I (2008-2012) the productivity and marketing of food production experienced a notable increase driven by a scaling up of productive investments in the Crop Intensification Programme (CIP) and the Land Use Consolidation Programme, along with subsidization of fertilizer, improved seeds, and land development costs. The period also observed impressive increases in milk production, largely attributed to the One Cow per Poor Family (Girinka) programme.

Over the next five years, as we approach the end point for Rwanda's overarching development framework Vision 2020, sectorial growth must be driven by both further yield increases and a more market driven approach. FY 2013/14 was the first year of implementation of phase III of the Programme for Strategic Transformation of Agriculture. PSTA III is an investment framework for private sector development, soft and hard infrastructure for agri-business and increased production of high value crops and processing. However, the strategy also recognises the opportunity for further yield increases in staple crops, to facilitate domestic food security. The approach is integrated - gender inclusivity and environmental sustainability are mainstreamed across programmes. In the short term, continued rapid food production increases will ensure further reductions in rural poverty and malnutrition. In the medium term, Rwandan agriculture will develop from a largely subsistence sector to a more knowledge-intensive, market-oriented sector, sustaining growth and adding value.

During the last financial year, the sector has made important steps in realising the vision of market oriented production. The Ministry of Agriculture and Animal Resources (MINAGRI), its two task forces of irrigation and mechanization (TF I&M) and post-harvest handling and storage (TF PHHS), the Single Project Implementation Unit (SPIU) and the two implementing bodies, the Rwanda Agriculture Board (RAB) and National Agricultural Export Development Board (NAEB), have worked in partnership to deliver strategic programmes and projects. This report outlines the achievements and challenges of the sector of the 2013-2014 FY. Further details can be found in the RAB and NAEB Annual Reports. The final chapter of the MINAGRI Annual Report also identifies priorities for the next financial year. It will be a major task to effect the systemic change required to double productivity and achieve ambitious national goals. It is only through a partnership based approach focused on implementation that MINAGRI, in collaboration with the private sector, donors and farmers, can effectively transform the sector, and drive forward Rwanda's overall development trajectory.

With the agricultural context explained, the rest of this chapter outlines progress in key agricultural intervention areas of crop production, animal production, irrigation, land husbandry and mechanization, post-harvest handling and storage, export promotion and key cross-cutting issues.

1.2 Progress towards Vision 2020

Vision 2020 defines the main goals which must be met for the country to achieve middle income status and reduced poverty by 2020. Progress towards meeting these targets continues, with key indicators pertaining to the agricultural sector illustrated in table 1 for FY 2013/14. The percentage of mechanized agricultural operations increased to 15%, up from 12% last year. Efforts directed toward soil conservation through terracing and erosion control ensured that 81% of the total land in Rwanda is now protected against soil erosion. Food security remains a national priority- the indicator for assessing progress toward the objective may however require some clarification. The 'Food Consumption Score' (FCS) is an internationally accepted World Food Programme (WFP) indicator that captures the frequency of consumption of different food groups within a household's diet. The indicator differentiates between three levels of food consumption- poor, borderline and acceptable. As compared

with the 2009 CFSVA and Nutrition Survey, the percentage of households with poor FCS declined by a percentage point, whereas those with borderline FCS showed a slight increase. On aggregate the number of food secure households in 2012 was not statistically differentiable from the number in 2009. However, this result may well be a function of the timing and nature of the two household surveys (the importance of seasonality in determining food stocks available to households and concerns about inter-temporal comparability). Given these concerns it is plausible that the percentage of food secure households between 2009 and 2012 in Rwanda actually showed an increase. Please refer to the CFSVA and Nutrition Survey Report 2012 for further details.

Table 1: Selected Vision 2020 Targets

Revised Selected Vision 2020 Indicators	2000 (calendar)	FY 2013-2014	2020 revised (calendar)	Source
Agricultural GDP growth (%)	9	3	8.5%	NISR
Agriculture as % of GDP	45	33	25%	NISR
Fertilizer application (kg/ha/annum)	0.5	32	50	MINAGRI
% of Agriculture Operations Mechanized	n.a.	15%	50%	MINAGRI
Food Security Indicator: Food Consumption Score	n.a.	Poor FCS: 4% Borderline: 17% (2012)	Poor FCS: 0% Borderline: 5%	CFSVA & Nutrition Survey, 2012
Soil erosion protection (% of cultivated land)	20	78.1%	91%	MINAGRI

The time series for the annual growth rate of the sector is depicted in Table 2. In FY 2013-14 the calculation of sectorial growth was based on the new agricultural seasonal survey conducted by the NISR (National Institute for Statistics Rwanda). Previously the sector's growth performance was computed from data sourced by the MINAGRI Crop Assessment Report. The data point for FY 2013/14 agricultural sector growth is therefore not comparable with the historical data owing to a change in computation methodology. Sectorial growth in FY 2013/14 was nonetheless adversely affected by insufficient rainfall in both Seasons A and B. This is elucidated upon in Section 1.4 under the Crop Production Report. Efforts to mitigate the sector's dependence on weather conditions through irrigation projects, crop intensification, and the mainstreaming of climate change awareness (and mitigation strategies) within the planning process were emphasized through the course of the year.

Table 2: Progress of Agricultural Sector

Growth Rate/Fiscal Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
GDP Growth Rate	8.0%	8.3%	4.3%	5.8%	9.5%	6.9%	5.1%
Agricultural Sector Growth Rate	4%	5%	5%	3%	8%	6%	3%
Agriculture as a % of GDP	34%	33%	34%	31%	33%	34%	33%
<i>Source: National Accounts FY 2013/14 (NISR)</i>							

1.3 Sectorial Roadmap toward Vision 2020 Objectives: EDPRS II & PSTA III

Vision 2020 is supported by the Economic Development and Poverty Reduction Strategy at the national level. EDPRS II, which was launched in 2013, identifies the agricultural sector as a key driver of inclusive economic growth. The agricultural sector contributes to the EDPRS II goals of rural development & foundational and cross-cutting issues. MINAGRI aids rural development by augmenting agricultural productivity and promoting the use of sustainable practices therein. The sector's efforts to promote food security and nutrition are classified as contributing toward the goal of 'foundational and cross cutting issues' under EDPRS II. The progress against EDPRS II objectives for the agricultural sector in FY 2013/14 is reported under Section II of the annual report. The following table elucidates how the sector intends to actualize its targets for FY 2020 by setting high performance targets for the 2017/18 FY under EDPRS II.

Table 3: Roadmap toward Vision 2020

Objectives	EDPRS 2 targets by 2017/18	Vision 2020 targets

Rapid economic growth to Middle Income status	<ul style="list-style-type: none"> ➤ GDP per capita of \$1001 ➤ Avg. GDP growth of 10.2% 	<ul style="list-style-type: none"> ➤ GDP per capita of \$1240 ➤ Avg. GDP growth of 11.5%
Increased Poverty reduction	<ul style="list-style-type: none"> ➤ Poverty reduced under 30% ➤ Extreme poverty under 10% 	<ul style="list-style-type: none"> ➤ Poverty reduced under 20% ➤ Extreme poverty moving towards eradication
More off-farm jobs	<ul style="list-style-type: none"> ➤ 200,000 new off farm jobs p.a. 	<ul style="list-style-type: none"> ➤ 200,000 new off farm jobs p.a.
Increased self-reliance	<ul style="list-style-type: none"> ➤ Exports Growth of 28% p.a. ➤ Exports cover. of Imports 75% by 2017 	<ul style="list-style-type: none"> ➤ Exports Growth of 28% p.a. ➤ Exports cover. of Imports 80% by 2020
Private Sector as engine of growth	<ul style="list-style-type: none"> ➤ Private sector investment to reach 15.4% of GDP 	<ul style="list-style-type: none"> ➤ Private sector investment to reach 20% of GDP

The Strategic Plan for Transformation of Agriculture Phase-III was also approved in 2013 in order to support the realization of EDPRS II objectives pertaining to the agricultural sector and other strategic sectorial goals. 2013/14 was thus crucial as the first year of implementation of both these strategies. The PSTA-3 has four principle programme areas which are outlined in **Error! Not a valid bookmark self-reference.**

Figure 1: Programme Areas of PSTA-3



Annex 1 examines performance as per broader sector outcome and output indicators agreed upon in the June 2013/14 Forward Looking Joint Sector Review. To elucidate how each of these sector outcomes contributed to the four pillars of PSTA 3 in 2013/14, and to contextualize the progress quantified within the Annex among policy interventions by MINAGRI, RAB & NAEB please refer to the analysis in Section II of the Annual Report.

Annex 1 displays encouraging performance in the development of research and extension services. In this category the two output indicators, i.e. the ratio of extension workers to agricultural households, and the proportion of farmer households taking up new technologies have fulfilled and surpassed their annual targets respectively. The 2013/14 FY experienced a significant fall in cash crop commodity revenue from coffee, tea & pyrethrum. The production and revenue from all cash crops were affected by drought and adverse global price trends for primary commodities. The revenue earned from pyrethrum exports additionally suffered from a lack of market access. NAEB is presently engaged in advanced discussions with strategic investors and a number of clients to address this concern. The revenue earned from tea exports suffered a setback owing to lower production (due to drought) and a drop in international prices. There was a problem of oversupply in the world market, stemming from conflict in some tea-consuming countries and overall suppressed demand. Some focus areas that have been identified to drive up productivity in this sub-sector include efficient input-usage, and the development of a collaborative business model between farmer cooperatives and private investors. The coffee sub-sector produced higher quality output in the fiscal year, albeit production volumes were reduced on account of rainfall deficit in Seasons A and B. Thus coffee producers faced better prices, but owing to lower volumes sold earned less revenue. A need to incentivize greater investment in production by farmers, to encourage private engagement in operations

downstream, and to develop a Zoning Policy have been underlined as essential to develop the coffee sub-sector. Going forward the sector plans to boost horticulture for commodity exports, and a greater role of non-traditional exports in the total basket of agricultural exports.

Improvements in the environment for agri-business in 2013/14 were primarily driven by an increase in the provision of credit for agricultural production and agro-processing. Loans for this purpose increased to 6.1% of overall loans (or a total amount of 35,273,866,000 Rwf). Efforts to improve post-harvest management and agro processing are included the dissemination of training material & know-how for post-harvest best practices, the construction of drying bays and rehabilitation of rural feeder roads. For instance, 23,281 farmers from over 500 cooperatives received training on maize, rice, beans, soya beans, wheat & Irish potatoes postharvest (PH) best practices; and 72,095 were farmers coached on maize, rice, beans, soya beans, wheat & Irish potatoes post-harvest handling practices. With stakeholder support, 101.15 km of rural feeder roads (RFR) were rehabilitated in 7 districts under the EU funded Sector Policy Support Programme; 30 km under the RFR Programme funded by the AfDB in Nyamagabe District; and 54 km were rehabilitated in the Kirehe District under the IFAD funded KWAMP programme. For more details please refer to Annex 1.

Approval of RFR rehabilitation standards: The feeder road standards were developed by RTDA (Rwanda Transport Development Agency) and approved at ministerial level in June 2013. The process of approval by RSB (Rwanda Standards Board) was started in 2014. The RSB received the final report on feeder road standards and has produced two standards: “Feeder roads Part 1: Guidelines for design”, and “Feeder roads Part 2: Guidelines for maintenance”. These standards have been approved by the board of RSB on 5 January 2015 and have been published.

Development of a specific RFR policy and strategy at national level: A budget for this study is included in the WB funded “Rural Feeder Road Development Programme” (RFRDP). The ToR for the study have been finalised and the procurement of the study will start soon. The study is expected to start in April 2015 and be completed in July-August 2015. The Policy and Strategy should be approved before the end of 2015.

Preparation of Feeder road master plans by district to be included in the District Development Plans: Based upon the National RFR Policy and Strategy, the PSC of the National Feeder Roads Programme has decided to prepare a National Feeder Roads Master Plan (NFRMP) from which District Feeder Roads Action Plans will be extracted. The Netherlands have volunteered to mobilise additional funds from their HQ to fund this study. The study would start in August 2015 as soon as the strategy study is completed. The implementation of the NFRMP and the action plans will take six months and should be ready by January 2016.

1.4 Crop Production Report

Crop production represents one of the most important indicators of the sector’s success. MINAGRI and its implementing agencies invest heavily in diverse areas to drive up yields, including infrastructure based programmes such as irrigation and terracing, inputs provision, training to improve production management and research to identify the best varieties for different agro-climatic zones. The data for harvested area (by crop), crop yields and crop production for Seasons 2014A and 2014B are presented in Table 4 and Table 5 respectively.

Season 2014A

In Season 2014A the rains started too early (in September) when compared with that of Season 2013A, and were irregular during the whole season. The western and northern provinces received enough rain in general while the southern and eastern provinces received low and irregular rains. Especially, in 2nd dekad of October, the rains in the southern and eastern provinces were below 50% of rains typically received in the month. As result, many farmers lost pulses that do not persist on continued shortage of rains. In the western and northern provinces, the situation was normal.

Countrywide in terms of area under crops, the main crops continued to be pulses (30%), roots & tubers (25%), cereals (22%) and banana (18%). The main crops in terms of share of land under cultivation were: beans (24%), maize (19%), banana (19%), cassava (11%), Irish potato (10%) and sweet potato (5%). In general, when we compare the volume of production in terms Kcal between seasons 2013A and 2014A an increase of only 2% is found due to irregular weather conditions, which negatively affected the area under crop cultivation.

In season A, due to adverse weather some crops showed a decrease in terms of yield and production. In particular maize, beans, groundnuts, Irish potato and yam decreased production of over 3% in comparison to the 2013A Season. Albeit the numbers indicate that there was increased crop production for cassava, taro, banana and

soybeans accompanied by both an increase in the area dedicated to the production of these crops and crop productivity. In particular, taro registered an impressive 23% gain in productivity vis-à-vis Season 2013A and a 31% increase in crop production. These gains can be explained by a number of factors, including MINAGRI's nutrition and marketability prioritization.

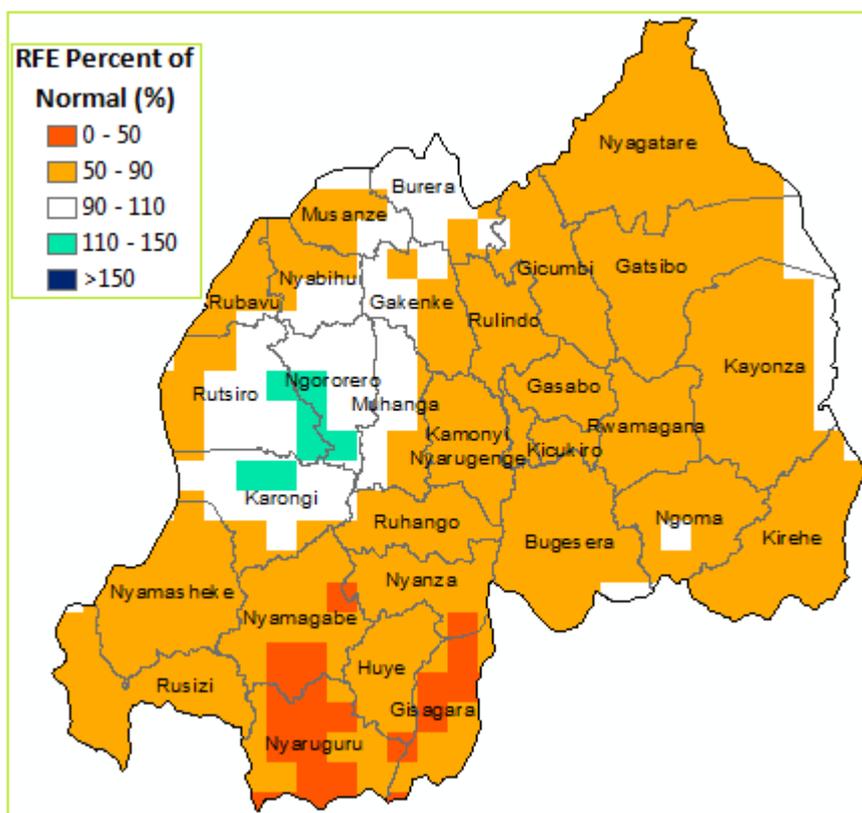
Table 4: Crop Assessment 2014 A (MINAGRI)

Crops	Harvested Area by Crop (Ha)			Crop yield (Kg/ha)			Crop Production (MT)		
	2013A	2014A	Variation	2013A	2014A	Variation	2013A	2014A	Variation
Sorghum	8,298	7,660	-8%	1,200	1,339	12%	9,956	10,257	3%
Maize	176,928	173,292	-2%	2,383	2,344	-2%	421,537	406,207	-4%
Wheat	5,093	5,086	0%	1,943	1,942	0%	9,894	9,877	0%
Rice	8,298	8,108	-2%	5,247	5,242	0%	43,541	42,501	-2%
Ordinary beans	122,263	103,599	-15%	622	541	-13%	76,018	56,042	-26%
Climbing beans	119,155	119,294	0%	1,540	1,660	8%	183,546	197,994	8%
Peas	23,052	22,067	-4%	828	910	10%	19,081	20,085	5%
Groundnuts	12,713	12,653	0%	549	332	-40%	6,985	4,204	-40%
Soybeans	19,872	22,536	13%	634	655	3%	12,595	14,769	17%
Banana	167,565	169,648	1%	9,496	9,863	4%	1,591,118	1,673,292	5%
Irish Potatoes	94,774	88,262	-7%	15,134	14,754	-3%	1,434,305	1,302,237	-9%
Sweet Potatoes	50,806	48,485	-5%	8,559	9,921	16%	434,832	481,002	11%
Yam	8,787	7,656	-13%	7,342	6,317	-14%	64,515	48,367	-25%
Taro	839	892	6%	4,269	5,255	23%	3,581	4,685	31%
Cassava	93,762	98,796	5%	14,102	14,804	5%	1,322,248	1,462,560	11%
Vegetables	17,790	17,221	-3%	9,929	9,953	0%	176,642	171,402	-3%
Fruits	9,913	9,813	-1%	12,273	12,284	0%	121,661	120,533	-1%
Total	939,906	915,069	-3%				5,932,054	6,026,013	2%

Season 2014B

In general all parts of the country were hit by a rainfall deficit in Season 2014B. In particular, the Eastern, Central, Southern provinces and a part of Western province were mainly hit by rainfall deficit when compared to the rains normally received in those regions. Figure 2 displays the distribution of rainfall in the country during the season, as compared with normal rainfall levels at that time of year. Countrywide in terms of area under crops, the main crops continued to be pulses (29%), roots & tubers (25%), cereals (23%) and banana (18%). Countrywide in terms of crop production, roots and tubers come first (54%), followed by bananas (27%), cereals (6%) and pulses (3%).

Figure 2: Rainfall Distribution in Season 2014B



The production of sorghum, maize (41.4% fall), ordinary beans, climbing beans and groundnuts experienced a greater than 20% decline in the season. Sorghum, maize and ordinary beans also exhibited a more than 20% fall in crop yield as compared with Season 2013B. On average there was also a decrease in the harvested area under crop cultivation, with ordinary beans and groundnuts showing the greatest decline. The production of taro however bucked the trend showing increases in harvested area, crop yield and crop production. The area under rice cultivation and the total volume of rice produced also showed a relative increase.

Table 5: Crop Assessment 2014 B (MINAGRI)

Crops	Harvested Area by Crop (Ha)			Crop yield (Kg/ha)			Crop Production (MT)		
	2013B	2014B	Variation	2013 B	2014 B	Variation	2013B	2014B	Variation
Sorghum	99,457	102,564	3.1%	1,428	1,064	-25.5%	144,658	111,277	-23.1%
Maize	82,135	77,115	-6.1%	1,929	1,199	-37.8%	161,947	94,837	-41.4%
Wheat	25,794	24,607	-4.6%	2,163	2,055	-5.0%	55,744	50,644	-9.1%
Rice	9,062	9,451	4.3%	5,734	5,619	-2.0%	51,959	53,279	2.5%
Ordinary beans	112,664	98,044	-13.0%	520	408	-21.5%	51,055	36,782	-28.0%
Climbing beans	142,217	123,641	-13.1%	850	778	-8.5%	133,230	104,183	-21.8%
Peas	16,946	16,801	-0.9%	700	609	-12.9%	11,607	10,306	-11.2%
Groundnuts	10,111	8,867	-12.3%	661	556	-15.9%	6,817	5,097	-25.2%
Soybeans	16,426	16,767	2.1%	818	664	-18.9%	13,121	11,198	-14.7%
Banana	173,515	167,005	-3.8%	8,550	8,542	-0.1%	1,637,703	1,542,070	-5.8%
Irish Potatoes	74,529	69,277	-7.0%	8,423	8,659	2.8%	808,670	718,352	-11.2%
Sweet Potatoes	59,652	55,610	-6.8%	9,419	9,895	5.1%	581,174	583,547	0.4%

Yam	12,174	12,202	0.2%	6,384	6,487	1.6%	77,310	79,070	2.3%
Taro	4,633	5,047	8.9%	7,763	7,801	0.5%	37,365	39,356	5.3%
Cassava	91,225	88,037	-3.5%	17,264	17,894	3.6%	1,642,106	1,649,402	0.4%
Vegetables	23,188	22,321	-3.7%	12,080	10,999	-8.9%	287,681	246,863	-14.2%
Fruits	26,193	25,282	-3.5%	12,578	12,534	-0.4%	335,085	321,534	-4.0%
Total	979,923	922,638	-5.8%				6,037,230	5,657,797	-6.3%

Figure 3 displays the time series for crop production of some priority crops, namely maize, cassava, rice, Irish potato and beans. As the Ministry in charge of production it is imperative that MINAGRI seeks to understand food price movements. Given the context of decreasing crop production at national and regional level, we examine the domestic price developments of key crops over the past financial year. The crops detailed in Figure 4 & Figure 5 highlight largely cyclical trends where lean periods of production result in higher prices. Note the general increase in prices from October to December (pre-harvest period Season A) and February to May (pre-harvest period Season B).

Figure 3: Food Production Time Series (MINAGRI)

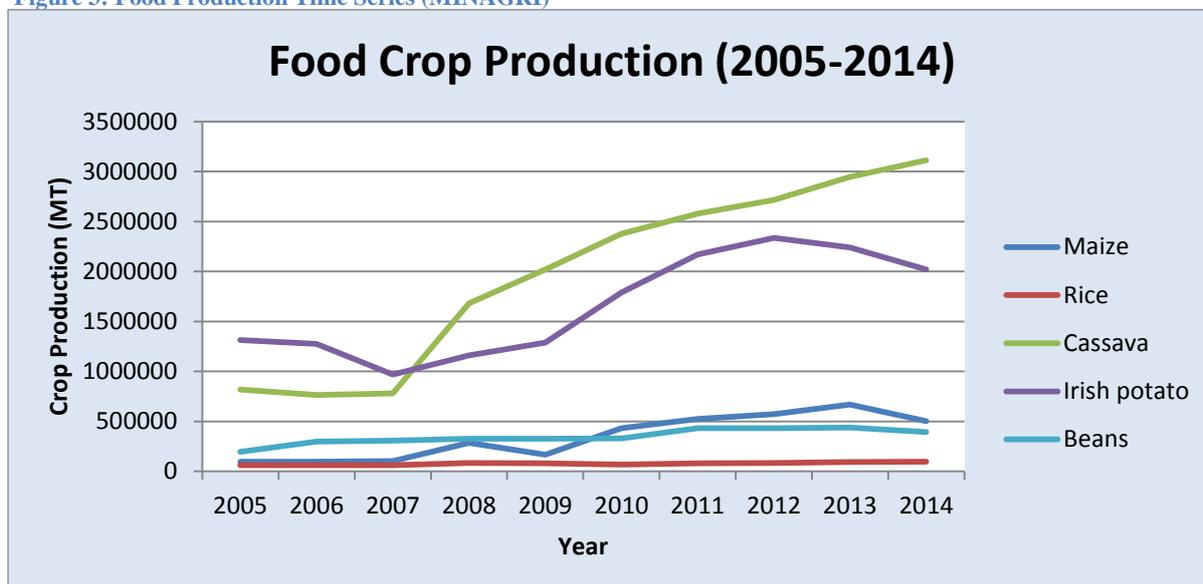
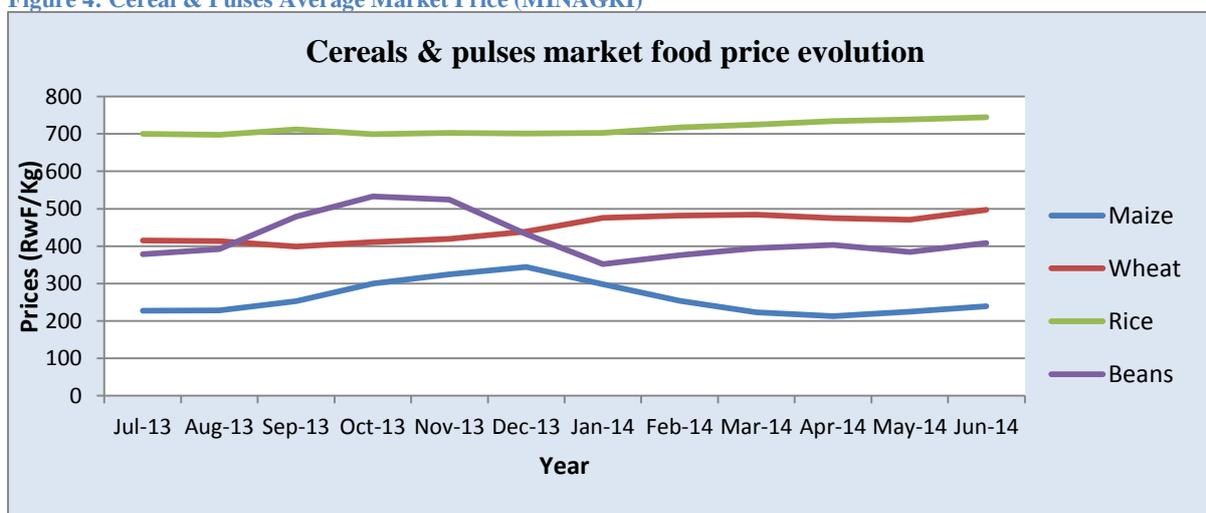
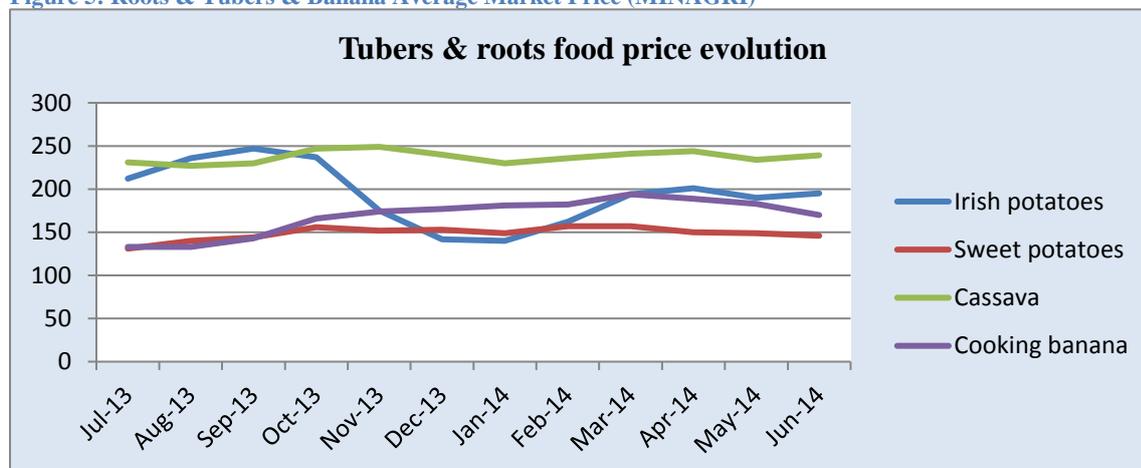


Figure 4: Cereal & Pulses Average Market Price (MINAGRI)



Improvements in quality of crops and increasing regional demand, to an extent, explain the increase in prices. In particular, wheat has seen high prices in Rwanda. Irish potato, given increasing demand both internally and externally, has seen very positive price development.

Figure 5: Roots & Tubers & Banana Average Market Price (MINAGRI)



The market prices of rice and wheat, both of which have negative terms-of-trade, have been unstable over the last year. However, in the last three months of the financial year, prices have begun to rise given the decrease in domestic and regional seasonal harvest. As a medium to long-term strategy, MINAGRI is seeking to mitigate the vulnerability to external price shocks by aggressively scaling up its rice and wheat production. There have been significant differences in rural and urban prices that could indicate impediments to farmers increasing revenues. Post-harvest constraints such as increasing fuel prices, post-harvest losses and large disparities between farmer and trader profits could explain this price difference. MINAGRI will continue to support post-harvest infrastructure to support a fairer price to the farmer.

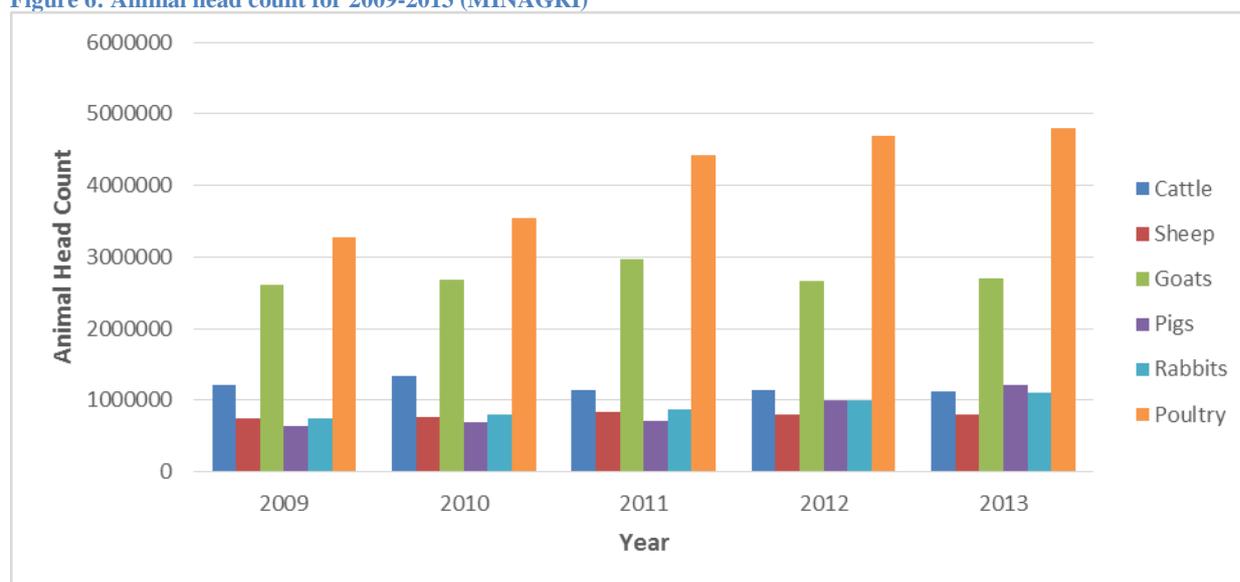
1.5 Livestock Production Report

Animal resources are recognized as an opportunity to increase domestic food security, improve nutrition through the provision of animal proteins, and generate income. Livestock also serves as a valuable asset for poor families. There is increasing demand for meat and fish, dairy, eggs, honey and hides and skins both in domestic and regional markets, which represents an important opportunity for investment in and growth of the livestock sector. In the financial year 2013-2014 MINAGRI and RAB focused on animal resource sector modernization, expansion and intensification. The PSTA III highlights the role of livestock, including the growth of the fishing industry, the potential for further exports of premium products such as honey, and the potential to further strengthen and integrate entire value chains e.g. for meat and dairy, fish and honey. The figures below demonstrate the continued growth of animal resource headcounts, production and consumption in Rwanda. The recently developed Dairy Strategy and Dairy Seal of Quality were finalized and started being implemented during this financial year. The seal of quality is an important step toward the marketing of good quality milk and gives confidence to the consumer. In addition, farmers who aim to produce good quality milk now have a tool to differentiate their product on the market.

1.5.1 Animal Population

Figure 6 illustrates how the animal head count has grown over the last five years. The greatest gains have been in small animals, particularly pigs, rabbits and poultry. This is useful for lower income households that may not have the resources to keep and maintain cattle, but are able to benefit from the meat and egg proteins produced by smaller animals as Rwanda continues its fight against malnutrition. The poultry headcount has more than doubled since 2009, driven by a concerted programme of intensification. In contrast, cattle, sheep and goat headcounts have remained relatively stable. The marginal decline in the cattle population, despite the Girinka programme which distributes cows to poor families, can be explained by the shift to zero grazing and improved cattle breeds that give more milk. However, the livestock figures also illustrate how livestock distribution alone is insufficient to develop Rwanda's animal resources, and that efforts must be made to train households in providing appropriate care, establish an effective service delivery network to improve animal health, improve the productivity of each animal and focus on value chain development to attract investors and produce premium animal products. This is particularly valid considering Rwanda's limited land availability for livestock grazing.

