

One Timad Package validation (OTIPAVA)



KEY MESSAGE

- The combined use of organic and inorganic fertilizers improves soil fertility and crop productivity of smallholder farmers.
- The one timad package is affordable and appropriate to farmers facing land shortages, lack of financial capital and experiencing risks.
- The replacement of inorganic fertilizers with compost saves foreign currency at country levels and reduces fertilizers expenses to over 2.5 million PSNP farming households.
- The package is also appropriate for other socioeconomically poor farmers residing in high potential areas.

BACKGROUND INFORMATION

In 2018 the WUR BENEFIT REALISE Ethiopia programme set out to take agricultural best practices to recipients of the Productivity Safety Net Programme (PSNP). These are the poorest farmers with a very marginal resource base, that experience a food gap and low diet diversity. To reach these "PSNP" farmers, the REALISE programme experimented with the so-called "One Timad" (0.25 ha) package. The aim was to introduce regenerative agricultural practices that can reduce the expensive external inputs that farmers must acquire to apply best practices. A more regenerative approach can at the same time address issues often raised by farmers: limited water holding capacity of the soil and increased climate change resilience. Composting, intercropping, relay cropping and mixed cropping were introduced, together with a wide range of new (often more drought resistant and more productive) crop varieties. This increased agrobiodiversity and yields and reduced risks of pests, and thus crop failure. Experience with the so-called integrated soil fertility management had already been obtained on the earlier Ethiopia - WUR CASCAPE programme and the Fertile Grounds Initiative. This work had shown that it is possible to reduce the standard recommended fertilizer gift by half if the equivalent of 4MT/ha of compost is applied. Compost will also contribute to soil biology, and the soil's water holding and cation exchange capacity. The success of the package was very clear, farmers typically doubled and tripled yields of their crops and got several additional benefits such as improvement in soil biophysical properties and soil moisture retention. Hence, this project is aimed to validate the effect of integrated nutrient management on soil health and economic benefit to the farmers.

The one timad package works on the four board categories of innovation;

- **Paradigm:** shift from one fits for all package approach to customized and tailor-made advisory services
- **Product:** one timad package (combined use of organic and inorganic fertilizers; improved seed (OPV/hybrid); 0.25 ha, promote IMP
- **Process:** micro packaging of fertilizers, and seeds, consultation with key stakeholders, piloting of one timad package, MEL, package formulation
- **Position:** segmentation of target (PSNP men and women farmers), landless youth who rent land

PURPOSE AND OBJECTIVES OF THE PROJECT

OTIPAVA project aimed to validate the effect of integrated nutrient management on soil health and economic benefit to the farmers by reducing the costs of mineral fertilizers and generating shreds of evidence and piloting innovative approaches for further institutionalization and scaling. It operates a type of agricultural package designed for low socioeconomic and female farmers to influence the extension practices that mostly target the better and progressive farmers.

The overall development objective of the project is to create evidence for practices that contribute to the transformation of the food system by addressing leverage points about productivity, enhanced value chain performance, and improved human nutrition for improved food security while minimizing the impact on the environment and ensuring social inclusion.

PROJECT INTERVENTION AREA

The project was implemented in three regions of the country. They are the west Gojam zone in Amhara, the west Arsi zone in Oromia, and the Wolaita zone in SNNP. It works jointly with Regional Agricultural Research Institutes (ARARI, OARI, and SARI) and BoA in the respective regions.

IMPLEMENTATION METHODS

The validation experiment has been conducted on-station and on-farm trials. In addition, plot testing of the practice on large demonstrations has been conducted to generate evidence.

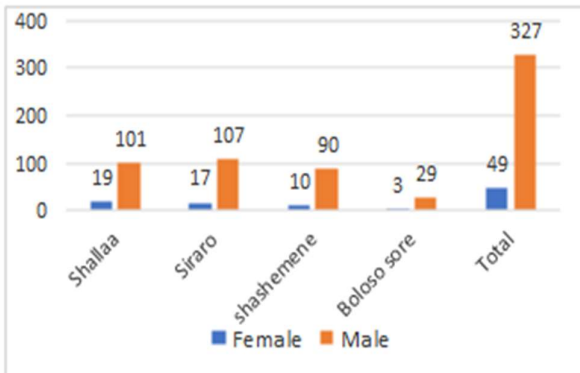


MAJOR ACHIEVEMENTS IN OROMIA AND SNNP

REGIONS

The number of smallholder farmers engaged in maize scaling validation trials is 376 (49 female) in three woredas of the west Arsi zone of Oromia and one woreda of the Wolaita zone of the SNNP region. They applied 10 qt. of compost or FYM, and 12.5kg of NPS and urea fertilizers each for 0.25ha of land. A wheat validation trial was conducted on station and on-farm plots to generate additional information for package formulation.

Figure 1 List of beneficiaries



Farmers used half amount of the recommended NPS/B and UREA fertilizers and replaced the other half of the recommended fertilizers using compost and farm yard manure.

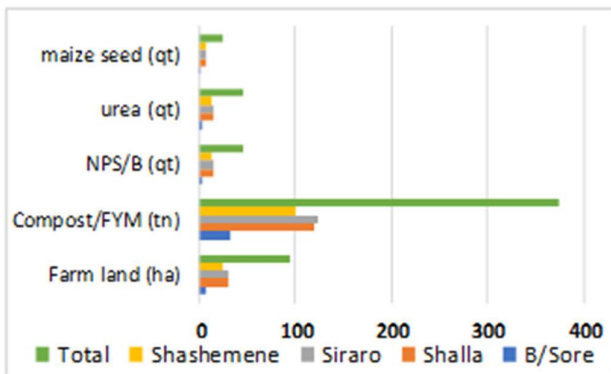


Figure 2 Agricultural inputs utilized

To develop a common understanding among implementers at the grassroots level in situ training on the maize agronomic practices identified by the OTIPAVA project activity was given to farmers, DAs, and woreda level experts on the farmers' field.

Figure 3 Training participants



Different data types will be captured at different growth levels and grain maturity periods and analyzed. Crop yield and yield-related data, soil and compost analysis and economic (partial budget) analysis data will be considered.

EXPECTED DELIVERABLES OF THE OTIPAVA PROJECT

- Use the pieces of evidence generated from on-station and on-farm trials to formulate an extension package using the combined use of organic and inorganic fertilizers.
- Design one timad extension package which is suitable for land-constrained and low-income farmers. These groups include young farmers having a small parcel of land, women-headed households and poor farmers who can't afford to apply the full recommended inorganic fertilizers.
- Mainstream and institutionalize regenerative agricultural practices aspects of the one timad package with multiple leverage points: soil health, cropping system, and sustainable livelihood.
- Provide evidence of how much nutrients (NPK) the different compost types (conventional compost, vermicompost, compost decomposed by EM) supply and formulate combined use of fertilizer recommendation rate.



