The two foundations later adopted the IRRI model in forming three other international agricultural research centers: the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, the International Center for Tropical Agriculture (CIAT) in Colombia, and the International Institute of Tropical Agriculture (IITA) in Nigeria.

The U.S. government became a donor to IRRI when the U.S. Agency for International Development (USAID) provided the institute with a grant in 1965. USAID has since been a major supporter of IRRI’s work in developing agricultural equipment suited to Asia’s small-scale rice farms. Research and development in this field helped improve employment in rural areas, lower the costs of rice production and marketing, and improve the designs of agricultural equipment to better fit local conditions.

Key achievements

- **Flood-tolerant rice.** *SUB1*, the gene responsible for flood tolerance in rice, was successfully identified in 2006 through a USAID-supported project. Since then, it has been bred into megavarieties across Asia, making it possible for farmers to harvest rice where there has been flooding for even up to two weeks. Swarna-Sub1 (from Swarna, a popular variety in India) is now grown on more than 5 million hectares since its release in 2009.

- **Spread of stress-tolerant rice seeds.** Another project supported by USAID enabled the delivery of high-yielding (HYVs) and stress-tolerant rice varieties (STRVs) to almost 1 million farm households on more than 200,000 hectares of rice area in southern Bangladesh. Two years of direct intervention and indirect spillovers resulted in about 1.9 million hectares of rice area planted to HYVs and STRVs, adding no less than 1.9 million tons to the country’s rice production and bringing benefits to an estimated 2.75 million farm households during the period.

- **Conserved rice genetic diversity.** The International Rice Genebank has received more than 5,500 types of rice from U.S. partners.

- **Building scientific capacity.** From 1962 to 2016, 326 scholars from the U.S. completed their studies and short training courses at IRRI. Of these scholars, 36 completed their doctorates, 10 their master’s degrees, and one a bachelor’s degree; 57 were interns, 17 were on-the-job trainees, and 205 were participants of various short courses at IRRI.
Breeding better rice. IRRI is developing rice varieties tolerant of drought, flooding, heat, cold, and other environmental stresses through the Stress-Tolerant Rice for Africa and South Asia (STRASA), Stress-Tolerant Rice in Vulnerable Environments (STRIVE), and Green Super Rice (GSR) projects.

Making rice healthier. With support from donors in the U.S., IRRI is working with several partners to further develop and evaluate Golden Rice. Bred to contain beta-carotene, a source of vitamin A, Golden Rice could potentially complement current interventions in addressing vitamin A deficiency among rice consumers.

Better rice farming systems. The Cereal Systems Initiative for South Asia (CSISA) seeks to improve productivity and farm income in India, Bangladesh, Nepal, and Pakistan through innovative partnerships with the public and private sectors in the development and deployment of improved varieties, sustainable crop and resource management technologies, and sound policies to drive economic growth.

Improving rice farming practices in coastal areas in Bangladesh. With funding from USAID, IRRI has partnered with Kansas University in teaching pragmatic farming approaches that aim to unlock the potential of rice production in rural polder communities in Southern Bangladesh.

Implementing integrated pest management for vegetable and mango. IRRI has partnered with the Virginia Polytechnic Institute and State University to work on water supply management, and in reducing agricultural losses and ecosystem damages caused by pests in vegetable and mango production in Asia.

Informing USAID’s climate change strategy. IRRI, through CCAFS, is working with the USAID’s Office of Climate Change to inform and guide their strategy on reducing net greenhouse gas (GHGs) emissions related to agriculture.

Delivering high-density genomics breeder tools. Donors from the U.S. are funding a project at IRRI that provides genomics support to rice breeding programs in several centers.