Figure 6: Animal head count for 2009-2013 (MINAGRI)



1.5.2 Animal Products

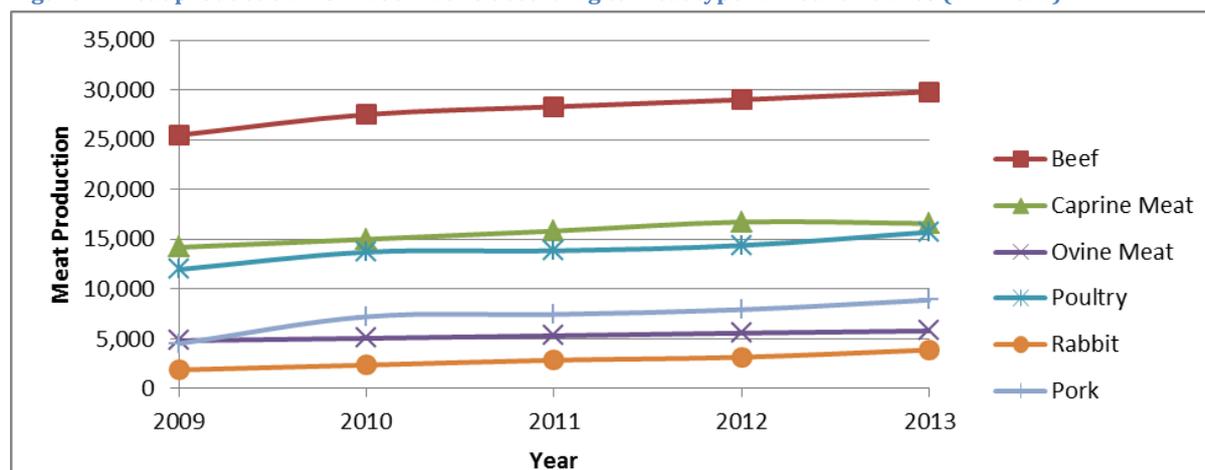
The increase in animal head count has contributed to the greater production of animal products, shown in table below. Between 2005 and 2013 milk production increased almost five times, and this will continue under the National Dairy Strategy developed in 2013. Meat production has almost doubled, and should continue its increasing trend alongside fish. This will be supported by the Aquaculture plan and prioritization of fisheries under PSTA III, and the meat strategy. Honey production is still relatively low, but market opportunities exist for premium exports and during the 2013/14 financial year, Rwanda obtained an Export Certificate Permit for Honey to access the EU Market. This should help increase production and the marketing of good quality honey. Egg production has increased five times- This has positive implications for nutrition as egg consumption provides both protein and micro-vitamins as part of dietary diversification. Overall, since 2005 animal production has continued to increase. This represents a market opportunity both for household consumption and commercialization of the sector, particularly to capitalize on regional demand for milk, hides and skins and investigate further marketability of animal products.

Table 6: Animal products in tons 2005-2013 (MINAGRI)

Product	2005	2006	2007	2008	2009	2010	2011	2012	2,013
Milk	142,511	152,511	189,827	257,480	334,727	372,619	442,337	503,130	628,266
Meat	49,861	52,226	54,780	56,900	65,863	70,928	73,633	74,519	81,087
Fish	8,180	9,267	9,655	12,594	14,104	15,007	15,526	17,566	24,550
Eggs	2,452	1,536	1,620	2,327	3,268	5,203	5,736	6,324	6,757
Honey	1,671	1,676	1,084	1,654	2,684	2,921	3,221	3,785	4,286
Hides & skin	2,637	3,183	4,137	4,496	4,098	4,072	4,017	3,814	5,207

Meat production can be broken down into types of meat to better understand consumption patterns (See Table 6). Beef accounts for the highest volume of production, representing the productivity of cattle despite the relatively low headcount. Goat meat has the second highest production, driven by traditional dietary preferences and high availability. Poultry has jumped sharply, even though chicken remains a relatively expensive meat which is still perceived as a luxury item.

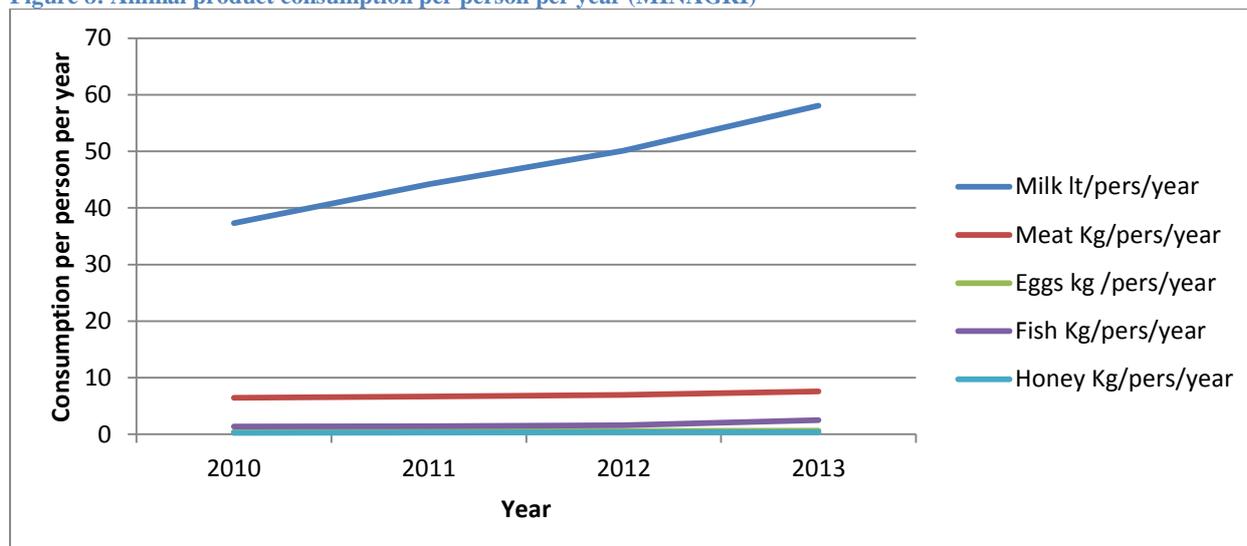
Figure 7: Meat production from 2009-2013 according to meat type in Metric Tonnes (MINAGRI)



5.3 Animal protein consumption

Increasing animal productivity and production over time is matched by the increasing trend for consumption of animal products. As incomes increase with GDP growth, consumers prefer to purchase animal products. Increasing consumption is a function of Rwanda’s growth and poverty reduction, and also the increased availability of animal products and more competitive pricing (among other factors). Although fish and egg consumption remain relatively low, nutrition education campaigns combined with increased

Figure 8: Animal product consumption per person per year (MINAGRI)



production will increase consumption. Milk will continue its upward trend with the new Seal of Quality to reassure consumers about the high standards of domestically produced dairy quality. Overall, increased animal protein consumption supports better nutrition, and these figures are therefore a positive indicator of improved food security

MINAGRI and RAB will continue to work to develop the livestock sector. Under PSTA III livestock is included as a separate programme area to ensure it is prioritized alongside crop production. The value chain section also identifies specific interventions for strengthening the supply chain and market development for all animal resource and fish products. The dual role that livestock development has to both increase rural incomes and improve nutrition is also an important focus area. More details about the achievements of specific livestock projects are in section 3. It should also be noted that the sub sector working group on livestock in 2013-2014 developed a roadmap to increase access to livestock products in order to support nutritional and food security.

1.6 Irrigation, Land Husbandry and Mechanization

Irrigation and land husbandry are key priority areas for MINAGRI as they both improve productivity and mitigate the effects of adverse weather shocks for farmers. Mechanization improves productivity and can contribute to

value addition and quality promotion. Although interventions in these areas are costly, they have also contributed greatly to the increased yields generated by PSTA I and PSTA II. In the financial year 2013-2014, the Task Force for Irrigation and Mechanization (TF I&M), working together with RAB, project units and development partners, implemented various activities to improve land and water management and to disseminate farm equipment among rural beneficiaries.

Irrigation & Land Husbandry

Rwanda is seeking to rationally exploit its soil and water resources as a mechanism to transform and modernize agriculture. The Irrigation Master Plan for Rwanda showed that Rwanda has potential to irrigate and modernize agriculture on 589,711 ha land including: (i) 219,797 ha of marshland potential, (ii) 153,534 ha of hillside domains, (iii) 179,954 ha of river & lakes pumping domains, and (iv) 36,432 ha of groundwater resources. The revised 5 Year Government target is 75,000 hectares to be irrigated by the end of 2017/2018. Currently, Rwanda has developed about 30,000ha of its potential irrigated area- including around 26,000ha of marshland and 3,000ha of hillside land. (Refer to Table 7)

Table 7: Marshland development and hillside irrigation in ha (MINAGRI)

Type of Irrigation	FY 2012/13	FY 2013/14
Marshland Development (ha)	24,721	27,005
Hillside Irrigation (ha)	3,075	4,807.3

Table 8: Land mechanically ploughed in ha during the FY 2013-2014 (MINAGRI)

	2013 A	2013 B	2014 A	2014B
Land ploughed (ha)	11,350	12,000	11,912.18	12,667.17

The Task force of Irrigation and Mechanization was created following a cabinet decision of 09/07/2010. The Irrigation and Mechanization TF also implements three key projects: the Immediate Action Irrigation Project (GFI), the Gishwati Water and Land Management Project (GWLM) and the Agricultural Mechanization project. The full reports of their achievements are found in Chapter 3.

The Irrigation Policy endorsed by the GoR in July 2014, identified a number of challenges limiting the growth of the irrigation subsector in Rwanda. The foremost challenge is the high cost of irrigation equipment, stemming primarily from the hilly topography of the country. Consequently, the cabinet of Rwanda in its decision in July 2014 directed MINAGRI through the Task Force of Irrigation and Mechanization to roll out the small scale irrigation programme, whereby farmers will be assisted to access subsidized small scale irrigation technologies to use on plots of up to 10ha. A total of 1000ha have been identified and are planned to be equipped in year 2014-2015.

In FY 2013/14, the TF also made significant progress in developing the capacities of the Water Users Organisations, which are a key factor in maintaining irrigation schemes to ensure they are sustainable. Details of these efforts are elaborated in the following subsection.

Water Users Organisations (WUOs) & Farmer Cooperatives

In accordance with the Ministerial Order No 001/11.30 of 23/11/2011 published in Official Gazette No 50 of 12/12/2011, MINAGRI and its partners are implementing Water Users Organizations (WUOs) to run and maintain the hydraulic infrastructures in all irrigation schemes in Rwanda. A Water Users Association Support Unit has been set up under the Task Force for Irrigation and Mechanization to oversee the implementation of WUOs. The Unit started to operate in November 2011 with two staff and a specialist in charge of Cooperative development was recruited in December 2013.

In FY 2013/14 eight Water Users organizations (WUOs) were created in QWMDP II schemes and supported to elect their own governing bodies. One cooperative in hillside irrigation scheme (KABOKU COOP) was reorganized to create two separate cooperatives (KABOKU and KOHIWOKIMA) in respect of the administrative boundaries within which the two irrigation sectors are found. Trainings at Kirehe and Nyagatare as well as study visits to Nyiramageni, Makera, Nyagahembe and Musaza were conducted for three hundreds and four (304) cooperative member representatives from QWMDP and GFI Schemes. Training and study visits were conducted for forty six (46) WUO and Cooperatives Committee members and farmers representatives in newly developed QWMDP II Schemes.



Figure 8: WUO field training

Fifteen (15) WUOs coaching staff were trained on Administration, finance, Human resource management and Operation and maintenance of irrigation infrastructures. One hundred twenty three (123) WUOs and Cooperatives Committee members and farmers representatives in QWMDP I, II and GFI Schemes were trained on Administration, finance, Human resource management, Operation and maintenance of irrigation infrastructure. The same members also benefited from a study tour in Makera, Rwasave and Musaza. Twelve (12) WUOs were supported for registration by RGB. Four national workshops were organized in order to harmonize practices in line with Water Users Organizations and Cooperatives in irrigation schemes. The following table summarizes training activities carried out in various Districts:

Table 9: Realized Field Visits & Training

Visited areas / Area of training	Number of participants	Types and District Origin of the participants	Training subject
Nyiramageni	33	Farmers growing rice from Gisagara, Huye, Nyanza, Ruhango	Good agricultural practices and planning for sustainable agricultural production
Makera	41	Farmers growing Maize from Gisagara, Huye, rulindo, kamonyi, gasabo, nyaruguru, nyamagabe,	Good agricultural practices and planning for sustainable agricultural production
Nyagahembe	9	Farmers growing rice from nyamasheke	Good agricultural practices and planning for sustainable agricultural production
Nasho	71	Farmers growing maize kirehe/ nasho irrigation scheme	Cooperative management and leadership, and business plan, Composting
Nasho	45	Farmers growing maize kirehe/ nasho irrigation scheme	Crop residues management and animal feeds making
Nyagatare	71	Farmers growing maize nyagatare / Matimba irrigation scheme	Cooperative management and leadership, and business plan
Musaza / Kirehe	34	Farmers growing maize at Nyagatare / Matimba and Kirehe / Nasho irrigation schemes	Good agricultural practices and planning for sustainable agricultural production
Total	304		

Mechanisation

The use of machinery in farming is becoming a culture among Rwandans. The Taskforce is responding to the demands of farmers by establishing Village Mechanization Service Centers (VMSCs), and encouraging the private ownership of farm machinery, private hiring service to different beneficiaries. Private investment in mechanization started early 2010 with BRAMIN's farm in Kayonza district. BRAMIN has various types of farm machinery such as seven center pivot equipment and 5 tractors of 65Hp to 120 Hp range, several attachments and one combine harvester. They have mechanized maize production on land of more than 500 ha in seasons A & B 2014.

Nyagatare Agro Venture Ltd also have several types of agricultural machinery and have more than 700 ha of land for paddy rice cultivation. Two more private companies are keenly involved in Agri-mechanization hiring services, namely Voluntous Agricon Ltd and SBTC PVT Ltd. They have imported 12 tractors and different types of attachments and have achieved more than 2000 ha during this fiscal year. More than 14000 ha of land have been put under mechanization by public and private farm equipment during seasons A and B 2014, resulting in 15 % of agriculture operations being mechanized.



Figure 9: Corn/Maize combine harvester in Ndego/Kayonza District

Over 950 individual farmers and farmers' cooperatives were trained on the operation and maintenance of agricultural machinery. A total of nine power tillers were sold to different institutions which include World Vision, Swiss Resource Centre and Nyamagabe District. A total of 24.6 million Frw was realized from the sales. For a time series of land mechanically ploughed (in hectares) refer to Table 8.

Figure 10: Storage facilities in Kigali SEZ

1.7 Post-Harvest Handling and Storage

The Post-Harvest Handling and Storage Task Force (PHHS TF) was established in 2010 to help reduce losses after harvest, improve market access through feeder roads and add value through processing. This results in higher outputs and increased revenue, and therefore enhances food security and generates better returns for farmers. The overall aim of the PHHS project is to reduce food insecurity through an efficient post-harvest private sector system delivering staple foods to the people of Rwanda. Specific objectives aim to strengthen food security for rural staple crop producers while also improving consumer access to safe and affordable food. Private sector leverage is key to strengthen the competitiveness of staple crop value and supply chains, and this will help to improve efficiency and reduce costs. The combination of both a producer and consumer focus will also enhance farmer access to and linkages with markets. The achievements of the PHHS TF for FY 2013/14 can be summarized as follows:



Reduction of Post-Harvest Losses

In order to reduce pre- and post-harvest losses that occur between the field and the first point of aggregation, the Post-Harvest Handling and Storage Task Force has been engaged in different activities that include: training and coaching of farmers, dissemination of post-harvest tools and equipment, construction of model drying and storage facilities as well as promoting efficient and equitable transport system across staple crop producing areas.

According to surveys that have been conducted to quantify and evaluate staple crop post-harvest losses, the post-harvest loss of maize, rice and wheat have been reduced to 10.4%, 8.3% and 14.8 % respectively for the year 2013 (season A & B). A post-harvest loss survey for season 2014 A indicated that post-harvest losses have been reduced to 9.42% for maize, 12.7% for beans, 14.7% for soya, 8.64% for paddy and 7.8% for wheat. Training has been conducted to build the capacity of farmers from different cooperatives in order to improve their knowledge on

post-harvest best practices which lead to obtaining quality produce thus ensuring sustainable rural income. A total of 23,281 farmers (11,657 F & 11,524 M) from over 500 cooperatives have been trained on maize and rice post-harvest best practices. Training materials: 12,110 leaflets and 1,312 training modules of maize, rice, Irish potatoes and wheat have been distributed to farmers.

Post-harvest extension staff members were regularly deployed to Districts and Sectors to coach farmers on post-harvest best practices: 74,959 farmers (38,024 F & 36,935 M) from over 500 cooperatives were directly coached on maize, rice, Irish potatoes & wheat post-harvest best practices. In order to minimize post-harvest losses, 21,469 sheetings (tarpaulin) have been distributed to maize, rice and wheat farmers; 733 shellers have also been distributed to maize farmers. 10 Hermetic grain storage bags have been distributed to farmers for demonstration. 10 cooperatives were supported with electrical maize shellers while 17 cooperatives were supported with wheat threshers. Public and private media were used to increase awareness of the benefits of post-harvest improvements for farmers and the private sector.

Modest drying grounds and storage facilities have been constructed to preserve the quality of products and to increase and stabilize farmers' incomes: 29 drying grounds, 1 storage facility and 4 selling points have been constructed in different districts. A total of 43 farmer's cooperatives have been linked to financial institutions as a result, they have been able to access inputs and compete on the market with their produce.

Efficient and equitable transport systems across staple crop producing areas

Follow up on the implementation of rehabilitation and maintenance of feeder roads has been conducted: Feeder roads action plans have been streamlined at district level through meeting with districts executive secretaries, agronomist and engineers. Tender document and Feeder roads standards were provided. With stakeholder support, 101.15 km of rural feeder roads (RFR) were rehabilitated in 7 districts under the EU funded Sector Policy Support Programme; 30 km under the RFR Programme funded by the AfDB in Nyamagabe District; and 54 km were rehabilitated in the Kirehe District under the IFAD funded KWAMP programme. Studies have been conducted for feeder roads that will be supported by the World Bank (4 Districts) and USAID (7 Districts). Procurement process for recruiting a service provider to conduct capacity building and technical support related to feeder road rehabilitation and maintenance in 5 Districts that will be supported under the Netherlands program have been conducted.

National Strategic Grain Reserves development

Management of National Strategic Grain Reserves with the principal objective of coping with food emergencies and contributing to a reduction in food insecurity has been done to address potential shocks to food supply. 9,745.7 MT of maize and beans have been stocked for the National Strategic Grain Reserves (Maize: 7,857.422 MT; beans: 1,888.28 MT).

Through the Purchase for Progress Program (P4P), the Post Harvest Handling and Storage Task Force worked with 43 cooperatives that delivered 3,500.674 MT of maize for the National Strategic Grain Reserves. As a result, there is increased farmers' investment in agriculture and increased capacity to engage in the market. The National Strategic Grain Reserves were used to support farmers through Food for Work Programme: a total of 954.126 MT of grains (551.426 MT of maize and 402.7 MT of beans) were distributed in Kayonza and Bugesera Districts.

Agro-processing promoted

In order to promote value addition, the construction of different processing plants has been initiated: Zamura Feed Plant has been installed in Musanze District; Rwamagana feed plant has been constructed in Rwamagana District with a progress of 95%; installation of oil plant in Kayonza District has been completed; the project for constructing an Irish potato processing plant in Musanze District has been handed over to the private sector. Seed plant construction in Kigali Special Economic Zone: civil works and machine installation have been completed and is operational; cob dryer and sorting house installation have been completed. Civil works of Nyagatare metallic silos with 10,000 MT capacity is at 100%, while machine installation is at 80%; civil works for Bugesera metallic silos with 6,000 MT capacity is at 100% while installation works are at 80%.

Challenges

- Education and change of farmers – need more time and investment in order to build strong and sustainable farmer cooperatives,
- Some post-harvest materials and equipment are still expensive for farmers,

-Lack of adequate and timely disbursement of public funds (From MINECOFIN to District level) to construct post-harvest facilities.

Way Forward

The Post-Harvest Handling and Storage Task Force is in the process of phasing out but its activities will be continued with a main focus of:

- Supporting farmers on post-harvest best practices for different crops through training, coaching and dissemination of post-harvest tools and equipment.
- Identifying and prioritizing economically relevant post-harvest technologies.
- Quantifying and evaluating staple crop post-harvest losses through post-harvest loss surveys.
- Constructing suitable and appropriate drying, storage and processing facilities.
- Reducing road transport cost between production and secondary aggregation points in high potential areas.
- Management of National Strategic Grain Reserves.

1.8 Export Promotion

Agricultural exports are coordinated by the National Agriculture Export Development Board (NAEB), focused on coffee, tea and horticulture. NAEB is also exploring other promising value chains such as sericulture, and these emerging sub-sectors are progressively improving and contributing to the diversification of export earnings. Exports are key to agricultural revenue generation and national growth. EDPRS II has a 28% annual export growth target, which agriculture must contribute to. Furthermore, high value exports such as premium teas, essential oils and floriculture will help achieve the 8% average sector growth and 11.5% national GDP growth targets for Vision 2020. In line with the strategic plan for agricultural transformation (PSTA), EDPRS, Vision 2020 and different sector strategies, throughout the fiscal year 2013-2014, NAEB focused its interventions in production, processing, quality improvement and marketing products from the three priority subsectors; Although, the production and revenue from all cash crops were affected by drought in FY 2013/14 and adverse global price trends for primary commodities respectively.

Figure 11: Harvested coffee cherries



During the FY, production activities were oriented mainly on expansion of the area under priority crops. In order to increase acreage under tea and coffee production, seedlings were prepared and planted. For the coffee sub-sector, NAEB managed to plant area totaling 9,166ha. Coffee productivity was also enhanced by increasing the use of mineral and organic fertilizers. A total of 7,876tonnes of organic fertilizers and 3,300 tonnes of mineral fertilizers were applied during the course of the fiscal year. The past year activities resulted in production of 17,827 metric tonnes of exportable coffee and generated a revenue of about 47.5 Millions USD. The fall in export revenue earned can be accounted for by the decline in production volumes on account of the deficit in rainfall albeit the coffee sub-sector produced higher quality output in the fiscal year. Thus coffee producers faced better prices, but owing to lower volumes sold earned less revenue. There is a need to incentivize greater investment in production by farmers, and more private engagement in terms of operations downstream. The development of a Zoning Policy may also be required. NISR will conduct a coffee census in the following fiscal year.

The efforts in developing the tea sector yielded appreciable results especially in terms of increasing acreage under tea plantation. A total of 1,891 ha were planted including replacement of dead seedlings in existing fields. 32 million tea seedlings were prepared to be planted during season A 2014. The productivity of tea plantations was improved by stakeholders through the application of 5,753 tonnes of fertilizers. This past year we realized an increase in tea production. The achievements were more than 22,483 metric tonnes with total revenue of 53.5 million USD. Developments in the tea subsector also included reviewing of the green leaf pricing model. A market price based model was agreed upon by tea stakeholders. The revenue earned from tea exports suffered a setback owing to lower production (due to drought) and a significant fall in international prices. There was a problem of oversupply in the world market, stemming from conflict in some tea-consuming countries and overall suppressed demand.

In the horticulture sector, NAEB focused attention on a few selected crops of both fruits and vegetables. Total area planted with vegetables during the fiscal year 2013-2014 reached 4,816 ha while the area planted with fruits totalled 3,480 ha. The new acreage includes 3,413 ha planted with pyrethrum. Various interventions and inspections were undertaken to reduce pests and diseases incidences in the horticultural crops. The export of fruits and vegetables increased to more than 8.6 million USD in the fiscal year 2013-2014. The export of refined

pyrethrum extracts was hampered by bad prices and the lack of market access. The volume exported in the FY was 14,413kg, earning 3.5 million USD in export revenues. There was only one company exporting pyrethrum in FY 2013/14 to markets in the United States of America. There is a need for aggressive private investment, increased market access and planned interventions in this sub-sector. NAEB is currently working with a strategic investor and a number of clients to discuss possibilities of expanding markets.

Going forward there is room for greater contribution of horticulture, floriculture and non-traditional exports to the total basket of exports. For the development of these new value chains investments in these areas will be needed. Non-traditional export commodities is a complex industry involving hides and skins, meat, milk, honey and oils plants. The hides and skins sub sector is one of the key agricultural sub-sectors with a high potential towards commodity development that addresses pertinent socio economic issues and positively impacts rural development, wealth creation and employment. Meat and milk are also sectors which are now growing faster in Rwanda and are playing a paramount role in the Rwandan community. The sub sectors depend largely on locally available livestock resources which need value addition for export. In addition to that in new chain development, production in the honey sub-sector started a long time ago mainly for local consumption, but now there is a need to expand the sub sector for regional and international consumption. The production, processing and export of the sub sector need to be improved in order to meet the standards required at the international level. Beside animal products, the sector includes essential oils which are important in international trade. Due to its worldwide importance in perfumery and medicinal sectors, the sub sector promises a large contribution to the growth of Rwandan exports. The contribution of those sub sectors toward economic growth through an expansion of the export market for both semi-processed and finished goods is immense and the only way to such success is by embracing value addition initiatives. **Mount Meru Soyco Ltd.** recently constructed an edible oil processing plant in Mukarange Sector, Kayonza District in the Eastern Province. In order to further encourage the production of soybeans, a technical team led by the Governor of the Eastern Province has started mapping lands suitable for soybean production (e.g. public land for industrial blocks, irrigation schemes, and unused farmland like terraces). Stakeholders are also mobilising farmers to adopt soybean production under the CIP. Further details of Rwanda's export promotion, key production figures, trends and revenues can be found in NAEB's annual report.

1.9 Institutional Development

MINAGRI works in partnership with its implementing bodies, RAB and NAEB, development partners, projects and all major stakeholders. In order to improve institutional capacities and information flows across the sector, to foster a knowledge-based and efficient framework, MINAGRI also continues to invest in institutional development activities. These focus on two areas: agricultural communications and capacity building. In addition to these, MINAGRI has mainstreamed certain key issues across the sector, including environmental sustainability, gender inclusivity, nutrition and food security and private sector development. Considerations of these factors are integrated into policy planning and programming to ensure sector growth is sustainable and inclusive of marginal groups. In the long run, this will create commercially viable but pro-poor centered growth.

1.9.1. Agricultural Communications

The Agricultural Information and Communication Center (CICA), launched in June 2010, is a focal point for all agricultural related information, and works with all sector actors and across every district. CICA's objective is to regularly collect, produce, process, adapt, store, share and disseminate agricultural information. CICA's main achievement over the last financial year was the ongoing production and management of agricultural information through ICT, the MINAGRI website and Agricultural Management Information System (AMIS), extension material development, audio visual extension material development and maintenance of the documentation center and library.

The main achievement across different areas of communication and the media include:

1. Information Communication and Technology:

- Conception, design and development of a simple, intuitive and very interesting website for the Farmers/extension website "Noz'ubuhinzi n' ubworozi": <http://nozubu.minagri.gov.rw>. this website aimed to teach the farmers extension works, the best techniques, technology in agricultural sector by providing information categorized in 4 categories (production, pest and disease, agricultural economics and marketing and value addition) crop by crop in 3 formats : PDF/readable, Audio and video format in each category.

Figure 14: Noza Ubuhinzi n' Ubworozi website, Ubuhinzi mu Rwanda (Page of Agriculture)



- Agricultural Management Information System have been upgraded/updated from Drupal 6.0 to Drupal 7.0 version
 - 801 news issues communicated through MINAGRI website, extension website and AMIS
 - Using the MINAGRI hotline, collection of feedback, comments, and inquiries from agricultural beneficiaries and linking them with concerned staff to improve quality of service delivery (between 47 and 92 callers per day, feedback shared)
 - Communication by using new Technologies have been adopted , deployed and MINAGRI staff trained on their use (social media, Dropobox , Whatsapp Groups, and DTWF and MINAGRI ePortal)
2. **Extension Material Development:**
- 7 monthly before then later quarterly magazines (HINGA WORORA) developed, produced and disseminated to share agricultural information and success stories, innovations and best practice
 - 52 weekly flash news bulletins produced and published via email
 - Agricultural Media Review on daily basis
 - 34.000 copies of booklets (climbing beans for both farmers and extensionists, pigs, poultry farming, cassava, and pyrethrum) and 200 flyers for agribusiness developed and disseminated to farmer groups and agricultural extension officers
3. **Audio visual Extension Material Development:**
- 50 radio and TV programs broadcasted
 - CICA is producing the community radio sketches (Ifumba-y'Ubukire : flame of wealth) on weekly basis, to teach farmers about best practice, new techniques and how to better manage production and marketing. These sketches are also very important for catalyzing socio-economic changes among Rwandan citizens. They are broadcasted on Radio Rwanda on weekly basis.

Figure 12: Ifumba-y'Ubukire : Flame of wealth Radio Sketch (In Studio & CDs released)



GIS

- Establishment of 15 Maps on sites infected by BXW countrywide, proposed Tea expansion area, a new sugar plantation area among others.

Library:

- 3729 clients trained on how to KOHA system, with additional applications such as circulation, acquisition, serial, cataloguing which are more user friendly for clients.

1.9.2. Capacity Building

MINAGRI is committed to building staff capacity to improve programme planning and delivery. The Ministry is working closely with Development Partners (DPs) to build institutional capacity internally and across its agencies, and also to build farmer and district level capacity to improve programme implementation at the local level. The following is a summary of capacity building activities undertaken over FY 2013/14 with support from various stakeholders:

(i) GoR and Cross-Stakeholder Activities:

- **SCBI** – In the 2011/12 financial year, MINAGRI piloted the innovative Strategic Capacity Building Initiative (SCBI) to develop ministry level capacity. Over the last FY, SCBI has continued to recruit experts and young professionals to build the skills base and institutional memory of the sector. SCBI has three principle components, which differ from traditional technical assistance:
 1. Hiring of International Experts in technical areas aligned behind priority projects to build capacity in the institution embedded for 1-2 years
 2. Hiring local Young Professionals, which the experts coach and mentor
 3. Training delivered to ministry staff and smallholder farmers

SCBI has focused capacity on building support for the Crop Intensification Programme (CIP). There are currently five experts working in Irrigation, Mechanisation, Extension, Sanitary and Phytosanitary Services (SPS) and Storage (PHHS). These experts are working closely with ten counterparts, to provide capacity across MINAGRI and its agencies and create ancillary support for key programme areas. There are also seven senior scientists working in research and development for RAB, which is an increasingly important focus for the sector.

TWIGIRE – MINAGRI has launched the new TWIGIRE Extension Model 2014, which offers an innovative approach to peer-to-peer learning, farmer field schools and capacity building at the local level. This model is currently being rolled out across Districts, and it will strengthen decentralized service delivery, accountability and farmer skills.

(ii) Development Partner Activities:

- **DfID** – DfID supported a consultancy team who developed a Capacity Needs Assessment (Report, September 2013). From this report, MINAGRI finalised its Capacity Building Action Plan, from 2013-2015. The initial phases of the plan are ongoing, including hiring experts in specific low capacity areas and training MINAGRI staff in certain skills.
- **USAID** – With financing from USAID, the Human and Institutional Capacity Development Rwanda (HICDR) project has seconded a number of experts to MINAGRI, in the areas of policy and planning, economics and econometrics and procurement. These experts have facilitated training courses for MINAGRI staff, and are coaching and mentoring members of the Planning Directorate to improve strategic analysis, forecasting and policy formulation.
- **EU** – As part of their new financing package for agriculture, the EU is supporting capacity building and technical assistance in two specific units – Rural Feeder Roads (RFR) and Management Information Systems (MIS). For RFR, the EU is financing highly qualified staff to develop the new strategy and implementation plan. For MIS, the EU is procuring a consultant to develop new, functioning software and a system which the entire Ministry will use on a day-to-day basis.
- **World Bank** – SPIUs funded by the World Bank are engaged in ongoing capacity building for project beneficiaries, through extension support and field training. The Bank also provides opportunities for staff professional development.

1.9.3 Agricultural Cross-cutting Issues – Environmental Sustainability

Agriculture and the environment affect each other and must be considered together. To foster a sustainable sector in the long term, sound environmental management must be mainstreamed in agricultural practices. MINAGRI has worked with partners to ensure agricultural interventions are environmentally sustainable and climate change smart. In the 2013-2014 financial year, management of environment and some interventions focusing in climate resilience have been mainstreamed into various planned activities in agriculture:

1. Soil erosion control intervention through radical and progressive terraces, including 18,344 ha of radical terraces and 44,184 ha of progressive terraces.
2. Irrigation development projects on hillside, marshland and small scale with an environmental consideration, to ensure water use efficiency in case of droughts due to climate variability.
3. Environmental consideration in rural roads design (EIA conducted), including 106 km Feeder roads rehabilitated in different districts.

In addition, the Sub Sector Working Group convened to work on issues of Climate Change accomplished the following tasks:

- Identified a tool to allow MINAGRI planners to evaluate the impact of programme spending decisions on the ability to adjust to climate change and the impact of those programme decisions on climate change.
- Tested this tool on the Agricultural Sector Investment Programme (ASIP).
- Prepared terms of reference for an expert to develop and refine this tool.
- Found DFID funding for the consultant.
- Identified a path for eventual mainstreaming of climate issues in MINAGRI planning.

1.9.4. Gender Mainstreaming

Access to Finance and women's Representation

Rwanda is ranked highly in gender equality terms, with legislation to protect women's rights and an internationally recognized representation of women in parliament. Nevertheless, gender disparities are still prevalent in agriculture. Generally in rural areas, women spend more time engaged in farming activities and caring for the household than men. As a result, on average women have longer working hours, which are worsened by the fact that they are involved in doing activities that are labour intensive and time consuming. MINAGRI has developed a gender strategy that describes the issues in detail and sets out an agenda to address them. Gender mainstreaming activities are also included in PSTA III, the Nutrition Action Plan and other key strategic documents. Over the 2013/14 financial year, certain key activities were held to eliminate the gender gaps in agriculture.

Different measures were put in place to increase agricultural productivity. One of these measures was to increase access to finance for farmers through agricultural value chains. For the aim of making credit available, the Rural Investment Facility (RIF) and other financial schemes whose management is under Business Development Facility (BDF) were set up and are currently operational. Although some of the challenges faced by women were addressed in these interventions, such as the provision of guaranty fund to facilitate access to available financial schemes for some women who were failing to provide adequate collateral, they still benefit at a very low rate (slightly more than 22% currently). There is a need to assess possible hindrances for access to finance especially for women, in line with increasing access to finance and agricultural investment at large.

Figure 13: Raising awareness on Financing Options



It is against this background that MINAGRI organised an awareness campaign to discuss existing financial schemes, with the specific objective of assessing the existing barriers and gathering ideas from the target group on how to increase access to available schemes.

