



RESEARCH
PROGRAM ON
Rice



Photo credit: G Smith/CIAT

RICE is a collaborative partnership that cuts across all components of the rice sector and aims to deliver impact for a sustainable future.

The CGIAR Research Program on Rice (RICE) is a forward-looking, holistic, global partnership that focuses on the win-win proposition of the social, economic, and environmental sustainability aspects of rice.

RICE fosters impact-driven rice research and development to reduce poverty and hunger, improve human health and nutrition, promote gender equity, and enhance ecosystem resilience in rice production systems. It harnesses 600 research and development partners from both the public and private sector to deliver measurable impacts on the overall goals of CGIAR.

RICE facilitates the transition of smallholder rice farmers to modern business entrepreneurship by exploiting opportunities offered by market diversification and the emergence of a stronger consumer demand for quality and nutritious rice products. At the same time, it assists poor farmers to cope with extreme stresses and the effects of climate change. In doing so, RICE will be at the cutting edge of science and will mobilize modern technological breakthroughs offered by biotechnology, ICT, and Big Data.

Impacts by 2022

Through R&D in collaboration with its many partners, RICE expects to:

- ▶ help at least 13 million rice consumers and producers, half of them female, to exit poverty by 2022, and another 5 million by 2030.
- ▶ assist at least 17 million people, half of them female, out of hunger by 2022, rising to 24 million by 2030
- ▶ assist at least 8 million people, half of them female, to meet their daily zinc requirements from rice by 2022, rising to 18 million by 2030.

These outcomes will become possible by:

- ▶ helping at least 17 million more households to adopt improved rice varieties and farming practices by 2022 and a further 19 million by 2030
- ▶ improving the annual genetic gain in rice (as measured in breeders' trials) to at least 1.3% by 2022, rising to 1.7% by 2030
- ▶ helping increase annual global milled rice production of 479 million tons in 2014 to at least 536 million tons by 2022 and to 544 million tons by 2030
- ▶ increasing water- and nutrient-use efficiency in rice-based farming systems by at least 5% by 2022, rising to 11% by 2030
- ▶ helping reduce agriculture-related greenhouse gas emissions in rice-based farming systems by at least 28.4 of megatons carbon dioxide (CO₂) equivalent/year by 2022 and by a further 28.4 megatons of CO₂ equivalent/year by 2030, compared to business-as-usual scenarios.



Adding Value to Africa's Rice

In 2014, Africa's rice sector realized the demand for better quality rice to make it more marketable and competitive compared to imported ones.

To solve this, Canada's Department of Foreign Affairs, Trade and Development (DFATD) and AfricaRice, in partnership with McGill University, spearheaded a project on food security in Africa with a focus on rice postharvest handling and marketing. The project sought to introduce improved harvesting, as well as postharvest practices and equipment throughout the value chain to achieve high-quality grain.

As a result, 57 fabricators from 10 countries were trained to construct the ADRAO-SAED-ISRA (ASI) thresher-cleaner in 2013. A light thresher has also been developed especially for women farmers in Uganda.

The project has promoted the development of equipment for parboiling. McGill University is providing technical backstopping to national partners to develop a parboiling pilot plant. It has also reached out to policymakers to harmonize rice policy across the region. Capacity building initiatives with rice stakeholders, from producers to consumers, is also a vital part of the project.

