



INCEPTION REPORT

May 2015

Evaluation of the CGIAR Research Program on Roots, Tubers and Bananas (RTB)



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In collaboration with IEA



Independent
Evaluation
Arrangement

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LIST OF ACRONYMS

A4NH	Agriculture for Nutrition and Health CRP
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
BMGF	Bill and Melinda Gates Foundation
BOT	Board of Trustees
CCAFS	Climate Change, Agriculture and Food Security CRP
CCER	Center-Commissioned External Evaluation
CIAT	International Center for Tropical Agriculture
CIP	International Potato Center
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CRP	CGIAR Research Programme
DDG	Deputy Director-General
DG	Director-General
EPMR	External Program and Management Review
FAO	Food and Agricultural Organization of the United Nations
FP	Flagship Project
IDO	Intermediate Development Outcome
IEA	Independent Evaluation Arrangement of the CGIAR
IITA	International Institute of Tropical Agriculture
ISC	Independent Steering Committee
ISPC	Independent Science and Partnership Council
M&E	Monitoring and Evaluation
NARS	National Agricultural Research Systems
PAC	Program Advisory Committee
PIM	Policies, Institutions and Markets CRP
PL	Product Line
PMC	Program Management Committee
PMU	Program Management Unit
RBM	Results-Based Management
RTB	Roots, Tubers and Bananas CRP
SLO	System-Level Outcome
SRF	Strategy and Results Framework
SSA	Sub-Saharan Africa
TOR	Terms of Reference
WLE	Water, Land and Ecosystems CRP

EXECUTIVE SUMMARY

The evaluation of the CRP Roots, Tubers and Bananas (RTB), commissioned by the IEA, is timed so as to provide evaluative information to feed into the preparation and selection of CRP proposals in the second call for CRP funding. The evaluation is aimed to inform decision-making and planning with respect to program performance and the potential options for the future. The primary audiences of the evaluation include the RTB management and governance, its partners, Fund Council and Consortium.

RTB is a partnership among four CGIAR centers - CIP (Lead-center), CIAT, IITA and Bioversity International - and CIRAD as the fifth core partner. It was launched in 2012 with the objectives of improving nutrition, income generation, and food security—especially among some of the world’s poorest and most vulnerable populations. RTB covers banana, plantain, cassava, potato, sweetpotato, yams and minor root and tuber crops and it aims to add value by exploiting cross-crop synergy. It has been structured around seven Themes that are being restructured into Flagship Projects (FP) for discovery, delivery and impact at scale.

The RTB evaluation will cover both programmatic and organizational aspects of the CRP. The major emphasis will be on formative evaluation assessing the design and implementation of RTB as a multi-partner CRP with a newly defined program structure, theories of change, targets and impact pathways. The summative component will look at achievements to-date, including past research that is continuing in RTB and evidence of outcomes and impacts from the participating centers’ research in such research areas. It will cover the six main evaluation criteria as defined in the RTB Terms of Reference (TOR)¹ and specifically address key evaluation questions reflecting the specific RTB context.

The evaluation will adopt a cross-scale approach with focus on main areas of research that relate to both the PLs within Themes and the emerging Clusters of Activities within FPs. The evaluation will cover the Program irrespective of sources of funding. Purposeful selection is done at two levels: PL by Theme and, within each selected PL, review of documentation of selected projects and activities that are representative of participating centers and geographical regions. The evaluation will focus on three broad areas of activity: (i) Pre-breeding and varietal development; (ii) Multiplication and distribution of planting material; (iii) Post-harvest management, value chains and marketing. A strategic assessment will be made of activities on disease and pest management as well as natural resource management research. Gender, capacity development and communication will be addressed as cross-cutting topics, particularly as they relate to programmatic performance, while the strategic importance of partnerships will also be assessed. Priority setting and impact will also be evaluated.

Case studies are a key element of the approach as they allow an in-depth review of a subset of research according to the key criteria of the review. In the analysis, the team will pay particular attention to the integration of research across centers engaged in research on same crops or where synergies are to be achieved, as well as collaboration with partners in specific research areas. In both the case studies and in evaluation of program-level and cross-cutting aspect of the CRP, the evaluation will use a number of

¹ <http://www.iaecgiar.org/sites/default/files/IEA%20Evaluation%20of%20RTB%20Final%20TOR-web.pdf>

methods, including document review, interviews, field visits and observation, and researcher survey. The team will validate its assessment of evidence through triangulation. The inquiry phase starting in May will involve review of project documents and other materials, followed by field visits in several sites in SSA including IITA, CIAT and CIP in Latin America and limited number of sites in Asia. Field visits and desk analyses will be completed by the end of July. Preliminary findings will be available in mid-August. The draft report is due in October and the final report in November.

1. INTRODUCTION

1.1 Origins of This Evaluation

Research in the CGIAR is guided by the Strategy and Results Framework (SRF), which sets forth the System's common goals in terms of development impact (System-Level Outcomes [SLOs])², strategic objectives and results, in terms of outputs and outcomes. The first SRF was approved in 2011 and a new SRF is at final stages of approval. The CGIAR's research agenda is implemented by the CGIAR centres and their partners through multi-partner CGIAR Research Programs (CRPs). Research is funded through a pooled funding mechanism in the Fund³, and through bilateral funding to centres.

The CGIAR's Independent Evaluation Arrangement (IEA) Office⁴ is responsible for System-level Independent External Evaluations. IEA's mandate is to facilitate the implementation of the CGIAR Policy⁵ for Independent External Evaluations, through strategic evaluations of the CRPs and institutional elements of the CGIAR, and through the development of a coordinated, harmonized and cost-effective evaluation system in the CGIAR.

The IEA's Rolling Work Plan for 2014-17, approved in November 2013 by the Fund Council, foresees the evaluation of up to 10 CRPs over the 2013-2015 period. The CRP on Roots, Tubers and Bananas (RTB)⁶ is one of the CRPs evaluated in 2015.

1.2 Evaluation purpose and clients

The principal purpose of this evaluation is to enhance the contribution that RTB is likely to make to reaching CGIAR goals, in particular food security. The evaluation is aimed to inform decision-making and planning by program management, CRP sponsors, partners and other stakeholders with respect to program performance and the potential options for the future.

In November 2013, the Fund Council of the CGIAR agreed that all current CRPs should undergo some form of evaluation by the time preparation of the full proposal for the second call of CRPs begins. The evaluation of RTB is therefore expected to provide information for preparing the program proposal and selection in the second call.

The evaluation provides both accountability among the CRP, donors and partners, and learning for improving the likelihood of program relevance, effectiveness, efficiency, impacts and sustainable results.

² The three SLOs in the new SRF are: Reduced poverty, improved food and nutrition security for health and improved natural resource systems and ecosystems services. CGIAR Strategy and Results Framework for 2016-2025. May 2015.

³ The CGIAR Fund is a multi-donor, multi-year funding mechanism that provides funding to (i) CRPs through two "Windows"; Window 1 across CRPs as per Consortium decision and Window 2 to donor-specified CRP; and to (ii) donor-specified Centres through Window 3.

⁴ <http://iea.cgiar.org/>

⁵ http://www.cgiarfund.org/sites/cgiarfund.org/files/Documents/PDF/CGIAR_evaluation_policy_jan2012.pdf

⁶ <http://www.rtb.cgiar.org/>

It will look at the extent to which RTB, within its mandate, is responding to the key aspirations underlying the CGIAR reform related to vision and focus, delivery orientation, synergy through efficient and effective partnerships and accountability.

The main stakeholders of this evaluation are the management of RTB, Lead Centre (CIP) and all participating Centres (CIAT, IITA and Bioversity International), other core partner (CIRAD), other partners associated to the program, the CGIAR Fund Council, and the Consortium Board.

1.3 Purpose and structure of the inception report

The inception report lays out the scope and framework of the evaluation and outlines the approach and methods to be used. Section 2 provides the background for the evaluation in terms of the reform context and the RTB structure, content, finance and management. Section 3 describes the scope of the evaluation, Section 4 presents the evaluation criteria and questions, and Section 5 gives detail on the approach and methods, including limitations to the evaluation. The organization and timing for the evaluation are presented in Section 6.

2. BACKGROUND

2.1 Context of CGIAR reform

The current CGIAR reform was set in motion in 2008. The CGIAR donors, in a Joint Declaration, agreed on the following main principles for the reform:

- 1) To harmonize our approach to funding and implementing international agricultural research for development through the CGIAR Fund (the Fund), The Strategy and Results Framework (SRF) and the consortium established by the Centres (the Consortium), respectively;
- 2) To manage for results in accordance with the agreed SRF and the Mega Programs that derive from the SRF;
- 3) To ensure effective governance and efficient operations in the provision and use of our resources; and
- 4) To collaborate and partner with and among funders, implementers, and users of SRF research, as well as other external partners supporting the SRF.

The SRF was approved in 2011 at a time when the Centre-led CRPs had already been developed, and two of them had been approved. Thus the current 15 CRPs did not emerge as a direct response to the SRF, although the SRF is intended to provide the broad rationale and context for the development, implementation and evaluation of all CRPs.

The CRPs were developed and appraised following a set of common criteria: (i) strategic program coherence; (ii) focus on delivering outcomes and impacts towards the SLOs; (iii) quality of science; (iv), management of partnerships, including both research and development partners; (v) efficiency of program management; and (vi) accountability, sound financial planning and efficiency of governance.

Under Consortium Office coordination and instructions, CRPs collectively and individually have worked on defining Intermediate Development Outcomes (IDOs). The IDOs link the CGIAR research to the SLOs and should facilitate priority setting, both at the CGIAR and CRP levels. The articulation of theories of change and impact pathways – leading from research activities to the achievement of the IDOs – has also been required. CRPs are expected to define clear target domains (agro-ecologies and end user groups) and measurable results at outcome level.

A new SRF is at final stages of approval. Instructions for the 2nd call for funding CRPs are forthcoming. The new SRF defines the CGIAR's mission, vision and a results framework at three levels: SLOs, IDOs and sub-IDOs that CRPs will directly target. It determines accountability at CRP level and for aspirational high-level targets at CGIAR level. The experience and work on impact pathways and targeting will contribute to a Results-Based Management (RMB) approach that currently is being piloted in five CRPs, including RTB.

The funding sources available to CRPs are shown in Box 1.⁷ The level of W1/W2 funding for each CRP was initially set on basis of the core funding in the period preceding the CRP (i.e. 2010).

Box 1: Major Sources of Funding in the CGIAR System

To maximize coordination and harmonization of funding, donors to CGIAR are strongly encouraged to channel their resources through the CGIAR Fund. Donors to the Fund may designate their contributions to one or more of three funding “windows”:

- Contributions to **Window 1** (W1) are the least restricted, leaving to the Fund Council how these funds are allocated to CGIAR Research Programs, used to pay system costs or otherwise applied to achieving the CGIAR mission.
- Contributions to **Window 2** (W2) are designated by Fund donors to specific CRPs.
- Contributions to **Window 3** (W3) are allocated by Fund donors to specific CGIAR Centres.

Centres also mobilize financial resources for specific activities directly from donors as **bilateral funding** and negotiate agreements with their respective donors for the use of these resources.

The CGIAR has adopted templates for annual reporting to the Consortium regarding all sources of funding. In parallel, bilateral funders have their own specific reporting requirements. Given that bilateral funding remains a significant proportion of all funding, the reform has not yet resulted in the anticipated reduction in reporting burden.

2.2 Context of research on roots, tubers and bananas

Root and tuber crops and bananas are an essential staple food for the poor in developing countries. With a mean production of 685 million tons on 55 million ha in 2006–2008 (FAO 2010), the RTB crops represent the second most important set of crops in developing countries after cereals. Production and use of RTB crops tends to be concentrated in countries with lower per-capita incomes: in Sub-Saharan Africa (SSA), the region most dependent on RTB crops, they constitute nearly two-thirds of per-capita food production. Around 200 million poor families are involved in their cultivation and many others benefit as consumers. Some 400 million tons of RTB crops are consumed as fresh or processed food; the remainder is used as animal feed, planting material, or industrial raw material.

