

Regional Management of NI and Relation to EURISCO in the Nordic Countries and Introduction to Svalbard Global Seed Vault for Depositors



Nordic milestones:

Passport Union (1957)

Helsinki Treaty to promote collaboration (1962)

NGB (1979)

Integrated labour market (1982)

Nordic Language Convention (1987)

Free access to higher education (1996)

New Nordic Food (2005)

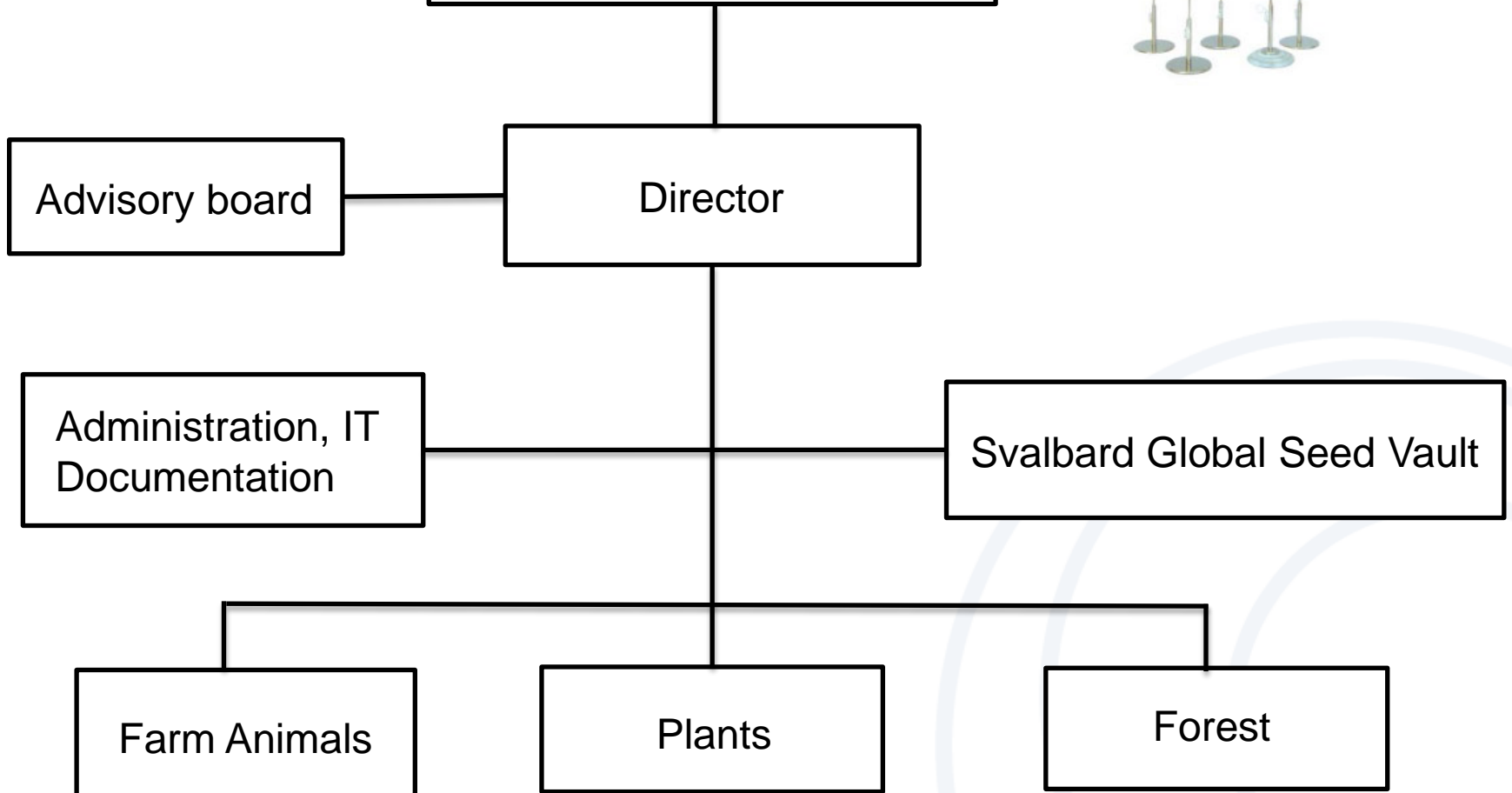
The Keyhole Label (2009)

Nordforsk/Nordic Innovation (2005)

Kalmar declaration 2003

Every accession in Nordic genebanks is joint property.

- Art.3: Concludes that NordGen PGR are in Public domain
- Art.6: Relevant PGR must enter Multilateral System



Genebank under Nordic Council of Ministers

+

- Stability
- Funding

-

- Political steering
- Slow process
- 8-year rule

Distribution of responsibilities

Ex-situ seed preservation

- NordGen for all Nordic countries

Ex-situ clonal preservation

- National program
- Documentation services from NordGen
- Varied need in different countries

