



**Food and Agriculture
Organization of the
United Nations**



**International Treaty
on Plant Genetic Resources
for Food and Agriculture**

Item 16.4 of the Provisional Agenda

TENTH SESSION OF THE GOVERNING BODY

Rome, Italy, 20–24 November 2023

**Report of Norway on the Management and Operations of the Svalbard
Global Seed Vault**

Note by the Secretary

This document contains the report of the Government of Norway on the management and operations of the Svalbard Global Seed Vault, submitted in response to the invitation extended by the Ninth Session of the Governing Body through Resolution 14/2022.

The Governing Body is invited to take note of the information provided in this document and respond as it deems appropriate, taking into account the elements for a possible Resolution provided by the Secretary in the Annex to this document for its consideration.

UPDATES ON THE MANAGEMENT AND OPERATIONS OF THE SVALBARD GLOBAL SEED VAULT FOR THE PERIOD OF 2022–2023¹

I. INTRODUCTION

1. By June 2023, after 15 years of operation, ninety-nine genebanks have safety duplicated a total of 1 255 332 seed accessions of plant genetic resources or food and agriculture in the Svalbard Global Seed Vault (the Seed Vault). The Seed Vault offers free, long term, safety deposit of black box of safety duplicated unique orthodox seeds of plant genetic resources available in the Multilateral System of Access and Benefit-sharing. The facility designed for long-term deposit of seeds, is operated in line with the FAO Gene bank Standards for Plant Genetic Resources for Food and Agriculture (2014). These standards recommend that a “safety duplicate sample for every original accession should be stored in a geographically distant area, under the same or better conditions than those in the original genebank”.

2. The Svalbard Global Seed Vault was established by the Norwegian Government in 2008, as a contribution to the global community. It is operated in partnership between the Norwegian Ministry of Agriculture and Food, the Nordic Genetic Resource Center (NordGen) and the Global Crop Diversity Trust (Crop Trust).

II. SUMMARY OF ACTIVITIES IN 2022

3. Norway reported to the Ninth Session of the Governing Body on the first decade of management and operations of the Svalbard Global Seed Vault. This report to the Tenth Session of the Governing Body provides updates on progress made between then and June 2023.

4. In 2022, three openings were organized and, in total, 31 genebanks deposited 69 825 seed samples in 2022, which is a significant increase compared to 2021. Four gene banks deposited seeds for the first time in 2022, located in Spain, Lithuania, Iraq and Uruguay. More information on the seeds deposited in 2022 and on the content of the Seed Vault, is made available on the official website of the Svalbard Global Seed Vault (www.seedvault.no) and on the Seed Portal (Svalbard Global Seed Vault, nordgen.org) – the publicly accessible database on the deposited material in the Seed Vault.

Table 1. Seed Vault deposits and dates in 2022

Depositor / Acronym / Date of deposit	Inst. Code	Seed accessions
14th of February		
Julius Kühn Institute (JKI)	DEU451	5
The Australian Pastures Gene bank (SARDI)	AUS167	6242
National Agricultural/ and Food Centre (SVKPIEST)	SVK001	452
Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)	DEU146	4715
Agr. Plant Genetic Resources Conservation and Research Centre (APGRC)	SDN002	479
Nordic Genetic Resource Center (NordGen)	SWE054	1350
Suceava Genebank” Mihai Cristea” (BRGV)	ROM007	461
International Centre for Agricultural Research in Dry Areas (ICARDA)	LBN002	6336
Margot Forde Germplasm Centre (AGRESEARCH)	NZL001	234
9th of June		
Genetic Resources Institute, University of Banja Luka (GRIBL)	BIH039	227
World Vegetable Centre (AVRDC)	TWN001	11113
Seed Savers Exchange (SSE)	USA974	99
Plant Breeding and Acclimatization Institute (IHAR)	POL003	1025
State Forest Service (VMT) ²	LTU021	123

¹ The report is presented in the form and language received, with only minor formatting edits applied.

² First time depositors to the Seed Vault in 2022.