RTB crops are excellent sources of cheap energy and some varieties are rich in vitamins and essential minerals⁸. They are true food security crops and are mostly produced, processed, and traded locally, making them less vulnerable than grains to abrupt price changes in international markets. RTB crops

⁷ <http://www.cgiar.org/who-we-are/cgiar-fund/>

⁸ Kenyon, L., P. Anandajayasekeram, and C. Ochieng. 2006. A synthesis/lesson-learning study of the research carried out on root and tuber crops commissioned through the DFID RNRRS research programmes between 1995 and 2005. UK: DFID Crop Protection Programme.

generate income for poor small holders contributing to poverty reduction. RTB generally grow in marginal conditions with relatively few inputs⁹. Many tolerate stresses such as drought, heat, and poor soil conditions. They play a key role in contributing to the sustainability of cropping and production systems, helping to reduce the risk of food shortages and nutritional shortfalls. RTB crops also play an important role in the livelihoods of women and vulnerable populations.¹⁰ Due to the perishability of RTB crops, attention to post-harvest losses and value chain development is a key part of improving productivity and enhancing livelihoods.

The RTB program has identified major research challenges to the development and delivery of outputs, outcomes and impacts. These include closing the yield gap through improved varieties, access to high quality planting material and improved management of nutrients and water; controlling pests and diseases; improved data and analysis of poverty targets; better alignment of research objectives to the needs of farmers and end-users, both women and men; addressing the impacts of climate change; and reducing post-harvest losses and facilitating market development.

2.3 RTB background

Program Objectives and Structure

RTB, which began in its current form in January 2012, holds its objective to be: “to more fully realize the potential of [mandate crops roots, tubers and bananas] for improving nutrition, income generation, and food security—especially among some of the world’s poorest and most vulnerable populations.”¹¹

RTB is led by the CIP in Peru and it brings together the RTB crop-related work, and wide networks and partners, of CIP, Bioversity, CIAT and IITA, with CIRAD representing the French research partners. Combining expertise and capacity also with other partners and CRPs, RTB aims to capture significant synergies, increase the ability to advance research, share knowledge, and enhance uptake to increase research for development impacts for the foreseeable future.

The CRP’s mandate is thematically organized around its crops. The crops include banana, plantain, cassava, potato, sweetpotato, yams, and other tropical and Andean root and tuber crops—sometimes termed ‘vegetatively propagated staple crops’ (Figure 1). These crops have several factors in common, including similar breeding challenges for highly heterozygous crops, seed management with bulky planting materials, postharvest issues associated with perishability and the frequency with which women are involved in their production and postharvest use, this last factor being important to women’s participation in the value chains.

RTB is a multi-center initiative that aims to add value by exploiting cross-crop synergy: common workplans; collaborative genetic discovery and conservation; shared platforms for information systems, knowledge management, conferences and training; and joint investment in experiment stations.

⁹ Lebot, V. 2009. Tropical Root and Tuber Crops: Cassava, Sweetpotato, Yams and Aroids. UK: CABI.

¹⁰ FAO. 2010. <http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm>

¹¹ “Roots, Tubers and Bananas.” Final Revised Proposal, 9 September 2011.

Additionally, for banana and cassava where three or four CGIAR centers and CIRAD share the mandate for research, RTB provides a platform for joint research within a crop.

Figure 1: RTB crops by participating centers

CENTER	PRIMARY CROP EXPERTISE					OTHER ROOTS AND TUBERS	
	BANANA	CASSAVA	POTATO	SWEETPOTATO	YAM	AROIDS	ANDEAN
Bioversity	■						
CIAT	■	■					
CIP			■	■			■
CIRAD	■	■			■	■	■
IITA	■	■			■	■	

Since its inception in 2012, RTB has been organized by seven Themes: (1) *in-* and *ex-situ* plant genetic resource management; (2) crop variety improvement; (3) crop protection; (4) farmer access to quality inputs (planting material); (5) decision tools and models for crop management; (6) postharvest technologies, value chains and marketing; and (7) cross-cutting partnerships and capacity-building. Its eighth Theme is a pilot phase of RBM, begun in 2014. Each theme consists of a mix of existing research lines (from pre-CRP work), expanded research lines, and completely new research lines (fueled by the new CRP arrangement). Each theme contains a cross-cutting section (cross center, cross crop) where joint work is brought together. Theme leaders appointed by RTB are responsible for the cross-cutting part of the portfolio.

After carrying out an in-depth priority-assessment exercise in 2012/2013—which included stakeholder workshops and surveys, agro-ecological mapping, constraints analysis, and impact modeling—RTB has begun to reorganize its program structure with Flagship Projects (FP) for discovery, delivery and impact at scale and Clusters of Activities; and will move to this new structure by 2016 (see Table 1).

Table 1: RTB Program Structure for 2016 (as of February 2014)

Flagship Projects:	Discovery	Delivery				Impact at scale
	<u>Accelerated genetic gain</u>	<u>Productive RTB varieties & seed</u>	<u>Resilient RTB cropping systems</u>	<u>Nutritious RTB food</u>	<u>Adding value to RTB crops</u>	
Clusters of Activity:	DI1 (NextGen)	CA1/CA2 (Varieties and Profitability merged)	BA1 (Fungal)	CA3 (Vit A)	CA6 (Processing)	Xx1 Information, capacities and partnership for impact at scale Xx2 Strategic research and support for gender transformation Xx3 Assessing impact at scale
	DI2 (Game changing traits)		BA2 (Viral)			
	DI3 (<i>In situ</i>)	BA4/BA5 (Diversity and Varieties merged)	CA4 (Biol. constraints)			
	DI4 (Genebanks)	PO1 (Seed)	CA5 (CMD, CBSD, etc)			
	DI5 (Breeding platform)	PO2 (Varieties)	LS2 (IPM)			
		YA1 (Clean seed)	PM1 (Prod Mod)			
		LS4 (Seed/seed degeneration)				

Notes on codes: BA=banana; CA=cassava; PO=potato; SW sweetpotato; YA=yam; PM=Production models; DI=discovery; LS=learning&support

The geographical scope of RTB's portfolio includes research sites on three continents; its largest investment is in SSA. RTB also has a substantial investment in "global" research (e.g. technological innovation of plant breeding tools) as well as investments in Asia and Latin America and the Caribbean.

IDO and Impact Pathways/Theory of Change

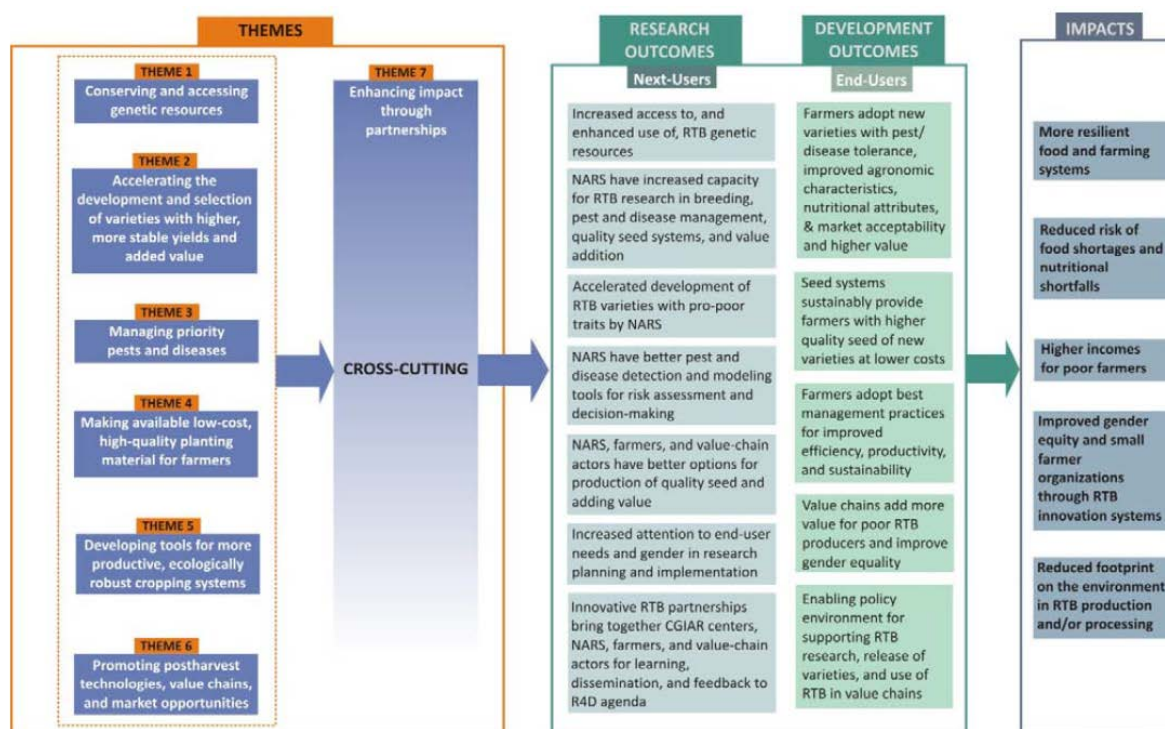
The impact pathways of RTB's seven themes have been conceived according to Figure 2, with IDOs preceding longer-term impacts. RTB is one of five CRPs piloting RBM. Proposals for piloting were invited by the Consortium Office and the successful proposals were funded, although only for 2014, despite initial plan for two-year funding.

RTB engages in a large number of partnerships. Examples of CRP collaboration include: CCAFS (Climate Change, Agriculture and Food Security) "to synergize expertise towards improving risk assessments of pests and diseases under current and changing climates"¹², Humidtropics on collaboration in joint Action Sites to expand the outreach of commodity research with NARS and other stakeholders as well as RBM

¹² Kroschel J., et al. (2012). "Management of critical pests and diseases through enhanced risk assessment and surveillance and understanding climate impacts through enhanced modeling." CCAFS and RTB Workshop Report. CCAFS and RTB. Copenhagen, Denmark; Lima, Peru. Available online at: www.ccafs.cgiar.org or www.rtb.cgiar.org

experimentation, A4NH (Agriculture for Nutrition and Health) on development and delivery of nutrient rich (Vitamin A) crop varieties and PIM (Policies, Institutions and Markets) on foresight modeling. In 2013 RTB projects at the four centers subcontracted to 155 different partner organizations a total of USD 12 million.

Figure 2: RTB impact pathways from seven themes to long-term impacts



Budget and Expenditures

The approved budget for RTB in 2012-13 from all funds (Window 1 & 2, Window 3 and bilateral Funds) was USD 136 million; in the same period, the cumulative expenditure was USD 124 million. In this cumulative expenditure from all funds, CIP has got the larger share (46%), followed by IITA (28%), Bioversity (15%), CIAT (9%) and Program Management Unit - PMU (2%) as shown in Table 2.

Table 2: 2012-13 RTB cumulative expenses, by center (in USD millions)

CENTER (USD Millions)	W1&2	W3	BILATERAL	TOTAL
BIOVERSITY	12.1	0.2	6.2	18.5
CIAT	7.7	0.4	3.1	11.1
CIP	18.5	8.6	30.1	57.1
IITA	11.0	8.2	15.2	34.5
PMU	2.3			2.3
TOTAL	51.7	17.3	54.6	123.6

The CGIAR Windows 1 & 2 cumulative expenditure in 2012-13 was USD 51.7 million; from which CIP represents 36%, Bioversity 23%, IITA 21%, CIAT 15% and PMU 5%. Additionally, the Window 3 & bilateral

cumulative expenditure reached USD 71.9 million, with a distribution of CIP 54%, IITA 33%, Bioversity 9% and 5% of CIAT. Expenditure by Theme for each center, from all funds, is shown in Figure 3, with totals below in Table 3.