In situ and on farm

- National responsibility
- NordGen getting involved

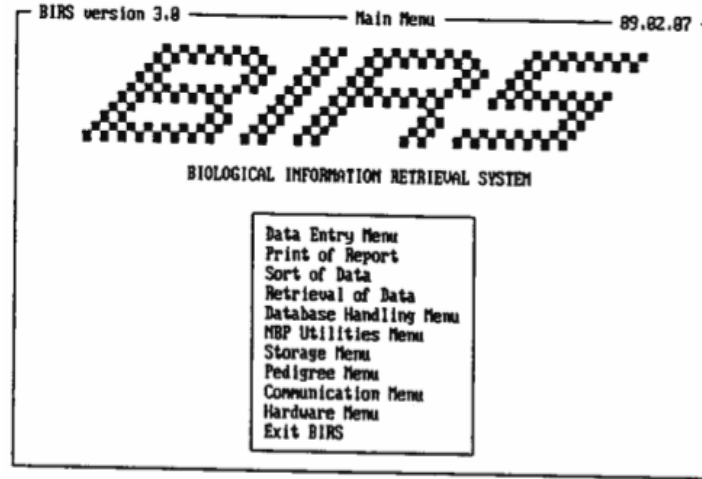
Preservation at other sources

- other players are minor

36 years of cooperation on preservation of Plant Genetic Resources



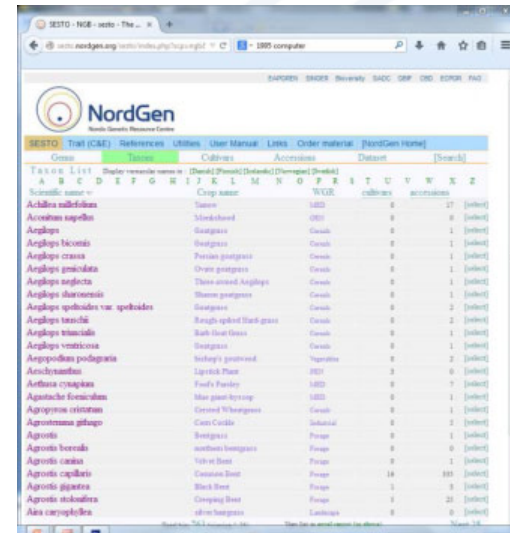
1979



1984



1995



2015

SESTO [<http://sesto.nordgen.org>]

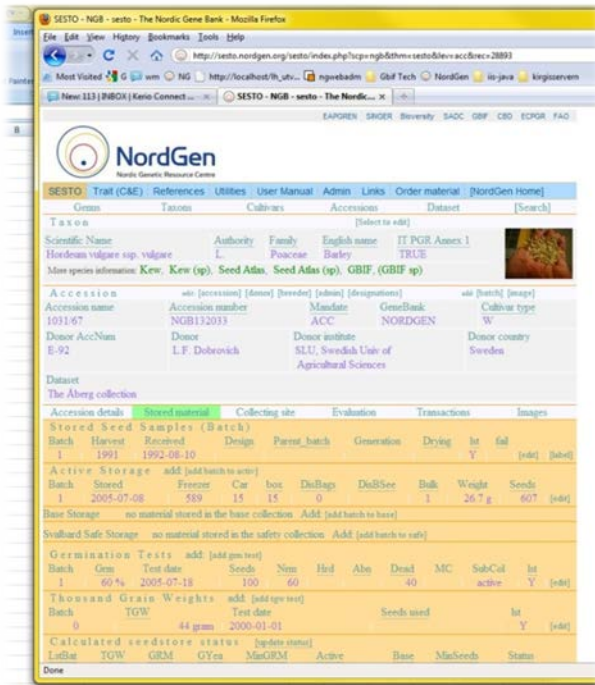
A regional gene bank documentation system

Originally SEed STORe handling

Ambition to handle all aspects of PGR documentation

Modules for

- passport data
- regeneration
- characterization & evaluation
- seed store
- online distribution
- online MTA (Material Transfer Agreements)
- reports
- image archive
- references



The screenshot shows the SESTO web application interface. At the top, there is a navigation menu with options like 'SESTO', 'Trait (CAE)', 'References', 'Utilities', 'User Manual', 'Admin', 'Links', 'Order material', and 'NordGen Home'. Below this, there are several data sections:

- Taxon:** Scientific Name: *Hordeum vulgare* ssp. *vulgare*; Authority: L.; Family: Poaceae; English name: Barley; IT PGR Annex 1: TRUE.
- Accession:** Accession number: NGB132033; Mandate: ACC; GeneBank: NORDGEN; Cultivar type: W.
- Dataset:** The Aberg collection.
- Accession details:** Stored material, Collecting site, Evaluation, Transactions, Images.
- Stored Seed Samples (Batch):** A table with columns: Batch, Harvest, Received, Design, Parent_batch, Generation, Drying, lot, fail. Row 1: Batch 1, Harvest 1991, Received 1992-08-10, Drying Y, lot [edit], fail [edit].
- Active Storage:** A table with columns: Batch, Stored, Freezer, Car, box, DtlBags, DtlSee, Bulk, Weight, Seeds. Row 1: Batch 1, Stored 2005-07-08, Freezer 589, Car 15, box 15, DtlBags 0, DtlSee 0, Bulk 1, Weight 26.7 g, Seeds 607 [edit].
- Base Storage:** no material stored in the base collection. Add [add batch to base].
- Swahard Safe Storage:** no material stored in the safety collection. Add [add batch to safe].
- Germination Tests:** A table with columns: Batch, Gem, Test date, Seeds, Num, Hed, Abs, Dead, MC, Sub-Cul, lot. Row 1: Batch 1, Gem 60%, Test date 2005-07-18, Seeds 100, Num 60, Hed 60, Dead 40, MC active, lot Y [edit].
- Thousand Grain Weights:** A table with columns: Batch, TGW, Test date, Seeds used, lot. Row 1: Batch 1, TGW 44 gram, Test date 2000-01-01, Seeds used Y [edit].
- Calculated seedstore status:** A table with columns: LotIDes, TGW, GRM, GYes, MacGRM, Active, Base, MacSeeds, Status.