Figure 17: Working with Women in Farmer Cooperatives



The general picture of the level of participants' knowledge on the above mentioned facilities is that very few women participants knew about these schemes. In all the sessions, hardly three participants were found to be aware. Women leaders of agricultural cooperatives were interested by this awareness raising and appreciated how MINAGRI thought about bringing together women farmers, for they have got particular challenges as they described. Participants from all provinces showed high commitment to use gained information and increase their own productivity and that of their cooperatives, through working

closely with banks and using loans. Despite their commitment to work harder, the women explained that they face different challenges.. The main challenges presented by women leaders of agricultural cooperatives include the following: lack of information, unfavorable Agriculture credit schemes, lack/delay of feedback from banks, lack of collateral, and delay of credit process, lack of skills in project management

Women explained that they highly need some basic skills on project elaboration, so that they don't spend much money on experts to help them elaborating their projects from zero. Moreover, they mentioned that when they don't have these skills, they also have difficulties in implementation. Participants took some measures to change to the above mentioned stereotypes such as increasing their self-confidence and stand for their rights to be voted in different agricultural committees. They pointed out that women should not wait for others to propose them for vote but should be the ones to propose themselves and show that they are able.

In the context of Gender Issues the leaders of agricultural cooperatives provided recommendations on two fronts:

(i) Pertaining to the encouragement of women entrepreneurs:

- To encourage women to strengthen their self-confidence to be able to influence growth of their cooperatives and that of their families in regard to using credits.
- To encourage women to promote the culture of working with banks (promoting deposit, saving and credit)
- Enhance cohesion among cooperative members
- Increasing follow up on their projects in banks

(ii) The role of MINAGRI:

- To partner with more financial institutions which are near farmers
- Negotiate banks to propose schemes which cope with agriculture, including provision of grace period and longer reimbursement period
- Organise Study tours for cooperatives
- Trainings on project elaboration and cooperative management are highly needed to uplift women level.
- Organise study tours in best performing agricultural cooperatives to help women learn about the cooperative management.
- Providing technical experts to help farmers and agricultural cooperatives with assistance in design and follow up of projects up to the bank level.
- Partnering with other institutions in charge of gender mainstreaming, and fight against Gender based violence which was a major hindrance to growth both in cooperatives and at the family level.

Gender Mainstreaming in Monitoring and Evaluation

A workshop was organized with Monitoring and Evaluation staff from MINAGRI, Boards and Projects. This workshop had the aim of enhancing participants' understanding of issues, conceptual approaches, and frameworks for Gender sensitive monitoring and evaluation of boards, projects, programs and interventions in the agricultural sector. Furthermore, the workshop helped to select appropriate gender sensitive monitoring methods and adapt required monitoring tools for sector specific programs and different areas of intervention.

Participants have learnt how to understand, analyze, present, and interpret gender disaggregated data; Understand how gender disaggregated data can be used for advocacy and decision-making towards agricultural productivity and poverty reduction in general.

At the end of the workshop, different tools were suggested to mainstream gender into policy making and implementation. Furthermore, consensus was reached on key gender indicators to be monitored and on the way forward.

1.9.5. Nutrition and Food Security

MINAGRI is one of the lead Ministries to improve food security and fight malnutrition. In the 2013-2014 financial year, in the implementation of the National Strategy to eliminate malnutrition the following activities were achieved:

1. Contribution to 1000 DAYS campaign to eliminate malnutrition in Gisagara, Karongi and Ngoma District.
2. By January to March 2014; 1,355 of kitchen gardens were constructed in Rutsiro and Ngororero Districts.
3. In December 2013; 1950 avocados trees were distributed to families and were planted in Gisagara and Ngoma Districts.
4. Promotion on consumption of bio-fortified beans and orange potatoes by: 6,250 kg of bio fortified beans (seeds) were distributed to 1,342 farmers for multiplication.
5. 163,084 vines of orange sweet potatoes were produced and distributed to Farmers in Muhanga, Kamonyi, Rulindo and Gakenke districts.
6. From January to March 2014, in creating awareness for eating mushroom: The mushroom center in Rubona (RAB) provided 4, 658 bags of mushroom spawn to mushroom tubes producers and cooperatives in Rwanda, which can produce 465, 800 tubes for 232,900 kg fresh mushrooms; and 28,083 mushroom tubes (for planting) yielding at least 14,041 kg of fresh mushrooms.
7. During fiscal year 2013/14, some 28,765 heifers against the target of 40,000 which accounts to 71.9% were distributed to beneficiaries mainly under district decentralization, non-governmental organizations.
8. Girinka program had to offer basic trainings in animal husbandry practices for some 25,000 families.
9. In one cup of milk per child the FY 2013/2014; 83,012 pupils are on the Program and 329,981 liters of milk were consumed by children: 82,819 liters of milk in the 2nd term 2013; 83,012 liters of milk in the 3rd term 2013; 82,15liters of milk in the 1st term 2014 and 81,997 liters of milk in the 2nd term 2014.

Nutrition will continue to be an important area for the sector over the next four years under PSTA III. Nutrition is included in Programme 1, to better integrate activities with crop and livestock production and to ensure the issue is prioritized in budget and delivery. PSTA III lines of action follow the NAP and include growing nutritious kitchen gardens, improving nutrition related knowledge, bio-fortified food distribution, expanding nutrition based programmes (Girinka and One Cup of Milk per Child) and strengthening Rwanda's food information systems to better mitigate and manage food distribution.

Figure 21: Milk distribution for children through One Cup programme



1.9.6. Private Sector Development

Heavy investment undertaken by the Government of Rwanda in agricultural value chain resulted in the country's economic growth in past years. In order to ensure sustainable growth of the sector, involvement of private sector investment is inevitable. It is in this regard that the PSTA III emphasizes the need of MINAGRI to prioritise strategies to attract new private sector players in agriculture, and to retain existing ones. In the fiscal year 2013/14, MINAGRI participated in a number of national, regional and global forums where potential investors were represented and used such opportunities to present profiles of private sector investment opportunities in the

Figure 25: CAADP II Meeting June 2014



agricultural sector. These forums include the National Private Sector Investors Forum March 2014; International Agribusiness Conference in October 2013; Grow Africa Forum May 2014.

In June 2014, MINAGRI launched the second Comprehensive Africa Agriculture Development Program. During this event one full day was dedicated for the private sector. A number of private investors across the agriculture value chain were represented and issues of business environment, and challenges which are currently faced by the existing investors were discussed. Most importantly private sector players committed to increase their investment in the sector as a contribution to the country's economic growth.

Apart from the investors who participated in these forums, the Minister and the Permanent Secretary met individuals and groups of investors in the country and abroad and informed them about available opportunities. As a result a number of investors have followed up showing a positive sign towards realization of investment in future. Some of these companies include Clinton Development Initiative, Yara, Unilever, etc.

To enhance efforts of attracting private sector investments in agriculture, over 300 copies of investment profiles were designed, printed and shared with potential investors. In addition to that, a sub working group on Private Sector Development and Export Promotion was established aiming to facilitate achievement of PSTAIII through enhanced engagement of private sector.

1.10 Report on International Conferences organized by MINAGRI

FY 2013/14 was an eventful year with the Ministry organizing over 6 international conferences in Kigali. The events along with their objectives, participants and dates/venue of organization are summarized in the table below:

#	Meeting title	Objectives	Participants	Key Organizers	Venue	Date
1	(re)New Agri-business in Rwanda	To provide a forum for a private sector-led discussion about agribusiness in Rwanda and a vision for the future.	All interested actors operating in agribusiness, and all who were curious to learn more about it.	RDB, the Ministry of Agriculture and Animal Resources and Kigali Farms	Kigali Rwanda	October 16 2013
2	ICT for agriculture (ICT4Ag)	(1) Find out how increased investment and adoption of ICTs in the agricultural sector will contribute to improved value chains as well as more effective advocacy and policy processes in agricultural and rural development. (2) In addition, conference objective was to share ideas and knowledge, discuss new approaches, best practices and experiences. (3) Analyze ICT trends and their impact on agriculture, capacity building, enabling	400 participants (policy makers, farmers, development practitioners, etc.)	Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA) and the Rwandan Ministries of Agriculture and Animal Resources and ICTs	Kigali Rwanda	November 4-8, 2013

		environments, scaling up and sustainability				
3	Cracking the Nuts (private sector engagement)	To tackle the challenges of food security, nutrition, and sustainable livelihoods for Africa's rural poor	Experts from the private sector, NGOs, government, and academia	Global Communities' USAID Ejo Heza project, the Ministry of Agriculture and Animal Resources, the Rwanda Development Board and AZMJ, a global international development consulting firm.	Kigali Rwanda	January 14, 2013
4	2nd Global Conference on Biofortification	Deliberate on how best to expand the delivery of nutritious foods to reach more of the two billion people who suffer from micronutrient deficiency and improve the lives of billions of people around the world.	300 high-level participants from government, business and civil society around the globe	Government of Rwanda in collaboration with Harvest Plus	Kigali Rwanda	April 1, 2014
5	CAADP II CONSULTATIVE BUSINESS SESSION	(1) Ensure the integration of a private sector "perspective" on the Results Framework for PSTA III; and (2) Identify priority policy issues and public investments which could enhance the incentives to promote expanded private sector investments and public-private sector partnerships, in support of PSTA III.	Public and private actors, Development Partners, NGOs (International and local), and Civil Society representatives	Government of Rwanda, USAID, Africa Lead, , and PSF	Kigali Rwanda	March 27, 2014
6	Launch of CAADP II and signing of new MoU with partners	To operationalize the second Economic Development and Poverty Reduction Strategy (EDPRS II) and to achieve the revised Vision 2020 targets, through an approach based on resource management, human capacity and value chains,	300 national agricultural experts, policymakers, donors and representatives of Ministries of Agriculture from other African countries, the African Union Commission (AUC), the New	Government of Rwanda	Kigali	June 9-10th, 2014

		and involvement of the private sector.	Partnership for Africa's Development (NEPAD) and other regional and international organizations			
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SECTION 2: EDPRS II & PSTA III OBJECTIVES AND DEVELOPMENT PARTNER COORDINATION



This chapter discusses the performance of the agricultural sector in FY 2013/14 through an assessment of indicators pertaining to both the core EDPRS II targets as well as broader sector objectives (PSTA III). FY 2013/14 was the first year of implementation of both EDPRS II and PSTA III- a review of performance in this fiscal year is therefore critical for assessing progress toward sectorial and national objectives. The chapter also discusses the progress on sectorial objectives secured through cooperation with development partners (DPs).

2.1 Performance in 2013-2014 toward EDPRS II objectives

This year, the Ministry made good progress in achievement of EDPRS II targets. The agricultural sector contributes to the EDPRS II goals of rural development & foundational and cross-cutting issues. MINAGRI aids rural development by augmenting agricultural productivity and promoting the use of sustainable practices therein. The verifiable indicator identified in this regard is the area under irrigation (marshland & hillside). In FY 2013/14, the sector achieved 95.8% of its annual target. The high cost of development of large-scale irrigation projects, given Rwanda's hilly topography, continues to pose a challenge for the Government, especially given the sector's target to bring a total of 75,000ha of land under irrigation by 2017/18. Consequently, the Cabinet of Rwanda in its decision in July 2014 directed MINAGRI to roll out the small scale irrigation programme, whereby farmers will be assisted to access subsidized small scale irrigation technologies to use on plots of up to 10ha. This will help to better engage private sector participation in the development of irrigation projects. Strategies to facilitate private sector engagement in the management of large-scale irrigation projects through innovative public-private-producer-partnerships are also being developed.

The sector's efforts to promote food security and nutrition are classified as contributing toward the goal of 'foundational and cross cutting issues' under EDPRS II. Seasons A & B in FY 2013/14 experienced adverse weather conditions, creating a deficit in the year's target for stockpiling a strategic reserve of maize and beans. However, policy actions sought to mitigate the variability of food reserves in the short term (by mobilizing farmers to establish household strategic food stocks) and to aid in the building of long-term capacity for farmers (support on post-harvest handling technologies). See Table 10 for RAG ratings on both identified indicators to attain the EDPRS II targets (pertaining to the agricultural sector) as well as performance on policy interventions carried out to meet these targets.¹

Table 10: Performance on EDPRS II targets in FY 2013/14

EDPRS II Outcome	Indicators	Baseline Value 2012/2013	2013/14 Achievement	2013/14 Targets
RURAL DEVELOPMENT				
Increased productivity and sustainability of agriculture	Area under irrigation (Marshland & Hillside)	27,796.31 ha in June 2013	31,812.3 ha by June 2014	33,204 ha
FOUNDATIONAL AND CROSSCUTTING ISSUES				
Enhanced food security and nutrition	Maize and beans stored as a strategic food reserve	15,909 MT	Current stock at 9,429.3 MT, including 7,518.085 MT of maize and 1,911.28 MT of beans	15,000 MT

2.2 Progress in 2013/14 toward PSTA III Objectives

¹ A clarification may be necessary with regard to the target of 15,000 MT for the national strategic food reserve of grain-the number should not be interpreted as a stock figure but instead as a revolving figure for grain flowing in and out of the reserve, i.e. on average the strategic grain reserve should have 15,000MT of stored grain.

The Strategic Plan for the Transformation of Agriculture- Phase III (2013/14 to 2017/18) lays out the sector's strategic plans for this five year period with a focus on increased production of staple crops and livestock products, and greater involvement of the private sector to increase agricultural exports, processing and value addition. A successful implementation of PSTA III would yield the following broad sectorial transformations:

- From guaranteeing food availability to generating food security through economic growth
- From farmers as passive recipients to farmers as active market players with new skills
- From government as a direct provider to government as facilitator of the private sector
- From supplying mostly the domestic market to exporter to the region.

In order to accomplish these transformative changes the PSTA III framework is organised along four key programme areas- (i) Agriculture and animal resource intensification; (ii) Research and technology transfer, advisory services and professionalization of farmers; (iii) Value chain development and private sector investment; and (iv) Institutional development and agricultural cross-cutting issues. The following table lays out some of the key interventions undertaken by MINAGRI and its implementing bodies RAB & NAEB, and classifies them according to the four pillars of the PSTA III structure:

Table 11: PSTA III Outcome Matrix for FY 2013/14

PSTA III PROGRAMME		
Sector Outcome	Lead Agency Responsible	Some Key Interventions in 2013/14
I. Agriculture and Animal Resource Intensification		
Increase sustainably agricultural productivity	RAB	<ol style="list-style-type: none"> 1. Monitoring & supervision of newly established radical (18,344 ha) and progressive terraces (above 92% of target or 44,184 ha) 2. Coverage of cultivable land protected against soil erosion: 78.1% 3. Average effectiveness of soil erosion protection measures: 57.2% 4. 2,284 ha Ha of Marshland and 1,732 Ha of hillside land incorporated under irrigation schemes. 5. Development of a policy paper on irrigation, dissemination of training material to Water Use Organisations & Cooperatives. 6. Land use consolidation: <ul style="list-style-type: none"> -Season A: 753,650 ha (108.1% of target) -Season B: 609,633.7 ha (91.5% of target)
Increase sustainably animal resources productivity	RAB	<ol style="list-style-type: none"> 1. 37,875 cows were distributed under Girinka programme (95% of target). 2. Insemination of 68,882 cows (90,000 targeted) 3. 22,696 MT out of 24,000 MT of fish produced from capture fisheries. 4. About 399,728 One Day-Old Chicks produced. 5. Animal disease prevention (various)
II. Research and technology transfer, advisory services and professionalization of farmers		
Transform agriculture through research and extension services.	RAB	<ol style="list-style-type: none"> 1. 34 soybean varieties were evaluated for adaptability at Rubona, Muhanga, Nyagatare, Ngoma and Karama stations. Several hybrid maize varieties under evaluation. 2. Ratio of extension workers to farmer households reached annual target of 1/500. 3. Capacity building for Farmer Promoters (now part of Twigire Muhinzi). Over 14,000 present nationwide. 4. Dissemination of training material to Farmer Promoters including 28,000 maize guides, 14,000 climbing bean guides and 8,000 Irish Potato guides. 400,000 printed ads circulated to promote the use of inorganic fertilisers. 5. Use of SMS services and a hotline to provide extension services remotely. 6. 2,531 FFS facilitators are active on the field.
III. Value chain development and private sector investment		
Enhanced agribusiness environment for agricultural enterprises.	NAEB	Cash Crop Commodity Development/Revenue: <ol style="list-style-type: none"> 1. Coffee: <ol style="list-style-type: none"> a. Acreage: Additional area planted totalled 9,166 ha. b. Productivity: Total of 7,876tonnes of organic fertilizers and 3,300 tonnes of mineral fertilizers applied during FY 2013/14. c. Revenue: Generated about 47.5 million USD (low average world coffee prices)

		<p>2. Tea:</p> <ol style="list-style-type: none"> Acreege: Additional area planted totalled 1,891 ha. 32 million tea seedlings were prepared to be planted in Season A 2014. Productivity: Through stakeholder support 5,753 tonnes of fertilisers were applied. Revenue: Increased production in the year (approx. 22,483 MT) generated 53.5 million USD. The green leaf pricing model was reviewed. Market price based model agreed upon by stakeholders. <p>3. Horticulture:</p> <ol style="list-style-type: none"> Acreege: Area planted with vegetables during the FY totalled 4,816 ha; area planted with fruits totalled 3,480 ha. The new acreage includes 3,413 ha planted with pyrethrum. Productivity: Various interventions & inspections undertaken to reduce pests and diseases incidence. Revenue: Pyrethrum exports earned USD 3.5 million (unfavourable prices & lack of market access). Export of fruits & vegetables earned over 8.6 million USD in the FY.
	MINAGRI	<p>1. Agricultural finance lending for production and agro-processing increased to 6.1% of overall loans (total amount of 35,273,866,000 Rwf)</p>
Improved post-harvest management and agro processing promotion	MINAGRI	<ol style="list-style-type: none"> 23,281 farmers from over 500 cooperatives trained on maize, rice, beans, soya beans, wheat & Irish potatoes postharvest (PH) best practices. 72,095 farmers coached on maize, rice, beans, soya beans, wheat & Irish potatoes post-harvest handling practices. Post-harvest equipment and material were distributed to maize, rice and wheat farmers: 21,399 plastic sheets (tarpaulins), 10 hermetic storage bags & 683 manual maize shellers. 10 cooperatives were supported with electrical maize shellers, while 17 cooperatives were supported with wheat threshers. 12 drying grounds constructed and operational & 13 drying grounds are under construction. Rural Feeder Roads: With stakeholder support the following achievements of sub-programmes in the FY were realized: <ol style="list-style-type: none"> Sector Policy Support Programme for Feeder Roads (EU funded) - rehabilitation of 101.15km of Feeder Roads in 7 Districts. Rural Feeder Roads Programme (AfDB funded Project) - rehabilitation of 30km of Feeder Roads in Nyamagabe District in 2013/14 FY. KWAMP (IFAD funded Project)- The project supported rehabilitation of 54 km of Feeder Roads in Kirehe District.
IV. Institutional Development and Agricultural Cross-cutting Issues		
Increased household food security and nutrition	MINAGRI	<ol style="list-style-type: none"> Current strategic reserve stock at 9,429.3 MT, including 7,518.085 MT of maize and 1,911.28 MT of beans. The shortfall from annual targets was due to adverse weather conditions in both Season A and B. Percentage of HHs in each Umudugudu with kitchen garden practices: 68% Percentage of schools with nutrition gardens: 60.5% Production of key food security crops (cereal equivalents): 3,503,354 MT
Developed institutional capacity and mainstreamed Crosscutting issues	MINAGRI	<p>Capacity building:</p> <ol style="list-style-type: none"> 20 staff members from MINAGRI, RAB and NAEB received Msc. scholarships to study in South Korea, Netherlands, Japan, India, Canada and New Zealand. 70 MINAGRI staff received training in different courses (Rural Development, ICT, Food Security Monitoring, Agribusiness, Policy analysis, GIS among others) with the support of JICA, KOICA, FAO, CHINA, RESAKSS, and SCBI. 129 young graduates in agriculture were sent to Israel for training in irrigation and horticulture. <p>Cross cutting issues:</p>

		<ol style="list-style-type: none"> 1. Environmental Impact Assessment studies were conducted for all marshlands developed by MINAGRI projects. 2. Gender issues were brought into the mainstream of planning and budgeting processes and awareness campaigns were conducted for women in agri-business in order to increase their access to credit and financial services. Whereby all district agronomists and veterinarians were trained.
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2.3 Aid Coordination

Agriculture Sector Working Group

There were eight Agriculture Sector Working Group (ASWG) meetings throughout FY 2013-2014, and two Joint Sector Reviews held in December and June. Meetings were chaired by the Permanent Secretary and co-chaired by the a Development Partner representative. For FY 2013-14 the European Union was the Co-Chair of the ASWG. These meetings are an essential forum for coordination around key agricultural development issues, and are attended by all sector government agencies and development partners. Participants discuss the progress on EDPRS II indicators and Policy Actions, and meetings are also a platform to discuss cross cutting issues and new strategies or innovations in the sector. This year, the following policy actions were completed by the concerned Sub-Sector Working Groups and validated by members of the Agricultural Sector Working Group (Table 12):

Table 12: Progress on Policy Actions in FY 2013/14

Focus Area	2013/2014 Policy Action	Progress on Policy Action	RAG Rating
Irrigation	Develop irrigation infrastructure performance evaluation guidelines and identify an institutional and implementation framework to operationalize regular evaluations. Present progress to ASWG.	Validated by ASWG on 11 th September 2014	
Soil conservation	Develop and implement guidelines for sustainable soil erosion control: infrastructure development, maintenance, assessment and community participation. Present progress to ASWG.	Validated by ASWG on 11 th September 2014	
Extension	Develop and endorse with the ASWG training modules/guidelines for agricultural entrepreneurship.	Validated by ASWG on 10 th July 2014	
Soil Fertility	Evaluate constraints that can limit adoption of organic and inorganic fertiliser and liming, and present to the ASWG recommendations to increase access to and use of sustainable soil fertility improving inputs	Validated by ASWG on 30 th May 2014	
Livestock	Develop and validate with the ASWG a roadmap for access to livestock packages to reduce malnutrition.	Validated by ASWG on 10 th July 2014	
Market Infrastructure	Develop a roadmap and action plan for implementation of the feeder roads maintenance framework and review progress with ASWG	Validated by ASWG on 30 th May 2014	

Sector-Wide Approach Group

The Sector Wide Approach Group (SWAp) is a sub-set of the ASWG and is focused on systemic strategic issues in the agricultural sector. Objectives include improving aid coordination, assisting in the preparation of Joint Sector Reviews (JSR), supporting the MINAGRI planning unit particularly in budgeting, expenditure tracking,

monitoring and evaluation, ensuring collaboration with the ASWG, and providing a forum for budget support donors to meet their fiduciary oversight requirements. The group was Chaired by the Permanent Secretary and Co-Chaired by the European Union in FY 2013/14. In the fiscal year, issues discussed by the Agricultural Sector Working Group were endorsed by SWAp members. Member organizations communicated their inputs through the ASWG forum itself as they were engaged in the provision of invaluable support for the finalization of CAADP II and the Results Framework, among other key policy documents.

SECTION 3: PROJECT & PROGRAMME IMPLEMENTATION



1. Agriculture and animal resource intensification

SP1.1. Land conservation and Land Husbandry

1. LWH – Land Husbandry, Water Harvesting and Hillside Irrigation Project



Basic Information	<p>Project cost: USD 147.5 million Donors: World Bank, GAFSP, USAID, CIDA Donors contribution: USD 140.2 million Government contribution: USD 7.33 million Implementation starting date: June 2010 Scheduled Completion date: June 2017</p>
Mission and Purpose	<p>The objective of the LWH project is to increase the productivity and commercialization of hillside agriculture in target areas. It has three main components:</p> <ol style="list-style-type: none"> 1. Capacity development and institutional strengthening for hillside intensification 2. Infrastructure for hillside intensification 3. Implementation through the Ministerial SWAP Structure
Achievements 2013-2014	<p>Capacity Development and Institutional Strengthening:</p> <ul style="list-style-type: none"> ○ Strengthening Farmers Organizations: from last year, the number of beneficiary households increased from 21,180 to 32,399 (40% headed by women). With all the household members, the total number of beneficiaries is 154,426 individuals. The farmers are all organized in 1,586 self-help groups (SHGs). So far 8 cooperatives have been created after capacity building on farmers organizations. Women, vulnerable persons and youth were encouraged to form special groups to make sure that project activities are as socially inclusive as possible. ○ Water Users Associations (WUAs): after acquiring district temporary legal status, the 3 WUAs of Karongi-12, Karongi-13 and Nyanza-23 were supported to get the temporary legal status from RGB. This temporary legal status from RGB become definite after one year. 2 more WUAs were created in Rwamagana-34 and Kayonza-4 sites which will operate in the two sites when the works for irrigation are complete next year. All WUAs were trained in financial management and operation and maintenance. ○ Extension Services: Over 2,500 lead farmers representing other farmers in all sites were trained on improved farming practices aimed at increasing the productivity. The training covered IPM practices, compost making and seed production. Seed production is ongoing in 6 Project sites for the following crops: maize in Gatsibo, Rwamagana and Nyanza sites; Irish potato and beans in both Karongi sites and Soybeans in Kayonza-4. ○ Horticulture Development: The project is currently piloting horticulture crops for export in the command areas of Nyanza; Karongi and Rwamagana-34 sites. The Project continues to link farmers with 2 international exporting companies (Lotec Rwanda and Super Fresh Kenya) with which they signed contracts for production. High value crops produced are snow peas, sugar snaps, chillies, egg plants, okra, karella, French & fine Beans and red onions. So far, from these pilots, 9 tons of vegetables were exported (from March 2014 when it started). Under horticulture development, the project has also supported the planting of 564,099 seedlings of fruit trees in different sites. The survival rate of these trees is

currently 68% due to severe drought observed in the country during season B of 2014.

- **Nutrition:** 242 Farmers representing others were trained on improving their nutrition. After mobilization, the number of kitchen gardens constructed by beneficiary households increased to 12,781 in project sites. To improve nutrition among beneficiary households, bio-fortified beans were also introduced in all sites and were planted during season 2014B. Overall, farmers with acceptable food consumption are now over 70%.
- **Marketing:** Capacity building work done included postharvest handling to reduce postharvest losses and increase quality of produce, marketing principles, contract farming, entrepreneurship, business plan development and financial management. Farmers were supported to purchase postharvest equipment like maize shellers, weighing machines, palettes, and other materials. To improve postharvest handling, farmers were supported to construct 24 storage facilities, 24 driers and 3 collection centers. As a result of that and capacity building, farmers are currently marketing 67% of their produce from a baseline of 35%.
- **Rural Financial Service Development:** Within the ambition of enhancing farmers financial literacy, the Project continues to work closely with farmers as well as financial institutions on increasing saving and credit. The Project has supported the design of 6 financial products which are suitable to agriculture rural finance. The products are now being piloted. During the period ; farmers have accumulated savings equivalent to Rwf 77,549,771 mainly for inputs of 2015A season, while loans have reached Rwf 131,229,524 and were mainly directed to agri-inputs for season 2014 B and quality compost making business.
- **Institutional Capacity Building for MINAGRI:** in order to reduce the skills gap in the agriculture sector, the project supports higher education (master's level) of MINAGRI and its agencies staff. So far, 8 staff have completed their studies, 11 more are still doing their studies in India. The Project has also supported 50 candidates to go to Israel to pursue an on-job training. 2 MINAGRI GIS staff were also supported to attend a training on "Geospatial Technologies for Planning and Management of Watersheds Projects."

Infrastructure for Hillside Intensification:

- **Land Husbandry Infrastructure:** A cumulative area of 10,970 ha (3,150 ha last fiscal year) has been treated with different land husbandry techniques including terraces, soil bunds, cut-off drains, waterways, afforestation and reforestation. Cumulatively, this is the progress per site: Rwamagana-34 : 1,087 ha, Rwamagana-35 : 1,569 ha, Kayonza-4 : 879 ha, Nyanza-23 : 2,731 ha, Gatsibo-8 : 910 ha, Karongi-12 : 1,069 ha, Karongi-13 : 1,303 ha, Muyanza : 410 ha, Gicumbi : 245 ha, Nyabihu : 121 ha, Ngororero : 151.5 ha, Rutsiro : 43.5 ha, Nyamagabe : 333.5 ha and Ngoma-22: 93 ha
- **Water Harvesting and Hillside Infrastructure:**
 - In phase 1A Sites (739 ha):**
 - **Nyanza-23 (471 ha):** Construction of a 19 m high dam and 471 ha hillside irrigation system in Nyanza-23 are at an overall progress of 95%. The dam was completed earlier with reservoir filling ongoing since February 2014. With the current amount of water in the reservoir, over 125 ha will be irrigated in season 2015A. An additional work of 10.7 km long, 6 m wide, all weather road was also completed from Nyanza town to the site.
 - **Karongi-12 (128 ha) & Karongi-13 (95 ha):** Construction of 145 ha and 107 ha hillside irrigation systems in Karongi-12 and Karongi-13, respectively, are almost completed and remaining minor activities will be completed by end November 2014. The total developed command area so far is 220 ha (123 ha + 97 ha) out of the planned 223 ha (128 ha + 95 ha).
 - **Gatsibo-8 (45 ha):** A study for small scale irrigation using stream flow and groundwater was completed in June 2013. Construction will start in July 2014 and is expected to be completed by July 2015.
 - Phase 1B sites (687 ha)**
 - **Rwamagana-34 (267 ha) and Kayonza-4 (420 ha):** Final design and tenders were completed in November 2013. Construction for these two sites will commence in July 2014 and are expected to be completed in July 2015.

	<p>Phase 1C sites (1,100 ha)</p> <ul style="list-style-type: none"> ○ Muyanza (1,100 ha): Feasibility design for Muyanza (1,100 ha) will complete in August 2014. Detail design is ongoing and tender documents are expected by Dec 2014. Construction is expected to commence in Feb 2015 and end in Oct 2016. Procurement process for hiring a Consultant has started. EIA studies have been completed. <p>Phase 2 sites (5,400 ha)</p> <ul style="list-style-type: none"> ○ Between September 2011 and March 2012, LWH team of engineers identified 37 new potential sites for 6,500 ha irrigation in different parts of Rwanda including Muyanza (1,100 ha). Muyanza site is selected as a fast-track Phase 1C site as described above. The remaining sites will be of great potential for future scale up of LWH2 project. Two consulting firms are currently carrying out Pre-feasibility, Feasibility and Detailed Design studies of these sites which have been separated into two lots. ○ Feasibility designs for Muyanza (1,100 ha) and Nyamukana (840 ha) as well as Pre-feasibility Studies for the remaining sites will complete in August 2014. <p>Financial Management implementation</p> <ul style="list-style-type: none"> ○ The project has executed 89% of its 2013-2014 fiscal year budget and has disbursed 50.8 % of its total budget from its different donors (IDA: 68.3%, GAFSP: 64.9%, CIDA: 77.1% and USAID: 39.06%).
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2. GWLM – Gishwati Water and Land Management Project



Radical terrace construction in Arusha under GWLM for potato and maize plantation

Basic Information	<p>Project cost: 25,774,908 USD (15,284,520,444 RwF) Donor: Government of Rwanda internally funded project Government contribution so far: 4,645,588 USD (3,159,000,000RwF) Implementation starting date: July 2010 Scheduled Completion date: June 2013 Eventual Extension: June 2017 Implementing Agency: TF Irrigation and Mechanization</p>
Mission and Purpose	<p>GWLM aims to implement comprehensive and sustainable land use and water management technologies, which contribute to environmental conservation and improve the livelihoods of Gishwati communities. The project's overall objective is to facilitate a healthy co-existence between agrarian communities and Gishwati's fragile ecosystem, while promoting sustainable economic development to improve the community's quality of life.</p> <p>The main components of the program are:</p> <ul style="list-style-type: none"> • Sensitization, mobilization and empowerment of beneficiaries, • Road network construction, • Comprehensive water and land management works, • Quarterly monitoring and evaluation, Building the capacity of staff and institutions.

1. Progress of activities in crop land use blocs:

Land husbandry works have been implemented on four sites: Muhe-Murambi and Muhe-Bihangara in Bigogwe sector, Mutaho in Rambura sector (Nyabihu District) and Yungwe in Kanama sector of Rubavu District. The table below shows the total treated area by the end of 2013.

Total area treated with graded terraces (Ha)

Site	Area treated with graded terraces (Ha)
MUTAHO	94.08
YUNGWE	120.51
MUHE-MURAMBI	168.15
MUHE – BIHANGARA	127.5
Total	510.24

Collaborative work with REMA and MINADEF (Reserve Forces) have completed an extra 360Ha of Land husbandry works in the project zone sectors as shown the table below:

Land husbandry works implemented in collaboration with REMA and MINADEF/Reserve Force

Site/Sector	Area treated with appropriate LH Technologies(Ha)	
	Graded terraces	Progressive terraces
JENDA	100	-
KARAGO	100	-
RAMBURA	-	80
KARAGO	-	80
Total	360 Ha	

2. Agriculture development and self-help groups' implementation

Activities related to agriculture development concerned mainly follow up of farming season on different sites: The following table illustrates the situation of activities carried out on different sites /2014 A and 2014 B. A total of 1064ha (season A) and 1590ha (season B) was successfully exploited for the production of maize and Irish potatoes. A total production of 3192tons maize and 31800 tons of potato was achieved.

Agriculture development and self-help groups' implementation

Site	Season 2014 A		Season 2014B	
	Cultivated area (ha)	Crops	Cultivated area (ha)	Crops
Arusha I	95	Irish potatoes	24.86	Maize
	72	Irish potatoes		
Kijote	128	Irish potatoes	175.54	Maize
Kora	35	Irish potatoes	54.096	Maize
Gatagara	56	Irish potatoes	82.13	Maize
Arusha II	75	Irish potatoes	108.07	Maize
Busoro	140	Irish potatoes	233.86	Maize
Kinamba / (Rega)	105	Irish potatoes	105	Beans and carrots
Muhe-Murambi	123	Maize	168.15	Irish potatoes

Yungwe	53	Maize	120.51	Irish potatoes
Bihangara	74	Maize	127.5	Irish potatoes
Mutaho	35	Maize	94.08	Irish potatoes
Jenda	73	Maize	96	Irish potatoes
Total	1064		1589.796	

3. Progress of activities in forest and ecosystem rehabilitation

Major activities in the Forest domain have been dominated by constant monitoring of already planted sites, continued sensitization of community members about the need for protecting already planted sites, avoiding grazing in the restricted high risk zones and respecting the different boundaries put into place by the project. However, in addition to monitoring, some others activities took place in the forest and rehabilitation component pertaining to the growth of tea and apples in the GWLM Project area. The GLWM project in collaboration with stakeholders mapped the area allocated for Tree planting, Tea planting and Apple growing. In the map (produced by RNRA), 169HA have been allocated for Tea growing, 160HA were allocated for Apple growing while the remaining area was for forestry.

