

Implementing the Treaty at the national level: What is the impact on the seed sector?

**Second World Seed Conference, Rome
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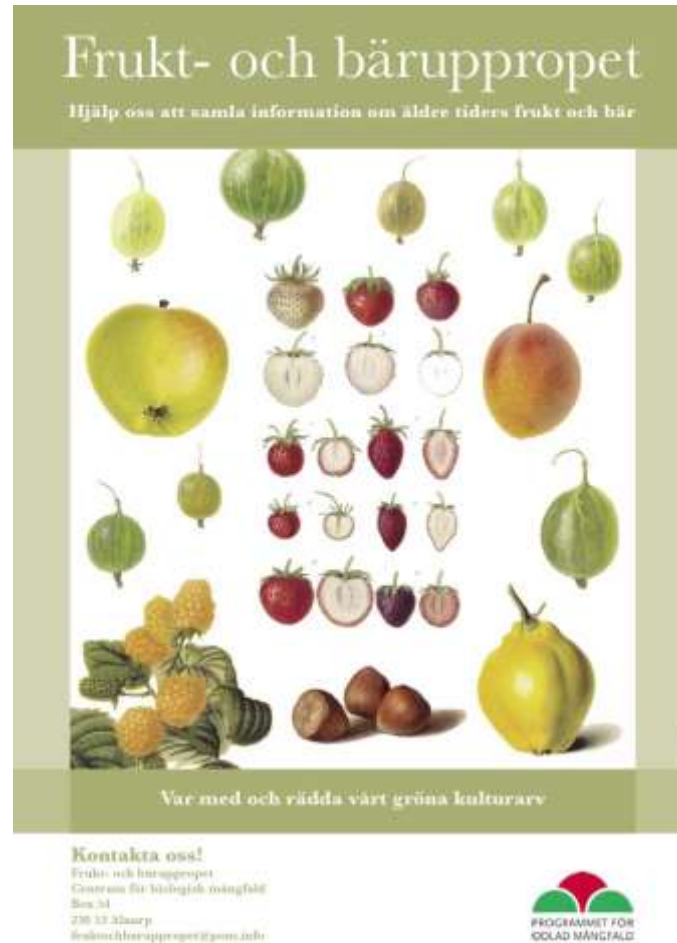
Implementing the Treaty at the national level

- **The national Swedish programme**
- **The Nordic regional approach – NordGen**
- **Use of the Standard Material Transfer Agreement**
- **Experience in the national seed industry**
- **Swedish international support**

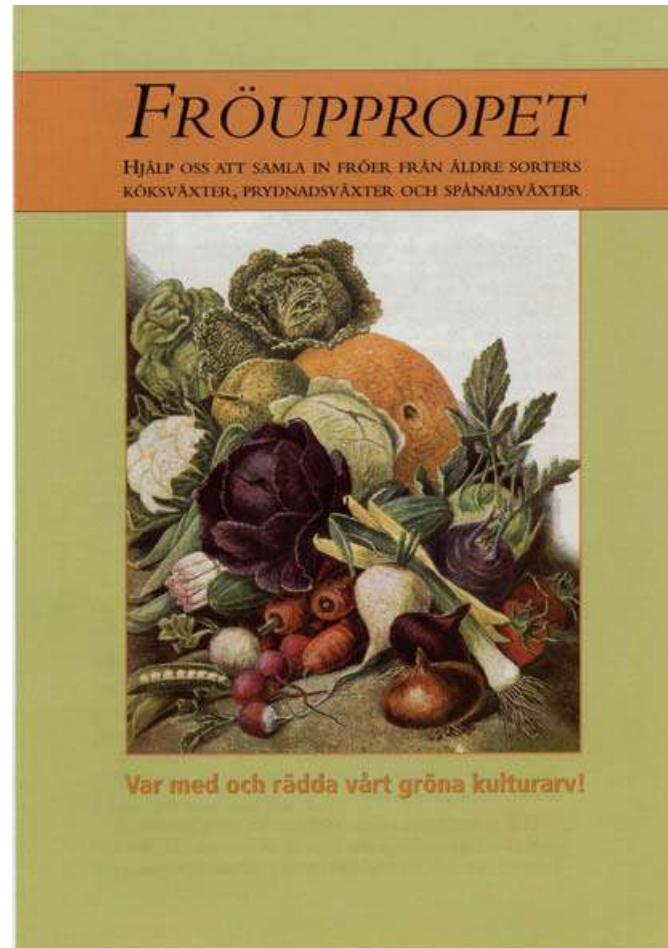
Swedish National Programme for Diversity of Cultivated Plants (POM): Goals

