The problem of the generic range

Agro-ecological innovations face the problem of their generic range which results in small adoption rates at large scales. The generic range can be improved with a stratified sampling procedure and an assessment of the capacity of an agro-ecological innovation to adapt to the local agro-ecological and social contexts.

Using classification statistics for stratified sampling

We tested this approach in Martinique, a tropical island of the French West Indies. The case-study involved 1382 improved fallows on vegetable farms.

A participatory approach identified several potential adoption determinants.

The participatory approach suggested land ownership and land size as the two key pre-requisites for an ex ante assessment of improved fallows diffusion. Therefore, the participatory approach identified 2 promising sub-groups: livestock farms and banana / sugarcane farms which can be considered as mechanised farms and livestock farms.

In 2013, the potential adopters willing to test improved fallows.

In 2013, overall population excluded from improved fallows.

The field interviews among 27 mechanised farms and livestock farms revealed that 174% of them expressed a willingness to test the improved fallows. This is about one-third of the total population of the 1382 farmers involved in vegetable farming.

The unstable land tenure farm group and the pure vegetable farm group were considered as potentially not concerned because of the absence of land titles or insufficient land size. This is about half of the total population of the 1382 farmers involved in vegetable farming. Specific, stratified sampling for each group are required to reduce exclusion.

Promoting adaptability and the number of agro ecological packages

- The risk of exclusion can be reduced by improving the generic range of agro-ecological innovations through adaptability, and larger portions of innovation packages.
- Some agro-ecological innovations may not be fitted for every type of farms. There are risks of diminishing returns in research and diffusion. In this case, a farming system approach could overcome conservative partners, promote trust, and impede diffusion.
- The stakeholders involved in agricultural policies must not put agro-ecological innovations into the prospect of the agricultural transformation and consider the risks of exclusion.

Improving the generic range for agro ecological innovation adoption. An application to improved fallows in Martinique

Laurent Parrot*, Laurent Herrign, François Raby*, Eric Rous, Lucile Vantard, Paula Fernandes

* CIRAD/Equipe FBA/INRA, Centre de Recherche en Agriculture pour le Développement et l’Environnement Tropicaux, BP 902, 94932 Montpellier Cedex 5, France

** CIRAD/Equipe FBA/INRA, Centre de Recherche en Agriculture pour le Développement et l’Environnement Tropicaux, 17, Rue des Camélias, 94932 Montpellier Cedex 5, France

*** CIRAD/Equipe FBA/INRA, Centre de Recherche en Agriculture pour le Développement et l’Environnement Tropicaux, 17, Rue des Camélias, 94932 Montpellier Cedex 5, France

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