



Report of a Network Coordinating Group on Industrial Crops and Potato



Second meeting - 22 October 2002 - Bologna, Italy
L. Maggioni and E. Lipman, *compilers*

European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR)



IPGRI is an institute
of the Consultative
Group on International
Agricultural Research
(CGIAR)

Participants

Andrea Carboni, ISCI
Lothar Frese, BAZ
Elinor Lipman, IPGRI
Lorenzo Maggioni, IPGRI
Martin Pavelek, AGRITEC
Paolo Ranalli, ISCI
Loek van Soest, CGN
Merja Vetelainen, NGB

Unable to attend

Bruno Desprez, Florimond Desprez
Dragan Skoric, ESCORENA Network on sunflower

Opening of the meeting

Lothar Frese, Chair of the *Beta* Working Group (WG) and manager of the International *Beta* Database and Lorenzo Maggioni, ECP/GR Coordinator welcomed the participants who briefly introduced themselves.

Briefing on ECP/GR (Network's activities)

Lorenzo Maggioni, ECP/GR Coordinator, summarized the activities of the Industrial Crops and Potato Network during Phase VI of ECP/GR, which included two meetings of the Potato WG, two meetings of the *Beta* WG, two meetings of the Network Coordinating Group, one *ad hoc* meeting of the Flax WG and the development of activities related to flax germplasm characterization. He also updated the participants on the progress of the EPGRIS project, the development of the EURISCO catalogue and the suggestions made by the EPGRIS partners to the central database managers.¹ He then mentioned the FAO/CGIAR campaign for a Genebank Conservation Trust, which is trying to raise a USD 260 million endowment fund to provide a permanent source of funding for *ex situ* conservation of the world's most critical collections of plant genetic resources for food and agriculture².

Coordination of ongoing activities at the Network level

L. Frese asked the representatives to brief the NCG on the activities implemented by their Working Groups, according to the agenda defined.

Flax

Martin Pavelek presented the historical background, current status and management of the International Flax Data Base (IFDB)³ and presented the plans for the future:

¹ Document available from the ECP/GR Secretariat

² For more information, see Issue 24 of the IPGRI Newsletter for Europe

³ For details, see: Maggioni L., M. Pavelek, L.J.M. van Soest and E. Lipman, compilers. 2002. Flax Genetic Resources in Europe. *Ad hoc* meeting, 7-8 December 2001, Prague, Czech Republic. International Plant Genetic Resources Institute, Rome, Italy.

Workplan for flax activities

31 March 2003 – Submission to the IFDB manager of the first set of passport data of European plant collection holders – with focus on accessions originated in the respective country;

1 April 2003 – 31 December 2006 – Completing submission of all passport data, including all accessions of European collection holders covering the majority of the European flax gene pool;

31 January 2003 - 31 December 2003 - Starting work on characterization and evaluation, focusing on the first six morphological characters with high priority.

31 January 2004 – 31 December 2008 - Completing all characterization and evaluation work for all flax accessions of European collection holders.

Planned meetings:

October or November 2004 - CGN Wageningen, the Netherlands:

- discussion on the progress of passport data acquisition;
- discussion on the progress of characterization and evaluation data acquisition - admitting further morphological, biological and yielding characters;

October or November 2006 - venue to be specified:

- discussion on the progress of passport data acquisition - passport part should be finished;
- discussion on the progress of characterization and evaluation data acquisition - further characterization and evaluation characters should be chosen.

Hemp

A. Carboni gave a general presentation on *Cannabis sativa* (origin, evolution, main breeding centres in Europe and major collections) and presented the activities carried out on hemp at ISCI for the recovery and characterization of old Italian cultivars. He illustrated these with details of AFLP studies on 6 varieties and studies revealing relations between cannabinoid contents and fibre quality.

He then explained that ISCI would be candidate to host a central database on *C. sativa* including passport and characterization data and mentioned other issues to be considered for the future: creation of a global (world) database, the need for a list of morphological and chemotype descriptors, a core collection to be possibly created at ISCI. The priority is, however, the hemp database and the support of the Network Coordinating Group will be essential.

Loek van Soest indicated that he had already contacted Marcel Toonen, in charge of the hemp working collection of Plant Research International, who had agreed to provide ISCI with the necessary information.

A message received from M. Mackiewicz-Talarczyk (Institute of Natural Fibres, Poznan, Poland), Secretary of the ESCORENA Network on flax and other bast plants, expressed appreciation and support for the establishment of a central hemp database in Bologna and confirmed the availability of G. Venturi (University of Bologna), ESCORENA Network member, to help in this matter.

