



AfricaRice



Contributions to rice sector development in CARD member countries

Update from Africa Rice Center (AfricaRice)

October 2021 to August 2022



**Eighteenth Steering Committee Meeting (SC18) of the Coalition for African Rice Development
29-30 September 2022, Dar es Salaam**



Content

- Major achievements for the period: October 2021– August 2022 in CARD II, the ‘RICE’ approaches: ‘Resilience’, ‘Industrialization’, ‘Competitiveness’ and ‘Empowerment’
- Influence of new CGIAR Initiatives where AfricaRice and partners are involved in rice sector development in Africa

Released varieties from AfricaRice/KAFACI projects

Country	Variety	Yield (t/ha)	Environment	Registration
Mali	KAFACI 2	6	Rainfed lowland	Jun-22
	KAFACI 3	7	Rainfed lowland	Jun-22
Rwanda	GWIZA	7.3	Rainfed lowland	Jan-22
	UMUTEBO	7.6	Rainfed lowland	Jan-22
	CYUZUZO	6.5	Rainfed lowland	Jan-22
Tanzania	TARI-RICE 3	6.5-7.5	Irrigated lowland	Feb-22
DR Congo	Super KAFACI	6.4	Irrigated lowland	2022 Expect
	Riziki Yetu	5.9	Irrigated lowland	2022 Expect
	Kiboko	5.8	Irrigated lowland	2022 Expect
	NaKafaci	6.3	Irrigated lowland	2022 Expect
	Kiring yemulezi	5.7	Irrigated lowland	2022 Expect
	Basimka	5.7	Irrigated lowland	2022 Expect



Improved red rice variety in Madagascar



Improved variety for irrigated lowland in Uganda

- In addition, 3 red rice varieties with improved nutritional qualities released in Madagascar for high elevation environment: FOFIFA 194, 195 & 196
- Four (4) rice varieties released in Uganda for irrigated lowland: NARORICE 1 (aromatic), 2, 3 and 4

Covid-19 Rice Seed Response (CORIS) Project

RESILIENCE

- New seed scaling model to increase varietal turnover in farmers' fields in Africa demonstrated

ENABLERS

Direct support of National Seed Quality Control and Certification Agency in 5 countries.

Capacity development of private seed companies through demos & on-farm trials of climate resilient and consumer-preferred varieties

Provision of GAP (flyers) and equipment (threshers, harvesters, moisture meters, hermetic bags) support to 35 companies in 5 countries

Digitalization of production and commercialization process for monitoring and traceability for 35 companies in 5 countries

Stage 1
(20.2 t)

Breeder seeds of climate resilient and consumer preferred varieties by **AfricaRice and NARIs**

Stage 2
(920 t)

Foundation seeds produced by **NARIs and Seed Companies (COSEM-Riz)**

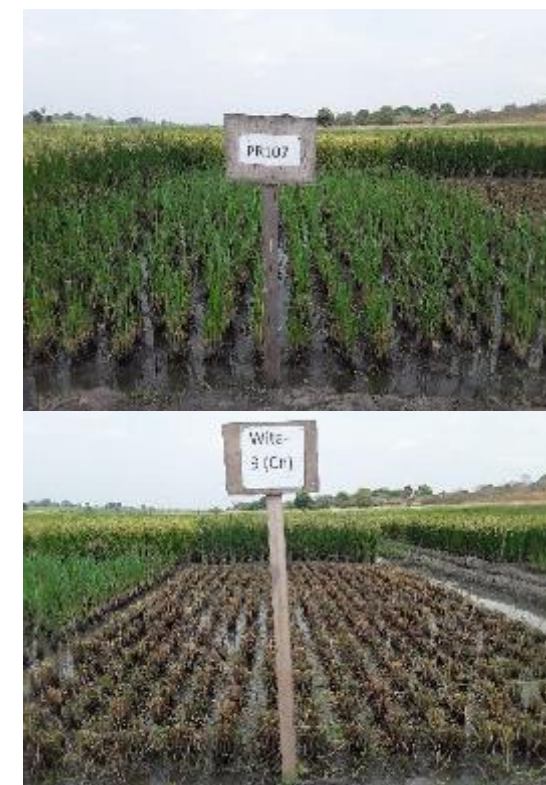
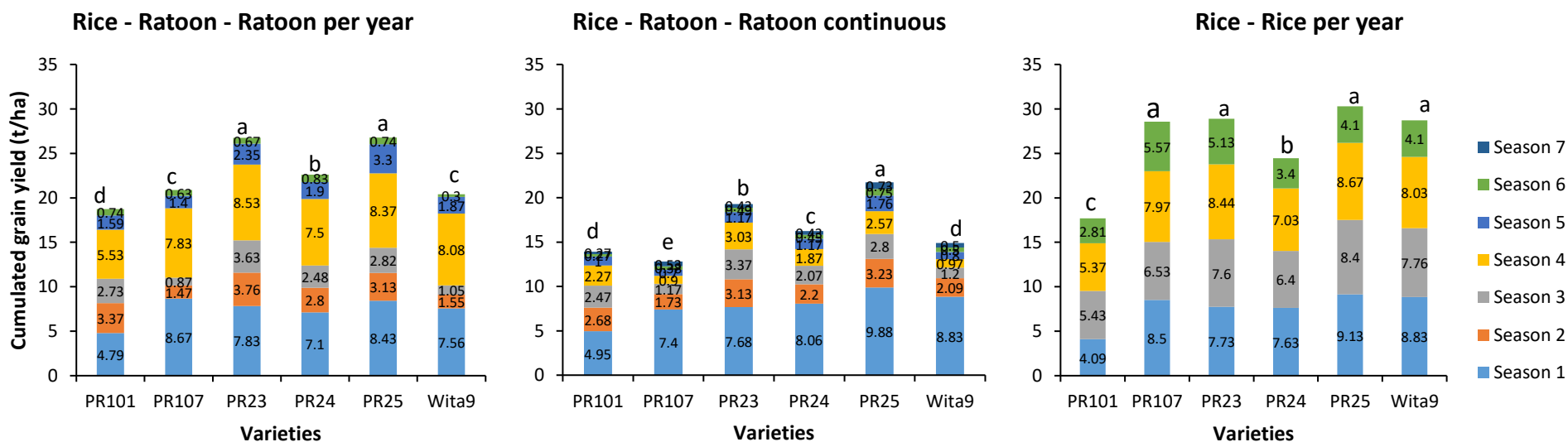
Stage 3
(27000 t)

