The Dutch German Cooperation on Plant Genetic Resources

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Outline of the presentation

1. German Dutch Cooperation
   1.1 Objectives and organisational aspects
   1.2 Milestones
   1.3 Services to the European PGRFA community
   1.4 Dutch German cooperation and Europe

2. An European Genebank Integrated System (AEGIS)
   2.1 Changed legal and organisational frameworks
   2.2 Objectives and organisational aspects

3. Comparison and conclusions
1.1 Objectives and organisational aspects

According to a one page agreement (7 s) between both Ministries of Agriculture signed by I. Kiechle and G.J.M. Braks on 12 May 1984

1 Objectives of the cooperation

✓ Cooperation on safeguarding of PGR
✓ Research activities exclude projects in the field of pre-competitive plant breeding
✓ All crops, primitive forms and former breeding varieties available in the partner countries and within the sphere of competence of the Ministries are included
✓ Long-term storage of all samples at the Genebank at Braunschweig
✓ Central documentation of 1) passport data, 2) evaluation data and 3) unrestricted on-line access to all data by both countries
✓ Exchange of material
✓ Exchange of scientists
1.1 Objectives and organisational aspects

According to the trustees board's rules of procedure (1984, 10 s)

1 Tasks of the board of trustees

It shall initiate joint projects in the following fields:

✓ Collection
✓ Taxonomic determination
✓ Merging of duplicates
✓ Long-term storage and seed physiology
✓ Tissue culture of vegetatively propagated plant species
✓ Regeneration and increase of accessions
✓ Documentation
✓ Security duplication

It may suggest joint PGR utilization projects.
1.2 Milestones (1968 – 1974)

1968: Establishment of the German Dutch Commission for Agricultural Research

1970: German Minister of Finance agreed financing the establishment and operating costs of the Genebank at Braunschweig (Bommer, 1972)

1971: The establishment of a European Solanum germplasm station was discussed at the OECD, Paris.

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Recurrent annual costs</th>
</tr>
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<tbody>
<tr>
<td>Germany</td>
<td>76500 DM</td>
</tr>
<tr>
<td>OECD</td>
<td>122000 DM</td>
</tr>
</tbody>
</table>

Country 1: Calculate national contribution according to national potato production (hectare, ton, biological or financial yield?)

Country 2: Highly interested in the subject, not willing to pay

Country 3: Willing to contribute, if others do.

Country 4: Our government is broke, we would pay but can’t currently.

Country 5: My private opinion is that we...
1.2 Milestones (1974 – 1999)

1983: Celebration of 15 years of German Dutch cooperation in the field of agricultural research

1984: Programming Board was replaced by Board of Trustees

1986: Establishment of the Dutch German Beta collection

1989: Reunification of Germany

1999: Last meeting of Board of Trustees
1.3 Services to the European PGRFA community

1974 – 1995 (at Braunschweig)

- Merger of the national potato collections
- Work program according to the objectives and tasks
- Establishment of the in vitro collection of former potato varieties and later cryoconservation
- Cleaning seed propagated wild and primitive forms from quarantine viruses
- The NL-D Potato collection moved from Braunschweig to Wageningen

1986 – 1991 (at Wageningen)

- Merger of the national Beta collections
- Work program according to the objectives and tasks
- The D-NL Beta collection moved from Wageningen to Braunschweig
1.3 Services to the European PGRFA community

Continued at the CGN after 1999

- Comprehensive program on safeguarding of potato genetic resources and management of the former NL-D collection of seed propagated potato wild species and primitive forms

Continued at the BAZ /JKI after 1999

- Merger of BAZ holding, including the D-NL collection of former potato varieties into the IPK holding

The ECPGR Wild Potato Database

Plant Research International,
Centre for Genetic Resources, the Netherlands (CGN)
PO Box 16, 6700 AA, Wageningen, The Netherlands
Tel: ++(31-317) 477077; Fax: ++(31-317) 418094

Database manager: Mr. R. Hoekstra

The ECPGR International Database for Beta

Federal Research Centre for Cultivated Plants - Julius Kuehn Institute
Erwin Baur Strasse 27, D-06484 Quedlinburg, Germany
Tel: ++ (49-3946) 47701; Fax: ++ (49-3946) 47255

