CTB

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PROJECT "DEVELOPPEMENT D'UN SYSTEME DE GESTION INTEGREE DE LUTTE CONTRE LES RAVAGEURS ET MALADIES DES CULTURES (IPM)"

RWA 0604811




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1 Project form

Country: Rwanda
Title of the project: Développement d'un système de gestion intégrée de lutte contre les ravageurs et les maladies des cultures (IPM) [Development of an integrated management system to control pests and diseases of crops in Rwanda (IPM)]
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DONOR	• Direction Générale de la Coopération au Développement - Royaume de Belgique • République du Rwanda
SETTING UP	• Ministry of Agriculture and Animal Resources (MINAGRI/RADA) • Agence Belge de Développement (BTC-CTB)
LOCATION	• Offices : MINAGRI-RADA / Kigali • Intervention zones : All the districts of Rwanda
CHRONOLOGY	• Phase: EXE; Starting date: 01/06/2008; Estimated duration: 36 months • Starting Specific agreement: 14/12/2006; Initial end of the Specific agreement: 13/12/2010; End of the project (after extension agreement): 31 August 2011.
BUDGET	• Total budget : 3.100.000 Euros • Belgian contribution : 2.850.000 Euros • Rwandan contribution : 250.000 Euros

CONTEXT

In the frame of the agricultural intensification undertaken in Rwanda in view of increasing the agricultural productivity, risks of outbreaks of several diseases and pests attacking crops are also very high. Moreover, these recent years, it was observed that pests and diseases of crops constituted one of the main constraints to be taken into consideration in order to maintain high levels of agricultural production.

These constraints are relative to concrete cases like the cassava mosaic disease (CMD),potato late blight, cassava brown streak disease (CBSD),various viral and fungal diseases of passion fruit, viral diseases of Tamarillo and a complex of phytosanitary constraints affecting tomato in various areas of the country.

It is in that context that it was proposed to set up this project whose goal was to develop new methods of pest and disease control in Rwanda based on an integrated global strategy. In these conditions, the present project aims at practically training farmers in their fields to the use of integrated control methods to limit the damages due to pests and diseases of crops. By using methods related to integrated management of pests and diseases, it was revealed that an emphasis has to be put on methods of integrated crop management (ICM) which are thus promoted through the implementation of the present project at the field level. In addition to the farmers who are the final beneficiaries of the project, there is another category composed of the trained FFS facilitators (trainers) who are also main beneficiaries of the project.

Finally, the administrative authorities (districts and sectors) are also in close interaction with the project as they are interested by the project realizations carried out in their respective zones. Agencies of MINAGRI (RADA, RHODA and ISAR) as well as some MINAGRI projects like PAPSTA, PADAB, APFH and LWH have established collaboration with the IPM project and have benefited of actions conducted with the supervision of the IPM project to improve the production conditions on various commodities of their interest.

OBJECTIVES

The main mission of the project is to contribute to increasing the agricultural productivity through the implementation of a integrated management strategy of pests and diseases control on the main crops of Rwanda. This approach aims at promoting control methods in view of producing sustainable results in terms of skills to control the main biotic constraints prevailing on different priority crops of the country.

In view of ensuring conditions for sustainability of this strategy after the end of the funding period, a particular emphasis is given to capacity building at different levels through training of trainers (facilitators) and practical training of farmers.

The FFS (Farmer Field Schools) approach has been adopted as an extension strategy to implement this project. It is through setting up the different training sessions that the different IPM components are used in the farmers' fields to practically demonstrate in a participatory manner the interest of the proposed innovations to overcome the various constraints hampering production.

2 Summary

2.1 Analysis of the intervention

Intervention logic	Efficiency	Effectiveness	Sustainability
Specific objective: To contribute to the improvement of agricultural productivity and to the environment protection by setting up an integrated management system to control diseases and pests of crops in Rwanda	A	A	A
Result 1: Concept, methodology and mechanisms of setting up IPM are reviewed and formulated	A	A	A
Result 2: Training of trainers achieved	A	A	A
Result 3: Training of farmers achieved	A	A	A
Result 4: Availability of quality planting materials	B	B	B
Result 5: Promoting cropping practices aiming at reducing sources of pests and diseases	A	A	B
Result 6: Knowledge relative to development cycles of pest and diseases acquired by actors involved in control of pests and diseases	B	B	B
Result 7: Use of resistant/tolerant varieties adopted by actors involved in production of the main crops	A	A	B
Result 8: Positive repercussions of promotion, development and setting up of an integrated management system for control of pests and diseases of the main crops are at the base of revisions of the national strategies of crop protection	B	A	A

Budget	Expenditure per year (2010)	Total expenditure year N (31/12/2010)	Balance of the budget	Execution rate
2.850.000 Euros	1.311.753,39 Euros	1.877.058,94 Euros	972.941,06 Euros	**66%**

2.2 Key points

As previously, the project organised during 2010 a strategy of training farmers based on two main components which are 'Training of Trainers' ToT and 'Training of Farmers' FFS. Practically, after each ToT session, all the trained facilitators have started organization of training of farmers through the FFS approach as they had previously acquired technical and organizational skills to ensure an efficient facilitation of the farmers' FFS groups.

During the year 2010, the IPM project intervention was achieved with field success from different points of view related to involvement and ownership by the beneficiary communities (farmers), the high interest expressed at the local authority level, achievement of the IPM activities on various crops, the possibility of farmers to be involved in variety participatory evaluation and in seed production, and tendency of farmers organised around FFS activities to create their own cooperatives.

However, although these several positive events/achievements, it can be noticed that some difficulties were experienced during the realization of the project like (i) some local authorities who don't consider the project activities among their priorities, (ii) the limited quantities of clean planting materials and (iii) the fact that the project cannot cover all the requests addressed by rural communities. Moreover, as the project was running simultaneously various FFS experiences on various crops, sometimes when facilitators necessitated field assistance from the project technical team, it was not always possible to provide it in due time. This would necessitate more human resources to be deployed everywhere when a specific request for a punctual assistance is expressed by beneficiaries.

2.3 Lessons learned and recommendations

During the process of setting up the IPM project at the field level in 2010, it was noticed that various constraints due to pests and diseases are posing serious threats at the farmer level in a way affecting the production level. One of the most important parameter leading to that situation is related to the lack of quality seeds and an inappropriate use of the intrants (seeds, fertilisers and pesticides in some cases).

It appeared that the farmers' communities are always ready to participate actively as far as the intervention is working by taking into account their specifically expressed concerns. This can be highlighted by a real example where farmers were complaining about the wide release of the new cassava varieties which are considered by farmers as giving rise to a bad flour quality. By accepting to go for a collection of local varieties through different areas in the country, it was realised that farmers were very happy and committed to participate and thus contribute to the success of the project activities.

On the side of the availability of extension services capacities in the country, it was realized that the use of the FFS approach is a suitable tool to create the skills at the grassroot level facilitating thus access of farmers to the required extension services which must be based on solid technical competences as in most of the cases, the posed problems necessitate different technical interventions. In these conditions, it is essential that the people in charge of delivering extension services have all the technical skills to realize it efficiently; otherwise, it becomes evident that farmers lose their confidence.

Based on the number of facilitators already trained in a period less than two years of the IPM project activities in Rwanda, it really appeared that this training approach is very adapted for improving the extension system in the country. In this frame, the authorities of the Ministry of agriculture are interested by the the use of the FFS approach and would like to assess how this approach could be promoted at a more large scale in the country. In this context, they are now conducting a global assessment by organising a consultancy mission which has to highlight the place of the FFS approach and those of other extension approaches in the Rwandan extension system.

Based on the lessons learned in 2010, a series of different recommendations can be formulated:

- **Recommendation 1; at the attention of all the development partners**: In view of increasing farmers' ownership, it is very important that the farming communities be involved in the whole implementation process. This starts by the practical identification of the problems to be treated through development of the various innovations.
- **Recommendation 2; at the attention of different agricultural projects working under MINAGRI**: to undertake a continuous capacity building of farmers through practical training sessions organised in their fields to improve the cropping practices, which can result in a significant improvement of the production in quality and in quantity.

- **Recommendation 3; at the attention of actors interested in the use of the FFS approach** : Given the majority of farmers are not yet members of cooperatives, it is suggested to have particular attention to the non members of cooperatives during the different training organisations in view of avoiding to forget this important proportion of producers; in fact, through the project implementation process, it appeared that these non members of cooperatives are also interested by having these capacity building sessions and that contributes to improving their production level as well as their organisational skills.
- **Recommendation 4; at the attention MINAGRI agencies and the different projects**: To continue promoting the IPM technology through a continuous organisation of FFS activities around the main crops, more particularly the crops concerned by the CIP (crop intensification programme of MINAGRI).

- **Recommendation 5; at the attention of SPAT 2 program 2 manager and the new BTC program of support to SPAT**: In Rwanda, access to seeds of high quality standards remains very limited for the majority of producers. That situation being due to the limited quantities of seeds made available by the formal system, it is recommended to concentrate efforts on the informal system in which farmers can contribute to producing seeds in their respective zones. Practical training using the FFS approach could constitute a useful tool to transmit practical skills to farmers in view of allowing them to become themselves producers of seeds for their communities and/or for the seed market because there is a gap which is not yet filled by the formal system.
  - **Recommendation 6; at the attention of MINAGRI agencies and projects**: To promote a safe and sustainable exploitation of these varieties by different actors (including mainly farmers and MINAGRI agencies) by promoting (i) the cleaning process (eradication of the different pathogenic infections), (ii) the use of the most appropriate cropping practices, (iii) the sustainable exploitation of these varieties by developing adapted deployment strategies and (iii) the development of efficient seed supply systems in the country.
  - **Recommendation 7; at the attention of all the actors adopting the use of FFS**: As groups organised around FFS activities have a more important production, it is recommended that the training programmes be organised also around training topics aiming at improving post-harvest issues including processing and marketing.
  - **Recommendation 8; at the attention of MINAGRI**: In view of keeping FFS coordination skills at the level of decentralised system, it is recommended to analyse with the MINAGRI how the decentralised levels (districts and sectors) could be more involved in the implementation or in the coordination of the FFS activities organised at these different levels.

3 Evolution of the context

3.1. Importance of the methods to control pests and diseases

The implementation of the IPM project started in the context of the new situation of crop intensification and the strategy of land use consolidation in Rwanda. Given these strategies of crop intensification and land use consolidation taken at the policy making level have significantly influenced the IPM project implementation, it is important to develop a clear analysis in view of demonstrating the kind of influence which that evolving context has had on the realisation of the project. In a few words, that situation has positively influenced the realization of our intervention. In fact, by encouraging farmers to go for the CIP programme, the authorities at the ministry's level knew that producing a limited number of crops on large areas (land use consolidation) constitute parameters leading to appearance of wide monoculture fields. They were aware also that this situation can easily generate favourable conditions for pests and disease development.

In this situation, the authorities at the ministry's level have shown a high interest in the activities carried out by the IPM project and have encouraged the project to implement activities of pests and disease control based mainly on the increase of farmer knowledge. It is in this frame that the project was directly asked to develop a strategy for sustainable control of the biotic constraint complex affecting tamarillo (tree tomato) in Rwanda. That specific request from the MINAGRI level has also contributed to simplify the contacts and direct collaborations with ISAR (the national centre for agricultural research activities) as well as the local authorities at the decentralised level. It is in that way that the IPM project has very easy access to genetic resources (planting materials) available at the ISAR level.

3.2. Progressive interest of local authorities

On the side of the local authorities, as the project team was asked by MINAGRI, to deal with some particular problems affecting agricultural activities at the grassroot level (potato leaf minor, striga outbreaks in cereals, tamarillo diseases, development of a maize streak disease epidemics), the local authorities (at least in the zones affected by the previous problems) were very interested for collaborating with the IPM project and this facilitated the implementation process of the project.

