



CROP  
TRUST

ANNUAL  
REPORT

20  
22

Highlights from a bold year



“ The Crop Trust continues to play a leading role in supporting the world’s most important genebanks from our Endowment Fund, which is at the heart of our mission. But our work does not end there: We also address gaps in the global system for the conservation of crop diversity through projects that closely complement the work funded by the endowment.

*Stefan Schmitz,  
Executive Director, Crop Trust*

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Michael Major/Crop Trust

## Message from the Executive Director

I am immensely proud of what we have achieved together with our partners in 2022.

We neared the completion of a multi-year initiative—Breathing New Life into the Global Crop Conservation Strategies Project—and made major strides forward on a project called Biodiversity for Opportunities, Livelihoods and Development (BOLD), which will help strengthen 15 national genebanks over the next eight years. 2022 also marked the start of the Sweetpotato Project and the signing of agreements with 37 organizations holding important crop diversity collections, which can now be backed up in the Svalbard Global Seed Vault with our support. In addition, we helped raise awareness of our central mission by hosting a special stakeholders' gathering to celebrate crop diversity and we participated in the United Nations Climate Change Conference for the first time.

I am profoundly thankful to my staff, research and funding partners, and everyone who takes the time to savor and support crop diversity. We hope 2023 will be a year of unprecedented progress toward increased cooperation, greater climate commitments and innovative solutions to the food security crisis.

*Stefan Schmitz, Executive Director, Crop Trust*



Alfonso Cortes/Crop Trust



Michael Major/Crop Trust

*Genebanks and the invaluable collections of crop diversity they hold are the foundation on which we will build a food- and nutrition-secure future. The Crop Trust is now developing its strategy to 2030, with the ultimate objective of strengthening collective efforts towards an effective, goal-oriented and sustainable genebank system for the world. The Executive Board is delighted to see the progress the Crop Trust is making and championing the cause of genebanks and crop diversity.*

– Catherine Bertini, Chair of the Executive Board



Luis Salazar/Crop Trust



Sarada Krishnan/Crop Trust

*As I reflect on my first year as director of programs at the Crop Trust, I am proud of the great progress that we and our global network of partners have made in fulfilling our mission of safeguarding crop diversity and using it to make lives better. In 2023, I am excited to see how we will continue to build on the Crop Trust's almost 20-year legacy and to expand our work strengthening the capacity of genebanks around the world to ensure a sustainable global food system.*

– Sarada Krishnan, Director of Programs

## An endowment for the ages: Long-term support to genebanks

The Crop Trust was launched in 2004 to conserve and make crop diversity available for use, forever and for the benefit of everyone, through its Endowment Fund.

The Endowment Fund supports genebanks in two ways: through Long-term Grants (LTGs) and Long-term Partnership Agreements (LPAs).

LTGs cover a proportion of the costs of the essential operations of key genebanks around the world in perpetuity. The Crop Trust currently provides LTGs to these collections:

- Bioversity International, Belgium – Banana and plantain
- CIAT, Colombia – Bean and cassava
- CIMMYT, Mexico – Maize and wheat
- CIP, Peru – Sweetpotato
- ICARDA, Morocco and Lebanon – Barley, grasspea and lentil
- ICARDA, Syria – Faba bean and forages
- ICRISAT, India – Chickpea, pearl millet and sorghum
- IITA, Nigeria – Cassava and yam
- ILRI, Ethiopia – Forages
- IRRI, Philippines – Rice
- The Pacific Community (SPC), Fiji – Edible aroids and yam

Once a genebank meets agreed performance targets, it becomes eligible for a Long-term Partnership Agreement (LPA). An LPA covers all of the costs of essential operations of the genebank, forever. In 2018, the International Rice Research Institute (IRRI) and the Crop Trust signed an LPA which guarantees funding worth USD 1.4 million a year to support the conservation and availability of over 136,000 varieties of rice.

By the end of 2022, the Endowment Fund's value stood at USD 277 million.

