CRAM varieties: High Yielding Climate Resilient Upland Rice Varieties for Africa

Climate resilient CRAM varieties for enhanced rice productivity for African farmers

CRAM (Climate Resilient Upland Rice Varieties for Africa) are early-maturing, high-yielding rice varieties developed by AfricaRice and CNRA for rainfed upland production, including areas receiving around 800 mm of annual rainfall. Their 101–104-day maturity helps farmers escape late-season droughts while achieving yields of up to 5.0 t/ha.

Africa Rice Center
Negussie Zenna

This technology is pre-validated.

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

Inclusion assessment 9 9 9

Climate impact 4 3

Problem

- **Unreliable domestic production:** Drought and rainfall variability constrain productivity in rainfed upland rice systems.
- **Climate vulnerability:** Short and unpredictable rainfall seasons threaten the stability of national rice production.
- **Disease pressure:** Blast and brown spot reduce yields and can increase reliance on chemical crop protection.

Solution

- **Higher domestic production:** Yield potential of up to **5.0 t/ha** supports rice self-sufficiency and import substitution.
- **Climate resilience: 101–104-day maturity** and drought tolerance help farmers cope with erratic rainfall and late-season drought.
- **Rainfed adaptation:** Suitable for **upland and sloping fields**, including areas receiving around **800 mm annual rainfall**, reducing irrigation dependence.

Key points to design your project

By advancing **SDGs 1, 2, 13 and 15**, CRAM helps governments strengthen rice production, climate resilience and sustainable land use. To scale CRAM effectively, programmes should:

- **Target** suitable rainfed upland areas and climate-vulnerable farmers.
- **Strengthen** quality seed production and distribution.
- **Combine** CRAM with good agronomic and soil management.
- **Engage** national research, seed, extension and private-sector partners.
- **Track** adoption, productivity, food security and resilience outcomes.

1012 USD Cost USD per hectare	**1320 USD** Revenue USD per hectare	**308 USD** Net income USD per hectare	**30 %** ROI per hectare
1.78 USD per kg Certified Seed Purchase	**3,220.00 USD per ha** Official Variety Certification & Inspection	**3.57 USD per kg** Foundation Seed Procurement	**4,000 kg per ha** Expected Seed Yield	**IP** Open source / open access

Commodities

Rice

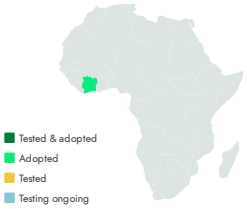
Sustainable Development Goals

1 NO POVERTY · 2 ZERO HUNGER · 13 CLIMATE ACTION

Categories

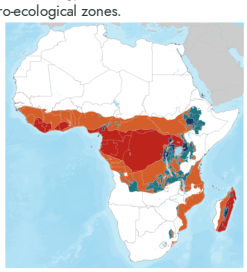
Production, Improved varieties, Disease resistance, Insect resistance

Tested/adopted in



Where it can be used

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



Target groups

Breeders, Farmers, Seed companies, Researcher center, Cooperatives and Agribusinesses