

Report to the Ninth ECP/GR Steering Committee meeting (October 2003)

Working Group on Potato

Progress made by the Group during Phase VI (1999 - 2003)

Specific objective	Achievements
Meetings	
The first meeting of the WG was held 23-25 March 2000 in Wageningen in conjunction with the final meeting of the EU potato genetic resources project RESGEN - CT95-34/45	Workgroup activities started. Databases of the EU project will be continued and expanded with other countries in Europe. Report published in 2001 by ECP/GR
The 2nd meeting was held 14 July 2002 in Hamburg the day between the 2nd conference of the Global Initiative on Late Blight (GILB) and the 15th Trien.Conf. of the Eur.Association for Potato Research (EAPR)	Reports on the activities within the 19 countries and the status of the Database for wild species (11842 entries) and clonal stocks (11600 entries of 4000 cultivars and 1400 breeding lines). The development of a core collection for potato varieties was decided to facilitate priority setting for virus eradication and characterization/evaluation
Documentation	
<u>Clonal stocks</u> : Update database (passport and characterization/evaluation data) and include additional European collections	The database is maintained by SASA and on-line searchable at www.europotato.org . SASA is developing software for automatic transfer of data into the Web format from flat tables (e.g. Excel, Access) without the need to identify changes. However, this software is not ready yet and new collections still need to be included. The data structure revised and sent to the curators
<u>Wild and Andean cultivated species</u> : Update database (passport and evaluation data) and identify duplicate accessions within and between collections	The database is maintained by CGN and downloadable at www.genebank.nl/eupotato . By e.g. tracking back donor numbers and standardising collector number codes, many previously unknown duplicates have been identified. The total amount of duplication (within and between European genebanks) is 19%
Characterization/Evaluation	
No specific WG objectives. Characterization and evaluation activities are organised by germplasm holding institutions and depend on individual priorities and opportunities to participate in national or international projects. The main problems for the potato crop are late blight (<i>Phytophthora infestans</i>), cyst-nematodes (<i>Globodera</i> spp.) and Potato Virus Y (several strains)	After being allowed to publish, the results are included in the central crop database during it's (annual?) update

Specific objective	Achievements
Regeneration	
<p><u>Clonal stocks</u>: Regeneration is an on-going activity, in the field or <i>in vitro</i>. A small number of clones is cryo-preserved at IPK. Virus cleaning and testing on quarantine organisms is very costly and therefore done only on a small scale</p>	<p>No co-ordination by the WG yet, because the central database is still incomplete and a core collection not available</p>
<p><u>Wild and Andean cultivated species</u>: The amount of regeneration is determined by local priorities and budget. Testing on quarantine diseases is costly but obligatory, because of the phytosanitary regulations of the EU</p>	<p>For duplicates the 'most original sample' will be determined to set maintenance responsibilities and prevent duplication of effort</p>
Sharing of responsibilities	
<p><u>Clonal stocks</u>: Important varieties are kept in several collections as reference material. For other clones duplication of effort should be reduced. However for each clone a safety duplicate should exist. Phytosanitary regulations hamper the exchange of potato clones, because many are virus infected or have not or only partially been tested on quarantine organisms. Curators are therefore reluctant in excluding clones from the collection, unless they really lost interest. On the other hand, not every old variety needs to be maintained forever</p>	<p>The coming core collection will include varieties with the criteria of cultural value, valuable traits, (past) area of cultivation and genetic diversity</p>
<p><u>Wild and Andean cultivated species</u>: Within Europe, 19% of the wild potato accessions are duplicates within or between collections. Duplication of efforts needs to be prevented. After the identification of duplicates, the 'most original sample' needs to be determined, to set maintenance responsibilities</p>	<p>Using the central database the curators (should) know which accessions are duplicates and can prevent duplication of effort</p>
Collecting	
<p>No specific WG objective set. For potato wild species the collecting activities in the past decade have in practice been co-ordinated by USDA (Univ. of Wisconsin). In 1999 CGN participated in the potato collecting expedition in Peru, together with USDA, CIP and INIA. In Eastern Europe (e.g. Ukraine) there might still be old landraces of potato, not maintained in national collections yet</p>	<p>The collected seeds are still in Peru and not available for distribution, due to the implementation of the CBD. Peru is member of the Andean Pact, that adopted Decision 391 on a "Common Regime on Access to Genetic Resources", a procedurally complex law. When the Treaty will come into force, this situation is expected to change for potato. Then follow-up expedition will be considered</p>

Working Group on Potato

Plan of action for Phase VII (2004 - 2008)

Specific objective	Action	Timeframe	Request of support from ECP/GR for specific actions	
			Funding requested	Type of support requested
<u>Meetings</u> : Third WG meeting 2005 in Spain next to the 16th Trien.Conf. of the Eur. Association for Potato Research (EAPR)	Organize it	July 2005	Limited to ECP/GR Secretariat selected participants and meeting room rent	
<u>Documentation</u> : Update central database, include new collections, identify duplicates, and create core collection. Identify most original sample (wild acc.)	Each country will identify national varieties suited for the core collection. Collection databases --> DBase-manager	2004 - 2008	NO	
<u>Characterization</u> : No specific objective			NO	
<u>Evaluation</u> : No specific objective			NO	
<u>Ex situ conservation -Regeneration</u> : No specific objective yet			NO	
<u>Ex situ conservation - Safety-duplication</u> : In discussion. Because of phytosanitary regulations and maintenance costs difficult to organise for clonal material	Accurate overview on collections and health status needed		NO	
<u>In situ - On-farm conservation</u> : No specific objective			NO	
<u>Collecting</u> : No specific objective			NO	
<u>Sharing of responsibilities</u> : Set maintenance responsibilities by means of 'Most Original Sample' or current health status (plant passport)	Keep central database up-to-date		NO	
<u>Submission of collaborative project proposal</u> : New RESGEN framework?			NO	

Prepared by: Working Group Chair: R. Hoekstra

Date: 26 September 2003