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“Solidarity in a competing world — fair use of resources”

WHY ABSENCE OF “FIHAVANANA” IS LIMITING AGRICULTURAL INNOVATION PROCESS IN THE HIGHLANDS OF MADAGASCAR?

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Conceptual framework



INTRODUCTION

Expected results:
Changes by farmers
- Holistic or individual impacts
- New practices and behaviour

Context

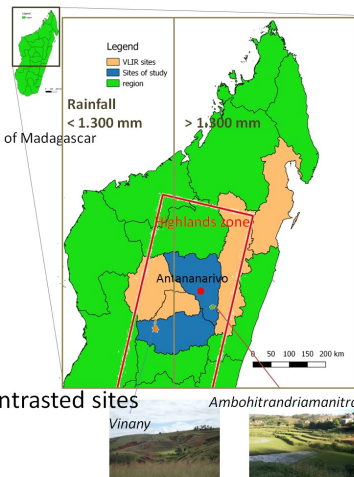
Agricultural practices of Malagasy farmers in the Highlands of Madagascar have not evolved for one century (Verin 1969). According to Gannon and Sandron (2008). Malagasy mutual solidarity (shared effort, pain and gain) that is expressed by the *fiHAVANANA* (Rarivomanantsoa 2004) may constrain agricultural innovation.

Objective

Conversely, this study aims to demonstrate that absence of *fiHAVANANA* between actors involved in innovation process conducts to its failure.

MATERIALS AND METHODS

Study sites



109 rural households



Household survey

Different rice cropping systems

Irrigated rice (IR) Rainfed rice (RF)



Multisite trials

Participatory Learning and Research Action

- principles:

- stakeholders: researcher-farmer (human interactions)
- common charges but individual benefits

Research-based knowledge:
addition of 20 kg/ha of phosphorus (P) increases rice yield up to 20-40% of initial production

Farmers can perceive increase of yield, identify & provide P-fertilizer/TSP by their means

- learning process: training, trials and on field application

- assessment modes:

- evaluations of the innovative practice (quantitative method)
- focus group (qualitative method)

Design of the trial

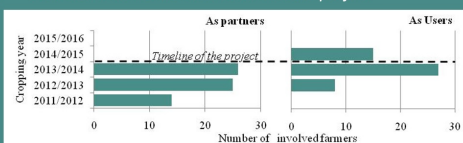
Control plot	P-fertilizer application
organic manure application	P-fertilizer + organic manure

Simulation of a development project

RESULTS AND DISCUSSIONS

Outcome of the survey
Site of Vinany: pioneer front of young migrants
Site of Ambohitrandriamanitra: Native farmers in advanced age
→ Survey highlighted the contrasts between sites regarding to their human characteristics in addition to physical
→ Externalities of innovation are confirmed by the survey (results not shown)

Farmers' involvement to the simulated project



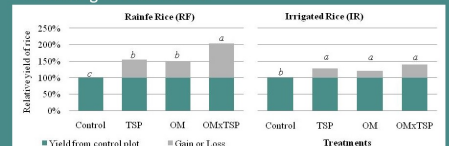
ABOUT « EFFORT »

→ Predisposition of farmers to receive depends on the impacts of innovation on the risks of farmers in their current activities
→ Predisposition of farmers to invest is warranted after trials.

ABOUT « PAIN »

→ Additional risks induced by innovative practices exist, these are mainly smoothed during the period of the project.
→ Alone, farmers are not able to re-establish the chain of innovation

Relationships between treatments and rice yield -According to researchers



- According to farmers: OMxTSP provides the best yields & induces less empty grain (3/14 responses on RF)
- enhances resilience to drought and to enemies of crops (2/14 on RF)
- Induces early ripening (10/10 on IR)

ABOUT « GAIN »

→ Researchers get confirmation about the efficiency of the P supply whatever the rice cropping systems (quantitative results).
→ Opportunities to improve rice production are set to farmers (qualitative results)

CONCLUSION

KEYWORDS: Agricultural research and development, behaviour, cultural concern, human resources, rice cropping systems

Summary

Interpersonal interaction of the simulated project provides an additional issue to the innovation process compared to an institutional approach of casual development projects.

Assessment of the objective of this study

Developer (researcher) and beneficiary (farmer) of a project diversely act relatively to their capacities and to their interests. Abandon of the innovation easily occurs after the project because synergy of their actions is no more compulsory. *FiHAVANANA* is not a common value.

Perspective

In addition to the divergence of the incentive and of the viewpoint of stakeholders, difference between cultures should also be considered in future projects.

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