



C3P
Fourth Quarterly Report
(1st January to 31st March 2007)



USAID
FROM THE AMERICAN PEOPLE

**Submitted on behalf of
C3P Management**

**John Peacock
C3P Chief of Party
CRS-Tanzania**

johnp473@yahoo.com

Tel: 255-743-935572

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1. Executive Summary

The Crop Crisis Control Project (C3P) is a regional activity supported by the USAID Famine Fund to intensify and bring coordination to the fight against Cassava Mosaic Virus disease (CMD) and Banana Xanthomonas Wilt (BXW) in six countries of Central and East Africa – Burundi, Democratic Republic of Congo (DRC), Kenya, Rwanda, Tanzania, and Uganda. Managed by Catholic Relief Services (CRS) and the International Institute of Tropical Agriculture (IITA), the program brings together more than 35 implementing partners. C3P commenced on 15 April 2006 and ends on the 15 October 2007. This document is the Fourth Quarterly Report for the period 1st January to 31st March 2007.

This quarter saw tremendous progress under both objective one Regional Coordination and objective two Farmer's employing successful measure to control CMD and BXW. Progress in regional coordination is reflected in part by the regional trainings and travel as well as the production of seven briefs which demonstrates the documentation and sharing of learning under C3P. Progress on employing successful measure to control CMD and BXW are reflected in the synthesis tables under section 3V of this report which precedes an objective and intermediate result breakdown of this quarter's progress.

As of April 1, 2007 a total of 706.5 hectares of cassava resistant materials are under production across the six countries in C3P through 22 implementing partners. This represents a nearly 30% increase over the C3P target. Using a proxy of one HA to serve 200 households over two cropping seasons, it is estimated that 706.5 HA produced under C3P will serve 141,300 farming households and have a direct impact on 850,000 people and an indirect impact on 1,700,000 people¹.

As of April 1, 2007, an estimated 11,304 farmers have been trained on BXW management practices across all six countries, nearly double the C3P target, and is estimated that this has a direct impact on 45,216 households. This is exclusive of household gaining knowledge of BXW resulting from direct exposure to radio and poster messages across the six C3P countries.

Highlights for this quarterly report include eight briefs covering food security, BXW, and CMD; summary documents related to the C3P mid term meeting in Kenya which convened the entire C3P management team as well as USAID; C3P regional training reports related to CMD, BXW, and GIS; BXW disease survey reports for Rwanda and DRC; a CMD health survey report for DRC; and phase 1 and phase 2 progress reports from Bioversity International. Documentation of these highlights are presented in the appendices to this report.

This quarter saw a marked increase in the allocation of C3P small project funds. As of the close of the financial quarter ending March 30, 2007 an estimated 1.6 million of 2.2 million USD under small project funds had been committed to 37 partners.

¹ Direct is based on an assumed 6 people per HH and indirect is based on the idea that each HH benefiting from cassava cuttings will share cuttings one time. The direct HH number referenced is based on two agricultural seasons.

This quarter also saw significant travel on the part of C3P management with more than 65 travel days booked between the CoP and Deputy CoP. All countries and partners were visited during this quarter with the Deputy focusing on DRC, Burundi, Rwanda and CoP focusing on Kenya, Uganda, Tanzania. These visits culminated in an end of quarter visit to DRC and Rwanda with CTO Peter Ewell.

For this Fourth Report and all subsequent reports to USAID, CRS-IITA will utilize the Program Framework shown under section 3V of this report to guide the reporting of activities and progress towards achieving the main Goals and Objectives during the life of C3P.

2. Introduction

The Crop Crisis Control Project (C3P) is a regional activity supported by the USAID Famine Fund, to intensify and bring coordination to, the fight against Cassava Mosaic Virus disease (CMD) and Banana Xanthomonas Wilt (BXW) in six countries of Central and East Africa – Burundi, Democratic Republic of Congo (DRC), Kenya, Rwanda, Tanzania, and Uganda. C3P has been organized under the auspices of a Limited Scope Grant Agreement with COMESA (the Common Market for Eastern and Southern Africa), in partnership with ASARECA (the Association for Strengthening Agricultural Research in Eastern and Central Africa).

C3P is an 18 month project and Catholic Relief Services (CRS) has been awarded a grant to implement regionally coordinated, well-targeted activities, in all six countries. Their largest implementing partner, with a sub-award, is the International Institute of Tropical Agriculture (IITA), and together they are leading a network of regional associations and agricultural institutions, national agricultural research organizations, NGOs and local partners. C3P commenced on 15 April 2006 and ends on the 15 October 2007.

This document is the Fourth Quarterly Report for the period 1st January to 31st March 2007. You will also note that project brief reporting on issues of regional interest are now being submitted. Seven project briefs are shown in section Appendix 5. There are a total of 23 appendices which reflect the huge amount of C3P work that has been executed and documented since the Mid-Term Meeting and during this quarter.

3. Report

In addition to the regular reporting on progress with the Intermediate Results (VI), five major activities make up this report as summarized below.

I. Mid-Term Meeting (MTM) Limuru, Kenya

The Mid-Term Meeting was held from 8th-12th January, 2007 at the Brackenhurst Conference Centre at Limuru, Kenya. The main objectives of the meeting were (i) to provide training to the CPMs on CRS financial practices, reporting procedures and to learn more about CRS and its working culture, (ii) to exchange technical information between the CPMs, C3P scientists from IITA, Bioversity-Uganda and concerned USAID staff and (iii) to develop a working and action plan for the remaining half of the project. The agenda is given in Appendix 17. The meeting was very successful and a full report on the main matters arising, an action plan and provisional work

plans and budgets for new commissioned proposals was prepared. A report on these is given in Appendix 18.

II. Completion of the CMD Management Training Workshop in Burundi (January/February)

The International Institute of Tropical Agriculture (IITA) and East Africa Root Crop Research Network (EARRNET), in collaboration with the Catholic Relief Services (CRS), organized a regional training workshop in Bujumbura from 30th January to 2nd February 2007 in Burundi, on CMD Management and Improved Cassava Production. The workshop aimed to improve information, knowledge and know-how on CMD control and cassava production increase for participants coming from French-speaking countries.

The training was conducted as part of a C3P project activity on multiplication and distribution of CMD resistant cassava varieties and promotion of improved practices. A similar workshop was held in Kampala, Uganda and it was thought important to repeat this in French (see Third Quarterly Report). A total of 39 participants from the public sector and from NGOs comprising of six from Rwanda, six from DR Congo and 27 from Burundi participated in the workshop. Detailed objectives, results, and contents of the training and a full list of the participants are given in Appendix 2.

III. Visit of CTO, CoP and DCoP to DRC and Rwanda (March)

The Project CTO, Dr. Peter Ewell, the CoP, Dr. John Peacock and the DCoP, Stephen Walsh visited DR Congo and Rwanda from 18th-28th March. The objective of the visit was to see C3P projects and partners in North and South Kivu and observe progress with the mat removal project in north-west Rwanda. The visit contributed to a total of 65 man days of “Monitoring and Evaluating” partner and regional activities during this reporting period.

IV. Allocation of further small grants and funds to CRS partners (March)

Out of a total C3P small projects fund of \$2.2 m, approximately \$1.6 m has now been committed to 37 partners following assessment and approval by the virtual regional grants review committee (RGC). The following partners have now received approval to move ahead immediately on country and community level activities under C3P:

Burundi (8)

Food for the Hungry International (FHI)
Entente Mutuelle et Solidarité (EMUSO)
CARITAS Belgique
BDD Bubanza
CRS Kirundo
IRAZ
BDD Muyinga
BDD Ngozi

Democratic Republic of Congo (7)

CARITAS Kindu
CARITAS Bukavu
CARITAS Uvira
CARITAS Goma
CEDERU
University of Graben
CARITAS Kongolo

Kenya (4)

Rural Enterprise Food Security Organization (REFSO)
Archdiocese of Kisumu
Diocese of Homa Bay
Kenyan Agricultural Research Institute (KARI)

Tanzania (9)

Rulenge Diocesan Development Office (RUDDO)
Maruku Agriculture Research and Development Initiative (MARDI)
LZARDI
MFEC
KIMKUMAKA
KIKANGONET
TAHEA
MRHP
MARDI-CMD

Rwanda (4)

Syndicat Rwandais des Agriculteurs et Eleveurs (INGABO)
Bureau D'Appui Aux Initiatives Rurales (BAIR)
Rwandan Rural Rehabilitation Initiative (RWARRI)
Institute Science and Agricultural Research (ISAR)

Uganda (4)

World Vision Inc. (WVI). See Appendix 23, WV Quarterly Report.
CARITAS Kasanaensis
CARITAS Lugazi
Uganda National Banana Program (NBRP)

Regional (1)

Bioversity International (formally INIBAP) developed a proposal in conjunction with IITA and the International Network for the Improvement of Bananas and Plantains (INIBAP) to provide training of trainers from the six project countries on best practices to combat banana wilt. Bioversity International (Biovint) is part of BARNESA (the Banana Research Network for Eastern and Southern Africa) and is affiliated with ASARECA. The project has now been approved and their first reporting comes in this report. See Appendix 21 and 22, Biovint Phase 1 and 2 reports.

V. Synthesis of CMD and BXW Outputs and Impact under C3P

A synthesis has been carried out showing the number of hectares of CMD resistant material that has been planted for further multiplication and an estimate made on the number of households this could impact on by the end of the project. Similar estimates are made on the impact in terms of HH to be served by the BXW sensitization program.

