Agriculture Sector Performance Report
Fiscal Year 2008

Sector Evaluation Report for the Joint Agriculture Sector Review of 2008

March 2009

Ministry of Agriculture and Animal Resources
Rwanda

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Acronyms and Abbreviations

ADB	African Development Bank
BNR	Banque Nationale du Rwanda
BTC	Belgian Technical Cooperation
CAADP	Comprehensive Africa Agriculture Development Program
DDP	District Development Plan
DfID	Department for International Development (UK)
EC	European Commission
EDPRS	Economic Development and Poverty Reduction Strategy
GDP	Gross Domestic Product
GoR	Government of Rwanda
Ha	Hectare
HH	Household
IFAD	International Fund for Agricultural Development
ISAR	Institut des Sciences Agronomiques du Rwanda
JAF	Joint Action Forum
LTIF	Long-Term Investment Framework
MDG	Millennium Development Goals
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government, Good Governance, Community Development and Social Affairs
MINECOFIN	Ministry of Economic Planning and Finance
MINITERRE	Ministry of Lands, Environment, Forestry, Water and Mines
MINICOM	Ministry of Trade and Industry
MTEF	Medium-Term Expenditure Framework
M&E	Monitoring and Evaluation
NAP	National Agricultural Policy
NEPAD	New Economic Partnership for Africa's Development
NGO	Non-Governmental Organisation
NISR	National Institute of Statistics of Rwanda
OCIR-Café	Rwanda Coffee Development Authority
OCIR-Thé	Rwanda Tea Development Authority
PADAB	Projet d'Appui au Developpment Agricole de Bugesera
PADEBL	Projet d'Appui au Developpment d'Elevage Bovin Laitier
PAIGELAC	Projet d'Appui a l'Amenagement Integre et la Gestion des Lacs Interieurs
PDCRE	Projet de Developpement des Cultures de Rente et d'Exportation
PER	Public Expenditure Review
PPCU	Policy, Planning and Capacity-Building Unit
PSTA	Plan Strategique pour la Transformation Agricole/Strategic Plan for the Transformation of Agriculture
RADA	Rwanda Agriculture Development Authority
RARDA	Rwanda Animal Resources Development Authority
RHESI	Rwanda Horticulture Export Standards Initiative
RHODA	Rwanda Horticulture Development Authority
RSSP	Rural Sector Support Project
RwF	Rwandan Francs
SWAp	Sector-Wide Approach
SWC	Soil and Water Conservation
US$	United States Dollars

Executive Summary of the Sector Performance Report for the Joint Agriculture Sector Review of the Financial Year 2008

Summary of Key Progress in the Agricultural Sector

Rwanda's agricultural sector registered an impressive growth rate of 15.0% in 2008, contributing to the estimated national economic growth rate of 11.2%. The increases of 16.4% and 20.3% in food and export crop production respectively, can be attributed to MINAGRI's work in the areas of crop intensification, disease prevention and assistance to producers of traditional and non-traditional export crops, as well as good rains.

Production in Season 2009A increased by 19% compared to 2008A and by 41% compared to 2007A. These production increases have buffered Rwanda against the global food crisis and the associated rise in food prices. However, the combination of dependence on rainfed agriculture, low yields and fertilizer price increases means Rwanda remains susceptible to the possibility of food shortages. MINAGRI will therefore retain its focus on staple crop production. To complement crop production, work continued in 2008 to increase livestock numbers and their productivity. Strong growth has been registered in both these areas.

These attainments have resulted in a per capita increase in income for the agricultural population of 5.2% between 2006 and 2007 and by 8.8% between 2007 and 2008[1]. Furthermore, the food balance sheet shows an availability of over 2,100kcal per capita per day for the 18 month period from January 2008 to June 2009 (compared to below 1,900 kcal per capita per day in 2007)[2].

CPAF Indicators and Achievements

Indicator 1: Area of land protected against soil erosion

In 2008, a total of 12,920 ha of terraces (4,760 ha radical and 8,160 ha of progressive terraces) were constructed. The target for 2008 was to increase the area of land protected from 40 to 45% of all land requiring erosion protection, however due to the lack of data available on the total area of land requiring terracing, it has not possible to report against this indicator.

Public Policy Actions

With the decentralization of MINAGRI's work, terracing is increasingly being carried out by districts with the earmarked funding they receive through the Ministry. Soil erosion control, particularly the construction of radical and progressive terraces, has been central to the drafting and execution of District Development Plans. This work has been supported with funds from a number of MINAGRI's partners.

Feasibility studies and detailed designs were commissioned and completed for 8 of the sites to be developed by the Land Husbandry, Water Management and Hillside Irrigation project. The selection of consultancy firms to carry out the feasibility studies and detailed

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[1] Data source: MINECOFIN Macro Department. Figures for 2008 are estimates as agreed with IMF.

[2] Data source: Crop Assessment Report for Seasons 2008A, 2008B and 2009A, MINAGRI.

designs for the remaining 24 sites is under way and will be completed by the end of the financial year Jan-June 2009.

Indicator 2: Proportion of farming households using improved methods
Unfortunately, MINAGRI is unable to measure the use of fertilizer at the household level on an annual basis. However, despite a near-doubling of ex-Kigali fertilizer prices between 2007 and 2008 respectable levels of fertilizer imports were maintained, and only a slight drop in fertilizer imports, from just over 20,000 MT in 2007 to just over 17,000 MT in 2008 was reported. The level procured for food production remained constant. Training has also taken place on the use of organic fertilizers and manure as a part of CIP to increase the use of these inputs.

Public Policy Actions
Attempts are being made to involve the private sector in fertilizer distribution, e.g. through the voucher system and fertilizer auctions organized by the Government of Rwanda. The seed law is in place and its application decrees have been drafted.

Indicator 3: Production in MT of key food security and export crops increase by 30% between 2006 and 2012
Crop production targets were exceeded for all key food security crops in 2008, with 166,853 MT of maize, 82,025 MT of rice, and 67,869 MT of wheat having been produced in 2008. Tea production also exceeded targets with a total production of 83,830 MT. Production is on target for 2009, as season 2009A saw a year-on-year increase of 1% and 12% of maize and rice output respectively. Despite a 17% decline in wheat production, 17,566 MT, more than half the wheat target, were harvested in January 2009.

Public Policy Actions
Demonstration sites and farmer field schools have been established through RADA and PASNVA, as well as other projects and initiatives implemented through MINAGRI's agencies. ISAR is also trialing 24 corn hybrids on farmers' fields at altitude, assisting with the dissemination of up-to-date extension advice. A feasibility study was conducted for the Mushubi Tea Factory and the mobilization of funds for the construction of the factory is underway. The Nshili Kivu Tea Factory was constructed by a private company with 15% shares held by the COTHENK cooperative.

Challenges, Lessons Learnt and Summary Recommendations
While CIP appears to have had a substantial positive impact on agricultural production, it needs to be evaluated in-depth, to determine which aspects of the programme are most successful at increasing output, how it affects poverty reduction, how it can be expanded as well as its effectiveness given Rwanda's reliance on rainfed agriculture. This analysis should also draw out the lessons learnt from the voucher scheme and how fertilizer distribution could be improved to include a larger number of smallholders (for example, and if feasible, by providing fertilizer in smaller packages) and inform future subsidy policy.

Furthermore, the impact of growth in agricultural output on poverty reduction has to be regularly assessed and increased efforts need to be made to collect the necessary data regularly.

The process of moving into commercial farming, including land consolidation and mechanization, pose considerable risks for smallholder farmers. MINAGRI must continue to explore ways in which risks can be reduced and, where appropriate, strengthen programmes to mitigate such risks.

Due to the remarkable increases in agricultural production, many producers are now facing marketing problems. The development of markets, food processing capacities and post-harvest infrastructure should therefore receive increasing attention in the Ministry's work and strategic plans. To this end, maintaining the momentum built-up by the Rwanda Horticulture Export Standards Initiative (RHESI), by ensuring inter-agency implementation and capacity, as well as private sector compliance, should be prioritised. Improving the management capacity of cooperatives will also be integral to market development.

Currently, MINAGRI's monitoring of project expenditures and earmarked district budgets is insufficient to evaluate their work. Better reporting systems need to be created for the tracking of these funds.

A number of challenges have been encountered in making inputs available to smallholders, particularly in involving the private sector in the distribution and/or production of fertilizer and improved seeds. Resolving these long-term problems, which must include making a wider range of financial products and services available to Rwanda's poor, also needs to be a priority.

The current global financial crisis is likely to negatively impact Rwanda's economy. In order to adapt to the changing international climate, increasing efforts should be made to monitor the price of luxury goods in the developed world, particularly coffee and tea, upon which Rwanda depends heavily as a source of foreign exchange.

Care needs to be taken in the course of MINAGRI's restructuring that the process reduces administrative burdens and improves the Ministry's ability to deliver services and that adequate capacity for service delivery is retained.

Signed by the Co-Chairs of the Joint Sector Review **Kigali, 30 March 2009**

Dr. Agnes Kalibatta
Minister of State for Agriculture

Dr. Victoria Kwakwa
Country Representative, World Bank

1. Introduction and Summary of Sector Performance

The EDPRS specifies four high-level targets for the agricultural sector, which are outlined in the table below.

Table 1: EDPRS High-Level Indicators

EDPRS High Level Indicators	Baseline (2006 or later)	2012 Target
1. Annual growth rate of the agricultural sector - Annual growth rate of agricultural export production - Annual growth rate of animal resource production - Annual growth rate of crop production	0% 28% 7.3% -1.5%	7% 8% 8% 6%
2. Average per capita real income in agriculture increases by 4% per year from 2005 baseline of 4%, RwF 74,515	4% RwF 74,515	26.5% RwF 94,258
3. 20% decrease in people reporting agriculture as their main source of income from 2005/2006 EICV baseline (80% average, 86% for women)	80% 86%	60% 66%
4. Halve, between 1990 and 2015, the population living below min. food requirements from 43% (WFP) to 12% in line with MDGs (28% in 2006, 16% in 2012)	28%	16%

1.1 Growth Rates in the Sector

The agricultural sector generates around 30% of Rwanda's growth and as such is one of the most important sectors to Rwanda's development and the goals set out in the EDPRS and Vision 2020. Rwanda's achievement of estimated growth of 11.2% for 2008 is in no small part due to the impressive growth in agricultural production of 15.0%. Particularly noteworthy are the increases in food and export crop production of 16.4 and 20.3% respectively. The increase in food production is both a result of the expansion of maize farming, and to a lesser degree wheat farming, as well as a recovery in cassava production, following the cassava mosaic epidemic that depressed production in 2006 and 2007. Both crop intensification and crop disease prevention have been a focus of MINAGRI's work in 2007 and 2008. The recovery of food and export crop harvests therefore puts the sector back on course for achieving its EDPRS targets as outlined above (see Table 2 below).

Table 2: Trends in Sector Performance and GDP Growth Estimates (2004-2008)

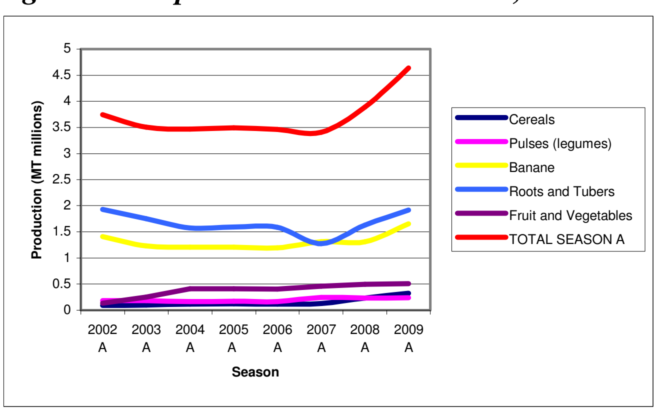
GDP	**2004**	**2005**	**2006**	**2007**	**2008***	**5 Yr Average**
Agriculture	**0.1%**	**4.8%**	**1.1%**	**0.7%**	**15.0%**	**4.3%**
Food Crops	-1.8%	6.4%	0.02%	1.8%	16.4%	**4.6%**
Export Crops	58.2%	-24.3%	29.8%	-33.1%	20.3%	**8.8%**
Livestock	2.7%	2.7%	2.7%	2.7%	2.7%	**2.7%**
Fisheries	2.6%	2.6%	2.6%	2.6%	2.7%	**2.6%**
Forestry	2.6%	2.6%	2.6%	2.6%	2.7%[3]	**2.6%**
Total GDP growth	**5.3%**	**7.2%**	**7.3%**	**7.9%**	**11.2%**	**7.2%**
Agriculture as % of GDP	**34.9%**	**34.2%**	**32.2%**	**30.0%**	**31.0%**	**32.6%**

Source: Macroeconomic Unit, MINECOFIN. *Data for 2008 is projection as agreed with IMF.

Preliminary data for season 2009A shows that the total output of January harvest exceeds that of 2008A. Crop assessment data show a 19% increase in production between 2008A and 2009A and a 41% increase in total output between 2007A and 2009A. This large expansion in output is largely due to an increase in roots and tubers, bananas, and to a lesser degree maize, production in both years. Traditionally roots and tubers carry the largest weight in production statistics after pulses, as they make up 26% of production.

Both agricultural seasons in 2008 and the first harvest of 2009 were far above the average of the past few years, thus buffering Rwanda against the global food crisis and the associated rise in food prices. However, as Rwanda remains very vulnerable to climatic shocks and the rise in global fertilizer prices the country remains susceptible to the possibility of food shortages. MINAGRI has, therefore, retained its focus on the production of staple crops, with more than half its budget contributing to the development of this area and the PSTA II, drafted in 2008, continues to reflect this priority. However, rising food prices are not solely negative, as they provide incentives for Rwandan producers to increase their output of staple crops.