The first tree planting contract between Rwanda Natural Resource Authority and Ministry of Defense/Reserve Force planted a total of 700ha comprising of *Alnus* trees and other Indigenous tree species. A new contract (second tree planting contract) was signed between the same institutions. Under this contract, the Reserve forces will plant 500ha within GWLM Project area designated to forest regeneration. Only indigenous tree species will be planted. Implementation of this contract has already started with tree nursery establishment.

4. Progress of activities in range land development

After the process of land redistribution, 1280 households received land in the rangeland. The major activities which have been going on in the rangeland development component are fencing of the paddocks and establishment of groups among cattle keepers. In line with fencing and establishment of groups, at least 70% of the redistributed rangeland is already fenced, and 25 groups are already established.

5. Other important activities:

5.1. Construction of the drainage canal in through Kinamba lowland

The subproject of reinforcing Mizingo river main drain with masonry was undertaken in order to resolve flooding problems at Kinamba area, and help farmers to grow crops on an area of 105Ha lowland as well as to convey water gathered by waterways and cut off drains in the upstream terraces. The 1500km long drainage canal was provisional received in 2014.

5.2. Land redistribution in Gishwati

In order to address the crucial issues and to cope with the land use rehabilitation process, a special commission has been tasked to redistribute available agricultural and range land to all affected families. The categories of the affected people in Gishwati have been identified and given land for agricultural activities (0.2ha/family owning land in Gishwati but living outside of Gishwati area and 0.4ha/family living in Gishwati) and animal husbandry activities (1ha/family). 4353 families have received agricultural land and 1280 families have been given range land. This exercise was a great success as it solved many problems related to land management. However, after land development and redistribution of land, in order to keep the primary objective of rehabilitation of Gishwati, we recommend:

- A strong emphasis on mobilization and sensitization of all the stakeholders including beneficiaries of the developed land, local administration and other concerned entities to work together for sustainable use of the developed land and infrastructures in this sensitive ecosystem.
- To hand over all the developed land for agriculture and livestock to the farmer beneficiaries with a user contract signed between them and local administration.

5.3. Mobilization for Pyrethrum growing in GWLM project area

Following the Government's recommendation to increase the area coverage for Pyrethrum growing, the GWLM project area was appointed to support the government's objective of increasing the production of Pyrethrum while at the same time protecting and increasing the sustainable productivity of the sensitive soils in Gishwati. Mobilization for Pyrethrum in GWLM area started towards the end of last year, though it had not effectively taken off at the grassroots/community level by January 2014. An intensive program of mobilization for pyrethrum growing at the grassroots level started in January 2014.

SP1.2. Irrigation and Water Management

1. PAIRB – Bugesera Natural Region Rural Infrastructure support Project



Four seed storage facilities of 300MT each at Ngeruka, Gashora, Kamabuye and Rweru in Bugesera District

Basic Information	<p>Project cost: 2.25 million USD Donor: African Development Fund Government contribution: None Implementation starting date: October 2009 Scheduled Completion date: December 2015 Eventual Extension: Not yet decided</p>																
Mission and Purpose	<p>PAIRB aims to enhance food security in the Bugesera region through a sustainable increase in agricultural production.</p>																
Achievements 2013-2014	<p>Irrigation Development:</p> <ul style="list-style-type: none"> Gashora marshland (Block A) development works that started on December, 3rd 2012 executed by a Joint Venture between AN KAPLAN (Israel) and Thomas et Piron Grands Lacs (Rwanda) resulted into contract cancellation on December, 10th 2013 at 6.7% of progress. A new process of acquisition of another contractor and supervisor (tendering process) has been immediately initiated: contract signed on 21/05/2014 with the Joint Venture SINOHYDRO TIANJIN (China) & HORIZON CONSTRUCTION COMPANY Ltd (Rwanda) for 7,267,074,990 Rwf. Works commenced on 21/06/2014 for 16 months. SCET Tunisie on 30/06/2014 Protection of hillsides of lakes and marshlands against erosion is done using local community committees known as COGIBAV, standing for watersheds integrated management committees: <ul style="list-style-type: none"> Trenches were rehabilitated (18,424 ml) protecting 2,303 ha cumulatively Agro forestry trees prepared and planted by COGIBAV on ditches over 118 ha throughout individual farmers' plots. Transplantation was shifted to season B 2014 due to unexpected drought period. Immediately after transplantation in March 2014, a period of severe drought occurred again and destroyed much of the planted trees (results are to be evaluated and new strategy elaborated with different stakeholders and partners early next year). Penissetum grasses were planted to strengthen progressive terraces protecting an area of 448ha. Drought period badly affected the achievement of the intended results. <p>Development of production:</p> <ul style="list-style-type: none"> Popularizing modern agricultural techniques through farmers' field schools: efforts are still being put in setting up more FFS to reach a big number of farmers organized around banana, cassava and maize crops. <table border="1" data-bbox="370 1899 1377 2029"> <thead> <tr> <th rowspan="2">Crop</th> <th colspan="2">Number of FFS</th> <th colspan="2">Number of beneficiaries</th> <th rowspan="2">Comments</th> </tr> <tr> <th>2013-2014 (New)</th> <th>Cumulative</th> <th>2013-2014</th> <th>Cumulative</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Crop	Number of FFS		Number of beneficiaries		Comments	2013-2014 (New)	Cumulative	2013-2014	Cumulative						
Crop	Number of FFS		Number of beneficiaries		Comments												
	2013-2014 (New)	Cumulative	2013-2014	Cumulative													

Banana	11	35	434	1,226	Need to be improved (Yield 77MT/ha against 100MT desired).
Cassava	29	200	870	2,758	Yield (23.1MT/ha, 30MT/ha desired).
Maize	18	22	450	556	FFS experienced unfavorable weather conditions (lack of enough rains) that compromised the learning exercise.
Rice	6	15	141	411	Started to engage early enough future beneficiaries of Gashora marshland after development works. Yield attained in a non developed marshland: 6MT/ha
TOTAL	64	272	2,353	4,951	

- Three new technologies are being introduced:
 - Banana and pineapple macropropagation: cumulatively, 15 banana macropropagation units initiated produced 11,661 that benefited to 222 farmers; while for pineapple 9 sites established produced 41,474 suckers for 204 farmers.
 - Fruits grafting (avocadoes, mangoes). Ten (10) fruit nurseries were established (one in each Sector of the project intervention zone): 135,000 plantlets to be grafted in July-August 2014. Transplantation is expected to take place in November 2014. Farmers (800) beneficiaries are mobilized nearby water sources/wetlands to avoid losses due to the negative impact of droughts that the District experiences frequently.
- Distribution of cattle and goats: It was planned to distribute 600 cows to poor beneficiary families this year. The tendering process ended up with signature of contracts on 22/05/2014. Heifers to be distributed are crossbreed (50%) jersey – frisonne. Identification process completed in collaboration with RAB and Bugesera District. Taking into account the then prevalent drought conditions, an evaluation of beneficiary preparedness advised to wait for the rains in September 2014 to distribute heifers. Only 60 heifers distributed on 19/06/2014.

On the other side, pass on heifer gifts ceremonies were organized whereby the first beneficiaries (since September 2011) passed gifts to new beneficiaries (70 heifers) in May 2014. The current situation of distributed cattle is summarized in the table below:

Sector	Cows distributed	Beneficiaries			Losses/May 2014	% of losses	Alive new born	Total cows alive	Increase rate
		M	W	% of women					
Nyamata	78	28	50	64	6	7.7	59	131	75.6
Mayange	95	32	63	66	12	12.6	49	132	51.6
Mwogo	67	27	40	60	18	26.9	30	79	44.8
Juru	94	31	63	67	15	16	72	151	76.6
Rilima	94	37	57	61	18	19.1	32	108	34
Gashora	311	217	94	30	57	18.3	97	351	31.2
Rweru	261	173	88	34	20	7.7	81	322	31
Total	1000	545	455	46	146	14.6	420	1274	42

Other Rural Infrastructure Development:

- Two milk collection centres in Ruhuha and Gashora Sector finished and operational (50,000 liters capacity each). Experiences brought by LISP other MCCs is being duplicated with regards to farmer to farmer training, milk collection and handling (collection networking, testing, marketing and records keeping, etc). Farmer cooperatives manage the infrastructure (Zirakamwa at Ruhuha with 131 members, 46% are women and KOINDAMU at Gashora with 110 members, 42% are women).
- Ongoing construction and equipment of 3 grain silos (at Mayange with total 6000MT capacity). General progress on the main contract is at 85% (delayed by electricity connection to the site and the contractor unjustified works stopping). For now, electricity is connected, and the

	<p>contractor provided a new planning of activities for recovery. Completion expected to be November 2014. Contracts regarding additional works (silo site internal roads, administrative block and parking construction) signed on 30/06/2014 for 6 months (168,384,985 Rwf).</p> <ul style="list-style-type: none"> - Construction works of 4 seed storage sheds of 300MT capacity each completed in Ngeruka, Kamabuye, Rweru and Gashora Sector and provisional reception done on 28th March 2014. They have been constructed nearby crop intensification sites for easy use. The organizations around are very new cooperatives being trained by ADEAR_UGAMA and the management model in starting associates community and commercial interests. - Construction of two road markets at Mayange and Gashora: Constructed and in use since May 2014 on sites used for selling fresh vegetables on the main road Kicukiro - Nyamata- Kirundo. The beneficiaries are former users of selling points initially set by farmers' initiative.
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2. KWAMP – Kirehe Community Based Watershed Management Project

Kinoni I Dam constructed under KWAMP as the first stage of a major irrigation scheme



Basic Information	<p>Project cost: 73.06 million USD Donor: The International Fund for Agricultural Development Government contribution: 9.54 million USD million USD Implementation starting date: June 2009 Scheduled Completion date: December 2016 Eventual Extension: Not yet decided</p>
Mission and Purpose	<p>KWAMP is an agricultural investment project which aims to develop sustainable and profitable small-scale agriculture in Kirehe District. There are three project areas:</p> <ul style="list-style-type: none"> • Local institutional development • Agricultural intensification • Rural feeder roads.
Achievements 2013-2014	<p>1. Local institutional development</p> <ul style="list-style-type: none"> • 18 Strong public and private local institutions with effective planning and management capacity in the natural resource sector – Comité Local pour Gestion et Supervision (CLGS) in place. • 18 coherent Watershed Management Plans developed, amended as needed and implemented. • Land registry give to farmers adequate title to their land rights for legal and planning purposes. • 17 Water Users' Associations (WUA) able to operate without external assistance and to mobilize funding for system maintenance and repairs • Construction and equipping of three permanent "Community Centres for Innovation" responding to requests for advice and extension services. • At least 590 Village-based resource persons to act as links to CCI. • At least 9 community competitions organized at CCI and village levels to provide incentives for greater efficiency in farming. • At least 25 primary cooperatives trained in businesses. • UCORIRWA (rice production cooperative) is trained in accounting and management. • At least 3 Co-operative Unions in Kirehe formed and strengthened.

- At least 18 watersheds surrounding potential irrigation development sites selected and developed at 100%.
- Mapping exercise to identify the extent and present land use in target watersheds.
- Local committee (CLGS) to manage each watershed is established at 100%.
- At least 3,674 persons (PR, RV and CLGS members) trained on soil and water land use management.
- An inventory of physical, economic and social attributes of each watershed as the foundation of a holistic Watershed Management Plan (WMP) is available.
- 18 WMPs elaborated and updated by technicians according to CLGS and community's needs.
- 100% District Land Bureau and National Land Centre staff trained.
- 365 members of District Land commission, sectors and cell land committee trained on land laws and land conflict resolution
- At least 200,000 Land titles available and distributed to land owners.
- 20 WUA created for involvement in the planning, overseeing of construction and subsequent operation and management of the installed system.
- 20 WUA trained in the technical, legal and operation and maintenance aspects of irrigation management.

2. Agricultural Intensification

2.1: Value chain development

- Four commodity chains are selected, mapped and analyzed.
- An action plan is developed by stakeholders' "actor-cluster platforms" for value-chain development for each targeted commodity.
- 16 basic facilities developed for post-harvest
- At least 10,000 persons trained in commodity chain management
- A *Value Chain Development Fund* is established and operational
- At least 10 Business plans prepared and implemented
- Number of input shops and collection points constructed.
- Number of market information and intelligence facilities available.

2.2: Crop and livestock intensification

- 25,000 ha of maize and bean intensification developed;
- 3,000 ha of banana rehabilitated;
- 2,000 ha of cassava intensification developed;
- 120 FFS groups for banana and 120 FFS groups for cassava established;
- Additional 150 cows distributed using the new Umudugudu-based model
- 4 000 households have received passed-on animals from other beneficiaries (3000 cows, 600 pigs and 400 goats distributed through POG);
- At least 15,000 persons trained in integrated crop/animal husbandry systems
- 300 roof rain water harvesting systems installed;
- 450 households regularly operating a biogas fermenter
- At least 1500 cows inseminated per year.

2.3: Irrigation development

- 1100 ha of hillside scheme works completed;
- 600 ha of new marshland developed;
- Operation & maintenance manuals for all irrigation schemes prepared and disseminated.

2.4: Soil and water conservation

- 17,832 Ha of watershed protected.
- 5,335 Ha protected against erosion through the planting of 14,750,000 trees.
- 669 ha developed under comprehensive land husbandry technologies
- 34 community-based tree nurseries established.
- 54,375,000 planted of Napier cuttings
- At least 22 Ha of hedge plant cuttings bank established.
- At least 3 SWC resource manual for farmer compiled and distributed.
- Additional 150 ha of hilltop reforestation established and 441 ha of watersheds reforested
- Contract signed with the cooperative Uburumbuke for forest management;
- 40 modern beehives provided to the cooperative Uburumbuke;

<ul style="list-style-type: none"> • At least 25 kg of honey per beehive harvested one year after installation; and • A solidarity chain for beehives established and operational. <p>3. Feeder roads</p> <ul style="list-style-type: none"> • 64 Km of feeder roads rehabilitated; • Operation & maintenance manuals for feeder roads prepared and disseminated.
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3. GFI – Government Funded Irrigation Immediate Action Irrigation Project



Irrigated maize under a sprinkler irrigation system supported by GFI at a mature stage

Basic Information	<p>Project cost: 50 billion RWF Donor: Government of Rwanda Government contribution: 100% Government funded Implementation starting date: July 2010 Scheduled Completion date: June 2013 Eventual Extension: To Be Decided Implementing Agency: TF Irrigation and Mechanization</p>																																																																					
Mission and Purpose	<p>The Immediate Action Irrigation (IAI) initiative for food self-sufficiency and livelihood improvement under MINAGRI's Task Force of Irrigation and Mechanization aims for the intensification and modernization of agriculture, to successfully reduce dependence on rain fed agriculture in the Eastern Province, the driest part of Rwanda. The targeted Districts are Kirehe and Nyagatare. The project aims to cover 5,000 ha in three years.</p>																																																																					
Achievements 2013-2014	<ul style="list-style-type: none"> • Operation and management of Muvumba (400ha) and Nasho (600ha) irrigation schemes • In Muvumba (400ha) the following achievements in crop production were accomplished: <ul style="list-style-type: none"> - The cooperative (KABOKU), and two water organizations (WUOS), farmers produced soybean, bean and vegetables. High value crops which included onion, eggplant watermelon and beetroot were produced successfully in Season C. A total of 302 tons of high value crops was achieved. - The total production from 2013b to 2014B are given in the following table: <p style="text-align: center; color: #4682B4;">Crop production for different crops from 2013A to 2014B</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Cropping season</th> <th rowspan="2">Total scheme Area (Ha)</th> <th rowspan="2">Crops</th> <th colspan="2">Cultivated land</th> <th colspan="2">Provisional production (t/ha)</th> <th colspan="2">Estimated Production</th> </tr> <tr> <th>ha</th> <th>%</th> <th>Production (tones)</th> <th>Yield (t/ha) availed data</th> <th>Production (tones)</th> <th>Yield (t/ha)</th> </tr> </thead> <tbody> <tr> <td>2013A</td> <td>400</td> <td>Maize</td> <td>400</td> <td>100</td> <td>2000</td> <td>5</td> <td>1800</td> <td>4.5</td> </tr> <tr> <td>2013B</td> <td>400</td> <td>Soybean</td> <td>100</td> <td>25</td> <td>120</td> <td>1.2</td> <td>50</td> <td>0.5</td> </tr> <tr> <td>2013C</td> <td>400</td> <td>Onion</td> <td>2</td> <td>0.5</td> <td>20</td> <td>10</td> <td>21</td> <td>10.5</td> </tr> <tr> <td>2013C</td> <td>400</td> <td>Eggplant</td> <td>1</td> <td>0.25</td> <td>10</td> <td>10</td> <td>9</td> <td>9</td> </tr> <tr> <td>2013C</td> <td>400</td> <td>tomato</td> <td>5</td> <td>1.25</td> <td>100</td> <td>20</td> <td>60</td> <td>12</td> </tr> <tr> <td>2014A</td> <td>400</td> <td>Bean</td> <td>380</td> <td>95</td> <td>570</td> <td>1.5</td> <td>570</td> <td>1.5</td> </tr> </tbody> </table>	Cropping season	Total scheme Area (Ha)	Crops	Cultivated land		Provisional production (t/ha)		Estimated Production		ha	%	Production (tones)	Yield (t/ha) availed data	Production (tones)	Yield (t/ha)	2013A	400	Maize	400	100	2000	5	1800	4.5	2013B	400	Soybean	100	25	120	1.2	50	0.5	2013C	400	Onion	2	0.5	20	10	21	10.5	2013C	400	Eggplant	1	0.25	10	10	9	9	2013C	400	tomato	5	1.25	100	20	60	12	2014A	400	Bean	380	95	570	1.5	570	1.5
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2014A	400	onion	2	0.5	20	10	21	10.5
2014A	400	tomato	15	3.75	300	20	150	10
2014B	400	Bean	375	93.75	562.5	1.5	420	1.12
2014b	400	tomato	10	2.5	200	20	300	30
2014b	400	onion	5	1.25	75	15	60	12
2014b	400	cabbages	2	0.5	20	10	14	7
2014b	400	Carrots	2	0.5	20	10	15	7.5
2014b	400	Eggplant	1	0.25	10	10	9	9

- Development of Ngoma irrigation scheme: Feasibility study, EIA, awareness campaign and land husbandry have been completed for the Ngoma (300ha) irrigation project in Ngoma District. The project will cover 300ha combining marshland and hillside and will be financed by a grant from the Japanese Government through JICA.
- Development of 500ha of Center Pivot in Kagitumba Valley: Hillside irrigation with a command area covering 500hectares (in three sections A,B,C) using center pivot has been completed at Kagitumba. The scheme is under test and production will commence in Season 2015A.
- Organization of farmers groups i.e. Water User Associations and farmer cooperatives.
- Developing of quick win marshlands: A total of 1250 hectares have been completed under quick win marshland development program - QWMDPIII - in various Districts throughout the Country.
- Farmer mobilization: Farmers' mobilization was made through farmers' field visit, community meetings and Demonstration plots installation. Cooperatives have been organized in meeting where different ideas were shared with the agriculture extensionists. A total of 6 Farmer field schools (FFS) were established, (3 at Nasho and 3 at Muvumba irrigation schemes), in collaboration with farmers so that farmers may learn from their farmer mates.
- Compost production from crop residue: Farmers were mobilization to understand the value of compost made from crop residues. A total of 388 tons of compost was prepared and this will produce 251.7m3 of fertilizer for the farmers.
- Soil Erosion control: A total of 2.7km of gullies which were severely damaged by erosion have been reclaimed using gabions and stone check dams in the Nasho Irrigation Scheme.

SP1.3. Mechanisation

1. Agricultural Mechanisation Program

Corn/Maize combine harvester in Ndego/Kayonza District



Basic Information	Project cost: 1.5 billion RwF Donor: Government of Rwanda Government contribution: 100% Government Funded Implementation starting date: June 2012 Completion date: July 2013 Eventual Extension: Yes Implementing Agency: RAB/TF Irrigation and Mechanization
Mission and Purpose	The Agricultural Mechanization Program, implemented by the Task Force for Irrigation and Mechanization, has two key aims: <ul style="list-style-type: none"> • To disseminate appropriately scaled mechanization options to farmers throughout the country • To enable access to farm mechanization services through Village Mechanization Service Centers and any other supply channels

Achievements 2013-2014	<p>The Taskforce is responding to the demands of farmers through establishing Village Mechanization Service Centers (VMSCs), and encouraging the private ownership of farm machinery, private hiring service to different beneficiaries.</p> <ul style="list-style-type: none"> • More than 14000 ha of land have been put under mechanization by public and private farm equipment during Seasons A and B 2014, resulting in 15 % of agriculture operations being mechanized. • Over 950 individual farmers and farmers' cooperatives were trained on the operation and maintenance of agricultural machinery. • A total of nine power tillers were sold to different institutions which include World Vision, Swiss Resource Centre and Nyamagabe District. • A total of 24.6 million Frw was realized from the sales. • The TF encouraged private sector investment in agricultural mechanization: BRAMIN mechanized maize production on land of more than 500 ha in seasons A & B 2014. Two more private companies keenly involved in Agri-mechanization hiring service, namely Voluntary Agricon Ltd and SBTC PVT Ltd imported 12 tractors, different types of attachments and achieved more than 2000 ha (land under mechanization) during the fiscal year.
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SP1.4. Inputs to Improve Soil Fertility and Management

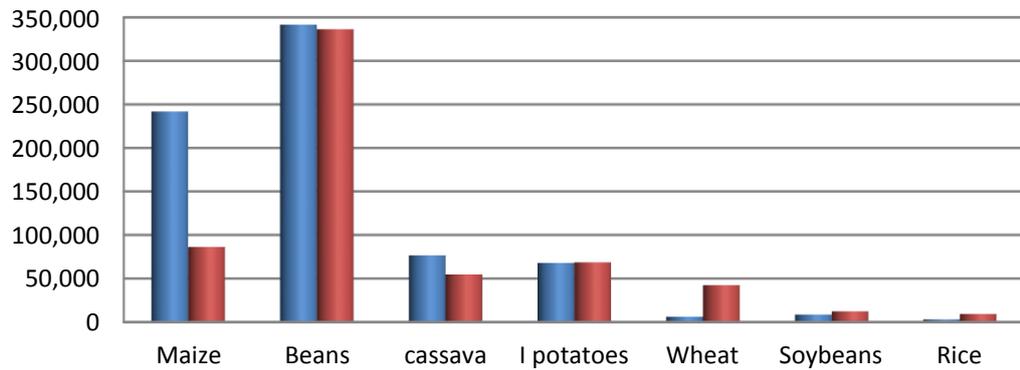
1. Crop Intensification Programme

Maize grown with support of CIP, harvested and correctly stored through support in post-harvest handling and extension for farmers



Basic Information	<p>Project cost: 9 billion Donor: Government Government contribution: Internally funded Implementation starting date: September 2013 Scheduled Completion date: None Eventual Extension: Not yet decided Implementing Agency: RAB</p>
Mission and Purpose	<p>CIP aims to increase agricultural productivity by significantly increasing the production of food crops across the country through using:</p> <ol style="list-style-type: none"> 1. Land use consolidation 2. Improved seed and fertilizer use and 3. Extension service at farm level 4. Post-harvest handling and storage initiative <p>CIP focuses on seven priority crops determined by agro ecological zones: maize, wheat, rice, Irish potato, beans, cassava, soy bean and sunflowers.</p>
Achievements 2013-2014	<p>Land use consolidation:</p> <ul style="list-style-type: none"> • Land consolidation countywide was in the season 14A 753,650 ha under the following major crops: Maize: 241,817 ha, Beans: 341,554.7, Cassava 76,565 ha, Irish Potatoes: 67,857 ha, Wheat: 6,031 ha, Soybeans: 8,517.5 ha, Rice: 8,291.3 ha and 3,016 ha. • In the season 14B, 609,633.7 ha were covered by Maize: 86,206 ha, Beans: 336,363 ha, Cassava: 54,633 ha, Irish Potato: 68,610 ha, Wheat: 42,300 ha, Soybeans: 12,291.1 ha and Rice: 9,217 ha.

Chart Title



Land use consulation for season 14A and 14B

Fertilizer distribution

- A new approach for fertilizer distribution was introduced in season 14A where the process was fully privatized for both importation and distribution to farmers as a sustainable way to disseminate sufficient quantities of affordable and on the time basis in line with the overall goal of promoting strong private sector involvement.
- The capacity of the 19 distributors and 1,062 agro dealers was enhanced, thereby improving the availability and access of fertilizers at the proximity of farmers.
- Agro dealers were trained in business and fertilizers management and certified.
- The private sector has been spurred to establish storage infrastructure.
- A storage capacity of 59,000MT now exists in the country.
- Agro dealers were organized into agro dealer cooperatives and have accessed credit from financial institutions to purchase fertilizer stocks for sale to farmers. Agro dealers who were unable to access credit from financial institutions are given fertilizers on credit against collateral. These interventions enable agro dealers to stock fertilizers that are available when farmers need them.
- The use of inorganic fertilizer increase from 14 kg per hectare in 2010 to 32 kg per hectare in 2014A.

Seed distribution

- RAB availed seeds and planting materials to the farmers for maize, wheat, soya beans , sunflower, banana and cassava.
- High yielding maize seeds were distributed to the farmers country wide. Among the seeds distributed, part was produced locally and the other imported by the private Seeds Company such as Murphy chemicals, Seedco Rwanda and Kenya Seeds Company.
- Improved seeds used on the both season A and Season B:

Crop	Season 14A	Season 14B	Total
Maize	3,581.5 MT	1,040 MT	4621
Beans	89.45 MT	3.69 MT	93.14
Soybeans	320.30 MT	105.3 MT	425.6
Sunflower	37.82 MT	-	37.82
Wheat	135.05 MT	477.97 MT	613.02

2. RSSP III – Rural Sector Support Project

The extension of Rwagitima marshland (325ha) in Gatsibo after development in December 2013. The marshland area under rice production is now 900 ha.



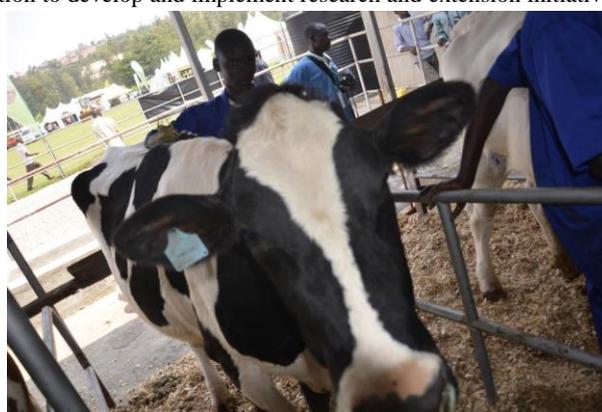
Basic Information	<p>Project cost: 100.9 million USD Donor: World Bank Donor contribution: USD 95.9 million Government contribution: USD 5 million Implementation starting date: June 20012 Scheduled Completion date: October 2018</p>
Mission and Purpose	<p>RSSP has two main objectives:</p> <ul style="list-style-type: none"> • Increase agricultural production and marketing in an environmentally sustainable manner in marshland and hillside areas targeted for development by the project • Strengthen participation of beneficiaries in market based value chains
Achievements 2013-2014	<p>Increased Production through Marshlands and Terracing</p> <ul style="list-style-type: none"> • Marshland Development: after the completion of Rwagitima extension works (325 ha) towards the end of FY2012-2013, works for Cyili (460ha) and Gacaca (400ha) were completed during FY13-14. During the same period, the project was able to launch marshland development works in Rwinkwavu (1,100 ha) and Kilimbi (170), while procurement for Karangazi dam works which will irrigate 928 ha was completed and the works are scheduled to start in October 2014. • Marshland Design Studies: Marshlands design studies completed for Mushaduka (200 ha), Mirayi (500 ha) and Kamiranzovu (140 ha). Detailed designs for Rugende (450 ha) and Nyabirandi (345 ha) and Ndongozi (115 ha) are ongoing. • Soil Conservation: A total of 6,857 ha of hillsides have been sustainably protected since July 2013. This increased the area sustainably protected to 9,929 ha from the beginning of the Project. This was done on the hillsides of the following sites: Kirimbi (Nyamasheke) : 906 ha, Kamiranzovu (Nyamasheke) : 190 ha, Rwagitima (Gatsibo) : 389 ha, Cyili (Huye) : 602.5 ha, Gacaca (Kayonza) : 1,066 ha, Rwinkwavu (Kayonza) : 1,984 ha, Karangazi-Rwangingo : 980.6 ha, Mirayi (Gisagara) : 553 ha, Mushaduka (Gisagara) : 186 ha • Postharvest infrastructure: to ensure better postharvest handling 8 storages and 35 dryers were completed in Muvumba-8, Rwagitima, Gacaca, and Cyili and Rwinkwavu. <p>Strengthen Participation of Beneficiaries in Value Chains</p> <ul style="list-style-type: none"> • Cooperative and WUAs Capacity Building: The Project has supported group formation, and strengthened Water User Associations (WUAs) and cooperatives to improve their governance and management capacity to deliver quality services to their members. Currently, the projects work with 27 cooperatives and 22 WUAs. Cooperatives were also supported to gain a transparent financial and procurement management. • Beneficiary Identification: from last year, the number of household beneficiaries increased from 57,532, to 65,402 (43% are headed by women). This number increases to 271,534 when we include all household members. • Water User Associations: the project has continued to build capacity of the 22 WUAs operating in the supported marshlands by strengthening their financial management and organization skills, and operation and maintenance. Currently 96% of all water uses in targeted developed marshlands pay water fees. The project has also supported the

	<p>creation and capacity building of 14 irrigation district steering committee. Their capacity building focused on roles and responsibilities.</p> <ul style="list-style-type: none"> • Improving production technologies: 10 cooperatives of rice were supported in seed production activity. They have all become certified seed producers. Lead farmers from all supported cooperative members were also trained in IPM, compost making and improved farming methods. • Training in Value Chain Participation: Beneficiaries were trained in topics including postharvest management, entrepreneurship and business planning, financial management, marketing principles, Small Enterprise Management, Strategic management and procurement procedures. Currently, the share of marketed paddy rice produce is 77% and 66% for other rain-fed crops. All cooperatives operate under contract farming. • Financial implementation: the project has executed 99% of its 2013-2014 fiscal year budget and has disbursed 40.6% of its total budget from the World Bank.
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SP1.5. Seed Development

SP1.6. Livestock development

The Rwanda Agriculture Board (RAB) is the primary institution to develop and implement research and extension initiatives which integrate sustainable crop production, animal resources and natural resource management. The projects under this sub-program and others are implemented by RAB. Further information can be found in the RAB 2013-2014 Annual Report.