SUMMARY OF CMD RESISTANT CASSAVA PLANTING IN ALL SIX COUNTRIES

| Country | Target (ha) | Total Planted (ha) | Varieties Under Multiplication | Partners Engaged in Multiplication | HH to be Served* |
|--------------|-------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------|
| Burundi | 144 | 138 | MM96/7678, MM96/7204, MM96/0087, MM96/5280, ABBEY-IFE | Bubanza, Muyinga, EMUSO, FHI, Ngozi, Caritas Belgique, CRS Kirundo | 27,600 |
| DRC | 105 | 147 | Liyayi (MM96/0287), SawaSawa (MM96/3920), Mayombe (MM96/7752), Sukisa (MM96/1666), Kasela, Kitanda, Kikonda | Cederu, Kindu, Kongolo, Uvira, Bukavu, Goma | 29,400 |
| Kenya | 58 | 82.5 | Mygera, MH95/0183, and SS4 | Homa Bay, Kisumu, REFSO | 16,500 |
| Rwanda | 92 | 92 | 95/0063 and 92/0057 | Ingabo and Rwarri | 18,400 |
| Tanzania | 143 | 238 | MM 96/4619 (<i>Meremeta</i>), MM 96/4684 (<i>Mkombozi</i>), MM 96/8450 (Kibaya), MM 96/5725 (<i>Nyakafuru</i>), MM 96/8233 (<i>Rangimbili</i>), MM 96/3075B (<i>Belinde</i>), I 91/00063 (<i>Kasara</i>), I 91/0057 (<i>Isanzu</i>), I 91/0067 (<i>Suma</i>), TME 14 (<i>Bahati</i>), SS4 and TMS 4(2) 1425 (Nigeria) | RUDDO, LZARDI- (Ukiriguru & Maruku), MARDI, MFEC, KIMKUMAKA, KIKANGONET, TAHEA, MRHP | 47,600 |
| Uganda | 0 | 9 | 0067 (Akena) and 2961 | World Vision, Caritas Lugazi, Caritas Kasana Luwero | 1,800 |
| Total | 542 | 706.5 | | 22 | 141,300 |

*These figures are derived by estimating average use of 150-250 linear meters per HH and average production per HA of 20,000 linear meters which would translate into 100 HH served by one HA. This is based on a single harvesting of cuttings in an 8 month time frame – so over 16 months one could assume that each HA planted could serve 200 HH.

BXW TRAININGS AND ESTIMATED FARMERS REACHED IN ALL SIX COUNTRIES

| Country | Target for Extensionists Trained | Actual Trained* | Target for Farmers Trained | Actual Trained/ Estimated Trained** | Estimate of Total HH impacted by training*** |
|--------------|----------------------------------|-----------------|----------------------------|-------------------------------------|----------------------------------------------|
| Uganda | 50 | 42 | 1000 | 6,525 | 26,100 |
| Tanzania | 50 | 53 | 1000 | 1,060** | 4,240 |
| Kenya | 50 | 22 | 1000 | 2,879 | 11,516 |
| Burundi | 50 | 19 | 1000 | 380** | 1,520 |
| Rwanda | 50 | 11 | 1000 | 220** | 880 |
| DRC | 50 | 12 | 1000 | 240** | 960 |
| Total | 350 | 159 | 6,000 | 11,304 | 45,216 |

Targets are based on the C3P project document. *Based on Country quarterly reports. **Estimated farmers trained based on assumption of each extensionist training 20 farmers. ***Estimated based on assumption of each farmer trained passing messages to 4 additional HH.

PROGRAM FRAMEWORK

Goal: Threats to food security caused by agricultural crises in the Great Lakes Region of Eastern and Central Africa are reduced

SO 1: Regional stakeholders institutionalize coordinated agricultural disaster response mechanisms

IR 1.1: Regional response to CMD and BXW is well coordinated

IR 1.2: GIS technology links data on disease to data on vulnerability to food insecurity

IR 1.3: Existing institutions carry forward proven methods for coordination and knowledge sharing regarding agricultural disasters

SO 2: Farmers employ effective measures to control CMD and BXW

IR 2.1: Effective control of CMD is achieved through multiplication and distribution of CMD resistant varieties and promotion of improved management practices

IR 2.2: Effective control of BXW is achieved through promotion of improved disease management techniques and through multiplication and distribution of wilt-escaping varieties

VI. Progress to Date Against Strategic Outputs and Intermediate Results

In most cases a single line/bullet entry will list an activity that has been made towards achieving an output within a strategic objective or intermediate result. All information in this report, unless otherwise stated, is submitted by the country CRS CPMs and further information can be obtained directly from them. In cases where the information has been submitted by IITA and/or particular individuals, this is mentioned in brackets, where appropriate. Only activities worked on during the period of this report are listed. Please refer to earlier reports for further information on an intermediate result. Where activities have led to an output being completed, for example, Regional CMD Training Workshop in Burundi Convened, then more details have been provided both in the text and in the Appendices.

SO 1: Regional stakeholders institutionalize coordinated agricultural disaster response mechanisms

IR 1.1: Regional response to CMD and BXW is well coordinated

1.1.1 Collate information from each of the target countries on the status of CMD and BXW and their effects

- In Burundi, in November, a planning meeting was held, in Bujumbura. Five representatives from CRS, IRAZ and FAO participated. USAID/Bujumbura was also represented and an emergency plan for BXW control was set up. This was an important development.
- In Rwanda, close collaboration continued with MINAGRI and the local authorities to increase the commitment and coordination of C3P activities:
 - viz. the uprooting of infected banana mats in Rubavu district.
 - helping INGABO to expand multiplication of CMD resistant cassava in districts in the Southern Province. In addition on:
 - 28th February 2007, the Steering Committee met on CMD to discuss national training on CMD.
 - 13th February 2007, C3P hosted a visit of Simon Boniface from OFDA to Kayonza district to review the cassava multiplication activities of C3P projects. Also training on how to implement the IITA Quality Management Protocol (QMP) at the different multiplication sites
- In Tanzania, the first C3P Country Coordinating Unit (CCU) meeting was held from 2-3rd February 2007. Seven members attended These were elected earlier by the National Steering Committee for Cassava Mosaic Disease (CMD) and Banana Xanthomonas Wilt (BXW) at the meeting held earlier in Bukoba from 9th-10th October 2006
 - These comprised of representatives from the Ministry of Agriculture Plant Health Services, an extension agent from the regions infected by CMD and BXW, farmers, NGOs, the BXW and CMD national team leaders and the CPM

- The meeting reviewed the C3P work-plan and the four C3P proposals submitted to the Regional Grant Review Committee (RGC). The meeting looked at the RGC comments and made suggestions for improvement
- The meeting also developed strategies to combat the new BXW outbreak in Tarime district (Appendix 13).

1.1.3 Identification of specific food aid requirements arising from CMD/BXW damage

An essential component of C3P is to improve food security in the six countries of the Great Lakes Region. It is vital that work being carried out by our partners is targeting the poor farmers in greatest need. To do this C3P continues to gather data from numerous sources. These data have not all been collected or analyzed. However the potential of these data and some initial analysis, demonstrated at the Mid-Term Meeting, showed that these are powerful tools and will enable C3P to better focus its interventions. Already information gained from the preliminary maps provided at the MTM has enabled C3P to identify districts for new primary sites for CMD multiplication and where to develop more tertiary sites.

- The contribution of banana and cassava to food consumption was determined for Uganda, W-Kenya and Lake Zone region of Tanzania (IITA) and updated Food Security briefs for Burundi, Rwanda and Uganda are shown in Appendices 5, 6, 7.

1.1.4 Establish mechanisms for linkage of the ASC with country teams involving flow of information

- During this period selected members of the Advisory Steering Committee (ASC) again assisted the Regional Grants Review Committees (RGC) with the reviews of the country and regional partner proposals
- Again all CPMs were involved in the review of their partner's proposals. The process worked well. CPMs from the Anglophone and Francophone countries reviewed their respective partner's proposals e.g. Uganda and Kenya reviewed projects from Tanzania; and Tanzania and Uganda reviewed projects from Kenya and so on. This way the CPMs could also benefit from seeing the projects that the other countries were working on and this greatly strengthened cross-fertilization of both ideas and writing skills
- ASC members have provided valuable feed back on key issues, such as BXW eradication, BXW diagnosis and web-site improvement

1.1.5 Publish and share project information, including a web site

- A regional C3P brief on cassava brown streak and its new spread and implications for the movement of cassava germplasm in East and Central Africa is issued in this report by EARRNET and IITA, (see Appendix 25).
- In DRC, a cassava plant health survey was conducted to assess the incidence, severity, abundance and effect of the major pests and diseases affecting cassava, to assess their impact on cassava production and also on cultivation intensity, to assess the frequency

of occurrence of newly introduced improved cassava varieties, and to provide data for incorporation into a GIS food security model, being developed by IITA that will facilitate improved targeting of CMD mitigation efforts, (see Appendix 19).

