



RESEARCH  
PROGRAM ON  
Roots, Tubers  
and Bananas



# CGIAR Research Program on Roots, Tubers and Bananas-RTB

## Gender Strategy

Web version 03

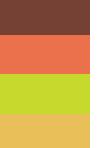


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# Summary

The CGIAR Research Program on Roots, Tubers and Bananas (RTB) has developed a multi-faceted gender strategy that will be woven through its research and development portfolio during the first three-year phase of the program and beyond. The strategy has been developed over several months and is based on extensive consultations with a wide range of stakeholders. The overall objective of the Program is to improve food security and reduce poverty while strengthening gender equality. For this to happen, all farmers, both men and women, must be able to benefit from science and technology interventions leading to positive development outcomes.

The RTB aims to achieve two types of gender outcomes:

**Gender-responsive:** both men and women benefit from RTB technologies and neither are harmed.

**Gender-transformative:** both men and women are helped while gender roles are transformed and more gender-equitable relationships between men and women are promoted

Recognizing the different challenges of the two types of expected outcomes, the relatively low baseline of gender research across the four Centers in RTB and current limited resources, we propose a step-wise approach to mainstream gender including the following activities:

- Including gender in targeting and priority-setting
- Identifying approaches and methods to integrate gender throughout the technical themes of the RTB
- Prioritizing gender integration research in high potential product lines
- Targeting a small number of strategic gender research initiatives where there is critical mass, key gender challenges and opportunities for going to scale
- Progressive expansion of gender integration research into other themes and product lines
- Participating in the Consortium Gender Network and developing other gender-responsive partnerships that will contribute to gender outcomes
- Identifying ways to strengthen communication and knowledge-sharing around gender issues
- Responding to the capacity-strengthening needs in gender analysis and gender-transformative methods and approaches across the RTB
- Designing gender indicators and providing monitoring support in outcome and impact assessment activities

An essential first step will be to identify specific beneficiary groups who are most likely to benefit from concentrated investment and exposure to new gender-sensitive technologies. These are likely to include:

- women producing and trading in female-dominated, marginal value chains
- women and men producing for and trading in high added-value, specialty marketing chains
- women providing unpaid family labor in production and post-harvest processing
- women owner-operators in small, semi-subsistence farms
- men and women artisanal seed producers
- women caregivers and their under 3 children

However, with the limited availability of gender-disaggregated information, the final choices will be made as more data become available. We will implement interdisciplinary, collaborative

research activities to achieve specific gender objectives for each RTB Theme:

*Theme 1:* To develop a gendered understanding of indigenous knowledge and practice in the conservation and use of genetic resources

*Theme 2:* To characterize gender-differentiated preferences for traits and their consequences, to help breeding strategies accelerate varietal development

*Theme 3:* To develop information and communications strategies that informs both women and men of safe pest and disease control methods

*Theme 4:* To improve access of men and women to quality planting material with gender-specific delivery systems where appropriate

*Theme 5:* To ensure that management practices and other tools that are developed have the potential to be useful for both men and women

*Theme 6:* To develop inclusive RTB market chains that improve gender equity in the distribution of benefits from increased commercialization

*Theme 7:* To ensure that both men and women participate as RTB partners and that impact is measured from a gendered perspective

Collaboration with organizations that have knowledge and experience of gender-responsive and transformative research and development will be essential to achieve these objectives.

Measurement of progress towards gender impact in the RTB Research Program will be systematic and will be an integral part of the Program-level M&E and ideally it will be undertaken at all stages of the research cycle. It will be based on the regular monitoring of a set of pre-established indicators mutually agreed with partners. Each of the four member centers of the RTB will have prime responsibility for implementing the gender M&E.

# 1. Rationale and Program Strategy

About 200 million poor farmers in developing countries use roots, tubers, and bananas (RTB) for food security and income. These crops are produced mainly by small farmers and play an important role in the livelihoods of many low-income and often socially-excluded groups, including women, children, youths, tribal communities, and displaced populations.

Women are often the main producers and processors of RTB crops. They can also be principal beneficiaries when they serve as elements in a strategy to diversify global food supplies, buffer against market shocks, reduce the risk of food shortages around the world, and are valued commodities in expanding markets. To ensure that women do benefit, a clear gender strategy needs to be integrated throughout this CGIAR Research Program.

Increasingly RTBs have become important as cash crops in different parts of the world, but there has been little discussion of the gendered nature of RTB production. For example, Best et al (2000) provided a global overview of roots and tuber production and a vision statement to 2020 from a CGIAR perspective, but their identification of constraints faced by producers, processors, manufacturers, and traders and consumers failed to identify the differences in the constraints faced by women and men in each of these categories. Other analysts also overlook gender as a key factor in understanding production constraints. In an overview of African food security, de Graaff, Kessler and Nibbering (2011) identify labor shortage, low soil fertility, land degradation, lack of water resources, and insufficient institutional support as key constraints, but they fail to analyse them from a gender perspective, although women are significant participants in African agriculture.