In 2022, USD 10.9 million was withdrawn from the Endowment Fund to support these long-term commitments of the Crop Trust to genebanks, the Svalbard Global Seed Vault and some operational activities of the Crop Trust Secretariat. The funds withdrawn from the endowment were generously supplemented by donor contributions.





World Vegetable Center

## What we did – A year in science

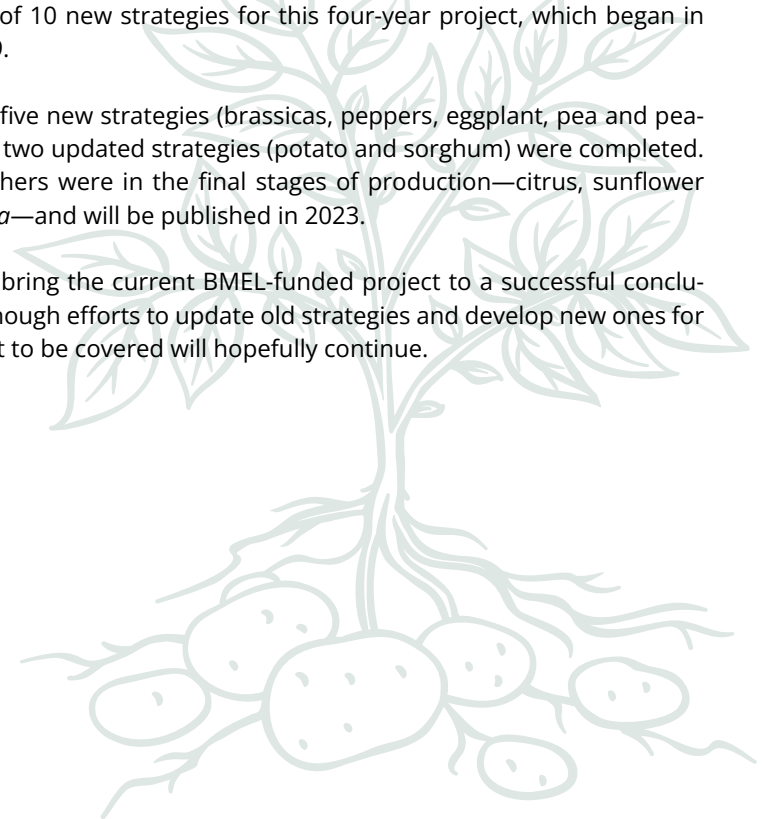
### A guiding light for global crop conservation

#### Breathing New Life into the Global Crop Conservation Strategies

The Global Crop Conservation Strategies bring together the latest information from experts worldwide to identify and prioritize actions in support of the long-term conservation and availability of the diversity of specific crops and their gene pools. With funding from the German Federal Ministry of Food and Agriculture (BMEL), the Crop Trust is facilitating the update of five existing global crop conservation strategies and the development of 10 new strategies for this four-year project, which began in July 2019.

In 2022, five new strategies (brassicas, peppers, eggplant, pea and peanut) and two updated strategies (potato and sorghum) were completed. Three others were in the final stages of production—citrus, sunflower and *Vigna*—and will be published in 2023.

This will bring the current BMEL-funded project to a successful conclusion, although efforts to update old strategies and develop new ones for crops yet to be covered will hopefully continue.



## BOLD strides into the future

### Biodiversity for Opportunities, Livelihoods and Development (BOLD) Project

BOLD is a 10-year project, funded by the Government of Norway, that builds on the successes and achievements of the Crop Wild Relatives Project to strengthen food and nutrition security worldwide. Launched in 2021, BOLD marked its first full year of operation in 2022, and the team took a number of major strides forward. Teams of genebank experts from around the world completed external reviews of the 15 national genebanks that will receive tailored support from the project to enhance their conservation, management and use of crop diversity.

In late 2022, the National Genetic Resources Center (NGRC) in Yemen became the first genebank to receive funding under the Emergency Reserve for Genebanks—the only such formal facility to provide financial support to genebanks under imminent threat. The Emergency Reserve was made possible in part due to financial support provided by the Government of Norway through BOLD.