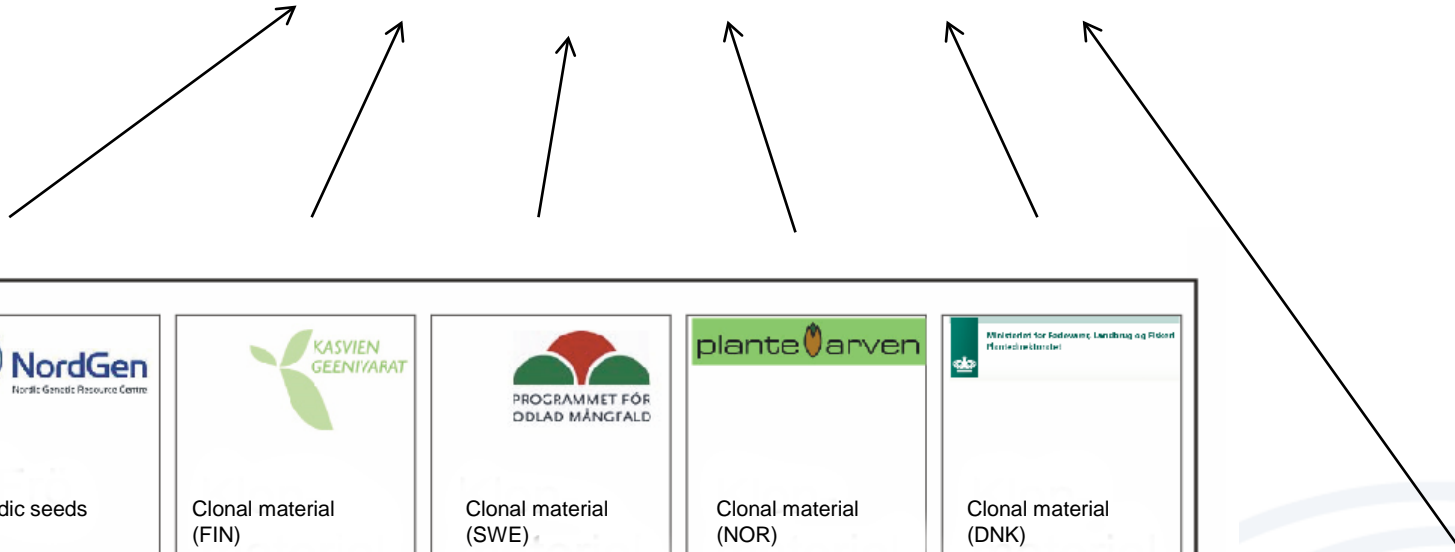
SESTO produces MCPD file every night



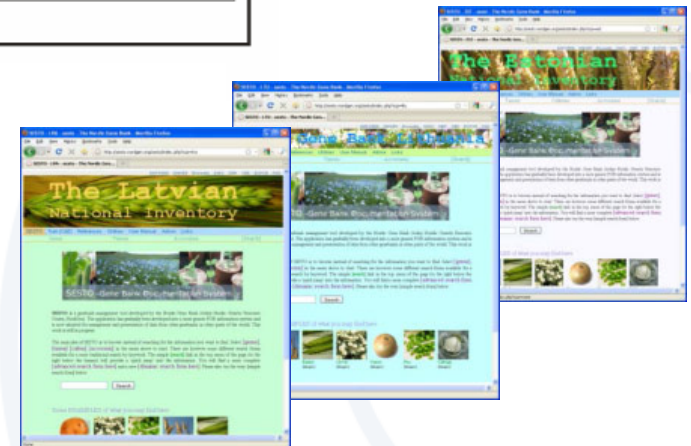
SESTO scopes

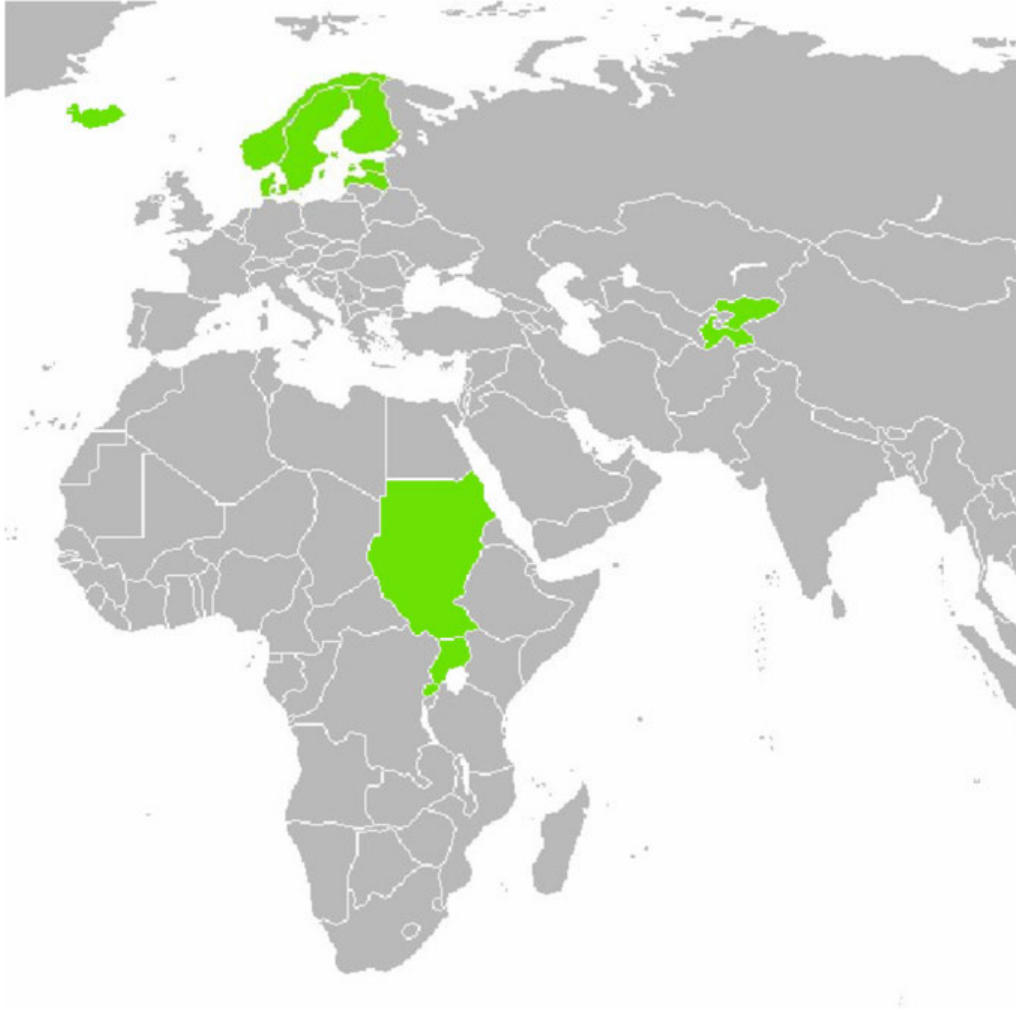
- Ⓢ a subset of data in a common database – same data structure
- Ⓢ a graphical profile – title, banner, colour etc.
- Ⓢ an address
<http://sesto.nordgen.org/sesto/index.php?scp=ngb>
- Ⓢ users and rights inside the scope
- Ⓢ search and report inside the scope
- Ⓢ handling of distribution and smta

A Nordic / Baltic PGR portal



Previously:
clonal material not sufficiently documented





SESTO use

- Nordic countries
- Baltic countries
- Sudan
- Uganda