The research program will make an important contribution in delineating the participation of women in RTB production and the relative contributions of both female and male farmers. Identification of gender-related production factors will be based on a recognition that participation of women varies according to regions and even within regions. In some cases, they work on family-owned plots and have little input into decision-making; in other cases, they own plots, although their land may not be the most desirable. A study in Nigeria found that women –owned fields tended to be in the remotest areas, far removed from markets (Nweke and Enete 1999).

Important production constraints to the development of roots and tubers include declining soil fertility, insufficient and poor planting material, lack of well-adapted varieties, and pests and diseases (Scott et al 2000). All these constraints have significant gender dimensions relating to access to inputs, credit, agricultural knowledge and extension services, etc. However gender-



In commercial plantations, bananas are washed to remove the latex that exudes from the cut surface of the crown and any dirt or fungal spores that may be present on the fruit. This usually generates female off-farm employment

responsive research should not only focus on production constraints, but also include studies on improving food taste, quality, nutrition, processing, resilience, and other characteristics that are particularly important to women (Meinzen-Dick et al 2011). Often the perspectives of men and women are somewhat different on these issues. For example, rice variety research in Uttar Pradesh, India has found that while both male and female farmers placed primary importance on grain yield and duration, men were more likely to emphasize resistance to abiotic stress and adaptation to specific soil types while women were interested in taste, post-harvest quality, cooking characteristics, competitiveness for weeds, and quality and quantity of straw for animal fodder (Paris et al 2001).

Gender roles in RTB cultivation and use are often complex. For example, in Kagera, Tanzania, men are in charge of banana cultivation, while women complement household food supply from cassava and sweetpotato plots. Yet banana processing into beer is a common income-generating activity for women and the elderly. In Nigeria, cassava was traditionally a women's crop because it did well on the poor land apportioned to women. A study showed that women contribute about 50 percent to cassava production and transportation, more than 90 percent to peeling, washing and drying, and about 70 percent to packaging and marketing, while men dominate in machine operation (Koyenikan, Konkwo and Namuna n.d.). Another study of cassava production, processing and marketing in Nigeria from a gender perspective also found clear evidence of a division of responsibilities between men and women (Nweke and Enete 1999). However, as farmer access to markets improved or as better processing technologies became available, men tended to assume responsibilities for work that had previously been consigned to women. The researchers also found that more intensive land management practices and application of purchased inputs were more likely to be used on male-owned fields. Women in women-headed households had less access to government services, including extension, than women in male-headed households. Male-headed households applied more labor per unit area to their crops than did female-headed households.

Overall, women in Nigeria are in charge of small-scale processing and marketing for gari (made from cassava), with large value added and important livelihood benefits. This could change as operations are mechanized and scaled up, although at the present time the mechanized processing sector is dwarfed by small-scale production. This is a remarkable success story of women in processing in RTB crops and one upon which the research program hopes to build. The RTB will also consider the issue of gender-responsive varietal development of cassava. The need to combine pest resistance with mealiness (poundability) is a major consideration for women.

Some research has suggested that women adopt technologies more slowly than men. Researchers in Zimbabwe found that households with female labour constraints were less likely to adopt improved fallow technology (Mudhara, Hilderbrand and Nair 2003) and in Kenya they were less likely to adopt expensive technologies like inorganic fertilizer (Marenza and Barrett 2007). However a study in Malawi concluded that women farmers were quicker to adopt a new kalmia bean variety because it had qualities that they valued, such as a shorter cooking time and a good taste (Masangano and Miles 2004). Further research must be done to see if women adopt

technologies at the same rate as men, when allowances are made for the resource constraints faced by female farmers.

In an effort to address such issues in RTB production in different parts of the world, the research program has developed a multi-faceted gender strategy that will be woven through its work during the first three-year phase of the program and beyond. The strategy has been developed over several months and is based on extensive consultations with a wide range of stakeholders. Implementation of the strategy will be aided by the RTB's gender focal points and the gender research coordinator. However, in the final analysis, gender will be mainstreamed into the research program and contribute to more robust and equitable development outcomes through the actions of researchers affiliated with the four CGIAR centers and other partners. Some will find it easy to implement the ideas and suggestions in the gender strategy; others will find them less relevant or difficult to understand. Importantly however, the RTB is beginning from a position that the inclusion of gender-responsive and gender transformative research will make its work better and ultimately will lead to a better uptake of research results.

## 2. Consultative Processes for Gender Strategy Development

The consultative process involved seven regional stakeholder workshops attended by 100 participants from 27 different countries. Additionally, an on-line "regional" survey for national and regional partners (prepared in English, Spanish, and French) was answered by 181 people, of whom 79 had attended a workshop. A shorter survey was also conducted and some one-on-one interviews were undertaken.

Women's priorities, when analyzed separately, were quite close to those of men on most issues, but they gave greater emphasis to:

- separate monitoring of early adoption
- staffing strategies to encourage gender-responsive research
- research awards for women
- establishment of gender focal points.

Somewhat surprisingly, compared with men, women gave lower priority to the reduction of drudgery. One explanation might be that they value the extra income generated by such work.

## 3. Gender Goal

The overall objective of the research program is to improve food security and reduce poverty while strengthening gender equity. For this to happen, all farmers, both men and women, must be able to benefit from science and technology interventions developed by the research team and its partners. A key goal of the gender strategy is to "level the playing field" where possible by providing access to knowledge, capacity building, and market opportunities, and by ensuring that the technology developed through the program is made available to both sexes.