- **Conservation and use of plant genetic resources shall contribute to improved food security, sustainable agriculture and maintained biodiversity in Sweden.**
- **Make the biological cultural heritage become alive for people.**
- **Materials shall be well documented, and information about the materials shall be available for free.**
- **The programme shall promote international cooperation on conservation, utilization, access and benefit sharing.**

POM: Call for fruit and berries material



POM: Call for vegetable material



Then, what happens?

- **Registration in databases (POM, NordGen)**

Cooperation with the NordGen:

- **Viability tests**
- **Descriptions/Evaluations**
- **Analysis of molecular markers**
- **Multiplication**
- **Seed storage**

- **Ethnobotanical study of peas**

Some results ...

- Morphological analyses showed that it was difficult to separate 30 of the new accessions from old landraces of pea (*Pisum sativum*) already stored at the NordGen.
- DNA analyses, using microsatellite markers, of 34 of the Fröupprop-accessions of pea and 46 accessions from NordGen collections showed that at least 21 of the Fröupprop-accessions are new unique genotypes. 13 could be duplicates.

Nordic Genetic Resources Center (NordGen) Vision

- **NordGen secures the biological livelihood for the present and the future**



- **Founded in 1979**
- **A Nordic Council of Ministers Institution**
- **A regional Gene Bank for the Nordic Countries**
- **Sweden, Denmark, Norway, Finland and Iceland**

Nordic Genetic Resources Center (NordGen)

Priorities in strategy 2008 - 2012

- **Conservation**
- **Sustainable use**
- **Information and networking**
- **International activities**