3.3. Ownership by farmers' communities

In addition to this context to be situated at the policy and institutional level, there are also the conditions found at the grassroot beneficiaries' level. Globally, it can be considered that farmers' communities are, since the beginning of the project, very interested by the innovations brought by the IPM project. For each of the crops already treated by the IPM project, farmers showed a very great interest in participating in the diverse activities proposed by the project. These farmers as well as their local leaders estimate that they are taking the maximum benefits from the project activities in the way that they increase their practical knowledge and become thus able to better manage their crops through a better control of pests and diseases. Moreover, they are interested by the FFS approach used by the project as it allows them progressively becoming autonomous in terms of access to clean seeds. Based on that, there is a progressive interest expressed by farmers as well as by local

authorities requesting more FFS initiatives in view of trying to reach a maximum number of farmers throughout Rwanda.

3.4. Additional topics covered by the project

As mentioned above, the outbreaks of striga observed in different sites of cereal production (maize and sorghum) in Rwanda constituted another priority topics to be treated by the IPM project in view of developing an efficient control strategy. In fact, as the obtained production in different areas serves as seeds to be used for the CIP programme, there is a risk of extending the importance of that striga problem if no actions are undertaken to increase the skills of farmers for an integrated strategy in view of controlling the problem. That has resulted in a specific action undertaken by the IPM project to assist the authorities to contain that problem in a sustainable way. A specific field training relative to management of that problem was undertaken and is currently carried out.

Lastly, in the context of the end of the PASNVA project, a global analysis of the extension system prevailing in Rwanda was undertaken to have a clear picture of the strengths and weaknesses of the system. The approach used by IPM project was highlighted by various actors as being interesting. In that way, it is now asked to the IPM project to actively participate in a process of thinking about the possibility of institutionalising that FFS extension approach.

4 Analysis of the intervention

4.1 Institutional anchoring and execution modalities

- **Institutional anchoring: score B**

At the institutional level, the IPM project is anchored within RADA (Rwanda Agriculture Development Authorities) which is one of the MINAGRI agencies. This agency is in charge of promoting the development of agriculture and more specifically in the area of crop production and protection.
For that, most of the different topics covered by the project during its process of activities' implementation are also areas of activities of the agency in which the project is anchored. This constitutes a set of highly favourable conditions for the project implementation. In this context, it can be estimated that the institutional anchoring is appropriate. However, there are some activities relative to topics like (i) participatory variety selection, (ii) conservation and of local genotypes of different crops and (iii) comparative analyses of the different innovations proposed to farmers communities which necessitate an experience sharing with the research institution (ISAR). To arrive performing that, the project required establishing a process of negotiation with different research scientists in view of getting access to the resources they are able to provide.
This means that if the institutional anchoring could have been imagined in a way associating formally the research institution also, it could have been more easy to achieve the different tasks and attain the expected results in a less complex situation.

- **Execution modalities: score A**

The execution modalities are based on the principle of 'COGESTION' bringing BTC and RADA (MINAGRI agency) to share responsibilities of the project execution. The human resources used for the execution of the project are availed by both RADA (IPM assistants) and BTC. The fact of associating national staff in the different tasks relative to execution of the project is a suitable way to ensure sustainability of the actions and processes established in the country through the execution of the present project.
Among the staff used for the execution of the project (IPM assistants), some are member of regular staff of RADA while some others are directly recruited by the IPM project. However, it is important to notice that it is not always easy to count on the staff availed by RADA because sometimes they are asked to participate in other activities of RADA and thus they are not always to participate in realization of all the actions undertaken in the frame of the project. In the same frame, the different employees of RADA (IPM assistants) have now gone abroad to pursue their post-university studies and are now replaced by others who have to learn again and this constitutes a difficulty for the project implementation speed.

4.2 Specific objective

The specific objective is announced 'Improvement of agricultural productivity and environment protection by setting up an integrated management system to control pests and diseases of crops'. The strategy adopted by the project consisting in providing technical and practical knowledge about the biotic constraints (pests and diseases) development conditions and the most suitable control methods to the farmers seems to be the most suitable as farmers themselves are acquiring the skills to perform this management themselves and thus are contributing to achieving progressively the specific objective. Moreover, as the methods and processes leading to IPM (Integrated Pest management) are the ones used in the frame of implementing the project, there is a good impact in terms of environment protection which can be seen through different facts like (1) significant decrease of the level of pesticides used in crop production, (2) conservation and use of genetic resources (varieties), (3) improved use of organic fertilizers to improve the soil properties (structure, texture, biology) etc…
It appears useful to undertake a more deep analysis of the specific objective by taking into account the different indicators as defined in the TFF (Technical and Financial File) of the project.

4.2.1 Indicators

There was no formal baseline study before this project started. However, for each crop to be treated in the frame of the project there is every time an initial step of gap analysis through which the problems are identified.

Specific objective:					Progress: **A**
Indicators	**E**	**G**	**Baseline (determined at the occasion of gap analysis)**	**Progress year 2010**	**Comments**
Number of trained facilitators (and co-facilitators) about IPM		x	0 for potato	126	There are FFS facilitators and FFS core-facilitators
			0 for maize	28	Only the first group of FFS facilitators trained around potato were also trained in view of ensuring rotation of maize and potato
			0 for banana	114	Two groups of banana FFS facilitators were trained at 2 different moments
			0 for tomato	108	One group of 52 people was trained around tomato while the other 56 were selected from the banana trained facilitators in view of giving them other skills
			0 for cassava	70	The training started in November 2010 and is sill running
			0 for passion fruit	54	The training started in November 2010 and is still running
			0 for striga management	63	The training started in November 2010 and is still running
			0 for potato	5402	New groups are formed at each cropping season

Number of trained farmers on IPM techniques	**x**	**x**	0 for maize	5010	New groups are formed at each cropping season; all of these farmers are also counted in the people trained about potato
			0 for banana	3310	As it is a perennial crop, the training takes more than one year, but people have already got production
			0 for tomato	5000	A part of the trained farmers were also trained around banana production
			0 for cassava	2174	The groups have just been formed and are now establishing their FFS plots
			0 for passion fruit	1628	The groups have just been formed and are now establishing their FFS plots
			0 for striga management	1905	Given the long drought period, the groups have been formed and just establishing their learning FFS plots
Number of crops on which IPM techniques are used	X	**x**	0 before the project	6 crops already treated + training about striga management	All of these crops were designed as priority crops at the beginning of the project
List of phytosanitary constraints addressed using IPM techniques through the project			0 before the project started	24	Potato late blight, Potato bacterial wilt, Potato viruses, potato leaf minor, Banana xanthomonas wilt, Banana Sigatoka leaf spot diseases, Banana virus diseases, Banana weevil, banana nematodes, Maize streak disease, Maize helminthosporium disease, maize stem borer, tomato bacterial wilt, tomato late blight, tomato aphids, tomato white flies, tomato viruses, cassava mosaic disease, cassava brown streak disease, cassava white flies, other insect pests of cassava, passion fruit viruses, striga in cereals

4.2.2 Analysis of progress made

As demonstrated by the evolution of indicators in the previous table, it is noticed that the project has made very significant progress during the year 2010. The progress made is judged **very satisfactory** and is attributed the score **A**. Moreover, this progress is continuous as the project continues to support other sessions of farmers' training through the different new FFS initiatives throughout the country. This significant increase of the various indicators is due in fact to the great adhesion of the different farming communities to the strategy proposed by the IPM project in view of bringing innovations at the farmers' level.

- **Relationship between results and specific objective**

More concretely, the different results achieved during the year 2010 have significantly contributed to the progress towards the realization of the specific objective. All the results defined for the project have been accomplished for each of the different individual crops attributed as priorities for the project allowing thus to make significant progress in the indicators related to the specific objective. The training curricula were developed for each individual crop based on the specific problems identified as hampering production. These were mainly related to inappropriate cropping practices as well as to low knowledge of farmers in relation with pests and disease management. The so developed curricula based on the real problems faced by farmers in Rwanda were progressively used to ensure training of FFS facilitators who

were in turn engaged in training of farmers on the different commodities by addressing mainly the identified problems through the process of gap analysis. This global process resulted in a significant increase of the different indicators related to the specific objective. There is a strict and direct relationship between the specific objective and the progressive realization of the different results.
It is important to notice that elaboration of training curricula and training of trainers (ToT) followed by training of farmers are not the single results which contributed to this evolution recorded through indicators relative to specific objective. In fact, other results in relation with the different components of the IPM technology like (1) availability and use of clean planting materials, (2) use of cropping practices aiming at reducing pests and diseases, (3) knowledge of pests and diseases development cycles and (4) suitable use of resistant varieties have been adopted as components of the IPM approach to which the different trainees (trainers or farmers) had to be exposed to in view of really contributing to field implementation of the IPM methods. These results were completed by a last one in relation with development of a communication strategy which was very successful in making the IPM project realisations visible and thus stimulating new demands which are at the base of the progressive increase of the level of the specific objective indicators. In fact, once demand is recorded, actions are undertaken and achieved in view of ensuring its satisfaction through delivering the required service from the side of farmers.

- **Sensitive factors and influencing factors**

Realisation of the project specific objective is influenced by the confidence already acquired by the MINAGRI side in the performance of the project to rapidly develop adapted solutions. In different cases, the project is asked to contribute as the main actor in analysing of problematic situation and development of appropriate solutions. The cases of the striga problem or the complex of diseases affecting tamarillo are examples of this confidence.
Another factor influencing the success of the project is due to the high importance of pests and diseases of crops in Rwanda given the level of damages induced by these latter on crop production. In reality, farmers were in deep needs of having solutions to their problems and the project is considered in various areas as being a good and suitable opportunity to significantly improve the methods used to control pests and diseases in a more sustainable and beneficial way for the farming communities.

This high level of needs expressed at the farming communities' level has also a negative impact on the realisation of the specific objective. In fact, due to the limited human resources, the project cannot arrive alone to cover all the areas from which the demands are progressively expressed.

- **Unexpected results**

At the beginning of the project, the problems relative to striga outbreaks were not known. However, since these were identified by the project, a specific action relative to training farmers about the integrated management of this parasitic weed in cereal production was undertaken by the project. This contributed to generating new values for the indicators relative to the specific objective. It can thus be considered that this result relative to striga has had a positive impact on the realisation of the specific objective. Farmers as well as FFS facilitators were mobilised around that problem (figure 1) and participated actively in different community based actions aiming at reducing the importance of that constraint in various districts affected throughout

Rwanda.

Figure 1. ***Mobilisation and action of farmers and FFS facilitatorsin view of implementing control strategies to reduce the impact of striga in cereal production in Rwanda***




Management of striga had not been expected since the beginning of the project. However, when the outbreak of this parasitic plant was confirmed, it was possible for the project to rapidly realise a rapid mobilisation of different actors to contribute to setting up a sustainable strategy of striga control in Rwanda.

- **Harmo dynamics**

There have been exchanges with the FAO IPM rice which has also in charge the development of a IPM technology for the rice growers in Rwanda. These exchanges have allowed to improve the contents of the training module proposed by the FAO IPM rice project as the experiences already acquired by the BTC IPM project were progressively shared. To increase the harmonisation process at the technical view point, the TA of the BTC IPM project is a member of the technical committee of the FAO IPM rice project.
On the other side, the coordination structure (National FFS coordinator) put in place by the BTC IPM project has initiated a process of coordination and harmonisation of the FFS approach in Rwanda. In that frame, contacts and exchanges have been accomplished with the CRS project organised around the cassava commodity in Western province of Rwanda.

