Pre-competitive Research on Gene bank material in the Netherlands

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Cooperation between the plant breeding industry and the Centre for Genetic Resources in the Netherlands

- Financial support for building up collections (collection missions etc.)
- Contributions to collections in the form of company breeding products
- Sharing of technical know-how in crop advisory groups
- Multiplication of accessions

- Pre-competitive Research: Collaborations to evaluate gene bank material
Genetic Resources: Pre-competitive Research

New germplasm is needed because new traits are desired:

• by consumers (taste, convenience etc.)
• by the processing industry (shelf life, commodity market, new processing techniques etc.)
• by the grower (new growing techniques, new pest resistances, demands for lower input etc.)
Genetic Resources: NEW TRAITS

Convenience food for consumers

World's first non-leaking tomatoes
Genetic Resources: NEW TRAITS

New processing techniques

when every leaf counts

Part of Bayer CropScience
Genetic Resources: NEW TRAITS

New growing techniques

Compact Generation
Genetic Resources: Pre-competitive Research

Reasons to join forces in a collaboration:

• Traits with a complex genetic background (e.g. chemical composition in tomato, digestibility in feed crops)
• Traits that are difficult to measure (e.g. taste in tomato, Nasonovia-resistance in lettuce)
Genetic Resources: Pre-competitive Research

Reasons to join forces in a collaboration:

• Traits that are rare (e.g. new resistances against Peronospora in spinach)
• Traits that are urgently needed (e.g. CGMMV resistance in cucumber, Bremia-resistance in lettuce)
Genetic Resources: Pre-competitive Research

Advantages:

• Bigger collections can be screened
• More reliable results by duplicate tests
• Cost sharing for complex and expensive research
• More efficient use of the seed stocks
Genetic Resources: Pre-competitive Research

Results:

- Improved chances of finding a new trait
- Improved speed to market, for the benefit of the grower
Genetic Resources: Pre-competitive Research

Organization:

- Coordination by Plantum:
  - Contracts
  - Administration
- CGN:
  - Supply of accessions (cultivated and wild)
  - Definition of test protocols
  - Collection and sharing of evaluation data
- Seed companies:
  - Input to define the most important targets
  - Input of technical knowledge to define the test protocols
  - Execution of the tests
Genetic Resources: joined efforts to find new traits
Thank you very much for your attention.