Figure 3: Expenditure by center and Theme, 2012-13 (in US \$,000)

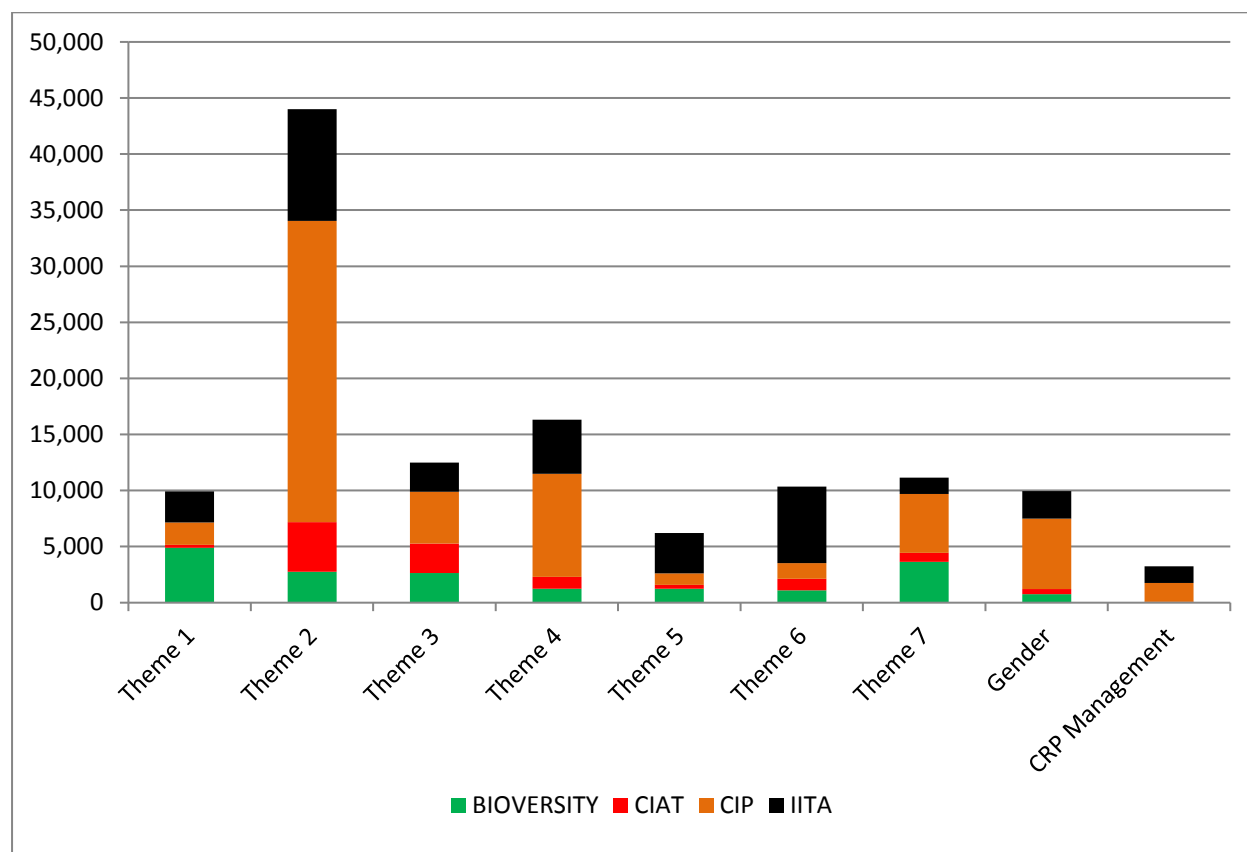
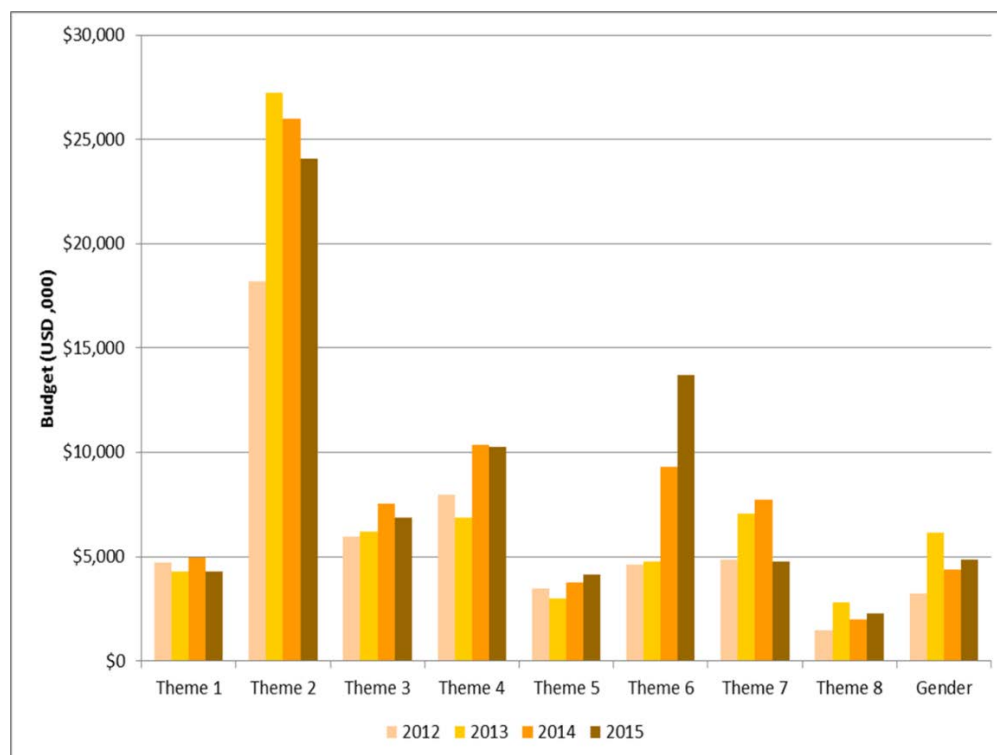


Table 3: RTB Total Expenditure by Theme, 2012-13 (in US \$,000)

	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7	Gender	Management
Total	9,924	44,003	12,492	16,302	6,211	10,341	11,138	9,939	3,243
%	8%	36%	10%	13%	5%	8%	9%	8%	3%

Figure 4 shows the 2012-2015 evolution of expenditure for the seven Themes and Gender (management is the eighth Theme).

Figure 4: Evolution of Expenditure 2012-15, by Theme



Governance and Management

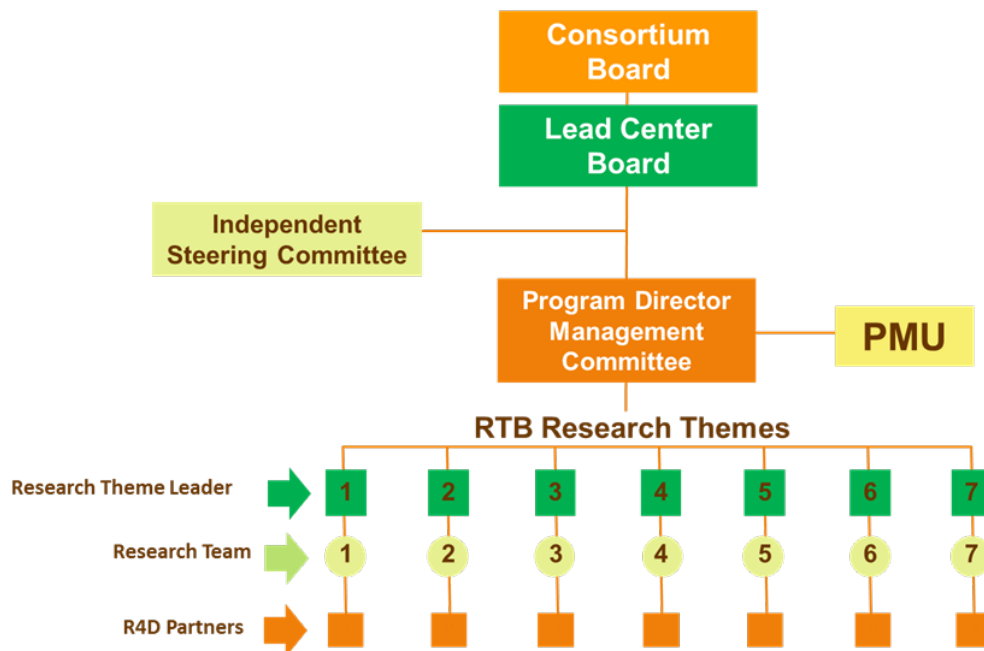
RTB is governed by the Program Implementation Agreement signed between the lead-center Board of Trustees (BOT) and the Consortium, and Program Participant Agreements and Task Orders between the participating centers and CIP. In 2014, the Science Advisory Committee was transformed into a Program Advisory Committee (PAC) for complementing the existing scientific/research advisory governing bodies at the center level. The PAC's six members have expertise in gender, partnership, capacity-strengthening and evaluation. The governance structure of RTB as of 2015 is shown in Figure 5.

A Steering Committee consisted (until December 2014) of the four center Directors-General, as well as a representative of CIRAD (Program Director is ex-officio member). Its purpose includes making recommendations on the overall direction of the program; to ensure that monitoring and evaluation (M&E) processes comply with CGIAR system-wide standards; and to approve strategic plans and annual plans of work and budget. In January 2015 RTB changed to a single governance body – the Independent Steering Committee (ISC) - made up of a majority of independent members drawn from the PAC with CIP DG as permanent member plus one other DG on a rotating basis.

Operational decisions are taken by the Program Management Committee (PMC) that consists of the Deputy Director Generals for Research of each of the participating centers as well as a representative

from CIRAD and the Program Director as head of PMC. The PMU supports the Program Director. The PMC makes a recommendation for use of the budget to be agreed with the ISC and ultimately approved by the BOT of CIP. Additionally it reviews progress, including for scientific output and to ensure center-level fulfillment of obligations. The PMU represents RTB centrally and monitors the agreed-upon goals, with special responsibility for the RTB Gender Strategy (from 2013).

Figure 5: Corporate structure of RTB (as of 2015)



2.4 RTB portfolio

Due to its complex institutional and funding structure, RTB does not have a comprehensive portfolio of individual bilateral center projects and activities mapped to the CRP. Instead RTB has a product portfolio with milestones, which covers all sources of funding. At the center level, information is available for W1/2 funding allocations according to crop, center and Theme/Product Line (PL). Notably, W1/2 funds are used for so-called complementary projects that more than one center and/or more than one crop are established through a competitive process and correspond with the RTB Themes. A list of major complementary projects (in terms of annual budget) is given in Annex 5.

The bilateral projects are defined at the center level. They are operated as bilateral grants and mapped to the RTB by the centers. They can correspond to more than one PL and likewise PLs comprise more than one project. Thus RTB has operated through a Product portfolio, and in the new structure bilateral grants will be mapped by each participating center to one or more Clusters of Activities.

3. SCOPE OF THE EVALUATION

The broad scope of the evaluation is outlined in the TOR. The strategic issues and evaluation questions that address the main evaluation criteria are structured around two dimensions: research/programmatic performance and organizational performance. The criteria and aspects related to these two dimensions are outlined in Section 4 while the more specific evaluation questions and topics are presented in detail in the Evaluation Matrix (Annex 1). The evaluation will give emphasis to gender and capacity building as cross-cutting topics particularly as they relate to programmatic performance. It will assess partnerships both within and outside the CGIAR in terms of their strategic importance for mobilizing research competence and for enhancing the relevance, delivery and uptake of the CRP's results as outlined in the impact pathways. Specific evaluation questions will address these cross-cutting topics.

The evaluation will cover two main time frames:

- The RTB research activities at CIP, CIAT, IITA and Bioversity that began prior to the initiation of RTB and were incorporated into the CRP.
- The period since RTB was approved in January 2012 as a multi-partner CRP including both the initial three year phase and the extension period 2015-2016.

The summative part of the evaluation will focus on the extent to which past research has led to outcomes and impacts. The evaluation will assess the results – outputs, outcomes and impacts – generated from research prior to initiation of RTB which were transferred into the CRP. The evaluation will draw on documented studies and impact assessments as well as the most recent CIP, CIAT, IITA and Bioversity External Program and Management Reviews (EPMR; 2008, 2008, 2008 and 2009, respectively) and any recent and relevant Center-Commissioned External Reviews (CCER).

The major emphasis will be on the formative part of the evaluation assessing the design and implementation of RTB as a multi-partner CRP with a newly defined program structure, theories of change, targets and impact pathways. It will also assess its likely effectiveness and the extent to which it adds value over and above doing the research separately in four centers and one advanced research institute each with their own partners.

The evaluation will cover program evolution since its inception in January 2012 considering all changes and information available by the end of the evaluation inquiry phase (August 2015). This will include the evolving and as yet incomplete transition of RTB's program structure from themes to FPs. It is acknowledged that although the CGIAR reform process is also still evolving, it sets the context for the RTB transition. The RTB evolution will be assessed against the CRP's overall objectives to determine the extent to which it is likely to succeed.

The evaluation will cover program planning, all research and research related activities of RTB, including activities funded from all funding sources. It will also cover the funding projected for 2015-16 in the extension proposal. It will cover all W1/2 funded activities and their strategic use across the RTB research portfolio. W3 and bilaterally funded projects will be covered through sampling and in-depth case studies.

The selection of field sites and projects for sampling and in-depth analysis will reflect the RTB regional focus and investment. The majority of activities and largest investment is in SSA followed by global research. Less attention will be given to Latin America and the Caribbean and Asia which have less activities and investment. The evaluation will focus on the major RTB crops and less emphasis will be given to the minor root and tuber crops.