Figure 1: Crop Production in Season A, 2002-2009

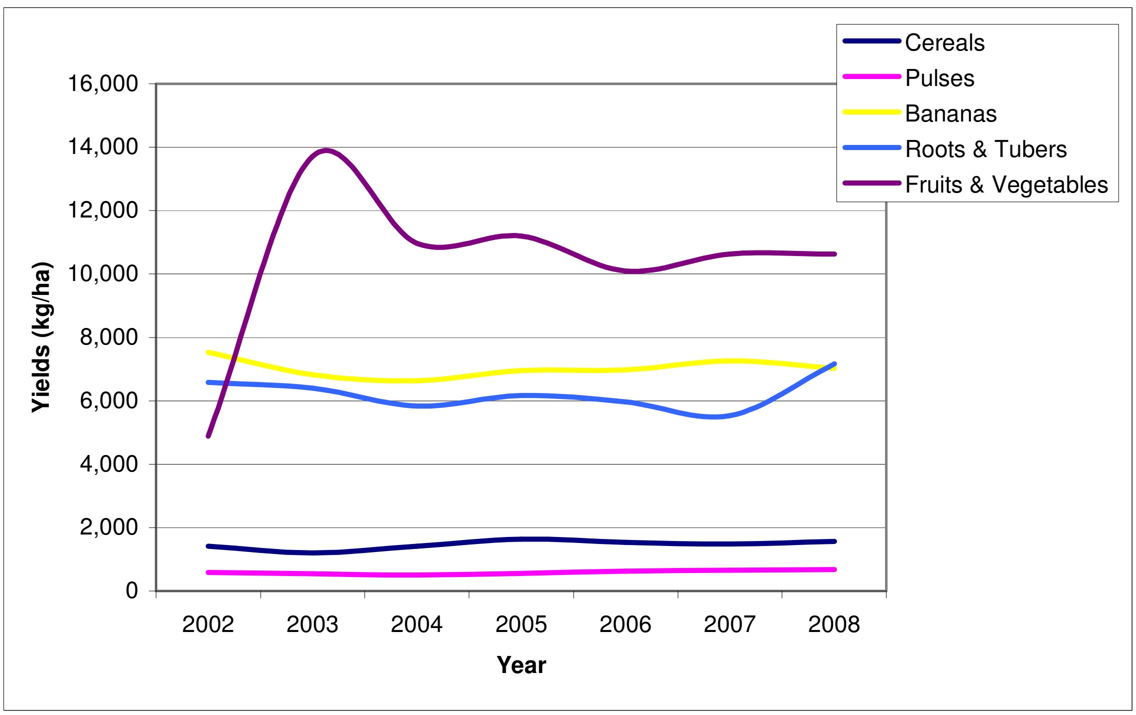


[3] Due to the difficulty in measuring growth in these sub-sectors, MINECOFIN estimates growth in the livestock, fisheries and forestry sectors to be equivalent to population growth rates (approx. 2.7%).

However, despite substantial achievements in increasing the total output of Rwanda's primary sector, yields remain low, both by regional and international standards. However, given Rwanda's high population density, its land is used more intensely, which makes increasing yields more difficult. As shown on the diagram below, yields have fluctuated, but they have not increased consistently since 2002. This issue will need further attention, if Rwanda's agricultural output is to keep up with population growth, particularly given limited land availability.

It is worth noting that substantial yield increases can, and have been, achieved where adequate investments have been made. So, for example, the areas chosen for intensive investment under the Crop Intensification Programme (CIP) have seen substantial yield increases in the focus crop for that area. So for example, yield increases in areas targeted by CIP were 158.9% and 190.3% higher respectively for wheat and cassava than in other areas.

Figure 2: Average Yields, 2002-2008

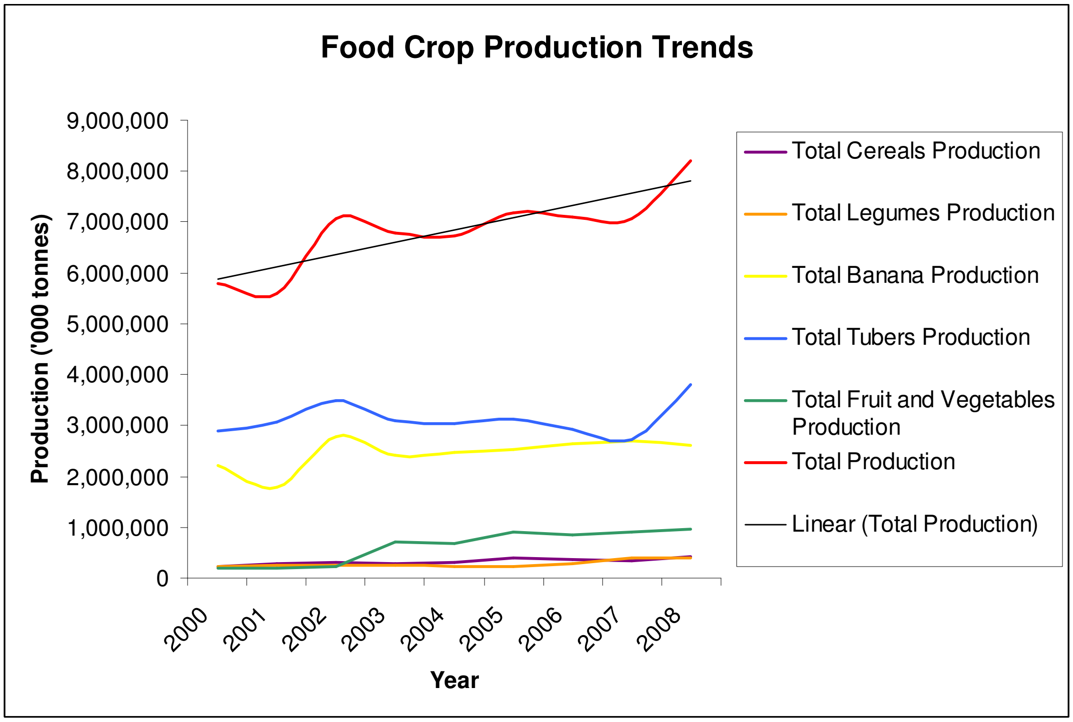


To complement efforts in crop production, work continued in 2008 to increase livestock numbers, as well as improving the productivity of existing livestock. A livestock census was carried out in 2008, which has allowed for more precise tracking of Rwanda's livestock and its productivity. Strong growth has been registered both in terms of livestock numbers, as well as their productivity.

1 A Crop Production

Food production was higher in 2008 than in any other year since 2000, higher even than the last bumper year which was recorded in 2002. Overall increases in production between 2007 and 2008 came to 16% for food crops and preliminary figures for the 2009A season indicate that production increased here too, by 19% overall. Please see Annex 1 for detailed production figures.

Figure 3: Food Crop Production Trends (2000-2008)



The substantial production increases in the last year are partly a result of the Government of Rwanda's drive to invest in staple crops, which was organized jointly with its partners. Maize, cassava and marshland rice production was stimulated by encouraging the use of improved seeds and fertilizers. In due course, the efforts of CIP will need to be extended to cover larger areas of the country, in order for average national yields to be improved substantially. It is worth noting that the 2008A and 2008B harvests were both negatively affected by serious droughts at the beginning of the planting season, which destroyed some already planted seeds or delayed planting altogether, leaving these crops vulnerable to dry spells late in the season.

It is worth reiterating, that while the Crop Intensification Programme has had some success in raising yields in a localized fashion, increases in national production are still more the result of crop substitution – i.e. shifting land usage to higher yielding crop varieties – and increases in area under cultivation (+9%) rather than the result increasing average yields. In 2008 the area under the cultivation of wheat, rice, soya, cassava, sweet potato and peas increased substantially. However, there was a reduction in the area used to cultivate beans (-6.43%), possibly as a direct result of the droughts experienced at the beginning of both seasons A and B or due to crop substitution (the data does not allow for a definite conclusion). However, given the importance of bean production to protein consumption in Rwanda, further investigation of the reasons for the reduction in bean production would be very useful. There was also a substantial reduction in the area given over to sorghum production in both season A and B (-13.35% over the year).

Overall, season 2009A saw an increase of 9% of the total area under cultivation (see table 3a and b for changes in the distribution of land usage).

Table 3a: Area Cultivated by Crop (2007A, 2008A and 2009A)

	Area			Variation	
Culture	**2007 A**	**2008A**	**2009A**	**09A/08A**	**09A/07A**
Sorghum	11,875	10,618	13,551	28%	14%
Maize	79,725	101,458	102,415	1%	28%
Wheat	11,992	21,164	17,566	-17%	46%
Rice	6,638	11,128	12,422	12%	87%
Beans	196,154	182,554	179,999	-1%	-8%
Peas	18,860	21,004	22,345	6%	18%
Groundnuts	9,883	10,533	10,533	0%	7%
Soya	24,871	38,981	38,982	0%	57%
Banana	176,426	177,671	176,755	-1%	0%
Irish Potato	77,168	68,846	69,352	1%	-10%
Sweet Potato	54,814	52,963	57,731	9%	5%
Yam & Taro	14,580	17,944	17,945	0%	23%
Cassava	57,879	78,935	83,514	6%	44%
Vegetables	27,002	31,029	31,924	3%	18%
Fruits	17,459	17,769	18,663	5%	7%
TOTAL	**785,327**	**842,597**	**853,697**	**1.32%**	**9%**

Table 3b: Area Cultivated by Crop (2007 and 2008)

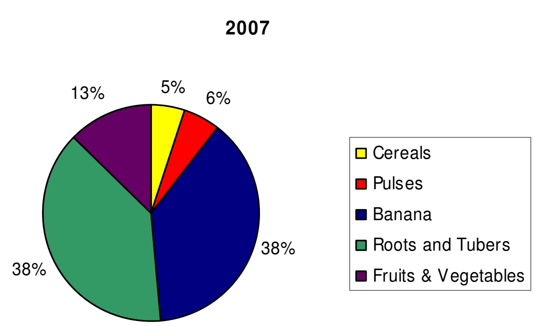
	Area		Variation
Crop	**2007**	**2008**	**2007/2008**
Sorghum	162,322	143,210	-12%
Maize	141,168	144,896	3%
Wheat	27,528	52,336	90%
Rice	15,005	18,455	23%
Beans	358,208	336,577	-6%
Peas	36,850	38,728	5%
Groundnuts	19,482	20,898	7%
Soya	50,238	61,748	23%
Banana	353,945	348,717	-1%
Irish Potato	124,621	127,226	2%
Sweet Potato	147,563	149,724	1%
Yam & Taro	28,530	31,633	11%
Cassava	142,881	163,099	14%
Vegetables	49,555	52,267	5%
Fruits	34,926	37,557	8%
TOTAL	**1,692,822**	**1,727,070**	**2%**

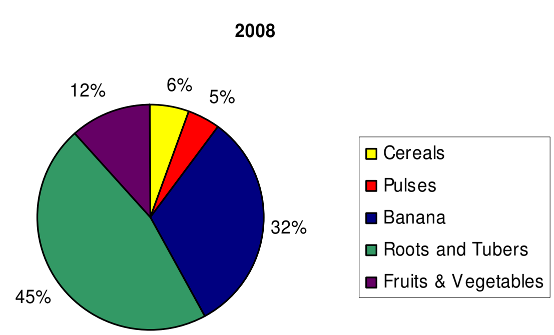
In conclusion, efforts at increasing yields will need to be scaled-up countrywide and complemented by further soil protection and anti-erosion measures to have a larger impact on average national yields. CIP has demonstrated the potential of such efforts, for example by boosting average yields in its target districts by 37% and 148% for wheat and cassava production between 2007 and 2008. Yield improvements are even more pronounced when comparing 2007A (before CIP was initiated) and 2009A, as wheat and cassava yields expanded by 159% and 190% respectively.

As expected, food prices[4] have reflected fluctuations in production, with bean prices peaking in 2008 as a result of a lower than usual harvest in season 2008B. Simultaneously, prices for cassava, Irish potatoes and bananas have declined overall, subject to seasonal variations. A full detailed overview is given below. A real food crisis as reported in other countries has not been observed as yet, and the successful efforts to increase national staple production have buffered Rwandan consumers against substantial price increases. Particularly the prices of roots, tubers and bananas have not kept pace with regional increases, which has benefited particularly poorer Rwandan consumers, as these represent the most important source of calories in the country (54.1% of calories produced in Rwanda) and are considerably cheaper than other carbohydrates. Rwanda's competitive position in staple crop production is likely to change with international food prices fluctuations and will need to continue to be monitored. Recently, international price increases have brought regional traders to Rwanda in larger numbers to buy local cereal stocks. This is reflected in the continuing, but gradual, price increases of traded crops, mainly cereals. Overall, recent developments show the importance of focusing on food crop production and the need to continue doing so.

The importance of different crops grown in Rwanda, as a percentage of total production is given on Figure 4 below.

Figure 4: Crop Production Shares, 2007 and 2008





[4] The food prices given in this report are consumer prices, collected at 33 different markets throughout Rwanda on a weekly basis. Separate consumer and producer prices are not available, making it difficult to disaggregate the effect of price incentives on staple crop production in Rwanda.

