Report of the November 12-14, 2012 Workshop on
Geographic Targeting and Priority Setting
for the Roots Tubers And Bananas Research Program (RTB)

Introduction

The geographic targeting and priority setting activity of the RTB program is part of the larger priority setting initiative that is being led by a group of social scientists within the CGIAR. One of the main objectives of the activity is to provide background analysis on geographic priorities. What countries/regions should we be working in? Where are the mandate crops produced and what is the geographical spread of the constraints to production? On November 12 to the 14th 2012 in Cali, Colombia a group of RTB researchers met to discuss these issues and to plan how the geographic targeting and priority setting activity will be carried out. This short report briefly describes some of the activities, some of the key issues that were brought up during the workshop, agreements and next steps that we intend to take, and also includes an appendix with the workshop schedule and contact information of all participants.

Workshop Content

Workshop discussions revolved around a final result that we want on geographic priorities, some methods on how we might obtain this result and discussion of information and data that would be needed to reach our goal. The key methodologies for the activity are analysis of digital maps, statistics on the crops and related themes, spatial overlay analysis, multi-objective criteria analysis and yield gap analysis. Several presentations were made about key information and data sets that will be used in the activity. These presentations included discussion of crop distribution maps, agroecology maps and the biotic and abiotic constraints to crop production. Participants discussed poverty maps and other demographic indicators. Participants discussed biodiversity concerns related to RTB crops and yield gaps.

Bernardo Creamer gave a presentation on how these different indicators might fit within the CGIAR and RTB impact assessment and evaluation framework. Many of the indicators described above were slotted into a table that includes intermediate development outcomes and other elements of the larger CGIAR strategy. Bernardo also discussed the multi-objective criteria methodology and how the indicators could be used to allow RTB researchers and other experts to be able to evaluate the most important considerations for geographic targeting of priorities within the program.
Ernesto Giron gave a demonstration on how the framework described above could be implemented using geographic information systems and the weighted overlay method.

Participants discussed a preliminary yield gap analysis to be carried out. An example of this methodology was shown by Glenn Hyman, from some work that David Hoyos in carrying out for cassava. We mentioned the need to combine this work with other yield gap work already under development by the RTB program. The method will be used to collect experiment station data, national and international data sets on yield gaps, and to any other information about yield gaps across the developing world. These information will be analyzed in the context of other research within the RTB program related to yield gaps.

The workshop included plenty of time to discuss data and methodologies and also many key issues came up that need to be worked out in greater detail by the analysis team. We are tentatively planning to develop an online Atlas. We made some advances in the development of the Atlas, and ran into some problems that will be discussed in future communications with the project team and with workshop participants.

**Key Issues**

Several key issues came up during the discussion such as the need for concrete results in a short timeframe, concerns about the multi-objective criteria methodology, the complexity of the task before us and a concern about identifying beneficiaries of the larger research program. Reinhard Simon emphasized the problems that we have due to complexity of the task. One major concern is with the errors in data sets and how these are propagated across an analysis, especially when we are using spatial overlay methods. This will need greater attention to avoid the pitfalls of using data of differing quality, from different scales, from different time periods and with different degrees of quality. However, it was pointed out that the analysis is not intended to give us the definitive empirical answer to priority setting questions, but rather to point us in the right direction and spur discussion. The process is the product.

Another important and related issue has to do with documentation of the methods and data sets, in order to ensure that the analysis and results presented include information about the reliability of the analysis. It will be important that everything is transparent and open to scrutiny of independent observers.
An effort was made to demonstrate a multi-objective methodology and we had some difficulties in terms of the method and the result. Part of this was due to some lack of preparation on the organizers part. The team recognized the need to refine our method and process to establish a more coherent research activity.

There was a fairly in-depth discussion about the need to identify beneficiaries of the RTB program. These are typically identified using overlays of crops, population and poverty. The economics group of the RTB program has also been using an accounting approach to identify beneficiaries. The group decided that these two approaches would be combined and greater effort would be made to present a coherent analysis about what we know about the beneficiaries of the RTB program. Finally, the group discussed the need for concrete and solid results in the first quarter of 2013, with polishing and finalizing the results for presentation to the broader CGIAR community by the middle of 2013.