4. EVALUATION CRITERIA AND QUESTIONS

4.1 Overarching questions

In the context of the CGIAR reform, and based on initial document review and engagement with the CRP and its stakeholders, the evaluation, in addition to addressing the issues covered within the evaluation criteria given in the TOR and presented below, puts special focus on the following questions:

- How well does RTB operate as an integrated program - programmatic-level thinking, strategy, inter-center research activities and management?
- Has the implementation of RTB realized anticipated synergies and complementarities from centers working more closely together especially on the same crop, added value to research on RTB and improved its prospects of achieving its objectives and contributing more efficiently and effectively towards the program's IDOs and SLOs?
- Are the CGIAR reforms assisting RTB to deliver its objectives, achieve program IDOs and contribute to SLOs?
- Is RTB priority setting effective in terms of program coherence and focus of research on its intended objectives?
- To what extent shall the new RTB program structure based on discrete "business cases" of crop-specific activity clusters contribute to or impede the program's ability to achieve IDOs and SLOs?
- How is the long and continuing process of change in RTB to Flagship Projects affecting the management burden and transaction costs, and affecting relationships with partners?
- Is RTB designing and shaping future partnerships to articulate a sustainable research project portfolio?
- Are the impact pathways in the RTB structure sufficiently specified regarding target beneficiary groups and alternative research and industry providers, and are they clearly formulated and used in program monitoring and management?
- In the current complex funding environment, has RTB been able to manage multiple sources of funding to assure strategic coherence around highest priority areas of research?
- To what extent do the governance and management (G&M) structures and practices of RTB contribute to or impede the achievement of program coherence and effectiveness?

4.2 Evaluation criteria

4.2.1 Research/Programmatic Performance

As part of programmatic performance, the evaluation will look at the following evaluation criteria: relevance, quality of science, likely effectiveness of the CRP as currently designed and implemented, impact of past research and the effort made in documenting it, and the sustainability of benefits. Within programmatic performance three cross-cutting topics are specifically addressed: gender, capacity building and partnerships.

Relevance

The evaluation will assess the extent to which the objectives and design of RTB is consistent with current global and national priorities and policies, as well as those of intended beneficiaries, partners and donors. It also refers to the extent to which the CRP is consistent with the CGIAR System Level Outcomes and the program components and activities are consistent with the CRP's objectives at the level of its Intermediate Development Outcomes. Assessment of Relevance includes supply- and demand-side relevance and comparative advantage of the program.

The evaluation will assess the formulation of the IDOs and their relevance against the program objectives and CGIAR SLOs, and the logic underpinning the impact pathways linking program activities to the intended results. It will assess the integration of research within and among the FPs and the prioritization of activities for addressing the IDOs. Priority setting processes will be assessed, as will the use of W1/W2 funding, resource mobilization and strategic foresight. The evaluation will also assess the synergies among RTB partners, and opportunities for further enhancing the relevance of research results.

Quality of Science

The evaluation of science quality will look at several dimensions of quality including the make-up of the research teams and partnerships, research design, research management, quality assurance and research outputs.

The evaluation will look at the processes and incentives in place for ensuring high quality research across program components and partners. It will assess the track record of research leaders and the competences of research staff. It will look at the program design in terms of problem setting, the use of state-of-the art research literature and methods, and novelty. It will also look at the quality of research management regarding synthesis of research findings and new knowledge at theme and program level.

Likely Effectiveness

Effectiveness will be assessed primarily from the point of view of likely effectiveness of the current program, rather than past impact. The evaluation will look at the program design, and particularly the plausibility of the theories of change underpinning the impact pathways (both generic and specific). The assumptions underpinning the theories of change will be assessed as well as the Program's use of the theories of change for informing the assumptions and monitoring changes towards outcomes. The evaluation will consider the extent to which risks and constraints influencing out-scaling, outcomes and impacts are being addressed in research design, partnerships and capacity building. It will look at the extent to which gender analysis and social analysis more broadly have informed the impact pathways. The evaluation will also consider the extent to which opportunities to link with other centers and CRPs are captured for further enhancing the likely effectiveness of the research.

The evaluation will assess progress towards milestones and outputs across the research portfolio. It will assess the M&E system and the extent to which it is used by management to adjust research plans and impact pathway designs, including learning from gender and policy analyses.

Impact and sustainability

As part of the summative component of the evaluation the extent to which past research has led to positive outcomes and impacts will be assessed. The assessment will depend on studies, assessment and data mostly at center level on adoption, outcomes and impact. It will be primarily based on CRP-provided impact narrative supported by evidence. To the extent possible, the evaluation will assess emerging results and outcomes of RTB since its beginning, and perceptions of impact by stakeholders. Regarding sustainability of outcomes and impacts from RTB, the evaluation will assess measures taken by RTB to analyse and address factors enhancing the sustainability of the results.

Partnerships

The evaluation will consider the partnerships among the implementing centers and CIRAD, linkages with other centers and CRPs, and with other research and development partners. It will look at partners' involvement in CRP management. The evaluation will consider issues such as coordination, decision-making, joint ownership of results and transaction costs, and assess equity, transparency, efficiency and effectiveness of partnerships.

Gender

As with all CRPs, RTB has a gender strategy that has been developed with the guidance of the Consortium Office. The evaluation will assess the adequacy, extent of adoption and implementation and outcomes of the gender strategy. It will focus on measures taken to enhance the relevance of RTB research to women and document how gender-dependent factors that affect acceptance and uptake of results have been recognized and addressed in research design and implementation. The evaluation will also consider the likely impact of these measures on the effectiveness of RTB.

Capacity building

The evaluation will look at how capacity building is prioritized in order to address partners' needs; the incorporation of capacity building into research activities for mentoring and enhancing the relevance and likely uptake of research results; the consideration of capacity issues among assumptions and risks related to the theories of change; and equity in targeting.

4.2.2 Organizational Performance

Governance and management

In order to facilitate the understanding and consistency across the CGIAR, this part of the evaluation will wherever possible and appropriate use the same terminology and criteria as the "Review of CGIAR Research Programs' Governance and Management" (Final Report, March 2014¹³). In line with this cross-CRP review, the following review criteria will be addressed: (i) legitimacy and participation, (ii) accountability, (iii) fairness and equity, (iv) transparency, (v) efficiency, (vi) effectiveness and (vii)

¹³ <http://www.iaecgiar.org/sites/default/files/Final%20report%20CRP%20G%26M%201%20April%202014.pdf>

independence. The evaluation will assess the performance of RTB G&M against the Consortium response to the CRP Governance Review.

With these criteria in mind, the evaluation on governance aspects will focus on: (i) management oversight; (ii) stakeholder participation, (iii) risk management, (iv) conflict management and (v) audit and evaluation (see section on *Monitoring and evaluation below*).

In relation to management the evaluation will focus on: (i) priority setting and planning, (ii) regulatory compliance, (iii) reviewing and reporting, (iv) administrative efficiency (see section on *Efficiency below*), (v) internal and external communication and relationships, (vi) learning, (vii) financial management and (viii) human resource development and staff performance assessment.

Efficiency

Assessment of efficiency will focus primarily on RTB organizational structures and processes, institutional and administrative arrangements and financial management. To the extent feasible the evaluation will assess research efficiency, by considering research design strategies and feedback from monitoring. Efficiency is also an aspect of science quality, particularly in the design of plant breeding approaches.

Monitoring and Evaluation

Monitoring and evaluation are part of the research management in RTB and thus the M&E design, indicators, and frequency and timing of use in adaptive management will be evaluated as part of the process. Novel aspects of M&E built within an action research paradigm and contribution to methodology literature will also be looked at in the evaluation.

The methods used for monitoring and documenting results will be assessed, including their compatibility with the research approach being taken, the aspects of program design and implementation, for instance baseline studies that will enable impact assessment, and the resources allocated to documenting outcomes and impacts.

5. EVALUATION APPROACH AND METHODOLOGY

5.1 Evaluation approach

This evaluation will address questions and criteria both at the program level and through a cross-scale approach that will be focused on main areas of research which relate to both the PLs within Themes and the emerging Clusters of Activities within FPs. The cross-scale approach involves purposeful selection at two levels: PL by Theme (Table 4) and, within each selected PL, review of documentation of selected bilateral and complementary projects and activities that are representative of participating centers. The review of PL-specific activities is complemented by field observations and interviews. Cognizance of the relationship between each PL by Theme and each Cluster of Activity by FP will enhance the outcomes from the evaluation in providing relevant guidance to RTB for 2016 and the CRP second phase. Assessment at the program level is done through a number of means and may involve looking at program performance by Theme or discipline depending on the questions addressed. The means include documentation review, interviews, publications analysis, researcher survey and field observations at research sites, as detailed in the Evaluation Matrix (Annex 1). The methods and frameworks for addressing different criteria and means for collecting evidence are explained below.

5.2 Methodology

The methodology includes several components. The main components described below include inter-related methods for assessment of research and programmatic performance. These will include case studies which include field visits, interviews and document review and case studies based on desk review of documents and virtual interviews. Organizational performance e.g. assessment of G&M, priority setting, efficiency and M&E will be assessed through document review, interviews and attendance at meetings.

Case studies

The purpose of the case studies is to allow an in-depth review of a subset of research according to the key criteria of the review. RTB is currently structured as six discrete themes and one cross-cutting theme. When RTB was approved, it was challenged by the ISPC ("Must-Have 1")¹⁴ to demonstrate that combining five major vegetatively propagated crops into a common CRP would capture synergies and take advantage of complementarities leading to greater achievements than working on each crop separately. Four of the themes (Themes 1, 2, 4 and 6) focus on three main areas of research which have been highlighted by RTB documentation to be important and have greatest potential for integration of research across crops to realize synergies and complementarities. These are:

¹⁴ More detailed commentary is posted on the FC5 website as:

http://www.cgiarfund.org/cgiarfund/sites/cgiarfund.org/files/Documents/PDF/fc5_CRP3.4_ISPC_commentary.pdf

- *Pre-breeding and varietal development (breeding pipeline), end-user priorities and uptake/promotion of improved varieties for impact:* there has been differential progress across crops and regions in terms of annual yield increases; targets Theme 2 and parts of Theme 1;
- *Multiplication and distribution of low-cost, high-quality, disease-free planting material:* access to clean planting material is a significant bottleneck to progress; there has been differential progress across crops and regions; targets Theme 4 and parts of Theme 3; and
- *Post-harvest management, value chains and marketing:* most crops are being researched; similar methods and technologies are being developed in different countries/regions on different crops with potential for spillovers; targets Theme 6.

These three areas will be comprehensively evaluated according to evaluation criteria for research/programmatic performance. It is noted that some of the above research includes enhancing the nutrient content of RTB crops although there is no explicit PL. Relevant research activities will also be evaluated to provide guidance for the development of the Delivery FP 4 – Nutritious food.

Theme 3 “Managing diseases and pests” covers research activities that are largely crop-specific and/or region-specific while Theme 5 “Cropping system management” is often region-specific and/or cropping system-specific. Apart from methodologies which can be covered in cross-cutting PLs, research activities under these themes are less likely to realize synergies and complementarities. These specific PLs in these two themes will be evaluated through a strategic approach (relevance, importance/priority setting, comparative advantage, capacity, cross-cutting activities etc.) to provide guidance for further development of Delivery FP 3 - Resilient cropping systems.

Themes 1-6 involve significant cross-cutting activities on gender, capacity building, partnerships, communication and knowledge sharing, priority setting and impact assessment which are brought together under Theme 7. These cross-cutting activities will be evaluated according to the criteria given in Section 4.

