



Conserving Crop Diversity Forever

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The Crop Trust works to ensure the conservation and availability of crop diversity worldwide, forever.



Climate Change

+1°C
AVERAGE
TEMPERATURE



-2%
AGRICULTURAL
YIELD

The importance of Crop Diversity

- **Natural diversity** as a raw material for crop improvement via **traditional breeding**
- **Several million** crop varieties worldwide (cultivars, traditional landraces, wild relatives)



*ALL are important because **ONE** might have the trait to adapt to a changing climate, increase nutritious value, fight disease, or produce higher yields*

Diversity already lost

- **China** lost - 90% of rice varieties since 1950
- **Mexico** lost - 80% of corn varieties since 1900
- **India** lost - 90% of rice varieties since 1900
- **USA** lost - 90% of fruit and vegetable varieties since 1900
-

Diversity beating crop disease

- Wheat is already in climate crisis. A disease from the past has now returned in a devastating new form code-named Ug99
- Breeders in Kenya, the first country badly hit by the disease, developed six tolerant varieties in less than nine years
- Only possible with the the crop diversity available in genebanks



*The wheat saved every year is worth more than **USD 1 billion** at current prices*

Global Interdependence

- No country is and cannot be self sufficient in crop diversity
- The US has less than 10% of the crop varieties found in the world's plant genebanks in its own collections



Crop Diversity

A true global common good requires a global system

International Treaty on Plant Genetic Resources for Food and Agriculture

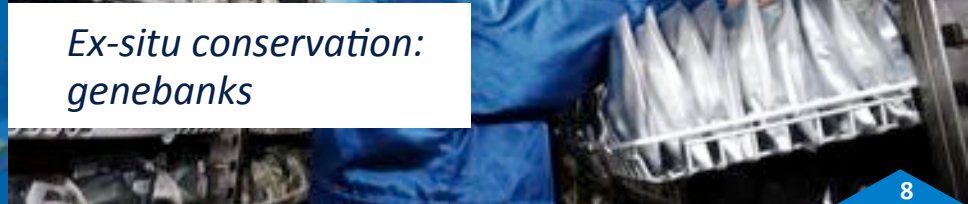
The Crop Trust is an essential element of the funding mechanism of the ITPGRFA to ensure the long-term conservation and use of crop diversity for food security worldwide.



*In-situ conservation:
small farmers*



Sustainable use



*Ex-situ conservation:
genebanks*

UN Sustainable Development Goals

Proposed Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

2.5: By 2020 maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed



Conserving crop
diversity in
genebanks requires
infrastructure, skilled
staff and funding

Three-tiered Global Genebank System

- **International** genebanks (CGIAR)
- Key **national** genebanks
- **Global backup** at Svalbard



International Genebanks



Genebanks are at risk – natural disasters and wars



Typhoon Xangsane, Phillippine National Genebank in Los Banos (2006)



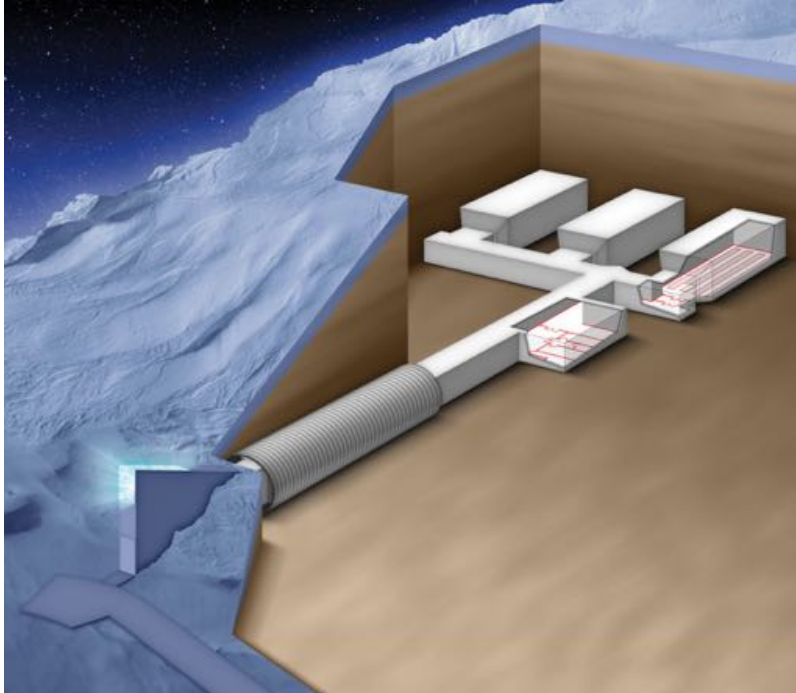
Fire at the Phillippine National Genebank in Los Banos (January 2012)



