

Precision Fertilizer Micro-Dosing for Millet and Sorghum Yield Enhancement



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Smarter Fertilizer, Stronger Crops: Maximize Growth with Minimal Input

The Fertilizer Micro-Dosing for Enhanced Yield and Efficiency Technology is a practice that involves applying small amounts of fertilizer in shallow holes at the base of each plant. This precise method is low-risk, affordable, and efficient.



This technology is **TAAT1 validated**.

8.7



Scaling readiness: idea maturity 8/9; level of use 7/9

Gender assessment

4

Climate impact

7

Problem

- Nutrient deficiencies in millet and sorghum
- Inefficient and risky fertilizer application methods
- Insufficient nutrient replenishment and gradual soil fertility decline
- Crop failure risk due to drought discouraging fertilizer investment

Solution

- Addressing nutrient deficiencies in millet and sorghum
- Providing a low-risk and precise fertilizer application method
- Fostering rapid crop growth

Key points to design your project

Micro-Dosing addresses nutrient deficiencies in millet and sorghum with precise, low-risk fertilizer application, promoting rapid growth, reducing environmental impact, and benefiting women. It aligns with climate-smart practices, enhances agricultural efficiency, and reduces poverty.

To integrate Micro-Dosing:

- Identify suitable fertilizers: Millet (50 kg/ha, 16,666 plants), Sorghum (100 kg/ha, 26,666 plants). Use NPK (15-15-15) or DAP fertilizers.
- Plan logistics: Include delivery costs, import clearance, and distribution to project sites.
- Raise farmer awareness through training and communication tools (flyers, videos, radio).
- Combine with stress-resistant crop varieties and Striga management for better results.
- Partner with agricultural institutes and fertilizer distributors for implementation.

This technology is applicable in Chad, Ethiopia, Kenya, Sudan, Tanzania, Burkina Faso, Mali, Niger, Nigeria, Senegal, and Zimbabwe.

Cost: \$\$\$ **43 USD/ha**

Application without equipment

ROI: \$\$\$ **15–108 %**

Increase in yield



Open source / open access

Technology from

[ProPAS](#)

Commodities

Sorghum/Millet

Sustainable Development Goals



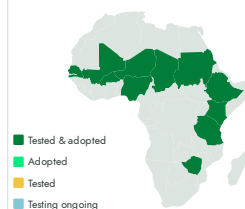
Categories

Production, Practices,
Fertilizer management

Best used with

- [Millet and Sorghum Varieties for Better Nutrition and Stress Resistance >](#)
- [Dual-purpose Millet Varieties for Crop and Livestock Integration >](#)
- [Proactive Management of Striga Infestation >](#)

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



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