- Rwanda
- Tajikistan
- Kyrgyzstan

ECPGR

All five countries are individual members

5 National ECPGR Coordinators:

Denmark
Finland
Iceland
Norway
Sweden

Birgitte Lund
Elina Kiviharju
Aslaug Helgadottir
Åsmund Asdal
Jens Weibull

AEGIS

All 5 countries are associate members

One contact person:

NordGen Arni Bragason

EURISCO

ECPGR EURISCO National Inventory Focal Points

NordGen	Jonas Nordling
Finland	Merja Hartikainen
Norway	Åsmund Asdal
Sweden	Jonas Nordling

NordGen updates seed PGR records for all countries

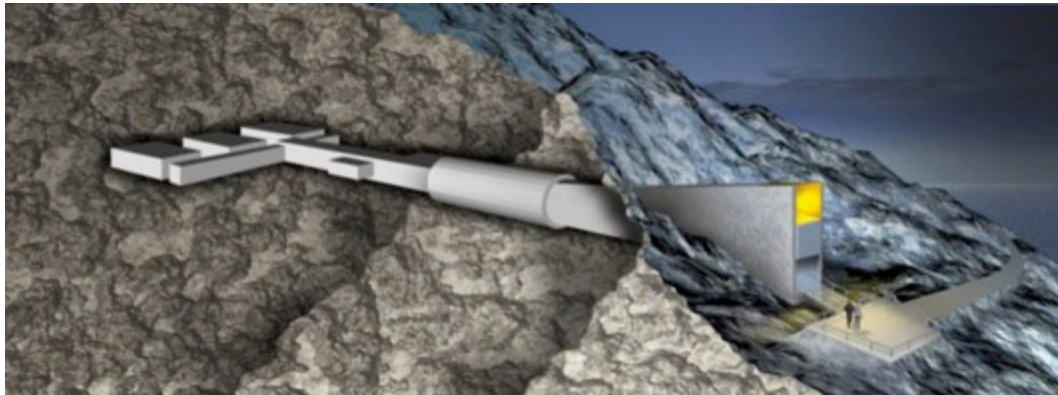
NordGen updates clonal PGR records for Sweden, Denmark & Norway

