



## **Crop Crisis Control Project (C3P)**

### **C3P regional workshop on CMD control and the increase of cassava production**

**From 30 January to 2 February 2007  
Bujumbura, Burundi**

#### **Introduction :**

The International Institute for Tropical Agriculture (IITA) and the Network for Research on Tuberous Plants in Eastern Africa (EARRNET) in partnership with the Catholic Relief Services (CRS) have organized a regional workshop on CMD control and the increase of cassava production. The training was conducted within the framework of the C3P project activities aimed at the multiplication and distribution of severe CMD resistant cassava cuttings from a Ugandan strain as well as on enhanced agriculture techniques. The workshop aimed to improve information, knowledge and know-how on CMD control and cassava production increase for participants coming from French-speaking countries. A total of 39 participants from the public sector and from NGOs comprising of 6 from Rwanda, 6 from Congo and 27 from Burundi participated in the workshop.

During the opening ceremony, CRS Burundi Resident Representative, EARRNET Coordinator and the Director General for Agriculture Planning who represented the Burundian Minister of Agriculture and Breeding have, one after the other, underscored the importance of cassava in achieving food security.

CRS Resident Representative underlined that food security is one of CRS concerns in its capacity as a partner charity organization for Burundi. The C3P project was designed to effectively address the issue of food security by putting emphasis on the control of diseases affecting such staple crops as cassava and banana. She noted that the workshop was an opportunity for all participants to reflect on the impact of these diseases on rural households.

In his address, EARRNET Coordinator also highlighted the genesis of the C3P project and briefly demonstrated the importance of cassava as a crop ranking 2<sup>nd</sup> or 3<sup>rd</sup> in the Great Lakes region contributing a 12.5% to the African production of cassava which represents 52% of the world cassava production. He added that IITA has a mandate to conduct research on cassava in collaboration with the network so as to put in place technologies that would ensure the development of cassava cultivation. He recalled that since 1998, IITA and EARRNET in collaboration with national programs introduced an enhanced CMD resistant germoplasm in the countries of the sub-region. However and notwithstanding the existence of improved varieties, many farmers do not have access to these varieties. The C3P project, therefore, aims at improving the coordination of the multiplication and distribution of this material and its promotion within the rural communities of this region.

The Director General of Agriculture Planning who was representing the Minister of Agriculture and Breeding highlighted the role of cassava in the sectoral policy of the Ministry. He underlined that the production of cassava decreased by 90% due to CMD and indicated that concrete actions needed to be taken in order to help these vulnerable populations. He thanked all the organizations (USAID, CRS, FAO, IITA, and ISABU) for their efforts in fighting against threats to food security.

**The objectives of the workshop:**

The workshop aimed at the following objectives:

- To improve the knowledge and know-how of participants on cassava phytopathomogy by insisting on CMD and the means to control it;
- To provide participants with practical knowledge on the multiplication, preservation and distribution of planting material;
- To impart the knowledge on production increase and post harvest technologies; and
- To improve participants knowledge on the popularization of techniques in the cassava sector.

**The results of the workshop:**

- Participants are able to identify the symptoms of the main and most devastating diseases in the fields and to explain the damage mechanism as well as the means to control it ;
- Participants are made aware of the importance of the sound phytosanitary status of plants in the production of cassava;
- Participants are made aware that only access to healthy and resistant cuttings may resolve the issue of food insecurity;
- Participants are made aware that the use of good farming practices in rural areas shall lead to sustainable production;
- Participants are made aware that the rapid multiplication of CMD resistant cassava cuttings at grassroots level is indispensable for a rapid availability of planting material. This technique shall henceforth be popularized and taught in the rural areas; and
- The plans of action to ensure the transfer of technologies at the level of the base have been developed and shall be finalized soon at the level of each country.

**Content of the training:**

The training comprised three main components:

1. Overview of the cultivation of cassava, its devastating diseases and means to control them;
2. The production, distribution and dissemination system of CMD resistant cuttings; and
3. The commercialization of cassava and its by-products and control strategies across Central and Eastern Africa.