After the first year of field activities of the IPM project, the 2010 year was characterised by a tendency to develop harmonization with other BTC interventions in the domain. That was the case with the former PASNVA project with which the IPM project collaborated by including some tomato growers working with PASNVA in the groups trained as FFS facilitators. On the other side, there was a series of 3 sessions aiming to sensitise and inform members of district platforms about the opportunities offered by the FFS approach as it is developed by the IPM project. The present intervention has also collaborated with the APFH project through a common support these 2 projects provided to the RHESI project within RHODA. Presently, collaboration between the two projects (IPM and APFH) has resulted in an evolution towards a situation of clean seed availability for tamarillo and in training of FFS facilitators for the crop of passion fruit.
For the alignment and ownership issues, the partner has shown a high interest in following and owning the actions and realizations of the BTC IPM project. There is a constant exchange of information between the TA and the National FFS coordinator on one side and the manager of program 2 of MINAGRI on the other side. These latter records regularly information from the IPM project and reports about the evolution process of the project initiative. There is also a clear strategy of MINAGRI to continuously integrate the realisations of the IPM project as its own realisations. As mentioned before, the IPM project has put a special attention in realising all the requests addressed by MINAGRI in relation with identification of problems and development of solutions.
In conclusion, the project is clearly engaged in a process of alignment while it appears clearly that there is a process of more ownership through institutionalisation of the FFS approach by the Ministry of agriculture. However, this is just a process which has to continue before it can be considered that the ownership is total.

- **Gender and Environmental integration**

Implementation of the project activities is carried out at the field level by taking into account participation of men as well as of women. During the preliminary discussions happening prior to organisation of the training sessions, the participants receive a clear message that the project takes into account the gender balance approach. As a result, there is a balance between men and women among the farmers who are beneficiaries of the intervention. Just one example relative to the cassava groups where in a total number of 2174 farmers benefiting of the regular FFS training, 1104 of them are women while 1070 are men illustrates well how the attention to gender balance is kept during the project implementation process. Although this situation, the impact is not yet known as it has to be evaluated after a certain period of time following the real improvement of production conditions.

On the side of environment integration, the IPM concept is in total respect of environment protection. The significant decrease of pesticide use (number of treatments: pesticide sprays) in potato production which was reached by farmers as a positive result of project implementation (from 15-16 times a season to 2-3 times per season).

4.2.3 Risks and Assumptions

Risk/Assumption	Level	Taken measures
Availability and operation mechanisms/measures of decentralisation process (Identified in TFF)	B	Regular information of district/sector agronomists about evolution of the project activities
Low commitment of some agronomists to support farmers engaged in FFS activities	B	Continuous supervision of the FFS groups by the project to allow them producing interesting results for the agronomists: this strategy leads to progressive integration of FFS realisations in performance contracts of the agronomists.

4.2.4 Quality criteria

	Score	Comments
Effectiveness	A	The different results of the IPM project have been delivered smoothly and contributed to the realisation of the specific objective as shown by the different indicators of the specific objective
Efficiency	B	The means availed by the intervention were used to practically achieve the activities and thus perform the expected results. All the intermediate results have thus been achieved for each of the priority crops already treated. However, it remains necessary to increase the number of beneficiaries and of intervention sites for each individual crop
Sustainability	B	The project intervention is owned by different levels of beneficiaries starting from MINAGRI, its agencies, the agronomists at decentralised levels, the trained FFS facilitators and by farmers themselves. This provides a guarantee that even at the end of the project, the different beneficiaries will continue managing their production according to the beneficial knowledge acquired through the project
Relevance	A	This intervention is in line with Rwandan policy in agriculture as described in PSTA 2 where intensification and professionalization of agriculture are the guiding principles. The increase of productivity reached through the FFS approach promoted is a visualisation of that relevance. On the other side, by availing FFS facilitators, the intervention increases the access to extension services and this is also in line with the national policies,

4.2.5 Impact

The specific objective being around the increase of crop productivity and improvement of environmental protection through setting up an integrated management system of pests and diseases, the realisation of the specific objective has in reality progressively generated an increase of crop productivity. In reality, most of the farmers who proceeded to rehabilitation of their old banana plantations estimate that progressively, the size of the harvested bunches has significantly and progressively increased. Some examples of farmers who have already registered an important increase of their production level following the action of the project are now available (figure 2).
In the figure 2, it is illustrated a family whose the husband participated in FFS training and started immediately to implement the skills acquired at the FFS plot level in his own plots. With simple actions of banana plot rehabilitation, he obtained after only a few time a significant improvement of the size of bunches and the production wave was more regular. Automatically he proceeded, together with his spouse to commercialising the production and the money generated was used to buy a cow which is now generating manure used for more improvement of the banana fields.

Based on the already recorded data, it appears that the IPM project has generated an impact as there is a significant increase of the crop productivity through the use of IPM technology. In line with the global objective, it can be considered that the few examples given in this reports show that there is a real decrease of poverty (income generation) at the level of the farmers involved in the various actions of the project.

Figure 2. ***Illustration of farmers having significantly improved their production conditions with a possibility of marketing their production and thus generating incomes***

This very simple example shows that the specific objective of the IPM project contributes to the sectoral objectives as found in the PSTA 2 in Rwanda. Other

examples showing how the actions undertaken by the project are generating results of farmers' direct involvement of clean seeds of crops like potato (figure 3) and banana are also available.

Figure 3. ***Farmers organised in FFS groups acquire the knowledge and skills to realize production of clean seeds and contribute thus to facilitating and increasing the level of clean seed use in Rwanda***.

All of these examples, added to the fact that several FFS groups have now undertaken a process of registering as farmers' cooperatives constitute proofs that the specific objective of this project is really contributing to the sectoral objectives of agriculture in Rwanda.

4.2.6 Lessons learned and recommendations

Based on the different data generated since the beginning of the project, a series of lessons and recommendations could be formulated at this stage. All of them are proposed in view of improving the quality of services offered to farmers in view of improving their productivity level and thus contribute to making their farming activities an income based agriculture. After presentation of the lessons learned, the various recommendations will be presented in another separate table.

Lessons learned

Lesson learned	Public	Capitalisation in the project cycle
In Rwanda, farmers are highly attached to their various genetic resources and are ready to own any initiative helping them to improve productivity of these varieties	All the development partners interested by agriculture	Identification-formulation
Farmers in Rwanda are very attentive to the added value of each innovation in agriculture	All the actors involved in extension	Implementation

In the opinion of farmers, pests and diseases constitute an important threat for the production system. Based on that, farmers request to access to the most efficient and sustainable control methods	All the actors involved in extension	Formulation and implementation
The FFS approach is a powerful tool which is highly appreciated by farmers in Rwanda	Policy makers at the MINAGRI level + Development partners	At all the steps
Rwandan farmers are able to speed up research relative to varieties development through programmes of participatory evaluation of varieties	MINAGRI and the research agency (ISAR)	Implementation
The high impact of pests and diseases in Rwanda is due to the fact that farmers don't have enough proximity service providers with high technical skills in relation with control of biotic constraints	MINAGRI and the different actors involved in extension	All the steps

Recommendations

Recommendation	Source	Who	Deadline
Maize should become a great priority for training using the FFS approach	Sub-chapters 4.2.1, 4.2.2 and 4.2.3	PS of MINAGRI in collaboration with BTC through the support to SPAT 2	Q2 and Q3 of 2011
The training based on the use of FFS approach should continue on various crops in Rwanda even after the end of IPM project	Sub-chapters 4.2.1, 4.2.2, 4.2.5	PS of MINAGRI and BTC	Q2 and Q3 2011
Agronomists at the level of the decentralised administration should be made more responsible of the FFS actions in their areas	Sub-chapter 4.2.3	PS of MINAGRI and the decentralised authorities	As soon as possible (Q2)
The place of the FFS approach in the Rwanda extension system should be defined more clearly	Sub-chapter 4.2.1, 4.2.2 and 4.2.5	MINAGRI and a team in charge of developing the road map for extension services in Rwanda	Q2 of 2011

4.3 Result 1

4.3.1 Indicators

Result: Concept, methodology and mechanisms of setting up IPM are reviewed and formulated to serve as reference for starting a program of integrated management of the pests and diseases of the main crops in Rwanda				Progress: A	
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
List of works and realisations of IPM in Rwanda				B	The result was mainly accomplished during the first mission (end of 2008). However, in 2010, different realisations like the recruitment of the national FFS coordinator, study tours and elaboration of training curricula for the different crops were achieved
List of global recommendations formulated				B	
Consultation with the instances involved				A	

4.3.2 Evaluation of activities

Activities	**Progress:**				**Commentaires** (only if the value is -)
	++	+	+/-	-	
1. Develop a training curriculum adapted to Rwandan conditions		X			

4.3.3 Analysis of progress made

- **Relation between activities and result**

The single activity relative to this result was about the development of a training curriculum adapted to Rwandan conditions. This was done through organisation of the first consultation mission which recommended the FFS approach as the extension strategy to be used for the implementation of the present project. After this mission, all the information leading to selection of the crops to be treated was available according to the situation prevailing in Rwanda. However, it is important to highlight the fact that the quality of each training curriculum is related with the quality of gaps analysis performed at the beginning of each training session. The initial document serves as a general guideline while for each crop there is a need to develop a specific training curriculum.

- **Sensitive factors and influencing factors**

During the first mission of consultancy relative to development of a training curriculum, the influencing factors were relative to identification and recruitment of a qualified specialist. During the mission, it was important for this specialist to get in touch with all the people who could deliver useful information to orient the strategy to be followed by the project like (i) importance of the crop for food security, (ii) the level of damages induced by pests and diseases, (iii) the importance of pesticide use omn the crop etc...

- **Harmo dynamics**

During that mission relative to development of the training curriculum, information

were collected from different development partners including FAO which was about to implement a project relative to IPM in rice. Other actors like ISAR, OCIR café and PAPSTA were also contacted during the process of collecting information as these actors had expressed their interest in the use of the FFS approach.

- **Gender and Environmental integration**

During the mission, information relative to the different parameters were collected from men as well as from women involved in agricultural activities. During that process, the use of pesticide was a point of the highest interest in the analysis of the prevailing situation. These data were then used for the selection of the crops to be addressed during the project implementation.

4.3.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
Identification of a specialist consultant to formulate the global training curriculum (TFF risk)	B	The consultant was easily identified and recruited though an international call
National staff having information for curriculum elaboration	A	Active participation of national staff during the first mission

4.3.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	All the specific training curricula planed for 2010 were produced by the end of 2010
Efficiency	A	Resources of the project have effectively been used to support the elaboration of the training curricula and thus proceed to the real training of farmers and facilitators
Sustainability	A	The FFS facilitators and the farmers trained according to the content of the training curricula will continue applying the same approach to train others on the requests even beyond the project period; today some of the facilitators have already registered companies to proceed to service delivery

4.3.6 Budget execution

Up to 31/12/2010, the budget execution for this result was globally of 46% (75.9596,36 Euros already used while the total budget is of 164.500 Euros). This execution rate seems to be low but it can be noticed that this is in reality due to the fact that most of the training curricula used up to now were mainly developed by the recruited FFS master trainers and the project technical team. Moreover, the level of study tours for farmers was not very high because most of the members of the project team who are supposed to organise and accompany the study tours were very busy

with the execution of the different ToT training sessions. Now, as the frequency of ToT sessions is going to be reduced, it will be possible to multiply study tours for farmers between the different regions of Rwanda.

4.3.7 Lessons learned and recommendations

Lessons learned

Lesson learned	Public	Capitalisation in the project cycle
Training curricula have to be developed crop by crop to address the real problems faced by farmers	All the development partners operating in agriculture MINAGRI and its agencies	Implementation
Once training curricula are developed, there is a need for an effective realisation of training with a very important field component	Development partners and MINAGRI agencies	Implementation

4.4 Result 2

4.4.1 Indicators

Result: Technical staff are trained in sufficient numbers to the concept, methodology and mechanisms of setting up integrated management of control of pests and diseases (IPM) in Rwanda; this technical staff are trainers at the base of progressive integration of IPM at the farmer level					Progress: A
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Recruitment and establishment of Master Trainers		X		A	Master Trainers were available during all the year for the different training sessions
Recruitment of specialised consultants		X		A	All the specialised consultants were availed on the demand
Realisation of training sessions of ToT		X		A	Already ToT were organised for 6 crops and another one is for striga
Number of technical staff trained		X		A	Already 563 facilitators are trained
List of acquired materials				B	Progressively, materials based on the achieved training activities are prepared

4.4.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1. Localise, mobilise and recruit the expertise in measure to ensure training of trainers		**X**			
2. Favour the learning and adoption of each of the different components of IPM		**X**			
3. Ensure training of trainers		**X**			

4.4.3 Analysis of progress made

- ***Relation between activities and the result***

The 3 planned activities were achieved and contributed together to avail trainers in Rwanda. Thus, there is a clear relationship between activities and the result. The fact that continuing to carry out these 3 activities results in a progressive increase of the number of trained facilitators is a proof of the direct relationship between activities and the result. Due to these activities, there are now several facilitators (563) who are delivering services to farmers, communities.