Iceland no material

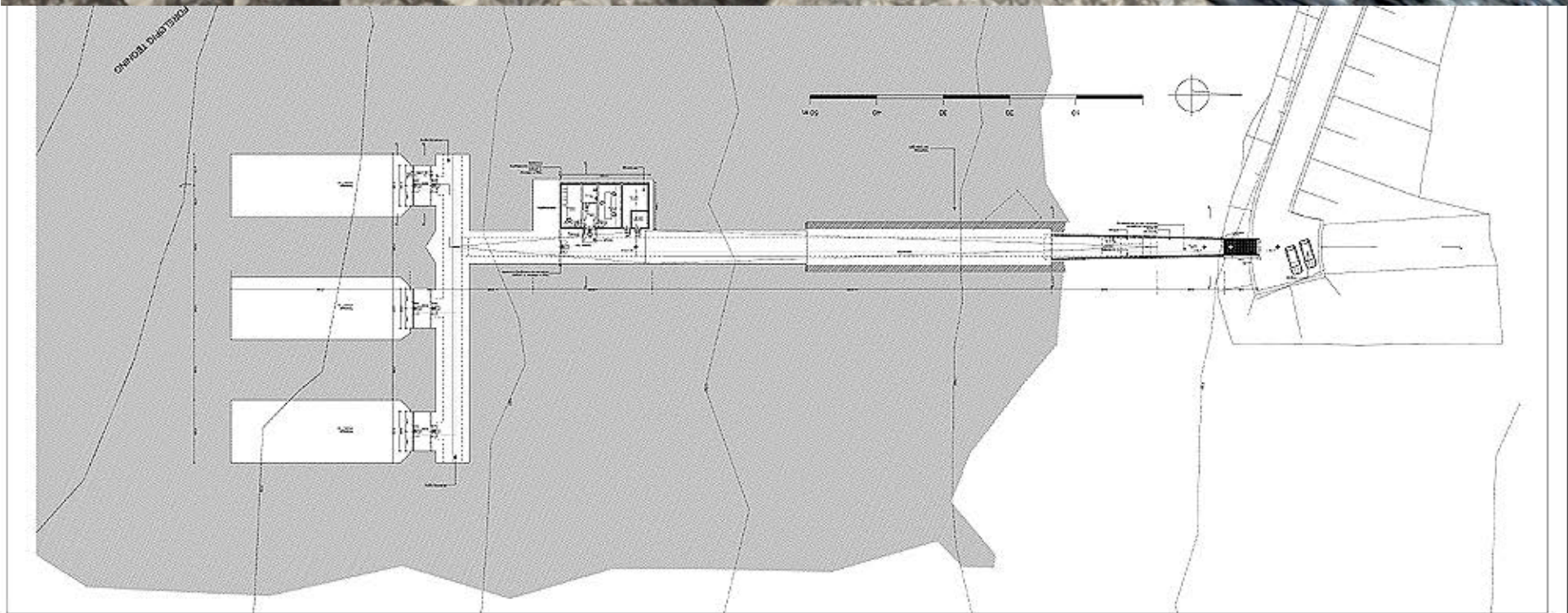
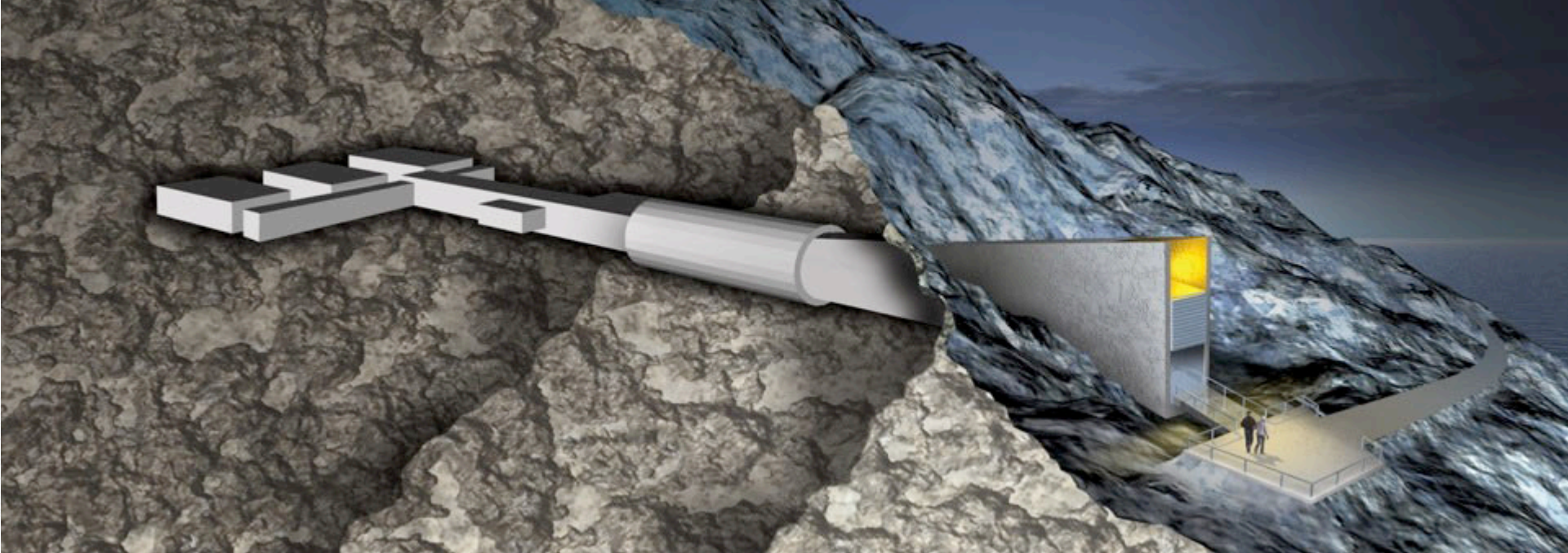
Finland not clear, will straight out in Norway in July