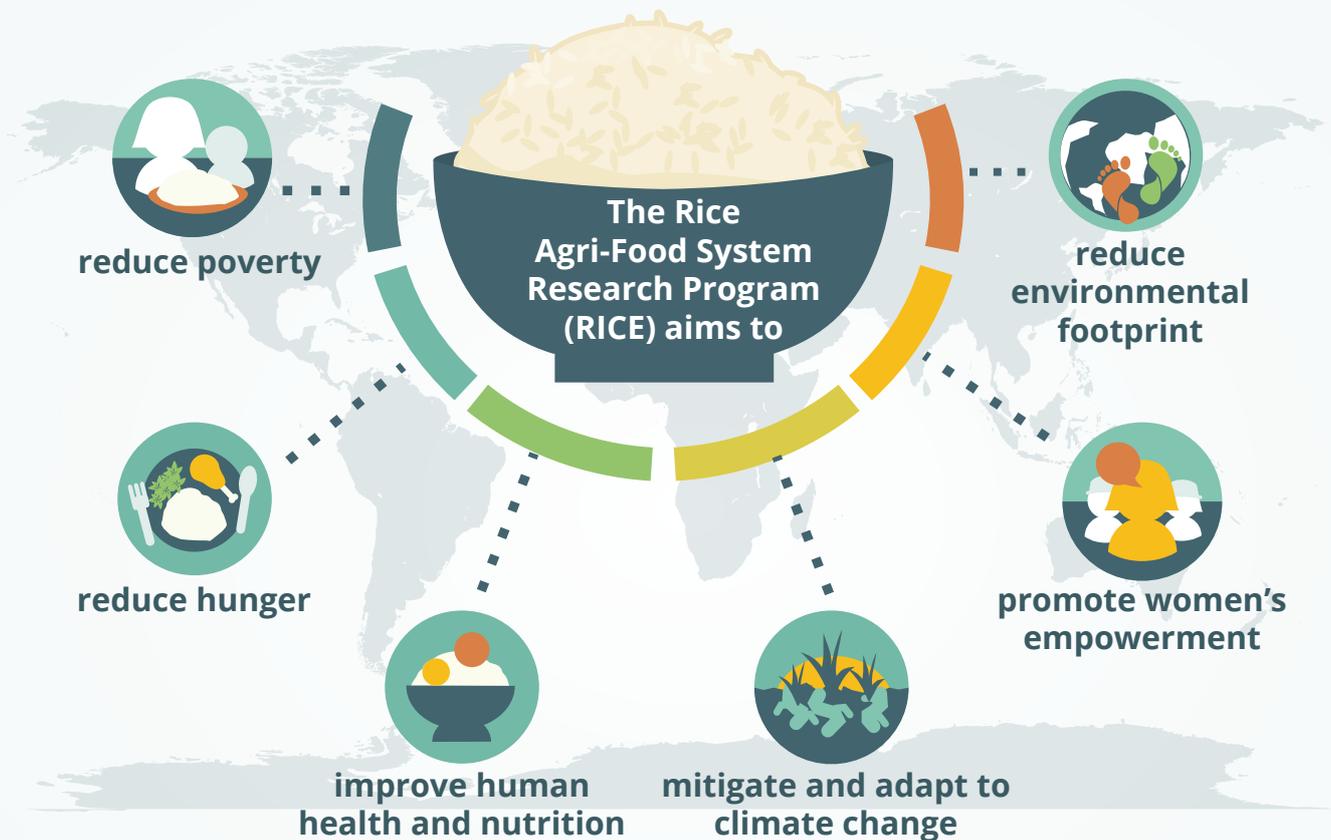
Growing Hope with Green Super Rice

In November 2013, Typhoon Haiyan devastated the Leyte. The survivors, especially the farmers, are struggling to rebuild their lives. Majority of the farmers depended on coconuts for their livelihood, which were destroyed and uprooted because of the typhoon. After Haiyan, the farmers have started replanting coconuts but these will take five years before the trees start producing fruits.

Green Super Rice (GSR) has become a substantial alternative to coconuts for Leyte farmers. GSR varieties are bred at the International Rice Research Institute (IRRI) and can thrive in the most unfavorable environments such as flood, drought, and salty soils. It is also tolerant to pests and diseases. The seeds reached the farmers through the Philippine Rice Research Institute (PhilRice) months before the typhoon came.

It has been reported that farmers were able to harvest as much as 11 tons per hectare, which is 2.75 times the average yield of 4 tons in Leyte. Farmers were able to get back on their feet because of planting GSR and rice has now become their main source of livelihood.