- In DRC and Rwanda BXW surveys were conducted to assess current status and intensity of BXW, (see Appendix 11 and 12).
- In Tanzania, a project brief on ‘Critical lessons learnt from BXW in Kagera region and Tarime district Mara region’ was prepared, (see Appendix 10).
- In Tanzania, a report to confirm BXW in Tarime district which was shared with some national and regional BXW stakeholders for immediate action, (Appendix 13).
- In Burundi, Rwanda, and Uganda Food Security Briefs were prepared (Appendices 5, 6,7) outlining three indicators to food security and showing the role of banana and cassava to food security in these countries with reference to more acutely impacted areas.
- In Burundi, a brief was prepared (Appendix 8) discussing the lessons learned relating to the cutting, bagging, transport, and dissemination of cassava cuttings from primary to secondary sites.
- In Kenya a brief was prepared (Appendix 9) discussing the lessons learned from the pilot use of on-farm vouchers to promote the dissemination of disease resistant cassava cuttings.
- In Kenya an evaluation of the on-farm voucher pilot work was conducted (Appendix 20).
- Regionally, a brief was prepared (Appendix 4) discussing best practices and lessons learned with respect to BXW uprooting of mats, i.e., eradication.
- IITA and CPM project outputs continue to be added to the website.

1.1.6 Monitoring and evaluation of project implementation

- Monitoring Template for Cassava multiplication was developed and refined during meetings with Anglophone (Kisumu, Kenya) and Francophone (Goma, DRC) CPM’s. The template will enable countries to break out fields under multiplication by partner and variety and includes GPS references as well as indicate cutting losses incurred during the dissemination stage from primary sites to the C3P site. The template will be completed by all C3P partners – under the management of CPM’s by early June 2007 and will form the basis of detailed dissemination planning of the resulting cuttings. (See Appendix 24).
- During this reporting period M&E manager / D CoP conducted two monitoring visits to Rwanda (three partners), two visits to Burundi (six partners), and two visits to DRC (four

partners), attended parts of both Regional GIS training in Kenya and DRC, and presented an On-Farm Voucher presentation at the CMD regional training in Burundi, and co-authored two briefs on cassava (see Appendices 8 and 9).

- In Burundi, in late January the C3P DCoP, Stephen Walsh, attended the Regional CMD workshop, visited the primary multiplication site of cassava cutting run by ISABU, and concluded with field visits to C3P Burundi CMD partners in Kirundo (FHI and CRS Kirundo) before meeting with C3P CPM in Rwanda to review status to date of program.
- In DRC, in early February, the C3P DCoP visited C3P CPM in Bukavu with Edgar Twine of IITA to set-up food security survey for South Kivu. The visit with in Bukavu concluded with a plenary session with 6 food security NGO's in South Kivu to review the purpose and methodology of the survey. DCoP continued to Uvira to review cassava planting progress to date, visiting all site in Uvira, and then to Rwanda.
- In Rwanda, in mid February, the C3P DCoP visited C3P Rwanda partners BAIR, Ingabo, and Rwarri and met with staff from USAID, with the C3P Rwanda team (CRS CR and the CPM) to de-brief on the progress of activities on BXW in Rubavu districts and progress to date and future plan on CMD work with Ingabo and Rwarri.
- In Burundi, in late February, the DCoP visited C3P Burundi CMD partners BDD Bubanza, BDD Muyinga, Caritas Belgique with focus on field visits to assess cassava planting status. Visit with BXW partner IRAZ resulted in program moving forward on BXW training. Burundi visit included with visits with Ministry of Agriculture Steering Committee Chairperson on Cassava, ISABU cassava program lead, and with ISABU plant material director. These latter meetings were to de-brief on monitoring visit and to promote coordination.
- In DRC in mid -late March, the DCoP visited C3P DRC partners Caritas Bukavu and then Caritas Uvira and Caritas Goma with CoP and USAID CTO and representative from USAID Kinshasa Mission. The delegation met with FAO in Goma to share C3P program progress to date. The visit concluded with visit to C3P Rwanda partner BAIR.
- In DRC in early April, the DCoP attended GIS training in GOMA and met with FAO staff in Goma to review FAO BXW efforts of FAO in North Kivu and to share C3P efforts and challenges in North Kivu on BXW.
- In DRC, two intensive field visits of all the partners were completed by the CPM. For both CMD and BXW these included visits to:
 - All the cassava multiplication sites of CARITAS Uvira, CARITAS Goma, CARITAS Bukavu and CEDERU Kibututu
 - The BXW work on the Goma–Kichanga axis with CARITAS Goma, and the Goma–Rutshuru axis with CEDERU Kibututu
 - During March, an additional field visit was completed, together with Peter Ewell USAID/CTO, John Peacock, Steve Walsh, Meta Mobula (USAID/DRC) and the two CPMs from Kinshasa and Bukavu

- Phemba Phezo, the CPM stationed in Bukavu, visited CARITAS Uvira twice. He also visited CARITAS Goma, CARITAS Bukavu, CARITAS Kindu and CEDERU Kibututu.
- In Kenya, the IITA BXW scientist, Dr. Maina Mwangi, visited the C3P project area in Kenya on the Tanzania border, following an outbreak of the disease on the Tanzania side. The disease has spread rapidly in the Teso district but hopefully is being contained by improved management techniques and sensitization by use of radio in Kenya.
- In Rwanda in late March, Peter Ewell, John Peacock and Steve Walsh visited the “BXW eradication” sites in Rubavu managed by C3P partner BAIR. They met several participating farmers and families and noted the progress being made. They were impressed with the work completed, despite the difficult conditions and encouraged the CPM to continue to work more closely with the partners.

Concerning the BAIR contract, a final report of the 1st Food for Work phase supported by WFP and C3P showed that:

- A total area of 224.1 hectares (56.6% of 396 ha) were uprooted and buried. This includes 172.8 ha uprooted “systematically” in larger fields of infected bananas and 51.2 equivalent ha of uprooted trees, on a plant by plant basis
 - In addition approximately 79.8 ha (46%) of cleared land were ploughed and sown with new seeds provided through 4 seed fairs (SFV).
 - Steeper lands cleared of infected banana were protected against erosion by planting 17.1 km of grass seedlings in rows along the hill contours.
- The total of Food For Work (FFW) rations from World Food Programme (WFP) that was distributed was 202.9 MT of food (64.5 MT of legumes, 129.1 MT of cereals and 9.4 MT of vegetable oil)
 - This was distributed through CRS, in coordination with BAIR, and succeeded in addressing short-term food insecurity for 1,291 farmers in 6 sectors in Rubavu district and assisted in reducing the prevalence of the BXW disease
 - Rocky volcanic soil and excessive rains hampered the pace of uprooting and burying, resulting in only 56% of the total 396 hectares being uprooted.
- CRS has now submitted a follow on proposal to WFP for an additional 2 months of resources, totaling approximately 209.704 MTs of food. The project has been approved and will assist in eradicating the remaining 172 hectares of infected banana mats in April-May 2007
 - The follow-on WFP project will build on the lessons learned from the first phase. These include the following:
 - i. The FFW activities resulted in a higher profile in the press and the among authorities and agronomists on disease awareness
 - ii. The FFW activities expedited uprooting and burial efforts
 - iii. The FFW activities catalyzed increased commitment by MINAGRI to control the disease
- In Rwanda On 29th March 2007, C3P CTO Peter Ewell and Tim Karera of USAID Rwanda Mission met to discuss the role of ISAR. They agreed that a contract needs to be

formulated. CRS will need to determine its transactions costs that will be charged to C3P for this contract with ISAR. A draft contract will be sent to Peter Ewell. Report on CIAT/REDSO update on CIAT funds for BXW training.

- In Tanzania, all partners in their respective working areas continued to monitor their day to day C3P activities.
- Bioversity has also been involved in participatory Monitoring and Learning. The aim of this activity is to ensure that the execution of capacity building activities is enhanced; corrective measures are taken in time; and lessons learnt during the implementation are selected and shared. It is intended to understand if the skills imparted at Tier 1 are sieving through to Tier 3, by checking on the implementation of the control measures executed on farm. In this regard, assessment tools have been designed and tested with CBTs in Luwero district in Uganda and then translated into English and French for distribution in the six countries. Two districts/ country; two sites/district; and four farms/site in all the six countries will be involved to evaluate the effectiveness of the capacity building for the diagnosis and management of BXW.

IR 1.2: GIS technology links data on disease to data on vulnerability to food insecurity

1.2.1 Food security survey: Field surveys and review of existing national documentation of food security. Links developed with related GIS projects in East/Central Africa

- In DRC, a training course was conducted by IITA and CRS staff on how to collect data on food insecurity due to CMD and BXW
 - The food security activities were organized and co-coordinated by Edgar Twine from IITA-Uganda and carried out with the assistance of the CPM based in Bukavu office and the DCoP
 - The food security survey was completed in five territories in the province of South Kivu
 - Data are currently being entered prior to analysis
 - National and provincial data are being reviewed and some will be incorporated into the final reports
- In Kenya, from 27-29th March, a Regional Training Workshop on GPS/GIS was carried out in Kisumu by Dr. Chris Legg from IITA
 - 4 participants from attended from each of the three Anglophone countries
 - The 3 day workshop was facilitated by an IITA specialist on GIS. Participants learnt how to use the GPS to collect and interpret data using DIVA 5.2 GIS software (See Appendix 3).
- In Tanzania, in January, at the MTM meeting in Limuru, it was decided to repeat the 2006 Food Security Survey to obtain more data. A budget was prepared and submitted to the RGC for funding in order to carry out the survey in 10 districts. This was approved.
 - Cassava inventory survey budget also was prepared in order to carry the survey in collaboration with the regional team
- IITA has completed food security surveys in all the 6 countries. The DRC survey was completed only recently because of security reasons. DRC-data will be entered, processed

and analyzed during April. For all other countries, food security briefs, in total numbering six, have been written and published

1.2.2 Mapping of food security status on a regional basis

- A regional training workshop was held in Kenya for the Anglophone speaking group (Kenya, Uganda and Tanzania) from 27th to 29th March at Kisumu Hotel in Kisumu town Kenya. The objective was to enable C3P partners and CPM to take GPS readings of the established fields which will aid in mapping of locations and establishing information on established cassava multiplication sites within the region
- This was done and some maps are published in the attached food security briefs (see Appendices 5-7).