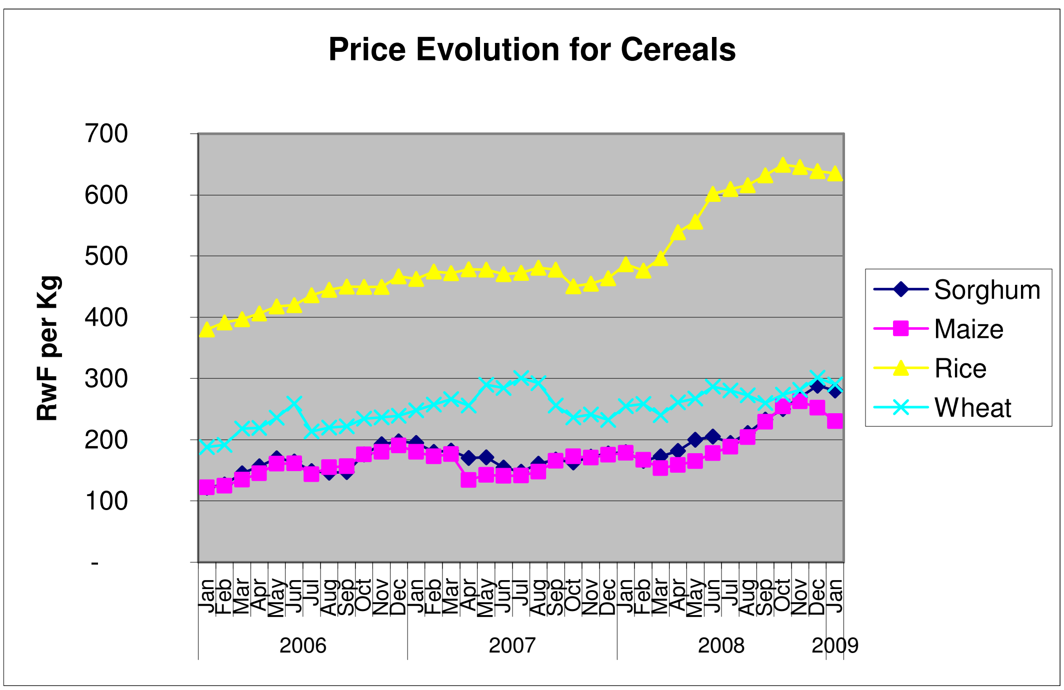
Cereal Production

The production of cereals saw an expansion of 31% in 2008 compared to 2007 and a 40% increase between seasons 2008A and 2009A. As mentioned above, this is partly due to an expansion in area under their cultivation (between 2007 and 2008 the area under wheat, maize and rice cultivation increased by 181%, 64% and 33% respectively). The increase in area given over to cereal cultivation between 2008A and 2009A was minimal overall (1.1%), but a large increase in the area under maize cultivation, coupled with improved yields of this crop, led to a considerable expansion in the output of cereals. Substantial increases in yields per hectare were achieved in wheat (54.4%) and maize (61.3%) production.

While growth of these crops came largely at the expense of lower-value crops, such as sorghum in 2008, the season 2009A seems to show these trends reversing somewhat, with larger areas again given over to sorghum (+27.6%) and a smaller hectarage being used to produce wheat (-17%). As Rwanda is largely self-sufficient in cereals, prices did not follow international trends, except in the case of rice which is imported in large quantities. While maize, wheat and sorghum prices have remained relatively stable, they nonetheless follow an upward trend. See Figure 4 for cereal prices.

Increases in cereal prices (though insubstantial compared to regional increases) coupled with an expansion of production are possibly to be explained by Rwandan produce becoming increasingly competitive regionally and attracting regional traders. Alternatively, they may reflect increases in demand on domestic markets.

Figure 4: Cereal Prices[5]

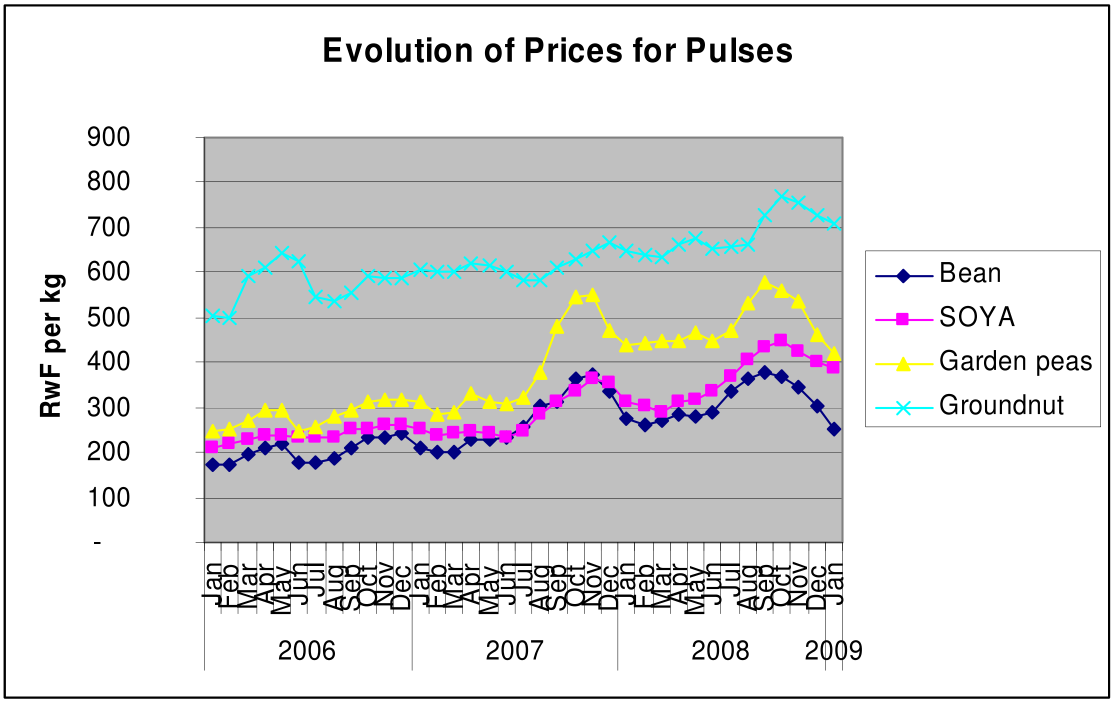


[5] These prices represent the average price across all of Rwanda's districts.

Pulses Production

The production of pulses, particularly beans, has been variable over the past few years, but 2008 saw overall legume production remain fairly constant, while the production of beans was lower than in 2007. Despite good harvests in 2008 and 2009A of peas, groundnuts and soya, their prices have continued to rise steadily, once seasonal fluctuations are taken into account.

Figure 5: Legume Prices



Preliminary data for 2009A show an increase in the production of pulses, as the result of a substantial increase in the output of peas (+35%) and a slight increase in bean production (+3%).

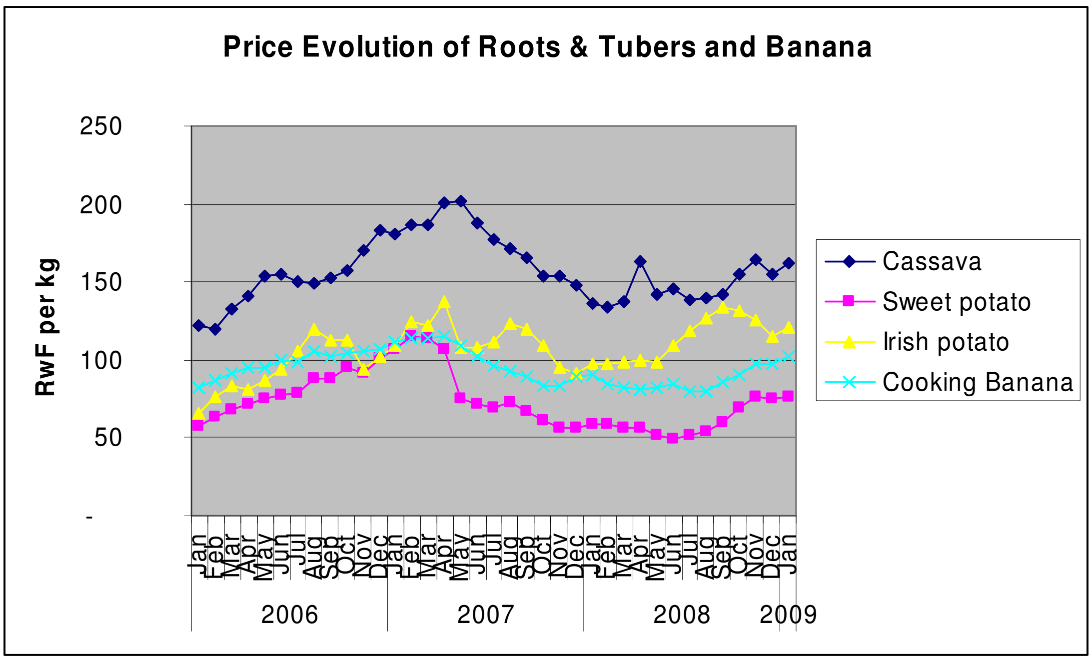
Pulses, particularly beans, are the most important source of protein for the vast majority of Rwandans and it would therefore be important to better understand bean cropping behaviour. However, available data does not provide a conclusive explanation for this, given a decrease in area cultivated with beans (-8%) and an increase in yield (+3%). It is possible that this is due to crop substitution or a lack of rain at the beginning of the season resulting in a reduction in the area given over to beans.

Roots and Tubers Production

The production of roots and tubers is key to overall production trends in Rwanda, given their relative importance, which sees them making up between 26 and 27% of the harvest. 2008 saw a slight increase in the area used for the production of these staple crops (8%), while yields increased by 29.69%, leading to a year-on-year increase in production of 39%. Yet, this increase in yields is largely the result of a 118.71% increase in the average cassava yield. A similar trend was observed between the January 2009 and 2008 harvests, which saw roots and tuber production boosted by 17.8%. Due to their importance both to food security and rural incomes (making up 38.6% of calories produced in Rwanda in 2008), this achievement is of particular importance. In 2008, the production of other tubers, such as sweet potatoes and coco yams, showed a positive trend in area under their cultivation, but a slight reduction in overall output. Thus far in 2009, there has been no change in output of these crops, with both their yields and the area under their cultivation remaining roughly constant.

The increase in cassava production, and the concomitant decline in its price, can be largely attributed to donor and government investments in staple crops, through the Crop Intensification Programme, particularly the distribution of CMD-resistant cassava cuttings, which has put a halt to the spread of the virus. However, the production of Irish potatoes is still being held back by the lack of good seeds, though RADA distributed 2207.1 tons of seed potatoes in 2008.

Figure 6: Roots & Tubers and Banana Prices



Banana Production

Despite its importance both to food security as well as income-generation, banana productivity remains very low and only 2.6 million tons were produced in 2008 on an area of approximately 178,000 ha (equivalent to 21% of Rwanda's agricultural land).

Banana production declined by 3% in 2008, which can be partly attributed to farmers being encouraged to reduce the size of their unproductive plantations, many of which were infected with banana bacterial wilt (BXW). These interventions led to a 1% reduction in the size of Rwanda's banana plantations. The negative trend in banana production seems to have been reversed, as the banana harvest increased by 26% between

2008A and 2009A. This is the result of yield increases, as the area under cultivation still declined slightly. This may be evidence that MINAGRI's efforts at BXW control, which included farmer training, the distribution of clean planting materials and rehabilitation of banana plantations, are beginning to pay off.

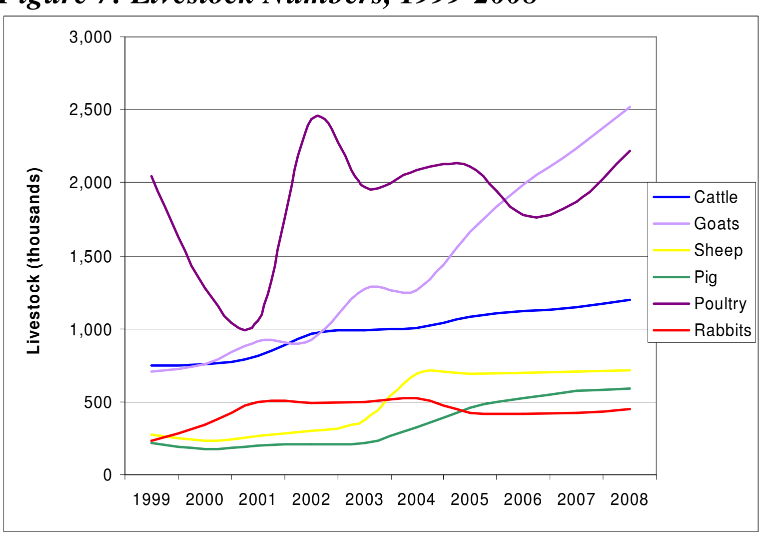
Fruit and Vegetable Production

Most of Rwanda's horticultural goods are grown in Season C, which MINAGRI was unable to track in 2008. However, there is a clear upward trend in the quantity of fruit and vegetables produced in season 2008A and B and 2009A. 2008 saw a 6% increase in the production of fruit and vegetables compared to 2007. The season 2009 was equally a successful season for fruit and vegetable growers, with production augmented by 3.3% compared to 2008A and by 11.9% compared to 2007A. RHODA's work, which involved supporting farmers' associations to access clean planting materials for both fruit and vegetable production, undoubtedly contributed to this achievement.

