African seed collection first to arrive in Norway on route to Arctic seed vault

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Twenty-one boxes filled with 7,000 unique seed samples from more than 36 African nations were shipped to the Svalbard Global Seed Vault, a facility being built on a remote island in the Arctic Circle as a repository of last resort for humanity's agricultural heritage.

The vault is being built by the Norwegian government as a service to the global community, and a Rome-based international NGO, the Global Crop Diversity Trust, will fund its operation. The vault will open on 26 February 2008.

The shipment, which was sent by the Ibadan, Nigeria-based International Institute of Tropical Agriculture (IITA), consists of thousands of duplicates of unique varieties of domesticated and wild cowpea, maize, soybean, and Bambara groundnut. The seeds from the IITA genebank in Ibadan, Nigeria, were packed in 21 boxes weighing a total of 330 kg. The processing by IITA staff took several months, and the boxes were packaged over a three-day period, with 10 staff checking the accession list, reporting errors, and adjusting the inventory, as needed.

The seeds were shipped on to Oslo on route to the village of Longyearbyen on Norway's Svalbard archipelago, where the vault has been constructed in a mountain deep inside the Arctic permafrost.

"IITA's genebank houses the world's largest collection of cowpea, with over 15,000 unique varieties from 88 countries around the world," said Dr Dominique Dumet, genebank manager at IITA. "Our collection holds

in-trust about 70 percent of cowpea landraces from Africa. Cowpea (also known as black-eyed pea in the USA) is a key staple in Africa, offering an inexpensive source of protein."

This month, other centers supported by the Consultative Group on International Agricultural Research (CGIAR) began packing and shipping duplicate collections from Benin, Colombia, Ethiopia, India, Kenya, Mexico, Peru, the Philippines, and Syria. Collectively, the CGIAR centers maintain 600,000 plant varieties in crop genebanks, which are widely viewed as the foundation of global efforts to conserve agricultural biodiversity.

Crop biodiversity is the raw material needed to equip crops with critical resistance to pests and diseases, and enable them to grow in harsher conditions of drought, salinity, and flooding, which will likely increase with global climate change, particularly in poor nations.

Cowpea and dozens of other crops, like cassava, yams, and millets, are known as "orphan" crops, because they receive less attention than they deserve relative to their value and importance.

According to researchers at the World Vegetable Center in Taiwan, collectively, 27 "orphan" crops with a value of $100 billion are grown on 250 million hectares (618 million acres) in developing countries.

"So called 'orphan' crops like cowpea and groundnut are not minor or insignificant crops," said Cary Fowler, executive director of the Global Crop Diversity Trust. "They are of great importance to regional food security. In addition, they are often adapted to harsh environments and are diverse in terms of their genetic, agroclimatic, and economic niches."

These crops may also vary in less obvious characteristics, such as their response to cold, heat or drought, or their ability to tolerate specific pests

and diseases. Farmers and scientists continually draw on the genetic diversity held in crop collections like IITA's to ensure productive harvests.

"Our ability to endow this facility with such an impressive array of diversity is a powerful testament to the incredible work of scientists at our centers, who have been so dedicated to ensuring the survival of the world's most important crop species," said Emile Frison, Director General of Rome-based Bioversity International, which coordinates CGIAR crop diversity initiatives.

Storage of these and all the other seeds at Svalbard is intended to ensure that they will be available for bolstering food security should a manmade or natural disaster threaten agricultural systems, or even the genebanks themselves, at any point in the future.

Source: CGIAR

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