Scaling innovations so hundreds of thousands of people benefit is one of the most important contributions that agricultural research for development provides. It is also one of the most challenging. This brief introduces nine lessons that work in East Africa to spread climate-smart agricultural (CSA) practices. They can be applied all together or taken up individually to suit different circumstances and for diverse agriculture innovations.
Lesson 1: Formulate equitable climate-smart agricultural policies

A robust, resilient, and enabling policy environment is critical to take successful CSA technologies and interventions to scale at national, regional, or local levels. The best policies to address climate variability, socioeconomic and environmental shocks are formulated using participatory, inclusive approaches and are guided by relevant scenarios. This lesson shows how learning alliances or multi-stakeholder platforms can be leveraged to support policy dialogue at community, district, and high-level planning stages, leading to harmonized, coordinated, and gender-responsive policies for tackling CSA.

Interventions must go beyond targeting women to focus on the underlying causes of gender inequality within communities. Involving men in the process of women’s empowerment is critical: norms will not change in isolation, and gender must be considered at each stage of a project cycle to incorporate factors that drive the adoption of gender equity practices.

Lesson 2: Design climate-smart agricultural interventions to be gender inclusive

If gender is not explicitly considered in climate-related interventions, the adoption of climate resilient practices is unlikely to reach scale.

Lesson 3: Assess whole-farm trade-offs and synergies for climate-smart agriculture

Research shows that CSA can increase productivity, promote resilience and reduce greenhouse gas emissions. But achieving benefits in all three areas is difficult, and gains in one area might come with concomitant gains or losses in another area. Providing information on trade-offs and synergies to decision makers improves CSA priority setting, which improves the likelihood that the CSA investment will achieve positive outcomes within a particular context while mitigating possible unintended adverse outcomes.
Lesson 4: Support farmer-to-farmer and community-wide social learning

Agriculture extension is a vital tool in delivering critical knowledge to farmers for achieving better agricultural productivity. Farmer-to-farmer learning can be up to six times more effective in influencing the adoption of CSA practices. Such peer learning offers effective ways to disseminate knowledge based on trust and learning networks, with social multiplier effects. Collective action and group incentives can galvanize communities to address new practices, where other approaches might fail. Peer learning can be reinforced by extension and change agents, but requires an understanding of performance incentives and recognition.

Lesson 5: Know what drives the adoption of climate-smart agriculture across different scales

Knowledge of successful CSA practices is not enough for adoption at scale. Government or development-led interventions to promote CSA practices often have low or even negative adoption rates. Data collected from more than 5,000 households in 15 countries across three continents shows that CSA adoption depends on drivers and constraints beyond the practices. Understanding the conditions upon which specific interventions are likely to thrive can increase their adoption and returns on investments.

Lesson 6: Target the pathways to scale out climate-smart agricultural technologies to farming communities

Co-designing, testing and co-creation of interventions and practices with farmers is important for ownership and for the long-term adoption and sustainability of impacts. Biophysical, socioeconomic, and institutional elements at the implementation scale must be considered when determining the most appropriate and effective CSA scaling approaches.
Lesson 7: Prioritize among climate-smart agricultural options and benefits for greater impact

Ranking CSA farm practices over others is complex because stakeholders usually have different desired outcomes. For example, a farmer may opt for a fertilizer, which boosts yield and income, while government officials may be interested in practices that lower carbon emissions and improve carbon sequestration to meet climate targets. Adopting ‘better fit’ prioritization processes will help different stakeholders explore and rank the criteria and trade-offs needed to take successful CSA innovations to scale in a specific context.

Lesson 8: Invest in climate-smart soil and land health

Better soil health can increase agricultural productivity. Restoration activities can build on-farm resilience and contribute to climate change adaptation and mitigation. The current soil health interventions and frameworks used by farmers today often do not consider the social, ecological, and biophysical constraints to generate a “bigger picture” response to whole landscape management. A Land Degradation Surveillance Framework can be used to assess multiple indicators for effective land rehabilitation and recovery and guide the investments that underpin wider CSA scaling.

Lesson 9: Monitor climate-smart agricultural interventions with a real-time participatory tool

CSA interventions often require fine-tuning or feedback from multiple stakeholders e.g. farmers, extension agents, NGO workers and policy makers to keep them relevant within a given context. A smart monitoring tool can help by asking a wide set of implementers at various stages of the project cycle five smart questions and using cutting-edge ICTs to provide a real-time, cost-effective monitoring tool. The tool has already been used to cut costs and effectively monitor climate interventions at scale. It can help to target and adjust interventions to maximize their reach and impact.

This series of briefs is a collaborative effort written and collated by researchers contributing to the Increasing Food Security and Farming System Resilience in East Africa through Wide-scale Adoption of Climate-Smart Agricultural Practices project.


Nine ways to make agriculture more climate-smart.
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