- ***Unexpected results***

As unexpected result, we can indicate the training of core-facilitators for the potato commodities; 3 different sessions have been organised since the beginning of the project 91 in 2009 and 2 in 2010); this allows to make available a high number of trainers in view of reaching more and more farmers growing that crop.

- ***Harmo dynamics***

There is also a harmo dynamics in the frame of the ToT sessions as contacts have been established with other actors in view of collaborating in the organisation of the training. This is the case for the maracuja ToT for which there is a close collaboration

between the IPM project and the APFH project. On the other side, it can be highlighted the collaboration established with PAPSTA project which allowed organisation of a training of core-facilitators who are now training in zones of intervention of that PAPSTA project. Moreover, the FFS facilitators graduated by the IPM project were sollicitated to work on promoting good practices with the collaboration of the LWH project in the districts of Rutsiro and Karongi.
Finally, there is an interest of FAO cassava program to involve the facilitators trained by the IPM project to perform the activities of supervising farmers at the field level in the context of the FAO project.

- **Gender and Environmental integration**

As in Rwanda a majority of women are achieving agricultural activities in rural areas, the project proceeds through a specific sensitisation in favour of women participation in the different project activities. This leads to a gender balance in relation with the training of technical staff; this message is highlighted since the process of problem identification and selection of participants to the ToT (training of trainers). This constitutes also a criterion of selecting participants that has to be taken into consideration by farmers' communities when they decide about their respective representatives to the training.
During the training sessions, participants are not only trained on the technical issues, there are also some specific presentations aiming at taking into account of gender balance but also to the different issues relative to environmental protection (erosion control, decreased use of pesticides, conservation of natural resources etc...).

4.4.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
Master trainers identified, available and recruited (TFF risk)	B	A company was recruited and availed all the required master trainers; this was through an international call process
Assignment of the public staff is coherent and stable (TFF risk)	A	The staff of RADA and staff of the project were affected to realisation of the project tasks
Availability of training centres and ToT plots (implementation risk)	A	Training centres easily identified and contracted in areas of project ToT and plots to host ToT activities hired by the project

4.4.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	The 6 crops around which the ToT had to be organised were achieved or at least started by the end of 2010
Efficiency	A	The project budget planned to be used for ToT was effectively used to organise different ToT sessions on various crops.
Sustainability	A	The trained people have acquired the required skills at the technical and organisational point of view and it can be estimated that they will continue to deliver services even after the end of the project

4.4.6 Budget execution

The budget execution for this result on 31/12/2010 reached the level of 89% (expenses reaching 662.480,44 Euros for a total budget of 745.900,00 Euros). This high budget execution rate illustrates the success of the training of trainers (ToT sessions) around the various crops (126 trainers for potato, 28 trainers for maize, 114 trainers for banana, 108 trainers for tomato, 70 trainers for cassava, 54 trainers for passion fruit and 63 trainers for striga control). The execution is very significantly advanced. Given the success of these training sessions which in reality allow availing more skilled people able to provide extension services to farmers, it will be necessary to negotiate for a budget change in view of increasing the means dedicated for activities allowing reaching this result. This is expected to be easy as the transfers will be realised within the cogestion budget.

4.4.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
There is a great need for increasing technical skills of facilitators to allow them improving the quality of services delivered to farmers	All the development partners operating in agriculture	Implementation
The agronomists available in districts/sectors and farmers'cooperatives need to be skilled by being trained with the FFS methodology to increase their delivering capacity	Development partners and MINAGRI agencies	Implementation

4.5 Result 3

4.5.1 Indicators

Result: Farmers are trained at their round on the concept, methodology and mechanisms of setting up integrated management of pests and diseases control (IPM) in Rwanda by technical staff.					Progress: A
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Mobilisation of trainers		X		A	Each trained facilitator started automatically training of farmers with the project support
Specialised consultants recruited to deliver training on the IPM components	X	X		A	All the requested consultancies have been provided
Achievement of farmers' training sessions	X	X		A	The training were organised in all the districts of Rwanda (Except the city of Kigali) according to the crops of interest for farmers among the priority crops
Level of monitoring/facilitation of training by the project team	X	X		A	On a regular base, the project team made a follow-up of the activities in the different FFS sites and provided
Number of trained farmers		X		A	The numbers of trained farmers are: 5402 for potato,5010 for maize, 3310 for banana, 5000 for tomato, 2174 for cassava, 1628 for passion fruit and 1905 for striga control.
List of acquired materials	X	X		A	(1)First experiences of FFS in Rwanda, (2) Description of FFS methodology, (3) Descrption of diseases complex in Tamarillo and control strategy, (4) Prevalence of striga and necessity for an integrated control strategy, (5) Synthesis of all the racquired IPM/FFS experiences in Rwanda, (6) Leaflet for the integrated control of striga in Rwanda

4.5.2 Evaluation of activities

Activities	Progress:				Comments (only if the value is -)
	++	+	+/-	-	
Facilitating all the steps of farmers' training	X				

4.5.3 Analysis of progress made

During the year 2010, training of farmers was one of the main achievements of the project at the field level. This resulted in having farmers with a high degree of practical knowledge and skills to efficiently perform management of their crops in a sustainable manner.

- ***Relationship between activities and the result***

There was a direct relationship between the activity (facilitation of all the steps of farmers' training) and the result (Farmers are trained...). In fact, by ensuring all the steps of farmers training to be realized according to the season long principle, it became possible to get a high number of farmers who have followed the capacity building session through the practical training approach.

- ***Sensitive factors***

A factor which led to the high success of reaching the result is related to the high interest of farmers to participate in the training session. In fact, as the entry point of the training sessions organised by the IPM project was the control of pests and diseases, farmers who are facing regularly these threats were really interested in following the proposed training because of their interest to acquire the useful knowledge in that frame.

- ***Unexpected results***

At the beginning of the project activities, it was not expected to have to proceed to training relative to striga control in cereal production in Rwanda. However, given the importance that parasitic weed is inducing in the country, the authorities recommended to take into account development and implementation of a suitable management strategy to contain that problem. It is in that way that by the end of 2010, there was already organisation of a training in relation with that management and that is why there are today 1905 farmers following training given by 63 trained facilitators. Presently, all these people trained know in details the striga biology and can implement easily the recommended solutions to overcome this problem.

- ***Harmo dynamics***

As already announced, there are constant contacts and mutual support between the IPM project and the other actors interested in performing FFS training. These actors are FAO, LWH project, PAPSTA project etc... In that frame, FFS facilitators trained and graduated by the IPM project have been availed in view of giving assistance to the actors who want to achieve training of farmers activities at the field level.

- ***Gender and environment integration***

For the farmers' training organisation, the IPM project has constantly developed a special attention about gender balance integration in all the training carried out. Just

an example, in the training relative to cassava, the project has got about 51% of women against 49% of men attending the training. On another commodity like passion fruit, the trends are the following: 42% of women and 58% of men. However, it is not yet possible to measure the impact of this gender balance in terms of efficiency and/or sustainability.

About environment integration, the training were always delivering about issues of soil conservation and erosion control, genetic resources conservation and limited use of pesticides for the control of pests and diseases.

4.5.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
Affectations of trained staff are coherent and stable (TFF risk)	B	The project trained people selected in rural areas to facilitate their reintegration after training
Distances to be covered by the trainers must be reduced to avoid transport costs (implementation risk)	B	The project supported transport and communication fees for the FFS facilitators when they achieve training of farmers

4.5.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	By the end of 2010, FFS training sessions were already started at the farmers' level around the different crops (potato, banana, cassava, maracuja, tomato, maize and striga control in maize and sorghum)
Efficiency	A	An important part of the project resources have effectively been used to realise the training of farmers (FFS).
Sustainability	A	The trained farmers are starting to organise the production in their own way by using the suitable methods to ensure sustainable production.

4.5.6 Budget execution

By the end of 2010, the budget execution in relation with this result relative to training of farmers was of 106% (310.200,50 Euros expensed for a total budget of 293.000,00 Euros). There was a very high success for all the activities relative to training of farmers and this was mainly based on the requests expressed by either the farmers' communities or by authorities at the decentralized level (districts or sectors). On the date of 31/12/2010, the project had already started training of farmers around different commodities (5402 farmers for potato, 5010 for maize, 3310 for banana, 5000 for tomato, 2174 for cassava, 1628 for passion fruit and 1905 for the integrated methods for control of striga). As the project is still receiving demands from farmers and local

leaders in view of organising other training sessions for farmers, and given the fact that some already initiated training of farmers have not yet been finished, it is expected to negotiate for a budget change in view of having additional means from other budget lines in the cogestion.

4.5.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
Farmers showed a high interest to participate in the training organised around the different crops even those which were estimated as being well known by farmers since a long time	All the development partners operating in agriculture	Implementation
Implementation of suitable practices is leading to a general increase of production level for different genotypes like various banana varieties	Development partners and MINAGRI agencies	Implementation

4.6 Result 4

4.6.1 Indicators

Result: Quality planting material of prebasic, basic and commercial of the main crops adapted to agro-ecological conditions are available					Progress: B
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Number of training and sensitisation session in relation with plant quarantine	X	X		A	
Importance of infrastructures serving for quarantine operations				C	The process of developing quarantine infrastructures is still in process (building of green houses still to be performed)
Data of production of planting materials (prebasic, basic and commercial)				B	The IPM project has just promoted the use of clean seed by training farmers and facilitators about the practical access to clean planting material through performing very simple and easy treatments (hot water treatment for cassava and banana)

4.6.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1. Sensitise about the importance of plant quarantine		X			
2. Promote and strengthen setting up of plant quarantine protocols				X	Establishment of quarantine infrastructures has taken a long time. It is only in 2011 that they are going to be established

4.6.3 Analysis of progress made

- ***Relationship between activities and result***

It appeared that the relationship between activities and result was somehow very weak. In fact, even the sensitisation about plant quarantine was performed in different sessions organised by the project, the availability of clean planting material was performed through other activities like the field training carried out on different crops. Moreover, the development of quarantine infrastructures will just facilitate more safety around introduction of new materials which will be introduced in the country. For the already existing materials, the increase of quality planting material availability will be achieved by other actors. However, the project is having an impact in this sense as it contributes to increasing the seed production by the informal system while by the same moment there is also a promotion of the use of various local varieties.

- ***Sensitive factors and influencing factors***

Globally, there was a little delay in undertaking the actions relative to setting up of the quarantine protocols due to the fact that all the training activities (ToT and FFS) took a maximum of time. The process of acquiring the quarantine infrastructures is only

expected during 2011 (Q1 and Q2).

4.6.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
Role and actions of staff involved in production of pre-basic materials and in performing quarantine protocols are well understood (TFF risk)	A	Sensitisation about the importance of health quality control
Roles of public and private sector in production of basic materials are clear and understood by all the actors (TFF risk)	B	The project trained farmers how to produce quality seeds in their own plots
All the other actors are informed about the risk to introduce infected materials	C	Different sensitisation seminars for agronomists and other district/sector responsible

4.6.5 Quality criteria

Criterion	Score	Comments
Effectiveness	C	The project has realised different sensitisation sessions. However, the infrastructures of plant quarantine as well as the laboratory equipments are not yet available
Efficiency	B	Funds of the project have been used for the different sensitisation sessions and for the training delivered to farmers. The other resources planned to be used for acquiring infrastructures are not yet used
Sustainability	A	Once the message about the danger of introducing infected seeds is provided to the trained facilitators and farmers, it is expected that this will continue to constitute a pint of attention for the actors.