1. GIRINKA – One Cow per Poor Family Program

Productive milk cows such as the one in the image are given to poor households as assets

Basic Information	<p>Project cost: 1,168,063,178 RWF (Annual) Donor: Government of Rwanda Government contribution: Internally funded project Implementation starting date: November 2006 Scheduled Completion date: 2017/18 Eventual Extension: Not yet decided Implementing Agency: RAB</p>
Mission and Purpose	<p>One Cow Per Poor Family distributes cows to selected poor households and has three primary objectives:</p> <ol style="list-style-type: none"> 1. Fight malnutrition through provision of dairy products 2. Increase household income through a productive asset 3. Increase crop productivity through use of manure

<p>Achievements 2013-2014</p>	<p>Cow distribution to poor families</p> <ul style="list-style-type: none"> • During fiscal year 2013/14, some 28,765 heifers against the target of 40,000, which accounts to 71.9% were distributed to beneficiaries. The distribution of cows was mainly under district decentralization, non-governmental organizations (Heifer Project International, Send a Cow Rwanda, World Vision Rwanda, Marcegaglia, Action Aid International Rwanda, Good Neighbors Rwanda, etc.) and many others including old beneficiaries who passed on heifers to new programme beneficiaries. • To-date, the program has distributed 197,325 heads of cattle throughout the whole country since 2006, the date of program inception which amounts to 56.4% of the total target of 350,000 families by 2017. • Girinka decentralization had earmarked funds transferred to districts for the purpose of heifer purchases. Most of the districts effected the purchases timely. Heifers distributed under decentralization were 3,861 against a total of 4,024 making achievements stand at 95.9% and yet a few districts like Rusizi and Ngoma did not buy any heifers. • Girinka Week in the Eastern Province: During Girinka week in Eastern province, districts had set activities that included; cowshed construction which was estimated to have cost 25,700,000 Rwandan francs, passing on heifers to other selected vulnerable families that totaled to 1204 heifers for the whole province, construction of crushes, synchronization of cows in Girinka programme and milk distribution with consumption by children. During this period of Girinka week some 1,204 heifers were organized and passed on to other poor families. The farmers who donated heifers were also awarded certificates of appreciation. In the sectors where they did not have crushes some 69 crushes were constructed for both treatments and artificial insemination. An important outcome of the week was to synchronize some 2,471 cows belonging to Girinka beneficiaries which were subsequently inseminated. • Girinka Week in the Western Province: The Girinka week from Western Province was characterized by activities that included; heifer distribution to vulnerable families totaling to 1,060 as passed on from some old program beneficiaries and milk consumption campaign into which children were given milk among others. • The programme offered basic training in animal husbandry practices for some 25,000 families. However, more than the targeted no. of families participated in training activities during the fiscal year, i.e. a total of 28,431 families (113.7 % of the targeted families). The training emphasized the basics of animal feeding, housing breeding and reproduction, disease control , general management and record keeping. The training aimed to improve farmer skills to effectively manage their stock for increased animal productivity.
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2. LISP – Livestock Infrastructure Support Program

Milk Collection Centers (MCCs) constructed in Rutsiro supported by LISP to develop the dairy value chain



<p>Basic Information</p>	<p>Project cost: 21.8 million UAC Donor: African Development Bank Implementation starting date: June 2011 Scheduled Completion date: December 2015 Eventual Extension: Not yet decided Implementing Agency: Livestock SPIU/LISP-MINAGRI</p>
<p>Mission and Purpose</p>	<p>The overall goal of LISP is the creation of an enabling environment that will stimulate the development of a modern livestock industry in Rwanda through value addition and access to markets. The specific objective of LISP is to build the necessary infrastructure and services that will contribute to the development of a sustainable and profitable livestock production and marketing and overall improvement of the livestock industry in Rwanda. The programme comprises of two components and sub-components namely:</p>

	<p>1. Livestock infrastructure:</p> <p>1.1. Community livestock infrastructure 1.2. Public livestock infrastructure</p> <p>2. Food security enhancement and capacity building:</p> <p>2.1. Support to One Cow per Poor Family 2.2. Support to productivity enhancement technologies 2.3. Capacity building</p>
<p>Achievements 2013-2014</p>	<p>Livestock infrastructure:</p> <ul style="list-style-type: none"> • Milk collection centers (MCC): 35 milk collection centres were constructed all over the country and all the equipment was delivered at 100%. The equipment installation/commissioning activities are on-going (27/35 MCCs, meaning 77%). During the commissioning the equipment was installed, tested and the training of the beneficiaries on their operation done. • Livestock watering system (LWS): Overall works progressed at 64%, topographic surveying done at 100%; excavation works done at 100% (287 km); sensitization meetings of beneficiaries done at 75%; water tanks completed at 95.65 % (44/46 reservoirs); water intake preparation still at 80%; pipe laying works started 50 km so far completed. Identification of farm owners is finished on 18/18 networks. List of beneficiaries and location (Sector, Cell and Village available). All required WUO committees have been elected (Committees of all 18 identified networks) Expropriation work is ongoing as some changes are being made (e.g.. access road, construction of pressure break structures that were not in study). • Mukamira Dairy: <ul style="list-style-type: none"> ○ <u>Construction and supervision of works:</u> Construction works of all blocks are still at 95%. (Administration, factory, canteen and latrine at the finishing level; internal road construction at the level of laterite compacting). The Contractor (TPGL) stopped working and left the site since 25/10/2013 following delays in payment. ○ <u>About supervision of works:</u> the contract for the supervising firm (ECET) was extended due to delays in works progress, has now ended. In accordance with the procurement law and considering the advanced stage of works (95%), a decision was taken to advertize recruitment of a new supervisor, an individual consultant instead of a firm. The process is now at the level contract negotiation. Contract not yet signed as the contractor has suspended. ○ <u>For Water Waste Treatment Plant construction,</u> the supplier (Helmet Construction & IMPALA Trading Ltd) provided equipments' guaranty and manufacturer's authorization on 02/01/2014; contract signed on April,1st 2014. ○ <u>Equipment</u> ordered from France and inspection of equipment and materials at the factory was done. Equipment and materials were shipped from the factory to Mukamira and are yet to arrive. Civil works are undergoing together with the supervision. ○ <u>Construction and supply of Water Tanks:</u> Works carried out up to 98% and the contract already ended up by 16/09/2013; The contractor (DOUBLE M) was delayed by some main contractor 's incomplete tasks. ○ <u>Supply of one Generator:</u> Contract cancelled and contractor notified of the decision on 25/02/2014. Tender document was reviewed, re-advertised, evaluation done and so far the supplier signed the contract awaiting the client to sign.

2. Research and Technology Transfer, Advisory Services and Professionalization of Farmers

SP2.1. Research and technology transfer

Activities to support sub-programme 2.1 of PSTA III are undertaken by RAB through research and technology generation under the following fields-

1. Crop and Horticulture Research
2. Natural Resource Management Research
3. Animal Resources Research, and
4. Cross-Cutting Research

The details of progress on the research projects under each of these thematic areas can be found in the Rwanda Agricultural Board Annual Report FY 2013/14. Select research outputs are highlighted in this section:

1. Irish Potatoes: Research Outputs

Potato plants on a soil based medium in wooden beds in a conventional screen-house at RAB Musanze during 2014A and 2014 B



Mission and Purpose	Potato (<i>Solanum tuberosum</i> L.) is an important food and cash crop in Rwanda. It is mainly grown in the highlands especially in the North Western part of the country. The total area under potato crop is approximately 150,000 hectares per year. Since 2001, the production steadily increased to more than one million metric tons per year but the yield is still low. The national yield average is approximately 10 tons/Ha, and it is attributed to pests and diseases pressure, shortage of clean potato seeds, inefficient cultural practices, declining of soil fertility, post-harvest losses and weak extension information delivery system. The Irish potato research focused on variety evaluation, germplasm conservation and collection of local varieties.			
Achievements 2013-2014	<ul style="list-style-type: none"> • Potato micropropagation: In the reporting year, healthy potato seeds produced by in vitro micropropagation of plantlets for minituber production were multiplied in screenhouses. The basis of this type of propagation system is the outgrowth of auxillary buds to form a new plantlet. A total of 230,360 minitubers were produced in the tissue culture laboratory and weaned in both, conventional and aeroponic screenhouses located in Musanze and Sigira. Approximately half of that number was disseminated to 22 private conventional (22m x 15m) screenhouses' owners in the Northern and Western zone. Aeroponic rapid seed multiplication technology allows bulking of sufficient seed by reducing field generations from six to three. • Minituber production in the conventional and aeroponic screenhouses : A total of 703,286 minitubers have been produced in both conventional and aeroponic screenhouses during the two season 2014 A and B. They have been planted in field in Kinigi station (Table below). A total of 25,000 minitubers (Kinigi: 19,000 and Kigega: 6,000) were harvested. High multiplication rate (20:1) was achieved under aeroponics than the production of mini-tubers in soil or compost-based substrate which is typically only about 6:1 as well as the increasing cost of energy needed to sterilize large quantities of substrate. The aeroponic system has low capital cost of assembly and relatively low energy requirements. It is that regards that RAB has expended the aeroponic unit from 60,000 minitubers to 600,000 minitubers per season. This aeroponic technology was adopted by a private individual in Kinigi sector of Musanze district. 			
	Minituber production in 2014 A and B			
	Variety	Number of minitubers produced		Aeroponic screenhouse
		Conventional screenhouses		
		Season 2014A	Season 2014 B	Season 2014 B
	Kinigi	41,669	23,027	72,439
	Ngunda	11,470	5,090	-
	Kirundo	30,756	26,642	96,673
	Gikungu	54,157	29,590	-
	Kigega	5,736	-	-
	Sangema	12,489	-	-
	Mizero	170	983	-
	Victoria	15,891	54,691	-

Mabondo	8,754	17,153	-
Cruza	2,181	66,653	33,212
Nderera	3,029	-	-
393077-54	566	-	-
393371-58	20,592	55,225	12,791
391047-34	1,657	-	-
Total	209,117	279,054	215,115

- **In vitro maintenance of potato germplasm:** Thirty accessions of potato were conserved in vitro in test tubes in the growth chamber of the tissue culture laboratory. Within these accessions there are released varieties and those which are conserved for genebank/biodiversity interest.
- **Agronomic evaluation of newly introduced and popular varieties:** The trial was conducted in Sigira, Kinigi and Tamira RAB stations during 2014B and it aimed to evaluate new Irish potato cultivars introduced from CIP for field resistance to potato diseases especially late blight. Trials were established in three different sites at Sigira, Kinigi and Tamira RAB stations. Forty two new potato cultivars plus two local checks (Cruza and Victoria) were evaluated. Fungicide treatment (Spray vs No spray) was applied. The varieties were CIP 394611.112 and CIP 399074. Twenty three were the highest yielding at Sigira with 24.1 tons/Ha and 24.5 tons/Ha, respectively. In Kinigi, CIP 399085.23 and CIP 398208.620 were the best with 22.1 tons/Ha and 28.4 tons/Ha. In Tamira, the best yielders were CIP 395085.5 (31.7 tons/Ha) and CIP398208.505 (31.3 tons/Ha) under fungicide protection; and CIP 388615.22 (29.6 tons/Ha) and CIP 391002.6 (28.3 tons/Ha) with no fungicide protection.
- **Training on analysis of Fe and Zinc in Potato:** A training course on methods of sampling and preparation of potato and sweet potato for evaluation of Iron and Zinc content by X-ray fluorescence (XRF) was conducted from 1st-4th April 2014 at Musanze. Twenty-five researchers and technicians working on potato and sweet potato programs from Ethiopia, Kenya, Malawi, Mozambique, Ghana and Uganda attended the training conducted by the facilitators from the International Potato Center, Lima, Peru. After the training, samples from 42 genotypes of newly introduced and popular potato varieties were processed from RAB Musanze laboratory and they will be sent to Lima, Peru for Iron and Zinc mineral analysis using XRF machine. The aim was to generate genotype x location data for micronutrients.
- **Collection of local potato varieties:** A number of 35 local potato varieties were collected in Western, Northern and Southern provinces (20, 11 and 4 varieties, respectively (Table below). These varieties were maintained at Kinigi RAB station.

Locally collected potato varieties and their characteristics

Variety	Province	District	Sector	Farmers' description
1.Nyabizi	West	Nyabihu	Jenda	High and early yield, good taste, short dormancy 1
2.Mabuno	West	Nyabihu	Jenda	Big tubers, good taste, late dormancy (4 months)
3.Magega	West	Rubavu	Kanzenze	Medium yield, tolerant to mildew, sensitive to dr
4.Peko	West	Rubavu	Bugeshi	High yield, 2.5 months dormancy, resistant to late
5.Winyugug a	West	Rubavu	Bugeshi	High yield, 2 months dormancy, good taste
6.Gisore	West	Rubavu	Bugeshi	High yield, resistance to leaf miner, susceptible t
7.Sad (PNAP)	West	Rubavu	Bugeshi	High yield, 3 months dormancy, adaptive to wide
8.Nyirakiga sire /Insigarubay e	West	Rubavu	Busasama	High yield, good taste, tolerant to bacterial wilt
9.Kuruseke	West	Rubavu	Busasama	High yield, good taste, resistant to drought
10.Nyirakar ama	West	Rubavu	Busasama	Low yield, good taste, tolerant to late blight, sens

11. Pepe	West	Rubavu	Busasamana	Good yield, good taste, susceptible to bacterial wilt
12. Makoroni	West	Rubavu	Cyanzarwe	Good yield, good taste, short dormancy
13. Rugero	West	Karongi	Rubengera	High yield, big and many tubers, short dormancy
14. Magayane	West	Karongi	Rwankuba	Early yielding, good taste, short dormancy (1 month)
15. Gashara/Nyiraburayi	West	Karongi	Gitesi	Early yield, good taste, short dormancy (1 month)
16. Urusitaza	West	Karongi	Rwankuba	Early yield, short dormancy 1 month
17. Makoloni	West	Karongi	Gitesi	Early yield, good taste, short dormancy (1 month)
18. Mabunya Bigega	West	Ngororero	Muhanda	Big and many tubers, good taste
19. Pepeni	West	Ngororero	Kavumu	High yield, long dormancy (3 months)
20. Tindura	West	Nyabihu	Jenda	High yield, good taste, resistant to late blight
21. Rwangu me	North	Gicumbi	Miyove	High and early yield, good taste, good cooking quality
22. Makerere	North	Gicumbi	Miyove	High yield, 3 months in field, short dormancy (1 month)
23. Rwansake	North	Gicumbi	Kaniga	High yield, good taste, 3 months in field, dormancy
24. Karande	North	Gicumbi	Kaniga	Low yield, good taste & cooking quality, 2.5 months in field
25. Rwamatiya	North	Gicumbi	Kaniga	2.5 months in field, short dormancy (1 month), to
26. Makorone	North	Gicumbi	Miyove	High yield, good taste, short dormancy (1 month)
27. Nicole	North	Rulindo	Kisaro	High yield, nice chips, 3 months in field, long dormancy
28. Sarpomila	North	Rulindo	Kisaro	High yield (40t/Ha), nice chips, highly resistant to late blight
29. Mabondo	North	Rulindo	Cyungo	2.5 months in field, many small tubers, Short dormancy
30. Bineza	North	Musanze	Gataraga	High yield, good taste, resistant to late blight,
31. Bucendore	North	Musanze	Cyanika	High yield, good taste, long dormancy (4 months)
32. Mugogo	South	Nyamagabe	Gatare	Highly resistant to Bacterial wilt, long dormancy
33. Lokari	South	Nyamagabe	Gatare	High yield, good taste, highly resistant to late blight
34. Montsama	South	Nyamagabe	Buruhukiro	High yield, many small tubers, 2.5 months in field
35. Tsimba	South	Nyamagabe	Buruhukiro	High yield, good taste, short dormancy (1 month)

2. Sweet Potatoes: Research Outputs



Demonstration plots for new OFSP (Orange Flesh Sweet Potato)

Mission and Purpose	Sweet potato (<i>Ipomoea batatas</i>) is a key staple grown in Rwanda. Therefore, its improvement is important in addressing food security, better nutrition and improved livelihoods.
Achievements 2013-2014	During the reporting year, sweet potato programme activities were focused on variety development and promotion. Demonstration plots and fertilization trials were established in various districts to demonstrate the appropriate agronomic practices. Postharvest storage experiment aimed at extending root shelf life using zero cooling storage was initiated. New orange flesh sweet potato (OFSP) varieties from advanced breeding stages were evaluated for postharvest aptitude.

- **Sweet potato germplasm conservation:** Conservation of 151 varieties of selected sweet potato genotypes were maintained at Rubona RAB station. This location has a low virus occurrence and good weather conditions, hence appropriate for germplasm maintenance. Most of the varieties are landraces and were collected in various areas of Rwanda while others are exotic and were introduced for adaptability evaluation.
- **Variety development for sweet potato:** Around 4800 true sweet potato seeds were nursed to raise clones for sweet potato selection with focus to dual purpose use using accelerating breeding approach. A total of 452 clones were selected from 31 families for observation yield trial. Particular attention for selection was put to Sweet Potato Virus Disease (SPVD) tolerance and Beta carotene content. During this year, advanced and multiplication trials were conducted in Karama, Rubona and Kibungo. 2000, 2002 and 2005 series were compared to high yielding varieties. OTADA and 2002-134 were the best performing varieties.
- **Best clones established to enter observational trial:** From the 452 clones selected in nursery at Rubona RAB station, three observation trials were set up in three locations (Karama, Rubona and Kibungo) for clone selection. Karama and Kibungo low altitude location was chosen for SPVD screening due to high virus pressure vs the Rubona location where the virus pressure is low with some sporadic Alternaria incidence when the weather is too humid. A total of 67 clones were advanced for preliminary yield trial whereby 24 clones were selected from Rubona, 23 from Karama. Out of 67 clones tested, 24 were characterized by yellow to deep orange fleshed color.
- **In vitro culturing and multiplication of orange flesh sweet potato varieties:** High yielding and new orange flesh sweet potato (OFSP) varieties with early maturing and rich in vitamin A were maintained in tissue culture laboratory and screen-house for subsequent multiplication. Between 3,000 to 5,000 healthy plantlets were produced monthly in Rubona lab. After hardening process, rapid multiplication of planting material was done on station to produce enough cuttings. This material was used for positive selection in order to get enough clean planting material to avail enough clean cuttings to the partners. Additional new OFSP (Ndamirabana and Terimbere) with high dry matter content which were released in 2013 were cleaned at Kenya Plant Health Inspectorate (KEPHIS), Kenya, and multiplied at Rubona for further promotion to replace Cacearpedo and Gihangamukungu varieties that succumbed due to SPVD. The new OFSP varieties had high yield ranging from 20 to 25 tons/Ha with relative tolerance to drought due to heavy vegetative cover with earlier maturity period of 4-5 months. Supplementary OFSP which included Naspot 9, Naspot 10, Kakamega-7, Tacna-2, Mafutha-1 and UW 11906, were introduced from Kenya, Uganda and Mozambique, to enrich the germplasm which were multiplied and evaluated at Rubona, Kigembe, Karama research stations and on-farm. Additional new OFSP were produced in vitro and hardened at Rubona RAB station.
- **Production and dissemination of clean OFSP planting material:** During the reported year, high yielding varieties were disseminated through various partners. A total of 47,250 plantlets were hardened at Rubona Lab. A total of 2,206,500 cuttings was produced in primary and secondary multiplication at Rubona, Kigembe and Karama RAB stations using Rapid Multiplication Techniques and Tunnels. Yield assessment through demonstration plots for new OFSP was conducted in various districts. Farmers use the tunnels and positive selection technology to produce vines for sale. For instance, in Kamonyi district, UDI, the local NGO, has sold 300,000 cuttings for 900,000 frw for season 2014A.
- **Development of OFSP processed product:** Four new OFSP varieties out of the six identified for processing were tested for sensory evaluation of baked products. This included the following varieties: 2560 (Terimbere), 2910 (Ndamirabana), Naspot 9, and Naspot 10. They were tested in biscuit preparation for the following parameters: biscuits aroma, texture, color, flavor and overall acceptability. For bread, aroma, texture (crumb), crust colour, crumb color, flavor, crumb cellular structure and overall acceptability were tested. Preliminary results showed that all the 4 varieties tested were good for use as bakery products. Test preparation of OFSP juice took place at Sina Gerald enterprise (Nyirangarama, Northern Rwanda). The protocol was as following: OFSP branding with pineapple and pure OFSP juice. These two categories of OFSP juice plus Agashya Pineapple and Inyange Pineapple were used during the sensory test. Gihingamukungu variety was used for making juice based on its characteristic of having low dry matter content. In total, 952 consumers were interviewed across Rulindo, Gakenke, Musanze, Muhanga and Kigali city. The results showed that the juice from Gihingamukungu was well accepted by the consumers. In collaboration with Imbaraga Federation syndicates, farmers' groups in Gakenke district produce OFSP doughnut for the local markets. The groups process about 500 to 600 Kg of sweet potatoes per week for production of sweet potato doughnuts and crisps. The zero cooling storage for fresh root conservation was conducted in Muhanga and equipments were brought to start assessment for

storage of fresh roots. The control of temperature inside the zero cooling storage was stabilized from 14 to 15°C which is already a good indication for fresh root shelflife extension. The four OFSP varieties under promotion were evaluated and preliminary results are promising.

- **Multiplication of nutrient-rich yam Bean (*Pachyrhizus spp.*):** Yam bean (*Pachyrhizus spp.*) research aimed at variety evaluation for adaptability and acceptability. Most the activities have been supported by the International Potato Center (CIP) through Sweetpotato Action for Security and Health in Africa (SASHA) and Enhancing the nutrient-rich Yam Bean. Released accessions were cleaned in collaboration with KEPHIS, Kenya, and multiplied through in vitro facilities for promotion in various districts. Yam bean accessions have been multiplied and maintained at Karama and Rubona RAB stations. New hybrid lines were evaluated in F3 segregating populations for early maturity.

3. Soybeans: Research Outputs



Farmers training on soybean production

Mission and Purpose	Soybean is one of the six priority crops under the Crop Intensification Program (CIP) for Rwanda. There is need to focus on selection and breeding of high yielding soy bean varieties to achieve 3.5 tons per Ha potential.
Achievements 2013-2014	<ul style="list-style-type: none"> • This year, consolidated land for soy bean grain production has increased from 5,720 to 19,011.9 Ha while the production has significantly increased in last two years from 0.8 to 1.5 tons per Ha. • Soy bean genotype adaptability evaluation: Research trials were conducted at Rubona, Nyagatare, Muhanga, Ngoma and Karama RAB stations to evaluate 19 soy bean genotypes sourced from Zimbabwe. Ten genotypes had a maturity period greater than 120 days (123-135) while the rest was between 105 and 119 days. The first category with more than 120 days was considered as late maturing and the second category ranging between 100 and 120 days was classified as medium maturing genotypes. Late maturing genotypes include S 1023/5/23, S 1025/5/40, S 1025/5/52, S 1021/5/14, S 1023/5/52, S 1023/5/21, and S953/6/8. Medium maturing genotypes include the check Peka 6, SC Sepa, SC Status, SC Sequel, SC Safari, S 822/6/13, S 823/6/16, SC Sequel, SC Saga and SC Serenade. For growth characteristics, 12 genotypes were indeterminate while 7 varieties were determinate. Most of indeterminate genotypes were also late maturing. Pod clearance of indeterminate varieties was also very high. Data collected from the trial showed significant and highly significant differences among genotypes for pod load and pod clearance. Significant differences were recorded between the varieties for grain yield. SC Saga has the highest yield of 3708 kg/Ha followed by S 822/6/13, SC Squire, SC Sepa, S823/6/16, SC Sequel and SC 1023/5/23. The third category included 11 genotypes with an average grain yield of 2378-2689 kg/Ha. The last category (less than 100 days) consisting of one genotype S1023/5/52 with a grain yield of 1617 kg/Ha. The varieties SC Squire and SC Saga showed excellent tolerance to rust. SC Sepa, SC Safari, SC Status, S 822/6/13, S 823/6/16 and S 1023/5/23 had good tolerance to the disease while SC Serenade was very susceptible to rust. No important symptoms of bacteria pustules were observed in the trial. In general, mosaic virus disease symptoms were observed in the whole trial but with fewer incidences. No any genotype among them was shattering or lodging in all sites.

- **Yield performance of soy bean genotypes:** Based on the adapted 19 soy bean genotypes (Sc. Sepa, S 822/6/13, S 823/6/16, S 1023/5/23, 1025/5/26, S1023/5/52, Sc. Safari, Sc. Serenade, S1021/5/104, Sc. Status, S1025/5/52, S1025/5/18, S953/6/8, S1023/5/21, S1025/5/40, Sc. Saga, Sc. Squire, Sc. Sequel and Peka 6), on farm trials were established in six sites of Muhanga and Nyagatare districts. Preliminary results showed high germination rate greater than 90% for all 19 soy bean genotypes. Phenological data of Peka 6, S822/6/13, Sc. Sepa, Sc. Saga and S 823/6/16 confirmed early maturity of the five genotypes compared to S 1023/5/23 which is late maturing. Physiological maturity of S 822/6/13, Sc. Sepa, S 823/6/16 and Peka 6 are respectively 96, 89, 98, and 85 days. Plant height and pod clearance for S 1023/5/23 remained high compared to other genotypes especially Peka 6 which has the lowest records. No significant difference was recorded for pod load whose mean was 40±4.62. In reference to diseases, rust did not manifest because of low moisture due to drought. Bacteria pustule and viruses symptoms were also recorded but with low incidence. The following varieties S823/6/13, Sc. Sepa, S823/6/16, S1023/5/23, S1023/5/21, S822/6/13, S953/6/8, Safari, Sc. Serenade performed well in all sites and produced more than 2 tons per Ha as compared to control (Peka 6). The nine genotypes were proposed for yield stability evaluation.
- **Production of soy bean breeder and pre-basic seeds:** Two categories of seeds include breeder and pre-basic were produced during 2013-2014 at Rubona and Muyumbu stations. Seeds were produced in accordance with procedures to ensure genetic purity and diversity including site selection, soil preparation, isolation, fertilization, phytosanitary treatments, negative and positive selection, harvesting and post-harvesting procedures. A total of 1124 kg (Peka 6, Sc. Saga, Sc. Sequel, Sc. Squire and SB24) of breeder seeds and 1681 kg of pre-basic seeds were produced at Muyumbu and Rubona stations in season 2014A.
- **Production of Rhizobium inoculums and quality control:** Inoculants were produced using inoculant technology. Steps followed included rhizobia strain selection, mother culture preparation, preparation of fermentation broth, inoculation and incubation, preparation of peat carrier and injection of liquid inoculants, packaging and incubation. Around 26,052 packets of soy bean inoculants and 1091 packets of bean inoculants were produced with quality of 3×10^{12} Cell/g 1×10^9 Cell/g, respectively. A total of 14,487 packets were supplied to the farmers, and the remaining 11,565 packets of soy bean inoculants were stored for the next season.
- **Expansion of soy bean production:** Among the four soy bean varieties released last year, a total of 408.65MT of the three varieties (Sc. Saga, Sc. Squire and Sc. Sequel) were disseminated to the farmers of Eastern and Southern Provinces. During this year, 1,500 farmers were trained on soy bean management in Eastern and Southern provinces.

4. Plant Health Clinics: Research Outputs



Plant health campaign on maize lethal necrotic disease, Western Province

Mission and Purpose

Plant clinics were the main extension approach used to monitor pests and diseases outbreaks and to give recommendations to farmers for pest management.

Achievements
2013-2014

- About 60 new plant doctors from RAB and local leaders were trained to support the running of plant clinics
- The major pests and diseases identified in plant clinics are shown in the Table below.

Main pest and diseases detected in plant clinics

Type of plant	Pest or disease
Bean	Aphids, anthracnose
Cabbage	Bacterial disease, aphids
Cassava	Cassava mosaic disease, mites
Citrus	Leaf spot, virus
Cucumber	Virus
or Coffee	Rust
Egg plant	Alternaria, insect
Sweet pepper	Fungus
Guava	Unidentified
Irish potato	Late blight, bacterial wilt
Maize	Stalk borer, maize streak virus, maize lethal necrotic disease
Mango	Anthracnose, insect
Sweet potato	Insect
Tamarillo	Virus
Tomato	Virus

- In order to complete plant clinic activities, plant health campaigns were organized in Western Province and focused specifically on maize lethal necrotic disease, which is becoming big challenge to maize production. A total of 30 rallies were conducted in four different Districts such as Ngororero, Rutsiro, Karongi and Rubavu. Factsheets on the disease symptoms and control were developed and distributed during plant health campaigns to 3,835 farmers.
- The Table below summarizes the distribution and location of Plant Health Clinics in Rwanda:

Distribution and location of plant clinics

N	Zone	District	Sector	Site	Running days
1	East	Kayonza	Mukarange	Mukarange	4 th Friday of month
2	East	Kayonza	Kabare	Cyarubare	3 rd Wednesday of month
3	East	Ngoma	Kibungo	Giturusu	2 nd Tuesdays of month
4	East	Ngoma	Rukira	Rukira	2 nd Thursday of month
5	East	Ngoma	Mutenderi	Mutenderi	Every Monday
6	East	Gastibo	Kiramuruzi	Kiramuruzi	2 nd Tuesday of month
7	East	Gastibo	Rugarama	Rwagitima	4 th Wednesday of month
8	East	Bugesera	Juru	Kabukuba	1 st Monday of month
9	East	Bugesera	Rweru	Batima	1 st Tuesday of month
10	East	Bugesera	Ruhuha	Ruhuha	4 th Tuesday of month
11	East	Kirehe	Nasho	Nasho	2 nd Friday of month
12	East	Kirehe	Nyarubuye	Nyarubuye/CI	2 nd Wednesday of month
13	East	Rwamagana	Nzige	Nzige	Every Tuesday
14	East	Rwamagana	Gahengeri	Gahengeri	2 nd and 4 th Tuesdays of month
15	East	Nyagatare	Nyagatare	Nyagatare	4 th Thursday of the month
16	East	Nyagatare	Matimba	Kagitumba	2 nd Wednesday of the month
17	Kigali City	Kicukiro	Masaka	Kabuga	2 nd Friday of the month
18	Kigali City	Kicukiro	Masaka	Rusheshe	4 th Friday of the month
19	Kigali City	Nyarugenge	Mageragere	Nyarurenzi	3 rd Friday of the month
20	West	Rubavu	Kanama	Mahoko	4 th Tuesday of month

21	West	Rutsiro	Gihango	Congo Nile	2 nd & 4 th Fridays of month
22	West	Nyamasheke	Kanjongo	Kirambo	2 nd and 4 th Thursdays of month
23	West	Rusizi	Nkungu	Kiziguro	4 th Thursday of month
24	West	Rusizi	Bugarama	Market	1st and 3rd Monday of month
25	West	Karongi	Rugabano	Rugabano	2nd & 4th Fridays of month
26	West	Karongi	Rubengera	Rubengera	1st & 3rd Wednesdays of month
27	West	Ngororero	Ngororero	Ngororero	2nd and 4th Wednesday of month
28	West	Ngororero	Nyange	Nyange	2nd and 4th Wednesday of month
29	West	Nyabihu	Shyira	Vunga	Every Wednesday
30	West	Nyabihu	Bigogwe	Kora Market	1st & 3rd Wednesdays of month
31	South	Ruhango	Byimana	Ntenyo	3rd Thursday of month
32	South	Gisagara	Ndora	Ndora	3rd Wednesday of month
33	South	Huye	Rusatira	Kinkanga	1st Wednesday of month
34	South	Huye	Rusatira	Kimuna	1st and 3rd Tuesday of month
35	South	Huye	Kigoma	Karambi	2nd and 4th Wednesday of month
36	South	Nyamagabe	Tare	Gasarenda	1st and 3rd Tuesday of month
37	South	Nyanza	Rwabicuma	Rwabicuma	2nd Thursday of month
38	South	Kamonyi	Runda	Nkoto	4th Wednesday of month
39	South	Kamonyi	Mugina	Mugina	4th Thursday of month
40	South	Nyaruguru	Kibehe	Ndago	1st and 4th Wednesday of month
41	South	Nyaruguru	Rusenge	Rugarika	2nd and 4th Thursdays of month
42	South	Muhanga	Shyogwe	Kinini	1st and 4th Friday of month
43	North	Musanze	Busogo	Byangabo	1st & 3rd Tuesdays of month
44	North	Musanze	Gashaki	Gaheru	1st and 4th Friday of month
45	North	Gakenke	Gakenke	market	2nd & 4th Tuesdays of month
46	North	Gakenke	Ruli	Ruli	1st & 3 rd Tuesdays of month
47	North	Gakenke	Janja	Murambo	2nd and 4th Thursday
48	North	Gicumbi	Miyove	Miyove	1st & 3rd Wednesdays of month
49	North	Gicumbi	Rutare	Rutare	2nd and 4th Wednesday of month
50	North	Burera	Rugarama	Rugarama	2nd & 4th Wednesdays of month
51	North	Burera	Butaro	Butaro	1st and 3rd Friday of month
52	North	Burera	Ruhunde/Nemba	Gitanga	2nd and 4th Fridayday of month

5 3	North	Rurindo	Base	Base	2nd and 4th Wednesdays
5 4	North	Rulindo	Buyoga		2nd and 4th Thursday
5 5	North	Rulindo	Cyungo	Buyoga	1st & 3rd Thursdays of month

5. Cassava: Research Outputs

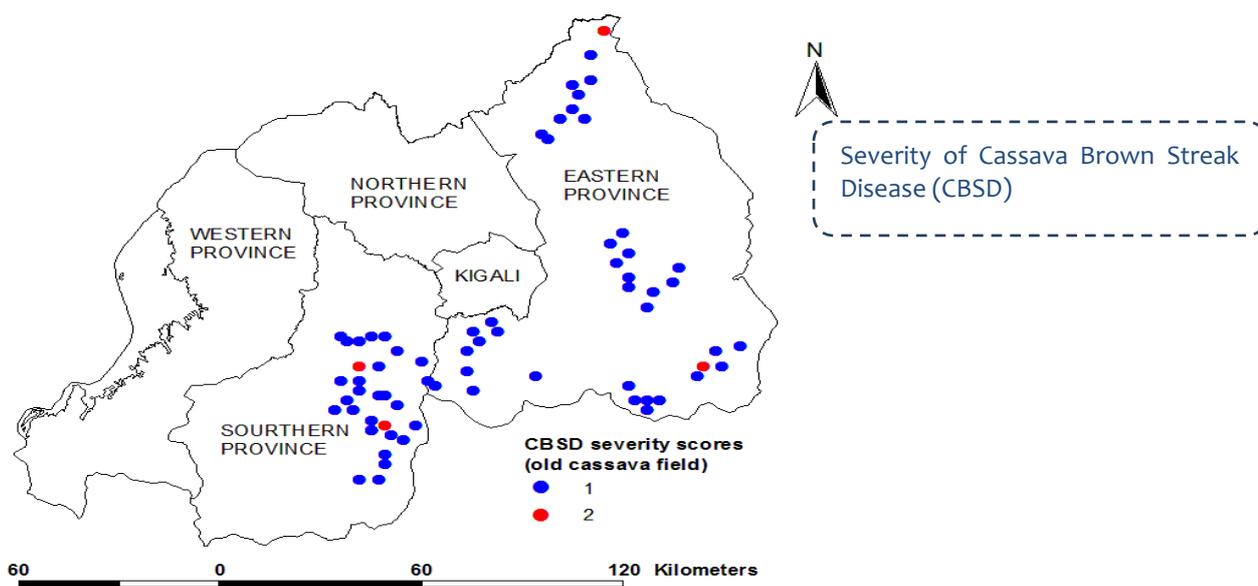


New cassava clones in tissue culture laboratory

Mission and Purpose	Cassava (<i>Manihot esculenta</i> Crantz) is a key food security staple in Rwanda. It is the second most important food crop in the country in term of production after banana.
Achievements 2013-2014	<p>The main agro-ecological zones for cassava are Mayaga, Bugesera and Imbo. There is growing interest for commercial cassava growing because of its relatively good tolerance to drought and poor soils. However, the production was compromised by cassava mosaic virus disease (CMD) and Cassava brown streak disease (CBSD). Both viruses are spread via infected cuttings and white flies (<i>Bemisia tabaci</i>). The disease management is focused on the development of resistant or tolerant cassava varieties, seed field inspection and promotion of clean planting material. The Cassava Program activities during the 2013-2014 fiscal year were: introduction of new cassava clones/plantlets from KEPHIS, Kenya, (8 clones) and IITA, Nigeria, (28 clones), harvest of on-station and on-farm trials (during 2013A) in Eastern Province (Bugesera, Kayonza and Rwamagana Districts), Southern Province (Kamonyi, Muhanga, Ruhango, Nyanza and Huye Districts), Northern Province (Gakenke District) and in Western Province during 2013B (Karongi and Rutsiro Districts), national survey on cassava diseases, establishment of cassava germplasm in Rubona, Muhanga and Ntendezi RAB Stations.</p> <p>Introduction of new cassava clones from KEPHIS and IITA: In order to increase genetic diversity to fight against CMD and CBSD, eight new cassava clones were introduced from KEPHIS, Kenya. These clones are: MM06/0138, MM06/0074, MM06/0143, MM06/0139, MM06/0046, MM06/0082, MM06/0083 and MM06/0013. They were placed in Rubona tissue culture laboratory for multiplication. Total number of plantlets was 400 (50 per clone). The clone MM06/0074 is currently under acclimatation at greenhouse stage (17 plants), and 50 plants of the same clone were planted in field from the earlier introduction from KEPHIS.</p> <p>Harvest of on-station trials: The nursery trial with 2,000 true cassava seeds from 25 families was evaluated during 2013A at Karama RAB station. The 398 best clones were selected for clonal evaluation at Karama and Rubona RAB stations during 2014A. The Preliminary Yield Trial with 26 clones was established in 2013A season at Karama and Rubona RAB stations. After harvesting, 20 clones were identified for Advanced Yield Trial (AYT) at Karama, Nyagatare and Rubona RAB Stations.</p> <p>Cassava disease survey: In July-August 2013, a survey was carried out in order to assess the current status of CMD and CBSD in 67 young and 70 old farmers' fields in a total of 7 cassava-growing Districts, including: Bugesera, Kayonza, Kirehe and Nyagatare (Eastern Province), Gisagara, Nyanza and Ruhango (Southern Province). The preliminary results showed that the severity of the CBS disease has medium in the majority of the visited farms and high in relatively few farms (Figure 5). During the year 2013-2014, Cassava program has produced pre-basic and basic seeds for further multiplication. A total</p>

of 57,000 cuttings of prebasic seeds were produced and given to service providers for further multiplication in order to increase the quantity of available cuttings. A total of 115,500 cuttings of basic seeds produced and disseminated to partners and NGO's.