The Svalbard Global Seed Vault

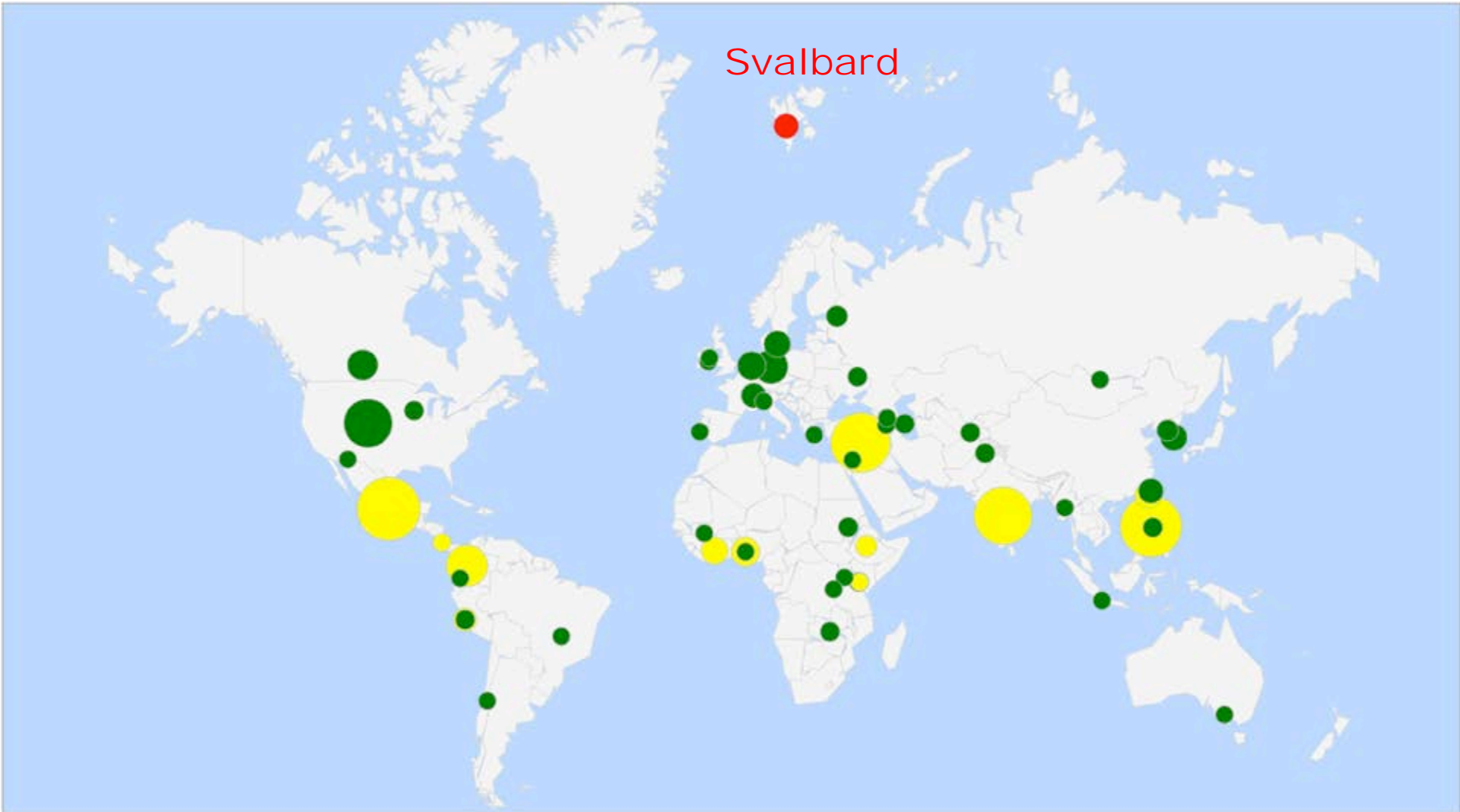
- Opened 2008
- Agreement between NordGen, Global Crop Diversity Trust (FAO) and the Norwegian Government
- NordGen has the operational responsibility
- No genebank but safety backup storage
- "Black Box" agreement







Depositors in The Seed Vault



Current figures in SGSV Jan 2015

- Countries of origin: 232
- Depositor institute: 61
- Number of plant genera: 919
- Number of plant species: 4 868
- Number of accessions: 839 804

www.nordgen.org/sgsv



Instcode		Taxa	Accessions
DEU146	Leibniz Institute of Plant Genetics and Crop Plant Research	3,684	42,412
SWE054	Nordic Genetic Resource Center	492	17,571
AZE015	Genetic Resources Institute of the Azerbaijan National Academy of Sciences	194	1,522

Major crops in the Global Seed Vault (accessions)

<i>TRITICUM</i>	154 881
<i>ORYZA</i>	145 667
<i>HORDEUM</i>	69 381
<i>SORGHUM</i>	45 945
<i>PHASEOLUS</i>	38 621
<i>ZEA</i>	35 367
<i>BRASSICA</i>	10 367