The RTB will aim to achieve two types of gender linked development outcomes:

- Gender-responsive: both men and women will benefit and neither will be harmed.
- Gender-transformative: both men and women are helped while gender roles are transformed and more gender-equitable relationships between men and women are promoted



The more straightforward is to achieve gender-responsive outcomes by ensuring that women are included equitably in the activities of the research program. Gender-responsive research will also analyze technologies for gender bias and address inefficiencies in aligning technologies with women's and men's needs, knowledge and skills.

It will be more challenging to achieve gender-transformative outcomes, given the structural gender inequalities in many sectors that are not easily influenced by an agricultural research program. Gender-transformative research, including both programmatic and policy approaches, challenges the distribution of resources and allocation of duties between men and women (ICRW 2010). Activities will have to address unequal gender relations to promote shared power, control of resources, decision-making, and support for women's empowerment. Because inequalities derive from multiple sectors, gender-transformative research will depend on broad partnerships, and it will take longer to achieve the desired outcomes.

## 4. Beneficiaries and Targeting

RTB will identify specific beneficiary groups, based on baseline studies done within different projects and crop groups. These could include:

- women producing and trading in female-dominated, marginal value chains
- women and men producing for and trading in high added-value, specialty marketing chains
- women providing unpaid family labor in production and post-harvest processing
- women owner-operators in small, semi-subsistence farms
- men and women artisanal seed producers
- women caregivers and their under 3 children

Specifically, attention will be given to those groups who are most likely to benefit from concentrated investment and exposure to new gender-sensitive technologies.

## 5. Gender-Responsive Integration Objectives and Activities within Research Themes

Each of the seven themes has specific gender objectives. Following the discussion of the gender dimensions of each theme, a few examples are presented of the types of potential activities to be undertaken.

### Theme 1: Conserving and accessing genetic resources

Gender-Responsive Objective: To develop a gendered understanding of indigenous knowledge and practice in the conservation and use of genetic resources

Existing genetic diversity of the different RTB crops reflects, to a large extent, the cultural beliefs, livelihood needs, and practices of women and men who produce, store, and manage plant material in a wide range of agricultural systems in different parts of the world. Because of the clonal propagation of these crops, much of their conservation and use is closely tied to the domestic sphere. This is where women play a decisive role in the storage of food and seed, in food preparation, and in seed selection and preparation for planting. A gender strategy will be most relevant to outputs of this theme relating to the optimization of in-situ conservation methodologies and the increased coverage of gene pools in global gene banks.

A gendered understanding of indigenous knowledge and practice will be a key output of on-farm conservation strategies. Prain, Schneider and Widystuti (2000) have reported the selection by New Guinea women of introduced sweeter, yellow- and orange-colored sweetpotato as baby food. It is also known that on the eastern slopes of the Andes, short-maturing chaucha cultivars of potato are planted to provide an early food supply for families. This kind of detailed information

will contribute to the characterization and documentation of native germplasm and will guide plans for repatriation of this germplasm. It will also help guide the selection of gene pools and composition of core collections in gene banks.

#### Potential Activities:

- Cataloguing women's seed knowledge. Women often make the final decision on selecting the best cultivars in terms of value for processing, cooking qualities and taste, and suitability for home consumption or for local marketability. To contribute to this understanding, researchers can catalogue existing knowledge systems including the criteria used by women to select the best cultivars.
- Cataloguing of traditional knowledge. Both men and women are involved in the production of crops and selecting landraces that better tolerate biotic and abiotic stresses, or which have preferred agronomic characteristics such as earliness or short or long dormancy. But they often have different types of knowledge, based on the gender division of labor. An important task will be to ensure that the knowledge of both men and women is captured and included in their databases.

#### Theme 2: Accelerating the development and selection of varieties with higher, more stable yield and added value

Gender-Responsive Objective: To characterize gender-differentiated preferences for traits and their consequences, in order to help breeding strategies accelerate varietal development.

The gender strategy will have an important role in identifying gender consequences of different breeding options. This will help breeders and research managers determine breeding investments, and through application of methods and tools, will help ensure the equitable distribution of benefits from new breeding products.

Specifically, the gender strategy will draw on tools and instruments developed through participatory research and gender analysis work on participatory plant breeding (e.g. Farnworth and Jiggins 2003). Greater equity in income benefits accruing to women and men from commercial crops can also have a broader positive impact on the farming system and on gender roles by offering a viable economic alternative to male migration. The departure of men to urban centers in search of work often leads to increased labor burdens on rural women and youths, and weaker rural economies (although it can also lead to enrichment of individual households that receive remittances). This theme will involve capacity strengthening among team members and local partners in gender-aware participatory plant breeding and preferred variety selection. In addition,



Female farmers have special responsibility for potato harvest in San José de Aymará, Apurímac, Peru



Women have specialized knowledge in managing seed potatoes. Himachal Pradesh, India

product line 2.1.5, which will produce guidelines, methods and catalogues, will also be strengthened from a gender perspective (see Annex 2 of the proposal for a full description of product lines).