1 B Increase in Growth Rate of Livestock Production

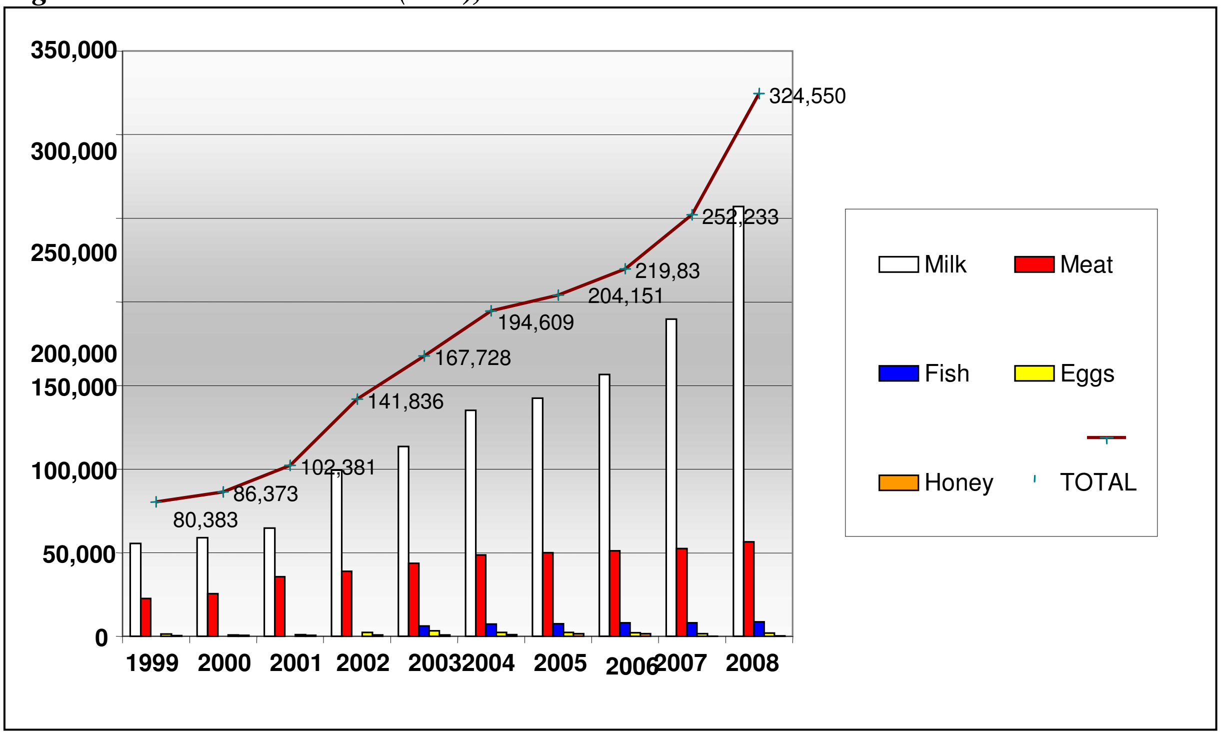
Reporting on livestock has always been a challenge, due to the difficulties of data collection, and it is not unusual for the resulting data to be contradictory. However, RARDA carried out a livestock census in 2008, which provides more robust results and gives a better idea of livestock trends than figures presented at the last Joint Sector Review. The livestock census shows a fairly steady upward trend in the number of livestock kept in Rwanda from 1999 onwards, except in the case of poultry. The expansion of poultry production in Rwanda has suffered a number of setbacks as a result of precautions against avian influenza, which prevented the imports of certain poultry products. The large drop in poultry numbers between 1999 and 2001 are attributable to an outbreak of Typhose aviaire. However, towards the end of 2008 import bans were again lifted, allowing RARDA to import fertilized eggs and day-old chicks. RARDA took advantage of this, by hatching and distributing16,973 chicks in November and December 2008.

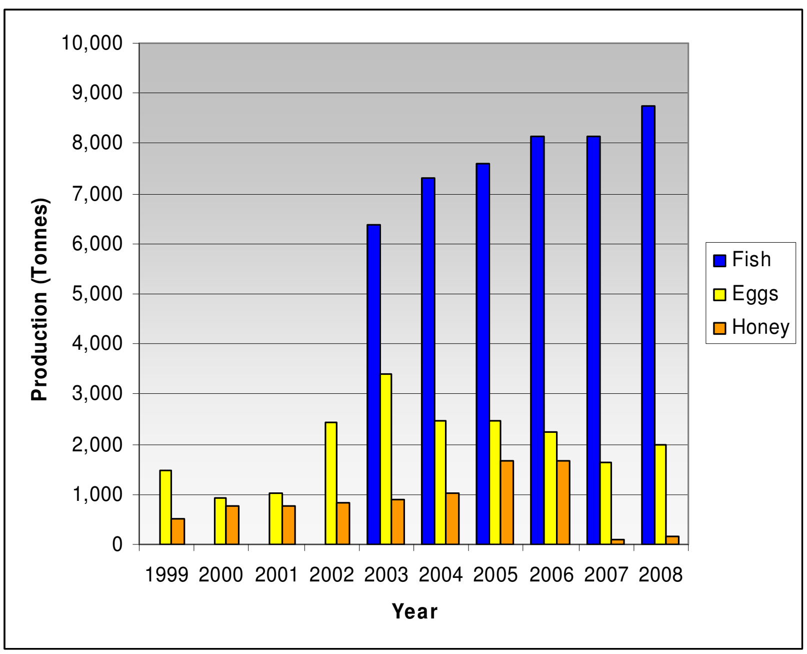
Figure 7: Livestock Numbers, 1999-2008



As one might expect, animal production, has increased in line with livestock holdings, leading to substantial increases in all of Rwanda's main animal products.

Figure 8: Animal Production (tons), 1997-2008





Source: RARDA, MINAGRI Animal Production Unit

1 C Increased Growth Rate of Export Crop Production

The export sector in Rwanda is still very vulnerable to climatic shocks and structural challenges to production increases. The Government of Rwanda has found that both these challenges can be addressed by putting great efforts into improving farming practices and stimulating the quality of production. To ensure that these efforts are coordinated and focused towards increasing production the Government of Rwanda moved the two marketing boards for coffee and tea, OCIR-Café and OCIR-Thé under the coordination of MINAGRI.

Differences in coffee output in 2007 and 2008 reflect the volatility of the coffee export sector, as coffee production recovered in 2008 from the low levels of the previous year. Tea, on the other hand, benefited from a 21.8% increase in the price achieved per kilogramme. For both tea and coffee, the emphasis has been on enhancing the quality produced, so as to reduce Rwanda's vulnerability to global coffee and tea price fluctuations, and instead concentrate its efforts on/target niche markets/specialty coffee. To this end, OCIR-Café has invested heavily in promoting Rwanda's coffee, and it organized the first 'Cup of Excellence' Competition, the first of its kind in Africa. In the context of this competition, 30 coffee testers were trained, 50 Rwandan coffees were brought to the attention of buyers and 24 Rwandan coffees received awards.

Hides and skins suffered from low prices, and the quality of these exports remains poor, so, despite an increase in the volume exported, overall revenue from this source declined. There has been a change in the way pyrethrum exports are measured, meaning that changes in value and volume between 2007 and 2008 cannot be compared. A comparison of exports in 2007 and 2008 is given below.

Table 4: Actual Exports –2007 and 2008

		2007	**2008**	**% change**
Coffee	Value (US$ millions)	35.7	47.1	**31.9%**
	Volume (kgs millions)	13.7	18.2	**33.0%**
	Value/kg (US$/kg)	2.61	2.59	**-0.8%**
Tea	Value (US$ millions)	31.5	39.8	**26.2%**
	Volume (kgs millions)	18.4	19.0	**3.6%**
	Value/kg (US$/kg)	1.72	2.09	**21.8%**
Hides & Skins	Value (US$ millions)	3.56	2.85	**-20.1%**
	Volume (kgs millions)	1.81	1.93	**7.1%**
	Value/kg (US$/kg)	1.97	1.47	**-25.4%**
Pyrethrum	Value (US$ millions)	3.00	0.38	**-87.2%**
	Volume (kgs millions)	0.04	0.003	**-91.4%**
	Value/kg (US$/kg)	78.44	116.16	**48.1%**
	Total Value (US$)	**58.41**	**66.12**	**13.2%**

Source: MINECOFIN Macro Department

Tea Production
The tea sector has experienced a strong recovery from last year's stagnation, with production increasing by 3.6%. Furthermore, the price achieved per kg sold rose by 21.8%, indicating that efforts by OCIR-Thé to increase the quality of tea grown are beginning to produce results and that this strategy should continue to inform OCIR-Thé's work in 2009.

Coffee Production
Following a downturn in coffee production in 2007 (as a consequence of the cyclical nature of coffee production, the uprooting of certain varieties and inadequate rainfall), 2008 shows a substantial recovery in production (+33.0% compared to 2007). Production levels are not yet as high as they were in 2006, but as production is of increasingly high quality this has partly made up for the reduction in volume produced. This policy direction is reflected in the average price received for Rwanda's coffees, which has increased by 10% since 2007 and 21% since 2006.

Hides and Skins
This is a volatile sector, and following the strong increase in production in 2007 in response to higher prices, the production value in 2008 fell, largely due to lower prices received. Nonetheless, the production volume in 2008 is 57% higher than in 2006. The price and resultant production volatility underlines the importance of finding niche markets for these products, which generate higher guaranteed prices and ensure long-term growth for producers and entrepreneurs in this sector.

Pyrethrum
The figures for the volume of pyrethrum exported between 2007 and 2008 can unfortunately not be compared, as prior to 2008 Rwanda's pyrethrum was exported unprocessed, whereas the figures given for 2008 are for the volume of processed pyrethrum exported.

1.2 Average per Capita Real Income in Agriculture Increases by 4% Per Year from 2005 Baseline

The measurement of this indicator relies on a number of assumptions, regarding estimates of the total population as well as the percentage of the population active in agriculture. However, subject to these limitations, estimates show that per capita income for the agricultural population increased by 5.2% between 2006 and 2007 and by 8.8% between 2007 and 2008. Both years therefore registered growth above the targeted 4%. The growth in agriculture is largely the result of increased effort and investment into staple crops, which has had positive results. Nonetheless, for these growth rates to be sustained, further investments in agriculture, particularly staple crop production and average yields will need to be made.

Table 5: Real Agriculture GDP, 2006-2008

	2006	2007	2008
Population (Million)	8.9	9.1	9.3
Agricultural Population (80%)	7.1	7.3	7.4
Real GDP (Billion Rwf)	999.8	1,079.2	1,200.4
Agricultural Real GDP	322.0	324.2	372.7
GDP per capita (Rwf)	112,745	118,597	129,077
Agricultural GDP per capita	45,385	44,539	50,097
Per Capita Growth	-	5.2%	8.8%
Agricultural per capita Growth	-	-1.9%	12.5%

Source: MINECOFIN Macro Dept

Notes:

1. Population estimates based on 2001/02 census and projections.
2. Agricultural population assumed to be constant from EICV II.
3. 2006 GDP: NISR; 2007 and 2008: MINECOFIN.
4. Real GDP at 2001 prices.

1.3 Decreased Number of People Reporting Agricultural Activities as their Main Source of Income

This indicator cannot be verified annually, at present, but will be measured through the EICV surveys undertaken every 5 years or the Enquete Agricole, which the National Institute of Statistics is currently working on. Unfortunately the data for 2008 has yet to be released. The EICV II, conducted in 2005/2006, showed that the percentage of working adults reporting agriculture as their *main* activity had declined from 88% to 80% since 2000/01. This reduction was matched by an increase in adults working in commerce and sales, in the skilled service sector and in unskilled elementary occupations.

As one might expect, the reduction of men moving out of agriculture was greater than for women, 86% of whom continue to work in agriculture and fisheries, as opposed to 71% of men. Unfortunately, the requisite data is not available to determine the impact of this on women's relative poverty. However, it is possible that women are becoming comparatively poorer, as men move into higher paid professions. Furthermore, 90% of the country lives in households in which *at least* one person works in agriculture, a proportion which has changed little in the years between surveys.

It should be noted that the total number of persons whose primary occupation is agricultural has in fact increased, due to population growth. The percentage shift away from agricultural jobs thus reflects an increase in jobs available in other professions and industries.

Information collected on time use showed that workers in agriculture work the shortest hours, at 27 hours per week, compared with an overall average of 31 hours, suggesting underemployment. Perhaps reflecting this, rural dwellers are particularly likely to have more than one job.

1.4 Halve, between 1990 and 2015, the Population Below Minimum Food Requirements

This indicator is measured through household surveys, such as the EICV. However, the production figures for 2008 and 2009A seem to indicate an improvement in food availability. For the first time in many years, Rwanda was able to produce sufficient amounts of food in 2008, allowing basic food requirements to be covered with additional imports (see Table 5 below).

Table 6: Food Balance Sheet 2008 ('000 MT)

	Jan-June 2008	**June-Dec 2008**
I. AVAILABILITY = 1 + 2 + 3	**941**	**1,104**
1. Stock	0	**4**
2. Crop production	1,162	**1,281**
3. Losses (20%)	-221	**-181**
II. NEEDS = 4	**1,121**	**1,156**
4. Consumption	1,121	**1,156**
III. Balance/Deficit = I-II	**-180**	**-52**
5. Net imports	103	**103**
6. Food aid	26	**36**
IV. TOTAL = III + 5 + 6	**-51**	**88**

Source: MINAGRI, Crop Assessment

The total output in calories was adequate in 2008 and 2009A to ensure a constant daily intake of over 2,100 kcal per capita. The breakdown of calorie production is given below in Table 7. It is worth noting, that while production increased by 16% between 2007 and 2008, total calorific output increased by 22%. In terms of lipids and proteins a growth of 23% and 10% respectively was registered. The main crops which contributed to this, are mainly those targeted under the Crop Intensification Programme, namely maize, wheat, rice, Irish potatoes, groundnuts, peas and cassava.

Table 7: Food Production by Kcal, Lipids and Proteins

	Food Production 2007			**Food Production 2008**			**Food Production 2009A**		
Crop	Energy (1000Kcal)	Lipids (kg)	Proteins (MT)	Energy (1000Kcal)	Lipids (kg)	Proteins (MT)	Energy (1000Kcal)	Lipids (kg)	Proteins (MT)
Sorghum	506,600,537	710	11,931	438,703,172	615	10,332	61,296,227	86	1,444
Maize	330,424,319	3,887	8,700	538,152,718	6,330	14,169	698,615,774	8,216	18,394
Wheat	66,214,489	361	2,300	182,435,437	994	6,338	102,989,470	561	3,578
Rice	127,730,084	176	2,464	169,802,341	234	3,275	100,098,195	138	1,931
Beans	1,003,605,534	4,480	64,818	935,273,321	4,175	60,404	566,435,905	2,528	36,583
Peas	61,351,004	199	4,036	67,695,093	220	4,453	50,404,507	164	3,316
Groundnuts	27,517,874	2,245	1,163	30,917,025	2,523	1,306	16,540,904	1,350	699
Soya	162,062,565	6,391	13,722	186,889,923	7,370	15,825	118,928,188	4,690	10,070
Banana	1,046,892,166	1,926	10,565	1,010,332,126	1,859	10,196	640,539,109	1,179	6,464
Irish Potato	488,856,627	596	10,136	667,419,987	813	13,839	395,174,506	482	8,194
Sweet Potato	913,191,530	1,513	12,077	892,993,405	1,479	11,810	358,872,299	595	4,746
Yam&Taro	119,625,674	117	2,111	114,419,734	112	2,019	60,447,298	59	1,060
Cassava	794,867,388	1,142	4,048	1,720,623,044	2,472	8,762	836,704,088	1,202	4,261
Vegetables	279,355,992	315	4,762	291,209,055	329	4,964	168,272,405	190	2,868
Fruits	192,886,043	218	3,288	211,462,169	239	3,604	88,832,870	112	1,685
Total	6,211,181,826	24,276	156,121	7,458,328,551	29,764	171,296	4,274,151,745	21,552	105,298

Despite these positive developments, it is nonetheless worth noting, that Rwanda still has some way to go in terms of producing adequate quantities of protein and lipid. For the 18 month period from Jan 2008 to June 2009 average daily lipid and protein availability range between 17 and 21g of lipids and 52 and 59g of protein per day (compared to a WHO recommended daily intake of 40grams of lipids and 59 grams of protein per day).