4.6.6 Budget execution

By the end of 2010, the budget execution rate for this result was of 11% (only 35.391,36 Euros were used while the total budget was of 312.000,00 Euros). This low execution level is due to the fact that infrastructures for quarantine operations (greenhouses) and laboratory equipments are not yet acquired. The project is presently occupied with processes of acquiring these equipments and infrastructures and the budget relative to these components is expected to be used in Q1 and Q2 2011.

4.6.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
In Rwanda, there are a lot of production actors (farmers mainly) who are not yet informed about the danger of introducing planting materials without a strict control of the health quality	All the development partners operating in agriculture Farmers MINAGRI	Implementation
Importance of quality planting materials is now well measured by different actors	Development partners and MINAGRI agencies	Implementation

4.7 Result 5

4.7.1 Indicators

Result: Cropping methods aiming at reducing the potential sources of pests and diseases of the main crops are promoted					Progress: A
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
List of sustainable cropping practices proposed				A	On the various crops treated by the project, the training (ToT and FFS) were achieved around the use of appropriate cropping practices
Number of trials achieved and level of participation	X	X		A	The practical realisation of all the training (ToT and FFS) was based on the field comparison of the different production methods
Number of farmers having adopted the proposed cropping practices				A	As already indicated, there are high numbers of farmers having followed the training of IPM project

4.7.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1 Realise an inventory of the traditional cropping practices		X			
2 Setting up the knowledge relative to appropriate and sustainable	X				

4.7.3 Analysis of progress made

- ***Relationship between activities and result***

The activities carried out by the project have contributed very significantly to the result. In fact, before each training session (ToT), there are different data recording in view of achieving the gaps' analysis. During that process, the different cropping practices under use are recorded and it is on that base that the appropriate protocols are promoted. That first analysis performed by the project was also completed by the work about inventory of cropping practices which was carried out through a practical field consultancy.

- ***Harmo dynamics***

As the IPM project itself collects this type of information in relation with cropping practices, it has proceeded to using that information in the activities organised in collaboration with other actors like RADA, PAPSTA project and LWH project.

- ***Gender and Environmental integration***

Through that process of collecting information in relation with the cropping practices, the gender issues are taken into consideration as points of view of women as well as those of men are considered. By the same occasion, all the practices which could have an impact on the environment quality are also collected through that process. Finally, development of the practices to be proposed and promoted through the project activities, the issues of environment protection are also considered.

4.7.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
The cropping practices leading to development of pests and diseases are identified (Implementation risk)	A	For each crop, the project organises a participatory gap analysis prior to each training session
Participants to ToT and FFS accept to test and validate innovations in cropping practices (implementation risk)	C	The project adopted a strategy allowing participants to compare their old practices with those proposed as innovations

4.7.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	For all the training sessions organised, there is an obligate step of getting this information relative to cropping practices before proceeding to the real field training
Efficiency	A	These information is available because the funds of the project were accessible to realise the collecting action
Sustainability	A	As the training achieved are in part oriented towards improving the cropping practices and as the benefit is rapidly visible at the farmer level, it can be expected that the beneficiaries will continue to use the best practices and avoid the non appropriate ones even after the end of the project

4.7.6 Budget execution

The budget execution rate at the end of 2010 was of 19% (expenses of 11.666,04 Euros for a total budget of 60.500,00 Euros). Apparently, this execution rate seems to be low. However, it can be highlighted that most of the activities relative to this result were covered through other budget lines (training of trainers and training of farmers). In fact, the organised training start by gap analyses activities which allow recording the situation relative to used cropping practices and this is followed by adapting training curricula as well as by the accomplishment of training sessions by taking into account these recorded situations. In these conditions, it will be easy to negotiate for transferring money from this budget line to the lines of training (ToT and/or FFS).

4.7.7 Lessons learned and recommendations

Lesson learned	Public	Capitalisation in the project cycle
For all the crops already treated, there are many inappropriate cropping practices which used by farmers and which can generate a negative impact in relation with development of pests and diseases	All the development partners operating in agriculture	Identification, Formulation and Implementation
Farmers are ready to change their practices if the proposed appropriate practices give to them visible benefits	Development partners and MINAGRI agencies	Identification, Formulation and Implementation

4.8 Result 6

4.8.1 Indicators

Result: Knowledge relative to development cycles of pests and diseases and their practical involvement for the control are acquired by actors involved in the production of the main crops					Progress: A
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Number of pests and diseases for which the knowledge relative to development cycles allowed to modify the control metods		X		A	All the biotic constraints appearing on the treated crops were taken into consideration
Number of farmers who adopted cropping practices by considering development cycles	X	X		A	For each crop, there were high numbers of farmers participating in the training FFS and ToT which ststematically took into consideration development cycles
Number of trials achieved	X	X		A	In all the areas where the FFS activities were undertaken, there were trials including the issues relative to improvement of cropping practices
Number of specific training facilitated by the projects				B	Two members of the project staff attended international training on the use of IPM for control of pests and diseases; these were in USA and in Netherlands
Number of documents produced and which are in relation with development cycles				A	Various documents wre produced by the project under the form of leaflets and of booklets

4.8.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1 Localise, mobilise and recruit the expertise in measure to provide knowledge on development cycles of pests and diseases	X				The experts were recruited and finished they survey
2 Ensure publication of documents relative to development cycles of pests and diseases		X			Different documents were published by the project
3. Funding specialised training in entomology and epidemiology			X		Training in IPM in USA and Netherlands for 2 members of the project staff
4. Setting up the knowledge relative to development cycles of pests and diseases	X				All the training (ToT and FFS) include issues relative to development cycles of pests and diseases

4.8.3 Analysis of progress made

- ***Relationship between activities and the result***

For each crop treated during the different training sessions organised, the data relative to pests and diseases development were taken into consideration to propose more suitable methods for pests and diseases control under production conditions in the considered areas. On the other side, performing field realisation of the activities allowed to develop Rwandan specific experience in relation with this aspect of control of pests and diseases by taking into consideration their respective development cycles. Documents produced based on these particular experiences in Rwanda are now being distributed throughout the country and are useful to ensure a practical use of these suitable methods of pests and disease control.

- ***Sensitive factors and influencing factors***

The damages induce by some particular constraints like the BXW or the potato late blight played an important role in increasing the participation of farmers in the activities undertaken by the project. An understanding development cycle was estimated by the majority of beneficiaries as an important achievement in the sense of improving the control methods.

- ***Unexpected result***

The outbreak of striga in Eastern province of Rwanda had not been taken into consideration at the beginning of the project. In these conditions, when the problem was highlighted by farmers, the project started to develop a strategy to improve the control of that weed. Farmers and different local authorities at the decentralised level showed a high interest for all the issues relative to the control of striga and for that, understanding the development cycle of that weed was highly appreciated by participants. Through that understanding, participants in the different training relative to striga control can better implement in their plots the recommended control strategy.

- **Gender and environmental integration**

For the various activities undertaken to improve the control of pests and diseases and which had relationship with the pests and diseases development cycles, women and men were given the same chance (opportunities) to participate in the different training and to increase thus their relative skills in relation with pests and diseases control. That is translated by a gender balance existing at the level of farmers participating in the different FFS activities through which knowledge relative to pests and disease development is provided.

For the environmental integration, a special attention is put on the impact of climatic conditions for the development of pests and diseases. From these knowledge, farmers acquire also practical skills which can contribute to reducing the development rate of pests and diseases.

4.8.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
The different actor are aware about the negative impact of pests and diseases and measure the necessity to adopt new control methods (TFF risk)	B	The comparative analysis performed in the different ToT and FFS plots allowed farmers, facilitators and agronomists to have a clear idea about the importance of the new control methods
Planting materials and all the required input to demonstrate the impact of the new methods are available in quality and quantity (Implementation risk)	B	The project has acquired quality materials from ISAR and RADA to perform the learning process in the farmer fields
The trained FFS facilitators are ready to organise training of farmers on a season long strategy	B	The project supported transport and communication fees for the FFS facilitators

4.8.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	The training (FFS and ToT) which were planned were realised with a progressively increasing participation at the grassroot level. Aspects relative to pests and diseases development cycles were taken into consideration during all these training sessions.
Efficiency	A	All of these training and the process of collecting information relative to pests and diseases were performed by using the project financial resources
Sustainability	A	Once farmers know more about development of pests and diseases and the impact of the development cycles on their relative importance and involvement on the control methods, it is expected that even after the end of the project they will continue to use improved methods for controlling pests and diseases

4.8.6 Budget execution

The result 6 is in relation with acquiring knowledge about pest and disease development cycles by actors involved in control of these biotic constraints. The budget execution rate was of only 1% at the end of 2010. This is explained by the fact that all the activities relative to setting up the knowledge relative to development cycles of pests and diseases were achieved with the budgets of training of trainers and training of farmers. On the other side, a consultancy mission relative to these issues was realised in Q4 of 2010 but the report is not yet validated and thus the services are not yet paid. Globally, there will be a positive balance on the budget line relative to this result; in these conditions, the budget change to be negotiated at the level of the steering committee will take that into account in view of transferring money to the training (ToT A 02-03 and FFS A03-01).

4.8.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
Globally, Rwandan farmers have a limited knowledge relative to pest and disease development cycles	All the development partners operating in agriculture MINAGRI	Identification, Formulation and Implementation
Farmers appreciate to learn about the biology of pests and diseases in view of improving the control methods	Development partners and MINAGRI agencies	Identification, Formulation and Implementation

4.9 Result 7

4.9.1 Indicators

Result: The use of resistant varieties and/or tolerant to pests and diseases is adopted by actors involved in the production of the main crops					Progress: A
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Number of situations for which a better knowledge about resistance characteristics to modify control methods	X	X		A	During all the ToT and FFS, information relative to the suitable use of resistance was delivered to all the participants
Number of farmers having adapted cropping practices taking into account the knowledge acquired about resistance		X		A	All the farmers participating in FFS sessions are exposed to the issues relative to the suitable use of resistance
Data relative to the importance of genetic diversity in relation with each concerned species	X	X		A	All the accessible genetic diversity was used in Tot and FFS to allow participants to experiment themselves issues relative to pests and diseases
Number of trials realised and level of participation				A	For all the crops, each facilitator initiated at least one FFS experience through which the issues relative to resistance were taken into account.

4.9.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1. Localise, mobilise and recruit the expertise in measure to deliver knowledge relative to management of resistance			X		
2. Funding the specialised training in the use of the resistance			X		
3. Setting up the knowledge relative to management of resistance	X				

4.9.3 Analysis of progress made

- ***Relationship between activities and result***

Since the starting of the project activities, it was emphasised the exploitation of resistant varieties in the different training (ToT and FFS). This resulted in the field application of the knowledge relative to management of resistant varieties. The training followed by two members of the project staff in relation with the use of IPM to control pests and diseases was also useful in the process of promoting the sustainable use of resistant varieties in Rwanda.

- ***Sensitive factors and influencing factors***

During the training process, farmers were very interested to access to different varieties for the various crops. That was a good occasion for them to test and evaluate the different varieties in view of proceeding to their own participatory selection. More interestingly, farmers' communities showed a high interest in the

possibility to better exploit their own traditional varieties by putting in place appropriate cropping practices. This exploitation and use of local genotypes is a way of increasing the genetic diversity and thus of creating suitable conditions leading to a sustainable use of resistance.

- ***Unexpected results***

Some local varieties are being promoted at the level of the country through the global improvement of the cropping practices. This is the case for cassava and for banana for which the traditional varieties are being recovered through the different treatments including selection, heat treatment, application of inputs etc...

- ***Gender and Environmental integration***

Gender balance in the participation to this suitable exploitation of genetic resources is a parameter which is permanently taken into consideration. The farmers' communities are sensitised to the fact that each training session must be followed by groups with a gender balance. Up to now, it has been seen that men and women continue to participate in the activities even after the end of the intensive phases of the training.
For the environmental integration, there is a special attention on the control of erosion and conservation of these genetic resources. Moreover, by promoting the use of suitable fertilisation approach (organic and mineral fertilisers), the project has progressively contributed to increasing the skills of participating farmers in relation with environmental conservation.