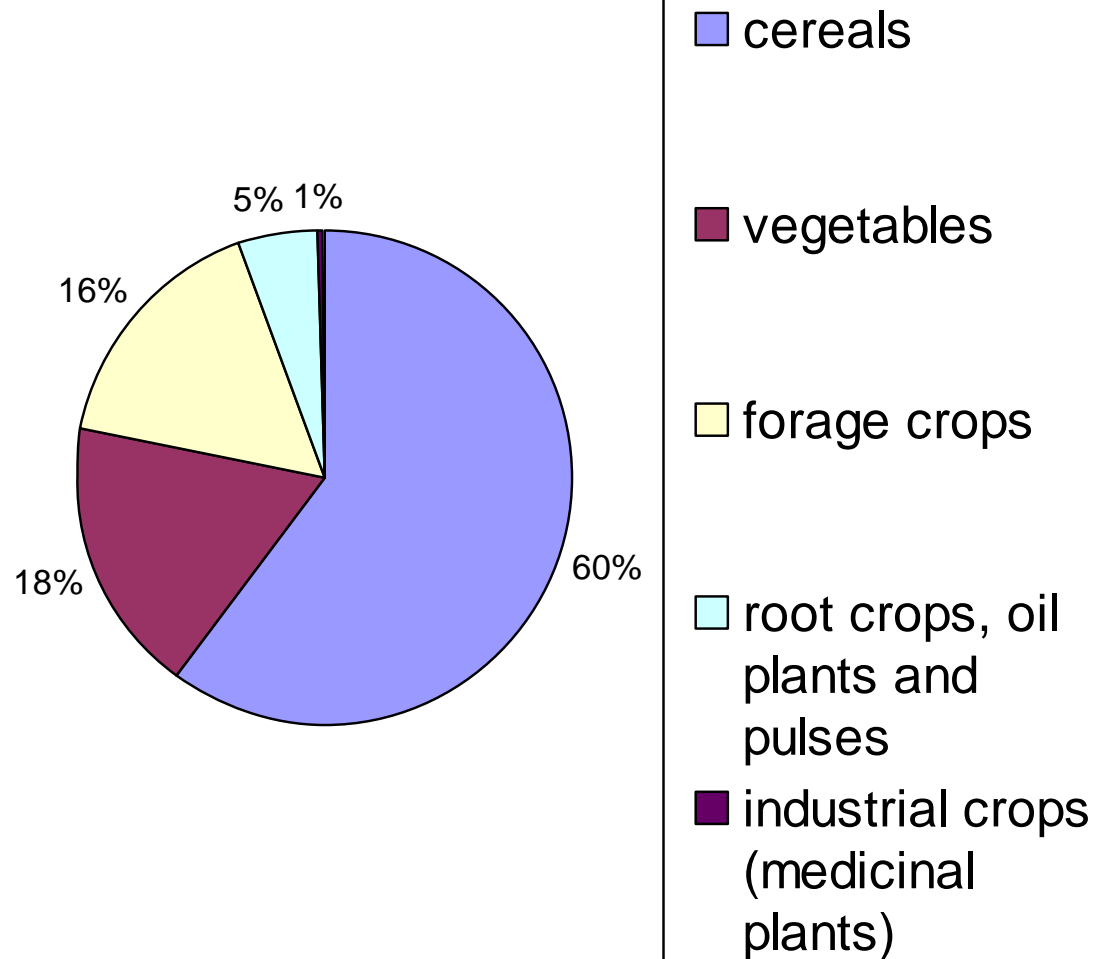
Seed Storage

- **Active Collection (Alnarp, Sweden)**
 - Distribution, characterization, multiplication, germination tests
- **Base Collection (Årslev, Denmark)**
 - Long term storage, rejuvenation
- **Safety Collection (Svalbard, Norway)**
 - Duplicate of base collection samples





Nordic Genetic Resources Center Accessions



Documentation in SESTO

Our Nordic Database

- **A central online data portal developed for public access to all Nordic plant genetic resources.**
- **Staff at the Nordic Gene Bank as well as staff from the national partner institutes can access the entire system**
- **SESTO is short for seedstore and is provided free of charge as open source**



Some gene bank collections presented from SESTO. SADC PGR Network (Southern Africa), ECP/GR Central Crop Forage Grasses, Plantearven (the Norwegian NI), the Latvian NI, the Estonian NI, Jõgeva Plant Breeding Institute (JPBI).

International activities



- **Expert consultation to assist partners in development of regional PGR programs**
- **Seed distributions, international**
- **Conferences, workshops, seminars**
- **Southern Africa, Eastern Africa, Baltic states, South East Europe, Russia, Central Asia**

The Svalbard International Seed Vault

- Not to be an ordinary gene bank but a safety net
- A 'black box' storage
- Seed movements (in or out) only twice a year and if original accession lost
- The seed vault to be managed according to international agreements



Foto:Tom Schandy, Samfoto



Svalbard, Norway
74-81 North, 10-
35 East



Organisation

- Owned by Norway
- Managed by the Nordic Genetic Resources Centre under an international steering committee
- Partly financed by the Global Crop Diversity Trust (GCDDT)

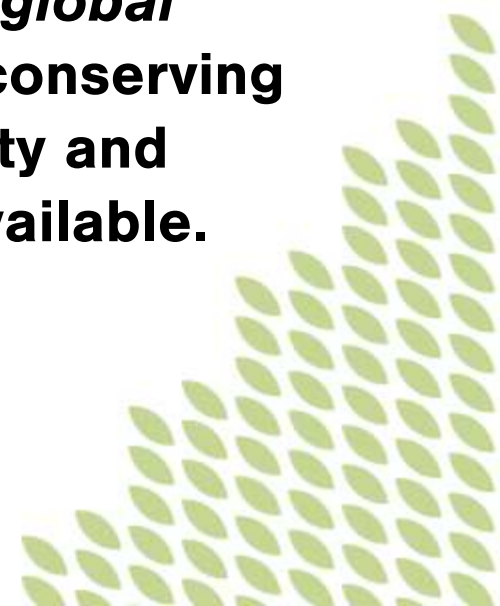


Foto: Tom Schandy, Samfoto

Vision

-A global security net

- **Safeguard a complete set of the world's most important accessions of plant genetic resources for food and agriculture.**
- **SGSV will provide the securest possible safety storage for a *rational, effective, efficient and sustainable global* system for conserving crop diversity and making it available.**



Why?

- The genebanks are vulnerable to a wide range of threats: civil strife, war, natural catastrophes, lack of adequate funding, equipment failures.
- The time is ripe: The International Treaty provides a framework for collaboration.