Centro Internacional de la Papa (CIP)	PER001	81
Spanish Plant Genetic Resource Centre (CSIC) ²	ESP004	979
International Centre for Agricultural Research in Dry Areas (ICARDA)	LBN002	3 446
Uganda National Genebank (UNGB)	UGA528	169
Africa Rice Centre (AfricaRice)	CIV033	1 142
Station Fédérale de Recherches en Production Vegetale de Changins (AGROSCOPE)	CHE001	944
10th of October		
RDA genebank/National Agrobiodiversity Center (RDA)	KOR011	3 392
Instituto Nacional de Investigación Agropecuaria (INIA) ²	URY003	1 892
Australian Grains Genebank (AGG)	AUS165	10 383
Institute of Plant Genetic Resources “Konstantin Malkov” (BGRIPGR)	BGR001	1 186
The Brazilian Agricultural Research Corporation (Embrapa)	BRA008	365
Plant Gene Resources of Canada (PGRC)	CAN004	257
James Hutton Institute (JHI)	GBR251	383
Directorate of Seed Testing and Certification (SBSTC-MOA) ²	IRQ001	418
Julius Kühn Institute (JKI)	DEU451	2
National Bureau of Plant Genetic Resources (NBPGR)	IND001	3 067
Plant Breeding and Acclimatization Institute (IHAR)	POL003	4 665
Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT)	MEX002	3 811
Suceava Genebank “Mihai Cristea” (BRGV)	ROU007	82
National Rice Seed Storage Laboratory for Genetic Resources (NRSSL)	THA012	300
Total number of accessions deposited 2022		69 825

Table 2. Deposited and withdrawn seed accessions per year

Year	Deposited per year	Deposited in total	Withdrawals for regeneration per year ³
2008	320 549	320 549	
2009	169 505	490 054	
2010	111 101	601 155	
2011	113 361	714 519	
2012	58 078	772 597	
2013	29 155	801 752	
2014	38 052	839 504	3
2015	36 130	875 934	38 073
2016	42 979	918 913	
2017	64 403	983 316	54 354
2018	92 638	1 075 954	
2019	32 572	1 108 526	24 064
2020	82 501	1 191 027	40
2021	50 926	1 241 953	
2022	69 825	13 11 778	
Total holdings of seeds by 31 December 2022: 1 195 244			
Total holdings of seeds by 30 June 2023: 1 255 332			

³ ICARDA withdrawals in 2015, 2017, and in 2019.

III. THE INTERNATIONAL ADVISORY PANEL (IAP)

5. The International Advisory Panel (IAP) to the Svalbard Global Seed Vault met in October 2022 in Svalbard for an inspection of the facility and for giving their strategic advice to the management and operation of the Seed Vault. Three of the participants participated digitally both in the meeting and for the inspection.

6. The IAP is the advising body to the Ministry of Agriculture and Food of Norway on a wide range of policy, management and operational issues related to the Seed Vault. The role of the IAP is to secure transparency to the international community and act as a direct channel for the depositors on issues to the management and operations of the Seed Vault. The panel is composed of experts and representatives of depositor institutes, international institutions and organizations suggested for each meeting of the IAP by Crop Trust and NordGen and approved by the Norwegian Ministry of Agriculture and Food. The Chair of the Governing Body of the International Treaty on the Plant Genetic Resources for Food and Agriculture (ITPGRFA) is invited to act as a Chairperson of the IAP. In October 2022, the IAP members concluded that the upgrade of the Svalbard Global Seed Vault, which was completed in 2019, has led to a major improvement of the facility, and it recommended the Seed Vault partners to further enhance the written protocols related to security and operations. The IAP further recommended to consider the strategic and holistic aspect when assisting new genebanks in their security collections.

7. The members of the IAP for 2022 meeting were:

- Yasmina El Bahloul, INRA, Morocco (Chair)
- Ana Maria Barata, Instituto Nacional de Investigação Agrária e Veterinária, Portugal
- Axel Diederichsen, Plant Gene Resources Canada, Canada
- Kristin Børresen, Graminor, Norway
- Lavern Tueco, University of the Philippines, Los Baños, the Philippines
- Marie- Noelle Ndjiondjop, AfricaRice, Cote d'Ivoire
- Stefanos Fotiou, FAO

IV. TECHNICAL UPDATES

8. After the physical improvements of the facility in 2019 the permafrost in the surrounding mountain massif is monitored. The annual reports confirm that the permafrost in the area is positively affected by the ongoing cooling in the access tunnel. The geometric analyses that were conducted also concluded that, in the case of the most extreme climate scenario for temperature rise in Svalbard, the seeds still will be safe even in the event of prolonged periods without external power.

