Saving our seeds: An emergency reserve for genebanks in peril

Seed regeneration plots t ICARDA's Terbol station in Lebanon. Photo: Crop Trust/Michael Major.

Genebanks are the foundation of the world's food supply. They conserve the diversity of crops and their undomesticated cousins and make it available to researchers, breeders and farmers, helping our food systems adapt to the ever-increasing challenges of climate change.

Yet, such collections are not indestructible. Natural disasters, political crises, pest and disease outbreaks, equipment failure and, most recently, the challenges caused by the global pandemic can place them in jeopardy and trigger catastrophic loss of the invaluable resources they conserve.

The permanent loss of crop diversity makes it harder to develop new crops that can withstand climate change and feed a growing world population.

Coming together to build a new safety net

The "Emergency Reserve for Genebanks" has been set up to avert just such a scenario. Established jointly by the Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture ("Plant Treaty") and the Global Crop Diversity Trust ("Crop Trust"), the Reserve provides a funding mechanism that can respond rapidly whenever there is an imminent threat to collections of crop diversity that fall under the framework of the Plant Treaty.

The Emergency Reserve is a component of a new 10-year project, "Biodiversity for Opportunities, Livelihoods and Development" (BOLD). Funded by the Government of Norway and launched in 2021, BOLD will help to strengthen food and nutrition security worldwide by supporting the conservation and use of crop diversity in genebanks. The permanent loss of crop diversity makes it harder to develop new crops that can withstand climate change and feed a growing world population.



Drawing on past experiences

Although there has been no formal mechanism to provide emergency support to crop collections until now, the Reserve builds upon experience gained from responding to past requests for critical intervention.

CASE 1: In 2019, the Philippine national genebank based at the National Plant Genetic Resources Laboratory, Los Baños, requested urgent funds from the Crop Trust to restore its seed-drying facility, which had been put out of service by storm-related flooding and power outages. An emergency grant from the Crop Trust allowed the genebank to install a new drying room with a dehumidifier and cooling system, allowing it to continue to add new material to the genebank collection and to regenerate and distribute seed samples of the cereals, legumes, vegetables and other crops it holds.

CASE 2: In August 2017—the hottest time of the year in Yemen—a cooling unit failed at the national genebank at the National Genetic Resources Center in Dhamar, Yemen. Without swift action, this could have resulted in the loss of more than 6,000 seed samples stored there. The Crop Trust stepped in with an emergency grant to buy a new engine for the cooling unit and save the seeds.

CASE 3: When war broke out in Syria in 2011, it put at risk the genebank collection at the International Center for Agricultural Research in the Dry Areas (ICARDA)—one of the world's most important seed collections. An internationally coordinated multi-year rescue effort saw 99% of the collection deposited for safekeeping in the Svalbard Global Seed Vault in Norway, preserving this priceless heritage. Much of the collection has since been regenerated to once again provide enough seed to distribute to researchers and breeders under the terms of the Plant Treaty.

About the International Treaty on Plant Genetic Resources for Food and Agriculture

The Plant Treaty, which came into force in 2004, supports the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use. A key element of the Plant Treaty is the "Multilateral System," which facilitates access to a pool of key genetic resources according to clearly defined rules. For more information, see /www.fao. org/plant-treaty/en/.

About the Global Crop Diversity Trust

The Crop Trust, founded in 2004, is an international organization working to support conservation and use of plant genetic resources. It provides direct support from its Endowment Fund for the management and maintenance of key genebank collections of crop diversity. The Crop Trust is recognized as an essential element of the Plant Treaty's funding strategy. For more information, see www.croptrust.org/.

Help where and when it's needed most

Through this partnership between the Plant Treaty and the Crop Trust, the Emergency Reserve for Genebanks will provide rapid support to genebank collections within the Multilateral System in low- and middle-income countries when there is an imminent threat to the collection and no alternative financial support is available. The Emergency Reserve will offer financial and technical assistance to repair equipment, procure supplies, evacuate collections or duplicate materials under threat.

Have further questions?

For media inquiries, please contact us via media@croptrust.org. For all other queries, including about eligibility to apply for support from the Emergency Reserve, please send an email to info@croptrust.org. Effects of the Syrian war seen in Aleppo in 2017. Photo: Unsplash/Aladdin Hammami.







