



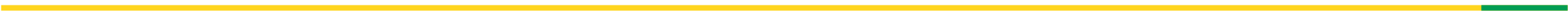
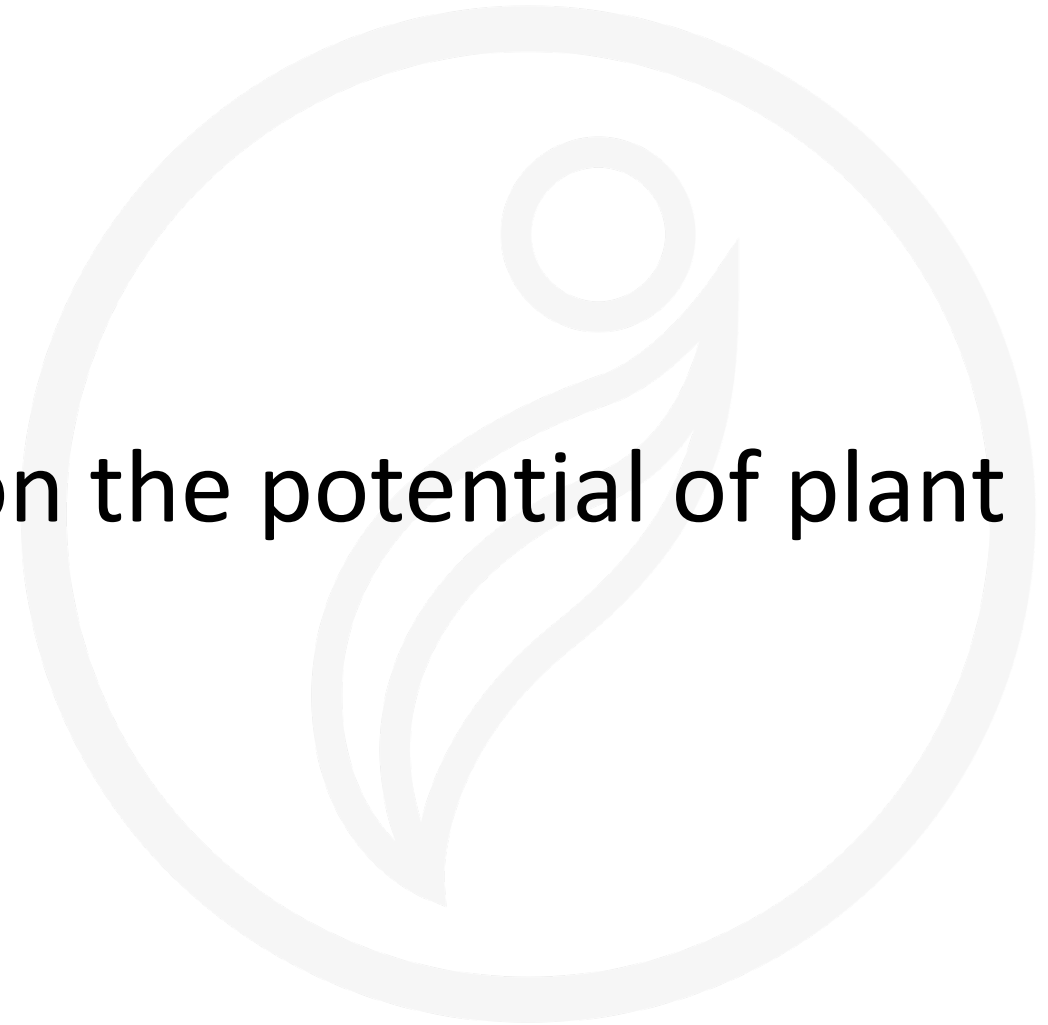
Seed sector perspective on the potential of plant biodiversity

PRO GRACE event

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Topics for today



- Plant breeding process
- Types of material used in breeding
- What is the potential of plant biodiversity for commercial breeding?
- Where are the bottlenecks?

The process of plant breeding



What are breeding goals and how are they defined?