1.1. Overview of the CMD and control strategies in Central and Eastern Africa

In this component, this importance of cassava in Africa and in the Great Lakes Region has been highlighted. Participants were aught all the techniques and necessary steps so as to produce CMD resistant varieties to increase production;

Cassava diseases and destroyers and means to control them, their importance and impact on production, the need to control these diseases to ensure the production and dissemination of quality cuttings;

Monitoring and evaluation of diseases and destroyers of cassava which is directly linked to the need for certification of cuttings to be produced. In this regard, emphasis was put on the diseases and destroyers of cassava, the marking scale and their certification;

Cassava agronomy and its involvement in the CMD control. In this regard, participants were taught the steps of cassava growth and periods during which cassava is vulnerable to diseases and destroyers.

## 1.2. System of production and dissemination of CMD resistant cuttings

In this component, themes such as the cuttings production and dissemination system (primary, secondary and tertiary multiplication) ensuring a multiplication rate of 10, the technique for the rapid multiplication through intermediary nurseries ensuring a multiplication rate of 60 has been developed. Participants were informed on the difference and advantages of these methods, the parts to be multiplied and the necessary care for these various types of multiplication.

Finally, participants were informed on the new approach for the dissemination of cassava cuttings through the On Farm Vouchers (OFV) system. The system aims at promoting contact between the beneficiary who is the farmer and the owner of cuttings who is the seller in order to enable the consumer to assess quality.

Methods aimed at the popularization of new technologies: the speaker talked about the method consisting in training and visit, the method of participative popularization with ascending and descending phases, agriculture campaigns and community solidarity chain.

## 1.3. Commercialization of cassava and its by-products as well as post-harvest technologies

In this component, participants were made to understand the commercialization of cassava and its by-products on the basis of studies conducted in Burundi. The theme on the processing of cassava has been developed. It aimed at informing participants on the opportunities that cassava provides for a quality diet when it is processed, but also on the fact that cassava by-products are very necessary to the alcohol and starch industry.

It is worth noting that the third day of the workshop was devoted to field visit to Cibitoke Province where ISABU is currently multiplying CMD resistant varieties. Participants had the opportunity to witness and practice rapid multiplication, the observation and marking of diseases and destroyers as well as the assessment of the chain from the planting through to the harvesting of cuttings including their packaging for transport. Participants further had the opportunity to assess the losses as well as to make recommendations to minimize them right from the multiplication up to the distribution to farmers.

At the end, participants understood that there is a problem to transfer the technologies put developed in the research institutions and networks. They, therefore, developed country plans of action that would enable these technologies to reach the consumers who are none

others than the farmers. These plans have been entrusted to three persons for each country plan of action and they will be finalized C3P project country managers.

**Resource persons:**

Presentations in the workshop were given by members of the University of Burundi, members of ISABU and those from the National Center for Food Technologies (CNTA) as well as members of the General Directorate for Agriculture Popularization including those from EARRNET.

**Training material:**

The training material (in hard copy) was provided to participants except material on the theme of rapid multiplication and that of M&E of diseases and destroyers which were developed by Simon BIGIRIMANA from ISABU. These themes shall be sent to participants at a later stage.

**Assessment :**

In general, participants (more than 90%) have positively appreciated the workshop. This evidences that the expected results have been reached. However, some participants have indicated that the logistics needs to be improved (transport means to take participants where the workshop was held). The form used for the assessment is attached in annex.

Certificates were awarded to the participants who completed this training.