#### **Potential Activities:**

- As part of participatory varietal selection and plant breeding, RTB can employ tools that enable adequate gendered diagnosis of end-user needs, adequate monitoring of deployment of technologies and, where necessary and possible, propose adjustments or additional actions (e.g.,

the promotion of women's associations to enable them to better exploit marketing opportunities of the specialty varieties generated).

- Capacity strengthening among team members and local partners can help strengthen gender-responsive participatory plant breeding and participatory varietal selection (PVS).

### **Theme 3: Managing priority pests and diseases**

**Gender-Responsive Objective:** To develop information and communications strategies that inform both women and men of safe pest and disease control methods.

Women are often the principal cultivators of RTB and, consequently, are faced with dealing with pest and disease problems. The importance of particular pests and diseases and their appropriate management also vary depending on whether the main objective of the production system is household consumption or market sale. Theme 3 will factor in the role of women and the relative contribution of the different RTB crops to food security and income in determining priorities and actions.

More women are becoming directly involved in the preparation and use of pesticides, which increases health risks to themselves and their children. At the same time, there is evidence that women have greater concerns about agriculture-health linkages—both positive and negative—and are receptive to messages about integrated pest management (IPM) (Norton et al 2005). Thus there are strong arguments for the involvement of women in alternative forms of pest and disease management. Capacity strengthening in Theme 3 will pay special attention to women's needs for information and methods that can facilitate their understanding of biophysical information, which is frequently complex and unrelated to local or indigenous knowledge.

An important element of the research approach in the medium term is a gender audit of systems and regions where pests and diseases of global importance are prevalent. This would draw on specific methods focusing on gender and IPM (e.g. Vietnam National IPM Program 2011). Farmer Field Schools will continue to be used as a key philosophy and methodology for both research and farmer learning. More specifically, this theme will develop RTB-based products that lead to national programs in ecological pest management and to the development of appropriate, gender-sensitive materials for farmer training.

#### **Potential Activities:**

- Cataloguing, understanding and, where appropriate, building on existing pest and disease knowledge of local male and female farmers
- Capacity strengthening around women's needs for information and methods that can facilitate their understanding of biophysical information
- A gender audit of systems and regions where pests and diseases of global importance are prevalent.
- Gender-sensitive Farmer Field Schools for both research and farmer learning about detection, risks, ecology, and biology of pests and diseases, and about options for sustainable management.

## **Theme 4: Making available low-cost, high-quality planting material for farmers**

Gender-Responsive Objective: To improve access of men and women to quality planting material with gender-specific delivery systems where appropriate.

In many cases, women and men have differential access to formal and informal seed systems. An important cross-crop output for this theme will be to understand the seed needs of key end-users, including different household members, which will provide the starting point for developing more effective access to quality planting material, especially by women in poor male-headed households. This will synthesize the experience of several CGIAR centers and their partners.

For example, one of the products in product line 4.1 (see Annex 2) in its cross-cutting category, will be a socio-economic and biophysical analytical framework to diagnose bottlenecks and develop strategies to strengthen integrated or single RTB seed systems. The use of gender-sensitive approaches will ensure that they are able to differentiate between constraints faced by men and women farmers, if any. The models will become systematically more precise over the next three years.

Another product in product line 4.2 is a platform for enhanced knowledge sharing about characterizing and reaching priority farmer clients, including the poor in general and poor women specifically. Preliminary efforts will focus on the documentation and compilation of experiences with client characterization tools, client characterization and targeting approaches. Ultimately, this work will ensure that scientists, extension workers and planners have tools to more effectively target actions to benefit the poor, including poor women. Applying a gender perspective to analyze and improve seed systems will help to overcome, or at least reduce, existing biases in the access to, availability of, and use of adequate seed.

### **Potential Activities:**

- Analysis of the cross-crop seed needs of key end-users, both men and women. This information will provide the starting point for developing more effective access to quality planting material, especially by women in poor male-headed households.
- Development of a gender sensitive biophysical and socioeconomic framework to identify bottlenecks and feed into capacity-strengthening strategies for single- and multi-crop systems. The proposed analytical tools for comparing alternative capacity-strengthening systems will also examine gender-specific delivery systems.

## **Theme 5: Developing tools for more productive, ecologically robust cropping systems**

Gender-Responsive Objective: To ensure that crop management practices and other tools that are developed have the potential to be useful for both men and women.

A clear gender-related challenge common to both the system research programs and to RTB Theme 5 is the impact that intensification of crop management and the likely associated capital investments will have on women's role in crop production. Key questions include: will women be able to access the technology and the capital required for technology investment? And will they benefit from increased income flowing from this intensification? The gender strategy will target these issues, increasing productivity in RTB cropping systems through nutrient, water and light management practices, and by developing integrated decision and management tools for RTB crops.

As part of an ecological and physiological understanding of RTB crops and cropping systems, it will be important to pay particular attention to the gender roles in different production systems. There are also likely to be tradeoffs between cultural management of stresses and yield in relation to both men's and women's needs. Increasing productivity in RTB cropping systems through nutrient, water and light management practices will involve assessments of the likely access of women, men, and children to productivity gains in different cropping systems.