Table 4: Main research and cross-cutting areas, themes and PLs, FPs and activity clusters and evaluation team lead persons

Main research areas	Theme/PL	FP/Activity cluster	Lead person
1. Pre-breeding and varietal development – breeding pipeline	<p><u>Theme 1 Conserving & accessing genetic resources</u></p> <p>PL 1.1 <i>Ex situ</i> (banana) & <i>in situ</i> conservation (potato)</p> <p>PL 1.3 Collections genotyped & phenotyped</p> <p><u>Theme 2 Varietal development</u></p> <p>PL 2.2 Trait capture & discovery</p> <p>PL 2.3 Population development & pre-breeding</p> <p>PL 2.4/5 Varietal development for end-user priorities</p>	<p><u>FP 1 Discovery - Enhanced utilization of genetic diversity</u></p> <p>DI 1, DI 3, DI 4</p> <p>DI 1, DI 5</p> <p>DI 2</p> <p><u>FP 2 Delivery -More productive varieties</u></p> <p>CA 1/2, 5; BA 1, 2, 3, 5;</p> <p>PO 2;</p> <p>SW 1*</p> <p>As above</p>	KV Raman
2. High quality planting material	<p><u>Theme 4 Low-cost, high quality planting material for farmers</u></p> <p>PL 4.2 Low-cost, effective mass propagation methods</p> <p>PL 4.3 Farmer-based quality seed production</p>	<p><u>FP 2 Delivery - More productive seed</u></p> <p>BA 1, 3; PO 1; YA 1</p> <p>CA 1/2; 3*, 4, 5; PO 1; YA 1; LS 4</p>	Jill Lenné
3. Resilient cropping systems	<p><u>Theme 3 Managing pests and diseases</u></p> <p>PL 3.1 Detection, surveillance, mapping</p> <p>PL 3.4 Specific management strategies</p> <p><u>Theme 5 Ecologically robust cropping systems</u></p> <p>PL 5.3 Integrated decisions and management tools</p>	<p><u>FP 3 Delivery – Resilient cropping systems</u></p> <p>BA 1, 3; CA 5</p> <p>BA 1, 2, 3; LS 2</p> <p>PM 1</p>	Jill Lenné/K V Raman
4. Post-harvest, value chains & marketing	<p><u>Theme 6 Promoting post-harvest technologies, value chains & marketing opportunities</u></p> <p>PL 6.1 Post-harvest approaches & processing</p> <p>PL 6.2 Linkages with markets & income generation</p> <p>PL 6.3 Marketing strategies and policies to add value</p>	<p><u>FP 5 Delivery – Adding value for income</u></p> <p>CA 1/2; 3*, 4, 6</p> <p>CA 1/2; 3*, 4; PO 1</p> <p>SW 1*; CA 6; LS 3</p>	Laurian Unnevehr Milla Mclachlan

Main research areas	Theme/PL	FP/Activity cluster	Lead person
5. Cross-cutting - Gender	<u>Theme 7 Enhancing impact through partnerships</u> No specific PL	<u>FP 6 Delivery - Impact at Scale</u> Xx 2	Milla Mclachlan
6. Cross-cutting – Capacity building	<u>Theme 7 Enhancing impact through partnerships</u> PL 7.4 capacity strengthening	<u>FP 6 Delivery - Impact at Scale</u> Xx 1	Milla Mclachlan
7. Cross-cutting - Partnerships	<u>Theme 7 Enhancing impact through partnerships</u> PL 7.2 Building effective partnerships	<u>FP 6 Delivery - Impact at Scale</u> Xx 1	Jill Lenné Selcuk Ozgediz
8. Cross-cutting – Communication & knowledge sharing	<u>Theme 7 Enhancing impact through partnerships</u> PL 7.3 Communication & knowledge sharing	<u>FP 6 Delivery - Impact at Scale</u> Xx 1	All
9. Cross-cutting – Priority setting	<u>Theme 7 Enhancing impact through partnerships</u> PL 7.1 Targeting and setting priorities		Laurian Unnevehr
10. Cross-cutting – Impact assessment	<u>Theme 7 Enhancing impact through partnerships</u> PL 7.5 Outcome & impact assessment	<u>FP 6 Delivery - Impact at Scale</u> Xx 3	Laurian Unnevehr

* These Clusters of Activities also contribute to FP 4 Delivery – Nutritious food. The theme structure did not have an explicit PL for nutritious food but will be evaluated under relevant Themes.

Finally, an assessment will be made of the inclusion of the minor crops under RTB, namely Andean roots and tubers and aroids. This will include an assessment of on-going research and whether it should continue to be included in RTB.

For case studies, an in-depth review will be conducted of each PL according to the major criteria for the review (e.g. relevance, quality of science, likely effectiveness, partnerships, gender, capacity building). In the analysis, the team will pay particular attention to the integration of research across all relevant centers e.g. IITA and CIAT for cassava; Bioversity, IITA and CIRAD for banana etc. and partners and as well look at CGIAR x non-CGIAR partnerships for single center crops e.g. CIP for potato; IITA for yam etc. It will also look at the linkages between RTB and other CRPs especially Humidtropics, A4NH, CCAFS, WLE and PIM.

Impacts will be reviewed as a whole rather than for each theme or PL using impact narratives from each participating center as well as available impact studies on their work.

Case studies will be conducted by:

- Reviewing documents related to the PLs, especially selected bilateral and complementary project proposals and progress reports
- Reviewing publications related to the PLs
- Interviewing Theme and crop leaders, leaders of major projects and partners, where applicable
- In some cases, through field visits to sites selected to be most suitable for the case study analysis

Each team member will be responsible for leading on one or more of ten main research or cross-cutting areas as designated in Table 4 and the projects (bilateral and complementary) mapped to the respective themes and PLs (Annexes 5 and 6) as well as focus countries for site visits (see Table 5).

Team members will work as a group to synthesize the analysis of PLs paying attention to linkages across themes.

An assessment template will be prepared as well as specific criteria to guide individual assessments and to assure consistency across assessments e.g. research design, progress, achievements, impact pathways and theory of change. Standard templates will also be used by team members for researcher and partner interviews.

The criteria for selecting main research areas, PLs and projects include: priority for investment; likelihood of demonstrating synergies, complementarities and added value; likelihood of cross-center partnerships; clear linkages to putative FPs and Clusters of activities in the new program structure; focus countries for site visits and expertise among team members.

Themes & PLs to be evaluated

Table 4 lists the PLs to be evaluated based on the justifications given above. These include 19 of 28 PLs and cover all themes. More attention will be given to Theme 2 as this receives the greatest investment of RTB across all themes. As far as possible, all major crops will be covered although not in all regions. Emphasis will be given to linkages across Themes, especially Themes 1 and 2, 2 and 3 and 3 and 4 and 2, 4 and 6.

The research areas left out from the above sampling frame are the following:

- Genetic resources activities linked to the Genebanks support program (Theme 1);
- Ecology, biology, and epidemiology of pests and diseases and ecology and management of beneficial organisms (Theme 3);
- Policies, strategies, and decision support tools to improve effectiveness of seed systems (Theme 4);
- Ecological and physiological understanding of RTB crops and cropping systems (Theme 5).

The omission of research areas in Themes 3 and 5 reflects the decision to approach the evaluation of these two themes in a strategic manner focusing on the PLs to be emphasized in the new program structure as indicated by clusters of activities.

Interviews

The evaluation team will conduct both on-site and virtual interviews with the aim of interviewing a representative group of stakeholders across relevant categories, and involving both RTB partners and other stakeholders. The interviewee categories include the following:

- RTB Management and ISC
- Lead-center senior management and BOT
- IITA, CIAT and Bioversity management and BOT
- Non-CGIAR core partners (e.g. CIRAD)
- Senior researchers contributing to RTB (Theme leaders; Focal points etc.)
- Other centers and CRPs linked to RTB – note not all CRPs listed as “linked” are actively linked due to insufficient funds; the most important are Humidtropics, CCAFS, PIM and A4NH
- Advanced research institute partners
- Public, including universities and extension listed as RTB partners
- Networks
- Private sector partners
- Civil Society Organizations partners
- Key donors
- Peer scientists with knowledge of science relevant to RTB

Partners and stakeholders in important target countries that the evaluation team will not be able to visit will be selectively covered in virtual interviews. Some emphasis will be given to the experiences of long-term partners which have experienced the transition from pre-CRP to CRP partnership.

Document review

The document review will be an important part of several components of the evaluations:

- Key CRP documents, such as original 2011 proposal, Extension proposal, Annual reports, Annual Program of Work and Budget documents for background and assessment
- Evaluative documents, such as ISPC and Consortium Office assessments of RTB, CCERs, EPMRs, Science Council and ISPC cross-cutting reviews
- Selected documents on bilateral and complementary projects for the case studies
- Selected publications
- Review of selected documents for the management and governance assessment, including IEA commissioned review of cross-CRP G&M.
- Reference documents, such as the SRF (2010 and 2015), CGIAR guidance notes and instructions for the 2nd call of CRPs.

Researcher survey

The evaluation team will undertake a survey of CIP, IITA, CIAT, Bioversity and CIRAD researchers who contribute to research mapped to RTB. The survey will cover research and program management including aspects of relevance, quality of science and likely effectiveness, management effectiveness and cross-cutting issues (gender, partnerships and capacity strengthening). The survey will be confidential,

conducted on-line through Survey Monkey. The surveys will be tested and launched in early June to allow for follow-up and qualitative validation through other means.

Field visits

The criteria for selecting countries and sites for field visits include the extent to which research related to more than one crop/cropping system can be observed and the extent to which more than one participating organization has activities in the country. The selection included locations where the synergy opportunities within RTB can be observed and assessed. The countries to be visited, timing and responsibilities are shown in Table 5.

Table 5: Field visit timeline

Country	Date	Travel purpose	Team involvement	Focus
Rome	March 2015	Inception meeting	All	Inception/Methods
Leuven, Belgium	March 2015	Field visit	KV Raman	Musa activities (Bioversity & CIRAD)
Montpellier, France	March 2015	Field visit	KV Raman	Musa activities (Bioversity & CIRAD)
Lima, Peru	May 2015	Field visit	Selcuk Ozgediz	Governance & management
Vietnam	May 2015	Field visit	Laurian Unnevehr Sirkka Immonen	Cassava, sweet potato (CIAT, CIP)
Philippines	June 2015	Field visit	Laurian Unnevehr	Potato, sweet potato (CIP)
Colombia	May 2015	Field visit	KV Raman Matthew FisherPost	Cassava (CIAT, CIRAD)
West Africa - Nigeria	June 2015	Field visit	Milla McLachlan Jill Lenné	Cassava, yam, (banana, sweet potato) (IITA, CIP)
East Africa - Kenya, Tanzania, Uganda	June 2015	Field visit	Milla McLachlan KV Raman Jill Lenné	Cassava, banana, potato, sweet potato (IITA, CIP, Bioversity)
Lima, Peru	July 2015	Field visit	Jill Lenné K V Raman	Potato, sweet potato (CIP)
Rome/ Washington TBD	Sept. 2015	Writing workshop	All	Draft final report

Assessment of governance, management and leadership

This assessment contributes to answering the evaluation questions related to the organizational performance of RTB and specifically the key question 10 above. The key evaluation activities are:

- desk research, including:
 - review relevant findings in CRP G&M reviews, including the system and CRP-level governance reviews implemented at the time this Inception Report was written,
 - synthesize available guidance on CRP-level governance arrangements, including on RTB G&M arrangements; in particular the Consortium response to the cross-CRP governance and management review;
 - understand RTB G&M structure and practices and the way they relate to the lead and other centers' G&M structures;
 - review existing contracts along the RTB performance contract hierarchy, as well as agreements with key partner institutions
 - review Consortium Independent Audit Unit reports on G&M, and Financial Performance of RTB – (audit conducted in April)
- analysis of meeting minutes (attendance, discussion and decision-making content analysis) of the last 4 years, or from when relevant: identify degree to which standard governance functions (see: World Bank Independent Evaluation Group 2007) are covered by what body, assess management of overlaps and gaps. Conditional on availability of minutes, the following bodies should be covered:
 - RTB PAC and ISC;
 - BOTs of CIP, IITA, CIAT and Bioversity.
 - Senior management of lead center (CIP)
 - RTB PMC and other management/coordination committees within the RTB structure
- interviews (participating centers' BOTs), RTB ISC, RTB and center management);
- online survey as part of RTB research staff survey (possibility of an additional surveys is not excluded): Collect feedback on managerial oversight and guidance, perceived issues (e.g. cross-center management, multiple-master situations, RTB versus center performance feedback mismatches);
- virtual participation in an ISC and a PMC meeting
- interviews (RTB coordinators and focal points, RTB researcher interviews): deepen understanding of managerial oversight and guidance, perceived issues (e.g. cross-center management, multiple-master situations, RTB versus center performance feedback mismatches).
- Observations and/or interviews to deepen understanding of independence/legitimacy questions; conflict of interest issues; performance assessment questions; transaction costs

Assessment of financial management

This assessment contributes specifically to answering key evaluation question 9 above. Key evaluation activities are:

- interviews (as part of RTB host center interviews): RTB resource mobilization and fund allocation issues; management of financial risks
- interviews (as part of center management and BOT interviews): plans to address RTB fundraising, fund allocation issues, including financial risk management; and
- interviews (as part of CGIAR system-level interviews): plans to address system-level fundraising and fund allocation issues, including financial risk management.

Assessment of Science quality

Quality of science will be assessed at several levels: (a) the program as a whole; (b) Theme (possibly clusters of activity); (c) disciplines.

The framework includes elements of processes and inputs for assuring quality, including program design, output quality and perceptions of quality. The assessment will contribute to questions related to quality of science in the evaluation matrix and specifically to key over-arching questions above. The main dimensions include:

Processes in place at CRP and center level: Internal peer processes in place and how they function; use by center of CRP commissioned external reviews for managing and overseeing science quality; staff performance assessment process (consistency, fairness, attention to excellence); data management; other RTB research related processes and protocols that quality depends on. Sources of evidence include interviews, document review (related to processes and protocols) and researcher survey.

