



© oneVillage Initiative

Evaluation of the impacts of a soil-fertility training programme on farm productivity in the Volta Region of Ghana

Programme overview

Low soil fertility is a critical constraint to food production and food security in Ghana. Evidence suggests that measures to increase soil fertility and crop yields are viable and cost-effective when farmers have access to information on good management practices, site-specific input and use recommendations, and access to input and output markets.

Africare is working in the Volta Region to promote integrated soil fertility management (ISFM) practices and marketing strategies. Africare's intervention, funded by the Alliance for a Green Revolution in Africa, has two key components. The first one aims to improve marketing services through privately managed agricultural input shops and warehousing services managed by farmer organisations (FOs). The second and most important feature of the programme includes training of trainers. Africare will train FO members and other selected individuals on different aspects of ISFM. Additional services will focus on the marketing end of the value chain and will include training on produce quality, standards and other market requirements.

The ISFM programme will be implemented in close collaboration with the Ministry of Food and Agriculture and other key stakeholders. The programme aims to improve access to information and best practices for smallholder farmers to increase the adoption of ISFM technologies and practices. The training will build capacities of farmers to coordinate and engage in input and output markets. These farmers will eventually serve as focal points for efficient post-harvest handling and marketing.

Newly adopted ISFM technologies and practices are expected to contribute to increased agricultural productivity and efficient agricultural hubs. This in turn is likely to result in improved food security and income, thereby reducing smallholder farmers' poverty.

About the grant

Grant-holding organisation:

International Food Policy Research Institute, United States

Lead principal investigator: David Spielman (d.spielman@cgiar.org)

Award: \$610,436

Primary evaluation questions

1. Does Africare's training increase the awareness and use of purchased inputs, ISFM practices and marketing strategies among smallholders?
2. Does Africare's ISFM training result in increases in the yields of major crops and increases in labour productivity on the farm and market participation?
3. Does Africare's ISFM training result in an increase in farming returns and improvements in household welfare?

Impact evaluation overview

This impact evaluation is funded as part of 3ie's [Agricultural Innovation Thematic Window](#). 3ie conducted a scoping exercise that identified existing evidence and where there are gaps in the evidence base. The analysis and consultations during the exercise identified the need for more evidence on the effectiveness of interventions in four areas: (1) interventions that promote communicating effectively with farmers; (2) ones that promote adopting more productive technologies; (3) ones creating markets, and (4) ones strengthening value chains. All funded studies in this thematic window focus on programmes in at least one of these four areas and address one or more associated priority questions, of which this study will address two of them:

- How should information be packaged and delivered to improve farmer decisions and uptake of improved seeds, better soil management practices and technologies?
- What are the cost-effective mechanisms to incentivise smallholder farmers to adopt improved seeds, and better practices and technologies?

The evaluation can fill an important knowledge gap on the effectiveness of Africare's approach to disseminating ISFM technologies. Emphasis will be placed on measuring impacts at the farm and household levels. It also offers the opportunity to engage directly with decision-makers to explore options to invest resources in strengthening training and empowering farmers and FOs in Ghana.

Methodology and identification strategy

The evaluation uses a combination design of difference-in-difference and propensity score matching to compare the following groups and understand programme impact: (1) farmers trained by Africare-trained trainers in villages that are located at Africare's two project sites in the Volta Region; and (2) the control group of farmers not trained in villages with similar agro-ecological and socio-economic characteristics that are not part of Africare's project sites. The sample size will include 759 farms or 543 households in the treatment group, and 825 farms or 590 households in the control group. The study will use qualitative methods to explore the intervention and its context in greater detail to understand farmers' perceptions of and experiences with the programme.

Heterogeneity analysis

This study is designed to allow for an analysis of heterogeneous effects, particularly effects pertaining to assets and wealth, sex and other key attributes that characterise differences in households.

Timeline

Start: October 2015

Baseline report: March 2016

Draft final report: November 2017

End: February 2018



3ie is a member-based, international non-governmental organisation promoting evidence-informed development policies and programmes through high-quality and policy-relevant evidence. One of the ways that 3ie realises this commitment is by supporting and quality assuring impact evaluations, systematic reviews and replication studies of development interventions in low- and middle-income countries in high-priority sectors. 3ie is the global leader in funding and producing evidence on what works, for whom, why and at what cost. We believe that better evidence will help make development more effective in improving poor people's lives.

3ie's Agricultural Innovation Thematic Window is supported by the Alliance for Green Revolution in Africa, the Bill & Melinda Gates Foundation, the International Fund for Agricultural Development and UK aid.

www.3ieimpact.org

For more information and updates, please email tw4@3ieimpact.org

[@3ieNews](#) [/3ieimpact](#) [/3ievideos](#) [international-initiative-for-impact-evaluation](#)



BILL & MELINDA
GATES foundation



TW4.1022

August 2016