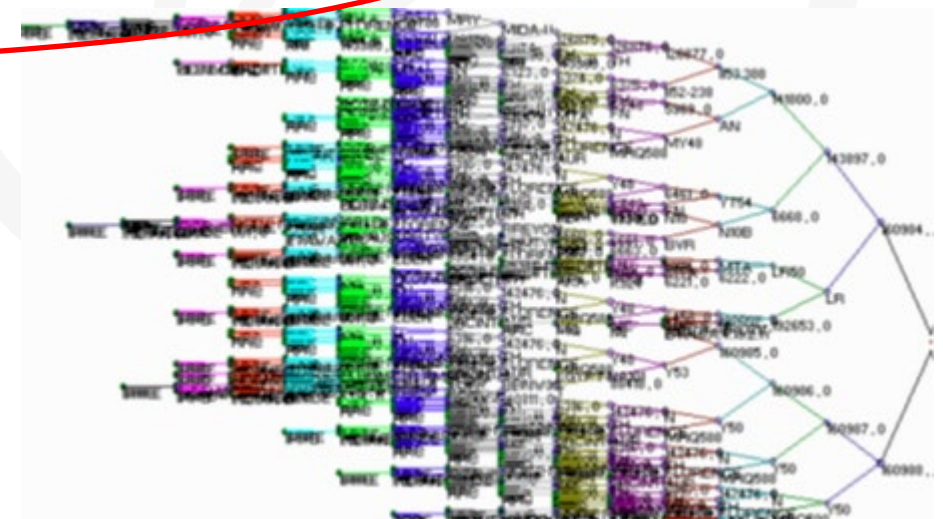
- Breeding goals = the criteria/features that the result of the breeding process should respond to.
- Important factors that influence the definition of breeding goals:



Types of material used in commercial breeding

- Modern varieties } 90-95% commercial PGR
- Research materials } 5-10% non-commercial PGR
- Landraces }
- Wild relatives }

Hundreds to thousands of crosses per year



What is the potential of plant biodiversity for commercial breeding?

- Commercial material – potential is clear

- Non-commercial material – potential depends on several factors
 - a. How much information is available on the PGR
 - b. How easy/difficult it is to work with the PGR
 - c. How can the PGR be accessed and used

What are the bottlenecks?



How much information is available on the PGR

How easy/difficult it is to work with the PGR

Importance of pre-competitive research:

- Research projects focusing on defined traits
- Joint characterization efforts
- Joint efforts for pre-breeding

What are the bottlenecks?

Conservation and characterization efforts are key BUT PGRs can only really deploy their benefits if used:

Identifying potentially useful PGRs

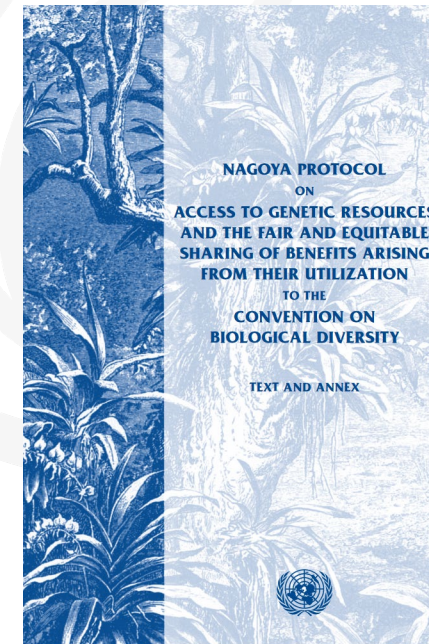
Use in commercial plant breeding



Convention on
Biological Diversity

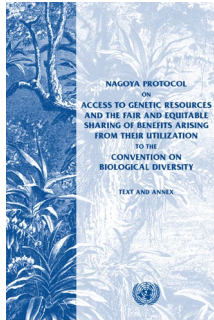


The International Treaty
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE



What are the bottlenecks?

(How) Does access work?



Very limited use

Very few successful access cases

ISF survey to top 12 companies:

- How many SMTAs signed since 2006?
- For which crops: corn/other Annex I/non-Annex I?
- For what purpose: in-kind services/R&D incl. commercial use/both?

Conclusions:

- SMAT in force since 2006
- Since that date companies have signed between 10-200 SMTAs / company for the whole period!
- Overall number reported by CGIAR: 100 000 SMTAs signed.
- Approx. 50% for non-Annex I crops
- Mostly for commercial R&D / use

Is there potential?

Yes, there is potential BUT to unlock the potential, we need:

- Better recognition of the partners & mutual trust
- Collaboration between public & private
- Adequate policy & legal framework to allow access & use



Seed is Life