**Agreements, Next Steps and Deadlines**

1. We agreed to incorporate new 2005 data on crop distribution from the International Food Policy Research Institutes SPAM project. Elizabeth Barona is checking with colleagues at IFRP on the availability of the 2005 crop data.
2. With these new data sets, disaggregate banana and plantain data, and also sweet potato and yam.
3. Disaggregate rural and urban poverty to the extent possible.
4. Investigate the match between spatial units of the impact model and those of farming systems and other geographies.
5. Consider adjusting the ranges for poverty classification. Elizabeth Barona is going to replicate Andy Nelson’s (IRRI) methodology, but for all the RTB crops, with expected delivery date of January 18th, 2013.
6. Engage with other RTB researchers in carrying out the yield gap analysis. Glenn Hyman has already started correspondence, and will summarize discussion by January 1th, 2013.
7. Estimate the number of beneficiaries in each country/agroecology by crop combining the accounting approach with the spatial overlay approach (GIS team by March 15 2013)
8. Create tables of key data using both FS and GAEZ. Using current SPAM data. 23 December 2012 (Glenn Hyman and Elizabeth Barona).
9. RTB Online Atlas: crop distribution, agroecological maps, biotic and abiotic constraints, 1st version December 15th, Final version March 15th (Elizabeth Barona, Glenn Hyman, Ernesto Giron, David Brown, Tunrayo Alabi, Henry Juarez). NOTE: we have run into some unexpected problems with

11. Yield gap analysis – combining FAOSTAT, USDA, Experiment Station data, literature, GAEZ. March 31, 2013 first draft; April 30 first 2013 final draft (Reinhard Simon, Glenn Hyman, David Brown, Henry Juarez, Tunrayo Alabi, David Hoyos, Elizabeth Barona).

Research programs in the CGIAR implicitly or explicitly make determinations about where they are going to operate – which countries, sub-regions or agroecological zones. Where we target our research and development has important implications and consequences for our programs and interventions. But how can we select our geographic priorities to maximize impact? The Roots, Tubers and Bananas CGIAR Research Program (RTB) faces this question now, addressing it within the context of a larger priority setting exercise. During this Background Analysis Workshop we will carry out a multi-criteria spatial analysis in a group decision-making context for RTB programs in cassava, potato, sweet potato and bananas (Point #1 in the framework shown below). The objective of the activity is to identify priority areas for targeting RTB research and development. The process of considering where to focus efforts is expected to support a larger consideration of how RTB designs its program to maximize impact.
Monday, 12 November

8:30-09:00  Welcome and Introductions – Ruben Echeverria, Claire Hershey

09:00 - 10:00  Meeting Objectives and Overview
  Glenn Hyman

10:00 - 10:15  Coffee Break

10:15 - 11:00  Run through of Analysis
  Bernardo Creamer and Glenn Hyman

11:00- 12:00  RTB Crop Distribution, Abiotic and Biotic Constraints and Agroecology
  Glenn Hyman

12:00- 01:30  Lunch (Main Dining Room)

01:30- 02:30  Poverty, Malnutrition, Demography and RTB crops
  Glenn Hyman and Elizabeth Barona

01:30- 02:00  RTB Crop Biodiversity
  Glenn Hyman

02:00- 03:00  RTB Crop Evaluation sites and Yield Gaps
  Glenn Hyman and Jesus David Hoyos

03:00- 03:30  Coffee Break   CIAT Cafe

03:30- 05:00  Introduction to Multi-criteria Analysis using Analytical Hierarchy Process
  Bernardo Creamer

Tuesday, 13 November

08:30-10:30  Planning the Analysis Process (Introduction, Group Work, Plenary session)

10:30- 11:00  Coffee Break

11:00-12:30  Assuring Logical Consistency between Process, Objectives and Goals

12:30-14:00  Lunch
14:00 – 16:00 Group Work

16:00 – 17:00 Closing session

**Wednesday, 14 November**

*Priority Setting Task Force meeting*

08:30 – 10:00 Outcome based management structure in the CRPs and links to priority setting study (Graham Thiele).