Potato

M. Vetelainen reminded the Group that there were two separate databases on potato (cultivated and wild/primitive) and summarized the status of the cultivated potato database, which now contains a total of 11 842 accessions including 4000 cultivars and 1400 breeding lines, described according to a “descriptor dictionary” (also available on the Web site). She gave statistics on the

use of the on-line database (about 500 hits per month) and summarized the most important issues discussed by the WG on Potato: germplasm management as health status, sharing of responsibilities and creation of a European core collection.

L. Maggioni commented that this WG is an example of an autonomous group, which holds its meetings with some financial support, but without direct involvement of the ECP/GR Secretariat.

Beta

L. Frese reviewed the activities of the *Beta* WG. He indicated that, after the decision made by the WG in 1999 to share responsibilities on accession basis, the IDBB had been redesigned by C. Germeier to facilitate assignment of specific responsibilities. The new structure of the database has also been developed for management purposes, since a new information system aimed at improving data management of BAZ is to be developed at BAZ further to the restructuring of the German genebanks. The next step to be undertaken to implement the sharing of responsibilities will be to contact genebanks and ask them to indicate whether they accept to take responsibility for some material. The use of the collections has been rather extensive with characterization carried out in the course of the EU-funded GENRES project and the redefinition of a European *Beta* Core Collection. The continuing appearance of new diseases, especially viruses, is however calling for continuing use and screening of the collections. There is also a need to focus more on *in situ* management for *Beta*.

Suggestions on priorities for Phase VII of ECP/GR

The Group agreed to present the following recommendations to the attention of the Steering Committee:

Flax and Hemp

It was considered important to broaden activities devoted to underutilized crops, such as flax and hemp, for which breeding activities are reducing in Europe, leading to the risk of loss of genetic resources. At the same time these crops are considered important for the future of European agriculture, considering their increasing importance for industry (fibres for cars, textile, pharmaceuticals, etc.) and their beneficial impact in rotation systems and diversification of agriculture.

Recommendations

- Request the Steering Committee to establish a Working Group on fibre crops (flax and hemp), with the objective to facilitate the implementation of the workplan proposed by the *ad hoc* group on flax and to help the development of a European Central Database for Hemp⁴.
- Endorse the offer made by ISCI to establish a European Central Database for Hemp, as an input in-kind to ECP/GR, also considering the availability expressed in principle by a few collection holders to contribute with their hemp data.
- Invite the database managers of the central crop databases under development (flax and

⁴ A proposal for the establishment of an ECP/GR Flax Working Group was prepared by M. Pavelek and L. van Soest and will be included among the background documents of the ECP/GR Steering Committee meeting of October 2003.

hemp) to seek advice and training from more experienced database managers and from the ECP/GR Documentation Support Centers (ZADI, CGN and NGB).

Potato

Considering that the potato databases have substantially developed, also with the inclusion of characterization data, the main challenge acknowledged by the WG is the implementation of a system for sharing responsibilities. This is particularly important in the case of potato germplasm, which requires expensive maintenance *in vitro* or in the field.

Recommendation

- Maintain in existence the WG on potato and allow for a third meeting of the WG. This would be used, *inter alia*, to formalize responsibilities for the maintenance of unique potato germplasm clones and to closely monitor their phytosanitary status. An accurate analysis, made by the central database managers, of the state of duplication of the material in the European collections would serve as a basis for the definition of shared responsibilities.

Beta

The level of development of the IDBB is considered very advanced, with a good coverage of the main collections in the world and a good set of characterization data.

Recommendation

- Maintain in existence the WG on *Beta*, with the purpose of facilitating the formalization of responsibilities on a decentralized basis, as well as to address specific issues such as the complementary conservation strategy for *Beta* genetic resources in Europe, with special attention to the conservation of wild populations.

Sunflower

A message received from D. Skoric (ESCORENA Network on sunflower), who was unable to attend the meeting, contained a request for funding of activities on sunflower genetic resources as a condition to establish a closer collaboration with ECP/GR.

Recommendations

- Inform the ESCORENA Network on sunflower that ECP/GR generally does not allocate funds for specific activities and none are available at the present time, but that it can mainly offer technical advice for the development of a European sunflower database, as well as the appropriate framework to facilitate data flow, as the flax example has shown.