

Report of a Working Group on Potato

Second Meeting, 14 July 2002, Hamburg, Germany

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EXECUTIVE SUMMARY

Introduction

The second meeting of the ECP/GR Working Group on Potato took place in Hamburg (Germany) on 14 July 2002, between the Second Conference of the Global Initiative on Late Blight (GILB) and the 15th Triennial Conference of the European Association for Potato Research (EAPR). The meeting brought together 23 participants from 19 countries. Among the observers were some who represented potato collections in the Ukraine and the Russian Federation, also from a German breeding company which represented the German Federation of Private Plant Breeders (GFP) and the International Association of Plant Breeders (ASSINSEL), and another from the US Potato Genebank, a member of the Association of Potato Intergenebank Collaborators (APIC). The representatives from Cyprus, Slovakia and Slovenia were participating for the first time. Most of the participants gave short presentations about their activities in the field of potato genetic resources.

Databases

The common database on clonal potato stocks, developed and maintained by the Scottish Agricultural Science Agency (SASA), holds over 11 600 records covering about 4000 cultivars and 1400 breeding lines. It has been made searchable on-line at <http://www.europotato.org/>. The next step will be to include the data from the East European potato collections. Guidelines for variety maintenance were proposed.

The use of the European Cultivated Potato Database (ECPD) has been monitored monthly since November 2001. Visitors from 20 countries have used the database. The number of visitors/month is presented in Fig. 1.

The common database on wild and primitive potato species, established by CGN, contains 11 842 records covering 9582 distinct accessions which are maintained in Germany, the Netherlands, the United Kingdom, the Russian Federation, the Czech Republic, Hungary and Poland. This material is mainly maintained in the form of true seed. The database is downloadable from <http://www.genebank.nl/eupotato/>.

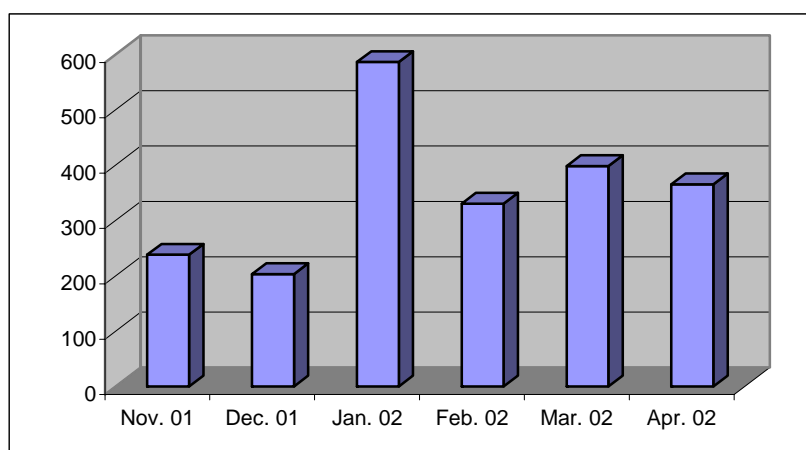


Fig. 1. Number of visitors to the ECPD Web site (Nov. 2001-April 2002).

Management of collections

An important issue for the Working Group has been to develop methods for the sharing of responsibilities in the conservation of clonal stocks. This would allow reductions in the costs of virus cleaning, characterization and conservation of potato. At the 2002 meeting it was decided that a core European potato variety collection will be established. Representatives within each country will therefore make a selection of their national varieties to be included in the core collection. The criteria for selection will be cultural value, valuable traits, (past) area of cultivation and genetic diversity. However, development of the mechanisms for sharing responsibilities will continue through discussions within the WG.

Within the European Wild Potato Database (EWPD), which includes native Andean cultivars, an extensive exercise to search for duplicates has been carried out. Table 1 shows the number of overlaps between genebanks. The genebanks listed in this table hold a total of 11 842 accessions from which 424 have been identified as duplicates, so we now estimate that there are 11 418 within-genebank distinct accessions. The number of distinct accessions within Europe is 9582, of which 8108 are being maintained by only one of the genebanks in Europe. Within Europe, the proportion of probable redundant accessions is 19%. This emphasizes the importance of continuing cooperation between genebanks holding germplasm of wild potatoes in order to rationalize the collections.