4.9.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
A diversity of varieties for each crop is available to perform testing their respective level of resistance (implementation risk)	A	The project got the varieties from different sources (ISAR, farmer plots, RADA, import of varieties)
Farmers in the different zones participating in FFS activities have access to the same varieties as the materials used in ToT plot (implementation risk)	B	The project provided all the FFS groups with materials of the different varieties used in ToT plots
Farmers participate themselves to evaluation of the resistance level of the used varieties	C	Facilitation skills given to the FFS facilitators to organise season long sessions The project staff visit regularly all the FFS groups to encourage them
Farmers keep together in associations to continue exploiting efficiently the identified benefits	B	The project continued to sensitise farmers about the importance of working in organised associations. The inputs and other assistance from the project were attributed to groups and not to individuals

4.9.5 Quality criteria

Criterion	Score	Comments
Effectiveness	A	In all the field activities (ToT and FFS), there is constantly a special attention on the exploitation of genetic resources and more particularly on the increase of genetic resources used in farmers' crops
Efficiency	A	The project funds were used to acquire the previously non accessible varieties for farmers and for the real organisation and achievement of the training
Sustainability	A	Farmers have already realised that different varieties are more beneficial (adapted, resistant, productive) than the others. There is no doubt that even after the end of the project, these varieties will continue to be used by farmers if they are convinced about the benefits they get from them.

4.9.6 Budget execution

For this result which is relative to the adoption and use of resistant/tolerant varieties by actors involved in production of the main crops, the budget execution rate was of 4% (2.700,85 Euros expensed while the budget was of 67.000,00 Euros) at the end of 2010. This rate is low because most of the activities relative to the appropriate use of resistant varieties were carried out through the training (ToT and FFS) sessions organised around the different priority crops covered by the project. Moreover, one consultancy mission initially planned has not yet been realised. This mission will only complement the realisations already achieved through the different trainings.

For the positive balance which should remain by the end of the project, the budget change to be negotiated would allow transferring money from this global budget line to the lines relatives to training (ToT and FFS).

4.9.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
Rwandan farmers are interested by receiving and testing themselves new varieties for different crops	All the development partners operating in agriculture	Identification, Formulation and Implementation
Emphasising the local varieties is highly appreciated by farmers who estimate that several of them have very particular properties	Development partners and MINAGRI agencies	Identification, Formulation and Implementation
Diversifying access to different varieties allow farmers to develop their skills for participatory selection of varieties	Research and different development partners	Identification, Formulation and Implementation

- **Recommendations**

Recommendation	Source	Who	Deadline
The final validation phase should be done at the farmers level for the different varieties to be released	Sub-chapters 4.9.3	ISAR, decentralised authorities, all the project working in agriculture	Q2 and Q3 of 2011
The traditional genotypes should be cleaned and reintroduced in the rural areas to avoid the genetic erosion	Sub-chapters 4.9.3	ISAR, RADA, all the development partners in agriculture	Q3 2011
Farmers' preference for particular varieties should have to be taken into consideration	Sub-chapter 4.9.3	ISAR, RADA, all the development partners	Q4 2011

4.10 Result 8

4.10.1 Indicators

Result: The positive repercussions of promotion, development and setting up of an integrated management system for control of pests and diseases of the main crops are at the base of reviewing the national strategies for crop protection					Progress: B
Indicators	**E**	**G**	**Baseline**	**Progress year N**	**Comments**
Number, quality and diversity of the various publications and communications through media				A	Diverse booklets, leaflets , documentary movies and radio messages have been produced in 2010
Number and repercussions/outcome of sensitisation sessions		X		A	All the meeting sessions organised by the project had the objective of increasing the awareness of participants about the benefit of appropriate strategies to control pests and diseases
Number of persons/groups, cooperatives, associations sensitised		X		A	All the groups from which participants to ToT are coming were progressively sensitised
Number of trainings facilitated by the project and number of beneficiaries		X		A	The training were organised about different crops defined as priority crops since the beginning of the project

4.10.2 Evaluation of activities

Activities	**Progress:**				**Comments** (only if the value is -)
	++	+	+/-	-	
1. Develop and set up a communication strategy	X				
2. Contribute to revising the national disposals for management of pesticides		X			

4.10.3 Analysis of progress made

- ***Relation between activities and result***

The progressive development of a communication strategy allows the project to make the positive achievement known by the public in Rwanda. It is through that type of progress that people could be aware about the possibility to improve the strategy of pests and diseases control at the national level. Today, based on the different experiences developed by the project and made known at a large scale by performing the project communication strategy, different actors are requesting more and more actions of the project in the area of pests and diseases control. This shows that the communication strategy put in place is useful to generate the expected result.

For the revision of the national disposals in relation with the management of pesticides, there has been a funding operation of the RHESI (Rwanda Horticulture Export Standards Initiative) programme based in RHODA. This activity was co-funded

by the IPM and APFH projects. As a consequence of this action, there is now a clear orientation of RHODA in view of promoting exports of horticultural products and this will be possible only if the system of healthy quality (control of pests and diseases) is improved.
Finally, a mission of consultancy in relation with improvement of pesticide management in Rwanda has been prepared (now it is in the phase of analysis of the different applications). Once the report will be ready, the project will provide MINAGRI and other actors with the information which will be generated by the way of that consultancy.

- ***Sensitive factors and influencing factors***

The sensitive factors are related to the lack of information in relation pests and diseases control strategies to be carried out in Rwanda. Farmers at different levels are requesting to get information and the project uses its actions aiming at developing a communication strategy to give appropriate answer to those requests.

- ***Harmo dynamics***

The RHESI funding action carried out by the IPM project was also supported by the APFH project. More interestingly, the RHESI programme was initially supported through a programme funded by the world bank. That RHESI programme is a Rwandan initiative and supporting it is clearly a sign of alignment and also of harmonisation of efforts from different actors.

- ***Gender and Environmental integration***

The communication tools (documents and messages) developed by the IPM project are made available for all the actors including men and women. In reality, there is no gender based discrimination in relation with the access to information produced through the communication strategy of the project.
For the environmental integration, the result number 8 is also strongly related to all the aspects concerning the pesticide use. In this frame, there is a great relationship with environmental protection as pesticides are a major component which could induce damages for environment.

4.10.4 Risks and Assumptions

Risk/Assumption	Level	Taken measures
The most popular communication means (TV, radio) are accessible to the project (TFF risk)	A	The project has easily diffused information relative to its realisations through these means by paying the services
Collaboration with the different MINAGRI institutes to access to available data	A	By collaborating with the different partners, the project has easily acquired information from the different institutes of MINAGRI (RADA, RHODA, ISAR)
Training materials (leaflets and booklets) are accessible and readable by farmers	B	The project has put an emphasis on developing training materials in Kinyarwanda

4.10.5 Quality criteria

Criterion	Score	Comments
Effectiveness	C	Although the setting up of communication strategy is well advanced and is appreciated by the different beneficiaries, the activity relative to reviewing the national strategies for the control of pests and diseases necessitates to accomplish the mission of consultancy in relation with pesticides management
Efficiency	A	The project funds were used to support the production of the different communication tools deployed in the frame of the project
Sustainability	A	The materials produced up to now will continue to be used by different actors interested by the strategy of pests and diseases control in Rwanda even after the end of the project.

4.10.6 Budget execution

For this result which is based on exploitation of the positive repercussions of the project achievement through promotion of a communication strategy and a real adaptation of the crop protection strategies, the budget execution by the end of 2010 was of 43%. It is thus expected to continue strengthening the communication strategy with the production of various tools aiming at communicating about the new findings generated with the project activities. Moreover, the consultancy mission will also be realised in the remaining period of the project to further contribute to this expected change of the national strategies for crop protection.

4.10.7 Lessons learned and recommendations

- **Lessons learned**

Lesson learned	Public	Capitalisation in the project cycle
Communication documents are complementary to the practical field training sessions	All the development partners operating in agriculture	Implementation
Farmers are opened to participate in participatory evaluation of innovations	Development partners and MINAGRI agencies	Implementation
Illustrations in the training materials done with situations prevailing in Rwanda is better accepted and exploited by farmers	Development partners MINAGRI agencies	Implememtation

5 Beneficiaries

The IPM project has different categories of beneficiaries ranging from (i) MINAGRI, (ii) RADA, (iii) ISAR, (iv) RHODA, (v) farmers' associations and (vi) farmers themselves. For each of these beneficiaries, there have been different changes due to the implementation of the IPM project.

- ***MINAGRI***

Implementation of the project activities has led to different positive changes in the area of control of pests and diseases. The example of the decrease of pesticide use in the control of potato late blight is a significant illustrating case of that situation.
Based on this example, MINAGRI has asked the project to contribute in identifying the problems affecting tamarillo and in developing adapted solutions to overcome these problems. This was done and presently, clean seeds of this crop which will be used for training of farmers are available.

Another example of change for MINAGRI is based on the involvement of the project in determining the problems related to striga outbreaks in Eastern Province where once again it was MINAGRI who requested the project to identify the prevailing problem and to develop a strategy to overcome that weed problems. However, after the end of the project, the trained people to manage problems appearing at the field level would continue to realise similar actions.

- ***RADA***

The project is institutionally anchored in RADA. All the positive experiences developed by the project are beneficial for RADA. For example, the trained FFS facilitators around the potato crop have been estimated very useful by RADA who decided to use them in supervision of the CIP programme. There are also other actions in the area of BXW control for which the trained banana facilitators are supporting RADA to implement an integrated strategy for the BXW control. The farmers trained through the FFS initiatives carried out by the project are also producing seeds for potato and this is complementing the formal system previously put in place by RADA.

- ***ISAR***

As shown previously, the FFS activities constitute a great opportunity to realise participatory research, more particularly the participatory selection of varieties. Different potato varieties developed by ISAR are now evaluated by farmers grouped in FFS in the last phase of their development . This contributes to speeding up the access of farmers to varieties developed by the research in Rwanda.

- ***RHODA***

By working on different horticultural crops like maracuja, tamarillo and tomato, the project has contributed to increase the skills of farmers involved in the production of these horticultural crops. More interestingly, the identification of the problems affecting these crops, and more particularly the tamarillo has been carried out by the IPM project. In the same frame, inspectors of RHODA have been initiated to deal with similar situations happening at the field. This process of capacity building in terms of

production and crop protection for horticultural crops will lead to an increase of the quality of horticultural products and that will facilitate marketing of horticultural products.

- ***Farmers' associations and farmers themselves***

The lessons provided by the project resulted in an increase of knowledge of farmers in relation with control of pests and diseases. This has a consequence in a significant decrease of pesticide control in different crops like potato where the average of application frequencies passed from **15-16 sprays** to **2-3 sprays** per season.

There was also an impact in terms of capacity of seed production by farmers themselves grouped in FFS groups. This could be illustrated by the fact that farmers having followed FFS training in banana know now the process to use in view of getting clean seeds from their own planting materials; for this crop**, 24 local varieties** have already been recovered and used successfully for production of clean seeds. This is also the case for cassava for which more than **12 local varieties** highly appreciated by farmers have been recovered.
Finally, the production level of the different crops is increasing after this intervention of the IPM project; for example a majority of farmers say that the bunches of their banana is increasing following the operation of rehabilitation as promoted by the IPM project.

- ***Other beneficiaries: students***

Students in different high agricultural schools (University level) in Rwanda have benefited of the project in Rwanda as they were able to perform their training in sites of actions of the project working in farmers' fields. A total number of 10 students have effectively performed their training in the project during 2010.

6 Follow-up of the decisions taken by the JLCB

After each meeting of the JLCB, there are different recommendations at the attention of the project team in view of improving the quality of services provided by the project. More precisely, most of the recommendations in 2010 were about the involvement of IPM project in improving the extension system by contributing to development of a FFS road map or by increasing the participation of local authorities in the project actions.