2 Analysis by Programme

2 A Performance Analysis by Programme

Programme 1: Intensification and Development of Sustainable Production Systems
Programme 1 is the focus of MINAGRI's work and it commands just over 80% of MINAGRI's total internally financed budget. The majority of work in this area has concentrated on soil erosion, crop intensification and increasing livestock production. The areas of inputs development, mechanization and food security have also seen substantial investments. Some of the highlights, as well as constraints faced, under the sub-programmes of Programme 1 are outlined below.

SP 1.1: Sustainable Management of Natural Resources and Soil Conservation

- 4,760 ha of land protected using radical terraces and 37,457 ha of progressive terraces and trenches constructed, which represents 217% and 547% of the target;
- As a result of the One Cow Programme, an increasing number of terraces were planted with animal fodder and thus protected;
- RADA has provided technical capacity to districts to improve their soil conservation and extension activities;
- A new project, the Land Husbandry, Water Harvesting and Hillside Irrigation Project, was planned and funding is currently being sought for it. A substantial component of the project will be to address soil erosion and improve soil productivity by increasing its fertility and moisture content. Feasibility studies have been undertaken for 8 of the 32 planned sites and work is expected to begin on these in 2009.

Bottlenecks and implementation shortcomings:

- Insufficient attention has been paid to restoring fertility on terraces, which has impaired attempts to improve yields. More liming programmes are needed and access to inorganic fertilizer should be improved further;
- Supply of primary tools and equipment has not progressed at the required rate.

SP 1.2: Integrated System of Intensive Agricultural and Livestock Production

- The increases in production and yield improvements resulting from CIP have reduced dependence on imports and buffer Rwanda from increases in global food prices as well as increasing rural incomes;
- Efforts have been made, with some success, to increase private sector involvement in inputs distribution, through the voucher system for fertilizer.
- The 'One Cow Programme' distributed 28,699 cows in 2008 and emphasizes zero-grazing policies, so that as little land as possible is used by cattle and their energy is conserved to increase their productivity;
- Genetic quality of livestock was also enhanced through the import of exotic pigs, sheep and goats;
- The PAPSTA project has been able to successfully combine terracing with the cultivation of livestock fodder plants and intensified agricultural and livestock

production, which has improved yields. The project has also succeeded in increasing farmer involvement in soil conservation works in this manner;
- Livestock disease was controlled through a vaccination campaign (Black Quarter, Anthrax, Lumpy Skin, FMD and Rabies).

Bottlenecks and implementation shortcomings:
- Land consolidation[6] has lagged behind targets, as agricultural households were reluctant to participate in the scheme;
- Shortage of, and difficulty in accessing credit was experienced by some farmers.

SP 1.3: Marshlands Development
- 500ha of marshland have been reclaimed, irrigated and are now in productive use;
- Feasibility studies for the irrigation and development of a further 2,124 ha of marshlands have been completed;
- The Kirehe Community-Based Water Management Project was elaborated and designed in 2008 and its implementation will begin in 2009. The project plan includes the irrigation of 2,000 ha in Kirehe district;
- The adoption of Intensive Rice Cultivation Systems in PAPSTA pilot zones has led to significant yield increases, from an average of 3-4 tonnes to 6-7 tonnes per hectare;
- RSSP 1 closed during the fiscal year 2008, having irrigated some 3,110 hectares of marshland;
- RSSP 2 became effective in the fiscal year on 22 October 2008 and aims to irrigate and develop 3,300 hectares of marshland.

Bottlenecks and implementation shortcomings:
- Marketing of rice remains a difficulty and farmers receive very low farm-gate prices.

SP 1.4: Irrigation Development
- Water harvesting infrastructures were created on 35ha of hillsides of Rilima sector in collaboration with the UNFAO;
- 68ha of hillside have been irrigated using upland irrigation in partnership with PDERB/Lux also in Rilima;
- Rice farmers, from various districts across Rwanda, have been trained in rice irrigation by RADA.

SP 1.5: Supply and Use of Agriculture Inputs and Mechanisation
- 26,200 MT of fertilizer were sold through public auction organized by MINAGRI to facilitate private sector participation in fertilizer distribution;
- Strategic stockpile of 4,000L of pesticides was created for crop pest management;

[6] Land consolidation has taken the form of pooling land for collaborative cultivation, without affecting actual ownership. Consolidating land gives households access to subsidized fertilizer, which is only available in standard packages too large for individual households' needs.

- The creation of cooperative-managed selling points for veterinary and agriculture inputs has eased farmer access to modern inputs in PAPSTA pilot zones;
- MINAGRI is in the process of elaborating its Agricultural Mechanization Policy, which will outline its plans for improving and increasing mechanization in Rwanda. Work has begun to encourage farmer cooperatives to acquire improved farming equipment.

Constraints in SP 1.5:

- Despite MINAGRI's best efforts, it has proven difficult to encourage private sector participation in fertilizer distribution and more needs to be done to guarantee this and to ensure the sustainability of its supply and usage;
- The production of improved seeds again lagged behind targets in 2008. Nonetheless, 3,415 tonnes of improved cereal seeds were distributed;
- Lack of management capacities in cooperatives set-up to sell veterinary and agricultural inputs jeopardizes their financial sustainability;
- Seeds are still mainly imported from abroad, as Rwanda lacks the capacity to produce sufficient quantities. In 2009, efforts will concentrate on encouraging the private sector to become more involved in seed multiplication and marketing.

SP1.6: Food Security and Vulnerability Management

- For season 2008A availability reached 2,176 kcal/person/day and this increased to 2,343 kcal/person/day in season 2008B. Meaning average calorie availability was above the globally recommended daily intake of 2,100 kcal/person/day;
- A reduction in post-harvest losses maximized the positive impact of the large outputs of seasons 2008 A and B and 2009A. MINAGRI worked with smallholder producers to increase storage capacity and several modern storage cocoons were purchased. Rwanda's food storage capacity is now approximately 12,000 metric tonnes;
- Family and kitchen gardens introduced by PAPSTA contribute to improving food and nutrition security at a very low cost, including for families that have very little cultivable land;
- Food crops were the focus on ISAR's technology transfer programme in 2008 and a number of new cassava, sweet potato and cereal varieties were released.

Constraints and implementation problems:

- Food consumption remains unevenly distributed across individuals and households and food production will need to increase further to ensure even the poorest households are able to access 2,100 kcal/person/day.

Programme 2: Support to the Professionalisation of Producers' Capacity

Programme 2 complements Programme 1 by strengthening the sector's social capital base to bring about a more profound structural transformation of agriculture as well as Rwanda's economy. Social capital is built through producers' organizations that can develop commercial linkages and function in a more entrepreneurial manner and it also seeks to strengthen productive capacities in the sector. Just over 10% of MINAGRI's funding is allocated to this programme. Focus in 2008 has been on providing research that is salient to the needs of smallholder producers and creating the necessary framework for disseminating innovations, as well as increasing the volume and accessibility of finance available to smallholder producers. Some of the highlights, as well as constraints faced, under the sub-programmes of Programme 2 are outlined below.

SP 2.1: Promotion of Farmers' Organisations and Capacity Building of Producers

- Participatory research focused on smallholder farmers' needs used to test 24 maize hybrids at altitude and rice varieties in different agro-climatic zones;
- Training and extension activities have seen cooperative representatives trained on a number of subjects, including artificial insemination and intensified production;
- ISAR has been training smallholder vegetable producers in seed production and multiplication, forest management, and post-harvest management.

Constraint

- Cooperatives and cooperative leadership often lacks the capacity to be able to make the most of available opportunities.

SP 2.2: Restructuring of Extension and Proximity Services

- The Agricultural Extension Strategy was developed in 2008 and presented to a workshop of stakeholders, which amended and finalized the strategy. Implementation of the new policy will begin in 2009;
- The new extension system will be demand-driven and responsive to reduce the burden on the public sector to provide agronomists;
- MINAGRI is in the process of being restructured, which will see the merger of RADA, RARDA and ISAR into the Rwanda Agriculture Development Board. This will contribute to strengthening the linkage between research and extension.

SP 2.3: Promotion of Research for Development

- ISAR's research agenda reflects MINAGRI's emphasis on staple crops: new varieties released include rice, maize, wheat, Irish potatoes, cassava and beans;
- Disease control has also been a focus, with work continuing on breeding blast disease resistant rice, virus-resistant potatoes, and BXW-resistant bananas;
- PASNVA has organized a number of study visits to tap into national and regional knowledge and research resources.

SP 2.4: Rural Financial Systems and Agricultural Credit Development

- MINAGRI is facilitating a micro-insurance pilot, which will see a cooperative of tomato growers receive weather-based insurance for the first time in early 2009;
- A new Rural Investment Fund has been agreed with the World Bank;
- As part of the LWH project, it is proposed that, there will be a component aimed at improving financial access to rural areas;
- FinScope survey was carried out and this will go a long way in assisting the financial sector and policy makers to identify the gaps, and thus inform their decision making.

Constraints:

- Financial products remain out of the reach of the majority of Rwanda's agricultural households, due to the lack of banking infrastructure and as agricultural loans are still considered too high-risk by banks.

Programme 3: Commodity Chain Promotion and Agri-Business Development

This programme aims to create investments and incentives in the agricultural sector that will create a favourable environment for farmers and agro-entrepreneurs to develop high-value products, including processed products. Furthermore, it seeks to ensure market access for Rwandan produce. The focus in 2008 was on increasing horticultural production and exports and to increase access to the finance necessary for value-addition activities. Programme 3 represents a smaller share of MINAGRI's work plan and receives just under 5% of the Ministry's budget. Some of the progress made and constraints experienced under Programme 3 are outlined below.

SP 3.1: Creation of an Environment Conducive to Business and Entrepreneurship Promotion

- RHODA trained 1,135 farmer representatives on production techniques, including 'Good Agricultural Practices' (GAP), organic farming, and pest and disease control for various high-value crops;
- Efforts continue to increase access to financial services both to smallholder producers, their cooperatives and larger agri-businesses.

Constraints

- It is proving difficult to involve Rwanda's private sector financial institutions in providing credit to primary producers, due to the high risk traditionally associated with these types of loans;
- The current global downturn may have detrimental consequences as consumers if developed countries reduce their expenditure on organic or exotic produce.

SP 3.2: Promotion of Value-Addition and Competitiveness

- OCIR-Thé and OCIR-Café have both been brought under the auspices of MINAGRI;
- The focus of OCIR- Thé and OCIR-Café is increasingly to improve the quality of Rwanda's tea and coffee and to increase the level of value-addition in country;
- The average price achieved by Rwandan tea in 2008 was US$2.09 per kg compared to US$1.72 per kg in 2007. This increase partly reflects efforts to increase quality and processing techniques;
- The average price achieved by Rwandan coffee in 2008 was US$2.59 per kg compared to US$2.61 per kg in 2007;
- Coffee producers are equally being encouraged to add-value to their produce prior to sale. As a result 18.2 tonnes of coffee was exported in 2008.

Constraints:

- Export earnings in coffee remain very volatile, both due to natural production cycles and global price fluctuations;
- The current global downturn may have detrimental consequences if consumers in developed countries reduce their expenditure on organic, exotic or niche market and quality produce.

SP 3.3: Commodity Chain Promotion and Development

- Good progress can be reported in distribution of clean planting material for a number of crops, including staple crops, such as cassava, sweet potatoes and banana cuttings;
- Transformation is being supported through the construction of cold storage facilities, milk collection centres and the construction of markets.

Constraints and bottlenecks:

- Overall activities in Programme 3 focus mostly on increasing the quality and quantity of marketable production, but do not sufficiently address marketing or business development issues.

SP 3.4: Rural Support Infrastructures

Main achievements in supporting the development of rural infrastructures:

- The construction of 6 rural livestock markets and 16 milk collection centres. Ten of these centres were equipped with fully functioning cooling systems and work continues to install cooling facilities in the remaining six;
- Construction of a veterinary clinic began at ISAE in 2008 and it is expected to begin operations in 2009;
- A feeder road to Gishwati was constructed.

SP 3.5: Commodity Chain Promotion and Horticultural Development

Main achievements in SP 3.5:

- RHODA facilitated access to clean planting materials, including French beans, passion fruit, banana, macadamia nut, pineapple and avocado seedlings;
- RHODA facilitated farmers to access the necessary materials and networks to grow French beans for export on 6 ha near Rwamagana. Technical support and irrigation systems were provided by RHODA;
- Focus has been on encouraging the production of high-value crops, such as macadamia nuts, apple bananas, hass avocados and pineapples.

Constraints:

- Overall activities under this programme focus on increasing the quality and quantity of marketable production, but do not adequately address marketing nor business development issues.

Programme 4: Institutional Development

Institutional development, which seeks to ensure an enabling environment for the sector and to coordinate and monitor government activities in agriculture is the fourth of MINAGRI's programmes. Its most important activities in 2008 included drafting the second Strategic Plan for Agricultural Transformation (PSTA II), which will guide the work of the Ministry and its boards for the four-year period of 2009-2012. It is due to be approved by Cabinet in early 2009. Beside the drafting of the PSTA II, PAPSTA has also conducted a number of studies to support sectoral policies, including MINAGRI's restructuring, private sector development, PFM and apex organizations.