Conditions

- **Storage free of charge for public and private holders of PGRFA**
- **Black box – only donor has access**
- **Viability testing - regeneration - multiplication responsibility remains with the depositor**
- **Information access on public online dataportal**
- **Withdrawal on request**



Opened 26th of February 2008

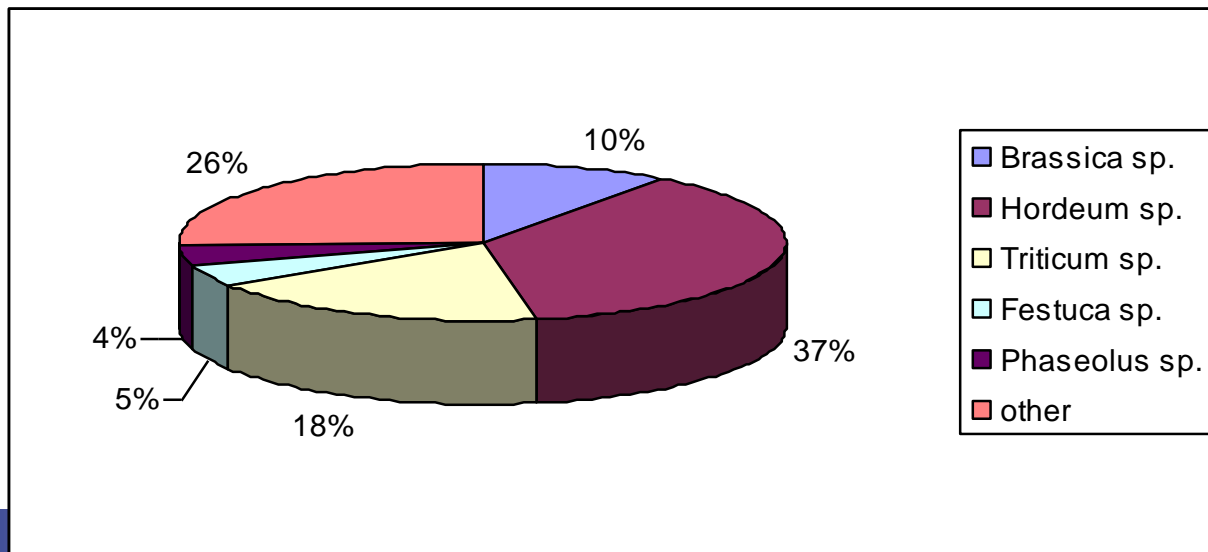
Using the sMTA

sMTAs issued since 1st of October 2007 to August 2009 by NordGen

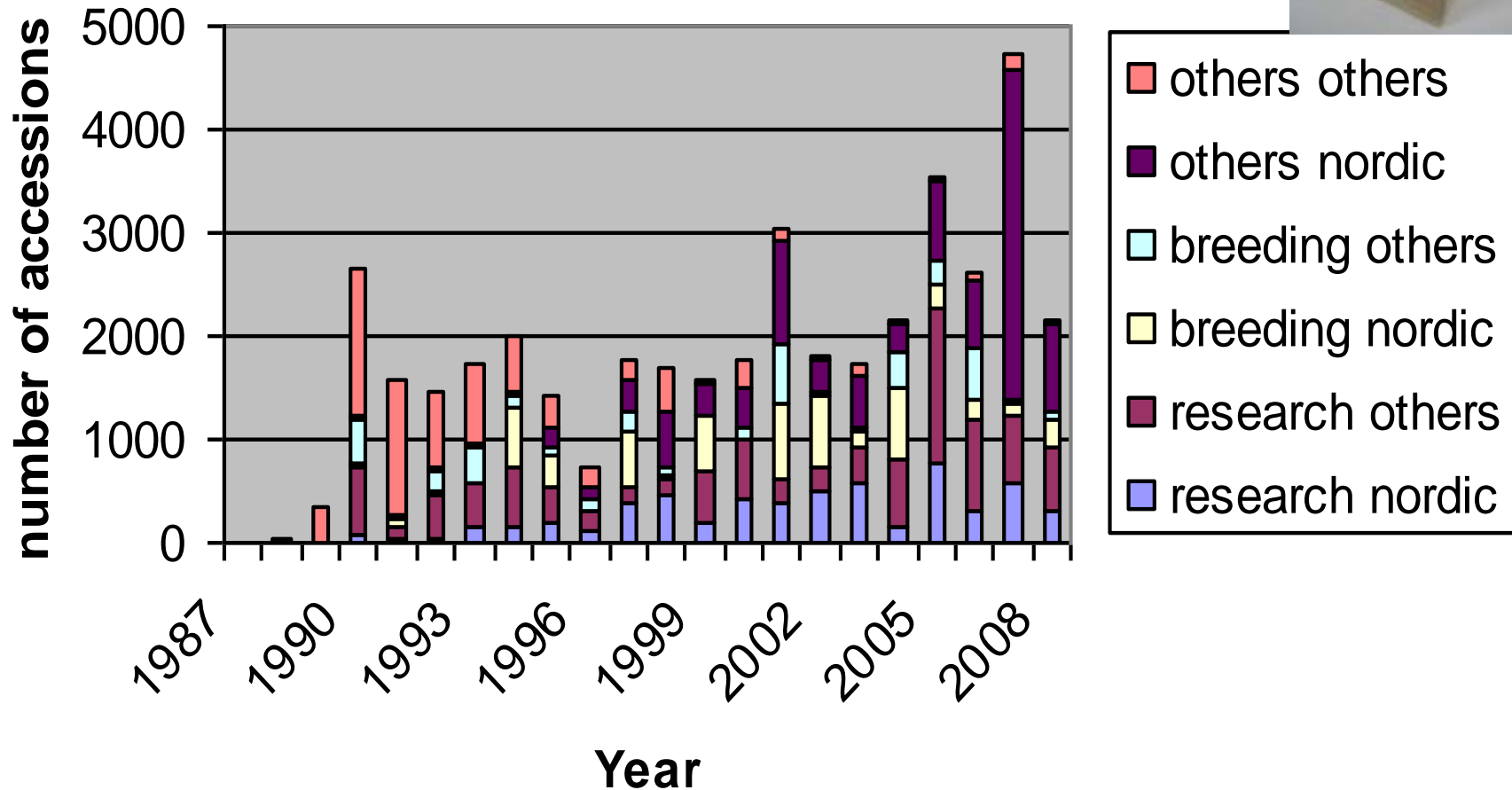
Total: 96 sMTAs (2523 accessions)

Organisations: 90 sMTAs (2455 accessions)

Private: 6 sMTAs (68 accessions)



Distribution of accessions



Experience from national seed industry

- **Little use of the sMTA as yet in seed industry**
- **Climate change gives new challenges**
- **Interest in Nordic PublicPrivatePartnership to meet this, in particular for pre-breeding**
- **Use of gene bank material and the Treaty system may be of growing relevance in this context**
- **Regional collaboration cost-efficient, also for the private sector**

Swedish involvement in plant genetic resources: some examples

- Capacity building on Treaty **implementation (1 million US dollars 2008 – 2010)**