All of the recommendations suggested by the JLCB were implemented by the project during the year 2010, except an ultimate organisation of a global meeting which had to discuss about the use of the FFS approach in Rwanda. This meeting was not possible to be organised because there were a lot of activities in MINAGRI while this level of authority was supposed to play a central role. However, although this difficulty to organise that meeting, the project has undertaken to participate in a global reflexion about the extension strategy to used in Rwanda. The project has provided to the current consultancy mission in MINAGRI with a lot of useful and practical information in relation with the use of FFS under Rwandan conditions.

7 Annexes

"Budget versus current (y – m)" Report

Operational planning Q1-2011

Budget vs Actuals (Year to Month, by Quarter) of RWA0604811

Project Title : **Développement d'un Système de Lutte Intégrée contre les Maladies et Ravageurs de Cultures**

Budget Version : **E01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosed closing**

Year to month : 31/12/2010

	Status	Fin Mode	Amount	2009	2010 Q1	Q2	Q3	Q4	Total	Total Exp.	Balance	% Exec
A CONTRIBUER À			**1.932.400,00**	269.425,59	129.532,84	243.618,23	304.964,03	246.894,15	925.009,24	**1.194.434,83**	737.965,17	**62%**
01 Le concept, la méthodologie			**164.500,00**	42.121,23	6.458,19	3.385,21	19.708,84	4.230,16	33.782,41	**75.903,64**	88.596,36	46%
01 Développer un Curriculum		COGEST	**164.500,00**	42.121,23	6.458,19	3.385,21	19.708,84	4.230,16	33.782,41	**75.903,64**	88.596,36	46%
02 Des cadres techniques sont			**745.900,00**	149.389,31	79.736,28	106.408,80	165.963,98	160.982,07	513.091,13	**662.480,44**	83.419,56	**89%**
01 Localiser, mobiliser et		COGEST	**193.500,00**	56.200,14	10.067,96	20.632,14	33.851,10	251,25	64.802,45	**121.002,59**	72.497,41	63%
02 Favoriser l'apprentissage et		COGEST	**31.000,00**	1.534,26		199,97		8.181,22	8.381,19	**9.915,45**	21.084,55	32%
03 Assurer la formation des		COGEST	**521.400,00**	91.654,91	69.668,32	85.576,68	132.112,88	152.549,60	439.907,49	**531.562,40**	-10.162,40	102%
03 Des agriculteurs sont			**293.000,00**	35.436,56	24.190,52	88.350,96	94.290,30	67.932,16	274.763,94	**310.200,50**	-17.200,50	**106%**
01 Faciliter toutes les étapes		COGEST	**293.000,00**	35.436,56	24.190,52	88.350,96	94.290,30	67.932,16	274.763,94	**310.200,50**	-17.200,50	106%
04 Le matériel de qualité de			**312.000,00**	5.482,76		28.405,27	1.503,33		29.908,60	**35.391,36**	276.608,64	**11%**
01 Sensibiliser quant à		COGEST	**41.000,00**	5.482,76		28.405,27	436,55		28.841,82	**34.324,58**	6.675,42	84%
02 Promouvoir et renforcer la		COGEST	**271.000,00**	0,00			1.066,78		1.066,78	**1.066,78**	269.933,22	0%
05 Les méthodes culturales			**60.500,00**	5.162,51	3.154,87	2.738,94	609,72		6.503,53	**11.666,04**	48.833,96	**19%**
01 Réaliser un inventaire des		COGEST	**32.500,00**	5.162,51	3.154,87	2.738,94	609,72		6.503,53	**11.666,04**	20.833,96	36%
02 Mettre en oeuvre les		COGEST	**28.000,00**	0,00						**0,00**	28.000,00	0%
06 Les connaissances des			**66.500,00**	374,92	433,66				433,66	**808,58**	65.691,42	**1%**
01 Localiser, mobiliser et		COGEST	**49.500,00**	374,92						**374,92**	49.125,08	1%
02 Assurer la publication de		COGEST	**17.000,00**	0,00	433,66				433,66	**433,66**	16.566,34	3%
		REGIE	**490.200,00**	**172.906,76**	**34.390,38**	**43.526,54**	**31.872,34**	**43.236,61**	**153.025,87**	**325.932,63**	**164.267,37**	**66,00**
		COGEST	**2.359.800,00**	**392.398,80**	**168.906,25**	**307.255,07**	**383.973,46**	**298.592,74**	**1.158.727,52**	**1.551.126,31**	**808.673,69**	**66,00**
		TOTAL	**2.850.000,00**	**565.305,56**	**203.296,63**	**350.781,60**	**415.845,80**	**341.829,35**	**1.311.753,39**	**1.877.058,94**	**972.941,06**	**66,00**

Budget vs Actuals (Year to Month, by Quarter) of RWA0604811

Project Title : **Développement d'un Système de Lutte Intégrée contre les Maladies et Ravageurs de Cultures**

Budget Version : **E01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosed closing**

Year to month : 31/12/2010

	Status	Fin Mode	Amount	2009	2010 Q1	Q2	Q3	Q4	Total	Total Exp.	Balance	% Exec
03 Financer des formations		COGEST	**0,00**	0,00						**0,00**	0,00	?%
04 Mettre en oeuvre les		COGEST	**0,00**	0,00						**0,00**	0,00	?%
07 L'utilisation de variétés			**67.000,00**	366,49	2.334,36				2.334,36	**2.700,85**	64.299,15	**4%**
01 Localiser, mobiliser et		COGEST	**34.000,00**	176,41						**176,41**	33.823,59	1%
02 Financer des formations		COGEST	**0,00**	0,00						**0,00**	0,00	?%
03 Mettre en oeuvre les		COGEST	**33.000,00**	190,08	2.334,36				2.334,36	**2.524,44**	30.475,56	8%
08 Les retombées positives de			**223.000,00**	31.091,81	13.224,96	14.329,04	22.887,84	13.749,76	64.191,61	**95.283,42**	127.716,58	**43%**
01 Développer et mettre en		COGEST	**122.000,00**	7.488,84	13.224,96	14.329,04	22.841,42	13.537,53	63.932,95	**71.421,79**	50.578,21	59%
02 Contribuer à la révision des		COGEST	**101.000,00**	23.602,97			46,42	212,24	258,66	**23.861,63**	77.138,37	24%
X RÉSERVE BUDGÉTAIRE (MAX			**0,00**	0,00						**0,00**	0,00	**?%**
01 Réserve budgétaire			**0,00**	0,00						**0,00**	0,00	?%
01 Réserve budgétaire		COGEST	**0,00**	0,00						**0,00**	0,00	?%
02 Réserve budgétaire régie		REGIE	**0,00**	0,00						**0,00**	0,00	?%
Y BUDGET TEMP			**0,00**	0,00						**0,00**	0,00	**?%**
01 Budget Temp Excel Digestor			**0,00**	0,00						**0,00**	0,00	?%
01 BudLine in COGEST		COGEST	**0,00**	0,00						**0,00**	0,00	?%
02 BudLine in REGIE		REGIE	**0,00**	0,00						**0,00**	0,00	?%
Z MOYENS GÉNÉRAUX			**917.600,00**	295.879,97	73.763,80	107.163,37	110.881,78	94.935,20	386.744,14	**682.624,11**	234.975,89	**74%**
		REGIE	**490.200,00**	**172.906,76**	**34.390,38**	**43.526,54**	**31.872,34**	**43.236,61**	**153.025,87**	**325.932,63**	**164.267,37**	**66,00**
		COGEST	**2.359.800,00**	**392.398,80**	**168.906,25**	**307.255,07**	**383.973,46**	**298.592,74**	**1.158.727,52**	**1.551.126,31**	**808.673,69**	**66,00**
		TOTAL	**2.850.000,00**	**565.305,56**	**203.296,63**	**350.781,60**	**415.845,80**	**341.829,35**	**1.311.753,39**	**1.877.058,94**	**972.941,06**	**66,00**

Budget vs Actuals (Year to Month, by Quarter) of RWA0604811

Project Title : **Développement d'un Système de Lutte Intégrée contre les Maladies et Ravageurs de Cultures**

Budget Version : **E01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosed closing**

Year to month : 31/12/2010

	Status	Fin Mode	Amount	2009	2010 Q1	Q2	Q3	Q4	Total	Total Exp.	Balance	% Exec
01 Frais de personnel			**527.000,00**	175.534,47	37.575,33	50.139,86	49.494,78	50.956,43	188.166,40	**363.700,87**	163.299,13	69%
01 Assistant technique		REGIE	**416.000,00**	148.807,73	32.821,42	42.316,06	30.624,34	37.993,29	143.755,11	**292.562,84**	123.437,16	70%
02 Directeur national		COGEST	**14.000,00**	5.557,11	535,26	862,31	2.101,13	1.311,48	4.810,18	**10.367,29**	3.632,71	74%
03 Equipe finance et		COGEST	**28.000,00**	7.607,65	1.128,00	1.817,25	5.154,26	3.168,45	11.267,96	**18.875,61**	9.124,39	67%
04 Equipe technique		COGEST	**63.500,00**	11.652,40	2.642,42	4.913,60	11.107,43	7.750,56	26.414,01	**38.066,41**	25.433,59	60%
05 Autres frais de personnel		REGIE	**5.500,00**	1.909,58	448,23	230,64	507,62	732,65	1.919,14	**3.828,72**	1.671,28	70%
02 Investissements			**50.500,00**	38.458,20		3.367,67		1.184,90	4.552,57	**43.010,77**	7.489,23	85%
01 Véhicule		REGIE	**16.000,00**	16.200,00						**16.200,00**	-200,00	101%
02 Equipement bureau		COGEST	**8.500,00**	4.697,02		328,63			328,63	**5.025,65**	3.474,35	59%
03 Equipement IT		COGEST	**17.500,00**	9.603,84		3.039,04		1.184,90	4.223,94	**13.827,78**	3.672,22	79%
04 Aménagements du bureau		COGEST	**8.500,00**	7.957,34						**7.957,34**	542,66	94%
03 Frais de fonctionnement			**300.100,00**	81.961,78	36.064,18	53.655,84	61.386,99	42.283,56	193.390,58	**275.352,36**	24.747,64	92%
01 Loyer du bureau		REGIE	**0,00**	0,00						**0,00**	0,00	?%
02 Services et frais de		COGEST	**500,00**	30,02				31,96	31,96	**61,98**	438,02	12%
03 Frais de fonctionnement		REGIE	**12.700,00**	5.474,93	825,82	719,38	732,61	3.692,93	5.970,74	**11.445,67**	1.254,33	90%
04 Frais de fonctionnement		COGEST	**131.000,00**	23.063,51	15.867,34	24.313,16	27.896,47	25.817,99	93.894,95	**116.958,46**	14.041,54	89%
05 Télécommunications		COGEST	**13.500,00**	4.157,79	754,76	2.047,61	1.816,66	1.437,61	6.056,64	**10.214,43**	3.285,57	76%
06 Fournitures de bureau		COGEST	**7.000,00**	4.249,83	122,79	101,29	89,38	37,66	351,12	**4.600,95**	2.399,05	66%
		REGIE	**490.200,00**	**172.906,76**	**34.390,38**	**43.526,54**	**31.872,34**	**43.236,61**	**153.025,87**	**325.932,63**	**164.267,37**	**66,00**
		COGEST	**2.359.800,00**	**392.398,80**	**168.906,25**	**307.255,07**	**383.973,46**	**298.592,74**	**1.158.727,52**	**1.551.126,31**	**808.673,69**	**66,00**
		TOTAL	**2.850.000,00**	**565.305,56**	**203.296,63**	**350.781,60**	**415.845,80**	**341.829,35**	**1.311.753,39**	**1.877.058,94**	**972.941,06**	**66,00**

Budget vs Actuals (Year to Month, by Quarter) of RWA0604811

Project Title : **Développement d'un Système de Lutte Intégrée contre les Maladies et Ravageurs de Cultures**