Inputs at CRP, Theme and disciplines levels: researcher quality; facilities and resources; research design. These consist in a combination of indicators, such as, for instance, the Impact Factor of the journals where publications are made and the H-index of the RTB PIs.

Output quality (Theme/discipline, PL): quantitative bibliometric analysis; qualitative assessment of outputs including data sets; synthesis of scientific knowledge. A main component of this section is a systematic in depth evaluation of the scientific production based on bibliometry, which will be conducted for all themes, when relevant. The diverse scientific fields involved in RTB (ranging from basic molecular biology to applied social sciences) have their own production and dissemination methods and thus require the use of adequate assessment tools to ensure equity in the evaluation process. Quantitative bibliometric assessment will be complemented by a qualitative assessment of the scientific output.

The duality of outcomes and quality parameters in scientific research (biological and social sciences) and practical breeding is to be recognized. The assessment of the breeding program will include, to the extent feasible, assessment of progress, protocols and efficiency, in addition to the scientific aspects of breeding within RTB.

In the systematic assessment of projects and products the team members will use templates and simple scoring to assure consistency across assessments. Interview and the research survey will also contribute to the assessment of RTB science quality by providing perceptions on quality and measures used to managing and enhancing quality.

Assessment of impact and sustainability of benefits

This assessment is based primarily on an impact narrative done by RTB at the request of the IEA. This narrative provides a summary of documented outcomes and impacts from research relevant to RTB capturing a period since the most recent External Program and Management Reviews of participating centers. The narrative is supported by a list of evidence documents underpinning the claims made about

adoption of, or the outcomes/impacts resulting from the use, adoption or influence of research results linked to CRP research. The claims in the narrative should specify the magnitude of the effect in terms of, for instance, geographic area or number of farm households affected/adopting and/or impact, or significance of intermediate uptake of research results. The narrative can also include extrapolation from specific evidence where the findings are considered generalizable over large domains than covered in the evidence. The evaluation will assess the impact claims and the coverage of the documentation across relevant areas of research. In addition to the assessment based on the impact narrative, the evaluation will look at the adequacy of impact assessment in RTB.

5.3 Main limitations of the evaluation

The CRP research is conducted by four main CGIAR partners with more than half of the funding coming from bilateral sources. This may constrain the collection of accurate project information and defining of CRP boundaries. Due to the lack of a comprehensive project portfolio, this evaluation will not include an assessment of all bilateral projects (grants) mapped to RTB. Rather, the evaluation will request information for a representative sample. The large number, as well as the institutional and geographic spread of partnerships of the CRP may also limit the ability of the evaluation team to collect information sufficiently representative of stakeholder groups. Therefore, there is need to select suitable methods to assess the CRP that allow representative evidence to be gathered across heterogeneous operations, stakeholder groups and target domains. This need for focus necessarily means that some components of the Program will not be assessed in depth. The timeline, where the evaluation findings will feed into preparing a proposal for the 2nd call of CRP funding, limits the possibility of the team to incorporate a large number of site visits into its itinerary and puts more emphasis on desk work which logistically is less demanding than organizing multiple field visits. Finally, the evaluation is conducted at a time when a new SRF has been approved, the CGIAR's governance is changing, the CRP portfolio is changing and the 2nd call CRP proposals follows a new set of instructions.

6. ORGANISATION AND TIMING OF THE EVALUATION

6.1 Team composition and responsibilities

Team members, their primary area of responsibility and the research sites to be visited by each team member are given below in Table 6. A short biodata for each team member is given in Annex 2.

Table 6: Team composition and primary responsibilities

Team Member	Primary responsibility for	Sites to be visited
	Evaluation team leader	
Jillian Lenné	Research strategy, crop protection, seed systems, natural resource management, <i>in situ</i> conservation, partnerships	West & East Africa (Nigeria, Kenya, Tanzania, Uganda); LAC (Peru)
Milla McLachlan	Nutrition and food security, capacity building, gender, value chains	West & East Africa (Nigeria, Kenya, Tanzania, Uganda)
K V Raman	Genomics, varietal development, crop improvement	Belgium, France, LAC (Colombia, Peru), East Africa (Kenya, Tanzania, Uganda)
Laurian Unnevehr	Socio-economics, policy, priority setting, impact assessment, value chains, marketing	Asia (Vietnam, Philippines)
Selcuk Özgediz	Management, finance and governance, partnerships	LAC (Peru)

6.2 Evaluation governance/roles and responsibilities

The Evaluation will be conducted by a Team of Independent External Experts. The Team Leader has final responsibility for the evaluation report and all findings and recommendations, subject to adherence to CGIAR Evaluation Standards. The Evaluation Team is responsible for submitting the deliverables as outlined in Table 8.

The IEA is responsible for planning, designing and managing the evaluation. The IEA is also responsible for quality assurance of the evaluation process and outputs, and for the dissemination of the results. During the preparatory phase of the evaluation the IEA collects background data and information and carries out preliminary analysis on RTB. An Evaluation Manager (Sirikka Immonen), supported by an Evaluation Analyst (Matthew Fisher-Post), will provide support to the team throughout the evaluation.

RTB management plays a key role in helping provide for the evaluation team’s informational needs. It provides documentation and data, information on all RTB activities, access to staff for engagement with the evaluators, and information on partners and stakeholders. It facilitates arrangement of site visits and appointments within the lead Centre and other stakeholders. RTB management is also responsible for giving factual feedback on the Draft Report and for preparing the Management Response to the Final Report. It assists in dissemination of the report and its finding and lessons and it acts on the accepted recommendations. While the evaluation is coordinated with RTB management, CIP as the lead Centre is a key stakeholder in the evaluation. It hosts visits to the Centre and its leadership and BOT are expected to make themselves available for consultations during the evaluation process.

A **Reference Group** has been set-up for the IEA Evaluation Manager and Team Leader to consult and ensure good communication with, learning by, and appropriate accountability to primary evaluation clients and key stakeholders, while preserving the independence of evaluators. The Reference Group provides views and inputs at key decision stages in the evaluation design and implementation process, including for the Terms of Reference, the Inception Report and the Draft Report. The Reference Group may also play an important role in leading evaluators to key people and documents. The names of the Reference Group are given in Table 7.

Table 7: Reference Group for the IEA Evaluation of RTB

Name	Affiliation
Graham Thiele	Director, RTB
Oscar Ortiz	DDG Development, CIP; RTB PMC
Rodney Cooke	BOT Chair, CIP
Yvonne Pinto	ISC Member, RTB
Hale Ann Tufan	Project Manager, Next Generation Cassava Breeding Project; Assistant Professor Plant Breeding and Genetics, Cornell University
Joe Tohme	Agrobiodiversity Research Area Director, CIAT; RTB PMC
Stephan Weise	DDG Research, Bioversity; RTB PMC
Robert Asiedu	Director, Research for Development, IITA; RTB PMC
Nadine Zakhia-Rozis	Deputy Director, CIRAD
Lawrence Kent	Senior Program Officer, BMGF
Joseph Methu	Head of Partnership and Capacity Development, ASARECA

6.3 Quality Assurance

In order to ensure evaluation rigor, the following quality assurance will be implemented during the evaluation exercise.

The IEA, as manager of the Evaluation, will play a crucial role in assuring its quality. The IEA will work closely with the Evaluation Team throughout the evaluation, and will ensure that the tools and methodologies, as well as the process followed, are in line with the CGIAR Evaluation Policy and Standards as well as with those used in other CRP evaluations. In addition, two senior evaluation experts,

Prof. Regina Birner and Dr. Leslie Cooksy, will provide assessment and advice on the evaluative quality of the evaluation inception report and draft final report of the RTB evaluation.

6.4 Timeline and deliverables

The schedule for deliverables and work is indicated in Table 8 below.

Table 8: Evaluation Timetable and Tentative Deliverables

Phase	Period	Main outputs	Responsibility
Preparatory Phase	Sep 2014 – Jan 2015	Final TOR Evaluation team recruited	IEA
Inception Phase	Feb 2015 – Apr 2015	Inception Report	Evaluation team
Inquiry phase	May – July 2015	Various analysis products as defined in inception report	Evaluation team
Presentation of preliminary findings	Aug 2015	Interaction with and feedback from main stakeholders	Evaluation team IEA
Reporting phase			
Preparing of Report	Aug – Oct 2015	Draft Evaluation Report, Final Evaluation Report	Evaluation team
Management Response	Dec 2015	Management Response	CRP Management
Dissemination phase	Dec 2015	Communications products	IEA Team Leader CRP Management

6.5 Reporting

The Evaluation Report will be the main deliverable of the evaluation. The outline of the final report will be agreed between the team and IEA at the start of the inquiry phase (see Annex 7).

A draft report will be compiled as the inquiry phase progresses, with contributions from each team member. The final evaluation report will be compiled when the inquiry phase is completed. The team Leader will co-ordinate the report writing with guidance from IEA and according to standard requirements for CRP evaluation reports. All team members will contribute to the analysis and text.

The recommended length of the final report is maximum 80 pages, excluding Executive Summary and Annexes. The report will describe the findings and conclusions that are informed by the evidence collected within the framework defined for the evaluation criteria and issues and for addressing the specific evaluation questions (Annex 1). It will present a set of recommendations that are prioritized, focused and actionable, indicating the stakeholders that are responsible for their implementation. The main findings, conclusions and recommendations will be summarized in an Executive Summary.

6.6 Consultation and dissemination

The list of people consulted during the Inception phase is provided in Annex 3.

6.7 Feedback and Responses to the Evaluation

RTB Management will prepare a response to the evaluation. The **Management Response** will contain both an overall response to the evaluation, as well as response by recommendation—addressing each recommendation in the order presented in the Evaluation Report. The Final Evaluation Report and the RTB Management Response will be considered by the governing body of the CGIAR for endorsement of the evaluation, responses, action plans and proposed follow-up. Given the forthcoming changes in CGIAR governance, the steps for finalizing the evaluation process will be confirmed at a later stage.

ANNEX 1. Evaluation matrix

Research/Programmatic Performance

Evaluation Issues and Questions

Sources of evidence, analysis

Overarching questions

- How well does RTB operate as an integrated program - programmatic-level thinking, strategy, inter-center research activities and management?
- Has the implementation of RTB realized anticipated synergies and complementarities from centers working more closely together especially on the same crop, added value to research on RTB and improved its prospects of achieving its objectives and contributing more efficiently and effectively towards the programs IDOs and SLOs?
- Are the CGIAR reforms assisting RTB to deliver its objectives, achieve program IDOs and contribute to SLOs?
- Is RTB priority setting effective in terms of program coherence and focus of research on its intended objectives?
- How is the continuing process of change in RTB affecting the functioning of research activities and achievements, contributing to the management burden and transaction costs, and affecting relationships with partners?
- Will the future RTB program structure based on discrete “business case” crop-specific activity clusters contribute more efficiently and effectively towards the programs IDOs and SLOs than the previous theme-based structure?
- Is RTB designing and shaping future partnerships to articulate a sustainable research project portfolio?
- Are the impact pathways in the RTB structure sufficiently specified regarding target beneficiary groups and alternative research and industry providers, and are they clearly formulated and used in program monitoring and management?
- In the current complex funding environment, has RTB been able to manage multiple sources of funding to assure strategic coherence around highest priority areas of research?
- To what extent do the governance and management structures and practices of RTB contribute to or impede the achievement of program coherence and effectiveness?