In October 2021, the Crop Trust and its partners launched a competitive grant scheme to support the regeneration and backing-up of crop diversity in another genebank and in the Svalbard Global Seed Vault. By the end of 2022, the project had signed agreements with 38 applicants in 29 countries.

“ Before the Emergency Reserve, there was no ready source of funding to aid genebanks in their times of acute need. We have stepped in on a number of occasions to help genebanks around the world facing emergency situations, but this puts it all on a surer footing.

*Stefan Schmitz,  
Executive Director, Crop Trust*

**Discover more at [bold.croptrust.org](https://bold.croptrust.org)  
and [cwr.croptrust.org](https://cwr.croptrust.org)**





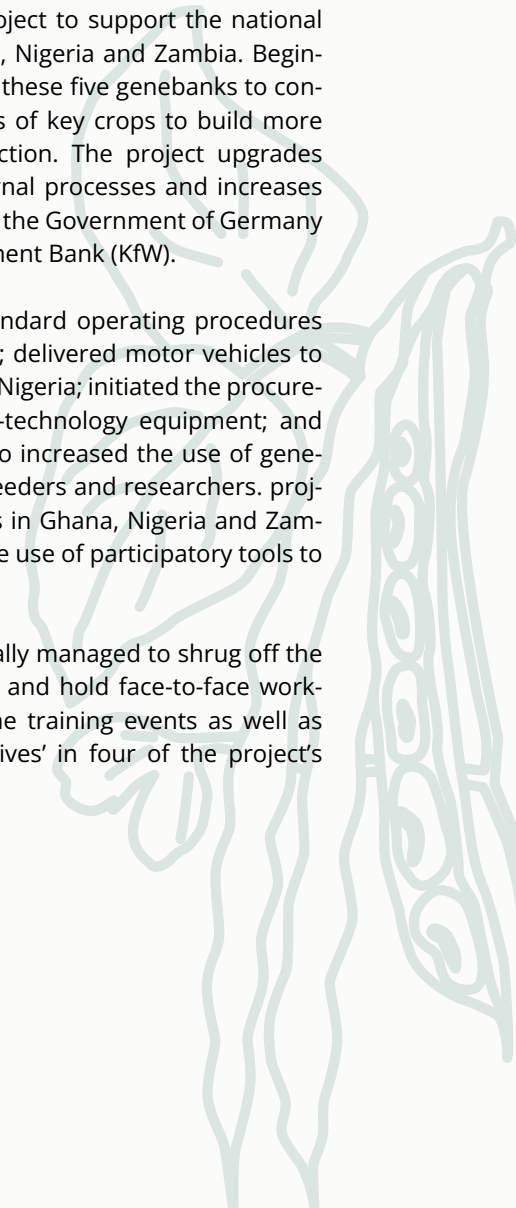
## Banking on African heritage

### Seeds for Resilience Project

Seeds for Resilience is a five-year project to support the national genebanks of Ethiopia, Ghana, Kenya, Nigeria and Zambia. Beginning in 2019, the project aims to help these five genebanks to conserve, share and use their collections of key crops to build more resilient and diversified food production. The project upgrades genebank equipment, improves internal processes and increases staff technical capacity. It is funded by the Government of Germany (BMZ), through the German Development Bank (KfW).

In 2022, the project documented standard operating procedures for acquisition and safety duplication; delivered motor vehicles to the national genebanks of Ghana and Nigeria; initiated the procurement of laboratory and information-technology equipment; and addressed operations backlogs. It also increased the use of genebank collections by farmers, plant breeders and researchers. Project consultants visited the genebanks in Ghana, Nigeria and Zambia to coach and advise partners in the use of participatory tools to engage with farmers.

In April 2022, Seeds for Resilience finally managed to shrug off the strictures of the COVID-19 pandemic and hold face-to-face workshops. There were also several online training events as well as quality management systems 'intensives' in four of the project's countries.



**CONTRIBUTIONS TO FUTURE CROP DIVERSITY CONSERVATION:** At the end of 2022, the market value of the Endowment Fund stood at USD 277 million.

