

# THE INTERNATIONAL RICE GENE BANK

The International Rice Genebank at the International Rice Research Institute (IRRI) holds in trust 126,782 (as of January 2015) types of rice that include modern, traditional, and wild varieties. It is the largest collection of rice genetic diversity in the world, and continues to grow as countries send seeds for conservation and sharing for common public good.

International treaties and agreements ensure fair and responsible sharing and use of this unparalleled repository of genetic diversity of rice, from which IRRI provides rice seeds to farmers and researchers for free.

The species of rice conserved in the Genebank can be broadly categorized into:

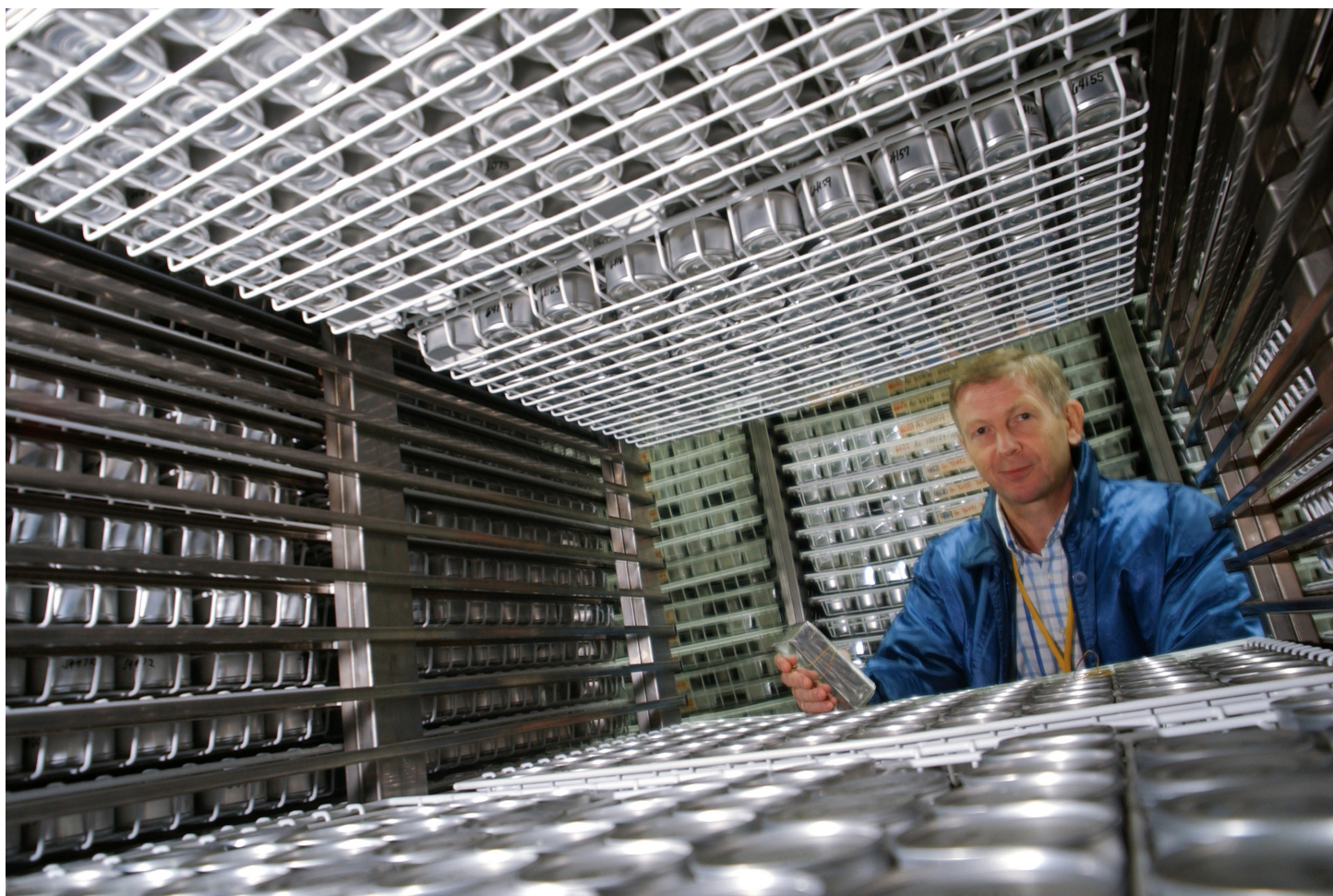
- *Oryza sativa*, or Asian rice, is most commonly grown and eaten globally. It can be further classified into two big