To be addressed through the more detailed questions and data analysis shown below

Relevance

Coherence

- | | |
|---|---|
| <ul style="list-style-type: none"> • Is the RTB CRP strategically coherent and consistent with the main goals and System Level Outcomes presented in the CGIAR’s Strategy and Results Framework? • Are the CRP Flagship Projects strategically rational and coherent as a set? • Is the core funding (Windows 1 and 2) used strategically in key areas of the program? • Has priority setting effectively identified the most important areas of research? • How are recent cuts being absorbed; what is their impact on the strategic focus of the program? | <p>Desk review of the CGIAR’s Strategy and Results Framework (SRF); the approved RTB proposal; RTB 2015-2016 extension proposal as well as recent its evolution; ISPC and FC commentaries on the original and extension proposal; CO commentary on extension proposal</p> <p>In-depth case studies including review of complementary projects</p> <p>Stakeholder interviews</p> |
|---|---|

Comparative advantage

- | | |
|---|--|
| <ul style="list-style-type: none"> • How strategically is RTB positioning itself, considering both the CGIAR’s mandate of delivering international public goods and obligation towards outcomes—relative to other international initiatives/research efforts, including the private sector; partner country research institutions; and development agencies? • Is the CRP’s role clearly defined relative to that of the boundary partners? | <p>In-depth case studies</p> <p>Stakeholder interviews</p> |
|---|--|

Program design

- | | |
|--|---|
| <ul style="list-style-type: none"> • Does the program target an appropriate set of Intermediate Development Outcomes (IDOs) and are the activities of highest priority for targeting the IDOs? • Do the impact pathways logically link the principal clusters of activities to the IDOs and are the IDOs linked to the SLOs through plausible theories that take into account trade-offs between multiple objectives? • Have the CRP research activities been adequately prioritized, in line with resource availability? • Has gender analysis adequately informed program design and targeting and are gender issues incorporated in the design? | <p>Desk review of RTB IDOs and impact pathways</p> <p>Interviews with RTB management, theme leaders and principle investigators</p> <p>Assessment of budget allocations to themes</p> <p>Review of priority assessments and their use in program design</p> |
|--|---|

Researcher survey

Assessment of the gender strategy, gender-related IDOs and impact pathways in relation to gender considerations

Analysis of gender research and its incorporation in case study projects; interviews; researcher survey.

Quality of Science

- Does the research design, problem-setting, and choice of approaches reflect high quality in scientific thinking, state-of the-art knowledge and novelty in all areas of research?
- Is it evident that the program builds on the latest scientific thinking and research results?
- Are the internal processes and conditions, including research staff and leadership quality, adequate for assuring science quality?
- Are the research outputs, such as publications, of high quality?

ISPC and CO commentaries; publications analysis; in-depth project analysis; interviews of peers

In-depth project analysis; field visits

Interviews about internal processes

Researcher survey

Analysis of publications and other outputs

Likely effectiveness

- Has the CRP stayed on track in terms of progress and milestones toward outputs, and along the impact pathway toward outcomes?
- Is the monitoring system used effectively for adjusting the program on basis of lessons learned?
- Have constraints to outcomes and impacts been considered in the program design, for example through assessment of the assumptions and risks in reliance on policies, actions of national institutions, capacity and partnerships? To what extent, have *ex post* studies informed the assumptions?
- Is the CRP adequately addressing enabling factors for out-scaling outcomes?
- Has gender been adequately considered in CRP impact pathway analysis and implementation, understanding the differential roles of women and men along the impact pathway, generating equitable benefits for both women and men, and enhancing the overall likelihood of enhancing the livelihoods of women?

Review of RTB annual reports, reports to donors and performance reports

Interviews with RTB management and theme leaders

Assessment of M&E systems and its use in program modifications

Review of impact pathways and theories of change and their use in program design and modification

- Are capacity building activities sufficiently and appropriately incorporated into the program?
- Does RTB engage with appropriate partners, given their roles in implementation and achieving the objectives of the program?

Review of ex post impact studies and their use

Review of impact pathways and theories of change and their use in program design and modification

Interviews with partners during field visits

Assessment of the gender strategy, gender-related IDOs and impact pathways in relation to gender considerations

Analysis of gender research and its incorporation in case study projects; interviews; researcher survey

Assessment of capacity building strategy and consideration of capacity in the theme impact pathways

Analysis of capacity building activities in sampled projects

Interviews

Researcher survey

Impacts and Likely Sustainability

- What has been the record of the centers engaged in research on these commodities, in terms of documenting and demonstrating outcomes and impacts from past research?
- Have there been sufficient efforts to document outcomes and impact from past research, with reasonable coverage over all research areas?
- What can be concluded from the findings of *ex post* studies, regarding the magnitude of impact in different geographical regions—and the equity of benefits?
- To what extent have benefits from past research been—or to what extent are they likely to be—sustained?

Review of RTB impact narrative and evidence provided in support of the claims

Review of impact studies

Interviews with stakeholders

Same as above

Interviews with stakeholders

Organizational performance

Governance and Management

- | | |
|---|---|
| <ul style="list-style-type: none"> • Do the G&M arrangements and functions conform to the program partnership requirements of independence, accountability, transparency, legitimacy and fairness? • Are the RTB institutional arrangements, management and governance mechanisms efficient? • Does RTB research management provide effective leadership, culture and ethos for advancing the program's objectives? • What are the pros and cons of allocation of W1/W2 funds based on formula funding allocation compared to more competitive allocation? • To what extent have the reformed CGIAR organizational structures and processes increased (or decreased) efficiency for successful program implementation? • Is the level of collaboration and coordination with other CRPs appropriate and efficient for reaching maximum synergies and enhancing partner capacity? • How effectively does RTB implement the principles of RBM in its delivery framework? • Is RTB management using an M&E system efficiently for recording and enhancing CRP processes, progress, and achievements? | <p>Desk reviews of the minutes of FC, CB, CIP BOT, SC (+PAC), and RTB PMC</p> <p>Interviews with selected staff from the above as well as other major partners (IITA, CIAT, Bioversity, CIRAD)</p> <p>Review of cross-CRP governance and management review report and relevant recommendations</p> <p>Interviews with partners</p> <p>Direct observation of CIP BOT and SC meetings</p> <p>Review of decisions after meetings</p> <p>Interviews with program managers of collaborating CRPs (HT, CCAFS, A4NH, POM)</p> <p>Assessment of the implementation of RBM in four pilot projects</p> <p>Assessment of the effectiveness and efficiency of M&E systems and its use in capturing key program advances</p> |
|---|---|

ANNEX 2. Evaluation Team biodata

Team Leader

Jillian Lenné has 36-year career in tropical agricultural research, management & development, including 15 years with CGIAR institutes (CIAT and ICRISAT). She has wide experience as a consultant in project and program review in more than 30 countries in Latin America, Asia and SSA; across tropical and semi-arid crop management systems. Most recently Dr. Lenné was Team Leader for the ICARDA CCER of integration of crop-livestock research. She has served as Team Leader for the IITA CCER of the Systems-wide Program for Integrated Pest Management, and reviewed the Sub-Saharan Challenge Program at its inception phase. Dr. Lenné also served as Deputy Director General – Research at ICRISAT. She is author, co-author or editor of over 150 publications and co-Editor in Chief of *Field Crops Research*.

Team Members

Milla McLachlan is Professor at the Division of Human Nutrition, Faculty of Health Sciences, University of Stellenbosch in South Africa. She has more than 25 years of experience in international social development, with a focus on food security and nutrition, to support institutional transformation for social and ecological benefit. As an independent consultant her clients in the past have included CIP, IFPRI, UNICEF, NEPAD and the World Bank. Her board and steering committee memberships have included the Sweetpotato for Profit and Health Initiative (SHPI), the Global Alliance for Improved Nutrition (GAIN), and the UN Standing Committee on Nutrition. To understand and facilitate transformative change processes, particularly in food systems, Dr. McLachlan has led capacity building and action research activities, and supported the design, implementation, assessment and documentation of food and nutrition security policies and programs.

Selçuk Özgediz is an independent consultant specializing in governance and management issues. During a 34-year tenure at the World Bank, Dr. Özgediz served the CGIAR Secretariat for 27 years. As Management Adviser he promoted changes to improve the overall accountability, health and performance of the CGIAR system. In 2012 Dr. Özgediz prepared a 40-year institutional history of the CGIAR, published by the Fund Office. Among others, he initiated external management reviews of CGIAR centers; governance, leadership and management development programs for CGIAR center executives and served as a resource on system- and center-initiated change management efforts. He is a veteran of over twenty CGIAR EPMRs. Recent consultancies include work for the World Bank Inspection Panel on change management, the Russia Department on establishment of a agricultural research institute, the Middle East department on improving the governance of a water management institute, and evaluation of research proposals for the European Commission. Prior to joining the World Bank he taught at Boğaziçi University in Istanbul.

KV Raman is Adjunct International Professor of Plant Breeding & Genetics at Cornell University, as well as Associate Director for Special Projects in International Programs, and Faculty Fellow at the David R. Atkinson Center for a Sustainable Future. He has worked extensively on root and tuber crops. In 1977-92 Dr. Raman worked at CIP, conducting research and technology transfer in effective pest control for

potato and sweet potato improvement in collaboration with several national programs in Africa, Asia and Latin America. His Ph.D. research included field studies at IITA. Dr. Raman's past consultancies include review of the Cassava Biological Control Program at IITA (UNDP); project review of Cassava genetic resources at CIAT (ISAAA); and reviews of CIP's IPM program in Bolivia and Peru (UK-ODA) and of biotechnology program (USAID). He is an author of over 100 international journal publications on root and tuber crop improvement.

Laurian Unnevehr is Professor Emerita, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign. She served as Director of the Food Economics Division of USDA Economic Research Service. She spent two years as Senior Research Fellow at IFPRI and at that time was involved in the CRP on Agriculture for Nutrition and Health. Since her Ph.D. dissertation at Stanford on "Cassava Marketing and Price Behavior on Java," much of Dr. Unnevehr's research has focused on value chain performance for food security, with emphasis on policy, markets, food safety and quality. Consultancies include service to the Gates Foundation, WTO, OECD, USAID, the World Bank, and IRRI, which is where she began her career as a post-doctoral fellow. She has served on the Editorial Boards of *Food Policy* and the *Review of Agricultural Economics* and in 2009 was recognized as a Fellow of the Agricultural and Applied Economics Association (AAEA).

ANNEX 3. List of people consulted/interviewed and sites visited during planning and inception phase

Name	Organization	Position/Expertise
Susan Ajambo	Bioversity	Gender
Jorge Andrade-Piedra	CIP	RTB Theme 4 Leader; Plant Pathologist
Elizabeth Arnaud	Bioversity	Crop Ontologist
Luis Augusto Beccara-Lopez	CIAT	RTB Theme 2 Leader; Plant Breeder
Robert Bertram	USAID	
Sebastien Carpentier	KUL	Drought phenotyping
Marie-Line Caruana	CIRAD	Banana streak virus
Alberto Cenci	Bioversity	Genomics
Rachel Chase	Bioversity	MusaNet; GMGC
Robert Domaingue	CIRAD	RTB Focal Point for CIRAD; Dep. Director, Mixed Research Unit
Ehsan Dulloo	Bioversity	Program Leader, GR Conservation & Availability
Valentin Guignon	Bioversity	Bioinformatics
Helen Hambly		Chair, RTB ISC
Stephan Hauser	IITA	RTB Theme 5 Leader; Agronomist
Clair Hershey	CIAT	RTB Focal Point for CIAT; Plant Breeder
Angelique d'Hont	CIRAD	RTB collaboration
Yann Hueber	Bioversity	Genetics; Next Gen
Eldad Karamura	Bioversity	Banana bacterial wilt
Peter Kulakow	IITA	Plant Breeder
James Legg	IITA	RTB Theme 3 Leader; RTB Focal Point for IITA; Virologist
Rouard Mathieu	Bioversity	Bioinformatics
Philippe Monneveux	CIP	DDG - Development
Oscar Ortiz	CIP	DDG - Research
Bart Panis	Bioversity	Cryo-conservation
Diemuth Pemsil		Priority assessment
Anne Rietveld	Bioversity	Value chains - banana
Max Ruas	Bioversity	Bioinformatics
Nicolas Roux	Bioversity	RTB Theme 1 Leader
Julie Sardos	Bioversity	Genetics; Next Gen
Dietmar Stoian	Bioversity	Commodity Systems and GR
Rony Swennen	IITA/KUL	Banana GR Specialist
Graham Thiele	CIP	RTB Program Director
Inge Van den Bergh	Bioversity	RTB Focal Point for Bioversity; ITC; ProMusa
Ines van den Houwe	Bioversity	ITC
Stefan Weise	Bioversity	Director of Research
Dagmar Wittine	CIP	RTB Program Manager

ANNEX 4. LIST OF DOCUMENTS REVIEWED

CGIAR. 2011. CGIAR Strategy and Results Framework

CGIAR. 2015. CGIAR Strategy and Results Framework 2016–2025. February 2015

Draft for final consultation

CGIAR Fund Council. 2014. ISPC Commentary on the Extension Proposal for CRP 3.4 Roots, Tubers and Bananas 2015-2016. Working document. 12th Meeting, Brussels, Belgium, November, 2014.

CGIAR Research Program 3.4. 2011. Roots, Tubers and Bananas for food security and income. Final Revised Proposal, 9 September 2011.

CGIAR Research Program 3.4. 2014. Roots, Tubers and Bananas Extension Request 2015-2016. April 2014.

CIP. 2014. CIP Strategy and Corporate Plan: Research, innovation and Impact. 2014 – 2023.