1.2.3 BXW Survey

- In Burundi, regular surveillances are being conducted by the local agriculture extension agents who were trained by C3P staff in November 2006
- In DRC, in March, the BXW survey was completed in DR Congo by IITA (See Appendix 12)
 - The BXW activities have been organized and co-coordinated by Dr. Maina Mwangi from IITA Uganda, assisted by Valentine Nakato, Prof. Ndungo Vigheri and Ir. Musianda Italu for the territory of Beni and in the Rutshuru territory. Maina was assisted by Ladislav from CARITAS Goma, Jean Marie Vianey, technical staff, Celestin Tuyisenge, BDD coordinator, Paluku Mughubirwa, CEDERU Director, Kambale Muhasa technical field staff, Dr. Gilbert Ndabagera, Ministry of agriculture, Head of North Kivu provincial, Representative from FAO Goma and Joseph Mbuyi Lusambo C3P CPM.
- A meeting to focus the BXW activities in the area of Rutshuru and Beni was held between CARITAS Goma, CEDERU, UCG and FAO Goma.
- In Tanzania, data collected in Kagera and Kigoma regions during this quarter are still being analyzed at the regional level where a report will be produced and shared at the regional level and within Tanzania
- IITA completed BXW surveys, in Rwanda and DR Congo and data entry was completed for all countries, except part of DR Congo. Data will be fed into GIS models
 - Results from Rwanda show the BXW is so far largely contained within Rubavu district, but is spreading into the neighboring districts of Rutsiro and Karongi
 - BXW has spread dramatically in DR Congo where the disease has moved out of North Kivu province. Sites outside Masisi/Rutshuru were surveyed for the first time and disease confirmed at Goma on the Rwanda/ DR Congo border, in Beni territory along the Bundibugyo/Uganda border, further north in the Mahagi area of Ituri district and in Mutwanga areas in Ruwenzori
 - Reports have been prepared for the completed surveys

1.2.4 CMD Survey

IITA staff completed CMD surveys in Uganda, DR Congo, Rwanda and Burundi. Data were entered for all of these surveys and will be fed into GIS models.

- Survey results from Uganda provided both positive and negative feedback on control efforts. For the first time, CMD-resistant varieties were reported from more than half of all farmers' fields. However, a significant country-wide spread of CBSD was noted.
- Sites sampled in DR Congo complemented those visited during the fourth quarter of 2006 and Maniema was visited for the first time. Survey results suggested that Maniema has yet to be affected by EACMV-UG that is associated with the severe CMD pandemic. However, rapid spread was again reported from Uvira District in South Kivu, and there appears to be an on-going southwards spread of the pandemic into Fizi District along the shores of Lake Tanganyika.
- The final edited version of the first DRC CMD survey report was completed (see Appendix 19)

1.2.5 Quantification of indicators for risks affecting food security (pests and diseases, droughts etc.) on a regional basis

- This was done through the surveys and briefs on food security.

1.2.6 Establishing a GIS model depicting medium to long term food security risks arising from pests and diseases and abiotic factors.

- This activity is on-going, and the CMD targeting brief of Dr. Chris Legg is a major incremental contribution towards this activity (see Appendices 5 -7)

IR 1.3: Existing institutions carry forward proven methods for coordination and knowledge sharing regarding agricultural disasters

1.3.1 Identify the critical organizational components of a disasters response unit using experience from C3P and elsewhere (GIS, crop data, socio-economic information)

In Rwanda, the following meetings/workshops were attended by the CPM:

- 6-7th March 2007, a workshop on seed availability and involvement of stakeholders to promote food security in the Southern Province, organized by AFSR
- 26-27th March 2007, an ISAR conference on agriculture research outputs
- 29-31 March 2007, a COMESA agriculture meeting held in Kigali

1.3.2 Determine the institutional linkages and partnerships required for an effective system

- In Tanzania, the CoP convened a meeting in the CRS Mwanza office which was attended by CRS Agric. Head of Program, Edward Charles, the CPM and the Mwanza Head of Office. The meeting also coincided with the visit by the RUDDO director who is also the

chairperson for the C3P Country Coordinating Unit to CRS-Mwanza who was invited to explain the progress made by RUDDO and way forward for C3P activities by RUDDO and in general for Tanzania, as the CCU chairman

- Since C3P in Tanzania have both CRS traditional and new partners, it was thought necessary to train the new partners in CRS financial accounting procedures to bring them on board. Training of accountants and administrators was conducted. Six partners were trained viz. MARDI, LZARDI-Ukiriguru, KIKANGONET, MFEC, MRHP and RUDDO. One group was trained in Mwanza where 9 participants attended and the other group was trained in the RUDDO offices in Biharamulo district Kagera region where 10 participants attended making a total of 19 trained participants
- In Uganda, World Vision conducted a number of sensitization workshops concerning implementation of C3P activities with a number of stakeholders involving district, Sub County and parish staff in the districts of Mbale and Nakasongola. Community sensitization, formation of task committee's and identification of beneficiary households have been completed (see Appendix 23).

1.3.3 Propose a methodological approach using the various data sources to provide an early warning system for potential disasters for crop or livestock production

- This is ongoing work for IITA. A model has been established to depict household consumption under different agricultural production, market and income scenarios. This model will cater for the integration of various data sources into the assessment and early warning system and will be published for the next quarter

SO 2: Farmers employ effective measures to control CMD and BXW

IR 2.1: Effective control of CMD is achieved through multiplication and distribution of CMD resistant varieties and promotion of improved management practices

2.1.1 Inventory survey for CMD-resistant varieties in all target countries

- In Kenya, the second Cassava Inventory Survey was conducted in all C3P districts of Kenya
 - This activity was led by IITA in collaboration with KARI, MoA and CRS partners
 - A preliminary report shows that there are now enough planting materials for the long rains of 2007. The dominant cassava variety being Mygera in Teso district. SS4 and MH95/0183 are also available for multiplication
- In Rwanda, the CPM has discussed cassava seed certification with RADA in MINAGRI
 - Certification activities are tentatively planned for May 2007-June 2007
- In Tanzania, the budget for the cassava CMD resistant inventory was made, submitted to the Regional Grant Committee (RGC) and was approved. Next quarter the survey will be carried out

- In Uganda, a second Cassava inventory Survey was carried out; the districts of Gulu, Pader and Kitgum, which are CRS areas of implementation in Northern Uganda and where cassava resistant materials have been disseminated and multiplied in the recent past, were some of the areas covered. In addition, the districts of Soroti, Lira and Kaberamaido were covered. The survey was done in the 1st week of April (1st to 8th April 2007) A report is expected by end of April 2007
 - Four people participated in the GPS/GIS training program, these included the CPM and one participant from CARITAS-Lugazi, CARITAS-Kasanaensis Luwero and World Vision
 - All cassava multiplication sites and farmers involved in multiplication will be now geo-referenced
- It was decided at the MTM to extend the inventory survey for the CMD-resistant germplasm into areas that were covered by the first inventory survey in Kenya, Tanzania and Uganda
 - These follow-ups aimed to provide a more comprehensive picture of resistant germplasm availability
 - During this quarter, the work was done in Kenya and Uganda and reports are being compiled. The extended inventory survey will be done in Tanzania during the next quarter (IITA).

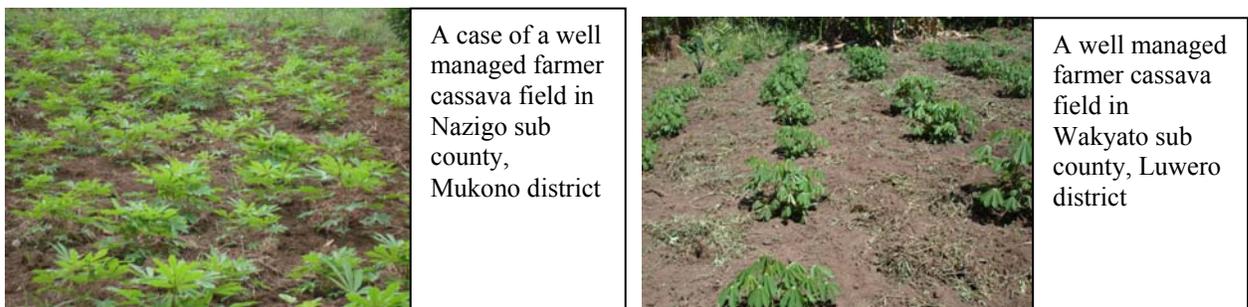
2.1.2 Expand networks of primary and secondary multiplication sites in Burundi, Rwanda and DRC