**C3P regional workshop on CMD control and  
the increase of cassava production Program**

**From 30 January to 2 February 2007  
Bujumbura, Burundi**

<b>Time</b>	<b>Activity</b>	<b>Responsible</b>
	<b>Day 1. Arrival of participants</b>	
	<b>Day 2. Tuesday 30 January 2007</b>	
8:30-9:00	Registration of participants	
9:00-9:30	Introduction of participants	
9:30-9:40	Welcoming and appreciation remarks	Janine Shines (CR)
9:40-9:50	Opening speech	Dr Pheneas (EARRNET)
9:50-10:00	Opening	MINAGRIE
10:00-10:20	Breakfast	
10:20-11:00	Overview of CMD and control strategies In Eastern and Central Africa	Dr Pheneas (IITA) Mr. Simon Bigirimana (ISABU)
11:00-12:30	Cassava diseases and means to control them	Dr Bahama (Université du Burundi)
12:30-14:00	Lunch	
14:00-15:30	Destroyers of cassava and means to control them	Mr Pascal Ndayiragije (ISABU)
15:30-15:45	lunch	
15:45-16:30	M&E of cassava diseases and destroyers	Mr Simon (ISABU)
16:30-17:30	Discussions	
18:00	Cocktail	
	<b>Day 3. Wednesday 31 January 2007</b>	
8:30-9:00	Summary of the day	
9:00-10:00	Rapid multiplication	Mr. Simon (ISABU) & Pheneas
10:00-10:15	Breakfast	
10:15-11:15	System for the production and distribution of cassava cuttings and its problems	In groups
11:15-11:35	NGOs experience in the multiplication and distribution of cassava cuttings	NGOs
11:35-11:45	Dissemination of cassava cuttings and the voucher system	Stephen Walsh (CRS-EARO)
11:45-12:00	Popularization methods	Philbert YANDEMYE (DG Mobilization)
11:45-13:00	Working in groups and reporting	Sylvestre (CRS)
13:00-14:30	Lunch	
14:30-15:30	The agronomy of cassava and its implications in the CMD control	Dr Pheneas (IITA)
15:30-16:00	Commercialization of cassava and its by- products	Mr Léonidas NDIMURIRWO (ISABU)
16:00-17:00	Post-harvest manipulation	Mr MANYANGE (CNTA)
17:00-17:30	Discussions	

<b>Day 4. Thursday 1 February 2007</b>		
8:00-9:00	Summary of the preceding day and clarification	
9:00-12:00	Visit to CIBITOKÉ (resistant, sensitive varieties; Good agriculture techniques, other diseases and destroyers)	Barumbanze and Pheneas
12:00-14:00	Lunch	
14:00-17:00	Back to Bujumbura with stop-overs	
<b>Day 5 Friday 2 February 2007</b>		
8:30-8:45	Summary of the preceding day and clarification	Sylvestre (CRS)
8:45-10:00	Working in groups : Multiplication of cassava cuttings : medium and long term plans	
10:00-10:30	Breakfast	
10:30-11:00	Reporting	
11:00-12:00	Assessment of the workshop	
12:00-13:30	Lunch	
13:30-14:00	Closing	
14:00-16:00	Departure	

