TechnoServe
Business Solutions to Poverty™

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The Business Case for Vermicompost

Economic analysis of vermicompost production as a source of income generation in Sidama Regional State, Ethiopia

Fertilizers, both organic and synthetic, are essential for improving crop yield and preserving soil health in many regions. However, synthetic fertilizer is often financially out-of-reach for farmers in low-income communities, and its production and use can also generate negative environmental impacts by adding dangerous chemicals to the soil and food chain.

Encouraging the use of organic fertilizers, such as vermicompost, can help maintain the productivity of lands and crops. Vermicompost is produced by using essential earthworms to decompose organic waste (e.g., cow dung, leafy materials, kitchen scraps, etc.). This organic fertilizer has many benefits for soil health and crop productivity, such as improving soil structure, water retention, nutrient availability, and microbial activity.

When vermicompost is used instead of synthetic fertilizer, seed germination is accelerated, which raises crop yield and quality and improves insect control. Vermicompost is a low-input production system, which can help small and medium-sized producers compensate for the initial product decline in the transition from conventional to organic agriculture.

The process of vermicomposting can help save resources, safeguard the environment and people, increase the circularity of farming activities and its ecological imprint, and meet farmers' economic needs by lowering expenses and increasing income.

There are few studies evaluating the cost–benefit breakdown and financial viability of vermicompost investment; this data is critical, as many households are skeptical of investing in vermicompost. This study, part of the NORAD-funded Scaling Ethiopia's Regenerative Export Sector with Outgrowers project, was initiated to fill that knowledge gap in the Sidama region of Ethiopia.

OBJECTIVES OF THE ECONOMIC ANALYSIS

- Study the economics of production and marketing of vermicompost in the Sidama region of Ethiopia
- Assess the financial viability of an average size vermicomposting firm

METHODOLOGY

Original data gathered through in-person interviews with 21 producers of vermicompost in the districts of Dale and Shebedino in the Sidama region.

Socio-economic characteristics of respondents

average age: ~41 years old

average experience in vermicompost production: ~4 years

average years of education: 8.5 years

The majority of responders qualified beyond elementary school.

~71% of the study area's participants were economically active.

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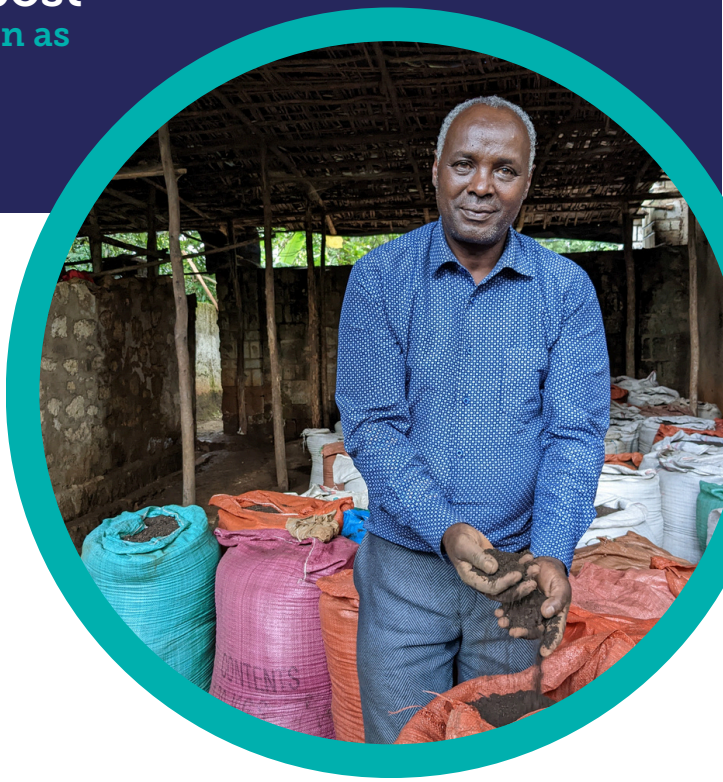
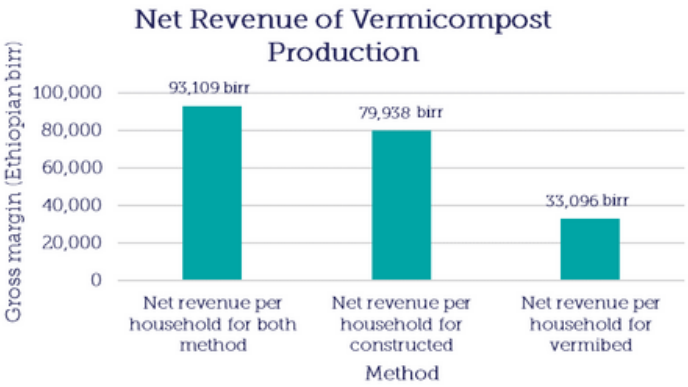


Bogale Borana showing off his compost (Image: TechnoServe)

RESULTS

The study found that there is a positive return on investment per household across all methodologies of vermicompost production, including constructed, vermibed, and both combined.



COMMONLY MENTIONED BARRIERS TO PRODUCTION AND MARKETING

- Ants and other predators
- Lack of financial support (to start operations)
- Lack of market linkages
- Lack of awareness

RECOMMENDATIONS

- Encourage farmers to use biomass from tree cutting and weeding to produce biofertilizers through vermicomposting (currently, this biomass is mainly burned).
- Create market support and incentives for vermicompost products through a legal classification of biomass types based on their intended use, especially when farmers intend to sell their vermicompost.
- Provide policy support for technical assistance, workshops, and demonstrations which increase farmers' confidence and skills in implementing vermicomposting, facilitating its adoption.

A VERMICOMPOST ENTREPRENEUR

When Bogale Borana started making compost and using it on his own avocado and coffee farm, he saw that it worked well, but it was difficult to access enough worms to scale up his production.

That changed, however, when Bogale received training from TechnoServe as part of the NORAD SERES program. He learned how to multiply his worms to not only increase his compost production but also sell the invertebrates to other farmers in the area.

Bogale has now...

- sold more than 20,000 kilograms of compost and 1,000 kilograms of worms
- helped 300 smallholder farmers improve their yields
- generated employment for 17 new workers on his farm.

"I am very happy when I see people coming here and working and getting money," Bogale said.

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