*New contributions to the Endowment Fund, in the amount of USD 8.5 million, were received from three donors: USAID, the Government of New Zealand and Groupe Limagrain. USD 10.9 million were withdrawn from the fund to support the core mission of the Crop Trust.*

**CROP DIVERSITY CONSERVED & USED:** USD 7.3 million in grants were provided to fund projects that strengthen the conservation and use of crop diversity.

*The Crop Trust, with the help of its partners, conducted a wide variety of program activities in 2022, including the Seeds for Resilience Project, and the new BOLD Project.*

**CROP DIVERSITY SAFELY BACKED UP:** Nearly 85,000 seed samples were added to the Svalbard Global Seed Vault.

*As of December 2022, the Svalbard Global Seed Vault safeguards 1,194,944 seed samples from 93 genebanks and research institutions worldwide.*

**CROP DIVERSITY DOCUMENTED:** 3,055,199 records of genebank samples were updated in Genesys in 2022.

*As of December 2022, Genesys made 4,281,450 records of genebank samples publicly available to enable users worldwide to explore, identify and request crop diversity for breeding and research.*



Michael Major/Crop Trust

**CROP DIVERSITY USED:** Forty years ago, scientists in Syria collected seeds of *Aegilops speltoides*, a wild relative of wheat.

*As part of the Crop Trust's Crop Wild Relatives Project, these seeds were cross-bred with cultivated wheat, leading to the release of the new durum wheat variety Jabal to farmers in Morocco in 2022.*

**CROP DIVERSITY HIGHLIGHTED:** In 2022, the Crop Trust was mentioned in the media more than 700 times, reached about 1 million people every month across its social media channels and welcomed almost 300 people—in person and online—at the inaugural stakeholders' gathering to celebrate crop diversity in Bonn, Germany.

*The Crop Trust's Executive Director, Stefan Schmitz, and other staff travelled the globe and also attended numerous online events to raise awareness of the importance of crop diversity for food and nutrition security, and of the crucial role of the Endowment Fund.*



The  
year in  
numbers

## Laying the foundations for better grasspea and finger millet

### Safeguarding Crop Diversity for Food Security: Pre-breeding Complemented with Innovative Finance

In 2022, the project entered its fourth and final year. Funded by Templeton World Charity Foundation, Inc., this builds on the Crop Trust's Crop Wild Relatives (CWR) Project to improve grasspea and finger millet. Scientists advanced CWR-derived breeding lines and landraces of the two crops to develop new, more-nutritious, better-adapted and more-resilient varieties.

Partners completed an analysis of the neurotoxin content of a diverse collection of grasspea samples. By the end of the year, some improved breeding lines were ready for large-scale evaluation in farmers' fields. In 2022, a coordinated regional finger millet breeding consortium in East Africa was created, and germplasm was widely shared for conservation and use.

The project also explored innovative mechanisms for financing the conservation and study of crop diversity, providing valuable inputs to the Crop Trust's future fundraising strategy.