There are likely to be opportunities to develop specific gender-sensitive outcomes in this area. One of the theme's aims is to use integrated decision and management tools to identify wide recommendation domains and as the overall program begins to produce gender-disaggregated baseline information it will become possible to design gender-sensitive methodologies and tools

for scaling-up and scaling-out. Because of the uncertainties about the roll-out of this theme, two relatively modest potential activities are suggested.

#### **Potential Activities:**

- To provide a more comprehensive ecological and physiological understanding of RTB crops and cropping systems, it will be important to analyze gender roles in the different systems, e.g. the importance of small-scale mixed plantings in home gardens or food security plots away from the house and managed by women.
- The mapping exercises planned in Theme 5 can include a gendered understanding of the resources available to farmers in different systems and to ensure that women are well represented in on-farm trials to capture the “wide range of farmer conditions” required to validate technologies.

### **Theme 6: Promoting postharvest technologies, value chains, and market opportunities**

Gender-Responsive Objective: To develop inclusive RTB market chains that improve gender equity in the distribution of benefits from increased commercialization.

A key gender-relevant dimension in this thematic area relates to developing clear and sound pathways to enhance food security and improve income generation for poverty reduction in RTB systems in which women play a major role as producers and processors. Women's access to resources and opportunities to move from subsistence agriculture to higher value chains is often much lower than men's. In addition, as market opportunities for RTB improve, there will often be a shift to large-scale production systems. This transition is important to increase overall food availability and food security, and make RTB crops cost-competitive compared to other ingredients for agro-processors. However, in such systems, there is a risk of displacing women from the production and/or marketing systems. Ongoing gender analysis and monitoring is required, with research still needed on how to ensure market development with adequate gender equity (Rubin, Nichols-Barrett, and Manfre 2010).

A gender strategy is important also for addressing the output on policies and strategies to enhance consumption of RTB. Policy development will emphasize the role of women in consumption choices and also in policy prescriptions for targeted nutrition education campaigns that work with women's groups and associations, and that can be delivered by extension services and health providers. Marketing and nutrition education efforts need to directly work with such groups.

Theme 6 will encourage public, private and farmer organizations to interact with research organizations to improve farmers' capacity to respond to new market opportunities using appropriate technologies. Again there will be good potential to ensure that the technologies developed through this interaction are gender sensitive and inclusive, offering potential for both poor and more prosperous farmers.

#### **Potential Activities:**

- Promote gender balance in RTB research-for-development teams and capacity development of core team members and local partners in gender-sensitive, value-chain research.
- Develop practical tools to foster women's participation in decision-making processes with strong emphasis on collective action initiatives, such as enterprise associations with strong participation by women.

### **Theme 7: Enhancing impact through partnerships**

Gender-Responsive Objective: To ensure that both men and women participate as RTB partners and that impact is measured from a gendered perspective.

This theme has cross-cutting relevance for all other themes, and as part of its responsibilities for targeting and setting priorities, building effective partnerships, strengthening communication and knowledge sharing, guiding capacity-strengthening strategies, and leading work on outcome and impact assessment. Strategic gender research will be undertaken in this theme and it will

also support the integration of gender issues into the substantive, technical areas of the research program.

Theme 7 will undertake studies on the significance of RTB in combined farming systems, considering levels of poverty and vulnerability and gender-specific roles in production, processing, marketing, and consumption. Results of these studies will be shared and validated in stakeholder consultations. Priority setting within the partnership learning cycle builds continuously on evidence provided by ex-post impact assessment. In this feedback process, special attention will be given to anticipating gender-related effects and including other metrics such as Disability Adjusted Life Years for nutrition interventions.

Communication and knowledge sharing, which is one of the outputs of Theme 7, will use the gender e-platform proposed to be established throughout the CGIAR, to provide access to gender analysis tools and learning opportunities.

Outcome and impact assessment will, among other things, measure the impact of research on RTB on the livelihoods of the poor, identifying a set of outcome and impact indicators to create a plausible theory of change with stakeholders. This is linked with first order gender-disaggregated impact indicators such as technology adoption; crop yields, area, and production; changes in practices and level of inputs; changes in production costs and profitability; and changes in attitudes and risks faced by women and men farmers. As part of the gender strategy it is proposed to develop additional gender-responsive indicators, relating for example to changes in access to agricultural resources and changes in participation in production, marketing, and processing activities.

#### Potential Activities:

- Supporting the formulation of targets and priorities, as appropriate, for the inclusion of gender in product lines.
- Undertaking case studies to better understand constraints and opportunities for equitable access to technologies and to demonstrate that gender-responsive research is ultimately more efficient in ensuring the right research questions are examined, and in technology uptake.
- Identifying women's farmer and marketing groups and involving them as partners. NGOs with experience in gender-responsive and gender transformative work will also be identified and selected as partners.
- Developing communication and knowledge-sharing platforms that recognize that men and women often access information in different ways and that their interests are not always the same.
- Supporting capacity-strengthening activities undertaken by RTB to be gender-sensitive and representative. In some cases, efforts may be made to include more women, in order to raise their numbers to a critical mass.