- In Burundi, the CPM, in partnership with its partners (BDD Bubanza, BADEC Ngozi, CRS Kirundo, FHI, EMUSO, BDD Muyinga and CARITAS Belgique), is assisting with the multiplication of 150 ha of cassava cuttings
 - 118 ha of cassava cuttings are now under multiplication
 - 300,000 cuttings equivalent to 30 ha were purchased for replanting fields.
- In DRC, cassava cutting material are now available in Tongo, in the North Kivu province
 - Ten associations for multiplying CMD resistant material were identified by CEDERU Kibututu and eleven identified by CARITAS Kongolo
 - One meeting on cassava networks was completed in Goma, the participants included:
 - FAO,CICR, PAM, CRS, CARITAS Goma, CEDERU Kibututu REFED North Kivu, RGT North Kivu, SENASEM North Kivu ACOGENOKI, Head of Provincial Agriculture
 - The topics discussed were mostly oriented to the criteria for:
 - becoming cassava cutting producers,
 - what is called cassava field multiplication and
 - what is the official price for one meter of cassava cutting
 - experiences from different stakeholders were shared
- In Rwanda, INGABO and CRS signed an amendment to their agreement to plant an additional 22 hectares of cassava, giving a total of 62 ha under multiplication
 - Likewise, RWARRI and CRS signed an amendment to their agreement to place an additional 10 hectares of land under CMD resistant cassava
 - RWARRI has now a total of 30 hectares under production

- The total benchmark of 92 hectares has now been achieved.
- In Tanzania, the CPM, in partnership with LZARDI and MARDI is planning to establish six sites each of 4ha, making a total of 24ha of new primary sites in the cassava dependant districts, drought prone, and food unsecured districts in the Lake and Western Zones infected by CMD

2.1.3 Monitoring of the health status of plants at the multiplication sites and promotion of quality control

- In Tanzania, each partner continued to monitor the cassava fields either planted by groups of farmers, individuals or those established as OFV fields. The monitoring also involved advising farmers to uproot/rogue the diseased plants, as well as keeping their fields weed free
- In Uganda, in March, monitoring visits were carried out in the districts of Luwero and Mukono to check on the progress of farmers who had received cassava planting material during the 3rd quarter of the project, using the on-farm voucher (OFV) approach. Germination of cassava cuttings distributed in December 2006 was good as observed in the farmers' fields and some multiplication sites. The variety, 2961 performed better than AKENA in Mukono/ Kayunga area, while Akena performed better in Luwero area.



Some of the challenges mentioned by farmers who were visited included:

- bruised cassava cuttings suffered during transportation,
- immature stems,
- the long dry spell between December, January and February,
- and inaccessibility to water sources which affected germination
- It was also observed that, farmers failed to apply some of the management practices like correct plant spacing for rapid multiplication
- This was attributed to receiving different information from different programs operating in their areas
- Such programs included NAADS and farmer field schools (FFS).
- IITA staff made visits to Rwanda, Burundi, Kenya and Tanzania for the purpose of testing the quality management protocol. A revised version was produced based on feedback obtained in all four countries. The final version will be promoted through visits to each of the six countries in the next quarter. Reports were produced for each of the visits and all of these were submitted to the project management team for distribution as appropriate

2.1.4 Facilitate establishment of community-based private sector driven cassava planting material production schemes

- In DRC, 30,000 ml of cuttings have been purchased by CEDERU Kibututu. All cuttings have been transported from Tongo, near Goma, to Kibututu.
 - 45,000 ml of cassava cuttings have been purchased by CARITAS Kongolo.
 - CARITAS Goma has purchased 7,000 additional cuttings and CARITAS Kindu has purchased 18,400 ml.
 - The total cassava cutting purchased during this period is 100,400.00 ml.
 - 20 Ha of land have been prepared by CARITAS Kongolo,
 - CEDERU Kibututu has been prepared 15 Ha of land,
 - CARITAS Uvira has prepared 5 additional Ha to totalizing 40 Ha,
 - CARITAS Kindu has prepared 5 to totalizing 20 Ha,
 - CARITAS Goma has prepared 2 Ha to totalizing 32 Ha.
 - Taking account of altitude in the area, six field maintenances are required.
 - At the end of March, old partners have completed an average of 3 field maintenance; the new partners just finished the plantation. No one field maintenance is completed,
 - Regular healthy inspection is done by partner agronomists. One inspection is done by SENASEM agents in the old field planted on November-December 2006.

- In Kenya, Facilitate 6300 households to acquire CMD free planting materials through OFV
 - Sensitization of farmers on the on farm vouchers in Busia district is ongoing and 386 voucher beneficiaries for 2007 LR identified
 - Monitoring for weeding, rouging and data recording on tolerant cassava multiplication sites are on going.

- In Burundi, more than 20 multiplication sites for our partners BDD Bubanza, BADEC Ngozi, BDD Muyinga and CARITAS Belgium were visited by the CPM and the Deputy CoP. The objective of the visits was to identify the problems encountered by partners, check on the status of planted fields and the need of more planting material to replace cuttings that failed to grow for a variety of reasons

- In Tanzania, This was done by C3P CRS partners in forming groups of farmers either by using their already existing groups or by forming new groups for the purpose of multiplying CMD resistant varieties. This was done in an agreement that part of the planting materials (2/3) will be taken to another group and another part (1/3) to be retained in the group. The group will provide labour and cassava roots will theirs. This agreement is for two years in which for the first year ratoon they are not allowed to uproot but to harvest piece meal in order to allow quick sprouting so as to get many planting materials in shorter time as possible

- In Uganda, 200 bags of cassava cuttings had been procured (100=AKENA & 100= 2961 cassava varieties) through the on farm voucher system by CARITAS Lugazi for dissemination to farmers in Mukono and Kayunga districts during the month of December 2006. Of these, 164 bags were distributed at farmer level among 82 farmers and 36 bags

were used by CARITAS Lugazi to establish 22 multiplication sites at the parish level and some with their host farmers. It was observed however that these sites were of small acreage between 0.25-0.5 acres due to scarcity of land. It was difficult to get one farmer to host 1 acre for multiplication because farmers expressed an urgent need to plant for food rather than just for planting material. The distribution of bags per sub county is shown below:

- Kangulumira 20 bags (10 AKENA & 10 of 2961)
- Kayunga 31 (17 AKENA & 14 of 2961)
- Nazigo 28 bags (14 AKENA & 14 of 2961)
- Nama 17 bags (7 AKENA & 10 of 2961)
- Busana 28 bags (14 AKENA & 14 of 2961)
- Nabbale 28 bags (14 AKENA & 14 of 2961)
- Nyenga 12 bags (6 AKENA & 6 of 2961)
- CARITAS Lugazi 36 bags (18 AKENA 18 of 2961)

Another 200 bags were procured and directly disseminated to 110 farmers. In total, 192 farmers have received planting material in the districts of Kayuga and Mukono.

- In Uganda, a further 200 bags of cassava cuttings were procured (79=AKENA & 121=2961 cassava varieties) through the on farm voucher system by CARITAS Kasanaensis
 - All the bags were distributed among 110 farmers at group level. Distribution of planting material according to sub counties is as shown below:
 - Butuntumula 64 bags (16 AKENA & 48 2961)
 - Luwero 102 (46 AKENA & 56 2961)
 - Ngoma 12 bags (7 AKENA & 5 2961)
 - Wakyato 22 bags (10 AKENA & 12 2961)

2.1.5 Organization of meetings of stakeholders for the establishment of as national network for the multiplication and distribution of good quality CMD-resistant planting materials

- In Burundi, in February, 10 participants from different organizations, (International, research institutes, NGO's and Governmental) met in Bujumbura, Burundi to discuss cassava multiplication constraints
 - The participants noted the problems linked with cuttings dissemination from primary multiplication to secondary. These are especially the quality of cuttings (their length, maturity), variety diversity, bagging, transport conditions and discharging). They noted that these factors are very important but unfortunately are not given adequate attention. The average cuttings loss amongst the participating countries was estimated at 20%. The necessary recommendations (mature cuttings with 4 eyes, transportation in small quantities and in open lorries, minimizing the time limit of cutting and delivery to fields for planting) were given to all stakeholders. However, the committee noted that globally, the objective will be achieved.

- In Burundi in March, all cassava stakeholders met with FAO to discuss the progress made in cassava recovery. The meeting concluded that a lot has been done in multiplication and 84,000 ha targeted can be achieved within 3 years. The meeting noted however that many things on cassava such as productivity, ecology, post harvest technology, test, and resistance to Cassava Brown Streak (CBSD) virus are still unknown and recommended that the research institutions to explore these areas
- In Kenya, in February, the C3P quality management training by IITA, KARI and CRS was attended by all partner representatives
- In Tanzania, C3P partners planted over 7.2 ha of CMD resistant varieties by use of OFV approach in the long rains in Muleba district in Ngenge and Rwigembe villages. The activity was implemented by MARDI, a C3P partner in collaboration with the Muleba district council. An estimated total of 800 households have benefited from this program/approach. Establishment of this site marked a total of three sites planned under C3P to be established in the life span of the project in Tanzania. In establishing the sites the following steps were followed:
 - Meeting with the District authorities to explain the OFV procedures and to get their support
 - To conduct leaders sensitization meetings (Division, ward, Village executive offices and their chairperson and sub-village leaders)
 - To conduct villagers and their leader sensitization meeting
 - To conduct voucher holders selection meeting and select the voucher holders by using wealth ranging tools in order to select the most needy groups (i.e. the resource poor farmers)
 - Verification of CMD resistant materials availability, purity and amount in with vendors (people who have the materials). Make enough copies and avail them to voucher holders at least 2-3 days before exchange of vouchers with cuttings
 - To conduct selected voucher holders meeting and issuing vouchers
 - Conduct vendors meeting to explain all the needed procedures to the voucher holders
 - Exchange of vouchers and cutting exercise
 - Taking records of how much each vendor is to be paid
 - Paying the vendors
 - Conducting evaluation at 2-3 weeks after issuing vouchers to get farmers perceptions on the whole system of OFV
 - Conducting evaluation again at 6-12 weeks after issuing vouchers
- The use of OFV stimulate the demand side and is a more sustainable way of disseminating CMD resistant varieties and market friendly response in helping farmers to access CMD resistant materials. There is a need to sensitize other donors involved in the same activities to use this approach.
 - A quick interview made to vendors indicates that most of the vendors were planning to spend money obtained from sell of cassava cuttings in improving their houses or building a new house. These success stories will be reported in the next quarter report
 - Evaluation to determine farmer's perception on the use of vouchers to access CMD free planting materials report for the three established sites is been finalized by our partner LZARDI who carried out the evaluation and will be reported in the next quarter

