

The impact of investing in rice research to overcome poverty is well documented. In fact, rice research is the single largest documented source of agricultural research benefits in the developing world.

USD 20 invested in the Global Rice Science Partnership can lift one person out of poverty.

The International Rice Research Institute (IRRI) is the global leader in rice research for development. IRRI convened the Global Rice Science Partnership (GRiSP) that brought together more than 900 partners worldwide in a coordinated effort to ensure that rice research contributes effectively to solving development challenges on local, national, and international scales and has a positive impact on the lives of rice farmers and consumers worldwide.

## Why rice?

Rice is the staple food for more than 3.5 billion people, or about half of humanity.

Rice is, of course, the staple food in Asia, where 600 million people live in extreme poverty. Nearly all of these people eat rice two or three times a day. Rice can thus contribute 30–70% of their calorie intake. In addition, the importance of rice in Africa and Latin America—other regions affected by

poverty—is increasing. Targeted improvements in rice production thus benefit those who are in need of the most urgent assistance.

Rice consumption is increasing, and demand for rice will outstrip supply if production does not increase faster than its current rate. The fundamentals of rice production would have to change. Rice varieties must have higher yield potential and

crop management techniques must help achieve this.

With a sufficiently high and reliable supply of rice, prices are more likely to stay stable and affordable, which is important for poor rice consumers. When rice prices tripled in 2008 during the food price crisis, the World Bank estimated that an additional 100 million people were pushed into poverty.



## Higher yields, higher incomes

The Australian Centre for International Agricultural Research (ACIAR) found that, between 1985 and 2009, IRRI's work to develop new rice varieties boosted rice yields by up to 13% across three Southeast Asian countries.

The report showed that across Vietnam, Thailand, and the Philippines, rice farmers were harvesting an extra USD 1.46 billion worth of rice **per year** as a result of IRRI's work.

To put this figure in context, the value attributed to IRRI's research in these three countries in one year alone exceeds IRRI's cumulative budget of approximately USD 1.3 billion since its founding in 1960.

## Multiplying the value of donor investments

A USD 12 million investment in rice research over 16 years by the Swiss government has returned more than USD 70 million in benefits to rice farmers and national economies in four Asian countries, according to an impact assessment report.

The report, commissioned by the Swiss Agency for Development and Cooperation (SDC), showed that the sixfold return on investment is, in fact, a conservative estimate, as only a subset of the farming technologies funded was assessed.

It was also estimated that, by 2016, the return on investment could skyrocket to 25 times the original investment.

# Impact: Improving lives and the environment

## Ensuring food security

About 40 stress-tolerant rice varieties from IRRI have been commercialized since 2012, reaching millions of farmers in South Asia and Africa. In Bangladesh, drought-tolerant rice helps farmers grow multiple crops of rice within one year. Therefore, they can produce more rice to consume and sell, thus improving their food security.

## Protecting the environment

IRRI has called for the elimination of certain pesticides in rice that can cause pest outbreaks when misapplied. Instead, IRRI advocates restoring the natural ecological balance of rice fields to encourage natural pest control. By adopting this practice, rice farmers in Vietnam have reduced their pesticide use by more than 20% without production losses. Farmers in other countries are also using the practice and reaping similar benefits.

## Engaging women

IRRI is helping ex-combatant women in the Central African country of Burundi to establish and manage rice crops, thus providing them with a livelihood. After the first year of the project, the women became self-sufficient in rice and began financing the rice production themselves. The project is being used as a model to engage other women in Burundi.

## Tackling climate change

Across the Philippines, farmers are adopting “alternate wetting and drying,” a management practice that can save as much as 25% of irrigation water without crop loss. Farmers will be able to cope with water shortage that occurs with climate change. The practice also reduces methane emissions generated by rice production by up to 50%, thus helping reduce the impact of greenhouse gases from rice production on the atmosphere.

## Reducing poverty

Delivery of IRRI-bred rice varieties has increased farmers' returns by USD 127 a hectare in southern Vietnam, USD 76 a hectare in Indonesia, and USD 52 a hectare in the Philippines. This represents only the economic impact of IRRI's breeding work in just three countries, yet IRRI's efforts go far beyond simply creating new varieties and cover many more countries.



## What our donors say

*“This new [IRRI] rice can survive up to 20 days underwater so, when rains flood their fields, farmers are now getting twice the yield compared with that of the old rice variety. The impact on farmers' lives is enormous—in a flood year, they have seen their incomes double.” (2013)*

### Sam Dryden

Former Director of Agricultural Development, Bill & Melinda Gates Foundation

*“Finding a way to double the amount each [rice] plant produces would help to feed many more of the very poorest. This new funding will enable the International Rice Research Institute to begin producing prototypes of this ‘super rice’ for testing. This could prove a critical breakthrough in feeding an ever-growing number of hungry mouths.” (2012)*

### Lynne Featherstone

UK Parliamentary Undersecretary of State for International Development

*“IRRI's high levels of return on investment, as found by the ACIAR study, show how Australians can really make a difference by effectively targeting our aid dollars.” (2011)*

### Kevin Rudd

Former Prime Minister of Australia

## For more information:

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