The CGIAR Research Program on Roots, Tubers, and Bananas (RTB) is conducting a strategic assessment of research priorities for bananas, plantains, cassavas, potatoes, sweetpotatoes and yams in order to identify where and how to focus the program's resources. The goal is to achieve the highest possible impacts on food security, nutrition and health, poverty reduction, gender equity and environmental sustainability. To do this, we are engaging scientists and stakeholders from across the global RTB community in a dialogue to increase the relevance and enhance the impacts of RTB research. This involves a dynamic, systematic and transparent approach that includes periodic revision and updating of research priorities. It is composed of six steps, which are not necessarily consecutive, but complement one another to define RTB priorities in a way that incorporates the most current data and information and engages a wide array of stakeholders from the global RTB community.

The six-step process comprises:

1. Mapping of agro-ecological zones, crop production, poverty and food security indicators in order to identify target areas where research is most needed.
2. Analysis of the key constraints for banana, plantain, cassava, potato, sweetpotato and yam production.
3. Identification of the most promising research options to address those constraints.
4. Quantification of impact model parameters.
5. Estimation of expected impacts under different adoption scenarios.
6. Communication of results to stakeholders and the general public.

Six Major Steps of the RTB Priority Setting Exercise

1. **Agro-ecologies and targeting**
   - Mapping of crop production, overlays with poverty and food security indicators
   - Identification of target areas/hotspots for research interventions
   - Focal/local studies
   - Online production atlas (each crop)
   - Target areas defined and located
   - Feedback on approach/results

2. **Constraints analysis**
   - Literature review of production constraints
   - Expert survey to elicit major constraints and research options
   - Synthesis of the major constraints
   - Expert survey results
   - Online survey
   - Feedback on constraints

3. **Identify matching research options**
   - Expert survey to elicit major constraints and research options
   - Consultation of stakeholders to finalize list of selected research options to be incl. in ex ante impact assessment
   - Survey results
   - Final list of research options for analysis
   - Online survey
   - Feedback on list of options

4. **Quantify model parameters**
   - Literature review of adoption and impact
   - Literature review of market and demand trends
   - Expert consultation to quantify parameters (workshop/interview/survey/online tools)
   - Annotated impact study bibliography
   - Quant. parameters
   - Estimate of and comments on parameters

5. **Estimate research impacts**
   - Literature review of adoption and impact
   - Literature review of market and demand trends
   - Expert consultation to quantify parameters (workshop/interview/survey/online tools)
   - Annotated impact study bibliography
   - Quant. parameters
   - Estimate of and comments on parameters
   - Impact models (incl. estimation of impacts by region/target group)
   - Sensitivity analysis: adoption scenarios
   - Weight environmental and social impact
   - Combine quant. and qualitative assessment

6. **Communication of findings**
   - Interpretation of findings (incl. results of local/focal studies)
   - Flag information gaps and research needs
   - Share results with wider scientific and stakeholder community
   - Final RTB report, (online) newsletter, journal paper(s)
   - Feedback on study approach and process

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THE SIX-STEP PROCESS

1. Agro-ecologies and targeting
   • Mapping of production and constraints to production with overlays of poverty and food security indicators
   • Identify yield gaps across RTB production areas
   • Identification of target areas/hotspots for research interventions
   • Focal/local studies

2. Constraints analysis
   • Literature review of production constraints
   • Expert surveys to elicit major constraints and research options

3. Identify most promising research options
   • Analysis of expert surveys on constraints and research options
   • Stakeholder consultation to finalize the list of research options to be included in ex-ante impact assessment

4. Quantify model parameters
   • Literature review of adoption and impact
   • Literature review of market and demand trends
   • Expert consultations to quantify parameters

5. Estimate research impacts
   • Impact models: economic surplus, DALYs
   • Sensitivity analysis: adoption scenarios
   • Scoring for environmental, health and social impacts
   • Weighing for food security and poverty impacts
   • Combine qualitative and quantitative assessment

6. Communication of findings
   • Interpretation of findings
   • Flag information gaps and research needs
   • Share results with wider scientific and stakeholder community