Other activities: Awareness campaigns about major cassava diseases and their management were organized through radio talk shows at Community Radio Huye, and the talk show has been availed for further dissemination as a CD. The farmer communities near Kinazi (Ruhango district) were facilitated to access cassava cuttings, and there was increased cassava yield that was supplied to Kinazi Cassava Plant.



SP 2.2.: Extension and Proximity Services for Producers

1. Support to SPAT II

Basic Information	Project cost: 18.6 million Euros Donor: BTC Government contribution: 620 thousand Euros Implementation starting date: July 2011 Scheduled Completion date: 2016 Eventual extension: Not yet decided Implementing agency: RAB and CICA
Mission and Purpose	The project's goals it to increase agricultural outputs and incomes through sustainable production systems for all groups of farmers, and to ensure food security. The specific objective is improved access to advisory services for crops and livestock, and improved access to and use of high quality food crop planting materials for men and women.

Achievements
2013-2014

Main Components	Outputs achieved FY2013/14	Comments on the achievement
Support to seed	266.54 Ha of basic and pre-basic seed under production in RAB stations	
	27 seed staff trained	<ul style="list-style-type: none"> • Training in MLND disease identification and control and FFS group formulation • 15 groups identified and formed trained using FFS approach. • 17 screen houses owners assisted practically in the field on technical and business aspects
	166 active seed multipliers	<ul style="list-style-type: none"> • Trained in land preparation, crop management, pest and disease control, soil fertilization, spacing, seed law, seed inspection, post-harvest handling. • Business training in: cost analysis, record keeping, TIN registration and seed marketing.
	92 private multipliers assisted	<ul style="list-style-type: none"> • Assistance through business plans, cost analysis, credit information, book keeping and recordings
	<ul style="list-style-type: none"> - 425 accessions collected, - 53 accessions collected and stored, - 110 accessions characterized - 216 accessions conserved 	
Support advisory services	65 varieties were identified and tested for various crops	Tested Varieties include: <ul style="list-style-type: none"> • 5 varieties of rice, • 13 varieties of potato, • 12 varieties of banana, • 4 varieties of cassava, • 12 varieties of maize, • 5 varieties of tomatoes, • 2 varieties of tamarillo, • 1 variety of maracuja • 4 varieties of Soya bean, and • 12 varieties of forages
	28 stakeholder meetings held	<ul style="list-style-type: none"> • Meetings with local leaders about FFS and BXW control through CMC
	8 gap analysis	<ul style="list-style-type: none"> • The commodities concerned are wheat, common bean, ,soybean, vegetables and livestock
	<ul style="list-style-type: none"> - 8 ToT sessions held - 1036 new FFS groups formed - 26021 more farmers were involved in FFS activities - 131,708 more farmers were involved in CMC activities - 45 MMT trainees were trained - 2 crops with positive selection for seed production 	<ul style="list-style-type: none"> • 1 ToT for Livestock, 3 ToT on Wheat, 2 ToT on Soybean, 1 ToT on Common beans and 1 ToT on vegetables • FFS group established on new commodities such as livestock, soybean wheat and common beans. • Farmers involved in CMC banana rehabilitation and BXW are 211780, farmers involved in CMC maize are 3019 and on CMC striga management farmers involved are 23344. • 45 MTT are trained and conducted the ToT on various commodities (crops & Livestock) and also not yet graduated. • 3966 farmers on potato have been involved in positive selection and 50 farmers on tamarillo • One study tour for 236 facilitators on banana from Musanze to Ngoma district, 37facilitators on striga management from different districts of Southern province to Kamonyi on striga

	- 3 study tours of FFS groups	management and banana and 109 facilitators on tamarillo participated in a study tour on tamarillo at Rwamagana.
	- 4 Extension materials produced - 3 issues of Hinga Worora - 402 agriculture related articles have been published	<ul style="list-style-type: none"> • 15,000 copies on Climbing beans • 5,000 Copies on Climbing beans • 2,000 copies on Pigs • 2,000 copies on Poultry • 2 extension materials are being designed; • Passion fruits and soya bean • 3 extension materials are being printed • Hinga Worora Issues no. 31, 32 and 33 have been distributed • Articles have been published by local and international media and have been shared with MINAGRI management team and other partners
	1 training session	<ul style="list-style-type: none"> • Training on AMIS website functional system.
	1026 clients of CICA library trained Reading materials distributed Library maintained	<ul style="list-style-type: none"> • The clients have been trained on Library software • 647 of newspapers (403 Imvaho nshya, 310 NewTimes, 4 East Africa business week), Official Gazette and 60 magazines (52 Jeunes Afriques, 4 The Economist, 4 Times) distributed • Final reception of the works of partition of CICA Library. The work stations have been delivered and the barcode scanners have been delivered too. • 812 Archives received are Classified.
	3 websites of AMIS and Minagri were improved and Noz'Ubz farmers website is operational, and feeding the content continues	<ul style="list-style-type: none"> • 119 new issues collected and uploaded in both MINAGRI and AMIS 381 Questions / inputs raised and answered through hotlines channel, Upload is done as soon as information is available. • MINAGRI upgrading website is done up to 100% • AMIS Upgrading activities are done up to 100% • Development of farmers website related activities done up to 100% , • Uploading content 56.2 %

3. Value chain development and private sector investment

SP3.2. Development of food crops

The banana program increases productivity, production and management of bananas



Basic Information	Project cost: 220 million RwF Donor: Government of Rwanda Government contribution: Internally funded project Implementation starting date: July 2010 Scheduled Completion date: June 2012 Eventual Extension: Yes Implementing Agency: RAB
Mission and Purpose	The Banana program aims to increase the contribution of bananas to both household consumption levels and improved rural incomes, through increasing production and pest management, raising yields and strengthening the value chain.
Achievements 2013-2014	<ul style="list-style-type: none"> • During FY 2013-14, RAB has delivered new planting material in form of conventional suckers or macro-propagated plantlets derived from local farmer-based seed production fields or macro-propagation units throughout the country. This material was used to establish new banana fields on a total of 468 Ha • During FY 2013-14, RAB has led banana rehabilitation through organized community mobilization campaigns at district and sector level with help of technically skilled FFS facilitators and co-facilitators, trained IDPs and farmer cooperative members under support from local leaders (mayors, vice-mayors FED and sector executives), district and sector agronomists, farmer promoters and cell and village leaders. A total area of existing banana fields rehabilitated was 37,030.6 Ha. • During FY 2013-14, the BXW disease continued to challenge banana production on a total of 5,510.6 Ha and it was controlled on a total of 3,363 Ha. Although the disease has affected few new areas, a general effort to reduce its spread was greater, especially in newly affected areas, and within the last year the disease extent was reduced by 61% as compared to FY 2012-2013.

SP3.3. Development of export crops

1. Improving Coffee Production, Productivity and Quality



Coffee Nursery

Basic Information	Project cost: 245 million RWF Donor: Government of Rwanda Government contribution: 100% Government funded Implementation starting date: July 2010 Scheduled Completion date: June 2014 Eventual Extension: June 2015 Implementing Agency: NAEB
Mission and Purpose	The objective of this program is to increase coffee production and productivity as well improving coffee quality.
Achievements 2013-2014	Activities for coffee in the fiscal year 2013-2014 concentrated on increasing the area planted with coffee, improvement of coffee productivity through application of fertilizers, control of pests and diseases and supporting coffee cooperatives especially in capacity building and accessing loans from banks.

Increased Coffee Production Area:

- **Planting:** A total of 24,058,622 seedlings were prepared. Out of a target of 10,000ha, 9,166 ha were planted which is equivalent to 92% of the target. 8,625,000 seedlings were also prepared for 2014-2015 fiscal year; they are currently under nursery beds. The table shows planting patterns.

Planted area in the different Provinces

Province	Target area (ha)	Available seedlings	Planted area (ha)	% planted vs target NAEB
East	3,512	7,017,498	2,713	77
South	2,422	6,669,430	2,525	104
West	2,376	6,110,090	2,238	94
North	1,664	4,189,947	1,661	100
Kigali City	26	71,657	28	109
Total	10,000	24,058,622	9,166	92

Increased Productivity of Coffee Plantations:

- **Fertiliser Application:** During the season 2014 A&B, 3,300 tons were applied up to June 2014, representing 106.4% of the target (3,100 tons). The distribution of fertilizers was done by 222 coffee washing stations out of 225 located across the country. The table shows the mineral fertilizer application by Province.

Mineral fertilizer distribution and application in 2014 A&B

Province	Target	Total applied A&B
Eastern	562	512
Northern /Kigali City	361	417
Western	1,183	1,142
Southern	994	1,226
Total	3,100	3,300

Application of mineral fertilizer was supplemented by organic fertilizer produced from coffee pulps. In total 7,876 tons was applied and this corresponded to 94% of the national target (8,420 tons). 200 coffee washing stations were involved in the production and application of organic fertilizer.

The table shows the organic fertilizer application by Province.

Organic fertilizer production and application

Provinces	Organic fertilizer produced (T)	Organic fertilizer Applied (T)	CWS involved
West	3,693	3,693	83
South	1,736	1,580	62
East	1,738	1,705	35
North and KC	898	898	20
Total	8,065	7,876	200

Pest and Disease Control:

NAEB assisted farmers to control pests and diseases in different locations where infestations occurred. The major pest and diseases for coffee in Rwanda are antestia, coffee berry borer, and coffee leaf rust and coffee berry disease.

For efficient control of antestia bug, imidacloprid and pyrethrum insecticides were applied. 6,359 litres of imidacloprid and 202 litres of pyrethrum insecticides, 2,700 kg of copper oxychloride fungicides were

applied in coffee plantations for the control of antestia bug, coffee leaf rust and coffee berry disease respectively.

Cooperative development and capacity building:

A study on cooperatives capacity building and training needs was conducted and presented to NAEB Staff. The survey report on cooperatives status in terms of levels of management and governance was discussed by NAEB in conjunction with RCA and recommendations were given.

More than 30 cooperatives received trainings in good governance, good agricultural practices and in certification and verification through different funded projects in the Coffee Division.

- **Coffee Production and Export 2013-2014:**

From July 2013 to June 2014, a production of **17,976 tons** of green coffee and export volumes of **17,827 tons** that generated **47,488,081 USD** were registered (Table below). However at the end of June 2014, there was additional 5,000 tons of green coffee which was still in the different warehouses outside NAEB and which is not recorded in the 17,976 tons.

Coffee Type	2012-2013 (kg)	2013-2014 (kg)	% change
Fully washed	7,082,547	6,185,810	-13%
Semi washed	11,483,880	8,931,100	-22%
Triage	2,376,766	2,646,653	11%
Robusta	256,600	211,944	-17%
Total	21,199,793	17,975,507	-15%

- **Export Promotion:** Marketing was a success in promoting quality and the year was characterized by a certain increase of coffee prices in the international market especially between April and June 2014, but not much coffee was available to sell because it was in processing. Rwandan coffee was advertised by attending coffee exhibitions, conferences, international coffee programs and international and regional adverts.

2. Tea Expansion Project



Tea acreage expansion goes hand-in-hand with the construction of new tea factories; beside is a New Tea Factory at Mushubi, Nyamagabe District which was operational from October 2013

Basic Information	Project cost: 575 million RWF Donor: Government of Rwanda Government contribution: 100% Government funded Implementation starting date: July 2013 Scheduled Completion date: June 2017 Eventual Extension: June 2018 Implementing Agency: NAEB
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Mission and Purpose	The objective of this program is to increase Tea production by planting new 18,000 ha from 2012. Among the 18,000ha, the 3,862 ha would be planted by existing tea factories, 4138 ha to be planted under tea expansion phase I, while 10,000 ha are to be planted under tea expansion program phase II																																								
Achievements 2013-2014	<p>Tea expansion</p> <ul style="list-style-type: none"> Tea acreage expansion: Achievement was 1,891 ha of new plantations at national level, meaning 82 % of the targets. <table border="1" data-bbox="375 403 1380 974"> <thead> <tr> <th>NAME OF TEA PROJECT</th> <th>TARGET AREA (ha)</th> <th>AREA PLANTED (ha)</th> <th>Percentage score(%)</th> </tr> </thead> <tbody> <tr> <td>1. KARONGI</td> <td>200</td> <td>117.34</td> <td>59</td> </tr> <tr> <td>2. RUTSIRO</td> <td>500</td> <td>250.52</td> <td>50</td> </tr> <tr> <td>3. GATARE</td> <td>500</td> <td>402.48</td> <td>80.5</td> </tr> <tr> <td>4. MUSHUBI</td> <td>100</td> <td>57.11</td> <td>57.1</td> </tr> <tr> <td>5. MUGANZA KIVU</td> <td>400</td> <td>469.05</td> <td>117.3</td> </tr> <tr> <td>6. Private tea Factories</td> <td>600</td> <td>594</td> <td>99</td> </tr> <tr> <td>7. New sites</td> <td>500</td> <td></td> <td>-</td> </tr> <tr> <td>TOTAL PROJECTS & Factories</td> <td>2,800</td> <td>1,891</td> <td>67.5</td> </tr> <tr> <td>Total without new sites</td> <td>2,300</td> <td></td> <td>82.21</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Tea seedlings production: A total of 32,422,365 seedlings were produced from NAEB tea projects, tea factories & tea cooperatives nurseries during the year 2013-2014. Tea factories construction Tea factories construction: For the ongoing tea expansion projects among the 5 targeted tea factories which are Muganza Kivu, Karongi, Mushubi, Rutsiro, Gatare two of them were completed (Karongi and Mushubi) and are operational. The Rutsiro and Muganza Kivu tea factories are at 99 % completed while Gatare tea factory is still at the ground level. <p>Increase tea productivity</p> <ul style="list-style-type: none"> Fertilizer Application: 5,753 tons of NPK 25-5-5+3S were purchased through the Tea Fertilizer Fund, distributed and applied representing 95.8% of the target that was set. <p>Tea Production & Export:</p> <ul style="list-style-type: none"> Green Leaf Production was 95,011 metric tons which was processed into 22,483 metric tonnes of Made Tea, i.e. 79% of the set targets; Export revenues were 53.5 million USD from the sales of 22,347 tons of Made Tea Export Promotion: In order to showcase and promote Rwandan tea on the international market, Rwanda hosted the 2nd Africa Tea convention and Exhibition organized by the East African Tea Trade Association (EATTA) in partnership with The National Agricultural Export Development Board (NAEB) on 28th -30th August 2013 at Kigali Serena Hotel. 	NAME OF TEA PROJECT	TARGET AREA (ha)	AREA PLANTED (ha)	Percentage score(%)	1. KARONGI	200	117.34	59	2. RUTSIRO	500	250.52	50	3. GATARE	500	402.48	80.5	4. MUSHUBI	100	57.11	57.1	5. MUGANZA KIVU	400	469.05	117.3	6. Private tea Factories	600	594	99	7. New sites	500		-	TOTAL PROJECTS & Factories	2,800	1,891	67.5	Total without new sites	2,300		82.21
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3. Horticulture Commodity Chain - Intensification and Quality Management



Collection center for horticulture products to preserve the quality of Rwandafresh products.

Basic Information	<p>Project cost: 372 891 496 RWF Donor: Government of Rwanda Government contribution: 100% Government funded Implementation starting date: July 2010 Scheduled Completion date: June 2013 Eventual Extension: June 2014 Implementing Agency: NAEB</p>																																								
Mission and Purpose	<p>This project aims to support and develop the horticulture value chain and new agricultural export chains through three major activities:</p> <ol style="list-style-type: none"> 1. Increasing the capacity of farmers in practicing market-oriented production of horticultural commodities 2. Propagating healthy planting material for selected fruit trees 3. Developing logistical and postharvest infrastructure to reduce postharvest losses faced by farmers. 																																								
Achievements 2013-2014	<p>During this fiscal year, NAEB distributed 7,614 kg of different vegetable seeds that could be planted on about 1877.4 ha that were consolidated in different marshlands. The total planted area for different types of vegetables are shown in the table below:</p> <table border="1" data-bbox="456 1144 1385 1765"> <thead> <tr> <th>Vegetable type</th> <th>Area planted under NAEB seeds</th> <th>Area planted under NAEB mobilization (ha)</th> <th>Total Area covered (ha)</th> </tr> </thead> <tbody> <tr> <td>Carrots</td> <td>126.25</td> <td>222.9</td> <td>349.15</td> </tr> <tr> <td>French beans</td> <td>125.6</td> <td>190.9</td> <td>316.5</td> </tr> <tr> <td>Onion</td> <td>41.5</td> <td>300.25</td> <td>341.75</td> </tr> <tr> <td>Tomatoes</td> <td>1,076</td> <td>1117.2</td> <td>2193.2</td> </tr> <tr> <td>Peppers</td> <td>122</td> <td>86.3</td> <td>208.3</td> </tr> <tr> <td>Cabbage</td> <td>202</td> <td>582.9</td> <td>784.9</td> </tr> <tr> <td>Eggplant</td> <td>0</td> <td>217</td> <td>217</td> </tr> <tr> <td>Watermelon</td> <td>184</td> <td>221</td> <td>405</td> </tr> <tr> <td>Total</td> <td>1,877.35</td> <td>2,938</td> <td>4,816</td> </tr> </tbody> </table> <p>For fruits, the activities related to subsector had been carried out in different locations of the country. During this fiscal year 2013/2014, a total of 75,212 seedlings of mangoes, 289,218 seedlings Of avocados, 4,777 seedlings of citrus, 57,248 seedlings of Grapes, 6,672 seedlings of plums , 16,770 seedlings of Macadamia, 7,722 seedlings of apples, 4,050 seedlings of peaches and 6,634 of pears were distributed as shown on below table;</p>	Vegetable type	Area planted under NAEB seeds	Area planted under NAEB mobilization (ha)	Total Area covered (ha)	Carrots	126.25	222.9	349.15	French beans	125.6	190.9	316.5	Onion	41.5	300.25	341.75	Tomatoes	1,076	1117.2	2193.2	Peppers	122	86.3	208.3	Cabbage	202	582.9	784.9	Eggplant	0	217	217	Watermelon	184	221	405	Total	1,877.35	2,938	4,816
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Fruits	Number of seedling planted	Area covered(ha)
Mango	75,212	752
Avocado	289,218	2410
Citrus	4,777	60
Grapes	57,248	143
Plums	6,672	17
Peaches	4,050	10
pears	6,634	17
Apple	7,722	19
Macadamia	16,770	52
Total	468,303	3,480

For the sub sector of flowers, the expensing was done at 20 ha. By today, the planted area for horticulture is evaluated to 35 ha.

About export, the sector performed the improved results. The increase in exported volumes was translated into increase in export earnings. In total the exported volumes of 31, 933,834 kgs of vegetables generated 9,494,442 USD while the 1,883,830 kgs of fruits results in 651,852 USD.

In framework of preserving Rwandafresh quality, the collection centers were equipped. These collection centres have facilities for sorting, grading and packing. Equipments like grading tables were supplied to the 3 constructed collection centers. Each of the collection centers has capacity to handle 10 tonnes/day produce. On the other side, the ex-NAEB warehouse was equipped with 10 INOX tables.

4. NSC – National Sericulture Centre

Fresh mulberry grown by cooperatives supported by the National Sericulture Centre



Basic Information	Project cost: 100,000,000 RwF (Annual) Donor: Government of Rwanda Project Government contribution: Internally funded project Implementation starting date: June 2009 Scheduled Completion date: Ongoing Implementing Agency: NAEB
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Mission and Purpose	The National Sericulture Centre aims to increase sericulture productivity and to contribute to the diversification of Rwandan exports. Activities include: <ul style="list-style-type: none"> • Supporting sericulture cooperatives • Supporting research related to sericulture • Strengthening the National Sericulture Centre, which coordinates farmer support activities
Achievements 2013-2014	During the Financial year of 2013 – 2014, main achieved activities were: <ul style="list-style-type: none"> • Developed highly yielding and disease resistant mulberry varieties • Adaptation of silkworm breeds under the environmental conditions of Rwanda; • Carried out maintenance of mulberry and silkworm germplasm at Rubona research station; • Developed disease monitoring system and prevention measures against pests within mulberry plantation and silkworms; • Extension of proven technologies and strengthen capacity building of famers

SP3.4. Development of Priority Value Chains: Dairy and Meat

1. Dairy Value Chains Outputs

Mission and Purpose	Development of the dairy sector in Rwanda by increasing value addition at all stages of the Dairy Value Chain. The development of this sector contributes toward improved livelihoods, diversification of income sources and nutritional security.
Achievements 2013-2014	<ul style="list-style-type: none"> • Transforming MCC into Hub Model: Farmers deliver milk to the Milk Collection Center (MCC) and should be facilitated to get all the required services and farm input including artificial insemination service, veterinary services and extension services; this were the driving force to see how MCC should be transformed into dairy business HUB Model centers that is aimed to revitalize the Milk Collection Network for efficient services delivery to dairy farmers. As of now, out of 97 MCCs in the country, 40 were transformed into Dairy Business Hub Models. Series of trainings were organized whereby MINAGRI in collaboration with partners (RAB,LISP, RDCP II, and SNV) have trained 2,400 dairy farmers on clean milk production. • New Dairy Plant and MCCs: Rusizi Dairy with a production capacity of 10,000 liters of milk per day and Mukamira Dairy Plant with were continued to be constructed, the works are at 90% of completion. And in addition to that 35 MCCs were constructed and equipped with livestock SPIU/LISP • Milk Competition: MINAGRI in collaboration with RDCP II of USAID and private sector in dairy business organized the second annual Milk Production Competition in dairy cows. The purpose of the competition was to encourage farmers to have the best animals within specific breeds to breed and create awareness on importance of keeping high producing animals among the farmers for profitable livestock business. This competition provided opportunity for appraisal of maximum genetic potential of the animal for milk production. The winners for cross cow Holesstein-Fresian 75% and Pure Jersey were rewarded the prize valued 300,000 Rfw including Cup prize and Certificate of appreciation • Milk week: MINAGRI in collaboration with Land o’Lakes and Ministry of Health the Milk week Milk week, milk Consumption Campaign and Breastfeeding Week was organized and launched in the District of Karongi and Gisagara. The objectives of the campaign were to sensitive farmers especially of rural areas to drink milk and breast their children and emphasis was on the children under 5 years vulnerable to malnutrition and chronic diseases due to the lack of important nutrients.

SP3.5. Development of Priority Value Chains: Fisheries

1. Outputs for the Development of Aquaculture & Fisheries

Mission and Purpose	The development of aquaculture and fisheries sector contributes toward improved livelihoods, diversification of income sources and nutritional security.
Achievements 2013-2014	Research Outputs on the Development of Aquaculture & Fisheries (RAB) In fish farming and fisheries, planned research was related to development of Tilapia nilotica strain more adapted to Rwanda conditions, fish feeds formulation, adaptation of Carps and Clarias to rearing in ponds and study on salmonids rearing conditions, in the FY 2013-2014.

- **Research on Tilapia Nilotica:** strain that was imported from Uganda, Lake Albert was conducted at Kigembe Fish Farming Station. Breeding in order to maintain and improve that strain (it has started, ongoing). In last year 4 successive offsprings were collected from 13 parent families. The growing of these 4 offsprings are to be followed up until we get a parent stock to start on in crossing with wild strains.
- **Carps and Clarias:** 162 specimens of Clarias gariepinus were fished from lakes Rwampanga and Cyambwe, taken to Kigembe station for acclimation. After, fingerlings that will be gotten from them will be disseminated to fish farms where we will conduct on farm research. Specimens of Carps are being collected from different water bodies. They will be transferred to Kigembe fish farming station for acclimation and further production of carp fingerling
- **Salmonids (trout):** Identification of some sites where rainbow trout could perform well was carried out in the Northern Agriculture Zone Division (Nyabihu district, Musanze District). The parameters of water have to be analyzed. The identification is to be continued in Gicumbi district.
- **Fish feeds:** Identification of local ingredients for formulation of fish feeds have been done in each Agriculture Zone Division. These potential ingredients are as follows:
 - **Northern Zone:** Maize, Soja, Cassava, Sombe leaves, haricots, peas, banana, cabbages, sorghum, wheat, fish meal, irish potato, sweet potato, wastes from animal husbandry, different wastes from households, fruits, wastes from slaughters, grass,
 - **Western Zone:** wastes from sericulture, wastes from animal husbandry, different wastes from households, fish meal, sweet potato, banana, fruits, rice, Irish potato, beans, cassava, wastes from slaughters, grass,
 - **Southern Zone:** Wastes from sericulture, wastes from animal husbandry, different wastes from households, wastes from slaughters, grass, fruits, banana, beans, maize, cassava, wheat, sorghum, rice,
 - **Eastern Zone:** Wastes from sericulture, rice, sunseed, wastes from animal husbandry, different wastes from households, wastes from slaughters, grass, groundnuts.

Report of Activities in Fish Farming and Fisheries

- 3 private investors have been recommended for cage fish farming in Kivu Lake;
- 2 private investors in fish feeds have been facilitated in taxes exoneration;
- 24,765 MT OF Fish production
- Monitoring and evaluation of Joint Youth and Women Employment Flagship implementation in fish farming, in partnership with FAO and RAB;
- Establishment of Mini Laboratory of 20,000 \$ at Kigembe Fish Center in collaboration with Smart Fish and RAB ;
- Ministry of Agriculture and Animal Resources has developed regulations for fish products trading, fish farming and fisheries as stated by the Law no 58/2008 of 10/09/2008 determining the organization and management of aquaculture and fishing in Rwanda;

SP3.7. Agricultural finance

The following data to summarize agricultural finance lending in Rwanda over FY 2013/14 has been sourced from the Central Bank.

Outstanding Loans (related to Agriculture) granted by banks

ACTIVITIES SECTOR	End July 2013(Frw"000")	End June 2014 (Frw"000")
<i>Agricultural, fisheries& livestock (Primary)</i>	<i>22,595,406</i>	<i>27,142,531</i>
<i>Agro processing</i>	<i>23,063,508</i>	<i>39,443,508</i>
MANUFACTURING INDUSTRIES	1,678,049	4,852,918
MANUFACTURING OF FOOD PRODUCTS	5,031,141	8,164,742
COFFEE FACTORIES	3,149,192	4,898,177
TEA FACTORIES	5,288,690	4,046,104
OTHER MANUFACTURING OF FOOD PRODUCTS	4,121,588	4,224,639

MANUFACTURING OF BEVERAGES PRODUCTS	3,582,300	13,247,840
LEATHER INDUSTRIES	212,548	9,088
Total	45,658,914	66,586,039
Total all sectors	699,056,627	900,730,567
% of Agriculture	6.53	7.39%

New loans (related to Agriculture) granted by banks

ACTIVITIES SECTOR		July 2013-June 2014 Frw"000")
<i>Agricultural, fisheries & livestock</i>		8,506,647
<i>Agro processing</i>		26,767,219
MANUFACTURING INDUSTRIES		3,090,619
MANUFACTURING OF FOOD PRODUCTS		3,979,664
COFFEE FACTORIES		3,888,774
TEA FACTORIES		2,062,723
OTHER MANUFACTURING OF FOOD PRODUCTS		2,171,358
MANUFACTURING OF BEVERAGES AND TOBACCO PRODUCTS		1,800,000
MANUFACTURING OF BEVERAGES PRODUCTS		9,774,081
Total		35,273,866
Total new loans July 2013-June 2014		577,680,000
% of Agriculture		6.11

Outstanding loans granted by Microfinance sector

Amount in Rwf billion	13-Jun	14-Jun
Outstanding loans	63.7	81.2
Amount of agriculture loans	8.34	10.25
% of Agriculture sector	13.10%	12.60%

SP3.8. Market infrastructure

1. Flower Park Construction

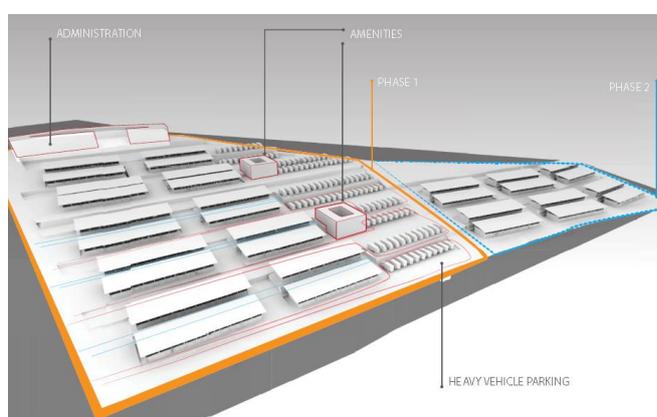
Greenhouses were erected as shown in the picture on the right



Basic Information	Project cost: 389,800,000 RWF
	Donor: Government of Rwanda
	Government contribution: 100% Government funded
	Implementation starting date: July 2010

	Scheduled Completion date: June 2013 Eventual Extension: June 2014 Implementing Agency: NAEB
Mission and Purpose	The objective of this project is to create competitive advantages in Rwandan floriculture by providing incentives to local and international investors such as provision of suitable land and facilities to stimulate investment in floriculture and make Rwanda a player in the global market.
Achievements 2013-2014	This project was initiated on a 35 ha land and required land leveling, Infrastructure, greenhouse, irrigation and spray system, postharvest facility and other required facilities. During the period under review, structure for greenhouse were erected on a two ha land and major ongoing activities that are civil works and building pack-house. In a framework to improve project investment, NAEB has signed a joint venture agreement with Shalimar flowers for implementation of the project.

2. Kigali Wholesale Market for Fresh Produce



Kigali wholesale market will eventually provide a selling and collection point for horticultural commodities

Basic Information	Project cost: 100,000,000 RWF Donor: Government of Rwanda Government contribution: 100% Government funded Implementation starting date: July 2010 Scheduled Completion date: June 2013 Eventual Extension: June 2014 Implementing Agency: NAEB
Mission and Purpose	The overall goal of the Kigali Wholesale Market for Fresh Produce project is to construct a well-managed and fully equipped modern fresh produce market to support the horticultural commodity chains serving both local and international markets. The facility is expected to provide farmers, traders and consumers with an orderly trading environment with access to all industry participants in one location. It will also offer packaging and cold facilities to reduce post harvest losses, improve the price structure, and act as a regional centre for product distribution and marketing.
Achievements 2013-2014	During this fiscal year, the activities were carried out in area of designing architectural designs and seeking the potential investors for this project. For designing, the operations related to tender and architectural designs were achieved and available architectural designs are ready. The terms of reference for business are under design to be finalized for next year fiscal year tendered.

3. National Strategic Food Reserve

Post harvest infrastructure to improve storage and processing across value chains

Post harvest infrastructure to



Basic Information	<p>Project cost: 2.5 billion RwF Donor: Government of Rwanda Government contribution: Internally funded project Implementation starting date: July 2010 Scheduled Completion date: June 2016 Eventual Extension: Yes Implementing Agency: TF Post Harvest Handling and Storage</p>
Mission and Purpose	<p>The National Strategic Food Reserve aims to ensure national food security, mitigate the impacts of potential shocks to the food supply, and reduce malnutrition and hunger among the population, while avoiding market distortion</p>
Achievements 2013-2014	<ul style="list-style-type: none"> • A total of 23,281 farmers (11,657 F & 11,524 M) from over 500 cooperatives have been trained on maize and rice post-harvest best practices. Training materials: 12,110 leaflets and 1,312 training modules of maize, rice, Irish potatoes and wheat have been distributed to farmers. • Post-harvest extension staffs were regularly deployed to Districts and Sectors to coach farmers on post-harvest best practices: 74,959 farmers (38,024 F & 36,935 M) from over 500 cooperatives were directly coached on maize, rice, Irish potatoes & wheat post-harvest best practices. • In order to minimize post-harvest losses, 21,469 sheetings (tarpaulin) have been distributed to maize, rice and wheat farmers; 733 shellers have also been distributed to maize farmers. 10 Hermetic grain storage bags have been distributed to farmers for demonstration. 10 cooperatives were supported with electrical maize shellers while 17 cooperatives were supported with wheat threshers. Public and private media were used to increase awareness of the benefits of post-harvest improvements at the farmer and private sector. • 29 drying grounds, 1 storage facility and 4 selling points have been constructed in different districts. Farmers and local leaders recognize the importance of different infrastructures that have been established and mobilized on their ownership. • A total of 43 farmer's cooperatives have been linked to financial institutions as a result, they have been able to access inputs and compete on the market with their produce. • 9,745.7 MT of maize and beans have been stocked for the National Strategic Grain Reserves (Maize: 7,857.422 MT; beans: 1,888.28 MT). • The National Strategic Grain Reserves were used support farmers through Food for Work Program: a total of 954.126 MT of grains (551.426 MT of maize and 402.7 MT of beans) were distributed in Kayonza and Bugesera Districts. • Zamura Feed Plant has been installed in Musanze District; Rwamagana feed plant has been constructed in Rwamagana District with a progress of 95%; installation of oil plant in Kayonza District has been completed • Seed plant construction in Kigali Special Economic Zone: civil works and machine installation have been completed and is operational; cob dryer and sorting house installation have been completed. • Civil works of Nyagatare metallic silos with 10,000 MT capacity was at 100%, while machine installation is at 80%; civil works for Bugesera metallic silos with 6,000 MT capacity was at 100% while installation works was at 80%.