Women bakers learn to process Orange Flesh Sweetpotato, Angola

## 6. Impact Pathways and Gender

Measurement of progress towards gender impact in RTB will be systematic and undertaken at all stages of the research cycle. It will be based on the regular monitoring of a set of pre-established indicators. These will be derived from the impact pathway for gender research in the RTB. a preliminary version of the impact pathway is shown in figure 1. This will be further developed as we get input from stakeholders and progressively engender RTB programs.

**Figure 1.** Schematic impact pathway for gender research in the RTB



The CGIAR's Gender and Agriculture Research Network has identified a series of guiding principles that can be used to address gender in research programs. These include:

- Priority setting based on identification of men's and women's needs for technologies through consultation with relevant stakeholder groups; gender balance in consultation process

RTB has already had a stakeholders meeting that identified some of the key priorities for both male and female producers (and identified some differences). However, meetings with stakeholders will be an ongoing process throughout the life of the RTB Research Program. Since the Program is made up of many different projects, there is no single group of stakeholders that represents all relevant interests. In such a multi-stakeholder context, it is easy for the interests of less vocal or less dominant stakeholders (often including women) to be forgotten.

- Representation of women in beneficiaries in proportion to their representation in the population

Some of the projects already underway in RTB do not have a proportional representation of women but to the extent possible, new projects will aim to achieve this goal. This means that researchers will ensure that women farmers are included in on-farm trials, that women entrepreneurs are included in training and other activities with processors, manufacturers and traders and that the preferences of women consumers are also solicited. In some cases it may not be possible to achieve equitable female representation but in all cases research teams should be aware of the importance of including both sexes in their work.

- Identification of factors responsible for gender disparities in adoption or impact of new technologies

Women's economic and cultural circumstances have a direct impact on their technology choices. They may be risk-averse to adopting new technologies, especially if considerable cash outlays are required. However, if a technology has an obvious benefit, e.g. reduced cooking time means that less firewood will be required, or if an aspect of the technology relates to their role within the family, e.g. the possibility of providing them a better tasting variety, then they may be persuaded to try it. Consequently, projects in RTB will try to ensure that women participate in the evaluation, adoption and dissemination of technology. At a practical level it will be important to identify some relevant tools to achieve this end. For example, getting orange fleshed sweetpotato adopted in Western Kenya involves recognizing the role of women in agriculture, the need for women, as main producers and carers, to have access to planting material, and the identification of health centers as innovative access points.

- Gender-responsive monitoring and evaluation system in place

RTB has developed a set of preliminary indicators that can be used by individual projects to assess their progress both in achieving gender-responsive research and in achieving gender-transformative work. These are discussed below. Monitoring will have to be regular and steps should be taken within individual projects to make necessary adjustments if they are not designed to be sufficiently gender-responsive.



Cassava starch processing near Hanoi, Vietnam

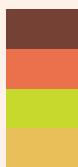
The approach will emphasize self-assessments based on the inclusion of gender-responsiveness in targeted milestones and also participatory monitoring via stakeholder meetings. Such meetings occur in most collaborative activities, and the RTB gender coordinator and focal points will provide formats for gender-responsiveness self-assessments. A good monitoring system will be established over the life of the program, beginning with a testing of the approach in the “best bet” areas of the RTB.

- Involvement of men and women in the innovation process (participation in identification and testing of promising varieties, use of indigenous knowledge, participation in and access to extension systems) through farmers groups and partner organizations, in proportion to men’s and women’s share of the rural population

This principle relates specifically to Theme 7. The RTB will ensure that its partners include women’s organizations, recognizing that for many poor women, participation in farmers’ organizations can have a transformative effect.

- Representation of women in program staff, especially where gender segregation requires female staff to work with women

Strong participation of women as program staff in the RTB is important. There is some evidence that male and female researchers are drawn to different research questions and sometimes research approaches (Meinzen-Dick et al 2011). The inclusion of significant numbers of women among the RTB research staff and in partner organizations, should lead to a wider scope in the types of research questions to be addressed.



## 7. Gender-Responsive and Gender Transformative Research Within RTB

### Integration of Gender across the Research Cycle

#### Targeting and priority setting

At this early stage of the research process, a major effort will be made to ensure that, where applicable, research questions have relevance for both sexes.

#### Methods and gender disaggregated data collection

Research carried out in RTB includes both quantitative and qualitative techniques. At the most basic level all research projects will disaggregate results by gender and will ensure that both men and women are included in survey populations.

Both cross-cutting and thematic approaches, methods, and tools are relevant to implement the strategy. Cross-cutting approaches and methods include:

- Methods and instruments developed through participatory research and gender analysis work (e.g., Feldstein and Jiggins 1994, Fernandez 2009)
  - A gender audit of systems and regions
  - Gender responsive framework for identifying biophysical and socioeconomic bottlenecks and for developing capacity-strengthening strategies (e.g., Conlago et al 2009)
  - Gender review of policies related to production, processing and use of RTB crops
- A wide range of qualitative methods are also available for application, especially gender-responsive participatory techniques, to elicit nuanced information.

## Gender Transformative Research

Even the most gender-sensitive agricultural research is unlikely to bring about immediate transformation in social relations of gender. Existing gender relations are deeply entrenched in all societies and encompass all aspects of public and private life. However, by creating opportunities for poor women to benefit from technological interventions and by ensuring that interventions are designed to take into account, or compensate for, the production constraints faced by women, the activities envisaged by the RTB will contribute to the empowerment of women and in the long run to transformation of gender relations.

