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On-Farm Experimentation Community (OFE-C)

International Society of Precision Agriculture (ISPA)

Co-editor of the month

Thanks to my co-editor of the month, Dr Eileen Bogweh Nchanji, Gender and Social Inclusion Expert, Alliance of Bioversity International and CIAT, Nairobi, Kenya.

Newsletter theme: Beyond Yield, How OFE and GTSTIBs Drive Gender Equity and Inclusion

Why do promising agricultural technologies perform well in trials but fail to scale in practice? The challenge is often not technical performance alone, but the social, economic, and institutional context in which innovations are embedded. Across Kenya and Ethiopia, **Gender-Transformative Socio-Technical Innovation Bundles** (GTSTIBs) are being integrated with On-Farm Experimentation (OFE) to shift the focus from "Does it work?" to "Who benefits, under what conditions, and why?" This reframing positions OFE not just as a testing method, but as a pathway toward more equitable innovation systems.

Innovation Is More Than an Ingredient

A Socio-Technical Innovation Bundle (STIB) treats innovation as a system, not just a product. Instead of distributing improved seed alone, bundles combine seed with insurance, gender-responsive training, digital tools, and market linkages to address structural barriers that limit adoption. When linked with On-Farm Experimentation, these bundles can be tested under real conditions to assess whether they truly reduce constraints and improve outcomes across diverse farmer groups. Learn more about the STIB framework here (https://hdl.handle.net/10568/140709) and recent paper here (https://doi.org/10.3389/fsufs.2026.1654751).

OFE: The "Kitchen" Where Equity Is Tested

If STIBs provide the recipe, OFE is the kitchen where it is tested under real-world conditions. In Kenyan counties such as Nakuru, Embu, and Makueni, trials go beyond variety comparisons to examine how innovations interact with labour, decision-making, risk, and access to services. This approach helps reveal who adopts, who decides, and who ultimately benefits. Explore the STIB dashboard tracking these trials (https://stibs.alliance.cgiar.org/).

Measuring More Than Yield

When innovation includes training, insurance, or empowerment, yield alone is not enough. Teams are tracking adoption, intra-household dynamics, resilience, and return on investment alongside agronomic performance. By embedding these social metrics within field-level experimentation, OFE generates multidimensional evidence on how inclusive innovation works in practice. Access integration guidance (https://hdl.handle.net/10568/148720). Explore supporting materials and

reports (https://hdl.handle.net/10568/179802).

From Variety Trials to System Trials

Traditional experimentation isolates single factors, one variety or one treatment. Integrating STIBs with OFE tests combinations of technical and enabling components, turning trials into platforms for learning about adoption, institutions, and markets. It also raises new design questions, such as defining appropriate controls and measuring returns when outcomes include empowerment and risk reduction. For a concise visual overview, see the infographic sections titled *"What is a Gender-Transformative STIB?"* and *"How the Bundle Works in Practice"* (pages 2 to 3 of the Ethiopia infographic: https://hdl.handle.net/10568/179510). For deeper methodological discussion, refer to the sections *"Bundling Components and Pathways to Impact"* and *"Monitoring, Evaluation and Learning"* in the socio-technical integration guide (particularly the framework and evaluation diagrams in https://hdl.handle.net/10568/169786).

Paper Highlight: Advancing On-Farm Experimentation in African Cropping Systems

A recent paper in *Agronomy Journal* examines how on-farm experimentation can be used to evaluate agricultural innovations under real-world conditions in African maize systems. Rather than relying solely on controlled trials, the study demonstrates how farmer-managed experiments capture the variability of weather, soils, and management that ultimately determines adoption and impact. The work highlights the value of co-designed trials and context-specific evaluation frameworks for generating evidence that is both scientifically robust and locally relevant. Read the full paper here (https://acsess.onlinelibrary.wiley.com/doi/10.1002/agj2.70276).

This letter was prepared by Louis Longchamps, co-chair of the ISPA OFE Community
Should you have something to share with the Community or the Community leaders, let us know here.