Kenyon, L., P. Anandajayasekeram, and C. Ochieng. 2006. A synthesis/lesson-learning study of the research carried out on root and tuber crops commissioned through the DFID RNRRS research programmes between 1995 and 2005. UK: DFID Crop Protection Programme.

Kroschel J., et al. (2012). Management of critical pests and diseases through enhanced risk assessment and surveillance and understanding climate impacts through enhanced modeling. CCAFS and RTB Workshop Report. CCAFS and RTB. Copenhagen, Denmark; Lima, Peru. Available online at: www.ccafs.cgiar.org or www.rtb.cgiar.org

Lebot, V. 2009. Tropical Root and Tuber Crops: Cassava, Sweetpotato, Yams and Aroids. UK: CABI.

Robinson, M., Zimm, S., King, A. and Zollinger, U. 2014. Review of CGIAR Research Programs

Governance and Management. FINAL REPORT. March 2014. IEA, Rome.

RTB. 2013. Teaming Up for Greater Impact. RTB Annual Report 2012. Lima (Peru). CGIAR Research Program on Roots, Tubers and Bananas (RTB). Available online at: www.rtb.cgiar.org

RTB. 2014. Expanding Collaboration, Catalyzing Innovation. RTB Annual Report 2013. Lima (Peru). CGIAR Research Program on Roots, Tubers and Bananas (RTB). Available online at: www.rtb.cgiar.org

ANNEX 5. Selected RTB complementary projects for IEA Team Members' in-depth review

Theme	Complementary Project Name	Short Name	Project Leader (Center)	Annual Budget (Proposal)	Period	IEA Team Member
2	Enhancing global RTB productivity through more targeted use of global genetic diversity	Targeted use diversity	Luis Augusto BECERRA (TL Theme 2, CIAT lead) Nicolas ROUX (TL Theme 1, Co-lead)	\$1,573,398	2012-2014	KVR
6	Part I (Processing): Driving livelihood improvements through demand-oriented interventions for competitive production and processing of RTBs	Post Harvest/ Processing Cassava	Clair HERSHEY (CIAT)	\$943,636	2013-2015	LU
7	Strategic Assessment of Research Priorities of the RTB	Priority assessment	Guy HAREAU (CIP)	\$824,271	2012-2013	LU
3	BBTD containment and recovery : Building capacity and piloting field recovery approaches through a learning alliance	BBTD: Building capacity	Charles STAVER (Bioversity)	\$797,412	2013-2015	MM
3	Management of RTB-critical pests and diseases under changing climates, through	Pest and diseases	Juergen KROSCHEL (CIP)	\$745,115	2013-2015	JL

RTB Evaluation, Inception Report, May 2015

Theme	Complementary Project Name	Short Name	Project Leader (Center)	Annual Budget (Proposal)	Period	IEA Team Member
risk assessment, surveillance and modeling						
4	Accelerating Learning and Tackling Bottlenecks through a Conceptual Framework for Roots, Tubers and Bananas Seed Systems	Seed systems	Jorge ANDRADE (CIP)	\$722,497	2013-2015	JL
2	Part II (Production - CIAT "alone"): Driving livelihood improvements through demand-oriented interventions for competitive production and processing of RTB's.	Post Harvest/Competitive Production	Clair HERSHEY (CIAT)	\$694,618	2013-2015	LU
6	Integrating gender in RTB thematic research to enhance development outcomes	Gender integration	Netsayi MUDEGE (CIP)	\$557,449	2013-2014	MM
3	Developing tools for describing, quantifying and managing diseases causing degeneration of planting material in RTB	Seed degeneration	Greg FORBES (CIP)	\$395,568	2012-2014	JL
7	From Rhetoric to Reality on Gender: implementing the RTB gender strategy in 2012	Gender strategy	Gordon PRAIN (CIP)	\$277,632	2012-2014	MM
7	b) Assessing adoption and impacts of improved cassava varieties on poverty	Impact	Tahirou Abdoulaye	\$203,041	2014-	LU

RTB Evaluation, Inception Report, May 2015

Theme	Complementary Project Name	Short Name	Project Leader (Center)	Annual Budget (Proposal)	Period	IEA Team Member
	reduction in Nigeria	Assessment	(IITA)		2015	
7	d) Adoption and impact of improved cassava varieties	Impact Assessment	Ricardo Labarta (CIAT)	\$202,850	2014-2015	LU
7	c) Strengthening Impact Assessment in the CGIAR (SIAC). Outcomes of crop germplasm improvement research: potatoes and sweetpotatoes varietal release and adoption in Asia.	Impact Assessment	Guy Hareau (CIP)	\$202,569	2014-2015	LU
7	a) Re-engaging stakeholders: leveraging banana priority assessment and network analysis for more effective outcomes and impact of RTB research	Impact Assessment	Charles Staver (Bioversity)	\$124,950	2014-2015	LU
6	Adding value to roots, tubers and bananas – Building a Team for Impact	Post Harvest workshop	Dominique DUFOUR (CIRAD/CIAT)	\$120,987	2013	LU
7	Gender Capacity Strengthening workshops	Gender capacity strengthening	Netsayi MUDEGE (CIP)/ Simone STAIGER (CIAT)	\$115,530	2013	MM
1	Developing and implementing a shared methodological framework for in-situ conservation of RTB genetic diversity in	In-situ conservation	Stef de Haan (CIP)	\$114,999	2013	JL

RTB Evaluation, Inception Report, May 2015

Theme	Complementary Project Name	Short Name	Project Leader (Center)	Annual Budget (Proposal)	Period	IEA Team Member
hotspots						
3	Management of critical pests and diseases of RTBs through enhanced risk assessment and surveillance”: Request for funds for scientific review and planning workshop	Managing priority pests	Juergen KROSCHEL (CIP)	\$100,000	2012	JL
7	Reaching end users through capacity strengthening and learning: A needs assessment	Capacity strengthening	Simone STAIGER (CIAT)	\$99,998	2012	MM
7	Partnerships and Knowledge Sharing for Innovation in Roots, Tubers and Banana Research for Development	Partnerships for innovation	Javier EKBOIR (Bioversity)	\$56,534	2012-2013	JL/SO
6	Inter-CG center research and development program for strengthening RTB value chain innovation in the Andean region	Value Chain	Andre Devaux (CIP)	\$52,469	2014-2015	LU/MM
2	Multi-center planning on banana/plantain improvement	Banana improvement	Danny COYNE (IITA) --> later Rony Swennen (IITA)	\$48,911	2012-2013	KVR

ANNEX 6. Selected RTB bilateral projects for IEA Team Members' in-depth review

Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
CIP	USAID	Mitigating Disaster and Fighting Vitamin A Deficiency with New Drought- Tolerant, Orange Fleshed Sweetpotato	ANDRADE, MARIA	\$691,318	2011	MM
CIP	Irish Aid	Scaling out sweetpotato and potato-led interventions to improve nutrition and food security in Tigray and SNNPR, Ethiopia	JOGO, WELLINGTON	\$436,646	2013	MM
CIP	USAID	Restricted USAID Contribution: Development of late blight-resistant potato and weevil-resistant sweetpotato	GHISLAIN, MARC	\$350,718	2012	JL
CIP	Irish Aid	Rooting out hunger in Southern Malawi with nutritious Orange-fleshed sweetpotato for the benefit of women and children	MUELLER, EMILY	\$350,310	2009	MM
CIP	OPEC (OFID)	Improving rapid multiplication techniques for enhancing potato seed production to improve food security in the Andes	ANDRADE-PIEDRA, JORGE	\$76,043	2013	JL

RTB Evaluation, Inception Report, May 2015

Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
CIP	ICIPE	Development and implementation of a sustainable IPM and surveillance program for the invasive tomato leaf miner, <i>Tuta absoluta</i> (Meyrick), in North and sub-Saharan Africa	KROSCHEL, JURGEN	\$53,821	2013	JL
IITA	BMGF	Improvement of banana for smallholder farmers in the Great Lakes Region of Africa	Swennen, Rony	\$2,774,720	2014	KVR
IITA	BMGF	AfricaYam: Enhancing yam breeding for increased productivity and improved quality in West Africa	Asiedu, Robert	\$2,700,000	2014	KVR
IITA	BMGF	Yam Improvement for Incomes and Food Security in West Africa (YIIFSWA)	Maroya, Norbert	\$2,601,683	2011	KVR
IITA	BMGF	New Cassava Varieties and Clean Seed to Combat Cassava Brown Streak Disease and Cassava Mosaic Disease (SCP)	Kanju, Edward	\$1,430,382	2012	JL
IITA	IFAD	Enhancing the competitiveness of High Quality Cassava Flour Value Chain in West and Central Africa	Abass, Adebayo	\$612,500	2014	LU
IITA	CORNELL	Next Generation Cassava Breeding	Kulakow, Peter	\$518,252	2012	KVR

RTB Evaluation, Inception Report, May 2015

Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
IITA	MAFSC (TANZANIA)	Fast-tracking the Access to Improved and Popular Varieties of Root Crops by Small Holder Farmers: A case of Sweetpotato and Cassava	Manyong, Victor	\$489,622	2015	KVR
IITA	CIP	Expanding utilization of RTB and reducing their postharvest losses	Abass, Adebayo	\$195,511	2014	LU
IITA	CRI (GHANA)	Community action in improving the quality of farmer saved seed yam (CAY-seed)	Aighewi, Beatrice	\$174,354	2014	JL
IITA	IFAD	Improving Quality, Nutrition and Health Impacts of Inclusion of Cassava Flour in Bread Formulation in West Africa (Nigeria & Ghana)	Maziya-Dixon, Bussie	\$168,589	2014	LU
IITA	MAFSC (TANZANIA)	Community Action in Cassava Brown Streak Disease Control through Clean seed in Tanzania	Legg, James	\$80,881	2013	JL
IITA	IFAD	Youth Agribusiness Development Initiative (YADI): A Private-Public Partnership to Advance Participation of Youth in Agriculture	Sanginga, Nteranya	\$67,057	2014	MM
IITA	CARE-ZAMBIA	An integrated approach to improve nutrition status of women and children under 2 years through nutrition sensitive agriculture in Eastern,	Gondwe, Therese	\$47,325	2014	MM

Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
Luapula and Northern Provinces of Zambia						
IITA	GIZ	Scaling Gender Equitable Impact of Cassava Biofortification to Cameroon and Ghana: Phenotyping and gender responsive assessment of cassava varieties for beta carotene, Fe and Zn	Kirscht, Holger	\$44,111	2015	MM
CIAT	BMGF	Double Haploid Breeding for Cassava Enhancement (BMGF Funds) Phase II	Clair Hershey	\$1,032,848	2014	KVR
CIAT	IFAD	Emerging Pests and Diseases of Cassava in Southeast Asia: Seeking eco-efficient solutions to overcome a threat to livelihoods and industries (EC funds)	Kris Wyckhuys	\$416,667	2012	JL
CIAT	BMGF	African Cassava Whitefly: outbreak causes and sustainable solutions	Luis Augusto Becerra	\$258,461	2014	JL
CIAT	SNV	Inclusive Business Models to Promote Sustainable Cassava Production (Funds from IFAD through SNV)	Keith Fahrney	\$249,000	2013	LU
CIAT	ACIAR	Innovative Business Opportunities for Profitable and Sustainable Cassava Value Chains in Southeast	Jonathan Newby	\$84,249	2013	LU

Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
Asia.						
Bioversity	UGANDA	Novel approaches to the improvement of banana production in Eastern Africa: the application of biotechnological methodologies -- Phase II	Eldad Karamura	\$587,167	2011	KVR
Bioversity	EU/IFAD	Reducing Post harvest losses and promoting product differentiation of fresh cooking banana for increased return to all Value Chain actors. Modification #1	Enoch Kikulwe	\$172,394	2014	LU
Bioversity	UGANDA	Novel approaches to the improvement of banana production in Eastern Africa: the application of biotechnological methodologies -- Phase II	Eldad Karamura	\$155,556	2006	KVR
Bioversity	HARVEST PLUS	Amendment No 4 — “Addressing micronutrient deficiencies in Sub-Saharan Africa through Musa-based foods”	Beatrice Ekesa	\$150,362	2014	MM
Bioversity	HARVEST PLUS	Amendment No 3 — “Addressing micronutrient deficiencies in Sub-Saharan Africa through Musa-based foods”	Beatrice Ekesa	\$130,000	2013	MM
Bioversity	HARVEST	Addressing micronutrient deficiencies in Sub-	Beatrice	\$127,180	2012	MM

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Center	Donor	Bilateral Project Name	PI	Average Annual Expenses	Start Year	IEA Team Member
	PLUS	Saharan Africa through Musa-based foods	Ekesa			

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