

Supporting agricultural extension and advisory services in Ghana help farmers cope with shocks and crises

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Agricultural extension and advisory services (EAS) play a critical role in helping smallholder producers and their communities cope with and build resilience to disruptions or emergencies. During the COVID-19 pandemic, EAS in many countries not only helped smallholder producers access agricultural information and inputs under challenging circumstances but also raised awareness about the disease.

Russia's invasion of Ukraine in 2022, combined with the global COVID-19 pandemic that began in 2020, led to an astronomical increase in the price of chemical fertilizers worldwide. In Ghana, the price of inorganic fertilizer doubled in 2022, rising from U.S. \$25 to \$55 for a 50-kilogram bag, and fertilizers became scarce due to poor distribution systems. Farmers in northern Ghana, a region with poor soils and high poverty rates, responded to this shock by reducing the quantity of fertilizers they applied, switching to organic fertilizers, reducing farm sizes, switching to crops such as soybean and cowpea that require less fertilizer, or abandoned farming altogether. This resulted in decreased crop yields and increased poverty for many farming households.

Coping with the fertilizer crisis

The fertilizer crisis presented agricultural extension and advisory providers in Ghana with opportunities to strengthen farmers' resilience by pivoting toward more sustainable soil improvement approaches.

But it also highlighted concerns about the readiness and ability of these providers to quickly respond to systemic shocks and crises with the latest technical information.

In Ghana, as in many low-income countries, most public and private extension service providers do not receive regular training and, due to weak connections with research institutions, are often unaware of the latest innovations. During the fertilizer crisis, agricultural extension agents (AEAS) from district Departments of Agriculture in northern Ghana endeavored to inform farmers about alternatives to inorganic fertilizers through WhatsApp, mobile phones and in-person sensitization and training sessions. Nevertheless, many government extension agents, community-based agents and agro-dealers were limited by their own inadequate technical knowledge on improving soil fertility and climate change adaptation strategies.



EFAT volunteer training community-based extension agents.

A comprehensive approach to training service providers on integrated soil fertility management

From June 2023 to September 2024, [USAID Enabling Farmers for Agricultural Transformation](#), implemented by Winrock International, conducted various activities in the Upper East Region of northern Ghana. This initiative, which targeted Garu, Talensi, Builsa South and Bawku West districts, was in response to the high fertilizer prices caused by Russia's invasion of Ukraine. The project focused on integrated soil fertility management (ISFM), a set of practices that combine the use of inputs such as chemical fertilizers, improved germplasm and organic inputs to lower production costs, maximize nutrient efficiency and boost crop productivity. Specific practices the project promoted include inorganic fertilizer application, crop residue management (composting and manuring), improved varieties, field bunding, and cereal/legume rotation. In addition to directly aiding selected extension and advisory organizations to disseminate ISFM messages, EFAT also strengthened the technical capacity of public and private extension providers to promote ISFM through short training sessions.



Dr. Edwin Akley, a Senior Research Scientist at the Savanna Agricultural Research Institute (SARI), demonstrating the advantages of using NPK fertilizers in crop production.

Over a seven-month period, EFAT trained 104 public and private extension providers: 36 from the Ministry of Food and Agriculture, 36 from community-based organizations and 34 agro-dealers. Participants said they especially appreciated the sessions on type, timing and quantity of fertilizers to apply, fertilizer rate formulation for specific crops, compost, manure production, and soil testing. They also valued training on extension approaches and methods and gender and youth responsive approaches to extension delivery.

Daniel Alaffia, a government extension agent from Bawku West District, remarked: “I didn't realize that I didn't know much about the types of fertilizer blends available on the market and how to apply them properly until I participated in the ISFM training. This experience showed me that AEAs need regular technical capacity strengthening to function effectively.”

Frank Kparib, a community-based extension agent from Talensi District, observed: “The training I received on ISFM has broadened my knowledge of agricultural technologies, especially how to properly calculate the quantity of fertilizer to apply to a unit area, and appropriate methods to disseminate technologies and practices to smallholder farmers. I am now better informed and confident in my ability to help farmers.”

According to Rebecca Atubila, an agro-dealer from Talensi District: “My experience with the EFAT-Ghana project has been transformative, both in terms of professional growth and networking. Training in integrated soil fertility management and other soil fertility enhancement technologies has clearly strengthened my ability to support farmers effectively while also boosting my product outreach. Engaging with other agro dealers in the region has provided valuable opportunities for collaboration and expanded my impact.”



EFAT Ghana facilitating improved management practices during a community-based extension agent field visit.

Following the trainings, EFAT introduced another innovation: WhatsApp groups for each cohort of service providers. Initially, EFAT used these group chats to follow up and document activities undertaken by trainees. However, the platforms soon evolved into working groups for providers and continued to be active after the project closed.

Forty agro-dealers who subscribe to the group chat share experiences and information on sources and prices of fertilizer. Government extension agents (26 participate in the group chat) use the platform to share their activities, ask questions, and foster collaboration with others working in neighboring locations. Similarly, the 25 community-based extension agents in the chat also share their activities.

Importantly, the group chats encourage collaboration, ongoing learning, and the replication of successful approaches.

As agricultural producers face increasing climate variability and other shocks, it is crucial to acknowledge the role of EAS in helping farmers manage crises and build climate resilience and enhance the capacity of extension organizations and personnel to respond effectively to these challenges. The evolving role of EAS necessitates sustainable funding and improved coordination among providers and with stakeholders from other sectors.

For more information about the EFAT project, visit <https://winrock.org/?s=EFAT>.

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