9. As a consequence of the improvements, also several security and control systems consisting of a combination of physical, electronic, organizational and administrative measures and procedures have been implemented.

V. DOCUMENTATION AND COMMUNICATION

10. The interest in the Seed Vault from media and others are still remarkably high and creates good opportunities to inform about the global mechanisms that are in place to respond to the loss of crop diversity.

11. In October 2022, 50 Heads of Mission/Ambassadors located in Oslo attended when genebanks deposited new samples into the Seed Vault.

12. In June 2022, Michael Haddad, United Nations Development Programme (UNDP) Regional Goodwill Ambassador, delivered the “Package of hope” from Pope Francis to the Svalbard Global Seed Vault, after a walk for Climate Resilience and Food Security from Longyearbyen center to the Seed Vault. The package comprised seed samples from twelve Arab countries provided by ICARDA. Representatives from the Holy See, UNDP, ICARDA, FAO and media accompanied Haddad in the walk.

13. The 100-year Seed Longevity Experiment in the Seed Vault that started in 2020 is evolving and project partners from Sweden, Thailand, Germany, India, Portugal, and Brazil will cooperate and analyze the germination level of specific seed samples, every tenth year.

14. The data that identify seed boxes in the Seed Vault is also printed on nano films, with the aim to increase the security and integrity of the data. The work to attach the new labels to the boxes is continuing during 2023.
15. The BOLD project (Biodiversity for Opportunities, Livelihoods and Development) was launched by the Crop Trust in 2021 as a 10-year project to strengthen food and nutrition security worldwide. One part of BOLD includes a scheme for supporting gene banks in preparing security deposits of seeds to the Seed Vault. By the end of 2022, around thirty gene banks that applied for such support have signed contracts. It is expected that the number of gene banks that store their security collections in Svalbard will increase during the next years.
16. Relevant communication and outreach initiatives in promoting the use of the Seed Vault has been taken by the partners in cooperation with the IAP and the Secretary of the ITPGRFA.

Draft elements to be integrated in the Resolution on Cooperation with Other International Bodies and Organizations

Recalling Resolutions 12/2017, 12/2019 and 14/2022;

Recalling that the adoption of the International Treaty gave the impetus to the Government of Norway to proceed with the establishment of the Svalbard Global Seed Vault (Seed Vault);

Reaffirming that the Seed Vault is a crucial element of the global system for ex situ conservation and use of plant genetic resources for food and agriculture; and

Acknowledging the close links between the operations and function of the Seed Vault to the objectives of the International Treaty and its contribution to the implementation of the Treaty's provisions;

1. **Thanks** the Government of Norway for the submission of the 2023 report on the management and operations of the Seed Vault and invites it to continue updating the Bureau and Governing Body on the operations and management of the Seed Vault;
2. **Notes** the new deposits of seed samples made at the Seed Vault during its three openings in 2022;
3. **Commemorates** the 15-year anniversary of the establishment of the Seed Vault;
4. **Notes** the positive impacts of the technical improvement of the facility implemented since 2019 and the development of new security and control systems and administrative measures;
5. **Commends** the efforts to support national genebanks to further deposit materials in the Seed Vault and encourage other donors to contribute to these activities;
6. **Welcomes** the reconvening of the Seed Vault's International Advisory Panel and **requests** the Chairperson of the Governing Body to continue chairing the Panel and carrying out such functions as the role may require;
7. **Reiterates** the invitation to Contracting Parties, international institutions and other relevant eligible bodies and organizations to consider making use of the Seed Vault as part of their strategy for securing their important seed collections and for long-term storage of plant genetic resources for food and agriculture;
8. **Requests** the Secretary to explore further with the Government of Norway other practical means to enhance the linkages between the International Treaty and the Seed Vault, including linking data through the Global Information System, and report to the Bureau of the Tenth Session of the Governing Body.
9. **Requests** the Secretary to continue collaborating with the Government of Norway and its partners in related activities, including supporting relevant communication and outreach efforts as well as promoting utilization of the Svalbard Global Seed Vault;