Budget Version : **E01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosed closing**

Year to month : 31/12/2010

	Status	Fin Mode	Amount	2009	2010 Q1	Q2	Q3	Q4	Total	Total Exp.	Balance	% Exec
07 Missions		COGEST	**90.900,00**	29.294,57	8.606,67	7.638,98	9.258,12	9.350,96	34.854,74	**64.149,31**	26.750,69	71%
08 Frais de représentation et		COGEST	**1.000,00**	847,51				50,36	50,36	**897,87**	102,13	90%
09 Formation		COGEST	**0,00**	0,00						**0,00**	0,00	?%
10 Frais de consultance		COGEST	**0,00**	0,00						**0,00**	0,00	?%
11 Frais financiers		COGEST	**1.000,00**	518,02	89,39	185,54	749,34	132,94	1.157,21	**1.675,23**	-675,23	168%
12 Frais TVA		COGEST	**0,00**	13.736,60	9.626,78	18.389,42	20.836,64	1.423,73	50.276,57	**64.013,17**	-64.013,17	?%
13 Autres frais de		COGEST	**42.500,00**	0,00						**0,00**	42.500,00	0%
14 Frais financiers		REGIE	**0,00**	27,02	31,11		7,77	3,18	42,06	**69,08**	-69,08	?%
15 Frais TVA		REGIE	**0,00**	561,98	139,52	260,46		304,25	704,23	**1.266,21**	-1.266,21	?%
04 Audit et Suivi et Evaluation			**40.000,00**	0,00	124,28			510,31	634,59	**634,59**	39.365,41	2%
01 Frais de suivi et évaluation		REGIE	**32.000,00**	0,00	124,28			510,31	634,59	**634,59**	31.365,41	2%
02 Audit		REGIE	**8.000,00**	0,00						**0,00**	8.000,00	0%
03 Backstopping		REGIE	**0,00**	0,00						**0,00**	0,00	?%
99 Conversion rate adjustment			**0,00**	-74,48						**-74,48**	74,48	?%
98 Conversion rate adjustment		REGIE	**0,00**	-74,48						**-74,48**	74,48	?%
99 Conversion rate adjustment		COGEST	**0,00**	0,00						**0,00**	0,00	?%
		REGIE	**490.200,00**	**172.906,76**	**34.390,38**	**43.526,54**	**31.872,34**	**43.236,61**	**153.025,87**	**325.932,63**	**164.267,37**	**66,00**
		COGEST	**2.359.800,00**	**392.398,80**	**168.906,25**	**307.255,07**	**383.973,46**	**298.592,74**	**1.158.727,52**	**1.551.126,31**	**808.673,69**	**66,00**
		TOTAL	**2.850.000,00**	**565.305,56**	**203.296,63**	**350.781,60**	**415.845,80**	**341.829,35**	**1.311.753,39**	**1.877.058,94**	**972.941,06**	**66,00**

RWA 0604811 - IPM / Planning Opérationnel 2011 vQ					Q1-2011			Q2-2011			Q3-2011			Q4-2011			
Code FIT	**Activités**				**Jan**	**Fev**	**Mar**	**Avr**	**Mai**	**Juin**	**Juil**	**Août**	**Sept**	**Oct**	**Nov**	**Déc**	**Commentaire**
A_01	**Concept, méthodologie et mécanismes de mise en œuvre de l'IPM revus et formulés**																
A0101	**Développer un Curriculum de Formation adapté aux conditions rwandaises**	Développement de curricula nouvelles cultures	Tamarillo	P													Il reste le curriculum pour tamarillo à élaborer par les Master Trainers et l'équipe technique du projet
				R													
		Voyages d'étude pour cadres	-	P													
				R													
		Voyages d'étude pour facilitateurs / formateurs	-	P													On va intensifier les voyagesd'étude pour fermiers entre les différentes zones
				R													
A_02	**Cadres techniques formés en nombre suffisant au concept, méthodologie et mécanismes de mise en œuvre de IPM**																
A0201	**Localiser, mobiliser et recruter l'expertise en mesure d'assurer la formation des formateurs**	Master trainers	Consultances	P													Un appel a été publié pour recruter d'autres Master trainers sans passer par FFS Foundation
				R													
A0202	**Favoriser l'apprentissage et l'adoption de chacune des différentes composantes de l'IPM**	Réalisation de consultances thématiques	A la demande	P													Les consultances thématiques abordent des aspects bien précis qui sont identifiés par les partyicipants ou par le projet lui-même lors des formations
				R													
A0203	**Assurer la formation des formateurs**	Formations		P													Le projet va poursuivre les ToT manioc et maracuja et va commencer le ToT tamarillo
				R													
A_03	**Des agriculteurs sont formés à leur tour au concept, méthodologie et mécanismes de mise en œuvre de la lutte intégrée (IPM)**																
A0301	**Faciliter toutes les étapes de formation des agriculteurs**		Formation des agriculteurs	P													Une fois que les facilitateurs ont entamé la formation des agriculteurs, ils poursuivent cette activité tout en mettant en place de nouveaux groupes FFS
				R													
			Acquisition de matériel de formation	P													La mise à disposition de matériel de formation est assurée par le projet au cours des sessions FFS
				R													
			Consultance internationale pour le suivi-évaluation de l'approche FFS	P													Le consultant est déjà sélectionné
				R													
A_04	**Le matériel de qualité de souche, de base et commercial de plantation (certifié et de qualité déclarée) est disponible**																
A0401	**Sensibiliser quant à l'importance de la quarantaine végétale**		Atelier de sensibilisation	P													
				R													
			Formation à l'étranger	P													
				R													
A0402	**Promouvoir et renforcer la mise en œuvre des protocoles de quarantaine végétale**	Investissements	Seres de quarantaine RADA	P													L'appel à manifestation d'intérêt est déjà publié
				R													
			Equipements de laboratoire et d'analyses	P													Le DAO est publié et 2 lots sont attribués. L'appel est relancé pour les 4 autres lots.
				R													
		Formation / Appui	Formation à l'utilisation des tests de détection	P													
				R													
			Appui opérationnel / accompagnement aux labos ISAR et RADA	P													
				R													

A_05	**Les méthodes culturales visant à diminuer les sources potentielles de maladies et ravageurs des principales cultures sont promues**																
A0501	**Réaliser un inventaire des méthodes culturales traditionnelles**	Consultances	Inventaire sur tomate	P													
				R													
			Inventaire sur fruit de la passion et tamarillo	P													Le contrat est signé et la mission a commencé (Wakala - WEACS)
				R													
			Inventaire sur manioc	P													
				R													
A0502	**Mettre en œuvre les connaissances relatives aux méthodes culturales durables et appropriées**	Formations FFS		P													Les activités de formation (ToT et FFS) permettent de mettre en œuvre ces connaissances relatives aux méthodes culturales. Le budget de formation est regroupé sur les lignes ToT et FFS
				R													
A_06	**Les connaissances sur les cycles de développement des maladies et ravageurs et leurs implications pour la lutte sont acquises par les acteurs impliqués dans la production des principales cultures**																
A0601	**Localiser, mobiliser et recruter l'expertise en mesure de divulguer les connaissances sur les cycles de développement des maladies et ravageurs**	Consultance internationale	Appel d'offres et réalisation de la mission NRI-UK	P													La mission est terminée. Il reste à valider le rapport et payer les prestations
				R													
A0602	**Assurer la publication de documents relatifs aux cycles de développement des maladies et ravageurs**	Publication	Elaboration et publication des documents	P													La publication du rapport de mission aura lieu juste après la validation de ce dernier
				R													
A0603	**Financer des formations spécialisées en entomologie et en épidémiologie**	Formation longue durée	Identification des besoins et mise en œuvre des formations	P													Deux agents du RADA travaillant avec le projet sont déjà en formation en Belgique pour une formation de Master complémentaire
				R													
A0604	**Mettre en œuvre les connaissances sur les cycles de développement des maladies et ravageurs**	Formations	ToT et FFS	P													Les aspects en rapport avec les connaissances sur le développement des maladies et ravageurs sont couverts par les lignes budgétaires A0203 et A0301
				R													
A_07	**L'utilisation de variétés résistantes et/ou tolérantes aux maladies et ravageurs est adoptée par les acteurs impliquées dans la production des principales cultures**																
A0701	**Localiser, mobiliser et recruter l'expertise en mesure de divulguer les connaissances sur la gestion de la résistance variétale**	Consultance internationale	Gestion de la résistance variétale	P													Le contrat est à la signature au niveau du PS MINAGRI
				R													
A0702	**Financer des formations spécialisées en résistance variétale**	Formations spécialisées	-	P													Les deux candidats du RADA sont en formation et devront d'abord définir leurs thématiques de recherche.
				R													
A0703	**Mettre en œuvre les connaissances sur la gestion de la résistance variétale**	Formations	ToT et FFS	P													Les activités de terrain lors des formations ToT et FFS permettent de mettre en œuvre les connaissances relatives à la gestion de la résistance variétale
				R													
		Recherche	Introduction et évaluation de variétés de bananes résistantes à,la BXW (tests en collaboration avec ISAR)	P													Il est prévu d'introduire des variétés de banane qui pourraient être résistantes au BXW
				R													
A_08	**Les retombées positives de la promotion, du développement et de la mise en œuvre d'un système de gestion intégrée de lutte contre les maladies et ravageurs des principales cultures sont à la base d'une révision des stratégies nationales de prot**																
A0801	**Développer et mettre en œuvre une stratégie de communication**	Film documentaire		P													
				R													
		Visite de terrain		P													Les divers outils de communication seront exploités pendant toute la période Q1 et Q2
				R													
		Atelier évaluation , information		P													
				R													
		Séminaire international	Capitalisation des acquis du projet	P													
				R													
		Radio rurale	Emissions chroniques	P													
				R													
		Livrets, dépliants , posters	Manuels et documents de sensibilisation	P													
				R													
A0802	**Contribuer à la révision des dispositions nationales de gestion des pesticides**	Consultance internationale	Gestion des pesticides	P													Les dossiers sont en phases d'analyse avant la phase d'attribution
				R													
		Convention RHODA	Appui au RHESI	P													Versement de la dernière tranche au RHODA en attente de la production des pièces justificatives de l'utilisation de la première tranche ainsi que d'un memo clarifiant l'utilisation
				R													

Z. activités générales de gestion

Personnel

Activités				Jan	Fev	Mar	Avr	Mai	Juin	Juil	Août	Sept	Oct	Nov	Déc	Commentaire
Recrutement (en phase de démarrage ou en cas de démission)																Pas de nouveaux recrutements pendant cette période
Formation du personnel du projet																Il n'est pas prévu de formation proprement dite ; mais les membres du personnel bénéficient également des formations pratiques qui sont dispensées lors de ces sessions ToT et FFS.
Préavis (en phase de clôture)		Assistants IPM							X							Fin des activités du projet au 30 juin 2011
		AT								X						Fin contrat AT au 31 juillet 2011
		Comptable									X					Fin de la période de clôture au 31 août 2011
		DI									X					Fin de la période de clôture au 31 août 2011

Investissement

Activités				Jan	Fev	Mar	Avr	Mai	Juin	Juil	Août	Sept	Oct	Nov	Déc	Commentaire
Véhicules																
Construction																
Equipement IT	Achat de GPS et disques durs extérieurs				X											Il s'agit d'améliorer la sécurité des données informatiques et de pouvoir inventorier tous les sites FFS à travers le pays
Fourniture et équipement de bureau				X	X	X	X	X								Les fournitures de bureau sont prévues pour une acquisition à chaque fois que de besoin

Qualité (Suivi évaluation)

Activités				Jan	Fev	Mar	Avr	Mai	Juin	Juil	Août	Sept	Oct	Nov	Déc	Commentaire
Backstopping																-
Evaluation à mi parcours																-
Evaluation Finale						X										Les consultants ont déjà été sélectionnés
Audit	Audit des conventions															Réalisé en octobre. A payer en Q1 2011