Foliar micronutrient addition for healthier rice

Targeted nutrients for stronger crops and richer grain

Foliar micronutrient addition involves spraying liquid fertilizers onto rice leaves and stems. This ensures quick nutrient absorption, improving yields and grain quality with smaller quantities than soil application. Farmers apply the solution at key growth stages. This method boosts crop resilience and productivity, especially in nutrient-deficient soils.

AfricaRice

Africa Rice Center
Sali Atanga Ndindeng

This technology is TAAT1 validated.

8·8 Scaling readiness: idea maturity 8/9; level of use8/9

Project adoption 1

Technology integrated in the ENSURE project.

Inclusion assessment 4

Climate impact 7

Problem

- **Micronutrient Deficiencies and Low Yields:** Rice crops often lack essential micronutrients like zinc, copper, and boron, leading to low yields and poor grain nutrition.
- **Soil Nutrient Depletion:** Soils in Sub-Saharan Africa are increasingly depleted of vital nutrients, impacting crop health.
- **Inefficient Nutrient Uptake and Crop Vulnerability:** Traditional soil-based fertilizers result in inefficient nutrient absorption, making crops more susceptible to diseases and environmental stresses

Solution

- **Corrects micronutrient** deficiencies through targeted foliar application for efficient nutrient uptake.
- Increases rice yields and **improves grain nutritional quality**.
- **Enhances soil fertility**, crop health, and resilience to diseases and environmental stress.

Key points to design your program

Foliar Micronutrient Addition for Healthier Rice can support rice value chain development, food security, climate-smart agriculture, and sustainable nutrient management by improving productivity, grain quality, and nutrient use efficiency. Its adoption contributes to **SDGs 1, 2, 12, and 13**. To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- **Facilitate access** to foliar micronutrient fertilizers, sprayers, protective equipment, and other application materials.
- **Establish partnerships** with AfricaRice, national agricultural research and extension services, fertilizer suppliers, and agrodealers.
- **Conduct** demonstration plots and training on foliar micronutrient application and nutrient management, and **monitor** technology adoption, rice productivity, grain quality, and nutrient use efficiency.

40 USD	**30—45** USD	IP
Protective kits per person	Knapsack sprayers with a tank of 20 liter	Open source / open access

Technology from

ProPAS

Commodities

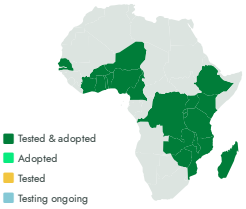
Rice

Sustainable Development Goals

Categories

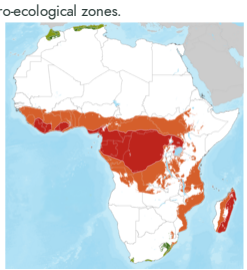
Production, Inputs, Fertilizer

Tested/adopted in



Where it can be used

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



Target groups

Farmers