LESSON LEARNED Consider from the start: the social fit of technical changes!

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Research for Development (R4D) projects aim to scale technical innovations for agricultural systems. They often use farm models to anticipate the impact of technology adoption. This essay demonstrates the importance of a systemic perspective, including an analysis of the social context that determines adoption.

Important Details

time (or time period)	2013-2014, 2015-2020
country & region	Northern Ghana
context & agro-eco landscape type	Guinea-Sannah Ecological Zone
key actors, stakeholders & beneficiaries	PhD and Master students, staff of the R4D Project Africa RISING, members of smallholder farm households
model and/or tools used	farm typologies, modelling and tailor-made recommendations for sustainable intensification

Description & takeaways

A lot of research for development (R4D) efforts include modelling to determine best-fit technical options for farming systems, essentially modeling possible options with the given land, total labor availability and budget. This is done with the goal of answering the questions,"what would be the ideal cropping patterns, animal types and numbers for a given context?"

However, when making suggestions based on models around introducing or applying technical options for changing elements in a farming system, it is equally important to account for the issues surrounding the possible and plausible social factors. Different household members have different skills, farming objectives and off-farm duties, which is not accounted for in current farm models. Meaningful model results thus need to be socially validated, not just from the perspective of the household head, but from the perspective of various household members who would be responsible for implementing the suggested change.

Said another way, researchers may make suggestions for certain changes, but the farmers are the ones who own and implement these changes through their resource management decisions.

Therefore, a truly successful research and/or development project should not be measured by whether researchers and project managers "let farmers participate in their work," but instead by the extent to which farmers allow and invite researchers to participate in their lives and realities. In this way, suitable options (e.g. for sustainable intensification) can be jointly identified and valued appropriately, taking the full range of variables into account for a given context

From a personal perspective, modelling took a lot of time and primarily served me, the researcher, to build a good understanding of the farm system. It enabled me to engage into a meaningful dialogue with the farmers. Features and functioning of the current farm was nothing new to the farmer, so these models really served as a tool that informed the researcher and structured our first dialogues.

The main added benefit of modelling for both me and now also including the farmers, was the scenario development and calculations, providing the basis for envisioning and describing changes, getting feedback on the social implications of concrete suggestions and correcting the model to respect and reflect the social set-up.

Aside from the structured data-collection for model input, it is crucial to engage and explore farmers' livelihoods and realities (e.g. through gaming, focus group discussions) in order to, from the start, make models less blind to the social dimension of change and decision-making.

Key references

Michalscheck, M. et al. (2018) Model results versus farmer realities. Operationalizing diversity within and among smallholder farm systems for a nuanced impact assessment of technology packages https://www.sciencedirect.com/science/article/pii/S0308521X17306303

Michalscheck, M. et al. (2020). Land use decisions: By whom and to whose benefit? A serious game to uncover dynamics in farm land allocation at household level in Northern Ghana. https://www.sciencedirect.com/science/article/abs/pii/S0264837719307951

Short magazine article on the social dimension of technical farming changes https://www.dandc.eu/en/article/cooperate-well-smallholder-farmers-we-must-understand-what-they-do-and-how-they-think

A short movie on matching model results with a social interpretation for this case study https://www.youtube.com/watch?v=6ZS31sv7Hs0