In an effort to promote gender transformative research, the RTB Program Management Unit, in conjunction with the gender focal points and the centers will seek consensus around a small number of research projects which will incorporate gender-transformative outcomes.



Women sieving cassava mash with IITA constructed sieves and tanks for making fufu, Nigeria

## 8. Partnerships

The RTB has a strong focus on partnerships with national research systems, farmers' organizations, NGOs, and the private sector, especially to help in delivery of new technologies developed by research. Some of these partnerships have been established for many years and have led to much useful collaboration in the past, but it will be important to avoid relying exclusively on well-established and familiar partnerships. For the most part, organizations that focus on promoting gender-equitable approaches or that have worked specifically with resource-poor female farmers have been less represented among traditional partners and the RTB will make deliberate efforts to develop relationships with organizations that have knowledge and experience of gender-responsive research and development.

## 9. The Monitoring and Evaluation (M&E) System and Gender

Overall, the M&E system is built on four pillars, two of which explicitly include gender considerations:

1. Program monitoring: overall supervision of program activities, especially cross-cutting elements such as gender mainstreaming, conducted by the program management.
2. Performance monitoring: against the products and milestones listed in Annex 2 of the RTB proposal, conducted by implementing partners against performance contracts.
3. Outcome and impact measurement: referring to the foreseen outcomes and related impacts, which will be managed through Theme 7 (the gender components of which are discussed above).
4. Financial and due diligence monitoring: against program budget, conducted by the Lead Center.

The RTB plans to set up an M&E system to track completion of the milestones that are indicated in the product line description tables in Annex 2 of the proposal.

## Gender Mainstreaming in Projects

Effective M&E requires good indicators. This strategy proposes that the themes themselves should be responsible for developing a set of gender-responsive and gender-transformative indicators (see Figure 1), with support from Theme 7, and that centers should be responsible for monitoring progress of the themes against the indicators. In addition, the RTB as a whole will develop gender indicators to be able to assess the extent to which it is mainstreaming gender overall into its research and its management. Meinzen-Dick et al (2011) have developed a comprehensive set of suggested indicators of gender-responsiveness in agricultural research and these may be used as a guide.

At the level of the overall program activities, indicators will be included as milestones and center management will assume responsibility for their monitoring. Centers need to pay attention to possible ameliorative actions that can be undertaken should gender milestones not be met, e.g. because it has proved difficult to find "qualified" women.

Development of appropriate gender-sensitive outcome indicators was a topic for discussion at the RTB gender workshop in December 2012. Based on input from researchers and gender experts, it should be possible to identify a core set of indicators. These indicators will be logically tied to the impact pathway and outcomes for the research program . They will also be linked to the lists of gender-sensitive potential activities discussed under the different themes.

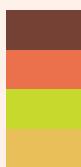
## Gender Mainstreaming in the RTB and in the Centers

Monitoring and evaluation of the success of gender mainstreaming into the RTB will also include indicators related to staffing, budgeting, partnering etc.

For example:

- Participation of women in research teams
- Participation of women in research management
- Proportion of overall budget spent on gender-responsive/gender-transformative research
- Proportion of partners with gender expertise
- Proportion of capacity-strengthening dedicated to developing gender expertise
- Proportion of women benefitting from capacity strengthening

In addition, as the performance contracts come into operation and CGIAR Research Programs are held accountable for research outcomes, gender indicators will be integrated into the M&E system. Each performance contract will include a clear M&E reporting framework that will feed into the overall program M&E set-up. Program partners and other stakeholders will be included in the M&E system to assess progress towards completion of outcomes, and particular care will be given to capturing the gender dimension of variables for monitoring. A key component of this participatory M&E process will be gender feedback. How well is progress being made in relation to gender-responsive indicators? Are midcourse corrections needed, is capacity strengthening needed to ensure that gender-related outcomes and impacts are met? The M&E system will be a crucial tool for the program director, the management committee, and stakeholders to track progress and take corrective action, and for reporting.



## 10. Implementation

The RTB Gender Strategy involves both gender integration research, which refers to using analysis of gender differences to inform and enhance the effectiveness of technical research areas, such as plant breeding or IPM, and strategic gender research, which refers to studies in which gender and gender relations are the main research topic. An important component of the strategy is capacity strengthening to support both these types of research and contribute to gender mainstreaming, where the use of gender analysis and strategic gender research inform the entire research cycle: targeting, priority setting, research design, implementation, uptake, monitoring, evaluation and impact assessment.

## **Gender integration research**

- Themes 1 & 2, at the core of a commodity CGIAR Research Program, concern conservation of crop genetic resources and crop improvement. The role of women as conservationists of crop genetic diversity means that gender is central to examining strategies for in situ conservation. Theme 2, on varietal selection and development, is a third of the RTB budget, reflecting the importance of this area of research for a commodity Program. The strategy will seek to ensure that there are sufficient resources to integrate gender into research on preferences, varietal development, selection and multiplication, and to align research with farmers' and end-users' priorities.
- In Theme 3 on managing pests and diseases, we expect to move from a focus on sex-disaggregated surveys and training events where learning is evaluated separately for women and men to a larger focus on more equitable access to IPM technologies and safer, more efficient agriculture.
- Theme 4 on seed is closely related to varietal development and we will examine here women's current role in seed systems and the potential for women to access increased income through seed enterprises.
- The focus in 2013 for Theme 5 on cropping systems will be to involve researchers from this area in capacity strengthening events so that the gender dimensions of cropping systems research can be examined in 2014.
- Theme 6 has a strong gender content, especially in finding ways for more equitable and efficient value chain development and we expect this to continue.