## A chill solution for tomorrow's sweetpotatoes

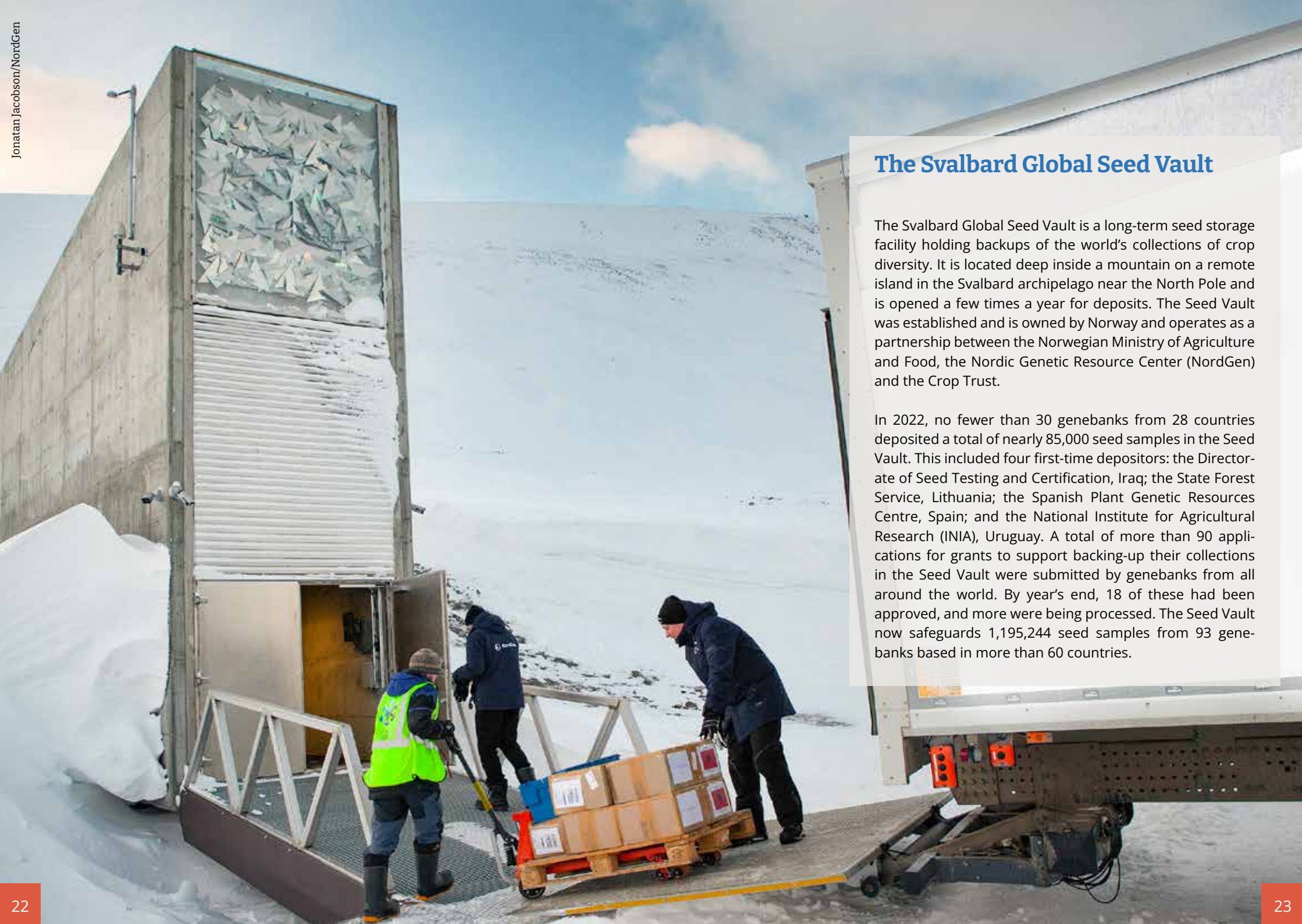
### The Sweetpotato Project

A new project, funded by the UK Government's Darwin Initiative, is preserving sweetpotato landraces from Madagascar and Zambia, cleaning them of diseases so they can yield better, and putting them back into the hands of farmers.

In 2022, the Crop Trust, together with the International Potato Center (CIP), the Zambia Agricultural Research Institute (ZARI) and Fiompiana Fambolena Malagasy Norvéziana (FIFAMANOR) in Madagascar, initiated the three-year project to test a model that could also serve for other crops that are not conserved as seed.

Around 80 landraces were collected in Madagascar and 30 were selected from Zambia. All were placed in *in vitro* collections, and more than 60 landraces from the two countries underwent heat treatment and shoot-tip culture to eliminate pathogens. DNA fingerprinting of the entire set is now under way. Meanwhile, national programs received training *in vitro* multiplication, disease cleaning and record-keeping and even photography.