Global backup in Svalbard



Svalbard Global Seed Vault







Data – linking Genebanks and Farmers



Genesys

A single entry point to data on crop diversity maintained around the world.



Divseek

An initiative to unlock the potential of crop diversity in order to accelerate the development of new, better crops for food security and nutrition.

Crop Diversity: From the Genebank to the Farmer

The conservation of diversity is essential to bringing farmers more and better options for the future – to be more competitive and secure.

- Much greater choice and easier access to more suitable varieties for farmers' needs
- Higher yields, better adapted, and more secure
- Repatriation: genebanks hold diversity which has been lost from some countries or communities – or in many cases, the world



Just an example...

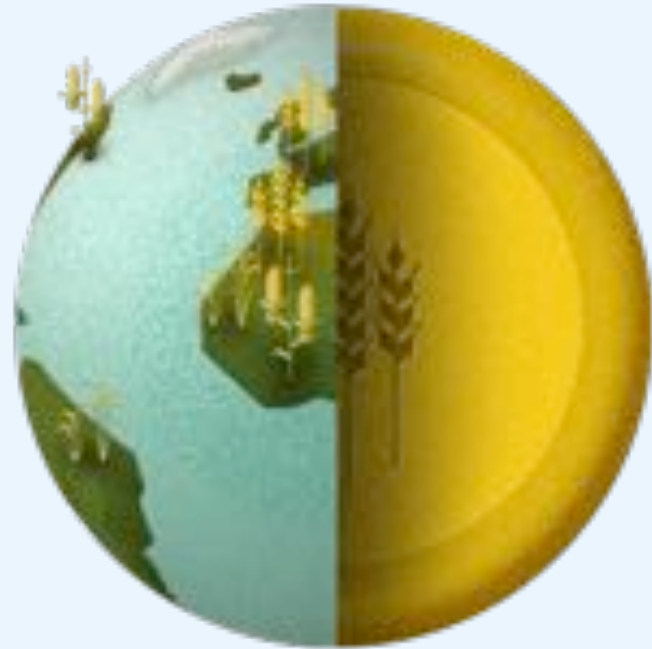
***Cosmopolitan cassava* revitalizes a big industry of small farmers**

In the 1990s, CIAT developed a new variety of cassava, KU 50. The new variety resulted from a cross of old material identified in CIAT genebank as having excellent traits for Southeast Asian production. A 2013 study estimated the economic benefits of KU 50 at USD 44 million in Thailand and USD 53 million in Vietnam.



Cost of the Global System

Only **USD 34 million per year**
or an Endowment Fund of
USD 850 million



The Crop Diversity Endowment Fund

- Maintenance of crop diversity requires secure funding, permanent and self sustaining
- Public and private funding sources are required





USD
850
MILLION



Funding the Global System

To date, more than **90%** of all funds raised from government donors.