Certified seeds produced by seed companies (**COSEM-Riz**)

Enhanced accessibility and availability of climate resilient rice varieties

Ratoon rice cropping systems using perennial rice

- Perennial rice is an interspecific rice from the cross of *Oryza sativa* and *O. longistaminata* by Yunnan University – with strong ratooning ability.
- PR 23 & PR 25 varieties under rice–ratoon, rice–ratoon rice system in a year achieved high productivity (cumulative yield for 2 years) compared to same system with WITA 9 (local high-yielding check).



- The cumulative yields of PR 23 and PR 25 under rice–ratoon rice–ratoon rice are comparable with yield of the check in usual double cropping (rice–rice) with much lower total input use.
- PR 23 and PR 25 under rice–ratoon rice–ratoon rice can be recommended to smallholder farmers in Africa.

Experimental auction for motorized weeding service

INDUSTRIALIZATION

Eliciting farmers' Willingness to Pay (WTP) for motorized weeding service per are (100m²)

Location	Number of participants	% of farmers who purchased the service	WTP min and max (MGA)	Mean WTP (MGA)
Malaimbandy	61	21.3	5 000 – 30 000	10 475
Ankilizato	101	13.9	1 000 – 30 000	6 637
General	162	16.7		8 082

- The WTP of 95% of participants is lower than actual price of service (20 000 MGA per are)
- Farmers not willing to pay more than 7,000 MGA (daily rate for hand weeding)

In general:

- Positive feedback from farmers after demo of motorized weeder in southwestern Madagascar
- Farmers interested in using or buying the weeder
- However, need to consider lowering price with possible cost-cutting for weeder fabrication & more efficient service (more customers/unit time)



Demonstration



Individual auction:
Farmers bid to receive motorized weeding service

GEM parboiling systems in East and South Africa

COMPETITIVENESS

- To improve food and nutrition security among rice farming households & consumers in ESA, GEM parboiling systems to ESA have been introduced. With units delivered in Madagascar and Mozambique
- GEM parboiling systems can **improve quality**—especially less breakage and chalkiness—and nutrition
- Parboiled rice is **sold at higher prices** than non-parboiled milled rice in WCA; due to high profitability.



- Women farmers and processors trained in rice parboiling
- Support to profitable and sustainable parboiling technology delivery & engagement: raising awareness, facilitating market entry & establishing functional linkages

New CGIAR initiatives

- Main aim: Create real, lasting, and positive impact in 5 key impact areas: (1) Climate adaptation / mitigation; (2) Environmental health & biodiversity; (3) Gender equality, youth & social inclusion; (4) Nutrition, health & food security; (5) Poverty reduction, livelihoods & jobs
- Among the 33 global and regional initiatives, AfricaRice is involved in 10 Initiatives and leads one regional initiative *Transforming Agrifood Systems in West and Central Africa* (TAFS-WCA).

Expected positive influences in Africa's rice sector:

- ***Genebank initiative:*** Quality of routine rice genebank operations improved; better support to breeding programs through increasing value and use of rice germplasm collections
- ***Market intelligence initiative:*** Better product profile in rice available through the collection of market intelligence, characterization of current & future needs, identification of market segments
- ***Breeding resources initiative:*** More availability of breeding resources developed through cost effective shared services, performance management of consistent, connected operations; smarter use of more data, and innovation development and research exchange.

Expected positive influences of new CGIAR Initiatives in Africa's rice sector

- **Accelerated breeding initiative:** Increasing the speed & accuracy with which novel & high-value traits can be incorporated into CGIAR & NARES pipelines within the framework of more inclusive & effective partnership models including CGIAR-NARES-SME breeding networks
- **Seed equal initiative:** Rice seed availability enhanced through supporting demand-driven rice seed systems for more effective delivery of genetic gains from One CGIAR rice breeding and strengthening partnership and capacity building
- **Plant health initiative:** Better protection of rice-based systems in Africa through threat identification and characterization, preparedness and rapid response against the threats
- **Excellence in agronomy initiative:** Higher productivity of rice-based systems in Africa through co-developed and validated agronomic solutions for rice including “RiceAdvice Lite” and developed fertilizer recommendations for cassava, maize, and rice in Nigeria



Expected positive influences of new CGIAR Initiatives in Africa's rice sector

The Regional Integrated Initiative for WCA: Transforming agrifood systems in West and Central Africa (TAFS-WCA)



Profitability and sustainability of rice-based systems in WCA improved through the introduction of innovations along with the rice value-chain—seed, varieties, agronomy, post-harvest, landscape management, digital tools, business models, institutional innovations and market information—with effective and efficient scaling models

- ***Harnessing gender and social equality for resilience in agrifood systems initiative:*** Gender equality in rice sector enhanced by collective actions
- ***Fruit and vegetables for sustainable healthy diets initiative:*** Yet to be finalized

Thank you