Collaboration between CGN and the seed industry

Workshop on public private partnerships

Bonn, 7 June 2017

Centre for Genetic Resources, the Netherlands
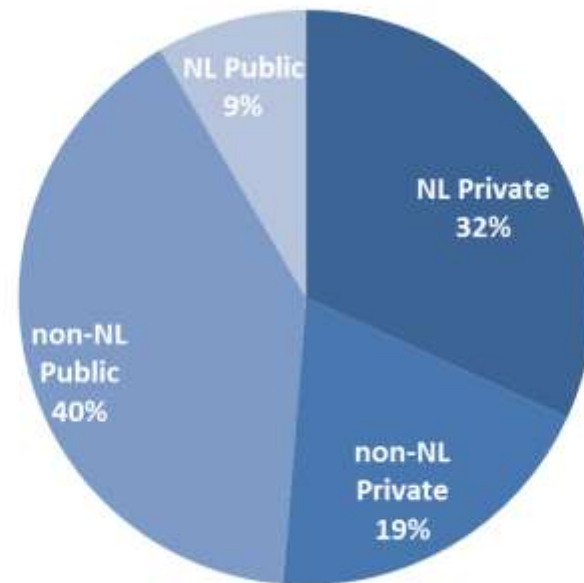
Collaboration CGN – breeding companies

- **Public-private partnerships with plant and animal breeding companies**

  - Development, maintenance and evaluation of CGN collections

  - Transparent and open collaboration

    - Preferably multilateral initiatives

    - Approval of Dutch government

Collaboration CGN – breeding companies

- **CGN provides services to PGR users**
  - Access to PGR collections and associated information
  - Advise to PGR users
    - Choice of material for use
    - ABS issues

CGN samples distributed 2010-2014
(n=34178)

NL Public 9%

NL Private 32%

non-NL Public 40%

non-NL Private 19%

Collaboration CGN – breeding companies

- **Private breeders support CGN**
  - Via the Dutch association of plant breeders (Plantum)
  - Services
    - Policy advice
    - Technical input
    - Financial support for collecting missions
    - Input in kind

Collaboration CGN – breeding companies

- Support of private breeders to CGN:

Policy advice

- Plantum is a member of the CGN Advisory Committee

  - Vision and policy

  - Implications of international rules and legislation

  - Planning and follow-up activities, providing input where necessary

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Collaboration CGN – breeding companies

- **Support of private breeders to CGN:**

Technical input

- ~6% of the CGN collection (23000 accessions) was provided by breeding companies

- Participation of breeders in 'crop working groups'

    - Technical advise and feedback

    - Advise on priorities from the user perspective

Example: collection improvement

- **Acquisition of lettuce cultivars**
  - Inventory of new cultivars (EU, 5-year period)
  - Qualification by breeding companies
  - Selection of 10% for uptake in the collection
  - Breeding companies provide seed samples

Collaboration Dutch Breeders - CGN

■ Support of private breeders to CGN:

Financial support for collecting missions

- Expeditions organized with local authorities and organizations

- Collecting of material

  - Meeting all MAT and PIC requirements

- Material is made publicly available

  - Exclusive access to funding companies during embargo period

Example: collecting expeditions

2008 – spinach: Tajikistan & Uzbekistan

2009 – leek: Greece

2011 – spinach: Armenia, Azerbaijan & Georgia

2012 – asparagus: Armenia & Azerbaijan

2013 – lettuce: Armenia & Azerbaijan

2015 – carrot: Kirgizia & Uzbekistan

Collaboration CGN – breeding companies

- **Support of private breeders to CGN:**

Input in kind

- Regeneration of CGN accessions
  - Based on CGN protocols (part of QMS)
  - Amounts ~10-15% of the CGN budget
- Collaborative pre-competitive evaluation
  - Breeders decide on priority traits and carry out evaluations
  - CGN coordinates, distributes material, combines results, etc.
  - All data are made publicly available after embargo period

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Example: collaborative phenotyping

- Lettuce

  - Resistance against downy mildew (*Bremia lactucae*)

  - Testing performed in duplo by breeders

  - Data on *Bremia* pathotypes Bl:1 – Bl:31

  - 39,344 available observations (2056 accessions)

Collaboration CGN – breeding companies

- Collaboration is formalised in Letter of Intent/Memorandum of Understanding

  - Currently 7 plant breeding companies

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Public-private partnerships with Dutch plant and animal breeding companies

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Contact form

CGN has developed public-private partnerships with Dutch plant and animal breeding companies for the development, maintenance and evaluation of its collections.

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Regeneration and improving the collection

Plant and animal breeding companies in the Netherlands contribute cash or in-kind to the build-up and management of the CGN collections in order to make the material available for research and breeding purposes.

Evaluation

Plant and animal breeding companies carry out evaluations on material incorporated in the CGN collections. The results of these evaluations may be published on the CGN website.

Collecting

Other public private partnerships

- DNA sequencing projects
  - Tomato
  - Lettuce
  - Melon
  - Solanaceae
  - Pepper (planning)

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