

# Farmer Research Networks (FRNs)

## Democratizing the innovation process



### DIAGNOSES the need

Smallholder systems are highly heterogeneous. Agroecological intensification (AEI) data needs are enormous.

A “business as usual” approach cannot provide the AEI evidence base. Alternative: Observational and experimental datasets from farms.

Rural organizations that support farmers form a collective rural infrastructure that could contribute to a grassroots research capacity.

Participatory methods have been effective at a small scale in producing relevant research at a small scale.

Need to connect social, technological, methodological, and political capital to achieve widespread change.

### PRINCIPLES AND ELEMENTS linking social and technical innovation



#### TECHNICAL CAPITAL

Scoping studies to allow us to identify partners and introduce the concept of FRNs.

Value propositions, including:

- Germplasm – crop and varietal options (linking breeding programs to communities)
- Crop management options
- Pest and disease management options



#### METHODOLOGICAL CAPITAL

- Both observational and experimental datasets
- Large-N trials: design to explore key hypothesis about GxExMxS
- Ways of working across disciplines and sectors



#### SOCIAL CAPITAL

- Scoping for partners with strong linkages in communities
- Linking social and technical innovation processes

- Stronger, vibrant, and more autonomous rural organization; other actors inspired by FRN spread and methods
- Support by the “Big Data for SHF” CoP
- Strengthened research and development sector (more relevant, sustainable and accountable)
- More and better AEI evidence



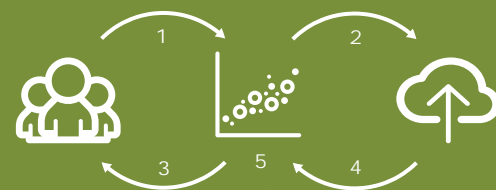
### CONTEXTUALIZED SCALING creating change at scale

#### 1. CAPTURING DATA FROM SMALLHOLDER FARMERS (SHF)

- Careful targeting of options
- Option negotiations by stakeholders
- Data capture software and hardware
- Sensors for the invisible

#### 2. GETTING LOCAL DATA & INFO TO GLOBAL DATABASES

- Designed to allow small disparate efforts to use common platform
- Cloud access
- Address interpretational issues



#### 3. GETTING IDEAS, RESULTS & INSIGHTS TO FARMERS

- Technology options
- Analytics
- Data visualization

#### 4. INTEGRATING GLOBAL & LOCAL DATA

- Global data on weathers, soils, genes etc.
- Lowering the entry barrier

#### 5. TECHNICAL HUB

- Ag Technologies: Principles and practices
- Information/Data technologies: Tools and workspace
- Sensors and gadgets

### IMPLEMENTATION pathways to change