## **Strategic gender research**

Our approach to strategic gender research is to develop a set of over-arching research questions of systematic importance for strengthening equity and efficiency in the research efforts of the RTB program. We have identified six target sites across the major regions where there is a convergence of factors for the establishment of case study research for testing the research questions. The potential for collaboration with partners having gender competencies and/or for scaling findings from these studies Sites have been identified in South Asia, Central and East Africa, northern Colombia and Haiti. Funding has been identified for launching work in these sites. We will utilize methods drawn from several of the gender toolboxes referred to in the Strategy document. Although we are still developing the research framework, we have identified the following key issues in relation to the different research sites.

***South Asia. Likely key issue: women's contrasting access to RTB-based agro-enterprises in Bangladesh and Northeast India.*** Two sites geographically close but culturally distant in terms of access where lessons could be learnt. Three way partnerships already in place include AAS/Worldfish, HKI, SPRING nutrition initiative. Contacts already made with the Gender and Water Alliance for gender capacity strengthening and with University of Guelph for gender research collaboration.

***Central, East and West Africa. Likely key issue: Implications of intra-household resource use and decision-making for equity and innovation in different RTB crop constellations.*** All major RTB crops are produced and consumed in this region, but under different resource management conditions and decision-making arrangements. Three way partnerships expected or in place with Humidtropics (two RTB gender focal points also focal points for Humidtropics), HKI, KIT.

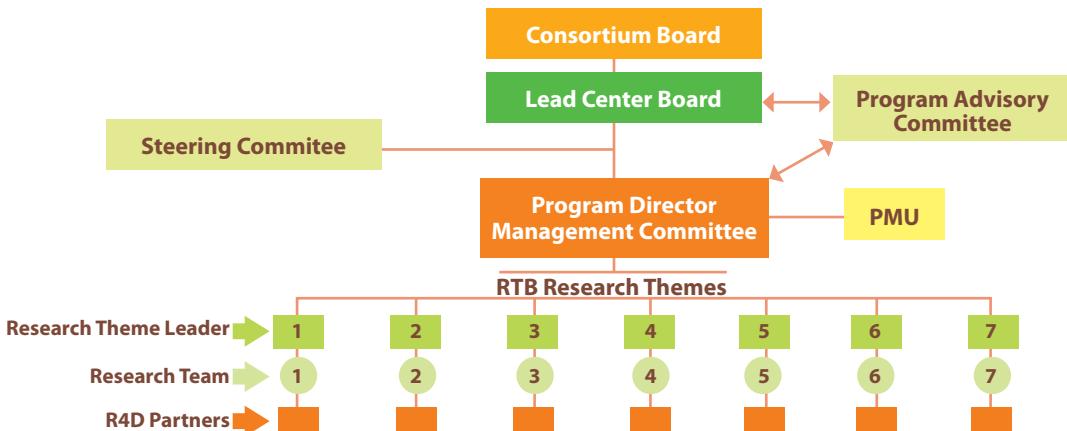
**Northern Colombia. Likely key issue: gender implications of agro-industrialization.** The transformation of artisanal production and postharvest processing of cassava to an industrial scale has critical poverty and gender implications. Potential three way partnerships with PIM, University of Florida. [See objective 6.2].

**Haiti. Likely key issue: gender research in support of improved use of RTB commodities for mother and child nutrition.** Urgent need for addressing highest levels of mother and child malnutrition in Western Hemisphere. Potential three way partnerships with A4NH, SPRING, HKI.

## 11. Management System

Figure 1 shows the Governance and Management arrangements proposed in the RTB Proposal\*. Gender relevance and the gender strategy has been systematically addressed and included in the terms of reference for the functioning of each of its elements. The recently renamed Program Advisory Committee has an important role in advising the CIP Board and the Steering Committee as well as the Program Director and Management Committee. It has a specific role of ensuring that gender mainstreaming occurs in the RTB program and one member of the Committee is designated as a gender specialist. The Management Committee should "Guarantee that a coherent gender strategy is articulated and successfully implemented". The Program Director will "take special responsibility for implementing the gender strategy". Similarly the RTB Theme leaders will be selected for their "commitment to gender mainstreaming" and have in their terms of reference to "work with center focal point for gender to ensure gender is adequately addressed".

Figure 1. Governance and management in the RTB



"The organizations together with the proposed M&E system should provide oversight, track progress and ensure improved gender responsiveness of RTB research."

\*<http://www.rtb.cgiar.org/resources/proposal-documents/final-proposal-annexes/final-proposal-annexes/crp-rtb-septemberrevision-webversion.pdf>

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A broad alliance of research-for-development stakeholders & partners