2.1.6 Publicity about newly-developed varieties and sources of quality planting materials provided through local mass media, field trips, demonstration plots and pamphlets

- In DRC, regular sensitization was done by partner agronomists using different approaches
 - Open day using field school as an approach was mostly used during this period to sensitize public and farmers
 - CARITAS Uvira has used the Archdiocese radio twelve times to sensitize the public to CMD
 - CARITAS Goma has used markets where cassava cuttings are purchased to sensitize the public to CMD
 - Thirty posters of 2m x 2m and 150 of 1m x 70 cm, with the simple CMD message have been completed
 - 500 calendars for 2007, with a simple CMD and BXW message have been completed
 - CARITAS Uvira has completed 300 C3P T-shirts and hats
- In Rwanda, in March, the CPM, in collaboration with ISAR, MINAGRI, prepared draft learning pamphlets and posters
 - C3P partners will validate the materials next quarter using focus groups
 - In April 2007, key messages on CMD management were broadcast through radio spots
 - These were developed by the CPM in collaboration with MINAGRI and sent to Radio Rwanda for broadcasting
- In Tanzania, from 19th-24th February, an extension material production week was arranged
 - participants were from the Ministry of Agriculture information office, agricultural extension staff from the region and districts and Lake Zone Agricultural Research and Development Institutes (Ukiriguru and Maruku)
 - The following extension materials for cassava in Swahili language were produced:
 - two leaflets on CMD, one training manual on CMD, one brochure on CMD and one poster for CMD
 - two radio announcements were also prepared.

2.1.7 Development of training curriculum

- In Tanzania, training curricula were developed for Training of Trainers (ToT) from the District council agricultural extension officers and NGO/Partner staff
 - these were used to train farmers
- IITA developed an illustrated draft for a one-page double-sided training sheet 'Growing a Healthy Cassava Crop'
 - One template will be produced for each country, with appropriate local pictures and local information
 - Translated versions will be produced for main local languages in each target area
 - The first version was produced in English using information appropriate for Burundi (available on request from Dr. James Legg; very large file)
 - This was subsequently translated into Kiswahili (available on request from Dr. James Legg)

- In the next quarter, local information and digital images for varieties will be obtained for each country, translations made, and the sheets will be tested with farmer groups
- The aim will be to mass produce laminated versions of these training aids for distribution to farmers in Project target areas

2.1.8 Regional training: Extensionists trained in CMD management approaches

- In Burundi, a training workshop on CMD management and improved cassava production was held in Bujumbura from 30th January to 2 February.
 - Six participants from Congo and six participants from Rwanda joined 27 participants from Burundi to discuss some topics such as :
 - Cassava disease and pest management
 - Monitoring and evaluation
 - Cassava agronomy
 - Cassava production and cuttings dissemination
 - Rapid multiplication
 - Cassava post harvest technology
 - Different methods of sensitization

A field tour was organized for the participants to be able to compare diseased fields and CMD resistant material, to exercise rapid multiplication and its applicability in rural areas. Each group developed a short term work plan for the technology transfer from research centers to farmers (see Appendix 5.1.3)
- In DRC, five persons from DRC, who were originally trained in Bujumbura on the cassava rapid multiplication and CMD management have subsequently trained the following:
 - a. Four agronomists and 20 technicians from different associations
 - b. Fifteen members from 10 associations in Kibututu
 - c. 120 farmers in Kindu and Maniema province
 - d. Topics covered during these trainings included:
 - i. rapid multiplication techniques,
 - ii. CMD management,
 - iii. Field multiplication used as a didactic material
- From Rwanda, 5 participants: 1 from RWARI, 1 from INGABO, 2 from ISAR and 1 from CARITAS attended the training workshop on CMD
- In Uganda, a number of farmer trainings were carried out in the districts of Mukono, Kayunga, Luwero and Nakaseke. The objectives were to:
 - i. To impart knowledge to farmers on the importance of practicing good crop husbandry and management practices on cassava.
 - ii. To identify pests and diseases that attack cassava and the appropriate pest and disease management practices control.
 - iii. To provide farmers with knowledge and practical skills in field hygiene, especially in the control of CMD and CBSD diseases.
 - iv. To train farmers in identification and differentiation of CMD and CBSD symptoms from other pests and diseases.

- v. A total of 2,294 farmers were trained in CMD, CBSD management, control and rapid multiplication of cassava in the districts of Mukono, Kayunga, Luwero and Nakaseke as shown in Table 1 below:

Table 1: Farmers who have been trained on CMD and CBSD

| District | Sub county | No. of farmers who participated |
|--------------|-------------|---------------------------------|
| Luwero | Butuntumula | 59 |
| Nakaseke | Wakyato | 42 |
| Nakaseke | Ngoma | 55 |
| Nakaseke | Nakaseke | 58 |
| Luwero | Luwero | 94 |
| Nakaseke | Kasangombe | 105 |
| Mukono | Nabbale | 300 |
| Mukono | Nyenga | 181 |
| Mukono | Nama | 300 |
| Kayunga | Busana | 550 |
| Kayunga | Kangulumira | 200 |
| Kayunga | Nazigo | 350 |
| Total | | 2294 |

• IITA/CRS held a 5 day regional training workshop on CMD for French-speaking countries in Burundi in late January/early February. A total number of 32 participants attended from Burundi (20), Democratic Republic of Congo (6) and Rwanda (6). This training workshop was organized by IITA/EARRNET in collaboration with CRS Burundi (see Appendix 2).

2.1.9 Country cassava teams train Extensionists and farmers in CMD management

- In Tanzania, RUDDO trained 392 farmers in CMD disease symptoms, control measures and cassava agronomic practices. This activity was carried out by trained RUDDO and District Council staff. The following numbers of farmers from the following partners and districts were trained in CMD disease symptoms, control measures and cassava agronomic practices:
 - MFEC-491
 - TAHEA-241
 - KIMKUMAKA-578
 - KIKANGONET- 796
 - MARDI- 506
 - MRHP- 220
 - A total of 3,224 farmers have been trained. The training exercise is continuing by our partners in their respective areas.

IR 2.2: Effective control of BXW is achieved through promotion of improved disease management techniques and through multiplication and distribution of wilt-escaping varieties

2.2.1 Identify farmer-preferred wilt-escaping varieties in target countries

- In Tanzania, farmer preferred banana varieties are expected to be multiplied in the established banana macro-propagators in Kagera and Mara (Tarime district) regions. This is in an effort to provide farmers with clean planting materials against banana weevils, nematodes and BXW. Already the established macro-propagator at MARDI has produced some banana materials. It is planned to start in May 2007 to mass produce banana plantlets for the coming Sept-Oct 2007 planting season. Also, in the next quarter four more macro-propagators will be established by other selected NGOs in Kagera region. Possible proposed NGOs by the CCU are MAYAWA, MALI, RUDDO and CHEMA. Negotiations are going on between these NGOs with MARDI in collaboration with CRS to persuade these NGOs to establish macro-propagators and to do sensitization and training for farmers. Also, the on-farm voucher (OFV) system may be used to enable the resource poor farmers to get clean banana planting materials.

2.2.2 Survey to obtain germplasm inventory for banana in all target countries

- In Tanzania, a regional team from IITA/BIOVINT did a survey/census in Kagera and Kigoma regions with the national banana scientists from MARDI.

2.2.3 Extensionists and farmers trained in macro-propagation

- In Tanzania, in January, training on banana macro-propagation for division and district agricultural extension officers for Kagera region was conducted at MARDI
 - A total of 38 participants attended the training
- In Uganda, all 12 macro propagation nurseries and mother gardens established were inspected by scientists from IITA and recommendations given on required improvements to ensure process quality
 - A total of 17 farms in 4 districts (Mukono, Mubende, Sembabule and Mityana) have been certified as sources of healthy corms for macro propagation (IITA).
 - These districts were certified as alternative sources being much closer to the central districts than the previously targeted sources in Mbarara and Ntungamo districts (IITA)
 - Several proposals have been positively reviewed for regional small grants to initiate macropropagation in Kenya and DR Congo, which will increase macropropagation training provided to extension and farmers in the region (IITA).

2.2.4 Establish multiplication nurseries in the target farming communities

- In Uganda, a follow up was made on the progress of macro-propagation construction in Luwero and Mukono. A total of 13 macro-propagators have been constructed and are complete by CARITAS Lugazi and CARITAS-Kasanaensis respectively with a few

touchups remaining after technical advice from IITA. In addition, CARITAS-Kasanaensis completed the nurseries which have been established near the macro-propagators. Table 2 shows the different sites where the macro-propagators have been constructed.