10:00 – 10:15 Coffee break

10:15 – 12:15 Progress by crop/center on identification of relevant constraints and prioritized research options based on expert consultation. Brief discussions of preliminary results.

12:15 – 13:30 Lunch

13:30- 15:00 Reporting survey 1: calendar and formats.

15:00 – 15:15 Coffee break

15:15 – 16:30 Survey 2: elicitation of model parameters and agreement on preliminary template questionnaire (Guy & Ulrich)

16:30 – 16:50 Data needs for background analysis (plenary discussion)

16:50 – 17:30 End of the year reporting against milestones; agreement on next steps by crop and center
## PARTICIPANT LIST

### Bioversity International

**Brown, David**  
Information Technology / GIS Specialist  
Commodity Systems & Genetic Resources Programme  
CATIE, Turrialba, Costa Rica  
Tel: (506) 2558-2342  
Movil: (506) 8896-9187  
E-mail: d.brown@cgiar.org  
[www.bioversityinternational.org](http://www.bioversityinternational.org)  
[www.musalac.org](http://www.musalac.org)

**Pemsl, Diemuth**  
Consultant - Agricultural Economist  
Bioversity International  
Seattle, USA  
E-mail: dpemsl@gmx.net

### Centro Internacional de la Papa – CIP

**Juarez, Henry**  
GIS Specialist  
Research Informatics Unit  
Centro Internacional de la Papa – CIP  
Av. La Molina 1895, La Molina  
Tel. + 511 3496017  
Lima, Perú  
E-mail: h.juarez@cgiar.org

**Kleinwechter, Ulrich**  
Post-Doctoral Scientist  
Impact Enhancement  
Centro Internacional de la Papa – CIP  
Av. La Molina 1895, La Molina  
Tel. + 511 3496017  
Lima, Perú  
E-mail: u.kleinwechter@cgiar.org

**Hareau, Guy**  
Agricultural Economist  
Impact Enhancement  
Centro Internacional de la Papa – CIP  
Av. La Molina 1895, La Molina  
Tel. + 511 3496017  
Lima, Perú  
E-mail: g.hareau@cgiar.org

**Thiele, Graham**  
Director for CGIAR Research Program RTB  
Centro Internacional de la Papa – CIP  
Av. La Molina 1895, La Molina  
Tel. + 511 3496017  
Lima, Perú  
E-mail: g.thiele@cgiar.org
International Institute for Tropical Agriculture - IITA

Alabi, Tunrayo
GIS Support Services Manager
IITA – HQ
PMB 5320, Oyo State,
Tel. +237 2 7517472
Ibadan, Nigeria
E-mail: t.alabi@cgiar.org

Abdoulaye, Tahirou
Agricultural Economist
IITA – HQ
PMB 5320, Oyo State,
Tel. +237 2 7517472
Ibadan, Nigeria
E-mail: t.abdoulaye@cgiar.org

Kirscht, Holger
Anthropologist/Social Scientist
IITA – Cameroon
1st Main Road IRAD, Nkolbisson
BP 2008 (Messa)
Tel. + 237 22 23 7434
Yaoundé, Cameroon
E-mail: h.kirscht@cgiar.org

Rusike, Joseph
IITA – Tanzania
Plot No. 25, Mikocheni Light Ind. Area
Mwenge, Coca-Cola Road
Tel. + 255 22 2700092
Dar es Salaam, Tanzania
E-mail: j.rusike@cgiar.org

CIAT – Miami

Barona, Elizabeth
CIAT- Miami
GIS Analyst (MSc Geography)
Seattle, USA
E-mail: barona.elizabeth@gmail.com

CIAT STAFF

Becerra, Luis Augusto
Cassava Geneticist
E-mail: l.a.becerra@cgiar.org

Creamer, Bernardo
Agricultural Policy Economist
E-mail: b.creamer@cgiar.org

Dufour, Dominique
Biochemist
E-mail: d.dufour@cgiar.org

Hoyos, Jesus David
Student on Practice
E-mail: j.d.hoyos@cgiar.org

Hyman, Glenn
Geographic Information System Specialist
E-mail: g.hyman@cgiar.org