



Consultative Group on International Agricultural Research

International Rice Research Institute (IRRI)

Los Baños, Philippines

www.irri.org

Background Information on IRRI Shipment to Svalbard Global Seed Vault

The International Rice Research Institute (IRRI) holds the world's largest and most diverse collection of rice: 108,925 accessions in total, or around 20 percent of the total holdings of rice conserved in all genebanks around the world. These include 102,794 samples of the Asian cultivated rice *Oryza sativa* (mostly traditional varieties); 1,656 samples of the African cultivated rice *O. glaberrima*; 4,475 samples of all known wild species and interspecific hybrids in the genus *Oryza*; and 20 samples of nine genera related to *Oryza*. The collection was begun in 1960; by 1965 it was already the world's largest single collection and it has retained that status ever since. One hundred and twenty four countries from all continents except Antarctica have sent wild or cultivated rice to be conserved in the collection—that is almost every country where rice grows.

Sub-samples have been taken from around 70,000 of these accessions to be sent to Svalbard during January-February 2008, to be deposited in the Svalbard Global Seed Vault during the opening ceremony on 26 February. The process of preparing the materials has been intensive and laborious. It began in August 2007, and the final packets were still being prepared and packed at the beginning of January 2008. The sub-samples have been packed into over 100 boxes and will probably be the largest single deposit of accessions from any genebank.

Sub-samples of the remaining 40,000 accessions are expected to be deposited later in 2008 or 2009 so that the entire collection will be securely duplicated.

The accessions are being sent, and will be conserved in the Svalbard Global Seed Vault by the Nordic Gene Bank under a "black box" agreement by which the Nordic Gene Bank must not break the seals of the box. They will know what rice varieties are contained within each box, but they will not see the contents.

Rice agriculture depends on the diversity seen in the rice genebank. If a new rice disease appears, researchers can search the genebank for resistant varieties. The genes required to make rice more tolerant of drought, for example, exist within the varieties contained in the collection. The genebank contains the genetic diversity we need to respond to changes in climate, consumer preferences, agricultural technologies, and government priorities.

The immeasurable value of seed banks has been seen many times in the past. One notable example is the use of Cambodian rice varieties stored in IRRI's genebank. Cambodian rice farming was devastated following years of civil destruction in the 1970s, and a starving population had eaten the nation's seed stocks. With samples of the country's rice varieties safely stored at IRRI, however, the rice industry was able to be re-established.

For more information, contact Adam Barclay, IRRI, DAPO Box 7777, Metro Manila, Philippines; tel: +63-2-580-5600; fax: +63-2-580-5699; email a.barclay@cgiar.org.