Table 2: Location of macro-propagation sites

| District | Sub county | Village | Status |
|----------|-------------|--------------------|----------------------------|
| Mukono | Naama | Kichwa | Established but incomplete |
| | Nabaale | Nagalalama parish | Established and completed |
| | Nyenga | Nyenga | Established and completed |
| Kayunga | Nazigo | Mbulakati | Established and completed |
| | Busaana | Namkuma | Established and completed |
| | Kangulumira | Kangulumira parish | Established and completed |
| Luwero | Kikyusa | Kikyusa | Established and completed |
| | Makulubita | Bakijulula | Established and completed |
| | Luwero | Bweya | Established and completed |
| | Butuntumula | Butuntumula | Established and completed |
| Nakaseke | Kapeeka | Kapeeka | Established and completed |
| | Semuto | Ggulu | Established and completed |
| | Nakaseke | Kiziba | Established and completed |



Completed macro-propagator in Luwero district



An established nursery shade in Luwero district



Completed macro-propagator in Mukono district

The macro-propagators are expected to have a capacity of 800 corms. The dimension of the propagator is 4.10ft high, 8.2ft wide and 15.5ft in length (4.1 x 8.2 x 15.5). The interior dimension is 14.8ft length and 2ft width (14.8 x 2). The nursery is 5.7ft high, 14.8ft wide and 29.2ft in length.

- Checking and approval of farmer's fields for provision of corms to feed the macro propagators took place in the week of 25th-29th March in Mukono district, 10th-13th April in Ntenjeru, Mityana, Mubende and Sembabule districts. The exercise was carried out by technicians from NARO's Banana programme and IITA. A total of 21 farmers' fields were visited out of which 18 fields were clean and disease free. The fields have been checked for BXW and other pests and diseases and certified as clean. Procurement of corms is expected to start third week of April as certification of prospective field to supply the corms has been completed. A total of 10,500 corms are to be procured by both CARITAS Lugazi and Luwero based on information obtained during the situational analysis exercise carried out during the previous quarter on farmers' preferred banana varieties.

- A total of 40 mother garden sites (30 in Mukono and Kayunga and 10 in Luwero and Nakaseke) districts have been identified and land clearing, preparation and digging of holes completed. 18.1 hectares were earmarked for the mother gardens by both CARITAS Lugazi and Luwero respectively.
- A total of 7,875 tissue culture plantlets have been procured by CARITAS Kasanesis and 9,600 by CARITAS Lugazi out of which 2,000 and 5,703 have been distributed respectively. The balance is being kept in the nurseries for partners waiting for regular rain patterns.

2.2.5 Identify farmers to receive the initial batch of suckers

- In Tanzania, villages around Maruku Agricultural Research and Development Institute (MARDI) will be sensitized on planting clean banana planting materials from macro-propagators established at the institute
 - Farmers transporting banana planting materials from Kagera region will be advised to take materials from the established macro-propagators in order to minimize transmission of banana pathogens to other regions growing bananas. Ministry of Agriculture Plant Health Services will be consulted to sensitize in the boarder posts as well as ports
- In Uganda, 600 (500 from CARITAS Kasanesis and 100 from CARITAS Lugazi) farmers were identified for the initial batch of suckers to be distributed from the propagators. Forty to 50 banana suckers will be distributed to each farmer in each farmer group by CARITAS Lugazi and CARITAS Kasanesis respectively. Identification of the beneficiaries was done during the situational analysis carried out in the 3rd quarter.

2.2.6 Publicity about wilt-escaping varieties and sources of quality planting materials through local mass media, field days, demonstration plots and pamphlets

- In DRC, this activity was completed by CARITAS Goma, Catholic Un. Graben and CEDERU Kibututu
 - Radio, Churches and markets have been used by partners to sensitize public and farmers
 - Twenty posters of 2m x 2m and 70 of 1m x 70 cm with the simple BXW message have been completed
 - 500 calendars for 2007, with the simple BXW message have been completed
 - Two BXW meetings were completed
 - The first focused on the intervention area of each partner involved in the cassava activities
 - Graben focused activities in Lubero and Beni
 - CARITAS Goma focused activities in Massisi
 - CEDERU focused activities in Rutshuru
 - The second meeting focused on lessons learnt from FAO intervention in Kichanga area.
- In Kenya, a total of seven field days were conducted by REFSO in collaboration with MoA and KARI in three districts (Busia, Teso and Bungoma). The field days largely focused on

BXW, but also on CMD. In Busia 5 field days have been conducted, while Teso and Bungoma have had one each. 2,334 participants attended with 1,439 being male participants and 895 female participants.

- REFSO conducted 10 on site BXW trainings on symptoms and management with a total of 545 farmers, male farmers are 422 and 123 female participants.
- Radio adverts on BXW awareness campaigns on going in a local language (Dholuo) through a local FM radio station (Radio Lake Victoria)
- In Rwanda, distribution of 776 poster/calendars to districts, sectors and other stakeholders (CRS Staff, INGABO, BAIR, ISAR, MINAGRI, Dioceses, USAID, WFP etc.)
 - Adaptation of a radio spot for Radio Rwanda on BXW in collaboration with the local radio;
 - Production and broadcasting of 2 emissions on BXW per month through local radio;
 - Publication of BXW story in the newspaper "Huguka" by BAIR
- In Tanzania, in February, an extension material production week was arranged with participants from the Ministry of Agriculture information office, agricultural extension staff from the region and districts and Lake Zone Agricultural Research and Development Institutes (Ukiriguru and Maruku)
 - The following extension materials were produced: four leaflets for BXW, one training manual for BXW, one billboard for BXW and one placard for BXW
 - Also, two radio announcements were prepared for BXW
 - The materials will be multiplied and disseminated next quarter during farmer trainings
- In Uganda, dissemination of participatory communication tools (posters, manuals, public video shows) was carried out. Participatory community sensitisation on BXW was carried out in the districts of Mukono, Kayunga, Nakaseke and Luwero by the National Banana Research Program. 4,068 farmers were sensitised above the expected project target of 2,500 and over 1,100 pupils. In addition 70 officials were sensitised about BXW and CMD. These involved political leaders (local council leaders, subcounty chiefs, parish chiefs), agricultural extension staff, NGOs and farmers. In addition, at the district level, district agricultural production sector officials, secretaries for production, councilors and agricultural extension staff.

2.2.7 Development of training curricula in both English and French

- In Tanzania, in January, training curricula were developed on BXW and macro-propagator construction for division and district agricultural extension officers for Kagera region conducted at MARDI where a total of 38 participants were trained
- IITA has prepared a guide for certifying farms that have sources of healthy corms for macro propagation. The guide will enable teams on the ground to carry out farm inspections to ensure corms are obtained from disease-free farms. This capacity is

necessary since sources of corms need to be certified no more than one month before corms are procured for the macro propagators

- A guide is being developed for certifying farms clean and ready for replanting to rehabilitate plantations after BXW attacks. This will be particularly relevant in Uganda and DR Congo where major efforts are underway to rehabilitate bananas in post epidemic areas through provision of clean planting suckers

A manual has been developed on comparative diagnostics of BXW versus other key banana diseases

- Bioversity-Uganda in addition for Tots for Tier 3, has developed bi-lingual BXW diagnostic and management tools. The Bioversity team developed and tested with CBTs tools for recognition and management of BXW. The strategy has been to develop bilingual (French and English) hard and electronic copies in sufficient quantities to enable the NARS-level teams to use them for training while receiving feedback on their suitability as teaching/learning tools. Using their electronic copies the tools can then be edited/adapted for the local conditions (language and/or social settings)

- In this regard 3000 French – language farmer-level posters (for Rwanda, Burundi and DRC) and 3000 English language translations along with 100 CDs were produced and are being distributed in the participating countries (See Appendices 14, 15, 16)

2.2.8 Regional training: Extensionists trained in BXW management approaches

- From Tanzania, four people participated in the GPS and GIS training in Kisumu Kenya (see 1.2.6 above) and the knowledge gained will be used to map all areas where BXW activities are carried out and the location of new BXW outbreaks.

2.2.9 Country banana teams train extensionists and farmers in BXW management

- In DRC, CARITAS Goma trained ten brigadiers on the BXW management and macro-propagation techniques

- In Tanzania, BXW disease symptoms were reported by Mr. Eliawoni F. Marandu the CPM when he was on his normal working trips in Tarime district between 18th. and 19th. January 2007

- A verification trip was planned and on 31st January 2007 a team including Mr Mgenzi Byabachwezi from ARDI Maruku, who is the national BXW team leader and Mr. Marandu from CRS, travelled to Tarime and confirmed the disease to be BXW
- Immediate action to eradicate the disease were taken in February as follows: training of 15 Tarime district agricultural extension workers, the disease was officially announced by Ministry of Agriculture, sensitizing the Tarime district leader and communities (Mogabiri village) infected with BXW.
- Also, IITA and Bioversity International (BIOVINT-Uganda) representatives participated in the sensitization meetings and trainings in Tarime district and strategies to combat the disease were developed and were used to develop a proposal for funding

- In Rwanda, BAIR was contracted to supervise the 2nd FFW phase to uproot and destroy infected banana mats on 172 hectares that were left unfinished from the first phase, due to heavy rains and difficult volcanic soils
 - The second phase is expected to reach the planned 396 hectares identified by the district for uprooting
- In Tanzania, training on BXW for division and district agricultural extension officers for Kagera region was conducted at MARDI from 9-11 January 2007. A total of 38 participants attended the training
 - The last quarter trained Division Executive Officers (DEO) and the Kagera districts chairpersons continued to sensitize ward and village leaders and district councilors in their respective areas on BXW control measures
- In Uganda, a number of farmer trainings were carried out in the districts of Mukono, Kayunga, Luwero and Nakaseke. The objectives were to:
 - To equip knowledge to farmers on the importance of practicing good crop husbandry and management practices on banana.
 - To identify pests and diseases that attack banana and the appropriate pest and disease management practices control
 - To empower farmers with knowledge and practical skills in field hygiene especially in the control of BXW diseases
 - To train farmers in identification and differentiation of BXW symptoms from other pests and diseases
 - To date 2,457 farmers have been trained in the four districts as indicated in table 3 below

