Red Hot Chili Peppers Arrive in Sub-Zero Arctic Seed Vault

A new collection of some of North America's hottest foods -- an eclectic **range** of New World chili peppers -- were **delivered** to the cool Arctic Circle environs of the Svalbard Global Seed Vault this week, where their exotic tongue-scorching **qualities** can be kept safe for centuries.

The seeds were delivered to the vault by a seven-person delegation from the U.S. Congress, led by Senator Benjamin L. Cardin (D-MD), Chairman of the U.S. Helsinki Commission, and **including** Assistant Senate Majority Leader Dick Durbin (D-IL). The seeds were **handed over** to Dr. Cary Fowler, Executive Director of the Global Crop Diversity Trust, the institution that funds the operation and **management** of the seed vault, as well as the transport of unique seeds from collections around the world. The latest **samples** of seeds come from the United States Department of Agriculture (USDA) National Plant Germplasm System (NPGS) in Fort Collins, Colorado. The so-called "doomsday" seed vault now **contains** seeds of more than 525,000 **crop** varieties, making it the most **diverse** collection of crop diversity amassed anywhere in the world. Overall, this week's deposit **consists of** a total of 537 varieties of 13 **crops**.

It includes Wenk's Yellow Hots, a pepper that starts out yellow and hot and cools somewhat to red and medium-hot; Pico de Gallo or "Rooster's beak," a medium-hot salsa staple; and the **unpredictable** San Juan "Tsile," a New Mexico chili still grown by elder farmers in a Native American pueblo that can be anything from mild to medium to hot.

"The world is interdependent when it comes to crop diversity, the essential raw material needed for a healthy and **sustainable** food **supply**," said Senator Cardin. "As we manage the **impact** of climate change around the world, the seed vault in Svalbard will be the safety deposit box that **ensures** we can keep that food supply intact." "The journey of the chili pepper from the **indigenous** cultures of the Americas to its **current** status as an essential ingredient in many Indian and Asian cuisines is a marvelous **example** of the global spread of **agricultural** diversity," said Senator Udall. "I'm very pleased that we are saving one of New Mexico's most famous and most delicious crops in the Svalbard Global Seed Vault."

The USDA's Agricultural Research Service (ARS) has sent tens of thousands of seeds from its National Plant Germplasm System to the Svalbard Global Seed Vault since January 2008. "Our goal, over the next 10 to 15 years, is to have the majority of the system's 511,000 collections represented in the Svalbard vault," said Edward B. Knipling, ARS administrator.

He added, "While we've sent samples from some very **familiar** crop species, such as maize, soybeans, and peanuts, we're also sending more exotic germplasm, such as seeds of the wild strawberry Fragaria iturupensis, collected from the island of Iturup on the lower slopes of the Atsunupuri Volcano in far eastern Russia. ARS has a strong commitment to sharing its crop diversity to **ensure** that Svalbard is well positioned to help **protect** the world's genetic diversity."

In addition to this **variety** of chili peppers, the Fort Collins collection also deposited in the vault this week melons, peanuts, beans, sesame, hibiscus, squash, gourd, and 448 different varieties of sorghum. Sorghum is a crop that is grown around the world and is a dietary staple for 500 million people in over 30 countries. It is getting **renewed attention** as a "climate change ready" crop **due to** its **ability** to withstand hot and dry **conditions**. "Sorghum is an amazingly versatile crop -- it's used for flour, bread, animal feed, beer and, **increasingly**, biofuels -- and it's **likely** to become ever more important to global food security given its drought tolerance," said Fowler. "But production in many areas is threatened by **insect** pest and plant disease," he continued. "This **intensifies** the need to **conserve** sorghum diversity so that plant breeders can find the genetic traits they need **to equip** this important crop for these **challenges**."

The seed vault was constructed **deep** in a mountain on a remote Norwegian archipelago near the North Pole as a fail-safe back-up to existing crop collections around the world. Collections are **constantly under threat** from wars and natural disasters but also small but important threats like **lack of** funding to pay for electricity to store seeds in refrigerators. The seeds in the vault are the **property** of the country or institution that sent them and are available in the public domain through these institutions. Crop collections around the world serve the daily needs of farmers and plant breeders in their work to find new **traits** that can **boost** yields or address problems posed by diseases, **pests** or shifting climate conditions.

Source: Science Daily