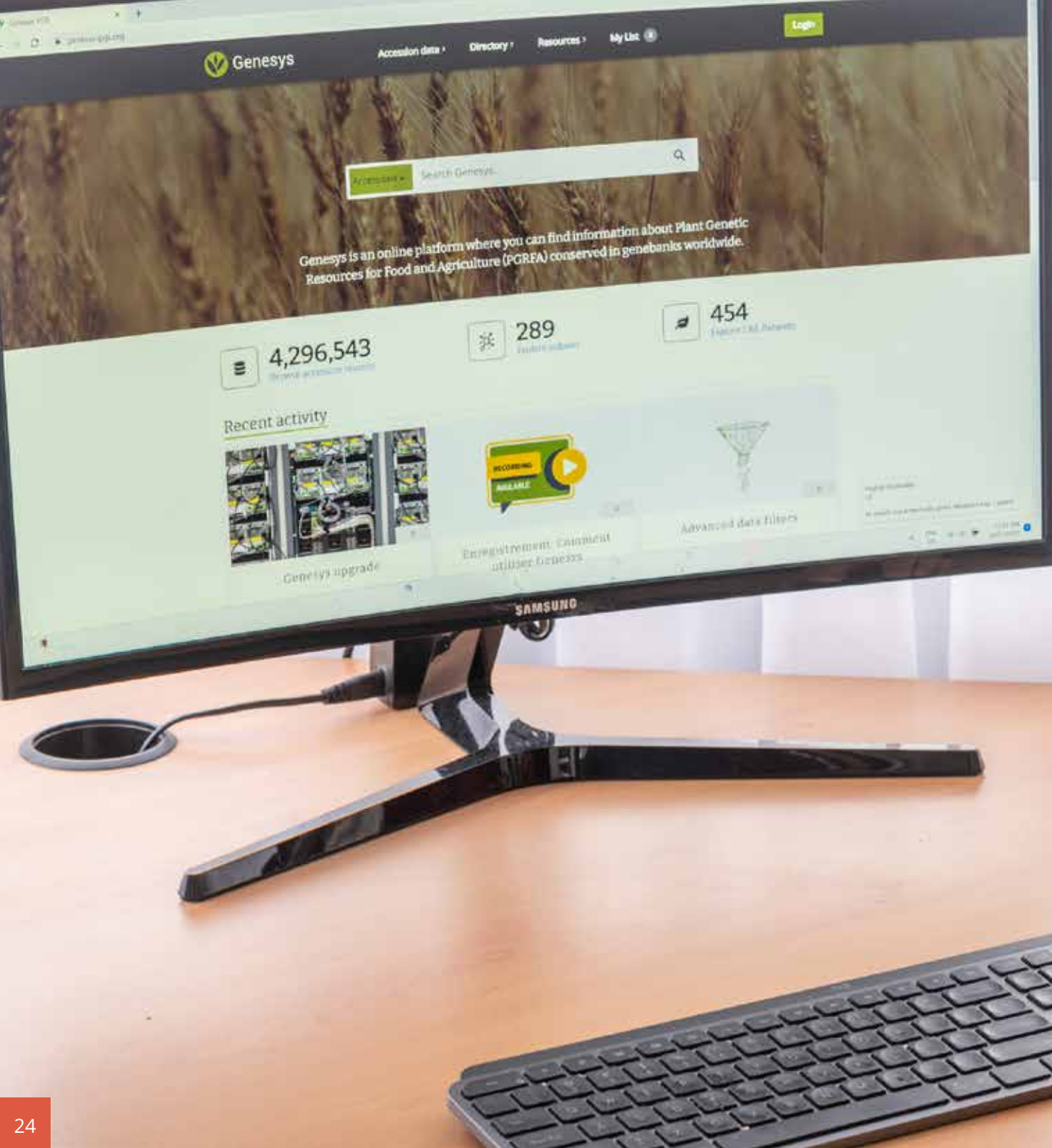




## The Svalbard Global Seed Vault

The Svalbard Global Seed Vault is a long-term seed storage facility holding backups of the world's collections of crop diversity. It is located deep inside a mountain on a remote island in the Svalbard archipelago near the North Pole and is opened a few times a year for deposits. The Seed Vault was established and is owned by Norway and operates as a partnership between the Norwegian Ministry of Agriculture and Food, the Nordic Genetic Resource Center (NordGen) and the Crop Trust.