The PSTA II forms the basis for the Sector-Wide Approach Memorandum of Understanding (SWAp MoU), which was signed in November 2008 and outlines the way in which MINAGRI will work with its development partners in the future. The SWAp will have a significant impact on MINAGRI's institutional development and foresees the establishment of a SWAp Secretariat that will oversee the implementation of the SWAp MoU and the PSTA II. The SWAp is a tool for aid management, but it also geared towards increasing dialogue and harmonization with a larger range of stakeholders, beyond merely the donor community. Therefore, it requires changes in MINAGRI's organization and the development of appropriate mechanisms for planning, budgeting and M&E, that go beyond project coordination.

Furthermore, a firm of consultants was recruited in 2007 to assist MINAGRI to develop an M&E system that will allow the Ministry to track all its activities down to the district level. Not only will this render much of MINAGRI's indicators and data much more reliable, but it will also free-up considerable staff time once capacity has been built to implement the system. The mini budget year 2009 provides an ideal opportunity to test the system.

Nonetheless, MINAGRI still has inadequate capacity to be able to implement its workload, particularly as staff recruitment and retention remains difficult.

At the beginning of 2009, the Cabinet took the decision to restructure MINAGRI and to bring its six agencies (RADA, RARDA, RHODA, ISAR, OCIR-The and OCIR-Café) under the auspices of two development boards, namely the Rwanda Agriculture Development Board and the Rwanda Agriculture Export and Marketing Board. The restructuring process will take place throughout 2009 and will, it is hoped, increase the capacity of MINAGRI to implement its mandate.

2 B Budget Execution 2008

MINAGRI's budget execution for 2008 came to 106.43%, a little higher than in 2007. The ordinary, counterpart and internally financed projects execution rates were at 98.68%, 99.99% and 108.46%. The number of internally financed projects is larger in 2008 than in previous years. At the last Joint Sector Review it was reported that these projects were having some difficulty spending their budgets, due to problems with procurement. However, these teething problems were resolved in the course of 2008, and all internally financed projects were able to engage 99% or more of their budgets. Table 8 gives an overview of budget execution.

Table 8: Overall Budget Execution 2008

	Allocation	Execution	%
MINAGRI Total	21,948,901,936	23,359,816,751	**106.43%**
MINAGRI BO	4,563,807,519	4,503,765,187	**98.68%**
MINAGRI BD CP	812,684,023	812,565,271	**99.99%**
MINAGRI BD FI	17,385,094,417	18,856,051,564	**108.46%**

Recurrent Budget Execution

For the ordinary budget, overall budget execution rates were also higher than in 2007 for all programmes with the exception of Programme 4. An overview of the execution rates by programme are given in Figure 9 and engagement by Agency is given in Table 9. Both show a positive trend compared to 2007.

Figure 9: Ordinary Budget Execution by Programme

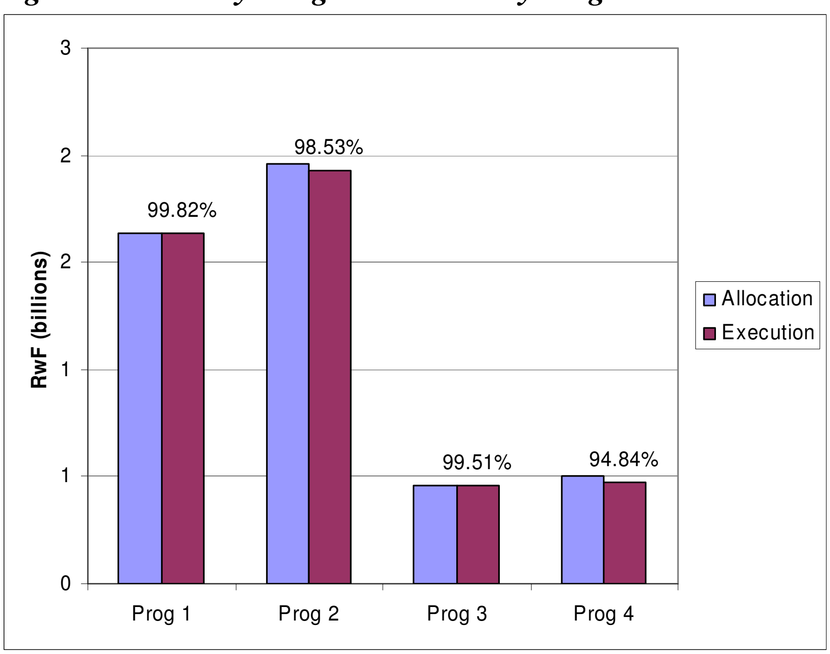


Table 9: Budget Engagement by Agency

	Allocation 2007	Execution 2007	2007%	Allocation 2008	Engagement 2008	2008%
RARDA Total	**957,679,767**	**911,232,140**	**95.15%**	**927,133,926**	**918,308,317**	**99.05%**
Wages	362,031,480	315,583,853	87.17%	362,728,860	361,649,700	99.70%
Non-Wage Expenditure	595,648,187	595,648,287	100.00%	564,405,066	556,658,617	98.63%
RADA Total	**719,139,833**	**686,120,244**	**95.41%**	**937,321,188**	**936,971,416**	**99.96%**
Wages	297,474,432	264,454,845	88.90%	327,379,188	327,029,416	99.89%
Non-Wage Expenditure	421,665,401	421,665,399	100.00%	609,942,000	609,942,000	100.00%
ISAR Total	**1,574,774,543**	**1,465,261,376**	**93.05%**	**1,693,717,308**	**1,681,196,999**	**99.26%**
Wages	1,210,340,748	1,100,827,581	90.95%	1,072,056,124	1,065,413,815	99.38%
Non-Wage Expenditure	364,433,795	364,433,795	100.00%	621,661,184	615,783,184	99.05%
RHODA Total	**340,143,673**	**340,143,673**	**100.00%**	**477,994,615**	**475,734,595**	**99.53%**
Wages	172,583,673	172,583,673	100.00%	156,169,720	153,909,700	98.55%
Non-Wage Expenditure	167,560,000	167,560,000	100.00%	321,824,895	321,824,895	100.00%
MINAGRI Central	**834,490,428**	**826,655,010**	**99.06%**	**508,293,812**	**480,562,397**	**94.54%**
Wages	164,834,577	164,523,283	99.81%	165,375,012	139,390,229	84.29%
Non-Wage Expenditure	669,655,851	662,131,727	98.88%	549,560,562	521,829,067	94.95%

Programmes 1 and 3 continue to show the highest ordinary budget execution levels in 2008, achieving rates of 99.82% and 99.51% respectively. This is closely followed by Programme 2, which executed 98.53% of its budget and falls only slightly short of the goal of executing 100% of the budget. The high execution levels of Programme 1, under which most of the crop and livestock intensification work takes place, can be interpreted as a continuing positive trend from 2007, which in turn is the result of increased absorptive and implementation capacity at MINAGRI. As this is the biggest programme at MINAGRI and the most important in terms of poverty alleviation, this is encouraging progress.

Execution levels for Programme 2, which includes ISAR and spending on extension services, are also satisfactory. In previous years, low wage expenditure in ISAR was the main factor that resulted in low wage expenditure under Programme 2, as staff retention levels were low and recruitment proved difficult. This problem was addressed in 2008 by increasing wage levels at ISAR to bring them in line with salaries in other MINAGRI agencies. The execution rates seen in 2008 indicate that this has helped to reduce both staff turnover and solved some of the recruitment difficulties.

Programme 3 again shows excellent execution rates in 2008, which is very promising, particularly given the newer components that are being implemented under this programme, such as the Rwanda Horticultural Development Authority. Progress has been made under this programme, but efforts will and need to continue to be strengthened, so that further progress can be achieved.

Programme 4, historically the weakest in terms of budget execution, has also done well in 2008, executing 94.84% of its budget. However, this falls short of the levels achieved in 2007 (99%). It is worth noting here, that again non-wage expenditure was much higher than wage expenditure under Programme 4. Similarly to ISAR's difficulties, this demonstrates the problems that have been experienced at MINAGRI in terms of both staff recruitment and retention.

Internally-Financed Development Budget Execution

Project execution levels show that counterpart funding was fully-utilised in 2008. All counterpart funding was executed at the 99% level or above. Overall counterpart funding execution therefore came to 99.99%. Budget execution for internally-financed projects ranged between 99.18% and 110.88%.

The larger number of FI projects initiated in 2007 and 2008 continue to progress well and have achieved consistently high execution rates. The two largest projects, both of which fall under Programme 1, namely the 'One Cow' and 'Crop Intensification' Programmes achieved execution rates of 99.96% and 110.88%. At the last Joint Sector Review, we reported that the 'One Cow' Programme was slow in executing its budget, due to long procurement processes and difficulties in sourcing cows on the regional market. These problems were clearly resolved in the second half of 2008 and the programme was able to distribute 28,699 cows.

The last sector report also stated that execution was not as smooth as hoped for various other projects, including the 'Irrigation Masterplan', RADA's storage projects and both of ISAR's projects and that efforts would need to be made to assist these projects to spend their budgets. These efforts have clearly paid off, with each of these projects achieving execution rates of 99% and above. The execution rates of FI and counterpart projects are given below.

Table 10: Execution Rates of Counterpart Funded Projects

Counter Part Funding	**Allocation**	**Execution**	**%**
PAIGELAC	100,000,000	115,000,000	115.00%
PADEBL	90,000,000	90,000,000	100.00%
PADAB	117,000,000	132,000,000	112.82%
RSSP	171,000,000	110,881,250	99.89%
PASNVA	41,366,666	71,366,666	172.52%
PDCRE	188,767,357	188,767,355	100.00%
PAPSTA	104,550,000	104,550,000	100.00%
Total Counter Part Funding	**812,684,023**	**812,565,271**	**99.99%**

Source: MINECOFIN Budget Dept.

Table 11: Execution Rates of FI Projects

Internally Financed Projects	**Allocation**	**Execution**	**%**
Irrigation Masterplan	180,000,000	180,000,000	100.00%
Irrigation and Hillside Development	400,000,000	396,719,564	99.18%
One Cow Per Family	1,199,097,061	1,198,657,061	99.96%
Honey Promotion Project	195,183,333	195,183,333	100.00%
Veterinary Laboratory	200,000,000	200,000,000	100.00%
Storage for Pest Management	30,100,000	30,100,000	100.00%
Rehabilitation & Development of Banana Production	80,030,000	80,030,000	100.00%
Priority Crops Intensification	13,550,000,000	15,024,890,407	110.88%
Sericulture	140,000,000	140,000,000	100.00%
Commodity Chain Programme	300,000,000	300,000,000	100.00%
ISAR: Rehabilitation of In-Vitro Laboratory	184,000,000	184,000,000	100.00%
ISAR: Capacity Building for Senior Scientists	114,000,000	113,905,928	99.92%
TOTAL FI	**17,385,094,417**	**18,856,051,564**	**108.46%**

Source: MINECOFIN Budget Dept.

Execution of Earmarked Funds by Districts

Equally, MINAGRI is very pleased to report that budget execution[7] has been very high for earmarked funds transferred directly to districts. Funds transferred to districts are earmarked for Programme 1 (sub-programmes 1.1, 1.2 and 1.5) and Programme 2 (sub-programme 2.2) as districts are deemed to have a comparative advantage in service delivery in these areas. Under Programme 1 execution reached 99.87%, while Programme 2 fell only slightly short of this at 99.19%.

Table 12: Execution of Earmarked Funds by Districts by Programme

	Allocation	**Execution**	**%**
Programme 1	**858,002,752**	**856,903,349**	**99.87%**
Sub-Programme 1.1	624,300,00	624,300,000	100.00%
Sub-Programme 1.2	119,902,752	118,803,350	99.08%
Sub-Programme 1.5	113,800,000	113,799,999	1000.00%
Programme 2	**115,000,000**	**153,750,000**	**99.19%**
Sub-Programme 2.2	155,000,000	153,750,000	99.19%

[7] N.B. these figures represent actual budget execution levels, as monitored by MINECOFIN.

3. Focus on EDPRS Objectives

The EDPRS, completed in 2007, outlines agreements on a number of key priorities in the agriculture sector. For this medium term period (2008-2012) five key areas, each of which are interrelated were identified. As they are interrelated it has proven difficult to assign a priority target and each year their order may shift slightly to respond to needs. However, MINAGRI's projects and programmes were designed to reflect the EDPRS priority areas, in order to realise the potential of agriculture to act as a main driver for economic growth.

The EDPRS priorities are:

1. Availability of and improved access to inputs
2. Soil conservation and water management (including irrigation)
3. Increase access and improve breed of small and large livestock
4. Extension services and research for development
5. Commodity chain and agri-business development

These priorities are implemented in the spirit of the National Agriculture Policy (2004), through the programmes of the sector strategic plan, namely the Strategic Plan for Agricultural Transformation (PSTA). The first draft of the PSTA was adopted for the period 2004-2008 and this was then amended to cover the period of 2009-2012. The second PSTA was drafted in 2008 to reflect the principles and goals set out in the EDPRS and Vision 2020 for the agriculture sector. Furthermore, the PSTA II is also aligned with the goals set out in the Comprehensive African Agricultural Development Programme (CAADP) of NEPAD as well as the Millennium Development Goals.

The PSTA II also consists of four programmes, all interrelated, emphasizing an integrated approach to the transformation of the agriculture sector. If implemented integrally the PSTA II will work towards the same goals as the previous PSTA, namely rural economic development and food security. Domestic and international experience has shown that this is the most effective and sustainable way to tackle agricultural development.

The PSTA II's four programmes are as follows:

1. Intensification and development of sustainable production systems
2. Support to the professionalisation of producers
3. Promotion of commodity chains and agri-business development
4. Institutional development

The first of these programmes addresses the first pillar of MINAGRI's work, namely the intensification of production, focuses on food security, soil and water management techniques, improved livestock rearing and breeding techniques and increased access to quality inputs to achieve sustainable and intensified production systems. It therefore addresses the first three agriculture targets of the EDPRS. It is also absolutely central to economic growth, as agriculture, which consists largely of smallholder food production, is Rwanda's largest economic sector. Furthermore, it provides employment for the majority of Rwandans, it provides investment opportunities for the private sector and ensures food security.