Table 3: Farmers who have been trained on BXW

| District | Sub county | No. of farmers who participated |
|--------------|-------------|---------------------------------|
| Luwero | Butuntumula | 59 |
| Nakaseke | Kapeeka | 43 |
| Nakaseke | Ssemuto | 46 |
| Luwero | Kikyusa | 125 |
| Luwero | Luwero | 94 |
| Luwero | Makulubita | 151 |
| Nakaseke | Nakaseke | 58 |
| Mukono | Nabbale | 300 |
| Mukono | Nyenga | 181 |
| Mukono | Nama | 300 |
| Kayunga | Busana | 550 |
| Kayunga | Kangulumira | 200 |
| Kayunga | Nazigo | 350 |
| Total | | 2457 |

- Backstopping support and training was provided on site to C3P partners in Uganda, Tanzania (Tarime) and DR Congo, with backstopping stops in Kisumu (Kenya) and Rwanda (IITA)

- Bioversity-Uganda selected 30 participants from the government extensions services, NGOs and policy institutions of Burundi, DR Congo, Kenya, Rwanda, Tanzania and Uganda and trained in BXW diagnostics and management skills, through oral presentations, working group discussions, plenary presentations and discussions, field demonstration of disease recognition and management techniques in different farming and agro ecological systems in Uganda.
 - Participants had extensive discussions with farmers, extension staff and community leaders on disease symptoms, the corrective measures being undertaken and the strategies being employed to raise public awareness
 - A number of agro-ecological systems were used to demonstrate the diversity of disease impacts and associated responses
 - Mukono district was used to demonstrate the ABB-based banana systems where the dominant mode of disease transmission is insect vector-mediated
 - In Mbarara, the intensively managed Matooke-based production systems were used to demonstrate approaches aimed at combating disease transmission by field tools and infected plant materials
 - The capacity of participants to design and use assessment tools was also strengthened in order to facilitate:
 - surveillance and early detection of the disease in disease-free but threatened regions;
 - eradication of disease pockets in areas newly infected (demonstrated in Mbarara frontline region of Uganda);
 - and management and coping strategies in endemic regions (demonstrated in Mukono district)
 - A number of training materials were presented to, and discussed by, the participants
 - These included reference literature about the disease,
 - posters for disease recognition and management;
 - disease assessment and surveillance tools both as electronic and hard copies for Tier 1 and 2 ToTs
 - The BXW diagnosis and management competences of the participants were monitored throughout the workshop, on a range of 1 – 10, 1 being the lowest and 10 the highest. On day 1 of the workshop, the competency levels were assessed at 5 - 6 but this had risen to 9 - 10 by the last day of the workshop
 - Bioversity teams have also provided technical back-stopping to Tier 2 capacity building activities to the NARS level teams in training government extension staff, NGOs and CBOs
 - This has also been an opportunity to develop and test tools for assessing the effectiveness of capacity building tools in a participatory manner
 - In this regard, Bioversity teams participated in three training workshops in Tanzania- Muleba for policy makers; Bukoba for government extension staff; and in Tarime district for both policy makers and extension staff
 - In Uganda, the focus of the ToT is the Community Based Trainers, organized in the framework of the Church-based organization viz. CARITAS. Training was carried out both in Mukono and Luwero districts.

4. Acronyms

| | |
|---------|-----------------------------------------------------------------------------------|
| ADP | Area Development Program |
| ASC | Advisory Steering Committee |
| ASARECA | Association for Strengthening Agricultural Research in Eastern and Central Africa |
| ATDT | ASARECA's Research and Development Network |
| BAIR | Bureau d'Appui aux Initiatives Rurales |
| BARNESA | Banana Research Network for Eastern and Southern Africa |
| BDD | Bureau Diocesain de Développement |
| BXW | Banana Xanthomonas Wilt |
| CARITAS | International Catholic Relief Service Organizations |
| C3P | Crop Crisis Control Project |
| CBSD | Cassava Brown Streak Disease |
| CBT | Community Based Trainers |
| CCU | Country Coordinating Unit |
| CHEMA | |
| CIALCA | Consortium for Improved Agriculture-based Livelihoods in Central Africa |
| CICR | International Committee of Red Cross (DRC) |
| CMD | Cassava Mosaic Disease |
| CMVD | Cassava Mosaic Virus Disease |
| COMESA | Common Market for Eastern and Southern Africa |
| CoP | Chief of Party |
| CPM | Country Program Manager |
| CRS | Catholic Relief Services |
| DCoP | Deputy Chief of Party |
| DED | District Executive Director |
| DPAE | Provincial Department of Agriculture (Burundi) |
| DRC | Democratic Republic of Congo |
| EA | East Africa |
| EARO | East Africa Regional Office |
| EARRNET | Eastern African Root Crops Research Network |
| ECHO | European Commission Humanitarian Aid Department |
| ECOSEC | Economic Security |
| EMUSO | Entente Mutuelle et Solidarité |
| FAMIS | Food and Agricultural Marketing Information System |
| FAO | Food and Agricultural Organization |
| FEWSNET | Famine Early Warning System Network |
| FFW | Food for Work |
| FHI | Food for the Hungry International |
| GIS | Geographic Information System |
| GPS | Geographical Positioning System |
| ICRC | International Committee of the Red Cross |
| IITA | International Institute of Tropical Agriculture |
| INERA | l'Institut National pour l'Etude et la Recherche Agronomique |
| INGABO | Rwandan Union of Agriculturalists and Animal Breeders |
| INIBAP | International Network for the Improvement of Banana and Plantain |
| IR | Intermediate Result |
| IRAZ | Institut de Recherche Agronomique et Zootechnique |
| ISABU | Institut des Sciences Agronomiques du Burundi |

| | |
|------------|------------------------------------------------------------|
| ISAR | Institut des Sciences Agronomiques du Rwanda |
| KARI | Kenya Agricultural Research Institute |
| KEPHIS | Kenya Plant Health Inspection Services |
| KIKANGONET | Kigoma Kasulu NGO Network |
| KIMKUMAKA | Kituo cha Mafunzo ya Kuboresha Mazingira na Kilimo Adilifu |
| LZARDI | Lake Zone Agricultural Research and Development Institute |
| M & E | Monitoring & Evaluation |
| MALI | Muleba Agricultural and Livestock Industries |
| MARDI | Maruku Agricultural Research and Development Institute |
| MAYAWA | Maendeleo Ya Wakulima |
| MFEC | Mogabiri Farm Extension Centre |
| MINAGRI | Ministry of Agriculture (Burundi) |
| MoA | Ministry of Agriculture |
| MRHP | Misungwi Rural Housing Project |
| MRHP | Mwanza Rural Housing Program |
| NAADS | National Agricultural Advisory Services (Uganda) |
| NADIFA | Nakasongola District Farmers Association |
| NARO | National Agricultural Research Organization (Uganda) |
| NARS | National Agricultural Research Systems |
| NBRP | National Banana Program (Uganda) |
| NGO | Non-Governmental Organization |
| OFV | On-Farm-Voucher |
| RADA | Rwanda Agricultural Authority |
| REFSO | Rural Energy and Food Security Organization |
| RGC | Regional Grant Review Committee |
| REGI | Regional Economic Growth and Integration |
| RUDDO | Rulenge Diocesan Development Office |
| RWARRI | Rwandan Rural Rehabilitation Initiative |
| SAKSS | Strategic Analysis & Knowledge Support System |
| SENASEM | Service national de semences |
| SO | Strategic Objective |
| TAHEA | Tanzania Home Economics |
| UoN | University of Nairobi |
| USAID | United States Agency for International Development |
| WFP | World Food Programme |
| WVI | World Vision Inc. |
| WVU | World Vision Uganda |
| MFEC | Mogabiri farmers Extension Centre |

5. Appendices

1. REGIONAL TRAINING REPORT BXW
2. REGIONAL TRAINING REPORT CMD
3. REGIONAL TRAINING REPORT GIS
4. BRIEF ON BXW ERADICATION
5. BRIEF ON FOOD SECURITY BURUNDI
6. BRIEF ON FOOD SECURITY UGANDA
7. BRIEF FOOD SECURITY RWANDA
8. BRIEF ON CASSAVA CUTTINGS BURUNDI
9. BRIEF ON-FARM VOUCHERS KENYA
10. BRIEF ON BXW LESSONS TANZANIA
11. BXW SURVEY RWANDA
12. BXW SURVEY DRC
13. BXW OUTBREAK REPORT TANZANIA
14. BXW SENSITIZATION POSTERS
15. BXW SENSITIZATION POSTERS
16. BXW SENSITIZATION POSTERS
17. MID TERM MEETING AGENDA
18. MID TERM MEETING ACTION PLAN
19. CMD HEALTH REPORT DRC
20. CASSAVA ON-FARM VOUCHER KENYA
21. BIOVINT PHASE 1 REPORT
22. BIOVINT PHASE 1 REPORT
23. WORLD VISION QUARTERLY REPORT
24. CASSAVA MONITORING TEMPLATE
25. BRIEF ON CASSAVA BROWN STREAK IN EAST AND CENTRAL AFRICA