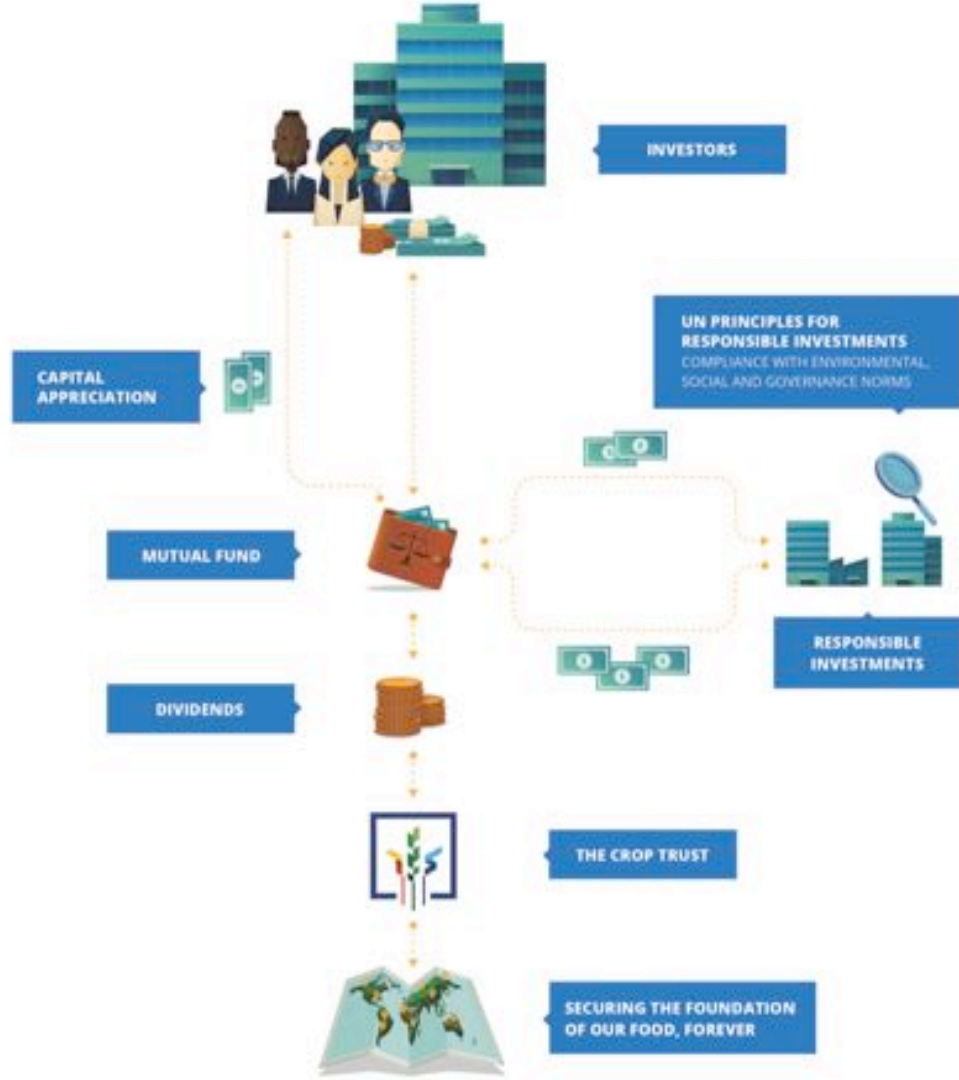
The Crop Trust is keen to complement these resources by broadening **its public-private partnership**.



The Investment Sharing Facility

- Mutual fund for the exclusive benefit of the Crop Trust, managed by Deutsche Asset & Wealth Management
- Launch target autumn 2015
- First-of-its-kind investment / capital market innovation





Who can invest ?

The Investment Sharing Facility will be available to **Individuals and Institutional Investors in the European Union** via a **Deutsche Asset & Wealth Management platform in Germany**.

Additional investor jurisdictions are under review to be added in the future.

A double harvest

The ISF represents both a socially responsible investment and a social impact investment.

By allocating investors' resources to companies that comply with environmental, social and governance-compliant (ESG) criteria, the ISF provides investors a **socially responsible investing option**.

By allocating the dividend payouts to the Crop Trust, investors also support **investment in climate change adaption of agriculture through crop diversity**.

The investment case

The invested capital will generate a return reflecting the opportunities and risks of the world stock markets that the ISF funds will be allocated to.

It is a win-win: investors are willing to give up a portion of the fruits of their investment today, with the Crop Trust preserving the fruits of tomorrow.

A true public-private partnership!



Where does the money go?

Income from the ISF will support the work of the Crop Trust to protect and make available crop diversity for farmers, breeder and researches across the world.

This includes financial support to international and national crop collections, funding of the operation of the Svalbard Global Seed Vault, the implementation of selected scientific projects, and the running of the Crop Trust organization.



Future Partners

The Crop Trust is keen to engage with additional banks and asset managers to develop further innovative instruments that will help generate additional resources from private investors and donors for the global common good of crop diversity.





The Investment Sharing Facility

A true public-private partnership