In 2022, no fewer than 30 genebanks from 28 countries deposited a total of nearly 85,000 seed samples in the Seed Vault. This included four first-time depositors: the Directorate of Seed Testing and Certification, Iraq; the State Forest Service, Lithuania; the Spanish Plant Genetic Resources Centre, Spain; and the National Institute for Agricultural Research (INIA), Uruguay. A total of more than 90 applications for grants to support backing-up their collections in the Seed Vault were submitted by genebanks from all around the world. By year's end, 18 of these had been approved, and more were being processed. The Seed Vault now safeguards 1,195,244 seed samples from 93 genebanks based in more than 60 countries.



## No data? No conservation.

Genesys is an online portal that allows users to explore the world's crop diversity conserved in genebanks. At the end of 2022, it housed information on nearly 4.3 million accessions, with data from 41 data providers. Data on more than 3 million genebank accessions were refreshed and confirmed in Genesys, bringing 94 percent of accessions up to date.

The Ethiopian Biodiversity Institute joined Genesys in 2022, and a new-look Genesys portal was launched in June. Meanwhile, nine updates were released for the GRIN-Global Community Edition (GGCE) software, which is used internally in many genebanks as a solution to data-driven management of collections.

**Discover more on [genesys.pgr.org](https://genesys.pgr.org)**

## Partnerships and organizational news

The Crop Trust made a number of important institutional strides forward in 2022, including: receiving an endowment contribution from a private company; signing a memorandum of understanding with CGIAR; and issuing the first grant under the Emergency Reserve Fund. These, and other activities and achievements, were discussed at numerous key public events, such as the World Food Prize Foundation's roundtable on "Financing and Investments for Climate Action and Food System Transformation," the 27th Conference of the Parties of the United Nations Framework Convention on Climate Change (COP27) in Sharm El-Sheikh, Egypt, and the Ninth Session of the Governing Body of the Plant Treaty.

- A systematic review showed that the diversity of our organization grew in 2022 – the Crop Trust's 44 staff members represented 23 nationalities, while 64% of staff identified as women and 36% as men.
- The three-year project Strategic Development of the Crop Trust (Crop Trust 2.0) resulted in the Executive Board's approval of a financing strategy, a funded proposal to support the cryopreservation and use of sweetpotato diversity in sub-Saharan Africa, and the organization of several events focusing on the critical importance of conserving crop diversity.
- Executive Director Stefan Schmitz addressed the Plenary Session of the 2022 United Nations Climate Change Conference (COP27) in Sharm El-Sheikh, Egypt, where he announced a comprehensive plan developed by the Crop Trust and its partners to safeguard crop diversity collections and make them more readily accessible to farmers, plant breeders and researchers.
- Crop Trust Board Chair Catherine Bertini and Crop Trust staff took center stage at the Global Landscapes Forum (GLF) Climate 2022 conference (which ran alongside the COP27 summit), leading two key panel discussions.
- The Crop Trust co-hosted a session on Food Day at the 15th Meeting of the Conference of the Parties (COP15) to the Convention on

Biological Diversity (CBD), highlighting how countries can transform their food systems to meet targets of the Post-2020 Global Biodiversity Framework.

- The Crop Trust launched its new branding with a new-look website, featuring a crop diversity news hub called *The Crop Diversity Digest*, which provides a platform for outreach campaigns, a showcase for videos and podcasts, a home for the Crop Trust's events calendar, and a resource for media outlets.
- We celebrated 10 years of partnership with Rhodes College, under which one outstanding graduating student each year has the opportunity to work with the Crop Trust and further their interest in global affairs and crop conservation.
- In a new partnership between the Crop Trust and Schär, the South Tirol, Italy-based family business will contribute to the Crop Trust Endowment Fund to help safeguard the seeds of 500 varieties of gluten-free crops in international genebanks for the next 100 years and beyond.

Discover more in the  
digital report at  
[report.croptrust.org](https://report.croptrust.org)



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