



AfricaRice

Technologies for African Agricultural Transformation

# TAAT Rice Compact

## Highlights

- **The Rice Compact introduced climate-smart rice varieties that yields 4-7 MT/Ha and hybrids that have the potential of 10 MT/Ha in 14 countries**
- **By adopting improved rice varieties, RiceAdvice and Good Agricultural Practices for crop management Rice yields in Madagascar, increased from 3.3 MT/Ha in the uplands to 7.5 MT/Ha and in lowland from 5.8 MT/ha to more than 10 MT/ha in Cote d'Ivoire and Togo**
- **A total of 69.1 MT hybrids basic seeds have been produced for multiplication to foundation and certified seeds by private seed enterprises**
- **The use of GEM rice parboiling system by the IP in Nigeria generated US\$ 181,800 in 2019. Substitution of firewood with rice husk for fuel fire resulted in US\$ 30 savings per MT of parboiled rice.**

## What is the problem?

Rice yield in farmers' fields had been generally low and the quality of most of the rice milled and marketed was also sub-standard. These were the results of low access to climate-smart high yielding rice varieties, the use of seeds of substandard quality from landraces and obsolete genetic materials, the use of traditional farming practices and equipment for land preparation and processing. In addition, access to credit, inputs (certified seeds and fertilizer) was low. These among other challenges, resulted in low grain yield of 2.0 T/Ha (35% of potential yield), high post-harvest losses of at least 16% and low market competitiveness. Therefore, Africa imports large quantities of rice to bridge the 42% production-consumption gap. For example, in 2018, African countries spent US\$ 5.9 billion to import about 13 million tons of rice whilst production stood at 19 Million MT against a demand of 33 Million MT. Nevertheless, the continent is endowed with arable land, water resources, labour and technology and innovation to develop the rice sector to improve rice productivity and market competitiveness and thereby turn the imports into opportunity to save the hard earned currency and create jobs.

## What are TAAT Rice Objectives?

The Development Objective is to rapidly expand access of smallholder farmers, the majority being women, to high

yielding agricultural technologies. This will improve their food production, assure food security and raise rural incomes. The Specific Objectives are to obtain 25% yield increase in rice production and reach over 2.26 million beneficiaries, 30% of whom are women, using productivity enhancing technologies and innovations in the rice value chain.

## Compact description

The TAAT Rice Compact (TRC) seeks to achieve rapid intensification of rice production through raising farm-level productivity, improving the efficiency of processing and increasing market opportunity. Proven technologies



include new genetic materials, quality breeder seeds, crop management and processing practices and business development models. This entails working with the value chain actors from both the private and the public sector, using the Innovation Platform (IP) approach to foster linkages for quick uptake of technologies. Each of these actors play complementary role that ensure that the value chain functions from research through production to processing and marketing.

### What are the TAAT Rice Technologies?

- *High-yielding, Climate-Smart, consumer-preferred rice varieties and hybrids*; these are upscaled through the supply of breeder seeds to 14 countries for multiplication into foundation and certified seeds and to conduct on-farm demonstrations
- *Good Agricultural Practices and the RiceAdvice* provide systematic guide for adoption of appropriate farm management practices. These assist in land selection and preparation, the choice of varieties and their characteristics, nursery management, transplanting, fertilizer types and application, weed and insect pest control, harvesting, post-harvest practices and cost/benefit analyses.
- *ASI Thresher* is a multi-crop thresher, smaller size, pre-cleans the paddy, easy to move, affordable to many small-scale farmers and adapted to women circumstances
- *GEM Parboiler* is specially fabricated and equipped with stainless steel pot and a stove. The parboiler uses rice husk for fuel in place of firewood fuel. It is cost saving, friendly to women and the environment and retains high levels of B-Vitamins and minerals in the rice grain

- *E-Registration* to engage partners in upscaling technologies and innovations

### What have we achieved so far?

In upscaling the adoption of 17 climate-smart, consumer-preferred rice varieties and hybrids, 69.1 MT of breeder seeds were produced and are being multiplied into foundation and certified seeds in 14 countries. It is estimated that 172,000 MT of Certified seeds will be produced between 2020 and 2022. Post-harvest/processing and value addition equipment (threshers and par-boilers) were installed on the IPs to improve the quality of rice marketed. In all, 1,411,644 beneficiaries are accessing and effectively using technology products and services and 2,717,637 beneficiaries reached (over 60% being women) have so far been reached. In terms of outcomes, rice productivity has increased from 2.00 to 2.21 MT/Ha (42%) and additional volume of 0.94 Million MT for grain rice at a value of 627 Million USD has been produced and household income increased by 30%.

### Were there any key challenges or lessons learned?

- Long variety release process, slows down farmer access to new genetic materials within partner countries
- Weaknesses in the national seed systems, which is reflected in the low capacity of seed enterprises hamper rapid multiplication of seeds for supply to farmers
- Predominance of inappropriate milling equipment and low capacity of processors and millers result in low quality rice
- Low access to credit (i) hinders farmers' ability to use the required rates of quality seeds and fertilizer and (ii) slows down the growth of the private enterprise





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