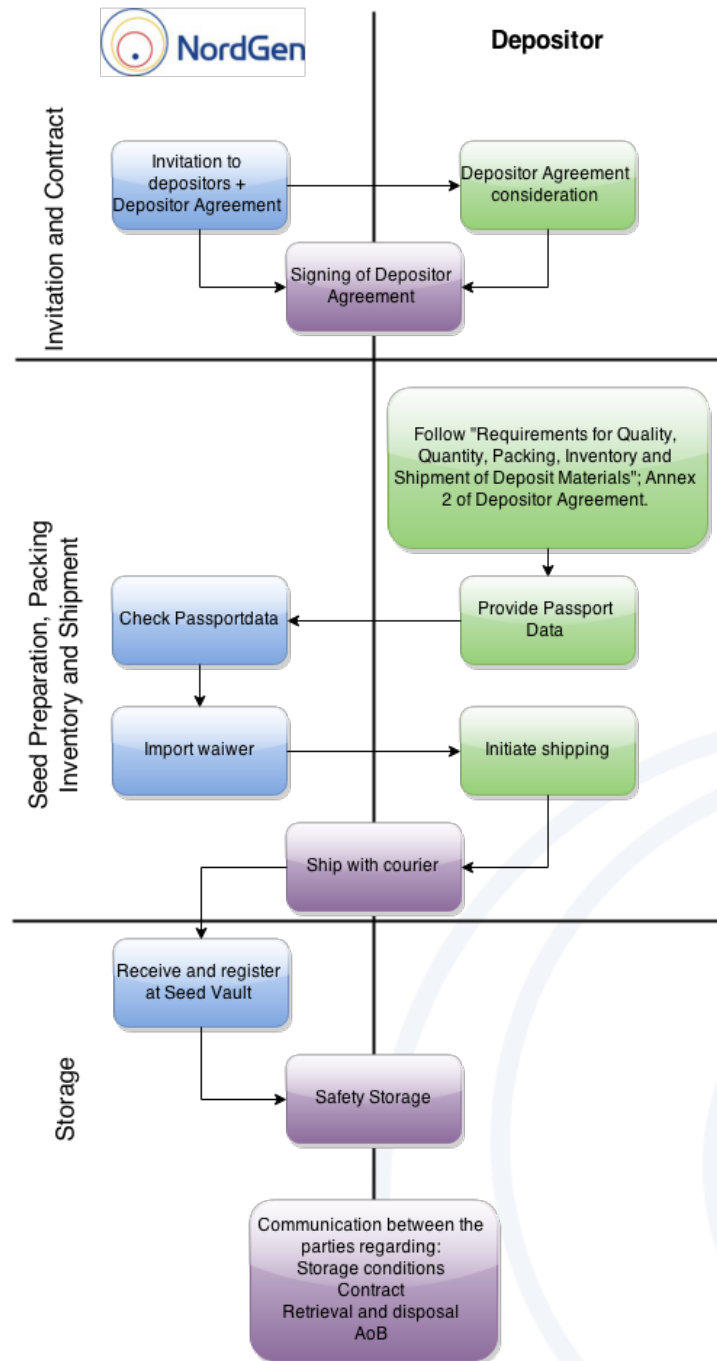








Deposition procedure



Passport data with seeds

Mandatory fields

- Institute code
- Deposit box number
- Collection name
- Accession number
- Full scientific name
- Country of collection or source
- Number of seeds
- Regeneration month and year

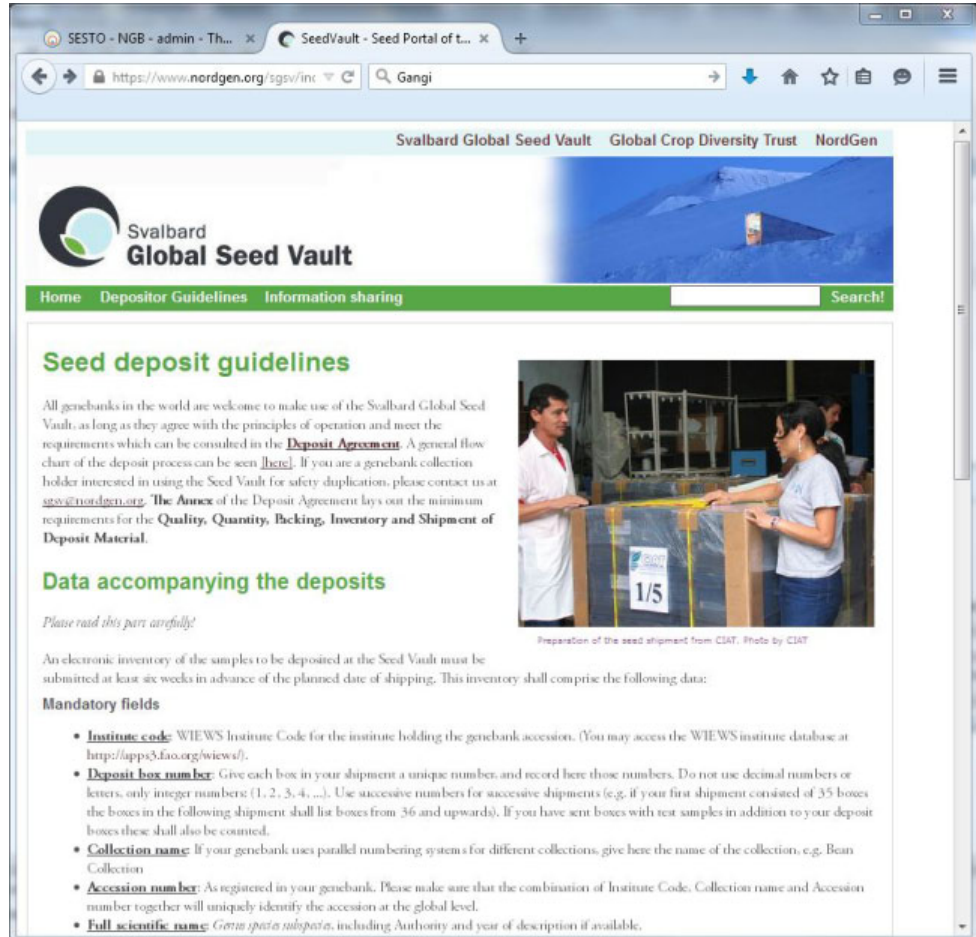
Recommended fields

- Other accession designations
- Accession name
- Accession URL

www.nordgen.org/sgsv

sgsv@nordgen.org

Åsmund Åsdal
SGSV coordinator at NordGen



SESTO - NGB - admin - Th... SeedVault - Seed Portal of t...
<https://www.nordgen.org/sgsv/inc> Gangi


