



Tropentag, October 5-7, 2011, Bonn

“Development on the margin”

## Participation Is Not for Free: A Cost Study on the Application of Participatory Variety Selection by Mother-and-Baby-trials for Potato Breeding in Peru

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### Abstract

The problem of slow and low adoption of improved seeds and other new technologies by smallholder farmers gives foundation to a large body of participatory research literature. The necessity to overcome a knowledge and communication problem between researchers and farmers calls for an improved integration of the farmer's perceptions, preferences and attitudes in research design, testing and diffusion. This especially applies for marginalised target groups like income and endowment poor farmers with difficult input and output market access and/or difficult agro-ecological conditions.

Participatory Plant Breeding (PPB) refers to a spectrum of activities which can have different modes of how farmers' participation is organised, at which stage of the research and innovation process it is taking part and to which degree the farmer participates. Participatory Variety Selection (PVS) implies a participation of the farmer and other agents of the value chain at an intermediate to final stage of the breeding process. Mother-and-Baby-Trials (M&B) is a rather novel design further developed by the International Potato Center (CIP) which addresses the need for a quantitative methodology and statistical procedures to learn about farmers' criteria for potato variety selection.

Favourable outcome effects and impacts of PPB in comparison to conventional breeding have been documented and discussed in the literature, pointing out the complexity of the analysis in terms of benefit quantification, time horizon and counterfactual scenarios. Published literature thereby reveals that the issue of the necessary costs to be invested for implementation of specific participatory methods is under-researched. If applied international agricultural research (*e.g.* done by the CGIAR system) strives for policy incidence in the sense of recommendations finding their way into national politics and development policies (*i.e.* institutionalisation) decision makers have to be informed about those costs.

This empirical study analyses the implementation of the M&B method in all its phases in 17 communities within the Cambio Andino/ RED LATINPAPA partnership programme where CIP is testing various participatory methods in cooperation with diverse organisations (governmental and NGOs). Based on the case-wise application of the method's protocol in field the direct and indirect expenses as well as opportunity costs of participation are analyzed.

**Keywords:** Costs, participatory variety selection, Peru