

The Need

Rural organizations that support farmers are numerous and often strong; they form a collective rural infrastructure that could contribute to a grassroots research capacity. However, *Farmers and rural organizations rarely have the opportunity to shape research agendas.*

Participatory methods have been effective at a small scale in producing rigorous and relevant research *but limited in achieving impact at scale.*

R+D systems ~~lacks~~ *are limited in their* ability to produce research outputs that can be ~~are~~ matched to a wide variety of social and biophysical contexts.

Many problems faced by smallholder farmers such as soil health and pests, diseases, and weeds, are complex and require cross sector AEI focused collaboration.

The Diagnosis

~~It is necessary to~~ Stronger connections that link social, *knowledge*, technological, methodological, and political capital ~~to achieve widespread change~~ will be more effective in solving complex problems faced by smallholder farmers than the current R + D approaches.

FRN Response

Farmer

Farmer groups negotiate research priorities and influence the research agenda.

Farmers are engaged throughout the whole research process from diagnosis, design, implementation, analysis, and communication.

Ensure farmers who lack financial, social, and resource capitals are included.

Research

Address agriculture's technical-social problems with research designs that include reasonable comparisons and counterfactuals, data management, protocols, and sound analysis methods that can reveal patterns and suitable options across diverse agro-ecological and social contexts.

Evaluate how technology, knowledge, and ideas facilitate inspiration or are adapted in the research and action processes so that others can learn from these experiences.

Network

Foster genuine and authentic collaborative engagement.

Facilitate learning and knowledge sharing across farmer and research groups with similar agendas, interests, and constraints.

Pathway to Change

Increased use of contextually appropriate options by farmers

Farmers can derive and understand principles and learning which would not be possible by working alone or receiving extension

Analysis of larger datasets produce better understanding of principles and options by context.

Large, networked datasets that reveal useful patterns of performance

Researchers are benefiting from contextualized farmer knowledge

More farmers and organizations participating in multiple parts of the research process.

Contextualized outcomes that provide evidence for potential at scale

Smallholders

Improved AE performance for smallholder farmers.

Institutional

Stronger, more vibrant, rural organizations

Strengthened R+D sector (more relevant, sustainable and accountable)

Global

More and better AEI evidence

Other actors inspired by methodology and principles and FRNs spread.