Svalbard Global Seed Vault Global Crop Diversity Trust NordGen

Svalbard Global Seed Vault

Home Depositor Guidelines Information sharing Search!

Seed deposit guidelines

All genebanks in the world are welcome to make use of the Svalbard Global Seed Vault, as long as they agree with the principles of operation and meet the requirements which can be consulted in the [Deposit Agreement](#). A general flow chart of the deposit process can be seen [here](#). If you are a genebank collection holder interested in using the Seed Vault for safety duplication, please contact us at sgsv@nordgen.org. The Annex of the Deposit Agreement lays out the minimum requirements for the **Quality, Quantity, Picking, Inventory and Shipment of Deposit Material**.



Preparation of the seed shipment from CIAT. Photo by CIAT

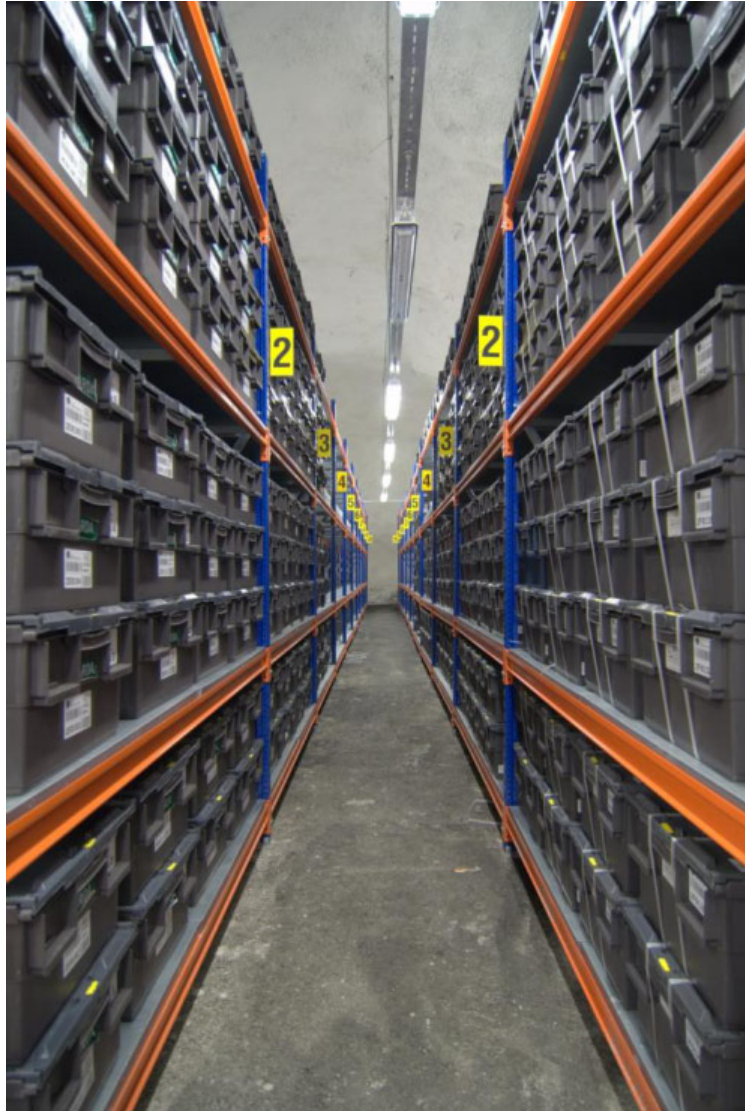
Data accompanying the deposits

Please read this part carefully!

An electronic inventory of the samples to be deposited at the Seed Vault must be submitted at least six weeks in advance of the planned date of shipping. This inventory shall comprise the following data:

Mandatory fields

- **Institute code:** WIEWS Institute Code for the institute holding the genebank accession. (You may access the WIEWS institute database at <http://apps3.iaac.org/wiews/>).
- **Deposit box number:** Give each box in your shipment a unique number, and record here those numbers. Do not use decimal numbers or letters, only integer numbers (1, 2, 3, 4, ...). Use successive numbers for successive shipments (e.g. if your first shipment consisted of 35 boxes the boxes in the following shipment shall list boxes from 36 and upwards). If you have sent boxes with test samples in addition to your deposit boxes these shall also be counted.
- **Collection name:** If your genebank uses parallel numbering systems for different collections, give here the name of the collection, e.g. Bean Collection
- **Accession number:** As registered in your genebank. Please make sure that the combination of Institute Code, Collection name and Accession number together will uniquely identify the accession at the global level.
- **Full scientific name:** *Germ spata subspata*, including Authority and year of description if available.



Thank You!