The following EDPRS indicators measure progress in the agricultural sector:

- *Area of land protected against soil erosion: 45% (2008) → 50% (2009)*
- *Area of marshland developed for agricultural use: 11,105ha (2006) → 21,100ha (2009)*
- *Arable land irrigated increases from 1% (approx. 15,000ha) (2006) → 1.6% (approx. 24,000ha) (2012)*
- *Irrigated hillside area increases from 130ha (2006) → 1,100ha (2012) using upland irrigation measures*
- *Proportion of farming households using improved farm methods: chemical fertilizer use increases from 15% (2008) → 18% (2009); organic fertilizer use increases from 10% (2008) → 13% (2009)*
- *Percentage of livestock in intensive systems increases from 30% (2008) →38% (2009)*

The objectives of Programme 2 are to strengthen the sector's social capital base, to provide Rwanda's producers with organizational frameworks through which they can develop commercial linkages and become more entrepreneurial and to empower those who develop productive technologies. This programme therefore includes the area of extension, as well as research, which together make up the fourth priority of the EDPRS objectives. For the year 2008 this still included agricultural credit expansion, though this has been moved to programme 3 under the PSTA II. The EDPRS and CPAF indicator linked to programme 2 is therefore

- *Decrease the farm households to extension ratio from 3,000 households per extensionist (2006) to 2,800 households per extensionist (2009)*

The third programme has as its objective to create an environment which is favourable for farmers and agro-entrepreneurs to develop high-value products, the capacity to process products and the ability to access markets for these goods. This should be done through institutional reforms and investment, which create the right incentives for private producers to transform agri-business in Rwanda. Importantly, this programme seeks to encourage private sector involvement in all areas of Rwandan agriculture. Two EDPRS indicators are pertinent to this programme:

- *Production of key food security crops and export crops increases by 30% from the 2006 baseline for maize, wheat rice, tea and rice*
- *Percentage of horticulture exports increased from 0.15% (1,992 tonnes) in 2006 to 1.6% (25,600 tonnes) in 2012*

The fourth programme of institutional development seeks to enable MINAGRI, its agencies and projects to implement the other three programmes as effectively and efficiently as possible. The EDPRS logframe for 2008 is given below.

SECTOR: MINAGRI						2008 EDPRS Report	
Policy actions for 2008	Logframe Output that the Policy Action contributes to	Indicators for each policy action	2008 target	Actual to date	R Y G	Progress and Challenges	Actions taken to overcome challenges
Complete feasibility studies for at least 10 out of 34 sites for watershed management including an assessment of existing pilots as well as a mapping of areas that need protection by watershed management and terracing	1.1 Soil Conservation	Area of land protected against soil erosion	45%		G	Feasibility studies and detailed designs for 8 of 32 sites for phase 1have been conducted and the new project LWH (Land Husbandry, Water harvesting and Hillside Irrigation project) was initiated in 2008 which will result in more than 12,000 ha of hillside being irrigated and a further 30,250 ha being subject to intensive land husbandry. A new project has been approved (KWAMP – Kirehe Community Watershed Management Project) for irrigating 2,000 ha. Additional 4,760 ha protected with radical terraces Terraces (216% of 2,195 ha target for 2008 achieved) An additional 37,457 ha were protected with progressive terraces (546.89% of the 6,849ha target for 2008 was achieved)	No action needed; ongoing monitoring of progress in place.
Develop Environmental Management Framework for Marshlands, including format and implementation schedule	1.3 Irrigation and Marshland development	Area of marshland developed for Agriculture use	12,000 ha		G	An Environmental Management Plan has been drafted for marshlands, which includes a clearly outlined format and implementation schedule Feasibility study for Muvumba /Nyagatare marshland (perimeter 8) covering 1,500 ha over 1,845 has been completed. And the study shows that 1500ha over 1845ha are productive Feasibility studies have been conducted for the rehabilitation of a further 2,125 ha of marshland. The reclamation and irrigation of 575 ha of marshlands has been project managed.	No action needed; ongoing monitoring of progress in place.

SECTOR: MINAGRI						2008 EDPRS Report	
Policy actions for 2008	**Logframe Output that the Policy Action contributes to**	**Indicators for each policy action**	**2008 target**	**Actual to date**	**R Y G**	**Progress and Challenges**	**Actions taken to overcome challenges**
Implement fertilizer strategy and clarify public and private roles. Develop Seed Law	1.4 Agricultural Inputs	Proportion of farming households using improved farm methods	Farmers using Chemical fertilizer 15%; Organic fertilizer 10%	Chemical fertilizer 22,3% Organic fertilizer 12%	G	The fertilizer strategy is being implemented through the Crop Intensification Program(CIP); The private sector is being involved through the delivery and distribution of agricultural inputs, using the voucher system; The organic fertilizer target will be exceeded as a result of the Girinka Program (108.8% of target for Ankole cows and 487% of target for distribution of improved cows has been achieved); The Seed Law has been developed; Some “Arretés d’application” not adopted.	No action needed; ongoing monitoring of progress in place.
Finalise and disseminate extension service strategy Implement Decentralized National Agricultural Extension Strategy in 4 pilot districts	2.1 Extension and Proximity Service and Farmer Organisations	Farm households to extension ratio	1:2,900	1:2,218	G	The extension strategy is being implemented through the establishment of stakeholder coordination platforms in 11 districts which work in response to the needs of farmer associations; The National Agricultural Extension system has been discussed and debated by district platforms and PASNVA/MINAGRI (at district and national seminars) and these generated a proposal for the way forward. The proposal is available; The AGASOZI NDATWA framework is also being used to implement the strategy countrywide.	No action needed; ongoing monitoring of progress in place.

SECTOR: MINAGRI						2008 EDPRS Report	
Policy actions for 2008	**Logframe Output that the Policy Action contributes to**	**Indicators for each policy action**	**2008 target**	**Actual to date**	**R Y G**	**Progress and Challenges**	**Actions taken to overcome challenges**
Establish demonstration sites and farmer field schools for key crops in appropriate districts. Mapping of sectors where farmer field schools can be established. Support feasibility studies of two new tea factories.	2.1 Extension and Proximity Service and Farmer Organizations	Production in MT of key food security and export crops increase by 30% from 2006 baseline	Maize: 101,700 Rice: 66,700 Wheat 24,200 Tea: 77,400	Maize: 166,853 Rice: 82,025 Wheat: 67,869 Tea: 83,830 tonnes	G	Three Community innovation Centers are now under rehabilitation in Ngororero and Gakenke and Nyamagabe Districts. The procurement process is underway for 1 Community Innovation Center to be built in Nyamagabe District. 3 Community innovation Centers are under construction in Kirehe, Bugesera and Nyanza Districts. The feasibility study of Karongi and Rutsiro tea Factory are done (80%)	These figures are from crop assessment, 2008 season B. The Community innovation Centers are under PAPSTA project construction. The tea nurseries have been completed and tea plantations are prepared. The pre-feasibility study of Bweyeye shows that Bweyeye has insufficient land and now Muganza, Gatare and Mushubi factories are under consideration.This work is budgeted and is to be completed in 2012.

SECTOR: MINAGRI						2008 EDPRS Report	
Policy actions for 2008	**Logframe Output that the Policy Action contributes to**	**Indicators for each policy action**	**2008 target**	**Actual to date**	**R / Y / G**	**Progress and Challenges**	**Actions taken to overcome challenges**
Develop and publish a clear policy on animal nutrition Develop and publish a clear policy on animal disease control	1.2 Productivity of Animal Resources	% livestock in intensive systems	30.7		Y	There are no figures for the livestock being kept under the intensive system The animal nutrition strategy is being developed. The animal health strategy was completed and is being implemented.	

CPAF Indicators

INDICATORS	EXPECTED PERFORMANCE			PUBLIC POLICY ACTIONS		
	Baseline 2006	**Targets 2008**	**Targets 2009/2010**	**Key Policy Benchmarks/Outputs by Year**		**Responsibility Centre**
				2008	**2009 Jan- June**	
(1) Area of land protected against soil erosion	40%	45%	50%	Complete feasibility studies for at least 10 out of 34 sites for watershed management Including an assessment of existing pilots as well as a mapping of areas that need protection by watershed management and terracing	Begin feasibility studies for further 10 sites (MINAGRI)	MINAGRI: RADA Soil and water conservation Unit
(2) Proportion of farming households using improved farm methods	Farmers using Chemical fertilizer 12%; Organic fertilizer 7%	Farmers using Chemical fertilizer 15%; Organic fertilizer 10%	Farmers using Chemical fertilizer 18%; Organic fertilizer 13%	Implement fertilizer strategy with a clarification of public and private roles. Develop Seed Law	Develop action plan to promote emergence of private sector-led fertilizer procurement and distribution systems.	MINAGRI: RADA crop production unit
(3) Production in MT of key food security and export crops increase by 30% from 2006 baseline	Maize: 91,813 Rice: 62,932 Wheat: 19,549 Tea (green leaf): 73,008	Maize: 101,700 Rice: 66,700 Wheat 24,200 Tea: 77,400	Maize: 107,800 Rice: 70,700 Wheat 25,650 Tea: 82,000	Establish demonstration sites and farmer field schools for key crops in appropriate districts. Mapping of sectors where farmer field schools can be established. Support feasibility studies of two new tea factories.	.	MINAGRI: RADA

CPAF Indicators and Achievements

Indicator 1: Area of land protected against soil erosion

In 2008, a total of 12,920 ha of terraces (4,760 ha radical and 8,160 ha of progressive terraces) were constructed. The target for 2008 was to increase the area of land protected from 40 to 45% of all land requiring erosion protection, however due to the lack of data available on the total area of land requiring terracing, it has not possible to report against this indicator.

Public Policy Actions

With the decentralization of MINAGRI's work, terracing is increasingly being carried out by districts with the earmarked funding they receive through the Ministry. Soil erosion control, particularly the construction of radical and progressive terraces, has been central to the drafting and execution of District Development Plans. This work has been supported with funds from a number of MINAGRI's partners.

Feasibility studies and detailed designs were commissioned and completed for 8 of the sites to be developed by the Land Husbandry, Water Management and Hillside Irrigation project. The selection of consultancy firms to carry out the feasibility studies and detailed designs for the remaining 24 sites is under way and will be completed by the end of the financial year Jan-June 2009.

Indicator 2: Proportion of farming households using improved methods

Unfortunately, MINAGRI is unable to measure the use of fertilizer at the household level on an annual basis. However, despite a near-doubling of ex-Kigali fertilizer prices between 2007 and 2008 respectable levels of fertilizer imports were maintained, and only a slight drop in fertilizer imports, from just over 20,000 MT in 2007 to just over 17,000 MT in 2008 was reported. The level procured for food production remained constant. Training has also taken place on the use of organic fertilizers and manure as a part of CIP to increase the use of these inputs.

Public Policy Actions

Attempts are being made to involve the private sector in fertilizer distribution, e.g. through the voucher system and fertilizer auctions organized by the Government of Rwanda. The seed law is in place and its application decrees have been drafted.

Indicator 3: Production in MT of key food security and export crops increase by 30% between 2006 and 2012

Crop production targets were exceeded for all key food security crops in 2008, with 166,853 MT of maize, 82,025 MT of rice, and 67,869 MT of wheat having been produced in 2008. Tea production also exceeded targets with a total production of 83,830 MT. Production is on target for 2009, as season 2009A saw a year-on-year increase of 1% and 12% of maize and rice output respectively. Despite a 17% decline in wheat production, 17,566 MT, more than half the wheat target, were harvested in January 2009.

Public Policy Actions

Demonstration sites and farmer field schools have been established through RADA and PASNVA, as well as other projects and initiatives implemented through MINAGRI's agencies. ISAR is also trialing 24 corn hybrids on farmers' fields at altitude, assisting with the dissemination of up-to-date extension advice. A feasibility study was conducted for the Mushubi Tea Factory and the mobilization of funds for the construction of the factory is underway. The Nshili Kivu Tea Factory was constructed by a private company with 15% shares held by the COTHENK cooperative.

4. Aid Management

The most important achievement regarding aid management in 2008 was undoubtedly the signing of the Sector-Wide Approach (SWAp) Memorandum of Understanding, between MINAGRI and a number of its development partners. The SWAp attempts to bring together governments, donors and other stakeholders in the agricultural sector and outlines how they will collaborate in the future so as to maximize the impact of disparate initiatives. Now that the SWAp MoU has been signed, it is hoped that under government leadership it will assist movement towards broadening policy dialogue, focusing increasingly on the sector’s single policy document (the second Strategic Plan for Agricultural Transformation (PSTA II)). It will also move the sector towards a common expenditure programme, common monitoring arrangements and more coordination in terms of funding procedures and use of Government of Rwanda systems.

With the SWAp signed, work is ongoing to create a SWAp Secretariat, which will assist with implementing the PSTA II’s four programmes for agricultural development.

5. Participation

As per the Terms of Reference of the Rural Cluster, the following partners are involved in this group:

- One key member of each of the sectoral line ministries which make up the Rural Cluster;
- One key technical representative from each of the bi-lateral and multi-lateral donor agencies active in the sector;
- One key representative of a Rwandan Rural Development NGO and one senior representative from one lead international NGO
- One key representative of a Farmers' Organisation
- One representative from MINECOFIN

Beyond this the Rural Cluster also seeks to involve any other organizations active in the rural sector that may benefit from participating in this monthly information exchange and organizations that may prove to be a useful partner for MINAGRI.

6. Summary Policy Conclusions

The annual Joint Agriculture Sector Review, held at Prime Holdings on 12 March 2009, made the following recommendations for the agricultural sector and the Ministry of Agriculture:

- The Crop Intensification Programme has had a substantial and positive impact on agricultural production in the districts where it is active. However, participants expressed the need for a more in-depth analysis of the programme, to determine with aspects of CIP are most successful at increasing output, how it affects poverty reduction, how it can be expanded as well as its effectiveness given Rwanda's reliance on rainfed agriculture.

- The key lessons identified by Government from the auction and voucher system of season 2009A need to be articulated and endorsed by the Rural Cluster meeting. These lessons will form the basis of policy actions in upcoming seasons for fertilizer importation and distribution.