Database managers: Mr. Lothar Frese and Mr. Christoph Germeier
1.3 Services to the international potato PGR community

1990: start of APIC (Association for Potato Intergenebank Collaborators)

1991: 1st meeting, Sturgeon Bay
- large group: curators from USA, Russia, UK, (former east) Germany, Dutch-German, CIP, Argentina, Peru, Ecuador
- representative from IBPGR
- taxonomists Hawkes, Ochoa & Spooner

1992: 2nd meeting Braunschweig - steering group only: USA, CIP, Germany, NL-D
- standardization passport data (e.g. collector codes)
- standardization of descriptor states of C&E data

1993: 3rd meeting Lima/Cusco - steering group & PER
- 1st version of internat. wild potato DBase created by CIP
  - collector number as unique identifier for redundancy
  - 8649 accessions, 2393 redundant
1.4 Dutch German cooperation and Europe

Processes

- Sharing of expertise, e.g. information management

Policymaking

- Bilateral
- Multilateral

Braunschweig/Quedlinburg

- 1974-1978: Computerized genebank information system, Standards for genebank documentation
- 1999-2010/2011: Reimplementation of online information systems
- Start in 1985: GENIS and methods for documentation of C&E data
- Start in 1987: International Data Base for Beta (IDBB)

Wageningen

- ECPGR program
- Start in 1990: EC 1467/94; EC 870/2004
- 1992: Common framework for an integrated EC programme on the conservation of PGR
- An European Genebank Integrated System (AEGIS)
2. An European Genebank Integrated System (AEGIS)

AEGIS task force (2006)

- How to improve operation of European genebanks if funding remains at the current level?

- Suggested solution
  - Task sharing
  - Active long-term collaboration, current focus of MAS
  - MoU =~ legal framework
  - AQUAS (AEGIS quality system) = information on the mode of operation

- But no additional funds
2.1 Objectives and organisational aspects

- Pan-European
- Ex situ focussed
  - with an option for in situ management
- EURISCO as central information unit
- AQUAS can be seen as a process triggering stronger efforts at the national level

- Relies on data flow from the national level to the European level of
  - passport data
  - C&E data and
  - in situ data
2.2 Changed legal and organisational frameworks

<table>
<thead>
<tr>
<th>Year</th>
<th>Institution</th>
<th>Programs</th>
<th>Funding</th>
<th>Legal framework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Genebank Gatersleben</td>
<td>D-NL</td>
<td>EC GENRES</td>
<td>CBD</td>
</tr>
<tr>
<td></td>
<td>Genebank B5</td>
<td>D-NL Potato</td>
<td>EC GR G on Beta</td>
<td>Treaty</td>
</tr>
<tr>
<td></td>
<td>Genebank Wageningen</td>
<td>D-NL Beta</td>
<td>EC GR G on Potato</td>
<td>AEGIS MoU</td>
</tr>
</tbody>
</table>

The table above shows the timeline and changes in legal and organisational frameworks. The timeline includes specific years and mentions institutions such as Genebank Gatersleben and Genebank B5. Programs like D-NL and D-NL Potato are also highlighted. Funding and legal frameworks such as EC GENRES, CBD, Treaty, and AEGIS MoU are detailed.
3. Comparison and concluding remarks

D-NL cooperation (2 partners)

Strength
- Political will (at least for a significant period)
- Win-Win situation
- Extra funds
- Long-term maintenance of expertise as work is crop genepool oriented
- Long-term stability of products and services
- Political impact

Weaknesses
- Susceptible to political changes caused by the lack of a legal framework
3. Comparison and concluding

AEGIS (approx. 500 partners)

- **Strength**
  - Political process driven by a large and organised interest group
  - Based on a considerably improved legal framework
  - **Political weight**

- **Weaknesses**
  - Accession based, registration of „European Accessions“ and selection of MAS
  - Progress depends on the capability of ECPGR WGs to drive the process
### 3. Comparison and concluding remarks

<table>
<thead>
<tr>
<th>Condition for effective cooperation</th>
<th>D-NL until 1991</th>
<th>AEGIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear perspective</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Concept</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>• Methods</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>• Techniques</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>• Resources</td>
<td>yes</td>
<td>yes, many!</td>
</tr>
<tr>
<td>• Adequate means (as condition for stability)</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>A recognized position in the larger community</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>
Thank you for your attention