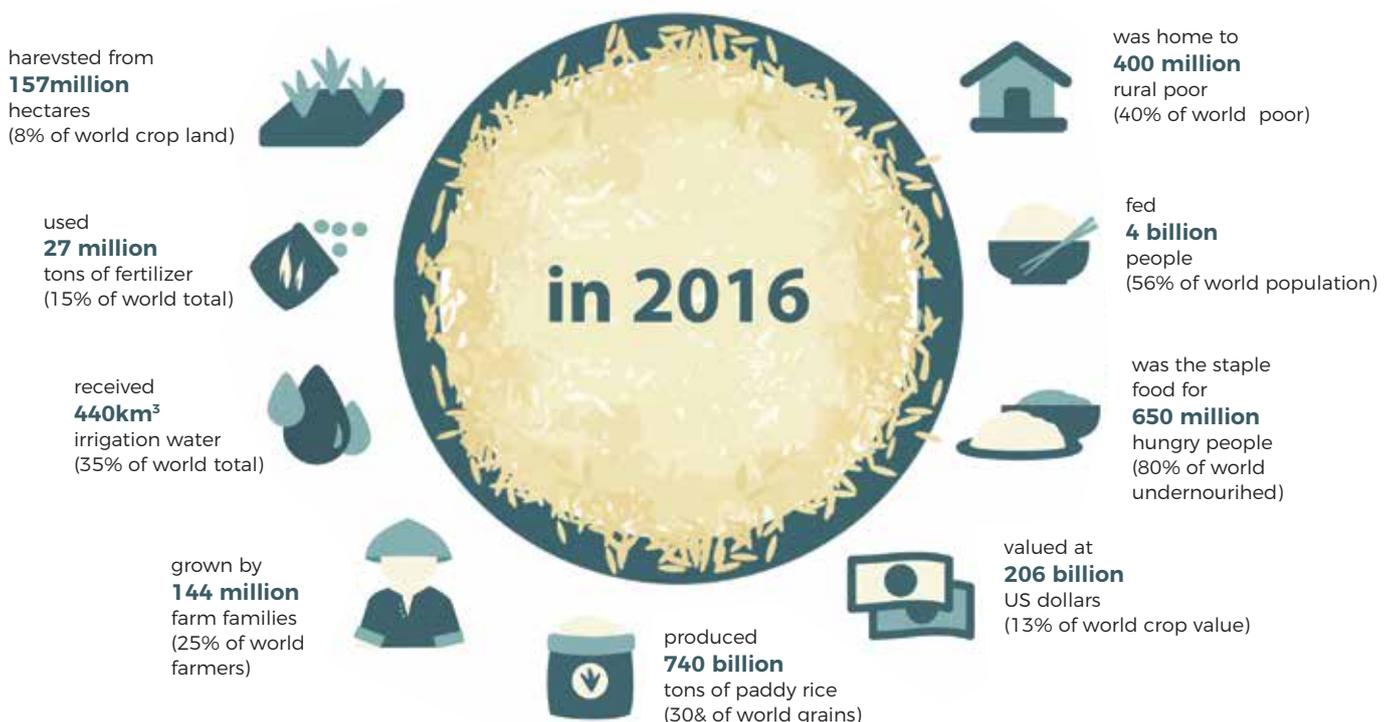


Research

RICE focuses on five research areas or flagship projects (FP): accelerating impact and equity (FP1), upgrading rice value chains (FP2), developing and delivering sustainable farming systems (FP3), establishing a global network of field laboratories that will discover new genes and traits of rice or the Global Rice Array (FP4), and breeding of new rice varieties adapted to current and future climates (FP5).

The flagship projects are structured around strategies on gender equity and engagement with the youth sector. RICE works in rice-producing and -consuming countries, particularly in **Asia, Africa, and Latin America.**

Important of RICE



Rice is the world's most important staple food and will continue to be so in the coming decades. A staple food for some 4 billion people worldwide, rice provides 27% of the calories in low- and middle-income countries. With expected population growth, income growth, and decline in rice area, global demand for rice will continue to increase from 479 million tons of milled rice in 2014 to 536-551 million tons in 2030.

Global Partners for Impact

RICE is led by six organizations with international mandate and with a large portfolio on rice:

Three members of the CGIAR Consortium:



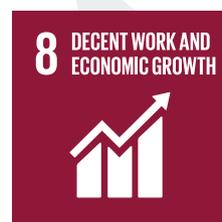
AfricaRice



Three other leading international agricultural agencies:



Working to Achieve the Global Goals



RICE fosters impact-oriented rice research and development to reduce poverty and hunger, improve human health and nutrition, promote gender equity, and enhance ecosystem resilience in rice production systems.

We would like to thank all donors who supported this research through their contributions to the CGIAR Fund.
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