- **Hosting** meeting negotiating the Treaty Standard Transfer Agreement **2006 (ca 5 million SEK)**
- **Voluntary** contribution to the Global Crop Diversity Trust **(11,9 million US dollars 2005+2007)**
- **Election of former minister of agriculture Karl Erik Olsson** as board member in Global Crop Diversity Trust.

1 USD = approx. 7-10 SEK

Swedish involvement in plant genetic resources: examples cont.

- **Regional** collaboration in Southern Africa (SADC) (160 million SEK over 18 years from all Nordic countries including Sweden)
- **Gene bank** collaboration in Eastern Africa (34,5 million SEK until 2007)
- **Gene bank** collaboration in Eastern Europe (36,2 million SEK from 2004 and 10 years ahead)

1 USD = approx. 7-10 SEK

Treaty Capacity building workshops through Swedish support

<i>Place</i>	<i>Time</i>	<i>Partner</i>
Lusaka, Zambia	Sept 2008	SPGRC
Entebbe, Uganda	March 2009	EAPGREN
Cairo, Egypt	April 2009	AOAD
Kuala Lumpur, Malaysia	May 2009	RECSEA-PGR
Nadi, Fiji	Sept 2009	SPC

Treaty assistance to national Capacity Building through Swedish support

- **Kenya**
- **Morocco**
- **Sudan**
- **Zambia**
- **Ecuador**
- **Peru**
- **Malaysia**
- **Philippines**

Thank you!

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