Table 1. Number of overlaps between genebanks for the within-genebank distinct accessions

Genebank	Distinct accessions (within genebank)	CGN	CPC	GLKS	VIR	Czech Republic	Hungary	Poland	Unique within Europe
CGN	2681		174	414	635	36	1	12	1718
CPC	1389	174		355	262	5		4	801
GLKS	2819	414	355		290	11		7	2034
VIR	4433	635	262	290		18		12	3514
CZE*	63	36	5	11	18			2	25
HUN	6	1							5
POL	27	12	4	7	12	2			11
Total	11418								8108

* In the Czech Republic 153 additional clones originating from the same populations are available, which for the time being are not included in the common database.

Acronyms used in the table:

CGN = Centre for Genetic Resources, the Netherlands

CPC = Commonwealth Potato Collection

GLKS = Groß Lüsewitzer Kartoffel - Sortiment des IPK (Potato Collection of IPK in Groß Lüsewitz)

VIR = N.I. Vavilov Research Institute of Plant Industry, St. Petersburg

Future prospects

The ECP/GR Working Group on Potato proposes to meet again in connection with the 16th triennial EAPR meeting in Bilbao, Spain 2005. The third meeting of the WG will allow us to make major improvements in the rationalization of costly conservation of potatoes in Europe.

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Appendix I. Agenda

Second Meeting of the ECP/GR Working Group on Potato 14 July 2002, Hamburg, Germany

Saturday 13 July

Arrival of participants

Sunday 14 July

Time	Topics
09:00 – 09:20	<ul style="list-style-type: none"> • Introduction <ul style="list-style-type: none"> - Opening of the meeting, welcome - Introduction of the participants
09:20 – 09:45	<ul style="list-style-type: none"> • ECP/GR <ul style="list-style-type: none"> - General briefing on behalf of ECP/GR (<i>R. Hoekstra, 10 min</i>) - Report of the Working Group Chair (<i>R. Hoekstra, 10 min</i>) <p><i>Discussion</i></p>
09:45-10:30	<ul style="list-style-type: none"> • Brief update on status of national collections (<i>5-10 minutes/country</i>)
10:30–11:00	<i>Coffee break</i>
11:00-11:30	<ul style="list-style-type: none"> • Brief update on status of national collections (<i>continued</i>)
11:30-12:40	<ul style="list-style-type: none"> • On-going activities and needs <ul style="list-style-type: none"> - Conservation and regeneration standards - Identification of redundancies - Regeneration needs (emergency?) germinability loss (true seed) phytosanitary status (clones/true seed) - Conservation responsibilities - Safety-duplication <p><i>Discussion</i></p>
12:30 – 14:00	<i>Lunch</i>
14:00 – 14:45	<ul style="list-style-type: none"> • Documentation <ul style="list-style-type: none"> - Updating central databases - Identification of duplicates/synonyms - Identification of unique material - Access through Internet <p><i>Discussion</i></p>
14:45 – 15:30	<ul style="list-style-type: none"> • Characterization/evaluation <ul style="list-style-type: none"> - Disease resistance - Quality traits - On-farm characterization
15:30 – 16:00	<i>Coffee break</i>
16:00 – 16:30	<ul style="list-style-type: none"> • Collaboration with other regions/networks/projects
16:30 – 17:00	<ul style="list-style-type: none"> • Other research activities
17:00 – 18:00	<ul style="list-style-type: none"> • Other items, approval of the workplan and recommendations • Selection of a new Chair of the Working Group • Closure of the meeting
	<i>Social dinner</i>

Appendix II. List of Participants

Note: The composition of the Working Group is subject to changes. The latest update can be found on the Potato Working Group Web page (http://www.ipgri.cgiar.org/networks/ecpgr/Contacts/ecpgr_wgpo.asp).

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