4. Sector Policy Support Programme Rural Feeder Roads-SPSP RFR (EU Funded Project)



Bugesera Rehabilitated Feeder Road

Basic Information	<p>Project cost: EUR 40,000,000 Donor: EU Management Mode: Sector Policy Support Programme Sector budget support: EUR 36,000,000 Project mode: EUR 4,000,000 Implementation starting Financial Year: 2013/2014 Scheduled Completion Financial Year: 2017/2018 Implementation Agency: ISFRRM/Minagri</p>
Mission and Purpose	<p>This project is a sector budget support programme for Rural Feeder Roads; where the Ministry of Finance and Economic Planning(MINECOFIN), acting as EDF National Authorising Officer(NAO), is responsible of disbursement requests for the SBS, transfers the funds to the Districts and will be responsible of the contracting of the Programme Estimate.</p> <p>The overall objective of the programme is to contribute to poverty reduction through the promotion of equitable and inclusive economic growth within the framework of decentralization and to improve consumer access to affordable food as well as access of food producers to markets, thereby contributing to strengthen food security.</p> <p>The specific programme objective is to support the implementation of rural feeder road network policies and strategies at local level, by helping set up a sustainable system and reinforcing the capacities of government in this domain.</p> <p>The priority roads identified by the projects covers different category of roads as per the RoadAct: National, District Class 1, District Class 2 and unclassified roads.</p>
Achievements 2013-2014	<p>Feeder Roads Rehabilitation:</p> <ul style="list-style-type: none"> ○ The project supported rehabilitation of 101.15km of Feeder Roads in 7 Districts namely: Muhanga, Huye, Ngoma, Ngororero, Rulindo, Bugesera and Rubavu. ○ The Districts achievements are as follows: <ul style="list-style-type: none"> ➤ Muhanga:19Km ➤ Huye:9Km ➤ Ngoma:17.02Km ➤ Ngororero:10.36Km ➤ Rulindo:22Km ➤ Bugesera:13.5Km ➤ Rubavu:10.2Km <p>Capacity building:</p> <ul style="list-style-type: none"> ○ Establishment of the Rural Feeder Road Unit. The RFRU, now operational is composed of: 7 Districts Engineers, 4Engineers attached to the central level(1 at MINAGRI and 3 at RTDA), 1Project Accountant, 1Project Procurement Specialist, 1 M&E Specialist and 1 International Technical Assistant/Institutional Specialist. <p>Project Management:</p> <ul style="list-style-type: none"> ○ The Programme Estimate being managed by the imprest administrator, Imprest accounting officer, Deputy imprest administrator and Deputy imprest accounting officer. Its meeting is held every month for the good management of the Project.



Nyamagabe Rehabilitated Feeder Road

5. Rural Feeder Roads Programme (AfDB funded Project)

Basic Information	Project cost: USD 5,681,500 Donor: AfDB Implementation starting Financial Year: 2013/2014 Scheduled Completion Financial Year: 2016/2017 Implementation Agency: RTDA
Mission and Purpose	The overall objective of the programme is to contribute to poverty reduction through the promotion of equitable and inclusive economic growth within the framework of decentralization and to improve consumer access to affordable food as well as access of food producers to markets, thereby contributing to strengthen food security. The specific programme objective is to support the implementation of rural feeder road network policies and strategies at local level, by helping set up a sustainable system and reinforcing the capacities of government in this domain. The priority roads identified by the projects covers different category of roads as per the RoadAct: National, District Class 1, District Class 2 and unclassified roads.
Achievements 2013-2014	Feeder Roads Rehabilitation: <ul style="list-style-type: none"> ○ The project supported rehabilitation of 30km of Feeder Roads in Nyamagabe District. And the other 25 Km are planned to be rehabilitated in Rutsiro District in 2016/2017.

Programme 3 (Cross-cutting): Directorate General of Agriculture and Livestock Inspection and Certification Services



Food Safety Market Inspection

Mission and Purpose	The Directorate of Agriculture and Livestock Inspection and Certification Services is mandated firstly to ensure that the people, animals and plants in the country are protected from pests and diseases that can be introduced into the country or be unintentionally spread to other countries as a result of international trade in agriculture. Secondly the directorate is mandated to facilitate trade by ensuring that all agricultural commodities being exported / imported into the country comply with international standards. The directorate is also charged with the regulation of Agrochemicals and equipment associated with the use of Agrochemicals. In this, the Directorate is required to ensure the safe use, storage and handling of agrochemicals by the public, the registration of agrochemicals used in the country as well as agro-dealers and their premises and to
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maintain and update a list of agrochemicals that are prohibited and restricted in the country. In addition, this directorate hosts the National Plant Protection Organization (NPPO) which is a requirement for countries that are signatory to the International Plant Protection Convention (IPPC) under the World Trade Organization (WTO) agreement on Sanitary and Phytosanitary Standards (SPS).

The directorate is delivering its services through two main sections which are in turn subdivided into sub sections as follows:

Section	Sub-section
<i>Plant health services</i>	Plant product certification Plant Quarantine Plant Pests surveillance
<i>Animal health services</i>	Animal Quarantine Animal Diseases surveillance Animal product certification

Achievements
2013-2014

- **Improve the input distribution market, inspection and regulation**

Directorate has conducted a countrywide inspection of agro-dealers and premises in order to ensure the compliance with requirements in accordance with the agrochemical law and its bylaws. In addition, codes of conduct and posters have been distributed to all agro-dealers. Within this framework, The list of authorized agrochemicals was updated and two new products were registered.

Table.1. Agrochemical products registered in 2013-2014

N°	Trade name	Active ingredient	Type of product	Owner of product
1	Agrothrin	0.11% Pyrethrins and 1.1% piperonyl butoxide (PBO)	Insecticide	Agropharm Africa Ltd
2	Refined Pyrethrum Concentrate (CAS No: 8003-34-7)	Pyrethrins =75%w/w	Insecticide	Horizon Sopyrwa

In collaboration with RAB, REMA, MINALOC, RBS, RRA, RNP, and MoH the lists of prohibited and restricted agrochemicals and veterinary drugs were also updated and all lists were posted on minagri website and RAB website and also distributed to all entry /exit points of the country, to all agro-dealers.

- **Sanitary and Phytosanitary certification**

Based On Different Plant Health Inspections Conducted On Farms And In Warehouses, 2,106 Phyto-sanitary Certificates Were Issued On Horticultural Products, Maize, Beans, Coffee And Tea Exported At The International Market In 2013-2014 Fiscal Year. As Regards To Sanitary Certification, Different Livestock Commodities Including Goats, Sheep, Fresh Fish, Meat And Meat Products, Milk And Milk Products And Honey Were Inspected And Certified For Export. In Order To Meet Transparency Principle Of WTO- SPS Agreement And Obtain Information For Certification, Different Countrywide Surveys On Pest And Diseases Were Conducted For Horticultural Crops, Coffee, Tea And Farm & Domestic Animals.

Export Certificates Issued For Livestock Commodities During Fiscal Year Of 2013-2014

Animals/ Products	Exports/Re-Export	
	Quantity /Number	Destination
Goats	6875	Democratic Republic Of Congo
Sheep	318	
Fresh Fish	1002	Congo Brazzaville
Meat And Meat Products	20333	Congo Brazzaville
Milk And Milk Products	6123429	Democratic Republic Of Congo
	124.992	South Sudan
	30000	Uganda
Honey	500	Singapore

• **Agricultural and livestock products import authorization**

In order to protect the country from pest and diseases which may affect the country as a result of international trade; the authorization of importation is issued after a thorough Pest and Diseases Risk Analysis, from which, import conditions are determined.

In 2013-2014 fiscal year, 496 import permits were issued for various agricultural and livestock products from different countries. The main imported agricultural commodities are seeds and other planting materials, agrochemicals (fertilisers and pesticides), equipments used in agriculture,

Pest Risk analysis of imported agricultural products.

Commodity	Country of origin	Import conditions
Maize seeds	Zambia	<ul style="list-style-type: none"> - Free from pests and diseases - To be accompanied by a Phytosanitary Certificate and Certificate of Quality Analysis complying with standards - Accompanied by a copy of laboratory results showing that those seeds are free from <i>Maize dwarf Mosaic virus (MDMV)</i>, <i>Maize chlorotic Mottle Virus (MCMV)</i>, <i>Sugarcane Mosaic Virus (SCMV)</i>, <i>Wheat streak Mosaic Virus (WSMV)</i> - Not be genetically modified - The maize seeds must have been harvested in the area free from <i>Maize Lethal Necrosis Disease (MLND)</i>
Maize seeds	Zimbabwe	
Maize seeds	Kenya	
Maize seeds	Mexico	
Maize seeds	Uganda	
Soya bean	Zambia	<ul style="list-style-type: none"> - Free from pests and diseases - Coming with phytosanitary certificate and certificate of quality analysis complying the standards of seeds - Not be genetically modified
Soya bean	Mozambique	
Soya beans	Zimbabwe	<ul style="list-style-type: none"> - Free from pests and all insects should be controlled by appropriate treatment before dispatch. - Not be genetically modified. - Coming with phytosanitary certificate and certificate of quality analysis
Rice seeds (For research)	Zimbabwe	<ul style="list-style-type: none"> - Free from seed born diseases - Coming with phytosanitary certificate and certificate of quality analysis - Not be genetically modified
Rice seeds (For research)	Kenya	
Irish potatoes mini tubers	Peru	<ul style="list-style-type: none"> - Free from pests and diseases - All insects be treated with appropriated pesticides before dispatch - All insects should be Controlled by appropriate treatment before dispatch
Flowers for planting	Kenya	<ul style="list-style-type: none"> - Free from pests and diseases - Accompanied with phytosanitary certificate - Free from soil and other foreign matter
Sunflowers	Kenya	<ul style="list-style-type: none"> - Sunflowers must be free from pests and all insects should be controlled by appropriate treatment before dispatch. - The sunflower seeds should be not genetically modified. - Coming with phytosanitary certificate and certificate of quality analysis
Rice inbred lines (For research)	Tanzania	<ul style="list-style-type: none"> - Free from seed borne diseases - Coming with phytosanitary certificate and certificate of quality analysis - Not be genetically modified
Rice inbred lines (For research)	Philippines	

Rice seeds (for research)	Burundi	<ul style="list-style-type: none"> - Must be pure, cleaned and free from any foreign matter, not mixed with other varieties, seed that are broken, poorly developed or diseased. - Not be genetically modified (GMO)
<i>Brachiaria</i> grass Seeds		<ul style="list-style-type: none"> - Free from weed seeds, impurities, viruses, accompanied with Phytosanitary certificate - Not be genetically modified
Bean seeds	Colombia	<ul style="list-style-type: none"> - Free from pests and diseases - Coming with Phytosanitary certificate and certificate of quality analysis complying with standards - Not be genetically modified
Bean seeds	Italy	
Oregon Sugar Pod II Seeds (<i>Pisum sativum</i>)	Kenya	<ul style="list-style-type: none"> - Free from pest and diseases and - Coming with phytosanitary certificate and certificate of quality analysis - Killing all insects by appropriate treatment
Pastures Sorghum Wheat Sunflower	Kenya	<ul style="list-style-type: none"> - Free from pests and diseases - All insects should be controlled by appropriate treatment - Not be genetically modified
Seedlings of different crop (Plums Pears Peach Grapes Apple Mango)	Kenya	<ul style="list-style-type: none"> - Free from pests and diseases - All insects should be controlled by appropriate treatment - Not be genetically modified - Free from soil and other foreign matter and debris
Groundnut seeds	Uganda	<ul style="list-style-type: none"> - Free from pests and diseases - All insects should be controlled by appropriate treatment - Not be genetically modified - Free from soil and other foreign matter and debris

Authorized imports of animals/animal products during fiscal year of 2013-2014

Animals/ Products	Imports		Import conditions
	Quantity(kg)/number	Origin	
Pet animal(dog and cat)	2dogs	Kenya	-To be accompanied by :veterinary certificate, vaccination certificate ,proof of treatment against <i>Echinococcus multicularis</i> tape worm
	8cats	South Africa	
Eggs	46200	Uganda	To be accompanied by :veterinary certificate ,to be clean and free from droppings or any dirty materials .They shall be non embryonated and free from blood spots, and not exceed 14 days being laid.
One day old Chicks	37000	Uganda	To be accompanied by :veterinary certificate, to be free from all OIE notifiable diseases
<i>Fresh fish</i>	1000	<i>Kenya</i>	To be accompanied by::veterinary certificate, certificate of origin ,to be free from <i>Salmonella spp, and E-coli,</i>
Canned fish	300	Belgium	To be accompanied by :veterinary certificate ,not being genetically modified, HACCP certificate
	3000	Uganda	To be accompanied by :veterinary certificate ,not
	1.500	Uganda	

			being genetically modified ,HACCP certificate
Meat and meat products	2558.2Kg	Kenya	To be accompanied by :veterinary certificate ,not being genetically modified ,HACCP certificate
	85.63	Italy	To be accompanied by :veterinary certificate ,not being genetically modified ,HACCP certificate
	804Kg	Belgium	To be accompanied by :veterinary certificate ,not being genetically modified ,HACCP certificate
Milk and milk products	2886.91	Belgium	To be accompanied by :veterinary certificate ,not being genetically modified ,HACCP certificate

- **Inspection of markets, storage facilities and abattoirs**

In order to ensure sanitary and food safety compliance of imported and locally produced agricultural products and animal feeds, inspections were conducted at various markets, abattoirs and stores in the whole country.

- **Monitoring of pesticides and antibiotics residues for honey**

The Pesticides Residue Monitoring Plan (PRMP) for honey was developed and submitted to the European Union Commission together with the application for **registration of Rwanda on the list of countries allowed to export honey to the EU market**. The developed plan is under implementation. As result, Rwanda was added to the list. The PRMP Working group was also established and is composed by stakeholders from MINAGRI, RAB, NAEB, RBS, Private sector.

- **Creating awareness on sanitary and phytosanitary standards and agrochemicals safe use and handling**

With the aim of increasing the awareness on the required standards to protect human or animal life health within the country and the territory of Partner State from risks arising from biological, chemical and physical substances including additives, contaminants, toxins or disease-causing organisms; and establishment or spread of pests, diseases, disease-carrying organisms, RALIS conducted a training workshop in Northern Province.

The training brought together participants from all districts of the Northern Province bordering Uganda. Groups of trainees were composed by Extension officers, farmers' representative, Cyanika and Gatuna border officials, Agro-dealers and district agronomists.

The training sessions focused on; Sanitary and phytosanitary standards, Good agricultural practices, safe use of agrochemicals and requirements for import and export of agricultural commodities.

- **Other activities for Sanitary and phytosanitary standards awareness creation**

- Meetings with seed importers and agro-dealers: Explanations on the requirements for importation of agricultural inputs and their distribution within the county.
- Dissemination of posters showing details on safe use of agrochemical, seeds and agrochemicals import conditions, international quality standards to be fulfilled for importation and exportation of agricultural products.
- Meetings with border officials at all official borders of Rwanda: explanation of requirements for imports/ exports in agricultural commodities. Information exchanges on ways of collaboration

- **Institutional Capacity Building**

In order to strengthen human capacity, the staffs of the Directorate of inspection have benefited different trainings:

1. Hazard analysis and critical control point determination (HACCP analysis)
2. Implementation of food safety according to CODEX-HACCP
3. Crop protection
4. Food safety
5. Monitoring and Evaluation of Plant Clinics
6. Training on Up- gradation of Food Testing Skills of Food Processing Professional
7. WTO SPS National Notification Authority

○ **Legal and Regulatory Framework**

In accordance with the mandate of the directorate of agriculture and livestock inspection and certification services, various Ministerial instructions and Procedures were developed aiming to facilitate safe international trade:

1. Ministerial instructions regulating the control of agrochemicals and agro-dealers and premises,
2. Ministerial instruction regulating the safe milk handling, collection, transportation and selling.
3. Phytosanitary Standards Operating procedures.
4. Import and inspection procedures for livestock entering Rwanda.
5. Draft import and inspection procedures for pet.
6. Draft import and inspection procedures for livestock products entering Rwanda.
7. Honey Residue Monitoring Plan.

4. Institutional development and cross-cutting issues

SP4.2. Decentralisation in Agriculture

The decentralisation process in the agricultural sector is still ongoing and has reached a de-concentration phase, whereby service delivery is provided at local levels through de-localised national bodies (RAB-Zones at provincial and decentralized NAEB-staff at district level) in partnership with local agronomists and veterinarians. The implementation of the agriculture sector strategy is gradually being shifted from project approach to programme based approach, especially through the Sector Budget Support and Program for Result, where a part of the budget was transferred to Districts and allocated to the following decentralized activities:

- Soil erosion control
- Small scale irrigation
- Girinka, Artificial Insemination and diseases control
- Capacity building of farmers
- Drying grounds
- Feeder roads rehabilitation and maintenance.

Fiscal decentralization in agriculture sector has considerably been strengthened. Earmarked transfers have increased from 1,193,849,632 RWF in 2009/10 to 9,135,368,623 RWF in 2013/14.

SP4.5. Gender and youth

1. One Cup of Milk per Child Programme



School children enjoy milk distributed by One Cup of Milk per Child

Basic Information	Project cost:	1.5 billion RWF (Annual)
	Donor:	Government of Rwanda
	Government contribution:	100% Government funded
	Implementation starting date:	June 2012
	Scheduled Completion date:	N/A
	Eventual Extension:	Yes

Mission and Purpose	<p>One cup of milk per child has five key, complementary objectives:</p> <ol style="list-style-type: none"> 1. Reduce malnutrition in children 2. Support children's development and capacity to learn 3. Provide children with a balanced diet and instill good dietary practices 4. Reduce post-harvest losses in the dairy value chain 5. Develop the Rwandan dairy sector through increasing demand 																				
Achievements 2013-2014	<ul style="list-style-type: none"> • Currently 83, 012 pupils are on the program, and there is anecdotal evidence to suggest that there has been improvement in the health of the children benefiting the programme, as well as their consistency in attending classes. • The habit of milk drinking has been fostered in beneficiary families. In the areas where the programme is being implemented, it has been found that parents have experienced the goodness of taking milk and now they have started giving it to their children. • Dairy plants have benefited a lot from the programme. • For the monitoring procedures, RAB has started signing MoU with districts where the program is being implemented. Districts are now going to be fully involved in monitoring the activities, follow how pupils take milk, compile reports and send them to RAB and timely communicate to RAB some other problems that can occur at schools. • Inyange Industries Ltd was requested by RAB to design a new packaging material of UHT milk for school feeding and that was achieved. This new design will help reduce cases of stealing milk as their colour is very similar compared to what is taken to markets. • The following table summarizes the achievements of the programme in 2013/14: <table border="1" data-bbox="368 864 1372 1639"> <thead> <tr> <th>Outputs</th> <th>Baseline</th> <th>Annual target</th> <th>Achievements</th> </tr> </thead> <tbody> <tr> <td>Improve health of 100,000 children in 112 schools.</td> <td>85028 children</td> <td>84702 children</td> <td>- 83012 children benefited from one cup of milk program. - Efficient distribution of Milk in 112 schools throughout the year. - Awareness of taking milk in families.</td> </tr> <tr> <td>Ensuring the quality of milk distributed in 112 schools</td> <td></td> <td>- Distribute milk in 112 schools</td> <td>- Efficient distribution of Milk in 112 schools throughout the year and ensuring its quality.</td> </tr> <tr> <td>Monitoring and evaluation modalities</td> <td></td> <td></td> <td>- New monitoring tools (storecount templates, milk requisition form) were developed and distributed to schools - We have developed milk purchase order which helped as limit over/less supply at certain schools - RAB has signed an agreement (MoU) with Districts where the program is being implemented, of participating in monitoring of the program</td> </tr> <tr> <td>Milk Stores were evaluated</td> <td></td> <td>112 schools</td> <td>- On site training of teachers about stock management (recording, cleanliness).</td> </tr> </tbody> </table>	Outputs	Baseline	Annual target	Achievements	Improve health of 100,000 children in 112 schools.	85028 children	84702 children	- 83012 children benefited from one cup of milk program. - Efficient distribution of Milk in 112 schools throughout the year. - Awareness of taking milk in families.	Ensuring the quality of milk distributed in 112 schools		- Distribute milk in 112 schools	- Efficient distribution of Milk in 112 schools throughout the year and ensuring its quality.	Monitoring and evaluation modalities			- New monitoring tools (storecount templates, milk requisition form) were developed and distributed to schools - We have developed milk purchase order which helped as limit over/less supply at certain schools - RAB has signed an agreement (MoU) with Districts where the program is being implemented, of participating in monitoring of the program	Milk Stores were evaluated		112 schools	- On site training of teachers about stock management (recording, cleanliness).
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SP4.7. Nutrition and Household Vulnerability

The projects contributing to this sub programme include the One Cup of Milk per Child & One Cow per Poor Family (Girinka) projects. Kindly refer to the reports under Sub Programmes 4.5 and 1.6 respectively for more details.

SECTION 4: FINANCIAL YEAR 2013-2014 BUDGET ANALYSIS



4.1 Overall Budget Execution

The implementation of the 2013/14 budget was affected by several factors: Firstly, the lagged impact of delayed and reduced donor support disbursements in 2012 adversely affected economic activities and growth thereby reducing domestic revenue collection in fiscal year 2013/14. Secondly, capacity constraints experienced during the fiscal year led to a slowdown in the implementation of capital projects and lower draw-down of external project funds in the fiscal year 2013/14. Finally, the budget for the fiscal year assumed the implementation of select revenue measures to achieve their revenue objectives. Delayed implementation of some of these measures, together with lags in the accrual of additional revenue from them reduced domestic resource mobilization and Government spending (MINECOFIN, 2014).

The overall internal budget execution for MINAGRI is given below (Table 13). It should be noted that the ‘total budget’ represented in the table only captures MINAGRI’s own budget and internal government financing. This does not therefore capture the total financing in the agriculture sector, which also includes significant external financing for projects, other Ministry’s agricultural programs and off-budget development partner interventions.

Table 13: MINAGRI Internal Budget Execution FY 2013/14

S.No	Expenditure Classification	Allocation (RwF)	Execution (RwF)	Execution Rate (%)
1+2	TOTAL	34,389,460,226	40,834,299,889	118.74
1	RECURRENT	8,287,596,100	8,388,967,332	101.22
1.1	WAGES AND SALARIES	414,900,388	404,877,259	97.58
1.2	GOODS AND SERVICES	1,756,940,594	2,175,459,728	123.82
1.3	TRANSFERS	6,115,755,118	5,808,630,345	94.98
2	DOMESTIC CAPITAL	26,101,864,126	32,445,332,557	124.30

Source: MINAGRI

Agricultural production, mainly of food crops, grew by 3 percent in season B. Growth has slightly declined in season B because of the shortage of rainfall. The production of export crops, tea and coffee, generated 223 million USD in revenues. (NAEB, 2014) MINAGRI over-executed its budget for FY 2013/14 due to accepted overspending in the development budget. A considerable proportion of this over-expenditure was allocated to priority Crop Intensification (payment for pending invoices of fertilizers), Irrigation (GFI, PADAB and PAIRB) and the finalisation of Mukamira dairy; which are major priorities for agriculture sector development. The Crop Intensification Program (CIP), Government Funded Irrigation, PADAB, PAIRB and LISP projects initially received substantially less resources than planned but later in the financial year the program received additional transfers from the Ministry of Finance and Economic Planning. The overspending was approved according to due process by the Cabinet & MINECOFIN. Overspending in the recurrent budget was due to compensation made to farmers who had imported cows from Germany and Holland and returned them to MINAGRI. The budget over-execution highlights the demand for resources to achieve ambitious sector targets, which recognizes that agriculture is a pivotal driver of national economic growth and remains the primary source of employment for the majority of Rwanda’s population. Table 14 presents MINAGRI’s budget execution disaggregated according to the PSTA III programmes and sub-programmes.

Table 14: Budget Execution by PSTA III Programmes & Sub-Programmes

Programme/Sub Programme	Allocation (RwF)	Execution (RwF)	Execution Rate (%)
TOTAL	34,389,460,226	40,834,299,889	118.74
1 ADMINISTRATIVE AND SUPPORT SERVICES	7,116,354,755	7,223,733,866	101.51
1.1 ADMINISTRATIVE AND SUPPORT SERVICES:NAEB	1,147,816,011	1,147,816,011	100.00
1.2 ADMINISTRATION AND SUPPORT SERVICES RAB	4,441,949,839	4,378,241,111	98.57
1.3 ADMINISTRATION AND SUPPORT SERVICES:MINAGRI	1,526,588,905	1,697,676,744	111.21
2 AGRICULTURE AND ANIMAL RESOURCE INTENSIFICATION	19,200,095,912	23,460,342,636	122.19

2.1	SOIL CONSERVATION AND LAND HUSBANDRY	1,650,000,000	1,650,000,000	100.00
2.2	IRRIGATION AND WATER MANAGEMENT	5,550,000,000	6,250,421,801	112.62
2.3	AGRICULTURAL MECHANIZATION	600,000,000	600,000,000	100.00
2.4	AGROCHEMICAL USE AND MARKETS	7,700,000,000	11,274,591,493	146.42
2.5	LIVESTOCK DEVELOPMENT	2,170,095,912	2,156,636,309	99.38
2.6	NUTRITION AND HOUSEHOLD VULNERABILITY	1,510,000,000	1,508,862,768	99.92
2.7	SEED DEVELOPMENT	20,000,000	19,830,265	99.15
3	RESEARCH, TECHNOLOGICAL TRANSFER, ADVISORY SERVICES AND PROFESSIONALIZATION OF FARMERS	507,896,768	485,871,927	95.66
3.1	RESEARCH AND TECHNOLOGY TRANSFER	264,196,768	254,047,927	96.16
3.2	FARMER COOPERATIVES AND ORGANIZATIONS	187,700,000	186,324,000	99.27
3.3	EXTENSION AND PROXIMITY SERVICES FOR PRODUCERS	56,000,000	45,500,000	81.25
4	VALUE CHAIN DEVELOPMENT AND PRIVATE SECTOR INVESTMENT	6,956,677,245	9,041,179,754	129.96
4.1	CREATING AN ENVIRONMENT TO ATTRACT PRIVATE SECTOR INVESTMENT, ENTREPRENEURSHIP AND ACCESS TO MARKET	389,800,000	389,800,000	100.00
4.2	DEVELOPMENT OF PRIORITY VALUE CHAINS: FOOD CROPS	106,062,500	104,412,500	98.44
4.3	DEVELOPMENT OF PRIORITY VALUE CHAINS: EXPORT CROPS	1,624,141,496	1,624,141,496	100.00
4.4	DEVELOPMENT OF PRIORITY VALUE CHAINS: DAIRY MEAT AND FISH	13,650,000	13,551,059	99.28
4.5	INSPECTION AND CERTIFICATION	35,816,531	38,200,441	106.66
4.6	MARKET-ORIENTED INFRASTRUCTURE FOR POST-HARVEST MANAGEMENT SYSTEMS	4,787,206,718	6,871,074,258	143.53
5	INSTITUTIONAL DEVELOPMENT AND AGRICULTURAL CROSS-CUTTING ISSUES	608,435,546	623,171,706	102.42
5.1	INSTITUTIONAL CAPACITY BUILDING	3,494,152	2,090,911	59.84
5.2	DECENTRALIZATION	12,700,000	12,480,000	98.27
5.3	LEGAL AND REGULATORY FRAMEWORK	21,279,994	20,163,594	94.75
5.4	AGRICULTURAL STATISTICAL SYSTEMS MIS M and E AND KNOWLEDGE MANAGEMENT	561,671,214	579,507,015	103.18
5.5	CROSS CUTTING ISSUES IN AGRICULTURE	9,290,186	8,930,186	96.12

4.3 National Budget Allocation to Agriculture

Rwanda's second agricultural investment plan (ASIP-II) comprises of a clear prioritization of the sector's investment needs, funding modalities, and harmonization of stakeholder activities for efficient delivery and a stronger accountability mechanism. Having successfully implemented the first cycle of the Comprehensive Africa Agriculture Development Program (CAADP I) through PSTA II (2009/12), MINAGRI has embarked on the second cycle of CAADP through PSTA III to facilitate the development of Rwanda's agriculture, through an approach based on resource management, human capacity & value chains, and involvement of the private sector. The CAADP process monitors the national budgetary allocation to agriculture (among other indicators) wherein

the classification of 'agriculture' incorporates a broader classification, inclusive of crops, livestock, fisheries and forestry, following the United Nations Classification of the Functions of Government (COFOG). Under the COFOG classification the annual average budgetary allocation to agriculture, as stated in the Public Expenditure Review (2010 & 2013) for Rwanda, exceeded the 10% threshold.

Table 15: National Budgetary Allocation to MINAGRI (US \$ '000s)

Institution	2009/10	2010/11	2011/12	2012/13	2013/14
1. MINAGRI & affiliated agencies + 3 SPIUs	54,848	63,360	64,116	79,158	103,935
Total national budget	1,166,090	1,427,235	1,592,100	2,066,395	2,284,910
Budgetary resources allocated MINAGRI & its agencies as % of National budget	4.7%	4.4%	4.0%	3.8%	4.5%

Source: Agricultural Public Expenditure Review (MINI-PER)

The total agriculture budget was 103.9 million USD an increase of 24.78 million USD from 2012-2013. This represents the government's continued commitment to rural development more broadly, including rural feeder roads, and the drive to increase agricultural productivity. This occurred despite a constrained budgetary environment, and illustrates government prioritization of the agricultural sector in a resource constrained environment. It is hoped this rising trend will continue to facilitate the implementation of PSTA III. Agriculture is a vital sector for the economy, as a driver of both growth and poverty reduction. However, resource constraints and decreased availability of donor funding also justify the importance of mobilizing private sector investment.

4.4 Internal and External Projects

Annexes 2.1 and 2.2 illustrate in detail project level execution of externally and internally funded projects respectively.

4.5 Budgetary Decentralization

Fiscal decentralization is a relatively recent strategic approach in Rwanda, and the increasing trend of decentralized expenditure is expected to continue rising as the capacity for absorption grows at the District level. The EU is the main partner in supporting decentralization in the agriculture sector. The EU Sector Budget Support for Decentralized Agriculture programme comprises of fixed and variable tranches amounted respectively to 20.6 million Euros and 19 million Euros over seven years. The grant allocation formula accounts for the population, cultivated area, poverty incidence and performance of a district. Within each programme or sub-programme the allocation is weighted according to the importance of each activity. Decentralised transfers support the first three programmes of PSTA III and their respective sub-programmes. These include:

- Program 1: Agriculture and Animal Resource Intensification
- Program 2: Research and Technology Transfer, Advisory Services and Professionalisation of Farmers
- Program 3: Value Chain Development and Private Sector Investment

Program 4, i.e. 'Institutional Development and Agricultural Cross-Cutting Issues' is not included in District level budget expenditure as it is implemented at central MINAGRI level.

Table 16: Decentralized Budget Transfers (Funds already disbursed by the EU)

DISBURSEMENT TRANCHES		
F/Y	EURO	RWF
2009/10	4,000,000.00	2,858,318,800.00
2010/11	4,991,792.80	4,086,119,353.00
2011/12	6,500,000.00	5,483,007,403.00
2012/13	6,100,000.00	4,872,091,960.00
2013/14	6,000,000.00 + 6,000,000 (Feeder Roads)	5,257,824,000.00 + 5,441,701,200 (Feeder Roads)
Total disbursed	33,591,792.80	27,999,062,716.00

The budget execution of decentralized transfers disaggregated across districts and sub-programmes have been presented in Annex 3. The total district level budget was 5,027,052,080 Rwf in 2013/14 with the execution rate of 97%. Funds already disbursed by the EU in this regard are detailed in Table 16.

