TAAT e-catalog for **government**

https://e-catalogs.taat-africa.org/gov/technologies/adapted-rice-varieties-for-africa-advanced-rice-varieties-for-africa

Adapted rice varieties for Africa Advanced rice varieties for Africa

Arica rice, the high yield, disease and stress tolerant rice

Hybrid ARICA lines are advanced rice varieties with high yield potential and resistance to diseases and environmental stresses. They are developed using a three-line or a two-line breeding system, involving backcrossing, test-crossing, and microsatellite screening. To be classified as ARICA, a breeding line must outperform benchmarks in seed yield and grain quality over three seasons. Fiel...

✓ This technology is TAAT1 validated.

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

Gender assessment 4

Climate impact 7

Problem

- **Low Productivity:** Traditional rice varieties in Africa yield inadequately.
- **Susceptibility to Pests and Diseases:** Common rice diseases and pests diminish yields and threaten food security.
- **Abiotic Stresses:** Environmental variability poses significant challenges, affecting crop growth and productivity.
- **Limited Adaptation:** Traditional rice varieties struggle to adapt to diverse agroecosystems, resulting in suboptimal performance.

Solution

- **High Yield Potential:** ARICA varieties offer increased productivity and profitability.
- **Disease and Pest Resistance:** ARICA lines resist common rice diseases and pests, ensuring stable yields.
- **Abiotic Stress Tolerance:** ARICA hybrids withstand environmental stresses, ensuring consistent yields.
- **Adaptability:** ARICA varieties thrive in diverse agroecosystems, providing flexibility to farmers.
- **Specialty Traits:** Some ARICA lines possess traits like drought resistance and iron toxicity tolerance, addressing specific challenges.

Key points to design your project

- Steps to integrate ARICA technology:
  - Develop and certify tailored ARICA varieties.
  - Raise farmer awareness about benefits.
  - Facilitate financial support for seed purchases.
  - Provide training on cultivation and management.
- Accompanying solutions:
  - Deep urea placement for nitrogen management.
  - Foliar micronutrient addition for crop nutrition.
  - Engineered irrigation surfacing and water lifting.
  - Motorized weeders for effective weed control.
  - RiceAdvice digital support for comprehensive guidance.

Cost: $$$ **0,8 - 1,2 $/Kg of seed**

Initial cost of the seed

ROI: $$$ **40 %**

Increase in yield (income)

356 USD

Planting, maintenance, harvesting and winnowing

50 - 111 %

Potential yield

IP

Open source / open access

AfricaRice

Africa Rice Center

Sali Atanga Ndindeng

Technology originally documented by

ProPAS

Commodities

Rice

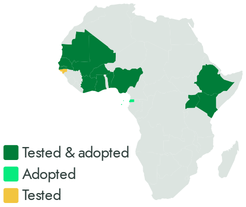
Sustainable Development Goals

1 NO POVERTY
2 ZERO HUNGER
8 DECENT WORK AND ECONOMIC GROWTH
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
15 LIFE ON LAND

Categories

Production, Improved varieties, Yield improvement, Quality improvement

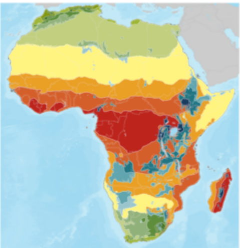
Tested/adopted in



🟩 Tested & adopted
🟩 Adopted
🟨 Tested

Where it can be used

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



Target groups

Breeders, Farmers, Seed companies