



EU-China FAB Task Force

26/03/2019

Report session on genetic resources
Rapporteur: Annette Schneegans

Three questions...



1. Common challenges (EU-China)
2. How R&I can address them
3. Best way of jointly tackling these challenges/expected output



Overview of common challenges from the EU and China

Genetic resources – as main element of biodiversity – are the very basis of agriculture. They are needed to constantly adapt to changing demands.

Within-species diversity allows crops to be cultivated in a range of different regions, in different climates and in different types of soils



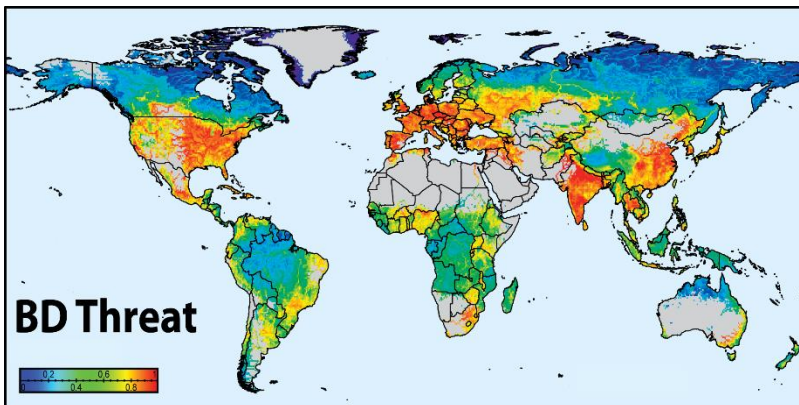
Overview of common challenges from the EU and China

Challenge 1: Multiple and simultaneous changes

- Climate
- Socio-economic
- Environment
- Modes of production

These changes do not only increase pressure on adaptability of crops / agriculture but also threaten genetic resources.

We are losing GenRes at an accelerating speed!



Overview of common challenges from the EU and China

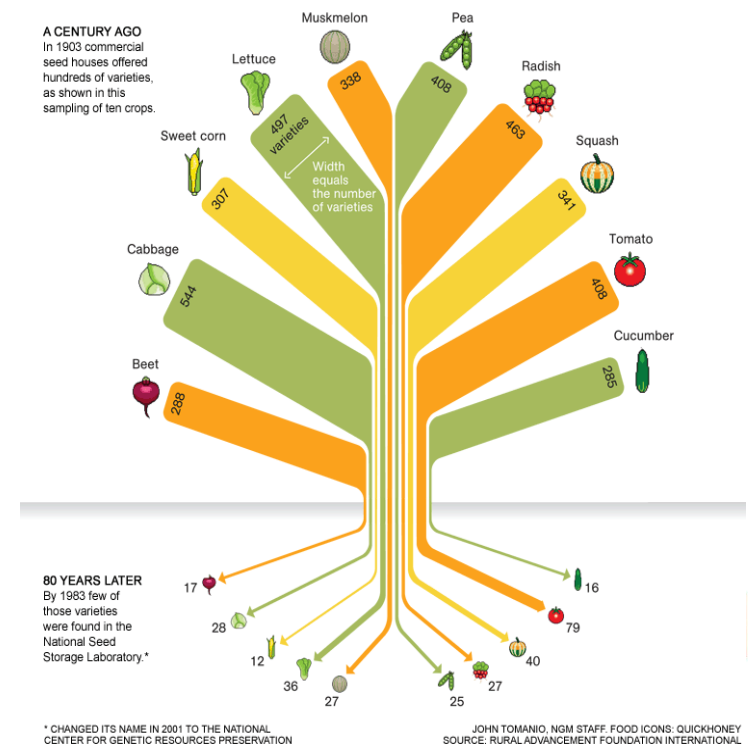
Agriculture increasingly relying on a narrowing genetic basis.

Example from presentation: 80% of apple production in Germany based on 15 cultivars (2.000 cultivars in collections)

Challenge 2: Need to broaden genetic basis of crops



Improve the status of collections in terms of quantity and quality



Overview of common challenges from the EU and China

Challenge 3: Lack of harmonised information

- Need to agree on minimum, common descriptors for genotyping and phenotyping

Challenge 4: Effective utilisation of GenRes

- Speed up use of GenRes (incl. germplasm enhancement)
- Valorisation of material incl. knowledge on GxExM interactions

Challenge 5: Transfer of data and plant material

- Political, legal, phytosanitary bottlenecks



How R&I can address these challenges

1. Create a platform for exchange and coordination allowing to organise workshops, staff exchanges or standardise methods and description of plant material
2. Define a common core collection as a basis for
 - testing genetic resources in different environments
 - studying GxExM interactions
 - pre-breeding
3. Better understand the biological basis of traits for „adaptability“



How R&I can address these challenges

4. Address specific technical needs for conservation such as
 - technology for cryopreservation
 - cleaning of plant material (e.g. from viruses)
 - Developing methods for monitoring the performance of wild resources
 - Develop methods to exchange GenRes (in particular on phytosanitary issues)

5. On-field phenotyping technologies



Best way of jointly tackling these challenges

- a. Start with a Coordination and Support Action to bring together information and people as a basis for further, more specific technical research cooperation

- b. Explore possibilities for building in specific corpus core collections/ reference collections





Thanks!

谢谢!