groups: indica and japonica (which includes temperate and tropical japonica).

- *Oryza glaberrima*, or African rice, originated in West Africa. It is not widely cultivated but has been used to breed other types of rice grown in Africa.
- Wild species related to *O. sativa* and *O. glaberrima* are found in Asia, Africa, Australia and the Americas. The collection includes all species of *Oryza* and a few related genera.

## Why conserve the genetic diversity of rice?

Crop diversity is the foundation of the genetic improvement of crops. IRRI seeks to understand this diversity by uncovering new genes and traits in rice that will help the rice crop thrive better and thus help farmers harvest well even with multiple challenges brought about by climate change, pests and disease, and other unfavorable conditions.





The IRRI Genebank collection has duplicates as back-up in Fort Collins, Colorado, USA, and at the Svalbard Global Seed Vault in Svalbard, Norway.

Inset:  
The Svalbard Global Seed Vault's construction was funded by the Norwegian government. The Vault is administered and managed by the Global Crop Diversity Trust and the Nordic Genetic Resource Center (NordGen).



### How does the Genebank conserve and share seeds?

Seeds of every different variety are stored in two types of collections: the base and active collections. The base collection is kept for long-term conservation, frozen at minus 20°C. The active collection is stored in less icy temperatures of 2–4°C and is where seeds for distribution are kept.

Seeds in the Genebank have the potential to remain viable for many decades. If viability falls below 85%, a sample of the remaining seeds is planted to produce fresh seeds for storage. IRRI ensures that best practices are used to conserve this vital genetic resource, following the guidelines set by the Food and Agriculture Organization (FAO). IRRI also carries out research to to further reduce the risk of losing any of the genetic diversity.

IRRI shares seeds of small quantities free of charge on demand to any individual or organization anywhere in the world for the purposes of research, breeding, or training for food and agriculture, using guidelines set by International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), under an agreement signed in October 2006.

### International Rice Research Institute (IRRI)

The International Rice Research Institute (IRRI) is the world's premier research organization dedicated to reducing poverty and hunger through rice science; improving the health and welfare of rice farmers and consumers; and protecting the rice-growing environment for future generations. IRRI is an independent, nonprofit research and educational institute founded in 1960 by the Ford and Rockefeller foundations, with support from the Philippine government. The institute, headquartered in Los Baños, Philippines, has offices in 15 rice-growing countries in Asia and Africa, and about 1,180 staff members of 41 nationalities.

Working with in-country partners, IRRI develops advanced rice varieties that yield more grain and better withstand pests and disease as well as flooding, drought, and other destructive effects of climate change. More than half of the rice area in Asia is planted to IRRI-bred varieties or their progenies. The institute develops new and improved methods and technologies that enable farmers to manage their farms profitably and sustainably, and recommends rice varieties and agricultural practices suitable to particular farm conditions as well as consumer preferences. IRRI assists national agricultural research and extension systems in formulating and implementing country rice sector strategies.

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See process of acquiring seeds from the Genebank here:



### Submit your inquiries or seed requests to:

Flora de Guzman

Email: [f.deguzman@irri.org](mailto:f.deguzman@irri.org)

Fax: +63-2-5805699

Telephone: +63-2-5805600 ext 2308