- Furthermore, the impact of the growth in agricultural output on poverty reduction has to be regularly assessed and increased efforts need to be made to collect the necessary data regularly.

- MINAGRI, through the SWAp Secretariat, should improve the monitoring of its externally financed projects as well as budgets transferred directly to districts. More information on these funds should be provided in the next Sector Performance Report.

- The process of moving into commercial farming, including land consolidation and mechanization, pose considerable risks for smallholder farmers. MINAGRI must continue to explore ways in which risks can be reduced and, where appropriate, strengthen programmes to mitigate such risks.

- Better data is needed on how increases in output, particularly of staple crops, are affecting rural incomes and food security. In order for policy conclusions to be drawn from such an analysis, data on both consumer and producer (farm-gate) prices (particularly for food crops) will be necessary.

- The majority of Rwanda's producers are not using improved seeds, which contributes to very low yields. The organization of a seed production chain should be a MINAGRI priority, so as to increase the accessibility and availability of good quality seed to all of Rwanda's producers.

- The extension services, which accompany the 'One Cow per Poor Family Programme', need additional resources to ensure that the health and productivity of the distributed livestock is maximized.

- The range of financial services available to the rural market needs to be expanded and adapted to the needs of agricultural producers. Emphasis on piloting innovative rural finance products with private sector banks and MFIs, should be supplemented with financial literacy and capacity-building activities that enable rural individuals and their organizations to access these products, and in particular, to access the Second Rural Investment Facility (RIF 2).

- With the end of the Rwanda Horticultural Export Standards Initiative (RHESI) Project at the end of April 2009 and the large upcoming investments by the Government of Rwanda into horticultural production, MINAGRI needs to actively support an action plan to build the basic supervisory and compliance capacity for the newly adopted legal framework.

- One of the issues identified by the PAPSTA mid-term review was that while technical innovations have led to significant production increases, most farmers are faced with serious marketing problems. Issues of marketing, storage and access to finance need increased focus. Cooperatives will need more support, particularly their management, if they are to fulfill their potential and be able to address these problems.

- The meeting noted that there is a need for coordinated efforts to better implement MINAGRI programmes particularly CIP through regular sensitization of local leaders.

- Stakeholders and partners agreed that MINAGRI's new structure would assist with the implementation of the PSTAII, however, the following suggestions were made:

    - Care needs to be taken to ensure that any restructuring reduces the administrative burden and improves the ability to deliver services.
    - The structure should ensure adequate capacity for service deliver, including extension and research, at all levels.

- The Joint Sector Review mandated a working group to complete the review and amendments of the CPAF indicators and the resulting policy actions.

- The Summary of the Sector Performance Report and the JASR Recommendations will be signed during the next rural development cluster meeting planned for the last Thursday of March.

ANNEXE 1: Crop Production Data By Crop Group

Total Production Trends							
Crop	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Cereals	**304,446**	**294,106**	**314,944**	**409,358**	**363,465**	**355,550**	**461,163**
Annual Growth (Cereals)	8.46%	-3.40%	7.09%	29.98%	-11.21%	-2.18%	29.70%
Pulses (legumes)	**290,436**	**287,759**	**244,019**	**252,303**	**352,166**	**400,482**	**392,305**
Annual Growth (Pulses)	2.11%	-0.92%	-15.20%	3.39%	39.58%	13.72%	-2.04%
Banana	**2,784,870**	**2,410,537**	**2,469,742**	**2,593,083**	**2,658,232**	**2,698,176**	**2,603,949**
Annual Growth (Banana)	56.00%	-13.44%	2.46%	4.99%	2.45%	1.50%	-3.49%
Roots and Tubers	**3,485,214**	**3,111,483**	**3,029,545**	**3,118,050**	**2,946,699**	**2,740,872**	**3,815,126**
Annual Growth (Roots & Tubers)	13.51%	-10.72%	-2.63%	2.92%	-5.50%	-6.99%	39.19%
Fruit and Vegetables	**233,643**	**713,884**	**693,066**	**920,233**	**846,004**	**903,432**	**961,645**
Annual Growth (Fruit & Veg)	10.71%	205.55%	-2.92%	32.78%	-8.07%	6.79%	6.44%
TOTAL	**7,098,608**	**6,817,770**	**6,751,316**	**7,293,026**	**7,166,567**	**7,098,512**	**8,234,188**
Annual Growth (Total)	26.07%	-3.96%	-0.97%	8.02%	-1.73%	-0.95%	16.00%

Source: MINAGRI Crop Assessment

Crops	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009A**	**% 08A/09A**
Total Sorghum Production (tons)	184,351	170,093	163,772	227,972	187,380	166,769	144,418	20,178	59.92%
Total Sorghum Area (ha)	171,608	179,991	179,307	196,732	170,298	162,322	143,210	13,551	27.62%
Average Sorghum Yield (kg/ha)	1,066	828	962	983	954	1,079	1,058	1,233	9.49%
Total Maize Production (tons)	91,686	80,517	88,210	97,251	96,662	102,447	166,853	216,604	62.87%
Total Maize Area (ha)	104,628	103,100	106,976	109,400	113,312	141,168	144,896	102,415	0.94%
Average Maize Yield (kg/ha)	796	561	702	798	767	714	916	1,797	61.27%
Total Wheat Production (tons)	7,434	15,305	16,772	21,942	18,978	24,633	67,869	38,314	1.07%
Total Wheat Area (ha)	12,046	20,728	22,191	24,157	22,084	27,528	52,336	17,566	-17.00%
Average Wheat Yield (kg/ha)	777	493	743	863	565	455	925	2,208	54.43%
Total Rice Production (tons)	20,976	28,191	46,191	62,193	60,446	61,701	82,025	48,353	0.62%

Total Rice Area (ha)	6,423	7,667	12,167	13,922	13,123	15,005	18,455	12,422	11.63%
Average Rice Yield (kg/ha)	3,024	1,990	3,244	3,885	3,856	3,671	3,354	4,479	18.14%
Total Cereals Production (tons)	304,446	294,106	314,944	409,358	363,465	355,550	461,163	323,449	39.68%
Total Cereal Area (ha)	294,705	311,485	320,641	344,211	318,818	346,023	358,897	145,953	1.10%
Average Cereal Yield (kg/ha)	1,416	968	1,413	1,632	1,536	1,480	1,563	2,429	30.23%
Total Beans Production (tons)	246,906	239,679	198,225	199,648	296,724	331,107	308,563	186,876	3.12%
Total Beans Area (ha)	358,002	356,899	319,349	313,018	360,318	358,208	336,577	179,999	-1.40%
Average Beans Yield (kg/ha)	675	565	605	611	844	911	910	1,019	3.14%
Total Peas Production (tons)	16,027	17,846	16,759	18,853	17,643	19,656	21,689	16,149	34.83%
Total Peas Area (ha)	31,228	34,752	32,176	34,796	32,029	36,850	38,728	22,345	6.39%
Average Peas Yield (kg/ha)	476	320	478	528	501	452	459	578	25.05%
Total Peanut Production (tons)	10,414	10,287	10,785	10,099	9,021	9,899	11,122	5,950	0.00%
Total Peanut Area (ha)	15,900	16,823	18,883	16,011	16,197	19,482	20,898	10,533	0.00%
Average Peanut Yield (kg/ha)	591	334	443	525	468	510	521	524	0.00%
Total Soya Production (tons)	17,088	19,947	18,251	23,702	28,778	39,819	50,931	32,410	0.00%
Total Soya Area (ha)	31,289	36,067	36,707	42,119	42,364	50,238	61,748	38,982	0.00%
Average Soya Yield (kg/ha)	598	528	509	570	697	768	805	829	0.00%
Total Legumes Production (tons)	290,436	287,759	244,019	252,303	352,166	400,482	392,305	241,385	4.24%
Total Legumes Area (ha)	436,418	444,540	407,115	405,944	450,907	464,778	457,951	251,860	-0.48%
Average Legumes Yield (kg/ha)	585	437	509	559	627	660	674	738	5.24%
Total Banana Production (tons)	2,784,870	2,410,537	2,469,742	2,593,083	2,658,232	2,698,176	2,603,949	1,650,874	26.17%
Total Banana Area (ha)	358,863	358,419	363,383	361,251	366,296	353,945	348,717	176,755	-0.52%
Average Banana Yield (kg/ha)	7,535	5,650	6,636	6,955	6,975	7,254	7,022	8,639	24.47%
Total Potato Production (tons)	1,038,931	1,100,107	1,072,772	1,314,051	1,275,585	967,283	1,161,943	687,978	26.17%
Total Potato Area (ha)	124,972	134,034	133,418	135,622	139,043	124,621	127,226	69,352	0.73%
Average Potato Yield (kg/ha)	7,374	5,012	6,136	7,130	6,851	6,150	6,358	6,533	7.99%
Total Sweet Potato Production (tons)	1,292,361	864,793	908,306	885,467	776,640	845,133	826,440	332,126	20.10%
Total Sweet Potato Area (ha)	195,370	147,290	163,070	148,526	138,353	147,563	149,724	57,731	9.00%

Total Sweet Potato Yield (kg/ha)	6,542	4,641	5,705	5,968	5,744	5,640	5,493	5,831	7.92%
Total Yam & Colocasse Production (tons)	122,845	138,919	136,359	136,894	129,275	151,513	144,919	76,560	15.40%
Total Yam & Colocasse Area (ha)	25,334	27,158	27,097	26,637	26,164	28,530	31,633	17,945	0.01%
Total Yam & Colocasse Yield (kg/ha)	5,031	4,196	5,091	5,205	5,073	4,898	4,963	4,986	0.00%
Total Cassava Production (tons)	1,031,077	1,007,664	912,109	781,637	765,198	776,943	1,681,823	817,837	18.88%
Total Cassava Area (ha)	130,457	134,386	133,876	115,694	118,860	142,881	163,099	83,514	5.80%
Total Cassava Yield (kg/ha)	7,399	6,988	6,409	6,380	6,191	5,424	11,863	13,974	12.46%
Total Tubers Production (tons)	3,485,214	3,111,483	3,029,545	3,118,050	2,946,699	2,740,872	3,815,126	1,914,501	17.80%
Total Tubers Area (ha)	834,997	801,287	820,844	787,731	788,716	797,540	820,398	228,543	4.51%
Total Tubers Yield (kg/ha)	6,587	5,209	5,835	6,170	5,965	5,528	7,169	7,831	8.52%
Total Fruit and Vegetable Production (tons)	233,643	713,884	693,066	920,233	846,004	903,432	961,645	510,991	3.35%
Total Fruit and Vegetable Area (ha)	47,420	58,225	64,303	81,777	83,446	84,481	89,823	50,587	3.67%
Total Fruit and Vegetable Yield (kg/ha)	4,886	11,867	10,966	11,193	10,097	10,628	10,629	10,172	0.00%
Total Production (tons)	7,098,608	6,817,770	6,751,316	7,293,026	7,166,567	7,098,512	8,234,188	4,641,200	19.27%
Total Area (ha)	1,589,830	1,586,425	1,580,751	1,578,775	1,600,164	1,650,582	1,682,158	853,697	1.32%

Source: MINAGRI Crop Assessment

ANNEXE 2: Overview of MTEF Request 2009/10 – 2011/12

Budget Component / YEAR	July 2009 - June 2010	July 2010 - June 2011	July 2011 - June 2012
BO Estimate	11,328,684,407	11,853,017,822	12,487,432,664
BD Estimate Total (including districts)	69,558,758,895	90,985,332,313	91,154,842,861
BD Estimate DONOR	45,981,741,961	58,533,054,917	44,766,887,587
BD Estimate FI and CP	19,490,762,033	25,255,777,005	32,591,404,687
District Transfers BO	1,084,454,901	1,192,900,391	1,789,350,587
District Transfers BD	3,001,800,000	6,003,600,000	12,007,200,000

ANNEXE 3: Overview BO and BD MINI Budget by Agency and Unit

Agency	2008	2009 MINI	2009/10	2010/11
Total RADA BO	961,423,188	555,779,701	1,185,600,216	1,268,592,231
Total RADA BD	110,130,000	1,031,500,000	2,014,000,000	2,035,000,000
TOTAL RADA	1,071,553,188	1,587,279,701	3,199,600,216	3,303,592,231
TOTAL RARDA BO	920,305,972	534,541,436	1,143,918,673	1,223,992,980
TOTAL RARDA BD	1,399,097,061	1,521,946,904	2,837,527,875	2,848,904,826
TOTAL RARDA	2,319,403,033	2,056,488,340	3,981,446,548	4,072,897,806
TOTAL RHODA BO	477,994,613	345,711,982	691,423,964	739,823,641
TOTAL RHODA BD	440,000,000	231,000,000	783,195,000	1,955,487,200
TOTAL RHODA	917,994,613	576,711,982	1,474,618,964	2,695,310,841
TOTAL ISAR BO	1,693,717,308	3,708,700,163	7,201,325,394	7,395,954,643
TOTAL ISAR BD	298,000,000	568,770,570	2,316,729,368	892,552,912
TOTAL ISAR	1,991,717,308	4,277,470,733	9,518,054,762	2,695,310,841
TOTAL PPCU	66,877,470	27,208,400	50,196,800	54,363,276
TOTAL ICT	34,300,000	31,757,448	73,514,896	81,454,505
TOTAL FIRU	448,383,012	452,915,827	982,704,464	1,088,836,546
TOTAL MINAGRI Central BO	549,560,482	511,881,675	1,106,416,160	1,224,654,327
TOTAL MINAGRI Central BD	2,380,000,000	4,886,100,000	4,397,490,000	3,957,741,000
TOTAL OCIR-The BD	0	0	0	6,757,142,857
TOTAL OCIR-Café BD	0	477,721,807	1,469,143,581	1,332,893,581
TOTAL MINAGRI BO	4,603,001,563	5,656,614,956	11,328,684,407	11,853,017,822
TOTAL MINAGRI BD	4,627,227,061	8,717,039,281	13,818,085,824	19,779,722,376