**PARTICIPANTS IN C3P REGIONAL WORKSHOP ON CMD CONTROL AND  
THE INCREASE OF CASSAVA PRODUCTION**

<b>Name and Surname</b>	<b>Institution represented</b>	<b>Country</b>	<b>Email address</b>
1. Thomas HATANGIMANA	World Vision	Rwanda	<a href="mailto:thatangimana@yahoo.fr">thatangimana@yahoo.fr</a>
2. Isaac KARIMWABO	RWARI	Rwanda	
3. John TULINGIYUMUKIZA	INGABO	Rwanda	<a href="mailto:Twijohn79@yahoo.fr">Twijohn79@yahoo.fr</a>
4. Casilde MUKAKANYANA	ISAR	Rwanda	
5. Concilie NYIRAHORANA	ISAR	Rwanda	<a href="mailto:concihorana@yahoo.fr">concihorana@yahoo.fr</a>
6. Jean RWIKANGURA	Caritas Bugesera	Rwanda	<a href="mailto:jrwikang@yahoo.fr">jrwikang@yahoo.fr</a>
7.Ladislav Kambale	Caritas Goma	D. R. Congo	<a href="mailto:Caritas_bdd@yahoo.fr">Caritas_bdd@yahoo.fr</a>
8.Jean Kongolo KABAMBU	Caritas Uvira	D. R. Congo	<a href="mailto:kongolokabambu@yahoo.fr">kongolokabambu@yahoo.fr</a>
9.Nzanzu Khalyo	Cederu Kibututu	D. R. Congo	<a href="mailto:Cederu2001@yahoo.fr">Cederu2001@yahoo.fr</a>
10.Ingwe Mashini	Caritas Kongolo	D. R. Congo	<a href="mailto:Caritas_kgl@yahoo.fr">Caritas_kgl@yahoo.fr</a>
11.Willy Mulimbi Byamungu	Caritas Bukavu	D. R. Congo	<a href="mailto:willymu@gmail.com">willymu@gmail.com</a>
12.Ugentho Ukhany	INERA	D. R. Congo	<a href="mailto:phebbap@yahoo.fr">phebbap@yahoo.fr</a>
13. Fidèle BUCUMI	ISABU Mosso	Burundi	
14. Eliakim SAKAYOYA	Dpt for the Protection Plants	Burundi	<a href="mailto:dpvbd@cbinf.com">dpvbd@cbinf.com</a> <a href="mailto:sakayoyaeliakim@yahoo.fr">sakayoyaeliakim@yahoo.fr</a>
15. Michel MUSONI	Dpt for the Protection Plants	Burundi	<a href="mailto:m-musoni@hotmail.com">m-musoni@hotmail.com</a>
16. Arthémon SABIYUMVA	Seeds and Plants	Burundi	
17. Elvis BIGIRIMANA	BDD Muyinga	Burundi	
18. Nestor RUNAMBI	DPAE Muyinga	Burundi	
19. Dieudonné FUKAMUSABE	BDD Bubanza	Burundi	<a href="mailto:bddbubanza@yahoo.fr">bddbubanza@yahoo.fr</a>
20. Zacharie SAKUBU	DPAE Bubanza	Burundi	
21. Jean-Marie NDABEMEYE	CRS Kirundo	Burundi	
22. André BUKURU	BADEC Ngozi	Burundi	
23. Ernest NDIHOKUBWAYO	SOPRAD Ruyigi	Burundi	
24. Venant SIBOMANA	ODAG Gitega	Burundi	<a href="mailto:sibovenant@yahoo.fr">sibovenant@yahoo.fr</a>
25. Vincent MUHITIRA	DPAE Ngozi	Burundi	
26. Dominique NDUWIMANA	DPAE Ruyigi	Burundi	
27. Jean NIBAYUBAHE	FHI	Burundi	<a href="mailto:jnibayubahe@fhi.net">jnibayubahe@fhi.net</a>
28. Pierre-Claver NYANDUI	CARE	Burundi	<a href="mailto:pcnyandwi@yahoo.fr">pcnyandwi@yahoo.fr</a>

29. Etienne NDABAKENGA	World Vision	Burundi	
30. Thérance BIGWIRA	Africare	Burundi	
31. Bashilwango MUSEBU	CRS Kirundo	Burundi	
32. Charles NTUNGUKA	D.G. of Agriculture Planning	Burundi	
33. Sébastien NDIKUMAGENGE	D.G. Agriculture	Burundi	
34. Patricie HABONIMANA	Cabinet MINAGRI	Burundi Burundi	
38. Zénon NSANANIKIYE	Cabinet MINAGRI	Burundi	
39. Sylvestre NSHIMIRIMANA	CRS-C3P	Burundi	<a href="mailto:snshimirimana@crsburundi.org">snshimirimana@crsburundi.org</a>
40. Stephen WALSH	CRS-C3P	Central and East Africa	<a href="mailto:swalsh@crsearo.org">swalsh@crsearo.org</a>