SECTION 5: CHALLENGES FROM FY 2013-2014 AND PRIORITIES FOR FY 2014-2015



5.1 Challenges faced in FY 2013/14

Based on the analysis of MINAGRI implementation in FY 2013-2014, below are some **key challenges** faced by the sector in the last financial year:

1. *Over execution of the budget (at 118.74% for the total budget) is a concern as it represents the need for further resources to meet the high level priorities of the Ministry. The financing gap for key projects such as irrigation is a challenge in light of the Government of Rwanda Seven Year Plan and Vision 2020 targets, which requires substantial increases in expensive interventions including irrigated land.*
2. *Leveraging private sector investment remains a challenge. The public sector alone cannot achieve the ambitious targets set, even with development partner support. MINAGRI must continue to focus on attracting private sector investors, creating a market for growth and removing barriers to market efficiency. This is particularly important to ensure sustainability of different agricultural programmes.*
3. *MINAGRI must continue to engage with the ASWG and all sector actors on vital strategic issues, particularly malnutrition. NGOs are an important part of the agricultural forum and collaboration must be increased to facilitate effective and accountable actions in the development process.*
4. *Capacity gaps persist at all delivery levels and in all processes including planning and implementation. The SCBI has started well and contributed to building capacity in key strategic areas, but capacity building efforts need to be more uniformly adopted and the model expanded. After the plan is validated, training and other actions will begin to close capacity and knowledge gaps.*
5. *Decentralised delivery is a challenge because it is still at an early stage in Rwanda, and local government does not have the necessary systems to efficiently execute budget and programmes at the district, sector and cell level. MINAGRI is working to counter this, with support from the EU, and the decentralisation of responsibilities such as the Girinka programme and animal health will help build local skills and implementation networks.*
6. *To better implement EDPRS II interventions with implications beyond the agricultural sector, and to leverage integrated private sector investment MINAGRI must improve its coordination with other relevant institutions, particularly RDB, MINECOFIN, MININFRA, MINALOC and MINICOM.*
7. *Knowledge management within the Ministry could be improved to ensure better sharing of plans, results and best practices. M and E systems require extensive labour and travel to ensure figures are accurate. An online Management Information System (MIS) and shared server which is being introduced would allow information to be shared more easily and better and more timely tracking of data.*

The 2014-2015 financial year is an opportunity to overcome these challenges with the continued implementation of PSTA III. This is also an exciting time for the sector as we move towards a new model of financing and investment, focused on the private sector.

5.2 Strategic Priorities for 2014-2015

Table 17: Key Priorities for FY 2014/15

Priorities for FY 2014/15	Projects & Programs	Sub-Programme of PSTA III	Relation to EDPRS II
1. Irrigation & Soil Conservation	1. GFI 2. RSSP (C.P) 3. LWH (C.P) 4. PAIRB (C.P) 5. KWAMP (C.P) 6. ETI	1.1, 1.2	Increase sustainably agricultural productivity & mitigate production risks - reduce dependence on rain-fed agricultural productivity and help hedge against climactic variability

2. Crop Intensification & Extension	1. Crop Intensification Program 2. Mechanization Programme	1.4, 1.3, 2.1, 2.2	Food security and increased productivity – farmer extension, together with research and distribution of inputs, integrated with mechanization/ modernization of farming techniques
3. Post-Harvest Handling and Storage Activities, Feeder Road Management & Strategic Grain Reserve	1. NSR 2. PASP	3.9	Improving quality of marketable produce for consumption and income-generation, securing national reserves which increases food security . Also leveraging private sector investment through improved quality of goods and market access.
4. Livestock Infrastructure & Development	1. One-Cow Program 2. One-Cup of Milk 3. LISP 4. LIP 5. Integrated cattle and goat production and fattening project	1.6, 3.9, 1.7	Quality and quantity enhancement of animal resource products and marketing for income generation and food and nutritional benefits
5. Export and Value-Added Promotion for Traditional and Non-Traditional Products	Totals 1. Improving Coffee Productivity 2. Commodity Chain Development 3. Flower Park Construction 4. Kigali Wholesale Market 5. Tea expansion project 6. Development of new agric export chains 7. Increasing pyrethrum productivity	3.3, 3.5, 3.9	Export revenues and growth, private sector engagement, income-generation and malnutrition reduction through diversified production, and penetrating new export markets
6. Research Improvements & Dissemination	1. SPAT II (C.P) 2. Gene bank 3. RAPP (Rwanda Agriculture Productivity Project)	2.3, 2.2, 2.1, 1.5	Innovation to improve productivity with improved links to farmer extension, driving up incomes .

Annex 1: Sector Indicators Matrix

	Sector Outcome	Indicator	Baseline	Targets	Achievement
				2013/14	2013/2014

1	Increased sustainably agriculture productivity	Yield (MT/ha/year) of priority crops.	Maize: 2.45 Wheat: 1.8 Rice: 4.85 Bush Beans: 0.65 Climbing beans: 1.7 Irish Potato: 14 Soybeans: 0.63 Cassava: 12.3 Milk production per cow(in liters) Coffee yield(Kg of cherry/tree/year)	Maize: 4 Wheat: 3 Rice: 5.0 Bush Beans: 1.2 Climbing Beans: 3.0 Irish Potato: 20 Soybeans: 1.8 Cassava: 18 Milk: 4.5 Coffee: 2.3	Maize: 2 Wheat: 2.038 Rice: 5.4 Bush Beans: 0.5 Climbing Beans:1.2 Irish Potato: 13 Soybeans: 0.66 Cassava: 16.3 Milk: 5 Coffee: 2.4
2	Increased sustainably animal resources productivity	Proportion of animal protein production in total of recommended "safe" protein consumption	14.2	16	16.7
3	Increased household food security and nutrition	Percentage of households that reach acceptable food consumption standards (FCS))	79	80.2	To be provided by CFSVA in next year
4	Transformed agriculture through research and extension services.	Ratio of extension workers per farmer household	1/839	1/500	1/500
		Proportion of Farmer Households adopting new introduced technologies	20%	25%	27%
5	Enhanced agribusiness environment for agricultural enterprises.	Increased cash crops commodities revenues (%):	Coffee: 5% (2012) Tea: 7% (2012) Pyrethrum: 16% (2012)	14%/year coffee 15%/year tea 20%/year pyrethrum 60%/year horticulture	-31%/year coffee -16%/year tea -56%/year pyrethrum 40%/year horticulture
		Increase in agricultural finance lending for agriculture sector (production and agroprocessing) (% of total)	3.60%	4.70%	6.10%
6	Improved post harvest management and agro processing promotion	% of post harvest losses reduced	22% for maize (2012) 15% for rice (2012) 26.03% for wheat (2013 A)	13% (maize); 12.6% (rice); 20% (wheat);	10.4(maize); 8.3 %(rice); 14.8% (wheat);
7	Developed institutional capacity and	Updated gender sensitive MIS Framework	No operational MIS Framework	Draft M&E Framework	Draft M&E Framework is available

mainstreamed Crosscutting issues	Agricultural policy reforms:Approval of seeds,fertilizer policies and agri- finance strategy	Seeds None exists,Fertiliser initial draft exists and Agri-Finance none exist	Approval of Seeds, Fertilizer and Ag. Finance Policy, and preparation and initial implementation of action plan	Approved Action Plans for seeds and Fertilizer and implementation has already started; Agri- finance strategy approved
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Annex 2.1: Execution of On-Budget Externally Financed Projects

NAME OF PROJECT	PLANNED TIMEFRAME		SOUR CE OF FUND ING I.E. SPEC IFIC DEVE LOP MEN T PART NER	TYPE OF FUND ING I.E. LOA N/GR ANT	TOT AL PRO JEC T BUD GET (A) RW F	CUM ULAT IVE AMO UNT DISB URSE D BY END 2013/1 4 (B)	AM OU NT BU DG ET ED IN 201 3/14 (C)	AC TU AL AM OU NT EX EC UT ED IN 201 3/14 (R WF) (D)	201 3/14 % EX EC UT ION RA TE (D/ C) %	PR OJ EC T CU MU LA TIV E EX EC UT ION RA TE (B/ A) %
KWAMP (KIREHE COMMUNITY-BASED WATERSHED MANAGEMENT PROJECT)	30/04/20 09	30/06/20 16	IFAD & GOR	LOAN & GRA NT	41,53 7,613 ,533	27,368 ,187,0 21	6,35 4,68 8,00 0	6,18 2,69 7,26 2	97.2 9	65.8 9
PRICE (PROJECT FOR RURAL INCOME THROUGH EXPORTS)	26/02/20 12	31/12/20 18	IFAD & GOR	LOAN & GRA NT	33,65 7,000 ,000	9,943, 539,74 6	5,10 7,71 3,54 3	5,62 3,92 4,07 7	110. 11	29.5 4
PASP (POST-HARVEST AND AGRIBUSINESS PROJECT)	28/03/20 14	31/03/20 19	IFAD & GOR	LOAN & GRA NT	57,09 5,051 ,400	687,72 3,794	151, 877, 000	24,1 24,6 84	15.8 8	1.20
BUGESERA NATURAL REGION RURAL INFRASTRUCTURE SUPPORT PROJECT (PAIRB) MULTINATIONAL PROJECT (RWANDA & BURUNDI)	16/10/20 09	31/12/20 15	AFDB & GOR	GRA NT	14,98 0,000	4,558, 360	2,44 4,61 7,42 8	1,07 5,16 5,52 2	43.9 8	30.4 3
LISP	29/06/20 11	31/12/20 15	AFDB ,GOR & OTHE R FINA NCIE RS	LOAN	46,47 1,000 ,000	8,217, 790,00 1	4,84 4,00 8,15 0	3,58 8,57 5,91 3	74.0 8	17.6 8

RSSP III (RURAL SUPPORT SECTOR PROJECT)	20/06/2012	30/10/2017	WB & GOR	LOAN & GRANT	51,000,000	23,857,238,120	14,471,308,482	13,652,318,341	94	47
LWH (LAND HUSBANDRY, WATER HARVESTING AND HILLSIDE IRRIGATION PROJECT)	2010/2011	2017/2018	GAFSP, WB, CIDA, USAID & GOR	LOAN & GRANT	88,242,362,600	42,539,338,914	19,130,976,896	17,271,742,456	90	48
SUPPORT TO SPAT II/MINAGRI	01-JUL-11	30-JUN-16	THE KINGDOM OF BELGIUM	GRANT	18,000,000	11,591,201	4,142,941,567	4,223,542,995	101.95	64.40

*Total Budget for LISP including finances yet to be mobilized:50,000,000 UA=

[(38,000,000U.A=/Donors' amount=21,810,000 U.A from ADB+16,190,000 U.A from other co-financing partners not yet found)+12,000,000 UA from GoR]

**1 USD=689.1779 RWF on 30.09.14

Annex 2.2: Execution of On-Budget Domestically Financed Projects

MINAGRI CENTRAL

	PROJECT	APPROVED	COMMITTED	BALANCE	EXEC .%
2316	GISHWATI LAND AND WATER MANAGEMENT (GLWM)	1,500,000,000	1,500,000,000	0	100
2311	IMMEDIATE ACTION IRRIGATION PROJECT (GFI)	4,600,000,000	5,052,434,758	452,434,758	110
2315	AGRICULTURAL MECHANISATION PROGRAMME	600,000,000	600,000,000	0	100
2316	PRIORITY CROPS INTENSIFICATION (INCLUDING FERTIZER IMPORTS)	6,200,000,000	8,558,880,834	2,358,880,834	138
2315	LISP (OTHER SPECIALIZED EQUIPMENT)	750,000,000	1,727,200,000	977,200,000	230
2316	LISP (OTHER CULTIVATED ASSETS)	1,690,000,000	3,666,020,780	1,976,020,780	217
2321	STRATEGIC STOCKS	1,377,853,478	1,377,853,478	0	100
	SUB TOTAL	16,717,853,478	22,482,389,850	5,764,536,372	134
	PROJECTS COUNTER PART FUNDING				
2642	LAND HUSBANDRY HILLSIDE IRRIGATION AND WATER (LWH)	150,000,000	150,000,000	0	100
2642	RURAL SECTOR SUPPORT PROJECT (RSSP)	350,000,000	350,000,000	0	100
2642	PROJET D'APPUI AU DEVELOPPEMENT AGRICOLE DE BUGESERA (PADAB)	334,353,899	482,353,899	148,000,000	144
2642	PROJET D'APPUI AUX INFRASTRUCTURES RURALES DE LA(PAIRB)	50,000,000	115,633,144	65,633,144	231
2642	KIREHE WATERSHED MANAGEMENT PROJECT (KWAMP)	250,000,000	250,000,000	0	100

2642	SPAT II	160,000,000	160,000,000	0	100
2316	SERICULTURE	100,000,000	100,000,000	0	100
2642	PROJECT FOR RURAL INCOME THROUGH EXPORTS (PRICE)	150,000,000	150,000,000	0	100
	SUB TOTAL	1,544,353,899	1,757,987,043	- 213,633,144	114
	TOTAL DEVELOPMENT BUDGET	18,262,207,377	24,240,376,893	- 5,764,536,372	133

Notes:

- Development Budget Figures from 01/07/2013 to 30/06/2014
- Priority Crops Intensification: In order to pay the pending invoices of fertilizers, MINECOFIN authorised an overspending of 2 358 880 834 Rwf, instead of spending 6 200 000 000 Rwf budgeted for, we spent a total amount of 8 558 880 834 Rwf where the budget execution increased up to 138 %.
- IMMEDIATE ACTION IRRIGATION PROJECT (GFI) : Budget execution increased up to 110 because MIECOFIN authorised an overspending of 452,434,758 frws.
- LISP : Budget execution increased up to 221% because MINECOFIN authorised an overspending of 2 ,953,220,780 frws
- PADAB : Budget execution increased up to 144 % because MINECOFIN authorised an overspending of 148,000,000 frws;
- PAIRB : Budget execution increased up to 231% because MINECOFIN authorised an overspending of 65,633,144 frws;

RWANDA AGRICULTURAL BOARD (RAB)

2013 -14 GOR PROGRESS BUDGET EXECUTION BY COMMITMENTS (30 JUNE 2014)					
DESCRIPTION	APPROVED BUDGET AMOUNT	EXECUTION AMOUNT	CURRENT COMMITMENTS (OP FOR PAYMENT AT OT, PENDING COMMITMENTS)	BUDGET BALANCE	CURRENT EXECUTION RATE %
1. DEVELOPMENT BUDGET	5,146,965,912	5,136,874,498	11,721,617	-1,630,203	99.80
BANANA PROGRAM	100,000,000	98,350,000		1,650,000	98.35
GENETIC IMPROVEMENT	500,000,000	476,916,054		23,083,946	95.38
POULTRY DEVELOPMENT	178,902,734	157,852,709		21,050,025	88.23
ONE CUP OF MILK PER CHILD	1,500,000,000	1,499,579,633		420,367	99.97
ONE COW PER POOR FAMILY	1,168,063,178	1,211,302,719	5,075,000	-48,314,541	103.70
SUPPORT TO RESEARCH	200,000,000	192,873,383	6,646,617	480,000	96.44
PRIORITY CROPS INTENSIFICATION (INCLUDING FERTILIZERS IMPORTS)	1,500,000,000	1,500,000,000		0	100.00

NATIONAL AGRICULTURAL EXPORT BOARD

PROGRAMME/ SUB-PROGRAMME/PROJECT	Annual budget	Realization as on 30/06/2014	Execution rate
DEVELOPMENT BUDGET in Rwf	1,857,691,496	1,651,354,786	88.89
FLOWER PARK CONSTRUCTION	389,800,000	389,800,000	100.00
IMPROVING COFFEE PRODUCTION, PRODUCTIVITY AND QUALITY	245,000,000	245,000,000	100.00
COMMODITY CHAIN PROGRAMME (HORTICULTURE INTENSIFICATION)	372,891,496	372,891,496	100.00
TEA EXPANSION PROJECT	750,000,000	575,132,867	76.68
KIGALI WHOLESALS MARKET	100,000,000	68,530,423	68.53

Annex 3: Budget Execution Disaggregated by District & Sub-Programme

BUDGET	COMMITMENT	PAYMENT	%
NGOMA	159,959,370	159,959,370	100
Construction of maize drying ground	13,544,851	13,544,851	100
Creation of Agribusiness modal fruit production centers	37,651,144	37,651,144	100
Veterinary Salaries	21,055,944	21,055,944	100
Afforestation project	25,910,694	25,910,694	100
Promotion of famers organization and capacity building	10,018,752	10,018,752	100
Livestock projects	51,777,985	51,777,985	100
BUGESERA	123,615,803	117,660,818	95
Veterinary services support project	23,819,940	17,864,955	75
Constriction of drying grounds in Rweru sector	12,090,000	12,090,000	100
Small scale irrigation in Juru sector, Mareba sector ,Mayange sector Mwogo sector	28,834,644	28,834,644	100
Farmers organisation and capacity building of producers project	6,019,403	6,019,403	100
Integrated system of intesive agricultural and livestock production project	52,851,816	52,851,816	100
GATSIBO	108,211,802	108,211,802	100
Installation of electricity in veterinary lab	1,860,000	1,860,000	100
Veterinary services support project	21,055,944	21,055,944	100
Construction of water ponds	23,976,368	23,976,368	100
Girinka Programme	37,000,000	37,000,000	100
Animal disease contral	8,000,000	8,000,000	100
Artificial insemination	5,301,970	5,301,970	100
Construction drying ground	11,017,520	11,017,520	100
KAYONZA	117,279,103	117,279,103	100
Market oriented rural infrastrucure project	13,245,205	13,245,205	100
Veterinary services support project	20,400,000	20,400,000	100
Integrated system of intensive agricultural and livestock production project	47,809,053	47,809,053	100

Irrigation development project	28,855,626	28,855,626	100
Farmers organisation and capacity building of producers project	6,969,219	6,969,219	100
KIREHE	87,212,473	87,212,473	100
Market oriented rural infrastructure project	12,631,320	12,631,320	100
Veterinary Services Support Project	19,977,492	19,977,492	100
Integrated system of intensive agricultural and livestock production project	44,433,381	44,566,608	100
Farmers organizations and capacity building of producers project	10,170,280	10,037,053	99
NYAGATARE	196,548,063	190,934,818	97
Supply of Damsheets	34,520,176	34,520,176	100
Salary veterinaries	21,800,000	16,186,755	74
PROGRESSIVES TERRACES 400 Ha	67,807,375	67,807,375	100
Drying ground in Karama Sector	12,889,758	12,889,758	100
Girinka Program	40,600,000	40,600,000	100
Insemination	3,500,000	3,500,000	100
Vaccination	8,279,447	8,279,447	100
Capacity building of farmers and producers	7,151,307	7,151,307	100
RWAMAGANA	136,949,127	136,949,127	100
Market oriented rural infrastructure project	11,107,319	11,107,319	100
Installation of one green house in Kitazigurwa IDP economic development activities.	2,790,000	2,790,000	100
Construction of Ha 125 of progressive terraces in Kangabo and Gishike in Munyaga Sector	32,287,713	32,287,713	100
Veterinary services support project	21,055,944	21,055,944	100
Integrated system of intensive agricultural and livestock production project	38,586,304	38,586,304	100
Irrigation development project	24,631,081	24,631,081	100
Farmers organizations and capacity building of producers project	6,490,766	6,490,766	100
HUYE	189,793,995	189,793,995	100
Construction of Gishamvu livestock market	26,175,236	26,175,236	100
Veterinary Services Support Project	21,055,944	21,055,944	100
Maraba Coffee Intensification Project	33,083,277	33,083,277	100

Integrated system of intensive agricultural and livestock production project	60,990,468	60,990,468	100
Farmers organizations and capacity building of producers project	5,598,887	5,598,887	100
Market oriented rural infrastructure project	8,923,244	8,923,244	100
Construction of progressive terraces	33,966,939	33,966,939	100
NYAMAGABE	145,102,702	145,102,702	100
Livestock Vaccination and Insemination	4,081,175	4,081,175	100
Purchase and Distribution of Cows (girinka program)	38,841,773	35,841,773	92
Capacity building of Farmers	8,870,299	8,870,299	100
Payment of Salaries to Livestock Officers (sectors)	20,400,000	20,400,000	100
Construction of Kaduha Cassava Drying Grounds	11,158,980	11,158,980	100
Development and Valorisation of Radical terraces (30 ha) in musange sector	15,750,475	15,750,475	100
Development and Valorisation of Radical terraces (25 ha)in mugano	9,333,333	12,333,333	132
Development and Valorisation of Radical terraces (30 ha)in kibilizi	6,666,667	6,666,667	100
Development and Valorisationof Radical/progressive terraces (20 ha) in kageri sector	30,000,000	30,000,000	100
GISAGARA	301,878,549	301,878,549	100
Support farmers to improve banana crop	12,000,000	30,576,189	255
Support the implimentation of banana production processing unit	20,000,000	20,000,000	100
Increase of land use under coffee plantations	92,880,944	74,304,755	80
Development of 100 ha of radical terraces and its valorisation at Nyanza, Mugombwa, Muganza and Save Sectors (including pig breeding for organic fumure)	79,779,777	79,779,777	100
Increase land use consolidation scale for cassava, beans, rice and maize crops	7,545,000	7,195,000	95
Veterinary services support project	31,252,600	26,602,600	85
Farmers organizations and capacity building of producers project (including input use promotion, training, viodeos for farmers mobilization, preservation parcels for ecosystem purpose etc)	10,784,418	15,784,418	146
Construction of maize drying ground at kigembe sector	14,274,093	14,274,093	100
Development of progressive terraces 110 ha in Kigembe, Gishubi, Nyanza,Muganza and Mugombwa	33,361,717	33,361,717	100
MUHANGA	110,652,603	110,652,603	100
Remuneration of Veterinary Sectors	27,146,592	27,146,592	100

Increase Post harvest facilities	10,126,011	10,126,011	100
MUHANGA: Construction of 30 Ha radical Terracing and Road Gaseke-Nyahinda	0		
Insemination of Cow	7,000,000	7,000,000	100
Vaccination	6,860,000	6,860,000	100
Purchase Cow for Girinka Program	39,060,000	39,060,000	100
IDP Model Gasave: Purchasing of cows (PW)	20,460,000	20,460,000	100
KAMONYI	108,447,118	126,218,695	116
Study of Construction of 1 hide and skins collection and treatment plant	7,000,000	7,000,000	100
Construction of 1 maize drying ground in Mugina Sector	7,731,503	5,731,503	74
Construction of 15 dams (Gacurabwenge & Rukoma)	17,098,650	33,535,745	196
Veterinary staff salaries	19,554,952	22,889,452	117
Soil control by Constructing/establishment progressive terraces (200ha) in Musambira Sector	28,009,214	28,009,196	100
Development of mechanization center by purchasing 2 tractors	14,071,857	14,071,857	100
Vaccination	5,680,942	5,680,942	100
Provide 40 cows to vulnerable households	9,300,000	9,300,000	100
NYANZA	99,461,608	99,461,608	100
Veterinary services support project	15,039,960	15,039,960	100
Construction of maize drying ground in Karama at cyabakamyi sector	8,438,546	39,041,034	463
Purchase of 100 cows in Girinka program	35,340,000	9,931,658	28
Completion of intansification of Banana project in Busoro, Muyira, Ntyazo and Busasamana Sector on	19,800,000	22,000,000	111
Unused land alluviated by intansification	11,396,882	4,002,736	35
Construct drying ground in Mukingo (Busogwe) Sectors	9,446,220	9,446,220	100
NYARUGURU	213,904,612	213,904,612	100
Construction of Ndago livestock market	32,075,199	32,075,199	100
Support veterinary services project	21,055,944	21,055,944	100
Construction of progressive terraces	27,591,975	27,591,975	100
Integrated system of intensive agricultural and livestock production project	14,760,295	14,760,295	100
Farmers organisations and capacity building of producers	22,676,142	22,676,142	100

Construction of Wheat drying ground in Muganza Sector	15,000,000	15,000,000	100
Progressive terraces and agro - forestry trees plantation in Ngera sector	9,524,817	9,524,817	100
Purchase of 200 cows through Girinka program	71,220,240	71,220,240	100
RUSIZI	205,387,057	205,387,057	100
Completion of Giheke Diary construction	13,950,000	13,950,000	100
Rehabilitation of Kamembe Slaughterhouse	4,650,000	4,650,000	100
Construction of Shara Drying ground in Muganza Sector	9,300,000	9,300,000	100
Veterinary services support project	21,600,000	21,600,000	100
Ubudehe Livestock Projects	99,090,343	99,090,343	100
Integrated system of intensive agricultural and livestock production project	46,046,134	46,046,134	100
Farmers organisation and capacity building of producers project	10,750,580	10,750,580	100
NYABIHU	186,862,958	186,862,958	100
Veterinary services support project	18,047,952	18,047,952	100
Construction of selling points for staple crops products in Gashyushya (Rugera) & Rubaya (Mukamira)	28,504,394	28,504,394	100
Construction of 35 ha of radical terraces in Mulinga Sector	26,603,050	26,603,050	100
Construction of 250ha of progress terraces in Bigogwe, Shyira, Jomba and Rurembo VUP sectors	47,246,348	47,246,348	100
Farmers organizations and capacity building of producers project (Farmers competition, training of agro-facilitators)	6,911,863	6,911,863	100
Integrated system of intensive agricultural and livestock production project (Animal genetic improvement, animal feeding, animal disease and control, cow on GIRINKA Programm)	46,553,285	46,553,285	100
Construction of dry ground in SHYIRA sector+Expropriation	12,996,066	12,996,066	100
RUBAVU	237,928,267	237,928,267	100
Construction of vegetable selling point in Nyakiliba sector	45,238,356	45,238,356	100
Construction of 400 ha progressive terraces in Kanama sector	38,600,000	38,600,000	100
Pay contractual personnel(terrassing)	7,286,150	7,286,150	100
Integrated system of intensive agricultural and livestock production project	50,389,222	50,389,222	100
Veterinary Services Support Project	13,896,000	13,896,000	100

Farmers organizations and capacity building of producers project (including input use promotion, training, viodeos for farmers mobilization, preservation parcels for ecosystem purpose etc)	4,947,795	4,947,795	100
Irrigation development project	9,018,244	9,018,244	100
Market oriented infrastructures project	13,427,306	13,427,306	100
Kabagali livestock market construction	46,177,500	46,177,500	100
Construction of vegetable selling point in Nyakiliba sector	8,947,694	8,947,694	100
Construction of workshop handcraft center in Gisenyi Sector (Agakiriro)	0		
KARONGI	351,620,041	350,698,385	100
GIRINKA Program (Purchase of 120 cows and veterinary drugs)	57,798,218	92,012,432	159
Banana Field School at Bwishyura, Mubuga, Gishyita, Gashari, Murambi Sectors: 150 ha	143,000,000	142,078,344	99
Valorization of bench terraces at Rwankuba, Ruganda, Mutuntu, Gitesi, Gishyita, Murundi, Gashari: 300 ha	51,922,158	51,922,158	100
Purchase and distribution of 1500 improved pigs (Murundi, Murambi, Gashari and Ruganda)	68,428,428	34,214,214	50
Farmers organizations and capacity building of producers project	4,957,079	4,957,079	100
Veterinary services support project	15,600,000	15,600,000	100
Market oriented rural infrastructure project (ubwanikiro)	9,914,158	9,914,158	100
NGORORERO	314,002,247	314,002,247	100
Create 200 Ha of radical terraces and make them productive (gatumba,ngorororero,hindiro,matyazo)	175,585,858	175,585,858	100
Market oriented rural infrastructure project	13,052,409	13,052,409	100
Purchase and distribute 350 cows to poor families	106,000,000	106,000,000	100
Veterinary Services Support Project	19,363,980	19,363,980	100
NYAMASHEKE	184,646,277	182,925,293	99
Veterinary services support project	22,559,943	20,838,959	92
Construct Radical Terraces in VUP Sectors (25 ha in Cyato Sector, 30 ha in Rangiro Sector and 40 ha in Kirimbi Sector)	15,189,473	15,189,473	100
Viabalisation of Radical Terraces in VUP Sectors (Kirimbi 40 ha, Rangiro 30 ha and Cyato 25 ha).	55,000,000	78,250,000	142
Anti-Erosive Ditches in VUP Sectors (Gihombo 45ha and Nyabitekeri 45ha)	33,500,000	33,500,000	100
Integrated system of intesive agricultural and livestock production project	50,676,393	27,426,393	54

Farmers organisation and capacity building of producers project	7,720,468	7,720,468	100
RUTSIRO	191,917,812	191,917,798	100
Completion of Construction of Congo Nil slaughter house	11,160,000	11,160,000	100
Construction of a Dry Ground in Musasa Sector	12,928,344	12,928,330	100
Production improvement Project (Banana promotion 52 ha) in non VUP sectors	29,764,033	29,764,033	100
Production improvement in Radical terrasses (10ha)/Mushubati	7,440,000	7,440,000	100
Production improvement(Banana promotion 38ha) in Kivumu and Mushubati sectors	49,915,937	49,915,937	100
Livestock production project (90 Cows and veterinary services)	80,709,498	80,709,498	100
BURERA	104,143,156	96,459,178	93
Drying ground facilities construction	13,267,539	13,267,539	100
Veterinary services support project(Veterinary salaries)	25,567,932	17,883,954	70
Support to Girinka program	44,012,767	44,012,767	100
Livestock improvement activities	10,525,364	10,525,364	100
Farmers organizations and capacity building of producers project	9,653,554	9,653,554	100
Food supplies for TIGISTS in constructing terrces in Bungwe sector	1,116,000	1,116,000	100
GICUMBI	375,499,465	224,524,232	60
Drying ground Muko construction (MINAGRI)	12,175,169	12,175,169	100
Byumba Slaughterhouse phase 2	1,039,209	2,078,418	200
Mukarange Livestock Market	7,021,115		-
Construction and retaining walls of Rukomo Veternary laboratory	7,638,032	4,000,000	52
Salaries of sectors veterinaries (MINAGRI)	31,200,000	29,736,787	95
Training and study tours of sectors and cells agronomists (MINAGRI)	8,903,093	6,000,000	67
Artificial insemination (MINAGRI)	6,000,000	15,616,084	260
Vaccination (MINAGRI)	9,616,084		-
Girinka Programme (MINAGRI)	36,650,176	36,650,176	100
Radical terraces construction on 160 ha in MUKO , Giti and Rubaya Sectors (PW)	248,673,514	111,684,525	45
Construction of retaining walls of Rubaya seeds bank (Pw)	6,583,073	6,583,073	100
MUSANZE	68,624,750	68,624,750	100

Establish crop demonstration plots	3,219,750	3,219,750	100
Purchase planting materials and other agricultural inputs	14,420,000	14,420,000	100
Support veterinary activities	50,985,000	50,985,000	100
RULINDO	120,036,577	106,089,111	88
Promotion of famers organization and capacity Building	6,705,239	6,705,239	100
Veterinary services support (salaries of veterinarians) (MINAGRI)	25,567,932	11,635,003	46
Radical terracing (25ha) along Bahimba Mashland in MBONGO/BAHIMBA	45,167,931	45,167,931	100
Supply of differents crops (Casava,Coffee, Banana and Fruits Trees)	42,595,475	42,580,938	100
GAKENKE	190,268,003	190,968,003	100
Study ,construction and supervision of slaughther house	47,200,000	47,200,000	100
Veterinary services support project	28,800,000	29,500,000	102
Promotion of commerce agricurture for export (Coffee plantations extension in Muhondo,Rushashi,Minazi, Ruli and coko sectors (on 500HA (Phase I).	40,824,000	40,824,000	100
Integrated system of intensive agricultural and livestock production project	49,345,634	49,345,634	100
Farmers organizations and capacity building of producers project	11,632,234	11,632,234	100
Market oriented rural infrastructure project (drying ground)	12,466,135	12,466,135	100
RUHANGO	163,071,231	192,121,231	118
Construction of Ruhango slaughter house	91,011,121	91,011,121	100
Veterinary services support project(Veterinary salaries)	13,535,964	13,535,964	100
Operationalization of Kabagali pineapple plant machinery	18,950,000	10,000,000	53
Artificial insemination	5,400,000	5,400,000	100
Disease control (vaccination)	7,921,287	2,521,287	32
Girinka Program	0	40,000,000	
Farmers organizations and capacity building of producers project	12,142,605	20,808,432	171
Construction of Maize drying ground in Bweramana Sector	7,394,000	4,478,713	61
Construction of Greenhouses in Ruhango and Byimana Sectors	6,716,254	4,365,714	65
NYARUGENGE	59,291,429	59,291,429	100
Veterinary services support project	12,000,000	12,000,000	100
Integrated system of intensive agricultural and livestock production project	29,068,492	29,068,492	100

Farmers organizations and capacity building of producers project	8,199,319	8,199,319	100
Project development of high value non traditional export products	10,023,618	10,023,618	100
KICUKIRO	59,321,044	59,321,044	100
Veterinary services support project	12,000,000	12,000,000	100
Farmers organizations and capacity building of producers project	6,913,200	6,913,200	100
Integrated system of intensive agricultural and livestock production project	30,591,081	30,591,081	100
Project development of high value non traditional export products	9,816,763	9,816,763	100
GASABO	115,414,838	115,414,838	100
Veterinary services support Project	22,559,928	22,559,928	100
Farmers organizations and capacity building of producers project	10,036,544	10,036,544	100
Project development of high value non traditional export products	11,237,950	11,237,950	100
Distribution of 75 cows to Igikumba (The vulnerable groups/IDP cooperative) through tender	30,000,000	30,000,000	100
Integrated system of intensive agricultural and livestock production project	41,580,416	41,580,416	100
TOTAL	5,027,052,080	4,887,756,096	97

Annex 4: Schools with Kitchen Gardens

Secondary 2014				
NO	District	Number of Schools	Schools with nutrition garden	%
1	Gisagara	38	24	63%
2	Huye	52	34	65%
3	Kamonyi	52	36	69%
4	Muhanga	59	39	66%
5	Nyamagabe	52	33	63%
6	Nyanza	47	25	53%

7	Nyaruguru	41	29	71%
8	Ruhango	50	33	66%
TOTAL	SOUTHERN	391	253	65%
9	Karongi	58	36	62%
10	Ngororero	49	25	51%
11	Nyabihu	44	26	59%
12	Nyamasheke	59	30	51%
13	Rubavu	53	26	49%
14	Rusizi	58	39	67%
15	Rutsiro	47	25	53%
TOTAL	WESTERN	368	207	56%
16	Bugesera	41	28	68%
17	Gatsibo	52	29	56%
18	Kayonza	42	32	76%
19	Kirehe	49	31	63%
20	Ngoma	55	29	53%
21	Nyagatare	51	33	65%
22	Rwamagana	56	32	57%
TOTAL	EASTERN	346	214	62%
23	Burera	44	22	50%
24	Gakenke	56	37	66%
25	Gicumbi	75	50	67%
26	Musanze	51	30	59%
27	Rulindo	63	48	76%
TOTAL	NORTHERN	289	187	65%
28	Gasabo	55	22	40%
29	Kicukiro	39	25	64%

	30	Nyarugenge	33	12	36%
TOTAL		KIGALI CITY	127	59	46%
TOTAL		RWANDA	1,521	920	60.5%